ANNEX

Project Design Matrix(Ver.1)
Title: Project for Capacity Development for the ASDP Monitoring and Evaluation System Phase II Target Area: Tanzania mainland (All the districts)
Period: Aug 2011 to June 2015 Counterpart: ASDP M&E TWG(Monitoring and Evaluation Thematic Working Group), ASLMs

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal ASDP Monitoring and Evaluation(M&E) is improved through interactive operation of relevant activities such as National Sample Census of Agriculture, National Panel Survey and Agricultural Routine Data System (ARDS).	Overlapped works are reduced among the surveys.	- M&E Performance Report - JIR - ASR - Interview with counterparts	
Purpose ASDP M&E is conducted on the basis of national agricultural data collected through improvement of ARDS.	1. Utilization of data collected through ARDS by ASDP JIR etc. Number of DADPs which utilize data analysis through ARDS	1. M&E Performance Report, JIR, ASR, Interview with counterparts 2. DADPs	Committee of the ASLMs Directors deals with coordination of the surveys.
Outputs			
1 ARDS is rolled out nationwide and operational.	1-1 Number of the trained trainers 1-2 Number of inquires on the submitted ARDS 1-3 Number of timely submission of ARDS among all the districts Level of understanding by WAEO/VAEO on data collection 1-4 method	1-1. Training reports 1-2. Training reports 1-3. LGMD2 records 1-4. Interview and questionnaires to WAEO/VAEO	LGMD2 continues its stable function.
2 Backstopping activities for ARDS by M&E TWG are strengthened.	2-1 Number of the trained officials on data analysis and reporting Evaluation of the users on LGMD2, common reporting 2-2 formats and training guides	2-1. Training reports 2-2. Questionnaires for the users	
3 Coordination of ASDP M&E to implement ARDS is enhanced.	3-1 Number of presentations on ARDS 3-2 Number of meetings on the coordination of ARDS related issues.	3-1. Minutes of M&E TWG meetings 3-2. Minutes of M&E TWG meetings	
Activities	Inputs		
1-1 To prepare annual workplan for ARDS rolling-out. 1-2 To conduct sensitization activities for introduction of ARDS for staff in Regions and LGAs. 1-3 To conduct trainings of trainers (TOT) for ASLMs and Regional staff by M&E TWG. 1-4 To conduct trainings of trainers (TOT) for District officials by M&E TWG, ASLMs and Regional staff. 1-5 To conduct trainings on the ARDS implementation for WAEO/VAEO by District officials under supervision of M&E TWG and Regional staff.	Japanese side 1. JICA Experts -Chief Advisor/Institutional Development -Agricultural Statistics -Monitoring and Evaluation -Administrative Data Management -Coordinator	Tanzanian side 1. Counterpart assignment 2. Facility -Office space for the Project	1. Counterparts and trained LGA officials, WAEO/VAEO are continuously assigned. 2. Officials in charge of data collection at ward/village level are assigned. 3. Necessary equipment for ARDS operations at LGAs is provided. 4. LGMD2 continues its stable function.
2-1 To conduct seminars for reviewing implementation process and sharing findings among Regions and LGAs. 2-2 To conduct trainings for M&E TWG on data collection methodology, data analysis, reporting and feedback mechanism. 2-3 To conduct trainings on data collection methodology, data analysis and reporting for Regions and LGAs. 2-4 To improve Training guides for LGAs officials, WAEO/VAEO format & Integrated Data Collection Format based on the ARDS implementation process. 2-5 To improve LGMD2 and its manual based on the ARDS implementation process. 2-6 To review ASDP M&E Framework.	2. Provision of machinery and equipment for ASDP M&E TWG, RS and LGAs, -Motorbike and Bicycle -PC and Printer -Modem	3. Local expense -PC, motorbike -Training cost -Recurrent cost (Papers, printing, fuel, communication etc.)	
3-1 To report the achievements of the ARDS activities in the ASDP related meetings such as Committee of ASLMs Directors and Expanded ASDP Steering Committee. 3-2 To create awareness on the activities of ARDS for administrative officials in Regions and LGAs. 3-3 To share and coordinate the ARDS related activities/information (e.g. coordination with National Sample Census of Agriculture and National Panel Survey, budgeting for nationwide rolling-out of ARDS) with ASLMs and the Development Partners. 3-4 To support implementation process, in relation to ARDS, of preparation of ASDP Performance Report, implementation of JIR/Agricultural Sector Review and PER.	3. Training of counterpart personnel in Japan and /or over the third countries -Agriculture Statistics 4. Local expenses for the Project activities		Pre-Conditions ARDS is continued to be considered as important agricultural data collection method in ASDP M&E Framework.

Regional staff : ASDP coordinator, IT specialist, Agricultural Advisor and Livestock Advisor etc. LGAs officials : District Agricultural Livestock Development Officials(DALDO) and WAEO/VAEO.

Annex 3 Proposed Revision of PDM (Version 2)

Title: Project for Capacity Development for the ASDP Monitoring and Evaluation System Phase II
Target Area: Tanzania mainland (All the districts)
Period: Aug 2011 to June 2015
Counterpart: ASDP M&E TWG (Monitoring and Evaluation Thematic Working Group), ASLMs

Revised part is underlined.

As of 20 February 2015

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal ASDP Monitoring and Evaluation(M&E) is improved through interactive operation of relevant activities such as National Sample Census of Agriculture, National Panel Survey and Agricultural Routine Data System (ARDS).	1. The agricultural surveys and data collections including ARDS are improved through the coordination among them. 2. The meetings on ASDP M&E coordination are continuously conducted.	- Related reports such as M&E Performance Report, JIR, ASR - Interview with counterparts	
Project Purpose ASDP M&E is conducted on the basis of national agricultural data collected through improvement of ARDS.	1. Utilization of data collected through ARDS by ASDP JIR etc. 2. Number of DADPs which utilize data analysis through ARDS	1. M&E Performance Report, JIR, ASR, Interview with counterparts 2. DADPs	Committee of the ASLMs Directors deals with coordination of the surveys.
Outputs			LGMD2 continues its stable function.
1 ARDS is rolled out nationwide and operational.	1-1 Number of the trained trainers 1-2 Number of visits to the Web-Portal 1-3 Number of events of data download 1-4 Number of timely submission of ARDS among all the districts 1-5 Level of understanding by WAEO/VAEO on data collection method *	1-1. Training reports 1-2. ARDS-LGMD2 records 1-3. ARDS-LGMD2 records 1-4. ARDS-LGMD2 records 1-5. Interview and questionnaires to WAEO/VAEO	
2 Backstopping activities for ARDS by M&E TWG are strengthened.	2-1 Number of the trained officials on data analysis and reporting 2-2 Evaluation of the users on LGMD2, common reporting formats and training guides	2-1. Training reports 2-2. Questionnaires for the users	
3 Coordination of ASDP M&E to implement ARDS is enhanced.	3-1 Number of presentations on ARDS 3-2 Number of meetings on the coordination of ARDS related issues.	3-1. Minutes of M&E TWG meetings 3-2. Minutes of M&E TWG meetings	
Activities	Inputs		
1-1 To prepare annual workplan for ARDS rolling-out. 1-2 To conduct sensitization activities for introduction of ARDS for staff in Regions and LGAs. 1-3 To conduct trainings of trainers (TOT) for ASLMs and Regional staff by M&E TWG. 1-4 To conduct trainings of trainers (TOT) for District officials by M&E TWG, ASLMs and Regional staff. 1-5 To conduct trainings on the ARDS implementation for WAEO/VAEO by District officials under supervision of M&E TWG and Regional staff.	Japanese side 1. JICA Experts -Chief Advisor/Institutional Development -Agricultural Statistics -Monitoring and Evaluation -Administrative Data Management -Coordinator 2. Provision of machinery and equipment for ASDP M&E TWG, RS and LGAs, -Motorbike and Bicycle -PC and Printer -Modem 3. Training of counterpart personnel in Japan and /or over the third countries -Agriculture Statistics 4. Local expenses for the Project activities	Tanzanian side 1. Counterpart assignment 2. Facility -Office space for the Project 3. Local expense -PC, motorbike -Training cost -Recurrent cost (Papers, printing, fuel, communication etc.)	1. Counterparts and trained LGA officials, WAEO/VAEO are continuously assigned. 2. Officials in charge of data collection at ward/village level are assigned. 3. Necessary equipment for ARDS operations at LGAs is provided. 4. LGMD2 continues its stable function.
2-1 To conduct seminars for reviewing implementation process and sharing findings among Regions and LGAs. 2-2 To conduct trainings for M&E TWG on data collection methodology, data analysis, reporting and feedback mechanism. 2-3 To conduct trainings on data collection methodology, data analysis and reporting for Regions and LGAs. 2-4 To improve Training guides for LGAs officials, WAEO/VAEO format & Integrated Data Collection Format based on the ARDS implementation process. 2-5 To improve LGMD2 and its manual based on the ARDS implementation process. 2-6 To review ASDP M&E Framework.			
3-1 To report the achievements of the ARDS activities in the ASDP related meetings such as Committee of ASLMs Directors and Expanded ASDP Steering Committee. 3-2 To create awareness on the activities of ARDS for administrative officials in Regions and LGAs. 3-3 To share and coordinate the ARDS related activities/information (e.g. coordination with National Sample Census of Agriculture and National Panel Survey, budgeting for nationwide rolling-out of ARDS) with ASLMs and the Development Partners. 3-4 To support implementation process, in relation to ARDS, of preparation of ASDP Performance Report, implementation of JIR/Agricultural Sector Review and PER.			Pre-Conditions ARDS is continued to be considered as important agricultural data collection method in ASDP M&E Framework.

Regional staff : ASDP coordinator, IT specialist, Agricultural Advisor and Livestock Advisor etc. LGAs officials : District Agricultural Livestock Development Officials(DALDO) and WAEO/VAEO.

* The data collection method for this indicator involves WAEO/VAEO and LGA officers.

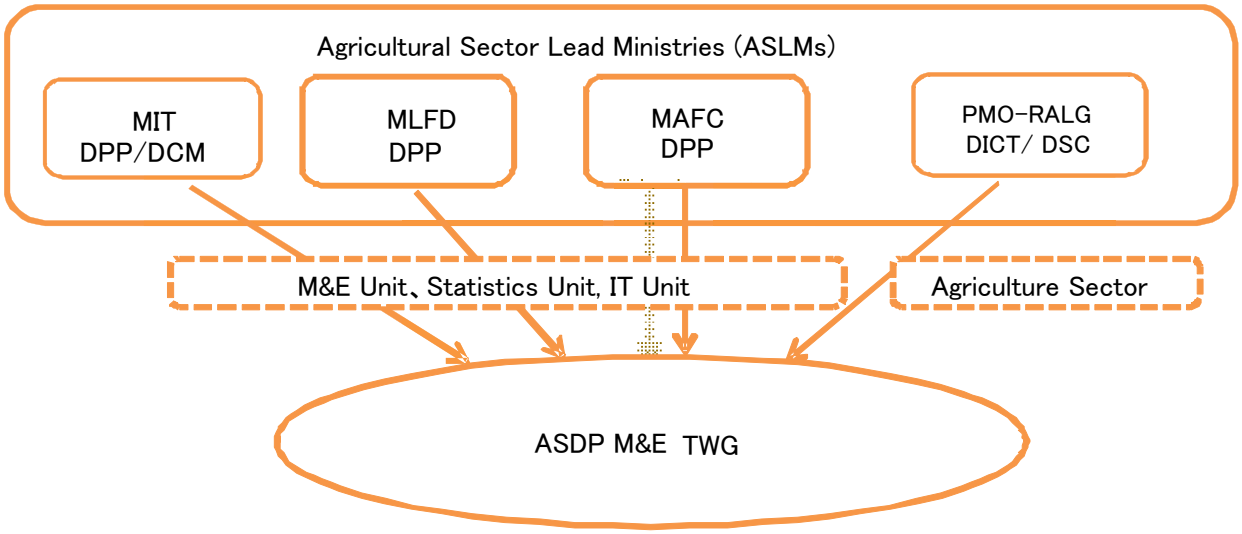
Annex 2: Results of the Project

Dispatch of Experts

FY	Name	Task	Duration of dispatch
2011/12	Fuminori Arai	Chief Advisor/ Institutional Development	6 ～25 December, 2011 (20 days) 13 April～23 June, 2102 (72days))
	Michio Watanabe	Deputy Chief Advisor /Monitoring and Evaluation 1/ Agricultural Statistics 1	15 August ～23 September, 2011 (40days) 19 October ～2 December, 2011 (45days) 15 January～18 February, 2012 (35days)
	Kyoko Akasaka	Monitoring and Evaluation 2	15 August～22 October, 2011 (69days) 28 January ～23 June, 2012(148days)
	Issei Jinguji	Agricultural Statistics 2	19 March ～1 June, 2012 (75days)
	Chisato Tanaka	Administrative Data Management	12 September ～23 December, 2011 (103days) 17 January～15 April, 2012 (90days)
	Koji Ishikawa	Training Planning	17 April～23 June, 2012 (68days)
	Ryosuke Sakumasu	Coordinator/ Monitoring and Evaluation Support	5 September～5 November, 2011(62days) 19 March～19 April, 2012 (32days)
	Eiko Shiokawa	Coordinator/ Monitoring and Evaluation Support	15 May ～23 June, 2012 (40days)
2012/13	Fuminori Arai	Chief Advisor/ Institutional Development	25 September ～28 November, 2012 (65days) 9 January ～22 February, 2013 (45days) 30 April ～23 June, 2013 (55days)
	Michio Watanabe	Deputy Chief Advisor /Monitoring and Evaluation 1/ Agricultural Statistics 1	22 August～20 September, 2012 (30days) 23 November～22 December, 2012 （30days） 8 Aril ～7 May, 2013 (30days)
	Kyoko Akasaka	Monitoring and Evaluation 2	2 September～15 November, (75days) 15 January～28 February, 2013 (45days) 20 March ～ 22 June, 2013 (95days)
	Issei Jinguji	Agricultural Statistics 2	26 September ～ 9 December, 2012 (75days)
	Kayoko Miyao	Administrative Data Management1	22 August ～20 October, 2012 (60days) 15 January ～ 15 March, 2013 (60days)
	Yukusel Hakan	Administrative Data Management2	17 September ～ 31 October, 2012 (45days)
	Eiko Shiokawa	Coordinator/ Monitoring and Evaluation Support	22 August ～ 5 October, 2012 (45days) 1 November ～ 20 December, 2012 (50days) 25 February ～ 15 April, 2013 (50days) 10 May ～ 23 June, 2013 (45days)
2013/14	Fuminori Arai	Chief Advisor/ Institutional Development	25 September ～ 27 October, 2013 (33 days) 4 November ～ 30 November, 2013 (27 days) 3 February ～ 8 April, 2014 (65 days) 9 May ～ 22 June, 2013 (45 days)
	Michio Watanabe	Deputy Chief Advisor /Monitoring and Evaluation 1/ Agricultural Statistics	22 August ～ 20 September, 2013 (30 days) 22 November ～ 21 December, 2013 (30 days) 14 April ～ 13 May 2014 (30 days)
	Kyoko Akasaka	Monitoring and Evaluation 2/ Training Planning 1	22 August ～ 20 September, 2013 (30 days) 14 October ～ 13 November, 2013 (31days) 9 January ～ 3 March, 2014 (54days) 2 May ～ 29 June, 2014 (59 days)

FY	Name	Task	Duration of dispatch
	Nobuyuki Yasui	Training Planning 2	22 August ～ 5 October, 2013（45days） 16 March ～ 29 April, 2014（45days）
	Kayoko Miyao	Administrative Data Management1	7 October ～ 1 November, 2013 (26 days) 16 January ～ 14 February, 2014（30days） 19 May ～ 21 June, 2014（34days）
	Yuksel Hakan	Administrative Data Management2	16 November ～ 20 December, 2013 (35days) 18 March ～ 1 May, 2014 (45days)
	Hanako Tsutsumi	Coordinator/ Monitoring and Evaluation Support	20 October ～ 6 December, 2013 (48 days) 20 February ～ 24 April, 2014 (64days) 9 May ～ 25 June, 2014 (48days)
2014/15	Fuminori Arai	Chief Advisor/ Institutional Development	30 September ～ 23 November, 2014 (55 days) 7 February ～ 23 March, 2015 (45 days) 7 ～ 11 May, 17 May ～ 30 June, 2015 (50 days)
	Michio Watanabe	Deputy Chief Advisor /Monitoring and Evaluation 1/ Agricultural Statistics	26 August ～ 15 September, 2014 (21 days) 19 November ～ 22 December, 2014 (34 days) 11 January ～14 February, 2015 (35 days)
	Kyoko Akasaka	Monitoring and Evaluation 2/ Training Planning 1	25 October ～ 23 December, 2014 (60 days) 31 March ～ 28 June, 2015 (90 days)
	Nobuyuki Yasui	Training Planning 2	30 September ～ 3 November, 2014 (35 days) 22 January ～ 20 February, 2015 (30 days)
	Kayoko Miyao	Administrative Data Management1	26 August ～ 24 September, 2014 (30 days) 14 January ～22 February, 2015 (40 days) 7 May ～26 May, 2015 (20 days)
	Yuksel Hakan	Administrative Data Management2	29 October ～ 12 December, 2014 (45 days) 5 March ～ 18 April, 2015 (45 days)
	Mana Jingushi	Coordinator/ Monitoring and Evaluation Support	26 August ～ 31 October, 2014 (67 days) 17 February ～ 5 April, 2015 (48 days) 17 May ～ 30 June, 2015 (45 days)

List of Counterpart



FY	Name of C/P	Profession	Duration	Name of experts	Duration of employment
2011/12	John Maige	Economics	August 2011～ June 2012	Fuminori Arai Michio Watanabe Kyoko Akasaka Issei Jinguji Chisato Tanaka Koji Ishikawa Ryosuke Sakumasu Eiko Shiokawa	4 years
	Elias Masunga	Economics			4 years
	Oswald Ruboha	Statistics			3 years
	Catherine Joseph	Economics			3 years
	Sophia Mlote	Economics			4 years
	Da Silva Mlau	Statistics			3 years
	R. Mwaliko	Agronomics			4 years
	Irene Lucas	Economics			3 years
	Malemi Nyanda	Statistics			3 years
	Kassim Msuya	Economics			4 years
	Robert Chacha	Economics			3 years
	Tumaini Maganga	Economics			2 years
	Happy Pascal	Economics			2 years
	Loyce Lubonera	Economics			2 years
	Phillip Shayo	IT			1 years
	Stephen Michael	Economics			3 years
	Raphael Sendalo	IT			1 years
	Abel Anthony	Statistics			2 years
	Pricilla Joseph	IT			2 years
	Genya Genya	Economics			4 years
	Elizabeth Msengi	Economics			2 years
	John Chassama	Economics			2 years

FY	Name of C/P	Profession	Duration	Name of experts	Duration of employment
2012/13	John Maige	Economics	August 2012～	Fuminori Arai	5 years
	Elias Masunga	Economics	June 2013	Michio Watanabe	5 years
	Oswald Ruboha	Statistics		Kyoko Akasaka Issei Jinguji	4 years
	Catherine Joseph	Economics		Kayoko Miyao	4 years
	Sophia Mlote	Economics		Hakan Ykusel Eiko Shiokawa	5 years
	Da Silva Mlau	Statistics			4 years
	R. Mwaliko	Agronomics			5 years
	Irene Lucas	Economics			4 years
	Malemi Nyanda	Statistics			4 years
	Kassim Msuya	Economics			5 years
	Robert Chacha	Economics			4 years
	Tumaini Maganga	Economics			3 years
	Happy Pascal	Economics			3 years
	Loyce Lubonera	Economics			3 years
	Phillip Shayo	IT			2 years
	Salim Mwinjaka	Economics			1 years
	Longin Nsiima	Statistics			1 years
	Stephen Michael	Economics			4 years
	Raphael Sendalo	IT			2 years
	Abel Anthony	Statistics			3 years
	Pricilla Joseph	IT			3 years
	Genya Genya	Economics			5 years
	Elizabeth Msengi	Economics			3 years
	John Chassama	Economics			3 years
	Festo Mwemutsi	Statistics			1 years
2013/14	John Maige	Economics	August 2013～	Fuminori Arai	6 years
	Elias Masunga	Economics	June 2014	Michio Watanabe	6 years
	Oswald Ruboha	Statistics		Kyoko Akasaka Nobuyuki Yasui	5 years
	Catherine Joseph	Economics		Kayoko Miyao	5 years
	Sophia Mlote	Economics		Hakan Yuksel Hanako Tsutsumi	6 years
	Da Silva Mlau	Statistics			5 years
	R. Mwaliko	Agronomics			6 years
	Yasinta Tabu	Statistics			1 year
	Irene Lucas	Economics			5 years
	Malemi Nyanda	Statistics			5 years
	Kassim Msuya	Economics			6 years
	Robert Chacha	Economics			5 years
	Tumaini Maganga	Economics			4 years
	Happy Pascal	Economics			4 years

FY	Name of C/P	Profession	Duration	Name of experts	Duration of employment
	Loyce Lubonera	Economics			4 years
	Phillip Shayo	IT			3 years
	Salim Mwinjaka	Economics			2 years
	Longin Nsiima	Statistics			2 years
	Stephen Michael	Economics			5 years
	Raphael Sendalo	IT			3 years
	Abel Anthony	Statistics			4 years
	Pricilla Joseph	IT			4 years
	Genya Genya	Economics			6 years
	Elizabeth Msengi	Economics			4 years
	John Chassama	Economics			4 years
	Festo Mwemutsi	Statistics			2 years
2014/15	John Maige	Economics	August 2014～	Fuminori Arai	7 years
	Elias Masunga	Economics	June 2015	Michio Watanabe	7 years
	Oswald Ruboha	Statistics		Kyoko Akasaka Nobuyuki Yasui	6 years
	Catherine Joseph	Economics		Kayoko Miyao	6 years
	Sophia Mlote	Economics		Hakan Yuksel Mana Jingushi	7 years
	Da Silva Mlau	Statistics			6 years
	R. Mwaliko	Agronomics			7 years
	Yasinta Tabu	Statistics			2 years
	Irene Lucas	Economics			6 years
	Malemi Nyanda	Statistics			6 years
	Kassim Msuya	Economics			7 years
	Robert Chacha	Economics			6 years
	Tumaini Maganga	Economics			5 years
	Happy Pascal	Economics			5 years
	Loyce Lubonera	Economics			5 years
	Phillip Shayo	IT			4 years
	Salim Mwinjaka	Economics			3 years
	Longin Nsiima	Statistics			3 years
	Stephen Michael	Economics			6 years
	Raphael Sendalo	IT			4 years
	Abel Anthony	Statistics			5 years
	Pricilla Joseph	IT			5 years
	Genya Genya	Economics			7 years
	Elizabeth Msengi	Economics			5 years
	John Chassama	Economics			5 years
	Festo Mwemutsi	Statistics			3 years

Counterpart Training

FY	Name of trainee	Duration	Field	Contents of the training/ training institution	Position	Current Position
2011/12	John Maige	August ～ October, 2011	JICA training course	Planning and Designing of Agricultural Statistics for Agricultural Policy Making/ JICA Tsukuba	Head of M&E unit, DPP, MAFC	Head of M&E unit, DPP, MAFC
	Faraja Komba Pricilla Joseph	January ～ April, 2012	JICA training course	ICT for Agricultural Information Use/ JICA Hokkaido	IT Management Unit, MAFC DPP (IT), MLFD	As in the left
2012/13	Oswald Ruboha	August ～ October, 2012	JICA training course	Planning and Designing of Agricultural Statistics for Agricultural Policy Making/ JICA Tsukuba	Section Manager (M&E), DPP, MAFC	Assist. Director (M&E and Statistics), DPP, MAFC
	Kasim Mwarabu Tumaini Maganga Happy Pascal Stephen Michael Salim Mwinjaka John Chassama	February, 2013	Counterpart training	Monitoring and evaluation system and data collection system in Japan.	M&E Unit, DPP, MAFC M&E Unit, DPP, MAFC M&E Unit, DPP, MAFC M&E Unit, DPP, MLFD Assist. Director, DPP, MLFD M&E, DCM, MIT	As in the left
	Phillip Shayo Raphael Sendaro	January ～ April, 2013	JICA training course	ICT for Agricultural Information Use/ JICA Hokkaido	IT Unit, MAFC (IT) DPP, MLFD	As in the left
	Abel Mhehe	August ～ October, 2013	JICA training course	Planning and Designing of Agricultural Statistics for Agricultural Policy Making/ JICA Tsukuba	Statistics, DPP, MLFD	As in the left

Equipment Provided

1) List of equipment

No.	Arrival	Name of equipment	Model	Maker	Price	No. Unit	Section	Place	Procurement	Purpose	Status/ Condition*1
FY 2011/12											
1	14, Aug. 2011	Projector	NP-V260XJD	NEC	@JPY 69,000	1	DPP	MAFC	Japan	Facilitate activities of TC	Good
2	16, Sept. 2011	Photocopier	QWH 0905755	Kyocera	@US$ 7,395.76	1	DPP	MAFC	Japan		Good
3	28, Nov. 2011	Computer	Inspiron 5040	Dell	@US$ 1,190	9	RAA	Regions of Mwanza, Mara, Kagera, Kigoma, Shinyanga	Tanz.		Good
4	28, Nov. 2011	Printer	Laser Jet P1606DN	HP	@US$ 242	9	RAA		Tanz.		Good
5	28, Nov. 2011	Stabilizer	2000VA	Solatec	@US$ 90	9	RAA		Tanz.		Good
6	6, Jan. 2012	Projector	EB-X12	Epson	@JPY 71,600	1	DPP	MAFC	Japan		Good
7	19, Jan. 2012	Scanner	Scanjet 5590	HP	@US$ 700	1	DPP	MAFC	Tanz.		Good
8	18, May, 2012	Computer	ProBook 4530s	HP	@US$ 1,350	14	TWG	MAFC, MLFD, MIT	Tanz.		Good
FY 2012/13											
1	19, Nov. 2012	Computer	ProBook 4530s	HP	@US$ 1,300	4	RAA	Regions of Iringa, Rukwa, Mbeya, Ruvuma	Tanz.	Facilitate activities of TC	Good
2	19, Nov. 2012	Printer	Laserjet P2055 DN	HP	@US$ 490	4	RAA		Tanz.		Good
3	19, Nov. 2012	Stabilizer	2000VA	Jacob	@US$ 96	4	RAA		Tanz.		Good
4	15, May 2013	Computer	ProBook 4540	HP	@US$ 1,350	6	RAA	Regions of Tabora, Singida, Lindi, Mtwara, Pwani, DSM	Tanz.		Good
5	15, May 2013	Printer	Laserjet 400m401 DN	HP	@US$ 485	6	RAA		Tanz.		Good
6	15, May 2013	Stabilizer	1500VA	Tronic	@US$ 99	6	RAA		Tanz.		Good

No.	Arrival	Name of equipment	Model	Maker	Price	No. Unit	Section	Place	Procurement	Purpose	Status/ Condition*1
FY 2013/14											
1	25, Nov. 2013	Computer	Probook 4540s	HP	@US$ 1,677	4	RAA	Regions of Arusha, Kilimanjaro, Manyara, Tanga	Tanz	Facilitate activities of TC	Good
2	25, Nov. 2013	Printer	Laser Jet 400m401 DN	HP	@US$ 575	4	RAA		Tanz		Good
3	25, Nov. 2013	Stabilizer	1500VA	Tronic	@US$ 100	4	RAA		Tanz		Good
4	15, Apr. 2014	Computer	3521 Inspiron	Dell	@US$ 1,035.5	30	DALDO	Regions of Dodoma, Geita, Kagera, Katavi, Kigoma, Mara, Mbeya, Morogoro, Mtwara, Njombe, Rukwa, Ruvuma, Shinyanga, Simiyu, Singida, Tabora	Tanz		Good
5	15, Apr. 2014	Printer	Laser Jet 400m401 DN	HP	@US$ 295	30	DALDO		Tanz		Good
6	15, Apr. 2014	Stabilizer	1500VA	Tronic	@US$ 65	30	DALDO		Tanz		Good
7	15, Apr. 2014	Internet Modem		HUAWEI	@US$ 32	30	DALDO		Tanz		Good
8	15, Apr. 2014	USB	16 GB	SanDisk	@US$ 16	30	DALDO		Tanz		Good
FY 2014/15											
1	17, Dec. 2014	Computer	Inspiron 3537	Dell	@Tsh 1,496,000	1	TWG	M&E TWG	Tanz	Facilitate activities of TC	Good
2	17, Dec. 2014	Computer	Inspiron 3521	Dell	@Tsh 1,032,500	4	TWG		Tanz		Good
3	27, Apr. 2015	Computer	Inspiron 3542	Dell	@Tsh 1,270,000	3	TWG		Tanz		Good

Note *1: These status/ conditions are tentative. Inquiry is under way for the updated status / condition of equipment.

(Equipment for project operation)

No.	Arrival	Name of equipment	Model	Maker	Price	No. Unit	Section	Place	Procurement	Purpose	Status/ Condition
1	5, Sept. 2011	Fax	MFC7220	Brother	@US$ 354	1	DPP	MAFC	Tanz.	Facilitate activities of TC	Good

(Equipment procured by JICA)

No.	Arrival	Name of equipment	Model	Maker	Price	No. Unit	Section	Place	Procurement	Purpose	Status/ Condition
FY 2011/12											
1	19, Jan. 2012	Vehicle	Pajero	MITSUBISHI	@US$ 44,350	2	DPP	MAFC	Tanz.	Facilitate activities of TC	Good
2	23, Jan. 2012	Computer	Inspiron N5110	Dell	@US$ 1,133	59	DALDO	LGAs of Mwanza, Mara, Kagera, Kigoma, Shinyanga, Rukwa, Mbeya, Ruvuma, Iringa	Tanz.		Good
3	23, Jan. 2012	Printer	Laser Printer P2055(dn)	HP	@US$ 360	59	DALDO		Tanz.		Good
4	23, Jan. 2012	Stabilizer	1500VA	Tronic	@US$ 69	59	DALDO		Tanz.		Good
5	23, Jan. 2012	Internet Modem		HUAWEI	@Tsh 55,000	59	DALDO		Tanz.		Good
6	23, Jan. 2012	USB Memory stick	16 GB	Transcend	@US$ 24	59	DALDO		Tanz.		Good
7	11, May 2012	Motor bike	YBR125	YAMAHA	@US$ 2,078	59	DALDO		Tanz.		Good
8	7, June 2012	Motor bike	XR125	HONDA	@US$ 2,030	59	DALDO		Tanz.		Good
FY 2012/13											
1	21, Feb. 2013	Computer	HP 650	HP	@US$ 655	35	DALDO	LGAs of Regions of Tabora, Singida,	Tanz.	Facilitate activities of TC	Good
2	21, Feb. 2013	Printer	Pro 400 401dn	HP	@US$ 337	35	DALDO		Tanz.		Good

No.	Arrival	Name of equipment	Model	Maker	Price	No. Unit	Section	Place	Procurement	Purpose	Status/ Condition
3	21, Feb. 2013	Stabilizer	1500VA	Tronic	@US$ 63	35	DALDO	Lindi, Mtwara, Pwani, DSM	Tanz.		Good
4	21, Feb. 2013	Internet Modem		HSDPA	@Tsh 35,000	35	DALDO		Tanz.		Good
5	21, Feb. 2013	USB Memory stick	16 GB	Transcend	@US$ 15	35	DALDO		Tanz.		Good
6	22, Mar. ～ 29, Apr. 2013	Motor bike	XR125	HONDA	@Tsh 1,636,862	56	DALDO		Tanz.		Good
FY 2013/14											
1	10, Feb. 2014	Internet Modem		Airtel	N/A	31	DALDO	LGAs of Arusha, Kilimanjaro, Manyara, Tanga	Tanz.	Facilitate activities of TC	Good
2	10, Feb. 2014	Computer	250GI	HP	@US$ 999	31	DALDO		Tanz.		Good
3	10, Feb. 2014	Printer	Pro 400 401dn	HP	@US$ 294	31	DALDO		Tanz.		Good
4	10, Feb. 2014	Stabilizer	1500VA	Tronic	@US$ 65	31	DALDO		Tanz.		Good
5	10, Feb. 2014	USB Memory Stick	16 GB	Transcend	@US$ 17	31	DALDO		Tanz		Good
FY 2014/15											
1	21, Nov. 2014 ～ Feb. 2015	Motorbike	XL 125 LKC	HONDA	@Tsh 1,739,869	86[*2]	DALDO	LGAs of Mtwara, Dodoma, Shingida, Geita, Kigoma, Morogoro, Shinyanga, Shimiyu, Mara, Kagera, Njombe, Ruvuma,	Tanz	Facilitate activities of TC	Good

No.	Arrival	Name of equipment	Model	Maker	Price	No. Unit	Section	Place	Procurement	Purpose	Status/ Condition
								Mbeya, Rukwa, Katavi, Tabora, Tanga, Kilimanjaro, Arusha, Manyara			

Note *2: As of the end of December 2014, 76 units have been delivered. However the procurement procedure is already well under way. So here is the total number of motorbikes 86 is reported. The remaining 10 units are expected to be delivered in February 2015.

Seminar/Training/Workshop

FY	Course name	Date	Duration	No. of participants	Target	Remarks
2011/12	TOT to ASLMs for LGA Training	19-24, Sept. 2011	6 days	34	ASLMs：M&E TWG, Statistics Unit, ICT Unit, Region：ASDP Coordinators	
	TOT to LGAs for VAEO/WAEO Training	7-8, Nov. 12-13, Dec. 2011	2 days× 34 LGAs	145	LGAs：DALDO, DS, DME, DPLO	34 LGAs (5 Regions of Lake Zone
	1st VAEO/WAEO Training	9-19, Nov. 14-20, Dec.2011	2 daysx 34 LGAs	1,323	VAEO/WAEO	34 LGAs (5 Regions of Lake Zone
	Excel Training	14-17, Feb.	4 days	14	ASLMs：M&E TWG,	In-house training
	Excel Training	20-24, Feb. 27 Feb. -22 Mar. 2012	5 days × 4 locations	118	Region：RAA, RLA LGA：DS, DME	34 LGAs (5 Regions of Lake Zone 8 LGAs (Pilot 2 Regions)
	LGMD2 Technical Training	27-28, Mar. 2012	2 days	16	ASLMs：ICT staff Region：ICT staff	Regions of Lake Zone Pilot 2 Regions
	LGMD2 Operational Training	2-13, Apr. 2012	5 days	14	ASLMs：M&E TWG	In-house training
	LGMD2 Operational Training	16-21, Apr. 2012	5 days × 4 locations	118	Region：RAA, RLA LGA：DS, DME	34 LGAs (5 Regions of Lake Zone 8 LGAs (Pilot 2 Regions)
	2nd VAEO/WAEO Training	23, Apr. – 8, May, 2012	2 days × 46 LGAs	1,241	VAEO/WAEO	Newly employed VAEO/WAEO 34 LGAs (5 Regions of Lake Zone 12 LGAs (Pilot 2 Regions)
	Sensitization Workshop	15-16, June, 2012	2 days	140	Region：ASDP Coordinator LGA：DALDO,DS	58 LGA of 10 Regions (2012/13 Roll-out) 4 Regions (2013/14 Rollout)
2012/13	TOT to LGAs for VAEO/WAEO Training	10-11, Sept. 2012	2 days × 3 Locations	129	Region：RAA, RLA LGA：DALDO, DS, DME, DPLO	26 LGAs of 6 Regions of Southern Highland
	VAEO/WAEO Training	12-29, Sept. 2012	2 days × 26 LGAs	2,049	VAEO/WAEO	26 LGAs of 6 Regions of Southern Highland
	Backstopping Workshop	31, Oct. – 2, Nov. 2012	3 days× 2 Location	117	Region：ASDP Coordinator LGA：DALDO, DS, DME	34 LGAs of 5 Regions of Lake Zone
	TOT on LGMD2 Training	26, Nov. -1, Dec. 2012	6 days	18	Region：RAA, RLA,ICT	6 Regions of Southern Highland

FY	Course name	Date	Duration	No. of participants	Target	Remarks
	Excel/LGMD2 Training	3-11, Dec. 2012	8 days × 4 Locations	52	LGA：DS, DME	29 LGAs of 6 Regions of Southern Highland
	TOT to LGAs for VAEO/WAEO Training	4-5, 25-26, Feb.2013	2days × 3 Locations	161	Region：RAA, RLA LGA：DALDO, DS, DME, DPLO	37 LGAs of 6 Regions of Central, South eastern and Coastal
	VAEO/WAEO Training	6-19, 27, Feb. – 15 Mar. 2013	2days × 37 LGAs	1,905	VAEO/WAEO	37 LGAs of 6 Regions of Central, South eastern and Coastal
	Backstopping Workshop	10-12, Apr. 2013	3 days	74	Region：ASDP Coordinator LGA：DS, DME	26 LGAs of 6 Regions of Southern Highland
	TOT on LGMD2 Training	16-22, May, 2013	6 days	18	Region：RAA, RLA,ICT	6 Regions of Central, South eastern and Coastal
	Excel/LGMD2 Training	24 May – 1, June, 2013	8 days × 3 Locations	72	LGA：DS, DME	37 LGAs of 6 Regions of Central, South eastern and Coastal
2013/14	TOT to LGAs for VAEO/WAEO Training	16-17, Sept. 2013	2 days × 4 Locations	163	Region：RAA, RLA LGA：DALDO, DS, DME, DPLO	31 LGAs of 4 Regions of North
	VAEO/WAEO Training	18, Sept. 4, Oct. 2013	2 days × 31 LGAs	2,205	VAEO/WAEO	31 LGAs of 4 Regions of North
	Backstopping Workshop	11-13, Nov. 2013	3 days	88	Region：ASDP Coordinator LGA：DALDO, DS, DME	6 Regions of Central, South eastern and Coastal
	TOT on LGMD2i Training	2, Dec. 2013 27, Jan. 2014	2 days	24	ASLMs：M&E TWG	In-house training
	LGMD2i roll-out Training	16-17, Dec. 2013 3-4, Feb. 4-5, Feb. 5-6, Feb. 7-8, Feb. 12-13, Feb. 2014	2 days x 6 Locations	295	Region：RAA, RLA LGA：DS, DME	21 Regions in which ARDS has already started operation
	TOT on LGMD2i Training	6-8, Mar. 2014	3 days	12	Region : RAA, RLA, ICT	4 Regions of North
	LGMD2i Training	10-13, Mar. 2014	4 days	62	LGA : DS, DME	31 LGAs of 4 Regions of North
	TOT on Data Use and Analysis	25, Apr. 30, Apr. 2014	2 days	16	ASLMs：M&E TWG	In-house training

FY	Course name	Date	Duration	No. of participants	Target	Remarks
	Training on Data Use and Analysis	22-23, May. 2014	2 days	50	Region : ASDP Coordinator, RAA, RLA, ICT	25 Regions
2014/15	TOT on ARDS-LGMD2	Feb. 2015	2 days	16	ASLMs : M&E TWG	In-house training
	ARDS-LGMD2 roll-out Training	Feb.-Apr. 2015	3 days x 25 Regions	386	Region：ASDP Coordinator LGA：DALDO, DS, DME	25 Regions

Local cost from Japanese side

1) Bearing cost from JICA Tanzania Office

FY	Item	Amount (US$)
2011/12	Motor bike 118 sets	N/A
	Laptop Computer, Printer, Stabilizer, Internet Modem and USB Memory stick 59 sets	N/A
2012/ 13	Motor bike 56 sets	N/A
	Laptop Computer, Printer, Stabilizer, Internet Modem and USB Memory stick 35 sets	N/A
2013/14	Laptop Computer, Printer, Stabilizer, Internet Modem and USB Memory stick 61 sets	N/A
2014/15	Motor bike 86 sets	N/A
	Total	N/A

2) Bearing cost from TC team

FY	Item	Amount (Tsh)
2011/12	TOT training expenses for M&E TWG and Regional officers (September)	Tsh 27,377,000
	TOT training expenses for LGA officers and VAEO/WAEO training in 5 regions of Lake Zone (November – December)	Tsh 323,755,240
	Excel training expenses for 5 regions of Lake Zone and Morogoro and Dodoma Regions (February)	Tsh 55,636,200
	LGMD2 training expenses for regional ICT officers of 5 regions of Lake Zone and Morogoro and Dodoma regions (March)	Tsh 6,008,800
	LGMD2 training expenses for 5 regions of Lake Zone and Morogoro and Dodoma regions (April)	Tsh 74,184,880
	Training expenses for newly employed VAEO/WAEO of 5 regions of Lake Zone and Morogoro and Dodoma regions (April)	Tsh 283,589,800
	Backstopping workshop expenses for Morogoro and Dodoma regions (May)	Tsh 5,215,000
	Sensitization workshop expenses (June)	Tsh 64,374,700
2012/13	TOT training expenses for regional and LGA officers in 6 regions of Southern highland (September)	Tsh 39,506,700
	VAEO/WAEO training expenses in 6 regions of Southern highland(September – October)	Tsh 401,025,878
	Backstopping workshop expenses for 5 regions of Lake Zone (October)	Tsh 55,749,250
	Excel/LGMD2 training expenses for 6 regions of Southern highland (November – December)	Tsh 83,667,406
	TOT training expenses for regional and LGA officers in 6 regions of Central, South eastern and Coastal (February – March)	Tsh 49,667,537
	VAEO/WAEO training expenses in 6 regions of Central, South eastern and Coastal (February – March)	Tsh 424,911,209
	Backstopping workshop expenses for 6 regions of Southern highland (April)	Tsh 27,244,280
	Excel/LGMD2 training expenses for 6 regions of Central, South eastern and Coastal (May)	Tsh 99,445,800
	Printing expenses of newsletters and pamphlets	Tsh 7,000,000

FY	Item	Amount (Tsh)
2013/14	TOT training expenses for regional and LGA officers in 4 regions of North (September)	Tsh 46,390,100
	VAEO/WAEO training expenses in 4 regions of North (September – October)	Tsh 467,573,100
	Backstopping workshop expenses for 6 regions of Central, South eastern and Coastal (November)	Tsh 28,758,450
	LGMD2i roll-out expenses for 6 regions of Central, Coastal, Dodoma and Morogoro (December)	Tsh 21,546,964
	LGMD2i roll-out expenses for 15 regions of Lakezone, Southern highlind and South eastern (February)	Tsh 61,831,376
	LGMD2i roll-out f expenses or 4 regions of North (March)	Tsh 40,574,190
	Data use training expenses for regional officers (May)	Tsh 21,958,800
2014/15	TOT on ARDS-LGMD2 (February)	Tsh 367,300
	ARDS-LGMD2 roll-out Training (March)	Tsh 301,216,690
	Total	Tsh 3,018,576,650

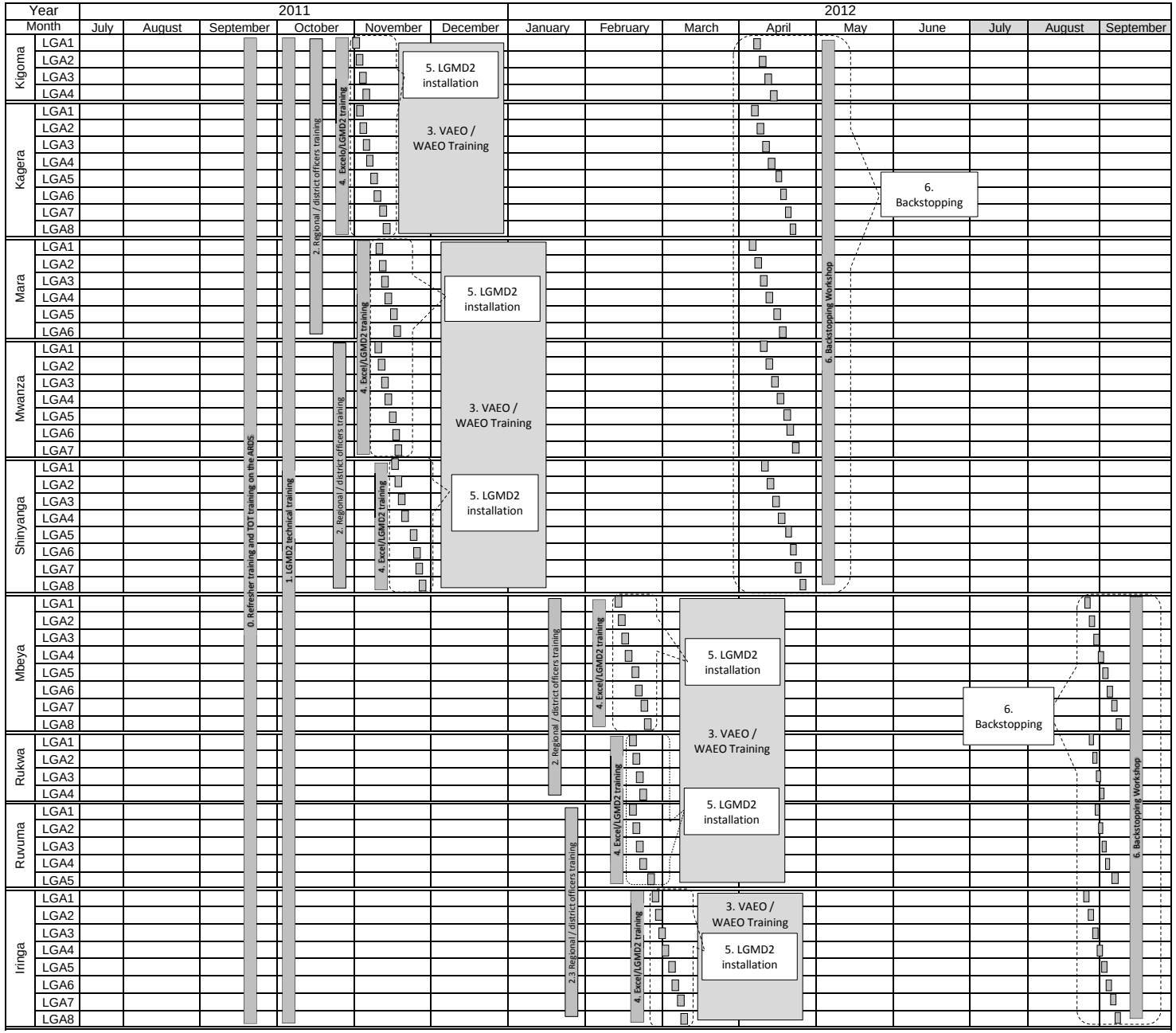
Local cost from Tanzanian side

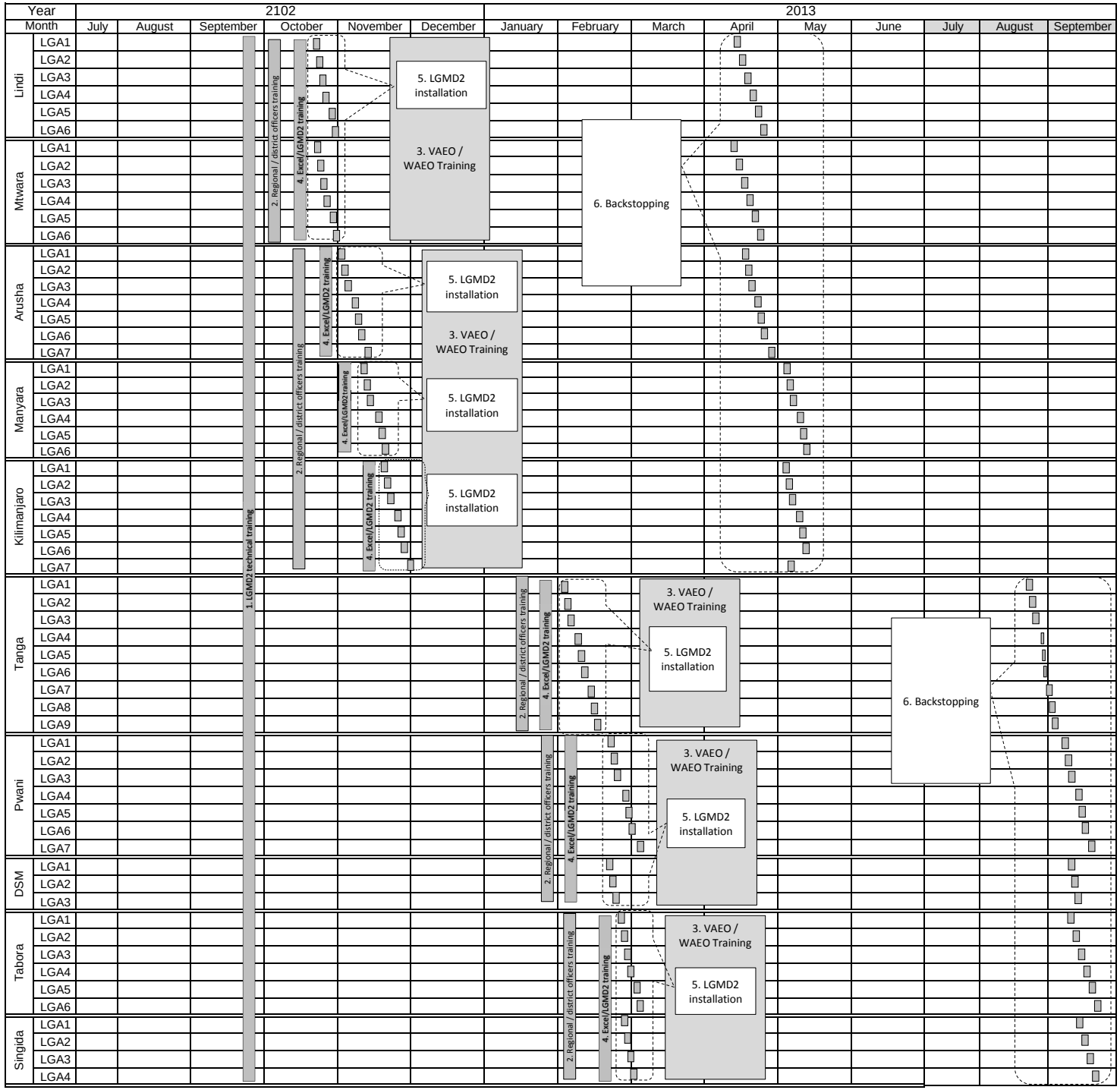
FY	Item		Estimated Amount
2011/12	TOT training expenses for LGA officers and VAEO/WAEO training in 5 regions of Lake Zone (November – December)	ASLMs	Tsh 25,354,000
2012/13	-	-	Tsh 0
2013/14	TOT training expenses for LGA officers and VAEO/WAEO training in 4 regions of North (September – October)	ASLMs	Tsh 30,275,400
	Backstopping workshop expenses for 6 regions of Central, South eastern and Coastal (November)	ASLMs	Tsh 4,965,000
	LGMD2i roll-out expenses (December - March)	ASLMs	Tsh 1,920,000
		Total	Tsh. 62,614,400

Other bearing from Tanzanian side

- Provide an office and furniture for Japanese expert team (Office space, Chairs, Lockers and Book shelves, etc.)
- Provide cars for field trips as necessary

ARDS Roll-out Plan (Original)

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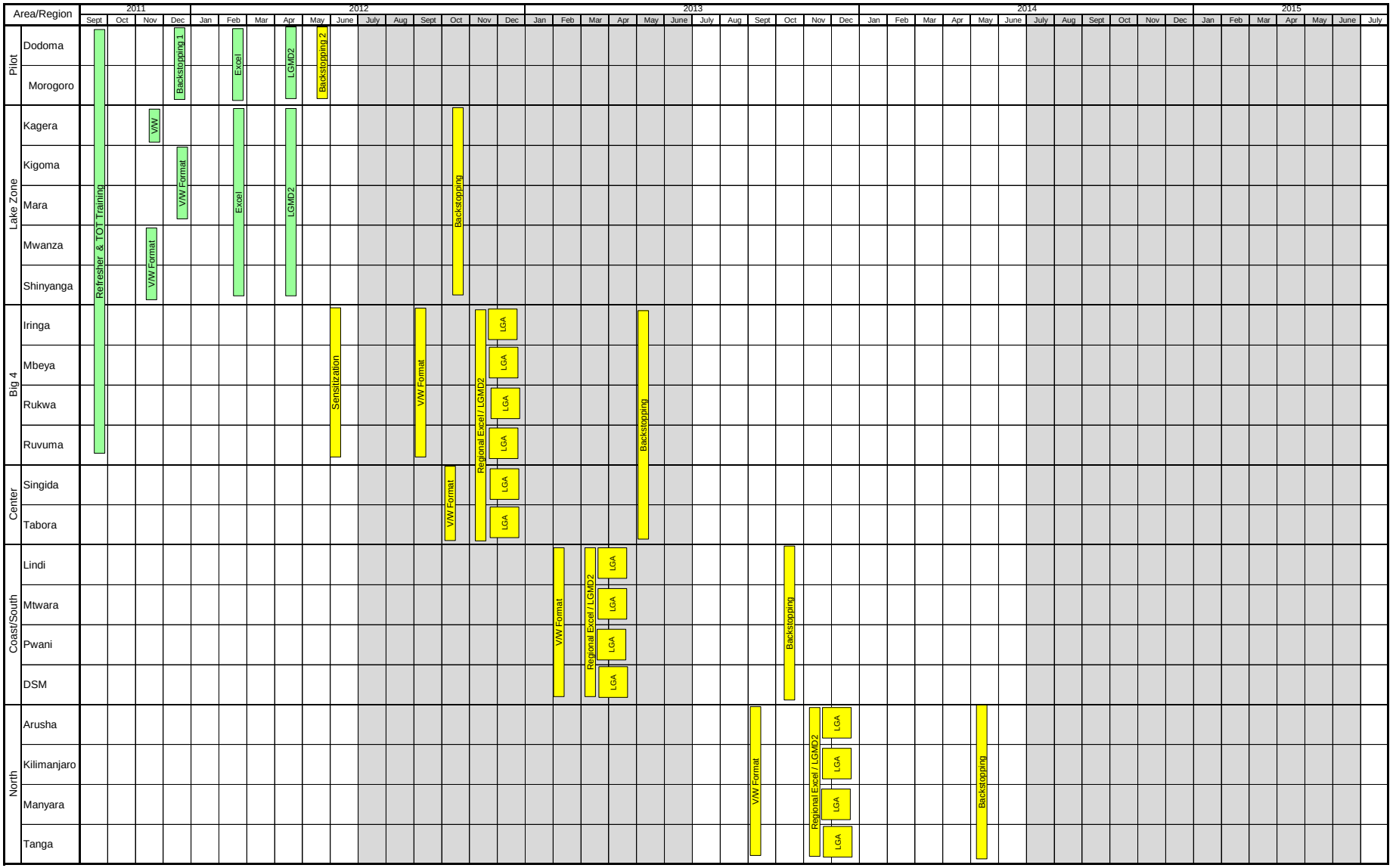
1. LGMD2 technical training
2. Regional / district officers training
4. Excel/LGMD2 training
5. LGMD2 installation
3. VAEO / WAEO Training
6. Backstopping

ARDS Roll-out Plan (Revised)



United Republic of Tanzania

AGRICULTURAL SECTOR DEVELOPMENT PROGRAM (ASDP)

AGRICULTURAL ROUTINE DATA SYSTEM (ARDS)

OPERATION GUIDE

(Ver. 09)

April 2015

ASDP M&E THEMATIC WORKING GROUP

ARDS Operation Guide
Table of Contents

Attachment:

1. The letter “MFUMO WA UPATIKANAJI WA TAARIFA ZA SEKTA YA KILIMO NCHINI (AGRICULTURAL ROUTINE DATA SYSTEM - ARDS)” issued from PMO-RALG on 09/25/2014
2. ARDS-LGMD2 User Manual

ACRONYM

ACBG	Agricultural Capacity Building Grant
AEBG	Agricultural Extension Block Grant
ARDS	Agricultural Routine Data System
ASDP	Agricultural Sector Development Programme
ASDS	Agricultural Sector Development Strategy
ASLMs	Agricultural Sector Lead Ministries (MAFC, MLFD, MIT and PMO-RALG)
ASSP	Agricultural Statistics Strategic Plan
BFSC	Basket Fund Steering Committee
DADG	District Agricultural Development Grant
DADP	District Agricultural Development Plan
DAICO	District Agriculture, Irrigation and Cooperative Officer
DALDO	District Agricultural and Livestock Development Officer
DC	District Council
DC	District Commissioner
DED	District Executive Director
DLFDO	District Livestock and Fishery Development Officer
DMEO	District Monitoring and Evaluation Officer
DPLO	District Planning Officer
DPP	Department / Director of Policy and Planning
DP	Development Partner
DS	District Statistician
FAO	Food and Agriculture Organization
FY	Fiscal Year
GoT	Government of Tanzania
IT	Information Technology
IDCF	Integrated Data Collection Format
IDCJ	International Development Center of Japan
JICA	Japan International Cooperation Agency
LGA	Local Government Authority
LGMD	Local Government Monitoring Database
MAFC	Ministry of Agriculture, Food Security and Cooperatives
M&E	Monitoring and Evaluation
MC	Municipal Council
MIT	Ministry of Industry and Trade
MKUKUTA	Mkakati wa Kukuza Uchumi na Kupunguza Umasikini Tanzania (National Strategy for Growth and Reduction of Poverty)
NBS	National Bureau of Statistics
NPS	National Panel Survey
NSCA	National Sample Census of Agriculture
NSGRP	National Strategy for Growth and Reduction of Poverty
PDM	Project Design Matrix
PMO-RALG	Prime Minister's Office - Regional Administration and Local Government
RAA	Regional Agriculture Advisor
RAS	Regional Administrative Secretary
RLA	Regional Livestock Advisor
RS	Regional Secretariat
SAGCOT	Southern Agricultural Growth Corridor of Tanzania
TAFSIP	Tanzania Agriculture and Food Security Investment Plan

TOR	Terms of Reference
TOT	Training of Trainers
TSMP	Tanzania Statistical Master Plan
TWG	Thematic Working Group
UCC	University Computing Centre
VADP	Village Agricultural Development Plan
VAEO	Village Agricultural Extension Officer
WAEO	Ward Agricultural Extension Officer
WB	World Bank

CHAPTER I

1. Introduction

1.1 Purpose of the ARDS Operation Guide

The ARDS Operation Guide is an official guidance document for the operation of the ARDS which is formally authorized for the agricultural data collection at LGA level by the government letter "MFUMO WA UPATIKANAJI WA TAARIFA ZA SEKTA YA KILIMO NCHINI (AGRICULTURAL ROUTINE DATA SYSTEM - ARDS)" issued from PMO-RALG on 09/25/2014 (Attachment 1.). The purpose of this Guide is to provide guidance and direction on how to operate and use ARDS in practical terms. The ARDS operation must follow and be ruled by this document.

1. 2 Scope of the ARDS Operation Guide

This Guide specifies every important aspects of the ARDS operation. The areas and subjects covered by this document are as follows.

No.	Area/Subject
1	Purpose of ARDS
2	Composition of ARDS
3	Institutional requirements for ARDS
4	Data flow of ARDS
5	Data to be collected and transmitted
6	Operation components of ARDS
7	Operation cycle of ARDS
8	Tasks of major actors
9	Communications and consultations among stakeholders
10	Attachment

This Guide is intended mainly for LGA officers (DALDO (DAICO, DLFO or equivalent officer), District M&E officer (DMEO), District Agricultural Statistician (DS), District Subject Matter Specialists in agriculture, and any other district officers who support field extension officers in terms of agricultural data collection). However, this Guide must also be referred to by Regional officers and the National level actors, i.e. the M&E TWG, the IT Section and the Statistics Units of ASLMs, whenever they engage in the ARDS operation. This Guide will be routinely reviewed and revised as needs arise.

2. Outline of ARDS

2.1 Purpose of ARDS

The present ARDS to which this Guide specifies the operation is an improved version of the previously existing one. The present ARDS brought improvement to the old by introducing the following:

- Standardized formats of data collection with clear definitions of data to be collected
- Clear instruction on the method and channels of data collection, compilation and transmissions.
- Electronically arranged data/ report transmission, browsing and utilization system

Data collection and reporting are an integral part of Monitoring and Evaluation (M&E) and Statistics for an agricultural development policy and planning. Without systematic and timely

provision of necessary data, a proper M&E cannot be conducted. Furthermore, in order for M&E to be effective, the data collected must be accurate, up to date, and accessible. The ARDS has been re-activated with improvement for this purpose.

The purposes of this improved ARDS can be summarized as follows.

- ❑ To provide agricultural data on a timely manner for district officers for their reporting, analyzing, planning, monitoring and evaluation of the agricultural sector.
- ❑ To provide agricultural data for regional and national government officers for their overall reporting, analyzing, monitoring and planning of the agricultural sector.
- ❑ To provide information so that national and regional level estimates of annual sample surveys are broken down to district estimates.
- ❑ To improve resource utilization (money, manpower and time) by having a uniform and comprehensive data collection system in the agricultural sector.
- ❑ To help stakeholders make proper decisions at all administrative levels from village up to national level.

2.2 Composition of ARDS

The ARDS is composed of:

- ❑ The VAEO/WAEO Format (for the data collection at Mtaa/Village/Ward levels),
- ❑ The District Integrated Report (compiles data at District level), and
- ❑ **ARDS-LGMD2** (a software for data transmission) and **ARDS Web-portal** (a website for ARDS data/ report browsing and utilization).
  [ARDS Web-portal URL: ***ards.go.tz***]

2.3 Institutional Requirements for ARDS

The recent ARDS requires following sets of institutional arrangements (offices and officers with duties) described in an ascending order of the administrative structure. Details of their duties are described in Section 3.3.

Village: There is a village agricultural extension officer (VAEO) (or village executive officer) who collects data from village level. Village registry is a good source of data, and to be updated regularly.

Ward: There is a ward agricultural extension officer (WAEO) who is responsible for receiving data from VAEO and consolidates them to ward level data.

District (LGA): There is DALDO (District Agricultural and Livestock Development Officer). If the office is split, there are DAICO (District Agriculture, Irrigation and Cooperative Officer) and DLFO (District Livestock and Fishery Officer). The office has both DMEO (District M&E Officer) and DS (District Statistician). DALDO (or equivalent officer) is staffed with sufficient number of officers who can guide and supervise field extension officers as well as process the data at district office. It is desirable for the district to have IT officers who can provide reliable technical support to the ARDS operation.

DALDO (or equivalent officer) assumes entire responsibility for the ARDS operation including its budgeting, data collection, data entry, analysis, reporting and transmission to the region and the national level in a timely manner.

In case that the office is split into crop and livestock sections, DAICO and DLFO are jointly responsible for ARDS operation. They should cooperate with each other to secure smooth operation of ARDS.

Region: There are regional officers responsible for the ARDS operation. The officers are RAA (Regional Agricultural Advisor) and RLA (Regional Livestock Advisor). He/she is responsible for monitoring and guiding LGAs in all aspects of the ARDS operation. He/she is also tasked to approve (or give comments on) the ARDS report submitted by LGAs to the region.

National level: The ASDP M&E TWG together with ASLMs' statistics units and IT units is responsible for overall management, maintenance, revisions, guidance, data utilization and promotion of the ARDS including the operation. This assembly of groups, which may be called the ARDS Management Team (ARDS MT) should be fully functional any time with a sufficient number and expertise of staff for the on-going operation of the ARDS. Although the management team is responsible for overall management and decision-making, there must be smaller groups of officers with specific assignments which is responsible for routine day-to-day operation such as monitoring LGAs' data submission, routine communication with LGAs/Regions, and regular reporting of the ARDS operation to ASLMs' management.

2.4 Data Flow of ARDS

Data flow in the improved ARDS is shown in Figure 1 next page.

2.5 Data to be Collected and Transmitted

The present ARDS collects categories of data as shown below. Details of the data within the category should be referred to in the VAEO/WAEO format.

VAEO/WAEO Monthly Report	VAEO/WAEO Quarterly Report	VAEO/WAEO Annual Report
1. Introduction (weather condition, activity summary)	1. Village Food Situation	1. Introduction (Population and number of households)
2. Crop: Planted Area, Yield, Production and Prices	2. Farmers Groups/ SACCOs	2. Contract Farming
3. Plant Health Services	3. Extension Services	3. Irrigation (water source, area, IO members, etc.)
4. Livestock Slaughtered	4. Biological Control Measures	4. Agricultural, Livestock and Fishery Machines
5. Meat Inspection	5. Irrigation (planted area, production, etc.)	5. Extension Services (FFS)
6. Livestock Products	6. Soil Erosion	6. Input Use
7. Livestock Health	7. Area Cultivated and Means of Cultivation	7. Livestock Population
8. Achievements and Challenges		8. Livestock Infrastructure
9. Visitors		9. Rangeland
		10. Pasture
		11. Area covered by TV, Radio and Telecommunication

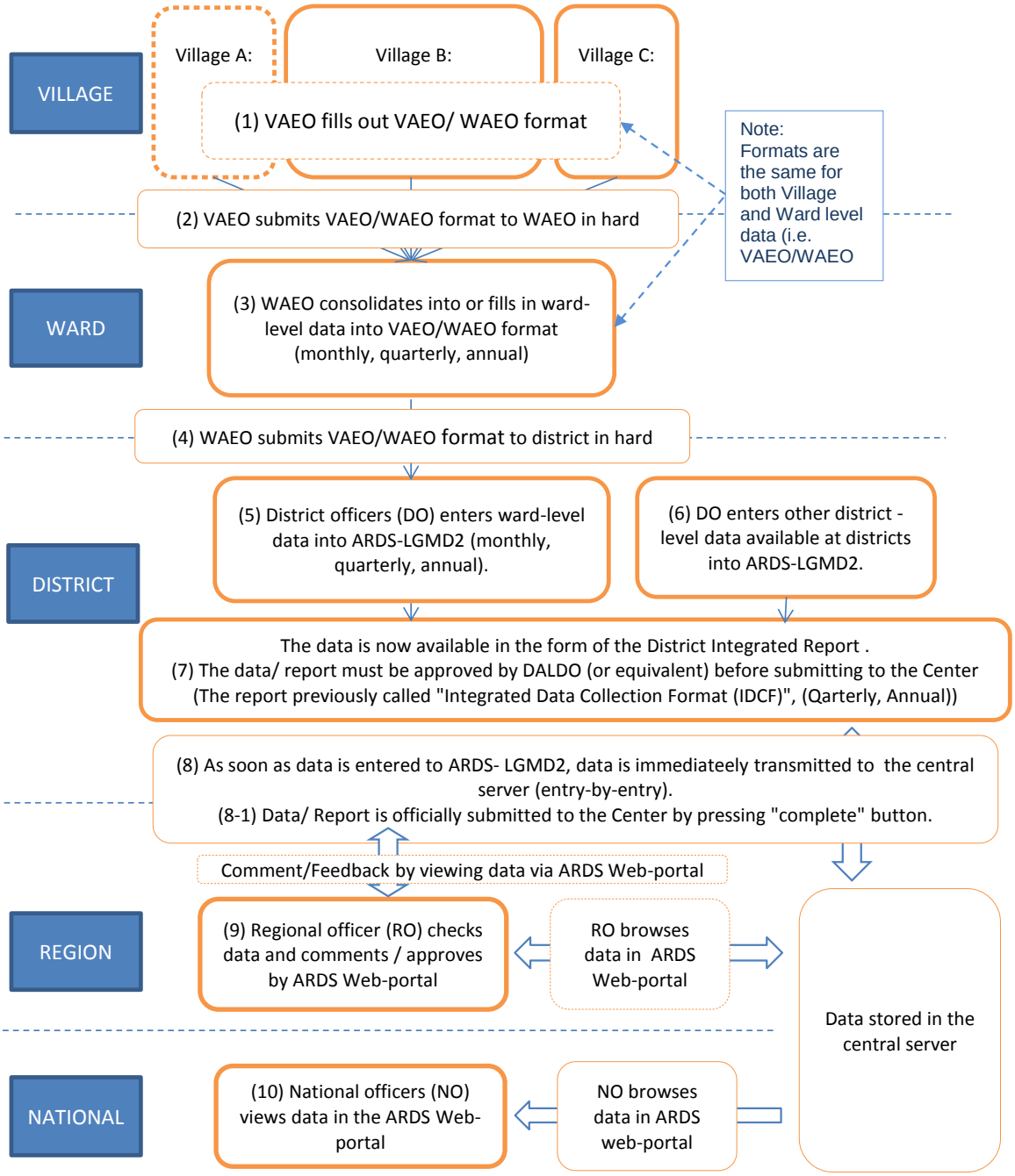


Figure 1: Data flow in the improved ARDS (Web-based system)

3. ARDS Operation

3.1 Operation Components

Below are major operational components of ARDS. Many of them are directly concerned with LGAs, but Regions and the National level should also be responsible for the components. The parties with which the component is mostly concerned are indicated by the following abbreviation at the section title:

V/W: VAEO/WAEO**, D:** District level**, R:** Regional level**, N:** National level

(1) Budgeting [D, R, N]

■ **District Level**

Every activity needs adequate budget, and ARDS is not an exception. Proper budgeting for ARDS is mandatory for districts as part of M&E budget as instructed by the Budget Guidelines for 2015/16 (MoF and Planning Commission). The key for securing adequate budget is the understanding of the importance of ARDS by high ranking district officials such as DED, DPLO, and DALDO (or equivalent officer). To make them fully aware of the importance of the ARDS, the district officers in charge of ARDS should take the following measures, but not limited to,

- To explain how effectively it stores and manages agricultural data,
- To show the high ranking district officials reports which are prepared based on the data collected through ARDS,
- To explain how the use of data is indispensable for the improvement of district agricultural planning.
- To explain how it can effectively monitor the progress of agricultural projects and other activities, and
- To explain how it can effectively respond to a number of questionnaires sent by national ministries and agencies (such as the data inquiry for GDP estimates by NBS), regions and district stakeholders including the District Council.

The ASDP M&E Thematic Working Group shall also support this effort by

- Explaining the importance of ARDS to high ranking district officials whenever the TWG members visit the district, or have opportunities to communicate with those officers in national conference or workshops, and
- Preparing a leaflet or newsletter which explains the importance and usefulness of the ARDS.

For smooth ARDS operation, the budget should include the following, but not limited to:

[For the minimum requirement of the ARDS Operation]
An indicative budget estimates are shown in Table 1(A). The items of budget should be adjusted according to the local needs.

- Printing and photocopying (paper, toner, etc.) (Blank formats are only up to WAEOs.)
- Fuel for WAEOs (for the use of motorbikes)
- Bicycle maintenance for VAEOs
- Stationary for VAEOs/WAEOs
- For submission of complete VAEO/WAEO format to district (by bus, etc.)
- Monitoring of VAEO/WAEO by district agricultural M&E officer (DMEO) and/or district agricultural statistician (DS).

- Access to internet (for ARDS-LGMD2 operation)

[For better and improved ARDS operation]
(Additional enhancement)
An indicative budget estimates are also shown in Table 1(B). The items should be adjusted according to the local needs.

- Printing and photocopying (paper, toner, etc.) (Additional blank formats to VAEOs.)
- Budget for technical support by Regional IT staff in case of computer malfunctioning
- Annual workshop / review for ARDS with the participation of all VAEOs / WAEOs,
- Refresher/ Training for LGA officers on, for example, Excel

Table 1 shows an example of annual ARDS operation costs (indicative) with an assumption that the LGA has 20 Wards (20 WAEOs) and 80 villages (VAEOs).

Table 2 is a general form of the cost calculation for both (A) and (B)

To prepare realistic budget, district officers put adequate numbers for ww (number of WAEOs), vv (number of VAEOs), yy (amount of liters necessary to monitor VAEO/WAEO per month), and mm (number of officers in DALDO's office) and compute.

■ **Regional and National Levels**

While major challenge of budgeting is at the district level, the regional and national level should also make sure that they secure necessary resources for the ARDS operation for their guidance, supervision, facilitation and instruction to the district in the ARDS operation. The budget is also necessary for both the region and the national level for their own data utilization, like report production, analysis and presentation.

(2) Format Distribution [V/W, D]

For each month, quarter, and year, district officers should make necessary copies of the VAEO/WAEO blank formats and distribute them to VAEO/WAEO. The district should prepare the copies well in advance so that there is enough time for distribution.

[Means of Distribution]

- The direct distribution in person is highly recommended rather than passing them through other people/bus.
  - Responsible district officer distributes the format to VAEO/WAEO by directly visiting them. This is especially important if VAEO/WAEO do not regularly visit the district headquarters.
  - VAEO/WAEO should pick up the format utilizing any opportunity to visit the district headquarters. In this case, it is recommended for the district to designate one specific place at DALDO office for distribution of the blank format and collection of the filled-in report.
- If district officers do not visit village/ward and VAEO/ WAEO do not come to the district headquarters, district officer may deliver the format to the WAEO at division center, who in turn will distribute it to the other VAEO/WAEO in the same division or ask VAEO/WAEO to pick them up there.

Table 1: Indicative Cost Estimate (Example)

(A) Minimum cost necessary for adequate ARDS Operation (Blank format only up to WAEOs) Revised on 22/02/2015

Item	Details	Number (WAEO xx, VAEO zz)	Page/liter/day		No of Copies/ Event	Unit price	Frequency	Cost
			Amount	Unit				
		(1)	(2)	(3)	(4)	(5)	(6)	(7)=(1)x(2)x(4)x(5)x(6)
Printing and Photocopying	Monthly	20	5	page	2	150	12	360,000
	Quarterly	20	4	page	2	150	4	96,000
	Annual	20	11	page	2	150	1	66,000
Fuel for WAEO	Monthly	20	3	liter/month	1	2,200	12	1,584,000
Bicycle maintenace for VAEO	Monthly	80	1	time/month	1	2,000	12	1,920,000
Stationary for VAEO/WAEO	Monthly	100	1	time/month	1	500	12	600,000
Submission of comlete VAEO/WAEO format (by bus, etc.)	Monthly	20	1	time/month	1	2,000	12	480,000
Monitoring by DMEO	Monthly	1	4	days/month	1	45,000	12	2,160,000
	Fuel	1	10	liter/month	1	2,200	12	264,000
ARDS-LGMD2 internet connection	Monthly	1	1	time/month	1	10,000	12	120,000
(A) Total								**7,650,000**

Assumption: There are **20 WAEOs and 80 VAEOs**.

(B) Additional cost for better and improving operation of ARDS

Enhancement: (a) Blank format to VAEOs, (b) Bi-annual facilitation by Regional IT,
(c) Annual refresher workshop to WAEOs/VAEOs, (d) Refresher/Training to LGA officers. Revised on 22/02/2015

Item	Details	Number (WAEO xx, VAEO zz)	Page/liter/day		No of Copies/ Event	Unit price	Frequency	Cost
			Amount	Unit				
		(1)	(2)	(3)	(4)	(5)	(6)	(7)=(1)x(2)x(4)x(5)x(6)
Printing and Photocopying	Monthly	80	5	page	1	150	12	720,000
	Quarterly	80	4	page	1	150	4	192,000
	Annual	80	11	page	1	150	1	132,000
Bi-annual facilitation by regional IT specialist	Per diem	1	2	days/event	1	65,000	2	260,000
(in case of computer malfunctioning)	Travel	1	2	time/evet	1	10,000	2	40,000
Annual workshop with all VAEO/WAEO	Per diem	100	3	days/event	1	45,000	1	13,500,000
	Per diem (DMEO, DS, DALDO)	3	2	days/event	1	32,500	1	195,000
	Travel	100	1	time/event	1	5,000	2	1,000,000
Training for LGA officers	Per diem (DMEO, DS, DALDO)	5	1	days/event	1	32,500	1	162,500
(B) Total								**16,201,500**

Assumption: There are **20 WAEOs and 80 VAEOs**.

Grand Total (A+B)		**23,851,500**

Table 2: Indicative Cost Estimate (General Form)

(A) Minimum cost necessary for adequate ARDS Operation (Blank format only to WAEO)

Item	Details	Number	Page / litre / day		Unit price	No of copies/ event	Frequency	Cost
			Amt	Unit				
		(1)	(2)	(3)	(4)	(5)	(6)	(6)=(1)x(2)x(4)x(5)x(6)
Printing and Photocopying	Monthly	ww	5	page	150	2	12	
	Quarterly	ww	4	page	150	2	4	
	Annual	ww	11	page	150	2	1	
Fuel for WAEO	Monthly	ww	3	Litre / month	2,200	1	12	
Bicycle maintenance for VAEO	Monthly	vv	1	Time / month	2,000	1	12	
Stationary for VAEO/WAEO	Monthly	ww+vv	1	Time / month	500	1	12	
Submission of complete format (by bus, etc.)	Monthly	ww	1	Time / month	2,000	1	12	
Monitoring by DMEO, DS	Monthly	1	4	Days / month	45,000	1	12	
	Fuel	1	yy	Litre / month	2,200	1	12	
ARDS-LGMD2 internet connection	Monthly	1	1	Time / month	10,000	1	12	
(A) Total								

ww: number of WAEO, vv: number of VAEO
yy: amount of litres necessary for DMEO/DS to monitor VAEO/WAEO per month.

(B) Additional costs for ARDS Operation with enhancing components

Enhancement: (a) Blank format to VAEO, (b) Bi-annual facilitation by Regional IT, (c) Annual refresher workshop to WAEO/VAEO, (d) Refresher/Training to LGA officers.

Item	Details	Number	Page / litre / day		Unit price	No of copies/ event	Frequency	Cost
			Amt	Unit				
		(1)	(2)	(3)	(4)	(5)	(6)	(6)=(1)x(2)x(4)x (5)x(6)
Printing and Photocopying	Monthly	vv	5	page	150	2	12	
	Quarterly	vv	4	page	150	2	4	
	Annual	vv	11	page	150	2	1	
Facilitation for regional IT specialist (In case of computer malfunctioning)	Per diem	1	2	days / event	6,5000		2	
	Travel	1	2	time / event	10,000		2	
Annual workshop with all VAEO/WAEO	Per diem	ww+vv	3	time / event	45,000		1	
	Travel	ww+vv	2	days/ event	5,000		1	
	Per diem (DALDO, DMEO, DS)	3	2	days/ event	32,500		1	
Training for LGA officers	Per diem	mm	1	days / event	32,500		1	
(B) Total								

ww: number of WAEO, vv: number of VAEO, mm: number of LGA officers

Grand Total (A)+(B)	

[Timing of Format Distribution]

- Distribution should be completed before the beginning of the month of their usage so that VAEO/WAEO can fill the form as they conduct their normal duties.
  - The Monthly Format should be distributed quarterly (three months together), during the days between 20th and 30th (or 31st) of the last month of previous quarter.
  - The Quarterly Format should be distributed once per quarter at the same time when the monthly format is distributed.
  - The Annual Format should be distributed when the formats for the fourth quarter are distributed (March).

[Number of Blank Formats to be distributed]

- It is important that two copies of the blank forms are distributed to each VAEO / WAEO for each month / quarter / annual.
- Both of them are to be filled: one of them is for submission to the District, and the other for WAEO/VAEO to keep at the ward / village, which can be used for village level planning.

If the blank forms are not distributed on time, Village/Ward Extension Officer should contact the district office.

It is recommended for the district to monitor the status of format distribution. Below is a suggested table to do this task.

Table 3: Suggested table for VAEO/WAEO format distribution

Report for: _____

SN	Name of ward	Number of village	Number of format distributed	Received by		Remark
				Name	date	

(3) Data Collection [V/W, D]

The data for the VAEO/WAEO format are to be collected by VAEO/WAEO. Data must be collected every month, quarter and year without interruption and without delay. With interruption and delay, the system loses the ability of tracking overall trend of the sector. When collecting the data, VAEO/WAEO should pay attention to the following.

- Follow the instructions stipulated in the VAEO/WAEO Training Guide.
- The format clearly shows what should be written in a report. Therefore VAEO/WAEO should be clear what kinds of information to be collected. Note that the present ARDS is different from the past where data collection was non-uniform and sporadic because the method was not standardized.
- The format covers the whole agricultural sector including livestock, cooperatives etc. VAEO should collect all kinds of data on the form, whatever his/her specialty is.
- It will be easy to fill out the format if VAEO/WAEO keep a record on their activities every day. It is a good idea to promote the “extension field diary” among field officers.

- It is very important that VAEO/WAEO cooperate so that they organize themselves in data collection.
- Even if extension officers are arranged under the two lines of command, DAICO and DFLO, the ARDS operation is joint responsibility of all extension officers regardless of their expertise.
- It is recommendable for VAEO/WAEO to have a regular meeting (like once in two weeks or a month) so that they share information and keep cooperation. (see sub-section (4) below)
- It is also important to cooperate with village executive officers in data collection.
- If any villages lack VAEOs, the village executive officers should be relied upon for data collection.
- When a VAEO is on a leave, he/she can ask his/her colleague in a nearby village to write this report. As for WAEO, he/she may ask one of the VAEO in the ward.

District officers should keep good guidance to, supervision on and feedback to VAEO/WAEO for the data collection work. Especially the data collection method stipulated by the VAEO/WAEO Training Guide needs to be thoroughly observed for the good data quality.

(4) VAEO/WAEO Report (Filled-in formats) Submission/ Reception [V/W, D]

- At the village level, the VAEO submits the report to the WAEO by the end of the month. The VAEO should keep a copy of the report in his/her office.
- At the ward level, a village report is consolidated into a ward report, which is submitted to district office within the first week of the following month. The WAEO should keep a copy of the report in the ward office.
- It is desirable for the district to encourage VAEO/WAEO to form the Ward Data Consolidation Team (WDCT) in each ward. All extension officers in a ward are the members of a WDCT, which is led by a WAEO. It meets every month and jointly fills out the ward level format. In this process, they check data quality each other, which helps improve data quality and the capacity of extension officers in report preparation.
- WAEO should go to the district office to submit the report. In case that he/she is not able to go to the district office, he/she will ask other extension officers to submit the report.

For district officers, in order to collect filled-in reports on time, follow-up is very important. The district officers should make phone calls to WAEO if they fail to submit the report on time. Especially for quarterly and annual reports, VAEO/WAEO may forget about them as they are not required every month. It is very effective if the district office organizes regular meetings (like monthly meeting) where all VAEO/WAEO are called upon for discussion, and thereby ARDS reports are to be submitted. If data is to be shown to District Executive Officer (DED) as reports, VAEO/WAEO should be informed so that they are aware of the importance of duty.

Besides, it is recommended for districts to monitor the report submission status. Suggested table to do this task are shown below. Also, proper feedback is a key to motivate VAEO/WAEO to fill out the format with reliable information and submit it on time. For details on feedback, see sub-section (6) in this chapter.

Table 4: Suggested table for VAEO/WAEO filled-in format submission

Report for: _____

SN	Name of ward	Submitted by		Data quality check (√)	Data entry to ARDS-LGMD2 (√)	Remark
		Name	date			

(5) Data Quality Check [D, R, N]

■ District Level

When the district officer receives the report from WAEO, or WAEO receives the report from VAEO, he/she should check the data, in particular, in the following points. If there are mistakes or questionable data, he/she should contact WAEO (or VAEO) and clarify the question or provide instruction.

- Are all tables filled (except for those not applicable)?
- Are all data readable (clear writing)?
- Are the data period appropriate in each table (data for the particular month/quarter or cumulative)?
- Are the data using appropriate unit of measurement (i.e. not by bundles, but by Kg)?
- Are the data realistic compared to the following?
  - Previous report data
  - District total or average data
  - Latest National Sample Census Agriculture data (i.e. 2002/03, 2007/08)
  - Your field observation
- Cross check the data with relevant officers at the district: officers in charge of crop, livestock, cooperative, extension, marketing, irrigation, etc.

■ Regional and National Level

- Regional officers should inspect the quality of data once the district submits the report for approval. They should give comments and guidance to the district immediately for improving the data quality. (See sub-section (10) below.)
- Similarly the national level should also inspect the data quality, and give guidance to the region and the district. If it is necessary, the national level should amend the relevant documents such as VAEO/WAEO Formats, the training guides and this operation guide, etc. so that data quality will be uniformly improved across the country.

(6) Feedback [D, R, N]

■ District Level

- WAEO should provide feedback to VAEO. If there is a problem, the officer should ask for clarification or correction. If they meet as Ward Data Consolidation Team, it is easy to provide feedback to VAEO.

- District should provide feedback to WAEO. If there is a problem, the officer should ask for clarification or correction. If the district has regular (e.g. monthly) meeting for VAEO/WAEO, it is a good opportunity for the feedback.

Proper feedback is a key to motivate VAEO/WAEO to fill out the format with reliable information and submit it on time. Through feedback, VAEO/WAEO need to see that their reports are read and the information they have provided is well used by the district. The following is some examples of how to give feedback to them.

- Once the district report is prepared, the district should not only submit it to the District Executive Officer and the Council, but also post it on a notice board of the district office so that VAEO/WAEO can read it when they visit the office. If possible, the district may send the report to each ward or division.
- A district officer should visit division/ward centers as often as possible to meet VAEO/ WAEO for providing feedback and backstopping for data collection. Such positive engagement by the district increases extension officers' confidence and encourage them to be more serious in filling out the form. Therefore the quality of data will improve.
- Based on the data analysis, the district and VAEO/WAEO can provide comments to the village agriculture development plan.
- Another idea to motivate VAEO/WAEO may be to provide an award or reward to those performing well, such as "best WAEO of the quarter."

■ **Regional and National Level**

- Both regional and national officers should give feedback to the district so that the district understands that the data are effectively monitored by the higher levels. The national level should also give feedback to the region for the same purpose. Both regional and national levels should inquire the district about the status or reasons if the latter fails to submit data/ report on time.

(7) Data Entry to ARDS-LGMD2 [D]

- After checking and improving the data collected by VAEO/WAEO, district officers should enter the data into ARDS-LGMD2, creating a file for each month, quarter and year for each ward.
- **ARDS-LGMD2** is a software for data transmission.
- **ARDS Web-portal** is a website for ARDS data/ report browsing and utilization.
- District officers can open the data entry sheet when he/she accesses the ARDS Web-portal:

  [ARDS Web-portal URL*:* ***ards.go.tz***]

- The district must keep the **User ID** and the **Pass Word** for the access to the ARDS Web-portal.
- If a district has reasonable internet connectivity, the district should be able to access to the ASRDS Web-portal where the data entry sheets are seen, and enter data into the sheet.
- Data entry, including "Annual Target" and "Prior Estimate", should be conducted according to the ARDS-LGMD2 user manual.
- Some tables of ARDS-LGMD2 are to be filled out at district. To do this, create a file for district report for each quarter and year for the district, and enter data.
- ARDS-LGMD2 will automatically aggregate ward-level data to get district-level estimates. It is important to double check the ward / district level data after the data are entered in ARDS-LGMD2.
- The data entry sheet has the "complete" button at the end of the sheet. When district officers are sure that data entry is complete and is ready for the regional approval, press

this “complete” button, which notify the region and the center that the data is ready.

- If it is hard for one officer to enter data in ARDS-LGMD2, it is a good idea to form a team in the district office in entering ward-level data in ARDS-LGMD2. Actually it is important that several officials are familiar with ARDS and ARDS-LGMD2 just in case that key officers are transferred and/ or emergency occurred (injury or health problems).

Table 5: ARDS Entry Forms (at District)

Level	Name of Entry Forms in ARDS-LGMD2	Data source
Ward	WF00 - Ward Annual Target Entry Form	VAEO/WAEO Format (Monthly, July)
	WFest - Prior Estimate Entry Form	District Officer’s Estimate
	WF01 - Ward Monthly Entry Form	VAEO/WAEO Format (Monthly)
	WF02 - Ward Quarterly Entry Form	VAEO/WAEO Format (Quarterly)
	WF03 - Ward Annual Entry Form	VAEO/WAEO Format (Annual)
District	DF02 - District Quarterly Entry Form	District Officers
	DF03 - District Annual Entry Form	District Officers

(8) Report Production [D, R, N]

■ District Level

Once necessary data are entered into ARDS-LGMD2, the software automatically processes the data and makes following report ready for printing or export in Excel or PDF file. ARDS-LGMD2 can produce a variety of reports as summarized in the table below. The reports can be used for different purposes, and the district should be able to utilize them according to their needs. Note that among various reports, two reports (**District Quarterly Integrated Report (DIR02)** and **District Annual Integrated Report (DIR03)** <for the abbreviation, refer to the description below> are those to be referred to as district’s official reports. Other reports are equally usable, but are for general consumption.

Table 6: ARDS Printable Reports (at District)

Outputs in ARDS-LGMD2	Name of Report	Data contents
Ward Reports	Ward Monthly Report (WR01)	Ward Annual Target Entry Form (WF00) and Ward Monthly Entry Form (WF01)
	Ward Quarterly Report (WR02)	Ward Quarterly Entry Form (WF02)
	Ward Annual Report (WR03)	Ward Annual Entry Form (WF03)
District Reports	District Monthly Report (DR01)	Consolidation of Ward Monthly Report (WR01) across wards
	District Quarterly Report (DR02)	Consolidation of Ward Quarterly Report (WR02) across wards
	District Annual Report (DR03)	Consolidation of Ward Annual Report (WR03) across wards
Integrated Reports (District)	District Quarterly Integrated Report (DIR02)	Consolidation of District Monthly Report (DR01) and District Quarterly Entry Form (DF02)
	District Annual Integrated Report (DIR03)	Consolidation of District Quarterly, Annual Report (DR02 and DR03) and District Annual Entry Form(DF03)
Data Submission Report	Data Submission Report	Submission status of Ward data 1) Monthly: WSR01 2) Quarterly: WSR02

		3) Annual: WSR03

Characteristics of each type of reports are described below.

Ward Reports: Individual ward has its own report after data entry.
These reports are useful for checking data entry mistakes. It is also good for data saving. It has three kinds: Monthly, Quarterly and Annual (WR01, WR02 and WR03).

District Reports:
These reports simply summarize all ward-level data into the district level. These District Reports are not official reports of the district, but should be used for district's general purposes. It has three kinds: Monthly, Quarterly and Annual (DR01, DR02 and DR03). [Previously these are called "*District Integrated Data Collection Format*".

Integrated Reports (District):
This is a report produced by combining both ward-level data and district-level data. District Integrated Report is an official district report to be referred to by the region and the national level. It has only two kinds: Quarterly and Annual (DIR02 and DIR03).

Data Submission Reports (Ward):
This is a report that describe whether the ward reports (the VAEO/WAEO format filled in with real data) are submitted by WAEOs. However, it should be noted that submission is confirmed only by entering data to the system. Therefore the District should avoid any delay in data entry. As soon as having received, the District should soon place the received data into the system. The submission report is produced for monthly, quarterly and annual data. This report is useful for monitoring the data submission.

The Ward submission status is reported as a summary for the District, the Region and the National level.

The district should be aware of the difference among the reports and make the best use of them. It is expected that once these reports are ready, the district should be ready for responding rather easily to any inquiries about district's on-going agricultural status.

■ Regional Level

The region can see and produce the following two types (District and Regional levels) of reports. The reports are tabulated below.

Table 7: ARDS Reports (at Region)

Outputs in ARDS-LGMD2	Name of Report	Data Contents
Integrated Reports (District)	District Quarterly Integrated Report (DIR02)	Individual LGA's District Quarterly Integrated Report
	District Annual Integrated Report (DIR03)	Individual LGA's District Annual Integrated Report
Integrated Reports (Region)	Region Quarterly Integrated Report (RIR02): which is consolidation of District Quarterly Integrated Report (DIR02) across LGAs	
	Region Annual Integrated Report (RIR03): which is consolidation of District Annual Integrated Report (DIR03) across LGAs	

Data Submission Report	Data Submission Report	Submission status of Ward data (by District level summary) 1) Monthly: WSR01 2) Quarterly: WSR02 3) Annual: WSR03

Characteristics of each type of reports are described below.

Integrated Reports (District): The region can see individual LGA's Integrated Reports. It has two types: Quarterly and Annual (DIR02 and DIR03).

Integrated Reports (Region): The region also can see a regionally summarized (consolidated) District Integrated Reports. It has again two types: Quarterly and Annual (RIR02 and RIR03).

Data Submission Reports (Ward):

This is a report that informs the submission of the ward reports (the VAEO/WAEO format filled in with real data) to the District. However, it informs only in a summary form which shows the total number of report submitted against the total number of expected reports. It does not show an individual Ward whether it has submitted or not. That information is shown only at the District level.

The region should utilize these three types of reports according to their needs.

- **National Level**

The national level can see and produce the following three (District, Regional and National levels) types of reports.

Table 8: ARDS Reports (at National)

Outputs in ARDS-LGMD2	Name of Report	Data Contents
Integrated Reports (District)	District Quarterly Integrated Report (DIR02)	Individual LGA's District Quarterly Integrated Report
	District Annual Integrated Report (DIR03)	Individual LGA's District Annual Integrated Report
Integrated Reports (Region)	Region Quarterly Integrated Report (RIR02): which is consolidation of District Quarterly Integrated Report (DIR02) across LGAs	
	Region Annual Integrated Report (RIR03): which is consolidation of District Annual Integrated Report (DIR03) across LGAs	
Integrated Reports (National)	National Quarterly Integrated Report (NIR02): which is consolidation of Regional Quarterly Integrated Report across Regions	
	National Annual Integrated Report (NIR03): which is consolidation of Regional Annual Integrated Report across Regions	
Data Submission Report	Data Submission Report	Submission status of Ward data (by District level summary) 1) Monthly: WSR01 2) Quarterly: WSR02 3) Annual: WSR03

Characteristics of each type of reports are described below.

Integrated Reports (District): The center can see individual LGA's Integrated Reports. It has two types: Quarterly and Annual (DIR02 and DIR03).

Integrated Reports (Region): The center can see individual Region's Integrated Reports. It has two types: Quarterly and Annual (RIR02 and RIR03).

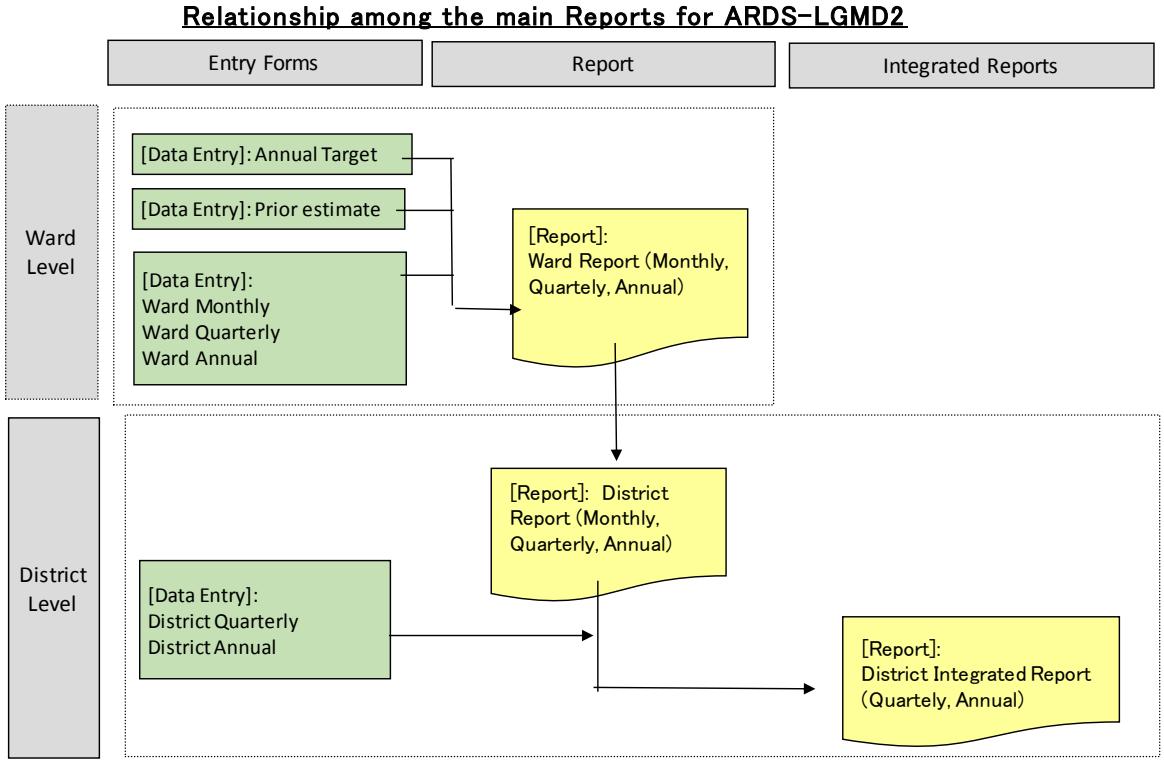
Integrated Reports (National): The center also can see a nationally summarized District Integrated Reports. It has two types: Quarterly and Annual (NIR02 and NIR03).

Data Submission Reports (Ward):

This is a report that informs the submission of the ward reports (the VAEO/WAEO format filled in with real data) to the District. However, it informs only in a summary form which shows the total number of report submitted against the total number of expected reports. It does not show an individual Ward whether it has submitted or not. That information is shown only at the District level.

The national level should utilize these four types of reports according to their needs.

The relationship among the reports used in this ARDS is shown in a diagram below.



(9) Data Transmission and Submission [D]

For the region or the national level to be able to see the data, the district should transmit their data through ARDS-LGMD2. With the ARDS-LGMD2 system, as long as a district has reasonable level of connectivity, data is immediately transmitted to the central server as soon as it is entered to the cell of a table. Although data transmission could be done anytime as far as internet connection is available, data/ reports are officially considered submitted only by

pressing the “complete” button of the ARDS-LGMD2. For the official submission (i.e. pressing the button), the data must be observed and approved by DALDO (or equivalent). The data/ report submission must be done within 20 days of the following month. (See the “3.2 Operation Cycle of ARDS”)

- Before submitting the data/ report, all LGA must obtain approval from DALDO (or equivalent) or preferably from DED.
- Data/ reports are officially submitted by pressing the “complete” button of the ARDS-LGMD2.
- Data is transmitted to the central server as soon as data is entered when the network is online. If network is offline, data is temporarily stored at the computer but sent to the server as soon as network comes back.
- However, if the connection is weak or not stable, the district officers in charge should try to send data whenever he/she visits major cities/towns where the environment of internet connectivity is better. As long as he/she carries the computer and the wireless modem, the transmission can be done.
- As long as data is transmitted to the central server or stored at the local computer, data is viewed in the next session when the user access to the ARDS Web-portal again.
- The district should inform (by mobile or email) to the region for approval that the data/ reports are entered, transmitted to the central server and ready for peruse.

(10) Data Approval [D, R]

As stipulated above, the data/ reports need to be approved by DALDO (or equivalent) before officially submitted to the central server.

Apart from the District, Regional officers are in charge of approving or rejecting (with comments) the data submitted by the districts. The approval must be done within 25 days of the following month of a quarter. (See the “3.2 Operation Cycle of ARDS”) Noting the deadline for approval, regional officers should make inquire to the districts if they have completed the data entry and submission.

- Go over the data and check whether they are appropriate by comparing them with data in other districts and/or previous quarters/years.
- If data are inappropriate, have anomaly or inconsistency, regional officers should give proper comments so that the district can amend them.

The way for regional officers to receive and comment the district level data is as follow.

- Regional officers obtain the data by viewing the ARDS Web-portal where all data/ reports of the districts within the region are accessible.
- Regional officers write the comments in the reports shown in the Web-portal. Or they can approve the data/ reports. Because of the web-based system, the district officers can see the comments as soon as they are written in.

(11) Data Analysis and Utilization (Benefit of ARDS) [D, R, N]

■ District Level

The data obtained through ARDS is comprehensive in the sense that it covers all areas of the district, and it encompassed a broad range of sub-sectors: crop production, crop health, livestock production, livestock health, inputs, extension services, food security, machine and infrastructure. Because of this broadness, if data are collected properly and long enough, it can

reveal overall changes of the district agriculture (similarly of region and nation). This is contrasted to progress reports of individual project, which shows outputs of a particular project only.

In this sense, the ARDS report could be helpful in overall monitoring of district agriculture where multiple projects are being implemented. The report is also beneficial to district planning, serving as a basis for all kinds of planning. In addition, it could be applicable to the grass root level as well, because the district and VAEO/WAEO can provide suggestions to planning at village-level by referring to the data of particular villages.

It is also possible for district officers to obtain ARDS data of the other districts / regions or the nation as a whole by using a web application specifically developed for ARDS. With the application, he/she can easily obtain data of interests by specifying the periods, areas and data items.

One of the analytic functions which the developed ARDS Web portal (containing ARDS-LGMD2) has is “dashboard”. Dashboard is, basically defined as a quick window of summarized data/information from various data source, is expected to present results of data analysis or graphs using ARDS data. It presents several tables and diagrams as samples, providing viewers ideas on how to present the data. The User’s Manual of ARDS-LGMD2 shows some of the tools to conduct data analysis. It will help district officers extract focused information from the data.

ARDS is also useful for many other purposes such as agricultural GDP estimation by NBS.

- **Regional Level**

ARDS data can also be used at the regional level by operating the ARDS Web Portal which shows data collected by ARDS-LGMD2. Data can be analyzed to find out, for example areal characteristics of production by district within the region, with which the region can construct a regional development plan. It is also possible for a region to produce regional comparison (comparison among regions) of a specific commodity by working on regional data of the entire country. By doing this the region can identify its own strength or weakness in agriculture.

- **National Level**

ARDS data is also useful at the national level. ARDS produces nationally consolidated data together with regional and district level data. With the ARDS Web Portal specifically developed for ARDS’s users, national level officials can also obtain such data easily. Similar to the regional data use, the central offices can study on the data to produce, for example national trend of a particular crop, or regional variation of a particular commodity. In various ways, ARDS data is helpful for the national level to analyze the nation’s agriculture in general. ARDS data are also very complementary to the data from the annual sample survey and the national sample census which are more rigorous with respect to data quality.

(12) Data Management [D, N]

- **District Level**

With ARDS-LGMD2, it is easy to manage data because they are kept at one place (ARDS-LGMD2). For VAEO/WAEO, it is also easy to keep records as long as they keep a copy of the filled-in VAEO/WAEO format. They will be used for VADPs and other purposes.

- ARDS-LGMD2/ ARDS Web-portal will be an important database for district. Whenever data are needed, access to the ARDS Web-portal where data are stored, and check the data you look for.

- For this purpose, it is important to keep the computers (for the use of ARDS operation) from crashing or virus contamination. Give specific designation to the officers who are authorized to use the computer with ARDS. Keep anti-virus software effective all the time.
- If by any mistakes, the computer for ARDS is not operational, just use another computer which has internet connection. As long as a computer can access to the ARDS Web-portal, the data entry and browsing are possible as easily as any other computers.
- It is always a good idea to have data backup separate from the computer. Backup files can be produced as Excel or other types by using the export function of the ARDS-LGMD2. Refer to the user manual.

■ **National Level**

As to the national level data management, the major issue is the maintenance of the ARDS central server. Since all ARDS data are submitted and stored at the central server and the server is under the management of MAFC, their responsibility is particularly important. The TWG and the IT sections need to make sure that data backups are regularly done and the server is properly protected from disturbances and damages.

When ARDS will be operated long enough and the server becomes obsolete with respect to the data storage capacity and functionality, it is national level responsibility to upgrade the system with replacement of proper facilities.

(13) Campaign and Promotion of ARDS [D, R, N]

■ **All Levels**

At all levels, ARDS should be promoted and made to known to as many stakeholders as possible. The best way for this is to collect proper data regularly, use the data and show results (either raw data or analytical results) to broader audience. In addition, the district, region and the center should do the following.

- To explain to high ranking officers including political members the importance of the "evidence-based discussion", i.e. to use data in reporting, planning and any policy analysis.
- To take every opportunity to high ranking officers in explaining the benefit of ARDS.
- To explain that ARDS is a standardized and formally authorized data collection system for the agricultural sector.
- To explain what kinds of data and how often they are collected.
- To use ARDS data for any meeting and presentation occasions: administrative meeting, council meeting, discussion with private sector, discussion with experts and study teams, explanation to farmers and general households, etc.
- To make ARDS data accessible to general public through reports and other means.

(14) Maintenance and Improvement of ARDS [D, R, N]

■ **District and Regional Levels**

For the district and the region, the major maintenance tasks of ARDS are data storage and computer/ ARDS-LGMD2 protection.

- Data storage: As soon as data is entered into the data entry sheet of ARDS Web-portal, they are electronically stored in the central server (data is immediately transmitted to the server) if network is online. If the connection is disrupting, the entered data is temporarily stored at the computer in use, and is transmitted to the server whenever the network resumed (the data can remain at the computer long time). Hence, as long as the computer

is properly functional and there is reasonable network connection, one can send and retrieve any data any time. However, it is also important for the district to keep original data (data on paper). The district should store the submitted filled-in VAEO/WAEO formats for at least three years. This action is necessary for both data backup and data checking if any inquiries arise in future.

- Computer protection and network connection: As described above, all data are stored in the central server or the local computer. Therefore the maintenance of the computer and network connection are of the utmost importance. The computer must be protected from crashing or virus contamination. The district should make resources available for anti-virus software and its regular updating. The district should also secure enough air time for internet connection. It is also recommendable for the district to designate particular officers for the use of the computer with ARDS. Should the computer be crashed, it is LGA's responsibility to restore or replace the computer.
- The same applies to the region. The region must keep the computer clean from virus and any other damages. Also secure stable internet connection. Without them, the region is unable to perform its duties (data approval and data utilization).

For the sake of further improvement of ARDS, the district and the region should be encouraged to inform the center about any modifications which seem to improve the use of ARDS. This is particularly relevant in the contents and use of the VAEO/WAEO formats. The formats may need to adjust to local conditions. In such a case, the district should communicate with the center about possible modifications of the formats.

The VAEO/WAEO formats need to be maintained at the latest version.

Also it is highly recommended for the district and the region to inform and share among themselves about good practices and/or better examples of ARDS utilization including data use.

■ **National Level**

The center, in particular the M&E TWG, is responsible for the entire setting and operation of ARDS. Therefore the TWG should actively engage in the maintenance and improvement of ARDS. In the areas of information technologies (IT), the TWG should work closely with the IT sections of ASLMs.

[Central server]

- The central server which accumulates all submitted data must be kept safe and functional all the time without disruptions or disturbances. It must be stable and accessible by users 24 hours throughout a year. It must be supported by stable power supply. Data backup must regularly be implemented. The server maintenance must be under the responsibility of the TWG and the IT sections of ASLMs. Internet connection must have sufficient capacity to ensure to all users speedy access to the server.
- The central server should be improved, reflecting the progress of data accumulation and server capacity and functionality.

[Data Storage]

- The TWG and the IT sections must maintain intact the data stored in the server. Access to the server for data management should be restricted to only authorized officers of the TWG and the IT sections.

[ARDS-LGMD2 (data transmission software)]

- ARDS-LGMD2 is another essential component of ARDS. The M&E TWG and the IT sections must be responsible for maintaining the application software when needs arise.

- While ARDS-LGMD2 is designed and structured to be used under a variety of computer environments, it is predictable that some users may encounter technical difficulties in their operation. Therefore it is the responsibility of the TWG and ASLMs' IT sections to provide technical support to such users. The TWG and the IT section should establish effective mechanism for such technical support and implement the support accordingly.
- ARDS-LGMD2 should be modified/ improved in a timely manner in response to the changes taking place in the VAEO/ WAEO formats and the way data are to be collected.
- Tasks to be carried out include (with recommended frequency):
  - Updating the Administrative Unit (Quarterly)
  - Updating the Lookup tables (Quarterly)
  - Updating the data scope (additions and removing)
  - Updating the table forms (Annually)

  The last three tasks have direct relation to the VAEO/WAEO Formats updating.

[ARDS Web-portal (data browsing and utilization software)]

- ARDS Web-portal is an important tool for the ARDS operation, because it is the window to all data users of ARDS. Every person interested in the ARDS data can and should approach to the portal and not only view but also manipulate/ analyze the data. Therefore its maintenance is crucial responsibility for the national team.
- The tasks to be performed include (with recommended frequency):
  - Updating the news and articles (monthly),
  - Uploading relevant documents (Quarterly)
  - Renewal of the dashboard, etc.

[VAEO/WAEO Formats and Data Collection Method]

- The TWG is also responsible for the maintenance and improvement of the VAEO/WAEO formats and the data collection method at the ground.
- The formats should be amended and fine-tuned as ARDS is being used. Changes may be needed to accommodate local conditions by giving more flexibility in the set of data to be collected. They may also arise from new demands for data according to the situation of the agricultural sector, like commercial activities expanding and new set of data needs to be collected.
- The method of data collection should also be reviewed once in a while to reflect actual situation of VAEO and WAEO.
- Consideration should be given to adjust ARDS to the overall agricultural statistics/data systems of the country. For example, when the agricultural annual sample survey is fully operational, ARDS should be adjusted to the extent the two systems achieve the optimum complementarity.

3.2 Operation Cycle of ARDS

The improved ARDS consists of monthly, quarterly and annual reports within the LGAs (from village to ward and then to district). The timing at which actions are taken is summarized below.

Data\ Action	Blank format distribution	Submission (VAEO to WAEO)	Submission (WAEO to LGA)	LGA's entering data in ARDS-LGMD2	LGAs' Data transmission to the Server (by Synchronization)	Report Approval by Region	LGAs' Report Submission (LGA to Centre [Server])
Monthly	-Distributed quarterly. -B/w 20th and 30th of last month of previous quarter	-By the end of the month	-Within **1st week** of the following month	-Within **20 days** of the following month.	n.a.	n.a.	n.a.
Quarterly	-Distributed quarterly. -Same time as the Monthly format	-Ditto	-Ditto	-Ditto	-Within **20 days** of the following month.	-Within **25 days** of the following month	-Within **25 days** of the following month
Annual	-Same time as the 4th quarterly format	-Ditto	-Ditto	-Ditto	-Ditto	-Ditto	-Ditto

The cycle of these actions is shown in Figure 2 below.

		Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.
VAEO/WAEO Format														
Monthly	Village													
	Ward	△												
	District	△												
Quarterly	Village													
	Ward	△												
	District	△												
Annual	Village													
	Ward	△												
	District	△												
ARDS-LGMD2														
Monthly	Ward	△												
	District	△												
	Region	△												
	National	△												
Quarterly	Ward	△												
	District	△												
	Region	△												
	National	△												
Annual	Ward	△												
	District	△												
	Region	△												
	National	△												

Note: ▲ Current year events, △Last year events.

Figure 2 Flow of data in the improved ARDS

3.3 Tasks of Major Actors of ARDS

3.3.1 LGA Level

(1) Village / Mtaa

- VAEO visits farmer groups, individual farmers, stockiest, etc. to collect necessary data as a part of extension activities, even whatever his/her specialty is. In collecting (or estimating) data, follow the methodologies specified in the VAEO/WAEO Training Guide.
- VAEO fills out the two copies of the VAEO/WAEO format with the data and information.
- VAEO submits one filled-in format (monthly, quarterly and annual) to WAEO. The deadline for each format is as follows:
  - Monthly format: Before the end of each month.
  - Quarterly format: Before the end of each quarter (Sep. Dec. Mar. and Jun.)
  - Annual format: Before the end of June.
- VAEO keeps the other for the planning at the village level.

(2) Ward

- WAEO analyzes and evaluate the submitted VAEO monthly/quarterly/annual reports (formats) and provide feedback to respective VAEO.
- Based on the analyses above and adding information on agricultural activities in the ward obtained from direct visits to the villages, WAEO fill up the ward agricultural monthly/quarterly/annual reports (formats). WAEO should carefully collect data of villages which are not covered by VAEO. WAEO should perform appropriate calculation (summation, averaging, etc.) to prepare the WAEO reports (formats).
- WAEO submits the WAEO reports (formats) to DALDO (or equivalent officer) on time. The deadline for each format is as follows[1]:
  - Monthly format: By the end of 1st week of the following month.
  - Quarterly format: By the end of 1st week of the following month (October, January, April and July).
  - Annual format: By the end of 1st week of the following month (July)
- WAEO posts the WAEO [monthly/quarterly/annual] reports (formats) on the notice board of ward offices so that everyone (including VAEO) can see the reports, as a part of feedback.

(3) District

The main actors at this level are DALDO (or equivalent officer, like DAICO or DLFO), DS and DMEO (under DAICO or DLFO). The district (DALDO) must maintain a sufficient number of officers who are capable of and committed to the ARDS operation. It is desirable to form a District Agricultural Data Management Team (DADMT) by which the district can address challenges in the ARDS operation.

DALDO should try every effort to increase the number of staff (in addition to DS and DMEO) who can handle ARDS, in particular the ARDS-LGMD2 operation so that the data processing

[1] Though the multi-sectoral reports should be submitted through WEO, the agricultural reports should follow the technical line (from WAEO to DALDO).

can be jointly by several people, hence avoiding work concentration to a few capable officers. The DADMT mentioned above is helpful in this respect.

ARDS is for the whole agricultural sector. Therefore, despite the recent split of DALDO into DAICO and DFLO, the responsibility for the ARDS operation must be borne by both offices. The district officers as well as field extension officers (VAEOs/WAEOs) should also work jointly for ARDS. The district has to secure good collaboration between the two offices.

The main roles and responsibilities of the district are as follows:

[In Regular ARDS operation and utilization]

- To budget for ARDS activities
  Reference should be made to Section 3.1 (1). Given the importance of data for both agricultural reporting and planning, all LGAs must secure budget for the ARDS operation which enables all activities below. An indicative budget is given in Table 1.
- To ensure that DAICO and DFLO work jointly for the ARDS operation.
- To distribute VAEO/WAEO forms to all villages/wards on time.
- To collect filled-in VAEO/WAEO format from WAEO on time.
- To make the best use of the submission Status Report of ARDS-LGMD2 which show the Wards whether they submitted or not on time. Keep the record of the WAEOs' performance.
- To check quality of data submitted by VAEO/WAEO.
- To provide feedback to the villages and wards.
- To enter data into ARDS-LGMD2
- To prepare report for the district (DED for example)
- To transmit data to regions and ASLMs using ARDS-LGMD2 (by synchronization).
- To obtain approval for data by the region by informing them that you have already submitted (or "completed") the report.
- To analyze and utilize data in reporting, monitoring and planning
- LGAs should use ARDS data for the general data collection requested by the national agencies such as GDP data collection by NBS, Economic data collection by BoT, or Food Security data collection by MAFC.

[In Maintenance, updating and promotion of ARDS]

For this part, refer to Section 3.1 (13) and (14).

- To explain to high ranking officers including political members the importance of the "evidence-based discussion", i.e. to use data in reporting, planning and any policy analysis.
- To take every opportunity to high ranking officers in explaining the benefit of ARDS.
- To ensure involvement and commitment of LGAs' decision makers such as DED and DC.
- To keep updating ARDS components (formats, manuals and any other related ones) to the latest version.
- To maintain and secure the User ID and pass word for the ARDS-LGMD2 operation.
- To maintain ARDS-LGMD2, relevant computers and other electronic components virus-free and avoid from any unnecessary damages (physical or electronic).
- To fix, repair or replace with its own expenses the computer and ARDS-LGMD2 if they crash or contaminated by virus.
- To perform regular data backup taking. Backup data should be kept separately from the computer with ARDS-LGMD2 installed.
- To keep the original VAEO/WAEO data (those data on paper submitted by WAEO to the district) for at least three years

- To carry out necessary training with its own expenses for the officers newly recruited or transferred from other locations such as DAICO/DLFO, DS/DME and VAEO/WAEO.
- To carry out necessary refresher training for existing VAEO/WAEO.

It is desirable that if the district has IT officers, DALDO (or equivalent officer) should promote good communications between DMEO/DS with the IT officers for reliable technical support to the ARDS operation

3.3.2 Regional Level

(4) Region

The main actors at this level are RAA, RLA, or ASDP regional coordinator and Regional IT officers. Their main roles and responsibilities are to ensure all districts carry out ARDS operation properly. For this, the region must first make sure itself being ready for the ARDS operation. Only then it can implement proper and regular guidance, monitoring and supervision to LGAs. The specific responsibilities of the region are as follows.

[Region's own deployment]

- The region must have a functional computer for the use of ARDS-LGMD2.
- The computer with good internet connection is properly managed and continuously protected from virus and other disturbances.
- The region should secure sufficient air time for regular access to the ARDS Web-portal.
- The region has at least two staffs (RAA, RLA or ASDP coordinator) who is capable of and fully committed to the ARDS operation.
- The regional IT must closely be involved in the ARDS operation. He/she should be regularly updated by RAA, RLA or ASDP coordinator on the development of ARDS.
- The region should actively communicate with neighboring (or other regions) for sharing experiences.
- The region should utilize the ARDS data for its own purposes such as reporting to RAS, important visitors and data inquiries from the center.

[Facilitation to LGAs]

- To ensure the district consolidate data properly and on time.
- To ensure the district transmit data and submit reports on time by using the Submission Status Report of ARDS-LGMD2.
- To check quality of the data from the districts,
- To provide feedback to the district on their reports,
- To approve or give comments about the data submitted by the district without any delay..
- To promote ARDS data utilization at the district especially in the DADP preparation and reporting.

[Main roles and responsibilities of Regional IT]

- To provide technical facilitation to the district on the operation of ARDS-LGMD2 and related issues.
- To provide feedback to the National ARDS-LGMD2 technical team (Sub-group of the M&E TWG)

3.3.3 National Level

(5) PMO-RALG

The Director of Sector Coordination and the Director of Information, Communication and Technology are the main actors in PMO-RALG. Their main roles are but not limited to:

- To enforce LGAs and the regions to use ARDS as a formal data collection system in the agricultural sector.
- To disseminate and maintain ARDS at regional and district offices.
- To ensure and promote consistency between ARDS and other LGA's data system such as LGMD.

(6) Agricultural Sector Lead Ministries (ASLMs: MAFC, MLFD and MIT)

The Directors of Policy and Planning in the ASLMs have the following duties as far as ARDS is concerned. The duties may be executed via the M&E TWG, IT sections and statistics units.

- To prepare reports on national component of ARDS (nationally consolidated data).
- To review reports on the local component and provide feedbacks.
- To collate data needed to monitor ASDP implementation, analyze and comment on the monitoring results, and submit regular monitoring reports to the ASDP BFSC.
- To lead the M&E functions such as assessing the performance of the DADPs.
- To coordinate the M&E systems of the ASLMs and examine agricultural sector performance at national level.
- To coordinate capacity building activities that support better M&E understanding and practices for planners and agricultural staffs in the ASLMs.

(7) ASDP M&E Thematic Working Group (TWG) (with the IT Sections and Statistics Units of ASLMs)

The M&E TWG together with the IT sections and statistics units of ASLMs is the central body responsible for ARDS operation, dissemination, maintenance and improvement. In order for them to perform their full responsibilities, it must establish an effective and durable organizational arrangement that ensures steady workings of ARDS operation. The arrangement should also assure close collaboration among the M&E TWG, the IT sections and the statistics units. Their roles and responsibilities are following.

[Overall management concerned with ARDS]

- To introduce, disseminate, maintain and Improve ARDS.
- To prepare the ASDP Performance Report by collecting the latest data for the ASDP M&E shortlisted indicators.

[Regular monitoring of ARDS]

- To establish a steady and continuing mechanism to monitor, guide and supervise the ARDS operation at LGA and regional levels.
- To track the LGAs' and regions' ARDS operation status on monthly basis by checking the "Submission Status Report" provided by ARDS-LGMD2.
- To assign TWG members to specific areas (regions) so that they responsibly communicate with due LGAs and regions, and urge the suitable operation on time.
- To assign particular members of the TWG to inspect the ARDS central server on monthly basis whereby the latest data transmission status of LGAs is monitored.
- To report the ARDS operation status at least quarterly to the M&E TWG meeting, and then to high ranking officers periodically.
- To make inquiry or demand to the districts which fail to submit data/ report on time.

- To make inquiry or demand to the regions which fail to approve/comment on the data/ report submitted by the district.
- To carry out necessary measures (identifying causes of the problems, facilitating their solving the problems, or demanding proper actions) to LGAs and regions if their operation has problems.
- To establish, if necessary, a special support mechanism to address IT related problems, in cooperation with the IT sections.

[Promotion of ARDS]

For this part, refer to Section 3.1 (13) and (14).

- To explain to high ranking officers including political members the importance of the "evidence-based discussion", i.e. to use data in reporting, planning and any policy analysis.
- To take every opportunity to high ranking officials of the government and politicians to introduce, disseminate and promote the usefulness of ARDS.
- To explain the kinds and frequency of data to be collected by ARDS.
- To communicate with other stakeholders about effective use of the data collected by ARDS.
- To organize if possible workshops and gathering to explain and sensitize stakeholders about the usefulness of ARDS.

[Data utilization]

ARDS data is indeed useful at all levels of the administration (LGA, Region and National). Assuming the responsibility of overall ARDS operation, the M&E TWG should promote ARDS data use at all levels including its own use.

- To promote the use of the ARDS Web-Portal specifically developed for accessing ARDS data.
- To encourage LGAs and the regions to use ARDS data in any possible occasions, including LGAs' own reporting and response to data inquiries by the center.
- To demonstrate or share examples of good data utilization of data in reporting and planning.
- To connect ARDS data to the FAO CountrySTAT.
- To utilize ARDS data at the national level in reporting, policy analyses and planning.
- To streamline the ARDS data with other agricultural data such as those in Food Security, Crop and Livestock Development, and agricultural GDP estimation by NBS.
- To ensure consistency between the ARDS data and agricultural statistical data such as the Annual Sample Survey and National Sample Census.

[ARDS maintenance, revision and improvement]

The center, in particular the M&E TWG, should actively engage in the maintenance and improvement of ARDS. In the areas of information technologies (IT), the IT sections of ASLMs should work closely with the TWG. Their specific roles and responsibilities are as follows.

[Central server]

- To keep the central server safe and functional all the time (24 hours throughout a year) without disruptions or disturbances.
- For the purpose of stable operation of the server, it is responsibility of the TWG and the IT sections to guarantee the stable power supply and regular re-booting without delay if the server is down. Data backup must regularly be implemented.
- The central server should be improved or replaced, reflecting the progress of data

accumulation and server capacity.

[Data Storage]
- The TWG and the IT sections must maintain intact the data stored in the server. Access to the server for data management should be restricted to only authorized officers of the TWG and the IT sections.

[ARDS-LGMD2]
- To maintain and authorize the application software.
- To provide technical support to users. The TWG and the IT section should establish effective mechanism for such technical support and implement the support accordingly.
- To amend or improve ARDS-LGMD2 in a timely manner in response to the changes taking place in the VAEO/ WAEO formats and the way data are to be collected.
- To improve ARDS-LGMD2 in response to the changes in the national internet conditions.
- Tasks to be carried out include (with recommended frequency):
  - Updating the Administrative Unit (Quarterly)
  - Updating the Lookup tables (Quarterly)
  - Updating the data scope (additions and removing)
  - Updating the table forms (Annually)

  The last three tasks have direct relation to the VAEO/WAEO Formats updating.

[ARDS Web Portal]
- To maintain the web application specifically developed for accessing ARDS data.
- To maintain its access to the data stored in the central server.
- The tasks to be performed regularly include (with recommended frequency):
  - Updating the news and articles (monthly),
  - Uploading relevant documents (Quarterly)
  - Renewal of the dashboard, etc.

[VAEO/WAEO Formats and Data Collection Method]
- To maintain and improve the VAEO/WAEO formats and the data collection method at the ground.
- To amend and fine-tune the formats as needs arise.
- To review the method of data collection in response to changes taking place in the actual situation of VAEO and WAEO.
- To adjust ARDS to the overall agricultural statistics/data systems of the country.

[Other ARDS documents]
- To update/ modify regularly the ARDS documents as follows.
  - ARDS Operation Guide
  - Training Guide for District Officers

3.4 Communications/ Consultation among Stakeholders

(1) Communications among LGAs, Regions and the National Level (M&E TWG)

Communication among LGAs, Regions and the National level must be actively promoted.

First the regions should closely work with LGAs in the ARDS operation. Whenever LGAs have challenges and problems, the regional officers either respond themselves or bridge them to the national level. In turn the national level should keep close communication with the region as ARDS and ARDS-LGMD2 will be routinely updated and new features will be introduced.

Technical communications with respect to ARDS-LGMD2 has higher importance because arising issues will be highly technical demanding experts' support. Any information either problems or good utilization of ARDS-LGMD2 should widely be shared with regions (including regional IT staff) and the national level. The contacts of all stakeholders must be collected and circulated back to all stakeholders. They should be regularly updated.

Communications and consultations should also be enhanced horizontally. LGAs should discuss and compare their operations and problems with neighbouring LGAs. Regions should communicate with other regions about ARDS issues and ARDS-LGMD2 technical challenges. There must be a database on the issues and challenges as well as their solutions encountered by LGAs, regions and the centre. Such database should be broadly shared by LGAs and regions (including IT staff) so that every stakeholder can resort to the common experience and knowledge.

(2) Contacts on ARDS Issues

Contacts for the general inquiry of ARDS are as follows. They are all members of the ASDP M&E Thematic Working Group of ASLMs.

Ministry of Agriculture, Food Security and Cooperatives (MAFC)

Mr. John Maige	Tel: 0759-074576	Email: maige2008@gmail.com
Mr. Irene Lucas	Tel: 0756-673289	Email: irenenlucas@yahoo.com

Ministry of Livestock and Fisheries Development (MLFD)

Mr. Stephen Michael	Tel: 0754-007008	Email: steve007008@yahoo.com

Ministry of Industry and Trade (MIT)

Mr. John Chassama	Tel: 0784-643242	Email: mbiti07@yahoo.co.uk

Prime Minister's Office – Regional Administration and Local Government (PMO-RALG)

Mr. Samuel Mdachi	Tel: 0713-656448	Email: mdachi.samuel@gmail.com

ASDP M&E Homepage: http://www.kilimo.go.tz/M&E.html

On the other hand, LGMD2 Technical Committee is responsible for all technical aspects of ARDS-LGMD2. Operational aspects are under the guidance of the ARDS-LGMD2 Operational Committee.

The contact persons for ARDS-LGMD2 committee are:

Mr. Sendalo (MLFD):	0754-988251	rsendalo@yahoo.co.uk
Mr. Genya (MIT):	0783-059693, 0717-345534	genya_06@yahoo.com
Mr. Shayo (MAFC):	0713 / 0767 -285320	shayo.inns@gmail.com

Conversion table

Weights and measures			Conversions	
1 hectare	= 10,000 sq metres	(100 x 100 mita)	1 hectare	= 2.47 acres
1 acre	= 4050 sq metres		1 acre	= 70 times 70 steps
1 kilometre	= 1,000 metres			
1 foot	= 30.48 centmetres			
1 step	= 3 feet			
1 tonne	= 1,000 kgs			

Kg Equivalents

	Crop Name	Standard (kgs)		Non-standard	
		Bag	Tin	Name	kgs
Cereals	Maize	100	18	Rumbesa	140
	Paddy	75	15		
	Sorghum	100	18		
	Bulrush Millet	100	18		
	Finger Millet	120	20		
	Wheat	75	15		
	Barley	75	15		
Roots and Tuber	Cassava	60	12		
	Sweet Potatoes	80	16		
	Irish Potatoes	80	16		
	Yams	80	16		
	Cocoyams	80	16		
Industrial Crops	Cotton	50	10		
	Tobacco	70	14		
	Coffee	55			
	Tea	60			
	Pyrethrum	60	12		
	Cacao	60			
	Rubber				
	Wattle	90			
	Sugar Cane	120			
	Sisal	130			
	Cashewnut	80			

	Crop Name	Standard (kgs)		Non-standard	
		Bag	Tin	Name	kgs
Oil Crops	Sunflowe	60	12		
	Simsim	100	20		
	Groudnut	50	10		
	Palmoil	100			
	Coconut	75			
	Soyabeans	100	20		
	Caster Seed	100	20		
Pulses	Cow Pea	100	20		
	Pigeon Pea	100	20		
	Green Gram	100	20		
	Chick Pea	100	20		
	Bambara Nut	100	20		
	Bean	100	20		
Spices	Ginger	75	15		
	Chilli Pepper	85			
	Cardamon	100			

	Crop Name	Standard (kgs)		Non-standard	
		Bag	Tin	Name	kgs
Vegetables	Cucumber	80			
	Cauliflower	50			
	Cabbage	50			
	Amaranthus	50			
	Spinach	45			
	Tomato	90			
	Eggplant	70			
	Onion	80	16		
	Carot	110			
Fruits	Banana	120			
	Mango	130			
	Pawpaw	100			
	Orange	130			
	Tangerine	110			
	Guava	110			
	Apple	110			
	Pineapple	90	18		
	Avogado	140			
	Water Melon	80			
	Plum	110			
	Pear	110			

National Sample Census of Agriculture 2002/03

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA WAZIRI MKUU

Anwani ya Simu "RALG"

Simu Nambari:
026-2322848/2321607
Nukushi: 026 2322116/2322168
E-mailaddress: ps@pmoralg.go.tz

Tawala za Mikoa na Serikali za Mitaa,
S.L.P. 1923,
DODOMA.

Unapojibu Tafadhali Taja:

Kumb. Na.AH.9/275/01B/51 25/09/2014

Makatibu Tawala (M).
TANZANIA BARA.

Yah: MFUMO WA UPATIKANAJI WA TAARIFA ZA SEKTA YA KILIMO NCHINI (AGRICULTURAL ROUTINE DATA SYSTEM - ARDS)

1. Kwa kipindi kirefu suala la upatikanaji, utunzaji, utumiaji na usambazaji wa Takwimu za Sekta ya Kilimo limekuwa ni tatizo katika ngazi zote kuanzia ngazi za kijiji hadi Wizara za Sekta ya Kilimo. Utafiti uliofanyika umeonesha kwamba zaidi ya taarifa kumi na sita (16) za Sekta ya Kilimo kila mwezi huandaliwa katika kila Halmashauri na kuwasilishwa Wizara za Sekta ya Kilimo (Wizara ya Kilimo, Chakula na Ushirika, Wizara ya Maendeleo ya Mifugo na Uvuvi, Wizara ya Viwanda na Biashara na OWM-TAMISEMI). Hali hii imesababisha wataalam wa Sekta ya Kilimo waliopo katika Mamlaka za Serikali za Mitaa kutumia muda mwingi katika kuandaa taarifa hizi na mara nyingine kuwasilisha taarifa zenye takwimu tofauti na zisizo na uhalisia.

   Tatizo hili limesababishwa na mambo yafuatayo:

   a) Kutokuwepo kwa mfumo wa pamoja (***format***) wa ukusanyaji, uchambuzi na utunzaji wa Taarifa na takwimu katika ngazi zote kuanzia Kijiji/Mtaa, Kata, Halmashauri, Mkoa na Wizara.

   b) Kutofautiana mpangilio wa uandishi wa Takwimu katika Mamlaka za Serikali za Mitaa kunatokana na maelekezo tofauti na

ya mara kwa mara na hatimaye kusababisha Halmashauri kushindwa kukidhi mahitaji ya Wizara za Sekta ya Kilimo.

2. Kutokana na Mapungufu hayo Wizara za Sekta ya Kilimo chini ya Programu ya kuendeleza Sekta ya Kilimo nchini (ASDP) kupitia kikundi kazi cha ufuatiliaji na tathmini chenye wataalam toka Wizara zote za Sekta ya Kilimo kimeboresha mfumo wa pamoja wa upatikanaji wa taarifa za maendeleo ya Sekta ya Kilimo nchini (***Agricultural Routine Data System*-ARDS)** kutoka ngazi ya Kijiji/Mtaa, Kata, Halmashauri, Mkoa na Wizara.

3. Mfumo huu unahusisha maeneo makuu matatu ambayo ni fomu ya kukusanyia taarifa za Kilimo za vijiji/Kata (VAEO/WAEO *format),* fomu kwa ajili ya kuweka pamoja taarifa za Vijiji, Kata na Wilaya (*Intergrated Data Collection Format*), na mfumo wa kompyuta unaowezesha kutawanya taarifa za kilimo kutoka ngazi ya Halmashauri kwenda kwa wadau mbalimbali kupitia Mikoa.

4. Mwaka 2009/2010, mfumo huu ulifanyiwa majaribio katika Halmashauri nne za Mikoa ya Morogoro (Halmashauri za Wilaya Morogoro na Mvomero) na Dodoma (Halmashauri za Wilaya Mpwapwa na Kondoa) na kuonyesha mafanikio makubwa. Baadaye mfumo huu ulisambazwa kwa majaribio zaidi katika Mikoa na Halmashauri zote nchini. Kazi hii imekamilika mwezi Machi, 2014.

5. Serikali kwa kushirikiana na wadau wengine wa maendeleo (DFID na JICA) ilitoa mafunzo kwa maafisa ugani wote kwa vijiji na kata pamoja na maafisa wawili wa Halmashauri na Mikoa ya jinsi ya kukusanya, kutunza na kuandaa taarifa mbalimbali za Kilimo kwa kutumia mfumo huu. Pamoja na mafunzo haya Serikali pia imetoa vifaa (Kompyuta, Pikipiki na Ving'amuzi) kwa Halmashauri na Mikoa yote nchini kwa ajili ya kazi hii.

6. Pamoja na kuwajengea uwezo maafisa ugani wa kukusanya taarifa za Sekta ya Kilimo, mfumo huu pia umerahisisha upatikanaji wa taarifa hizo katika mtindo unaofanana kwa Halmashauri zote nchini. Lengo la uboreshaji wa mfumo huu ni kuwezesha upatikanaji wa takwimu zote katika *Database* iliyoko kwenye *Server* iliyoko Makao makuu ya Wizara za Sekta ya Kilimo na wadau wengine wa Sekta.

7. Kutokana na umuhimu wa suala hili, na jitihada zote hizi kubwa zilizofanyika, naelekeza kuwa Mamlaka za Serikali za Mitaa zianze rasmi kutumia mfumo huu katika kutoa taarifa za kila mwezi za sekta ya kilimo.

Nawatakia kazi njema.

J. A. Sagini
KATIBU MKUU

Nakala: Katibu Mkuu,
Wizara ya Kilimo Chakula na Ushirika
S.L.P 9192
DAR-ES-SALAAM.

Katibu Mkuu,
Wizara ya Maendeleo ya Mifugo na Uvuvi
S.L.P 9253
DAR-ES-SALAAM.

Katibu Mkuu,
Wizara ya Viwanda na Biashara,
S.L.P 9503
DAR-ES-SALAAM

REF: AGRICULTURAL ROUTINE DATA SYSTEM – ARDS

1. For a long time the availability, storage, usage and distribution of agricultural statistics have been a challenge to all levels starting from the village to the agricultural leading ministries. Results from a conducted research has revealed that about sixteen (16) reports of agricultural sector are prepared every month by LGAs and presented to the leading agricultural ministries i.e (Ministry of Agriculture Food Security and Cooperatives, Ministry of Livestock Development and Fisheries, Ministry of Industries and Trade, PMO-LARG). This has caused local government authorities agriculture specialists to spend much time in preparing these reports and sometimes end up presenting reports with wrong statistics or even unrealistic ones.

   The following are the main sources of the problem.

   a) Not having a centralized format for collection, analysis and storage of data/statistics at all levels, from village/street, ward, municipal/LGA, and Region and Ministry level.

   b) Differences in format/layout for preparing statics at LGAs caused by frequent contrasting directives which results into LGAs failure to meet agriculture sector ministries requirements.

2. In response to that Shortage, the Agriculture sector Ministries under the Agriculture Sector Development Program (ASDP) formed a monitoring and evaluation workforce which includes experts from all agriculture sector ministries, the team has enhanced a centralized system **(Agriculture Routine Data System-ARDS) for** collecting data/statistics of agriculture development from village/street, ward LGA, Region and the ministry level.

3. The system consist of three major parts, a form for collecting agriculture information from village/street **(VAEO/WAEO format),** a form for storing information for village, ward and district ***(Integrated Data Collection Format),*** and a computerized system that can distribute agriculture statistics/information from the LGA level to different stakeholders through the regional levels.

4. In 2009/2010, the system was tested in four (4) LGAs of the following regions, Morogoro (Morogoro and Mvomero), in Dodoma (at Mpwapwa and Kondoa), where it showed great accomplishments. Later on the system was introduced into all other regions and LGAs for further testing. This task was concluded in March, 2014.

5. The government, in collaboration with other development stakeholders such as (**DFID and JICA**) trained all extension officers from villages and wards together with two officials from LGAs and Regions on using the system for statistics collection, storage and report preparations. The government has also provided equipment (Computers, Motorcycles and Decoders) to all LGAs and Regions for facilitating the task.

6. Apart from building capacity to extension officer on collecting agriculture sector statistics, the system has made statistics/information availability much easier using the same format/layout for all LGAs all over the country. The main purpose of enhancing the system is to facilitate the

availability of all the statistics in a ***Database server*** located at the headquarters of the agriculture sector ministries and others stakeholders.

7. Given the importance of this matter, and all the great efforts undertaken, I give directives that local authorities (VAEO/WAEO) begin official use of this system to report monthly agriculture statistics/information.

Wishing you good work.

J.A.Sagim

PERMANENT SECRETARY

COPY: Permanent secretary

Ministry of Agriculture Food Security and Cooperatives

P.O.BOX 9192

DAR ES SALAAM

Permanent secretary

Ministry of Livestock Development and Fisheries

P.BOX 9253

DAR ES SALAAM

Permanent secretary

Ministry of Industries and Trade

P.O.BOX 9503

DAR ES SALAAM

Evaluation of the ARDS Operation (Questions for LGA Officers)

One answer from one LGA is good.

LGA Name: _____, Region Name: _____

1. Overall ARDS Operation

1.1 Usefulness of ARDS

a) Do you think ARDS useful?
Yes/ No: _____

b) If useful, in what areas? (*Indicate by "√ (tick)" in the cell of the table.*)

No.	Area of Usefulness	√ (tick)
1	Understanding of current status of agriculture	
2	Data management	
3	Planning	
4	Report writing	
5	Responding to the questions of DALDO, Council, Regions, Central Ministries	
6	Any others (write specific areas of usefulness)	

1.2 Components of ARDS Operation and their Work Load

a) On average, how many hours per day, and days per month (for VAEO/WAEO Monthly data) do you typically spend in completing the following part of the ARDS operation? (*Please also give the number of Ward of your District.*)

No. of Wards in your District: _____

No.	Part of ARDS operation	Hours/day	Days/month
1	Data quality check		
2	Data entry to LGMD2i		

b) Do you think the work load too much and not practical in regular working conditions?
Yes/ No: _____

c) If Yes, what should be done to make ARDS more workable?
Choose any of the below, if you think applicable, or give your suggestions at the end.
(*Indicate by "√ (tick)" in the cell of the table.*)

No.	Part of ARDS operation	√ (tick)
1	To reduce the number/kinds of data to be collected	
2	To increase the number of staff at LGA who can operate ARDS/LGMD2i	
3	Any other suggestions	

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d) Which parts of ARDS operation do you like/ wish to simplify most?

(*Indicate by "√ (tick)" in the cell of the table.*)

No.	Part of ARDS operation	√ (tick)
1	Blank format distribution (including photocopying of formats)	
2	Data collection (Submission by VAEOs/WAEOs)	
3	Data quality check	
4	Data entry to LGMD2i	
5	Report preparation	
6	Data transmission (by either Synchronization or Zip file)	
7	Data analysis and utilization	
8	LGMD2i maintenance (including anti-virus and other software maintenance)	
9	Reporting of the ARDS operation status to the centre	

1.3 Usefulness and actual user of the Guides and other materials of ARDS

a) Please indicate in the table below about the usefulness of the materials prepared for the ARDS operation. (Indicate by "√ (tick)" in the cell of the table.)

No.	Topics	Very useful	Useful	Somewhat useful	Un-useful	Very un-useful
1	VAEO/WAEO Formats					
2	Training Guide for VAEO/WAEO formats					
3	Training Guide for District Officers on Data Collection, Analysis and Feedback in ARDS					
4	ARDS Operation Guide					
5	LGMD2i (Computer software)					
6	LGMD2i Operation Manual					

b) Please indicate in the table below about how actually you use/ refer to the materials prepared for the ARDS operation. (Indicate by "√ (tick)" in the cell of the table.)

No.	Topics	Very often	Often	Sometimes	Seldom	Very seldom
1	VAEO/WAEO Formats					
2	Training Guide for VAEO/WAEO formats					
3	Training Guide for District Officers on Data Collection, Analysis and Feedback in ARDS					
4	ARDS Operation Guide					
5	LGMD2i (Computer software)					
6	LGMD2i Operation Manual					

c) About the materials that you indicate "Seldom" or "Very seldom" above, please describe specifically what need to be done to make them more usable.

No.	Topics	What need to be done.
1	VAEO/WAEO Formats	
2	Training Guide for VAEO/WAEO formats	
3	Training Guide for District Officers on Data Collection, Analysis and Feedback in ARDS	
4	ARDS Operation Guide	
5	LGMD2i (Computer software)	
6	LGMD2i Operation Manual	

c) When you have difficulties in the ARDS operation, where/whom/what do you consult with?

(*Please give the office/persons you consult with, together with the kinds of difficulties*)

No.	Office/Persons that you consult with	Difficulty/ Challenges
1		
2		
3		

1.4 Data collection method

a. Do you guide and supervise VAEOs/WAEOs in data collection?
Yes/ No: _____

b. What do you insist/instruct VAEOs/WAEOs to follow when they carry out data collection?

No.	What do you insist/ instruct
1	
2	
3	

c. Please indicate in the table below whether VAEOs/WAEOs understand well important aspects of their data collection. (*Indicate by "√ (tick)" in the cell of the table.*)

No.	Aspects of data collection method	Understood well	Under-stood	Not well understood
1	To make sure data are collected through daily extension activities			
2	To explain well to the village leader and executive officer.			
3	To make sure that collected data are exactly those defined by the format.			
4	To prepare a list of all farmers in the village			
5	To choose 10 farmers from the list (for data of Monthly Format Table2)			
6	To collect productivity and area (but not production)			
7	To avoid data which are extremes or inconsistent.			
8	To work in cooperation among Crop and Livestock Officers, as well as between VAEOs and WAEOs.			
9	To collect all data necessary to be collected.			
10	To submit data on time			

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2. ARDS data utilization

2.1 Data utilization at District level

a) How do you actually use/ refer to the ARDS data? Please indicate by "√ (tick)" in the cell of the table below.

No	Data use	If yes, √	Frequency (select by √)		
			Monthly	Quarterly	Annual
1	Report to DED				
2	Report to DC				
3	Report to the Council				
4	Report to CMT				
5	District Target setting				
6	DADP preparation				
7	DIDF preparation				
8	District budget preparation				
9	Other purpose (1), [specify]				
10	Other purpose (2), [specify]				

b) If the ARDS data is used/ referred to DADP preparation (or implementation), how did you actually use/ refer to? Please indicate by "√ (tick)" in the cell of the table below.

No	DADP data use	If yes, √
1	To examine the validity of VADP	
2	To find potential crops/ areas in the LGA	
3	To just describe the present situation of agriculture of the LGA	
4	To estimate the scale/ size of project/ intervention	
5	To make prediction of future state of crop/ livestock/ others	
6	Other use (1) [specify]	
7	Other use (2) [specify]	

2.2 Data utilization for national/ regional data demand

a) Have you used/ referred to the ARDS data to respond to national/ regional data demand? Please indicate by "√ (tick)" in the cell of the table below.

No	Data demand	If yes, √	Frequency (select by √)		
			Monthly	Quarterly	Annual
1	GDP data (by NBS)				
2	Economic data (by Bank of Tanzania)				
3	Food security (early warning) (by Min. Agric.)				
4	Livestock disease (by Min. Livestock)				
5	Crop disease (by Min. Agric.)				
6	Input subsidies				
7	Agricultural machine/ equipment (by Min. Agric.)				
8	Agricultural machine/ equipment (by Min. Livstck)				
9	Retail price (by Min. Industry)				
10	Farm gate price (by Min. Industry)				
11	Farmers' Cooperatives (by Min. Agric.)				
12	Irrigation (by Zonal office/ Min. Agric.)				
13	Other data demand (1), [specify]				
14	Other data demand (2), [specify]				

2.3 Data utilization for general demand

a) Have you used/ referred to the ARDS data to respond to general data demand? Please indicate by "√ (tick)" in the cell of the table below.

No	Data demand	If yes, √
1	NGO	
2	Researchers (including Academics)	
3	Investors (Foreign or Domestic)	
4	Media/ Journalism	
5	Other use (1) [specify]	
6	Other use (2) [specify]	

3. Suggestions and remarks about the ARDS operation or data utilization

a) Do you have any suggestion for improving the ARDS operation or data utilization?

[End]

Result of Questionnaire on ARDS Operation Status

1.1 Usefulness of ARDS

a) Usefulness of ARDS

Item	Total No.	Yes (No.)	Yes (%)
Usefulness of ARDS	136	134	98.5

b) If useful, in what areas?

	Item	Total No.	Yes (No.)	Yes (%)
1	Understanding of current status of agriculture	136	131	96.3
2	Data management	136	134	98.5
3	Planning	136	124	91.2
4	Report writing	136	133	97.8
5	Responding to the questions of DALDO, Council, Regions, Central Ministries	136	124	91.2

1.2 Components of ARDS Operation and their Work Load

No. of Wards in a LGA		No.	%
National average (136 LGAs)		21.4	
Distribution			
	No. LGA w/ Ward >=40	3	2.2%
	No. LGA w/ Ward <40 & >=30	17	12.5%
	No. LGA w/ Ward <30 & >=20	56	41.2%
	No. LGA w/ Ward <20 & >=10	51	37.5%
	No. LGA w/ Ward <10	6	4.4%
	n.a.	3	2.2%
	Total	136	100.0%

*Max No. Ward 47: Mwanza RS [Sengerema]

*Min. No. Ward 6: Singida RS [Singida MC], Iringa RS [Mafinga TC], Iringa RS [Mufindi DC]

a) Time spent for ARDS Operation

1	Data quality check (Hours per day)	3.98
1	Data quality check (Days per month)	6.79
2	Data entry to LGMD2i (Hours per day)	6.23
2	Data entry to LGMD2i (Days per month)	8.76

1.2 Components of ARDS Operation and their Work Load

b) Do you think the work load too much and not practical in regular working conditions?

	No.	%
Yes	41	30.1
No	93	68.4
n.a.	2	1.5
Total	136	100.0

LGAs with Ward >=30 which reported the work load too much

No.	Total	20
	Reported "Yes"	5
	%	25.0

Regional difference in LGAs which reported the work load too much

	No. LGA	No. LGA (Yes)	% Yes
No. Yes in Morogoro RS	7	1	14.3%
No. Yes in Dodoma RS	7	1	14.3%
No. Yes in Tabora RS	8	0	0.0%
No. Yes in Singida RS	6	2	33.3%
No. Yes in Kigoma RS	8	3	37.5%
No. Yes in Kagera RS	8	6	75.0%
No. Yes in Mwanza RS	7	4	57.1%
No. Yes in Simiyu RS	6	4	66.7%
No. Yes in Geita RS	6	1	16.7%
No. Yes in Mara RS	8	1	12.5%
No. Yes in Sinyanga RS	6	1	16.7%
No. Yes in DSM RS	3	0	0.0%
No. Yes in Pwani RS	7	2	28.6%
No. Yes in Lindi RS	6	3	50.0%
No. Yes in Mtwara RS	7	1	14.3%
No. Yes in Iringa RS	5	0	0.0%
No. Yes in Katavi RS	4	0	0.0%
No. Yes in Mbeya RS	11	1	9.1%
No. Yes in Njombe RS	6	3	50.0%
No. Yes in Rukwa RS	4	2	50.0%
No. Yes in Ruvuma RS	6	4	66.7%

c) If Yes, what should be done to make ARDS more workable:

1. To reduce the number/kinds of data to be collected					
8		5.9%			
2. To increase the number of staff at LGA who can operate ARDS/LGMD2i					
56		41.2%			

1.2 Components of ARDS Operation and their Work Load

d) Which parts of ARDS operation do you like/ wish to simplify most?:

1. Blank format distribution (including photocopying of formats)					
65		47.8%			
2. Data collection (Submission by VAEOs/WAEOs)					
57		41.9%			
3. Data quality check					
55		40.4%			
4. Data entry to Excel					
13		9.6%			
5. Data consolidation by Excel					
14		10.3%			
4. Data entry to LGMD2i					
67		49.3%			
5. Report preparation					
48	74	35.3%			
6. Data transmission (by either Synchronization or Zip file)					
68		50.0%			
7. Data analysis and utilization					
66		48.5%			
8. LGMD2i maintenance (including anti-virus and other software maintenanc					
74		54.4%			
9. Reporting of the ARDS operation status to the centre					
49		36.0%			

1.3 Usefulness of and actual user of the Guides and other materials of ARDS

a) Please indicate in the table below about the usefulness of the materials prepared for the ARDS operation:

No. of answers

	1. VAEO/WAEO Formats	2. Training Guide for VAEO/WAEO formats	3. Training Guide for District Officers on Data	4. ARDS Operation Guide	5. LGMD2i (Computer software)	6. LGMD2i Operation Manual
No. very useful	76	63	71	73	52	45
No. useful	52	59	56	51	55	67
No. somewhat useful	5	7	5	5	18	11
No. un-useful	0	0	1	1	2	3
No. very un-useful	0	1	0	0	2	3
n.a.	3	6	3	6	7	7
Total	136	136	136	136	136	136

% of answers

% very useful	55.9	46.3	52.2	53.7	38.2	33.1
% useful	38.2	43.4	41.2	37.5	40.4	49.3
% somewhat useful	3.7	5.1	3.7	3.7	13.2	8.1
% un-useful	0.0	0.0	0.7	0.7	1.5	2.2
% very un-useful	0.0	0.7	0.0	0.0	1.5	2.2
n.a.	2.2	4.4	2.2	4.4	5.1	5.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

1.3 Usefulness of and actual user of the Guides and other materials of ARDS

b) Please indicate in the table below about how actually you use / refer to the materials prepared for the ARDS operation:

No. of answers

	1. VAEO/WAEO Formats	2. Training Guide for VAEO/WAEO formats	3. Training Guide for District Officers on Data	4. ARDS Operation Guide	5. LGMD2i (Computer software)	6. LGMD2i Operation Manual
Very often	70.0	43.0	45.0	44.0	53.0	38.0
Often	55.0	64.0	65.0	67.0	56.0	64.0
Sometimes	0.0	0.0	0.0	0.0	0.0	0.0
Seldom	0.0	3.0	2.0	4.0	4.0	4.0
Very seldom	0.0	1.0	3.0	0.0	2.0	1.0
n.a.	11.0	25.0	21.0	21.0	21.0	29.0
Total	136.0	136.0	136.0	136.0	136.0	136.0

% of answers

% Very often	51.5	31.6	33.1	32.4	39.0	27.9
% Often	40.4	47.1	47.8	49.3	41.2	47.1
% Sometimes	0.0	0.0	0.0	0.0	0.0	0.0
% Seldom	0.0	2.2	1.5	2.9	2.9	2.9
% Very seldom	0.0	0.7	2.2	0.0	1.5	0.7
% n.a.	8.1	18.4	15.4	15.4	15.4	21.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

1.4 Data collection method

a) Do you guide and supervise VAEOs/WAEOs in data collection?

	No. LGAs	%LGAs
Yes	130	95.6
No	2	1.5
n.a.	4	2.9
Total	136	100.0

c) Please indicate in the table below whether VAEOs/WAEOs understand well important aspects of their data collection.

No. of answers

	1. To make sure data are collected through daily	2. To explain well to the village leader and executive	3. To make sure that collected data are exactly those	4. To prepare a list of all farmers in the village	5. To choose 10 farmers from the list (for data of Monthly	6. To collect productivity and area (but not production)	7. To avoid data which are extremes or inconsistent.	8. To work in cooperation among Crop and Livestock	9. To collect all data necessary to be collected.	10. To submit data on time
No. "Understood well"	50	31	41	40	23	25	25	67	43	39
No. "Understood"	74	82	77	75	73	82	76	55	78	63
No. "Not well understood"	11	20	17	18	37	25	31	13	14	30
n.a.	1	3	1	3	3	4	4	1	1	4
Total	136	136	136	136	136	136	136	136	136	136

% of answers

% "Understood well"	36.8	22.8	30.1	29.4	16.9	18.4	18.4	49.3	31.6	28.7
% "Understood"	54.4	60.3	56.6	55.1	53.7	60.3	55.9	40.4	57.4	46.3
% "Not well understood"	8.1	14.7	12.5	13.2	27.2	18.4	22.8	9.6	10.3	22.1
% n.a.	0.7	2.2	0.7	2.2	2.2	2.9	2.9	0.7	0.7	2.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2.1 Data Utilization at District level

Data use	No. LGAs reported	Reported Frequency				
		Month	Quarter	Annual	n.a.	Total
1. Report to DED (No.)	114	91	29	2	14	136
- ditto - (% of total LGAs)	83.8%	66.9%	21.3%	1.5%	10.3%	100.0%
2. Report to DC (No.)	82	41	39	9	47	136
- ditto - (% of total LGAs)	60.3%	30.1%	28.7%	6.6%	34.6%	100.0%
3. Report to the Council (No.)	97	0	0	0	136	136
- ditto - (% of total LGAs)	71.3%	28.7%	42.6%	3.7%	25.0%	100.0%
4. Report to CMT (No.)	91	0	0	0	136	136
- ditto - (% of total LGAs)	66.9%	44.1%	25.0%	2.2%	28.7%	100.0%
5. District target setting (No.)	103	0	0	0	136	136
- ditto - (% of total LGAs)	75.7%	26.5%	8.1%	48.5%	16.9%	100.0%
6. DADP preparation (No.)	104	0	0	0	136	136
- ditto - (% of total LGAs)	76.5%	25.0%	16.2%	41.2%	17.6%	100.0%
7. DIDF preparation (No.)	81	0	0	0	136	136
- ditto - (% of total LGAs)	59.6%	17.6%	9.6%	36.8%	36.0%	100.0%
8. District budget preparation (No.)	100	0	0	0	136	136
- ditto - (% of total LGAs)	73.5%	16.9%	11.0%	51.5%	20.6%	100.0%
9. Other purpose (1) [specify]						
10. Other purpose (2) [specify]						

b) If the ARDS data is used/ referred to DADP preparation (or implementation), how did you actually use/ refer to?

Data use	. LGAs repor
1. To examine the validity of VADP	92
- ditto - (% of total LGAs)	67.6%
2. To find potential crops/ areas in the LGA	115
- ditto - (% of total LGAs)	84.6%
3. To just describe the present situation of agriculture of the LGA	109
- ditto - (% of total LGAs)	80.1%
4. To estimate the scale/ size of project/ intervention	100
- ditto - (% of total LGAs)	73.5%
5. To make prediction of future state of crop/ livestock/ others	111
- ditto - (% of total LGAs)	81.6%
6. Other use (1) [specify]	
7. Other use (2) [specify]	

2.2 Data utilization for national/ regional data demand

a) Have you used/ referred to the ARDS data to respond to national/ regional data demand?

Data use	LGAs reported	Reported Frequency				
		Month	Quarter	Annual	n.a.	Total
1. GDP data (by NBS) (No.)	82	27	51	8	50	136
- ditto - (% of total LGAs)	60.3%	19.9%	37.5%	5.9%	36.8%	100.0%
2. Economic data (by Bank of Tanzania) (No.)	49	18	22	12	84	136
- ditto - (% of total LGAs)	36.0%	13.2%	16.2%	8.8%	61.8%	100.0%
3. Food security (early warning) (by Min. Agric.) (No.)	97	55	32	18	31	136
- ditto - (% of total LGAs)	71.3%	40.4%	23.5%	13.2%	22.8%	100.0%
4. Livestock disease (by Min. Livestock) (No.)	97	79	23	4	30	136
- ditto - (% of total LGAs)	71.3%	58.1%	16.9%	2.9%	22.1%	100.0%
5. Crop disease (by Min. Agric.) (No.)	93	76	18	3	39	136
- ditto - (% of total LGAs)	68.4%	55.9%	13.2%	2.2%	28.7%	100.0%
6. Input subsidies (No.)	76	31	10	40	55	136
- ditto - (% of total LGAs)	55.9%	22.8%	7.4%	29.4%	40.4%	100.0%
7. Agricultural machine/ equipment (by Min. Agric.) (No.)	87	25	20	47	44	136
- ditto - (% of total LGAs)	64.0%	18.4%	14.7%	34.6%	32.4%	100.0%
8. Agricultural machine/ equipment (by Min. Livstck) (No.)	74	25	18	35	58	136
- ditto - (% of total LGAs)	54.4%	18.4%	13.2%	25.7%	42.6%	100.0%
9. Retail price (by Min. Industry) (No.)	75	60	12	6	58	136
- ditto - (% of total LGAs)	55.1%	44.1%	8.8%	4.4%	42.6%	100.0%
10. Farmgate price (by Min. Industry) (No.)	65	48	11	8	69	136
- ditto - (% of total LGAs)	47.8%	35.3%	8.1%	5.9%	50.7%	100.0%
11. Farmers' Cooperatives (by Min. Agric.) (No.)	69	27	27	15	67	136
- ditto - (% of total LGAs)	50.7%	19.9%	19.9%	11.0%	49.3%	100.0%
12. Irrigation (by Zonal office/ Min. Agric.) (No.)	80	28	32	24	52	136
- ditto - (% of total LGAs)	58.8%	20.6%	23.5%	17.6%	38.2%	100.0%
13. Other datademand (1), [specify]						
- ditto - (% of total LGAs)						
14. Other data demand (2), [specify]						
- ditto - (% of total LGAs)						

2.3 Data utilization for general demand

a) Have you used/ referred to the ARDS data to respond to general data demand?

Data use	LGAs reported
1. NGO (No.)	104
- ditto - (% of total LGAs)	76.5%
2. Researchers (including Academics) (No.)	112
- ditto - (% of total LGAs)	82.4%
3. Investors (Foreign or Domestic) (No.)	90
- ditto - (% of total LGAs)	66.2%
4. Media/ Journalism (No.)	70
- ditto - (% of total LGAs)	51.5%
5. Other use (1) [specify]	
- ditto - (% of total LGAs)	
6. Other use (2) [specify]	
- ditto - (% of total LGAs)	

Evaluation of the ARDS Operation (Questions for LGA Officers)

One answer from one LGA is good.

LGA Name: _____, Region Name: _____

1. Usefulness of ARDS Web Portal / ARDS-LGMD2?

In last March, the new system "ARDS Web Portal / ARDS-LGMD2" has been introduced to all LGAs of the country.

a) Please indicate in the table below about the usefulness of ARDS Web Portal / ARDS-LGMD2 (Indicate by "√(tick)" in the cell of the table).

Very useful	Useful	Somewhat useful	Un-useful	Very un-useful

2. Submission status of Ward Monthly Report

Please see the attached *Submission Status of Ward Monthly Report* (April data: "Submission Status" here means the "Status of Data Entry" by LGAs which is observable by ARDS-LGMD2. Please note this is different from the Submission Status of VAEOs/WAEOs.) The report is sorted based on the percentage of submission of Ward Monthly Report as of 1st June 2015. Note that LGAs of the same percentage are placed just in alphabet order. In case that you have already entered data, but your submission rate is shown as 0 "zero", please follow the e-mail instruction regarding "complete" button, and answer the following question according to your actual submission.

a) Question for the district whose submission rate is higher than 60%:

If your district's submission rate is higher than 60%, please write down ***the factors which helped you*** to achieve higher "Submit Status" of the Ward Monthly Report.

b) Question for the district whose submission rate is lower than 60%:

If your district's submission rate is lower than 60%, please write down ***the factors which prevented you*** from achieving high "Submit Status" of the Ward Monthly Report.

c) For the above negative factors, what measure you are planning to take?

3. Data Utilization

3.1. Access to Web Portal

a) How often have you accessed ARDS Web Portal from March to May 2015 other than data entry, and which page have you used? Please indicate by "√ (tick)" in the cell of the table below, and choose option number for the used Webpage.

Options of "Used Webpage":

No	Data use
1	Dashboard
2	Analysis
3	Report
4	Data: Pivot Table
5	Data: Data visualizer
6	Data: Map
7	News
8	Articles

No	Frequency	If yes, √	Used Webpage (Write option number)
1	None (only access for data entry)		
2	1-3 times per month		
3	4-5 times per month (1 time per week)		
4	6-19 times per month		
5	About 20 times per month (1 time per day)		
6	More than 20 times		

3.2. Use of ARDS data for District works

a) From March to May 2015, have you used any ARDS data for District works? Please indicate in the table below in which month you used and for what purpose you used? For the purpose of use, please select the option number below if it is applicable. Note that this is the question for your ***actual use***. Please indicate only if you have used it.

Options of "Purpose of use":

No	Data use
1	Report to DED
2	Report to DC
3	Report to the Council
4	Report to CMT
5	District Target setting
6	DADP preparation
7	DIDF preparation
8	District budget preparation
9	Other purpose (1), [specify]
10	Other purpose (2), [specify]

Name of Report (from which Data is obtained)	Month of use	Purpose of use (Write option number)
Ward Monthly Data Source		
Ward Quarterly Data Source		
District Monthly Data Source		
District Quarterly Data Source		
District Quarterly Integrated Data Source		

b) If you have used / referred the ARDS data to DADP preparation (or implementation) from March to May 2015, how did you actually use / refer to? Please indicate by "√ (tick)" in the cell of the table below.

No	DADP data use	If yes, √
1	To examine the validity of VADP	
2	To find potential crops/ areas in the LGA	
3	To just describe the present situation of agriculture of the LGA	
4	To estimate the scale/ size of project/ intervention	
5	To make prediction of future state of crop/ livestock/ others	
6	Other use (1) [specify]	
7	Other use (2) [specify]	

3.3. Use for responding to national / regional data demand

a) Have you used / referred to the ARDS data to respond to national/ regional data demand from March to May 2015? Please indicate by "√ (tick)" in the cell of the table below.

No	Data demand	If yes, √		
		March	April	May
1	GDP data (by NBS)			
2	Economic data (by Bank of Tanzania)			
3	Food security (early warning) (by Min. Agric.)			
4	Livestock disease (by Min. Livestock)			
5	Crop disease (by Min. Agric.)			
6	Input subsidies			
7	Agricultural machine/ equipment (by Min. Agric.)			
8	Agricultural machine/ equipment (by Min. Livstck)			
9	Retail price (by Min. Industry)			
10	Farm gate price (by Min. Industry)			
11	Farmers' Cooperatives (by Min. Agric.)			
12	Irrigation (by Zonal office/ Min. Agric.)			
13	Other data demand (1), [specify]			
14	Other data demand (2), [specify]			

3.4. Use for responding to general data demand

c) Have you used / referred to the ARDS data to respond to general data demand from March to May 2015? Please indicate by "√ (tick)" in the cell of the table below, and write down what data was demanded.

No	Institution or person who demand the data	If yes, √	Data Demanded
1	NGO		
2	Researchers (including Academics)		
3	Investors (Foreign or Domestic)		
4	Media/ Journalism		
5	Other use (1) [specify]		
6	Other use (2) [specify]		

4. Suggestions and remarks about the ARDS operation or data utilization

a) Do you have any suggestion for increasing the ARDS data submission rate?

Thank you for your cooperation.

[End]

Result of Questionnaire on ARDS Operation Status

(In total, 97 LGAs have reported out of 168 LGAs)

1. Usefulness of ARDS

a) Usefulness of ARDS

Item	Very Useful	Useful	Somewhat Useful	Un-useful	Very un-useful	No Answer	Total No. of LGAs
Usefulness of ARDS	31	56	9	0	0	1	97
%	32.0%	57.7%	9.3%	0.0%	0.0%	1.0%	100.0%

2. Submission status of Ward Monthly Report

a) Factors which ***helped*** LGAs to achieve higher "Submission Status"

(asked to LGAs whose submission status is higher than 60%)

- Supports from LGA office in terms of finance and task allocation
  - Administration, DED, and DAICO (Finance, task allocation, and raising awareness)
- On-time distribution of VAEO/WAEO Format
  - District officers are asking VAEOs and WAEOs to print-out the Format
- On-time collection (submission) of VAEO/WAEO Format
  - Following ARDS time table.
  - Notice Board in Department (Each WAEO who submits the form signs and his/her name. For those who does not submit the report must be warned.)
  - Accurate and timely filling of ARDS forms is one of the criteria used in assessment of OPRAS.
  - Disciplinary measures for poor achievements
  - Follow-up and good communication with WAEOs (phone calls, sending text messages, field visit as well as official and ad-hoc meeting)
  - Submission by WAEO was emphasized by LGA Heads in the seminar held in Dodoma.
  - We have conducted several training sessions to all VAEOs/WAEOs in the district to create awareness on requirement of the system, also emphasizing early deliverance of ARDS reports to our HQ.
- On-time Data Entry
  - Entering data once forms are submitted
  - Since we have a problem to access strong internet connection in our district, we have decided to have at least one trip per month to visit in areas with strong internet connection for data entry activity.
  - Because the Web Portal can be accessed by any computer, the entry can be done by different location and person.
  - Availability of working tools i.e Computer and internet.
- Others: Accountability, Good collaboration among staff, Monthly Department Meeting

b) Factors which ***prevented*** LGAs from achieving high "Submission Status"

(asked to LGAs whose submission status is lower than 60%)

- Difficulties in on-time distribution of VAEO/WAEO Format (lack of fund)
- Difficulties in on-time collection (submission) of VAEO/WAEO Format
  - Insufficient numbers of extension officers (Some wards do not have assigned WAEO)
  - Some of filled-in Format are not properly written, and need to ask WAEOs to modify.
  - Due to geographical location of the district
  - Poor return of WAEO report forms from WARD level.
  - Lack of proper follow-up due to lack of funds for fuel.
  - Some Ward Extension Officers have gone for studies
  - Some VAEO/WAEO do not have knowledge on how to fill them.
- Difficulties in Data Entry
  - Weak internet connection (location, delay of internet fee)
  - Unreliable electric's power
  - New wards are not included in Web Portal => Now, M&E TWG is updating.
  - Mafinga TC do not have Laptop, motorcycle and modem (because it is a new town council)
  - Could not find proper option to select in lookdown tables=> Now, M&E TWG is revising.
  - Delay of data entering in the system which is the result of many tasks in the LGA
  - After entering data/Report on offline page, when re-logged in after signing out or after switching to another Administrative unit data, the entered data was not available.
  - Failure to press complete button after data entry.
- Others
  - Officers in charge of ARDS are not in the office (The whole April DS, DMEO most of WAEOs and VAEOs were engaged/selected for the National activity (BVR) work / Leave)
  - Insufficient numbers of officers in charge of ARDS operations.
  - No support from DED and DAICO hence making this work as a ME & DS activities

3. Use of ARDS data for District works

3. 1. Access to Web Portal

a) From March to May 2015: Frequency of access to Webpage

	Options of data use	1-3 times per month	1 time per week	6-19 times per month	1 time per day	More than 20 times	No. LGAs reported (100%=97LGAs)	
1	Dashboard	1	1	3	3	1	9	9.3%
2	Analysis	24	10	5	3	0	42	43.3%
3	Report	27	23	13	5	2	70	72.2%
4	Data: Pivot Table	7	6	5	0	2	20	20.6%
5	Data: Data visualizer	5	4	5	0	2	16	16.5%
6	Data: Map	4	0	1	1	0	6	6.2%
7	News	4	10	4	1	4	23	23.7%
8	Articles	1	5	3	1	4	14	14.4%

3.2. Use of ARDS data for District works

a) From March to May 2015: Use of ARDS data for District works

To select the purpose of use, and the name of report from which data is obtained.

Options of data use		No. LGAs reported (100%=97LGAs)		Ward Monthly Report	Ward Quarterly Report	District Monthly Report	District Quarterly Report	District Integrated Report
1	Report to DED	55	56.7%	37	24	25	23	14
2	Report to DC	37	38.1%	19	16	16	17	10
3	Report to the Council	46	47.4%	19	23	22	21	11
4	Report to CMT	38	39.2%	19	16	13	13	9
5	District Target setting	23	23.7%	6	4	8	11	3
6	DADP preparation	19	19.6%	5	3	8	9	4
7	DIDF preparation	12	12.4%	2	3	3	4	1
8	District budget preparation	12	12.4%	15	6	3	6	3
9	Other purpose (1), [specify]*	20	20.6%	10	2	5	3	0
10	Other purpose (2), [specify]*	10	10.3%	5	2	2	4	1

**Specified purpose in Option No. 9 and No. 10*

Specified Purpose	No. LGAs reported
Food situation / Food Security	6
Crop production	2
Rainfall Distribution	2
Cultivated area	2
Report to RAS / DSM, MLDF	2
NBS	1
GDP	1
BOT	1
RC Report	1
Monthly Report	1
District routine reporting system	1
Status of animal sold in the district	1
Livestock	1
District monthly Hide and skin report	1
Animal Disease surveillance report	1
Assessing disease status & disastrous events	1
Central vertenary laboratory	1
LANi Projection of 5yrs to come	1
Report Writing	1
District budget preparation	1

b) From March to May 2015: Use of ARDS data for DADP preparation (or implementation)

	Options of data use	No. LGAs reported (100%=97LGAs)	
1	To examine the validity of VADP	9	9.3%
2	To find potential crops/ areas in the LGA	38	39.2%
3	To just describe the present situation of agriculture of the LGA	53	54.6%
4	To estimate the scale/ size of project/ intervention	18	18.6%
5	To make prediction of future state of crop/ livestock/ others	45	46.4%
6	Other use (1) [specify]*	3	3.1%
7	Other use (2) [specify]*	3	3.1%

**Specified purpose in Option No. 6 and No. 7*

Specified Purpose	No. LGAs reported
District Food situation	1
Animal disease surveillance report	1
PEST AND DISEASES	1
LIVESTOCK DATAS	1
To evaluate trend of change from hand hoe to agromachines	1
HGF	1

3-3: Use for responding to national / regional data demand

a) From March to May 2015: Use of ARDS data to respond to national / regional demand

	Data Demand	No. LGAs reported (100%=97LGAs)		Used in March	Used in April	Used in May
1	GDP data (by NBS)	46	47.4%	39	17	5
2	Economic data (by Bank of Tanzania)	20	20.6%	19	8	4
3	Food security (early warning) (by Min. Agric.)	70	72.2%	48	48	28
4	Livestock disease (by Min. Livestock)	42	43.3%	38	32	18
5	Crop disease (by Min. Agric.)	43	44.3%	33	34	20
6	Input subsidies	21	21.6%	12	12	9
7	Agricultural machine/ equipment (by Min. Agric.)	32	33.0%	13	18	13
8	Agricultural machine/ equipment (by Min. Livstck)	17	17.5%	10	7	4
9	Retail price (by Min. Industry)	33	34.0%	24	22	14
10	Farm gate price (by Min. Industry)	23	23.7%	16	14	8
11	Farmers' Cooperatives (by Min. Agric.)	18	18.6%	12	11	8
12	Irrigation (by Zonal office/ Min. Agric.)	21	21.6%	14	13	6
13	Other data demand (1), [specify]*	8	8.2%	6	6	4
14	Other data demand (2), [specify]*	2	2.1%	2	2	1

**Specified purpose in Option No. 13 and No. 14*

Specidfied Purpose	No. LGAs reported
Crops production(by Min. Agric)	1
Min of Agri	1
Reginal office	1
For investors	1
Monthly Report	1
Quaterly Report	1
Report Writing	1
Council Meetings	1
NGO	1
Researcher	1

3-4: From March to May 2015: Use of ARDS data to respond to general data demand

No	Institution or person who demand the data	No. LGAs reported (100%=97LGAs)	
1	NGO	36	37.1%
2	Researchers (including Academics)	41	42.3%
3	Investors (Foreign or Domestic)	17	17.5%
4	Media/ Journalism	10	10.3%
5	Other use (1) [specify]*	4	4.1%

Data demanded from NGO

Demanded Data	No. LGAs reported
Crop production/productivity	7
Livestock production	3
Rainfall data	3
Area under cultivation and varieties of crops grown	3
To find potential crops	2
TOTAL MAIZE CULTIVATED AREA	2
Disease affecting poultry and what measure do we take	2
Vegitable production	1
PRODUCTION OF GRAIN	1
Tea production	1
Milk production	1
Number of SACCOS in the Council	1
Cultivated area of cassava crop	1
Farmers organizational development and potential areas for partnership	1
Expected yield of produced crops	1
Target,markets,infrastructure	1
No of wards growing horticultural crops	1
Irrigation schemes in the District	1
Price	1

Data demanded from Researcher

Demanded Data	No. LGAs reported
Crop production	9
Climate / Rainfall	6
No of animals slaughtered	4
Crop disease	3
Livestock disease	3
Potato production	2
Sorghum seed production	1
Rice production trend	1
Sweet potatoes production	1
Cassava production	1
Production status of food and cash crops	1
Sorghum, sunflower and finger millet production	1
Potential villages for maize production	1
Varr. of crops grown and total inputs used	1
Coffee Seedlings required with farmers	1
CROP YIELD	1
Area under cultivation	1
Weed and disease control in crops	1
Types of diseases affecting rice production	1
Food security	1
Land degradation status and counteractive conservation measures	1
Tuta absoluta damages to tomato production	1
Livestock production	1
Transported livestock	1
Soil	1
Markets,productivity,infrastructure	1
Price	1
District Monthly Data Source	1
Ward Monthly Data Source	1
Staff status	1
HALI project from SUA and MARUKU use ARDS data for their investigation.	1

Data demanded from Investor

Demanded Data	No. LGAs reported
Potential crops/areas	2
Area under cultivation	2
Rainfall	2
Number of Animal slaughtered	1
Availability of arable land and other existing potentials for agric investment	1
CRDB BANK	1
Data of the Implementations of agriculture crop production and activities for five years.	1
Population	1
Area available for investment	1
Cotton Production	1
Livestock	1
Crop	1
Area for sunflower oil machine installation	1
District Monthly Data Source	1

Data demanded from Media

Demanded Data	No. LGAs reported
Crop prodcution	2
Livestock production	1
Potential area for irrigation	1
Production trend of simsim	1
BXW severity, impact and control extent.	1
disease affecting banana and livestock and measure to be taken	1
Tea production	1
Area in (ha) destroyed by masika flood	1
How far have reached to the Implementation	1

*Data demanded from Other

Institution	*Demanded Data*	No. LGAs reported
N/A	Report to RC	1
N/A	Preparing report for the implementation of leading party manifesto	1
DC office	Food and crop security situation Monthly report	1
Farmer	Rainfall distribution	1

PRIME MINISTER'S OFFICE-REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT (PMO-RALG)
MONTHLY AGRICULTURAL SECTOR REPORT FORMAT (VILLAGE/WARD)

Revised June 2015

Name of Village/Ward: _____

Name of Extension Officer: _____ Telephone Number: _____

Month: _____ Financial Year: _____ Date of Submission: _____

To be submitted to WAEO before the end of each month by VAEO. To be submitted to DALDO within first week of the following month by WAEO.

NOTE:
1) If your village/ward do not produce the crop / livestock products or do not have the machinery/infrastructure in question, write "0". (zero)
2) If the item exists in your village/ward, write the best estimated number.
3) Use National Standard Measurement in each table where needed.
4) Read the instruction in each table carefully before writing.

1. Introduction

1.1 Weather Condition

a) Rainfall: Write the number of days it rained, and the amount of rainfall.

Number of days	Amount of rain (mm)	Comments (Much, Average, Little, no rain)

Note
i. If there is a rain gauge in your station, please write amount of rainfall in millimeters in the second column.
ii. If there is no rain gauge in your village, skip the second column and fill in the third column.

b) Disaster: Please describe if any disaster (drought, flood, hunger, plant/livestock diseases etc.) occurred in this month.

1.2 Summary of Activities

Please summarize main activities conducted in agricultural sector in this month.

1.3 Achivement and Challenges

Please summarize your output of main activities, and any comments in agricultural sector in this month.

Achievement:

Challenges / Problems :

2. Target, Implementation and Crop Prices

Before filling in this section, please read the note at the end of the table. Annual target should be written only in July and left blank for the other months.

Please refer "List of Crops" attached separetly and add key crops not listed in the first column which are produced in your LGA.

Implementation of seasonal crops

Name of the Crop	Annual Target			Implementation			Market price	Remarks
	Planted Area (ha) (i)	Productivity (ton/ha) (ii)	Expected Production Qty (ton) (iii)=(i)x(ii)	Planted Area (ha) (iv)	Productivity (ton/ha) (v)	Production Qty (ton) (vi) =(iv)x(v)	(Tsh / Kg)	
Maize								
Paddy								
Sorghum								
Bullrush millet								
Finger millet								
Cassava								
Sweer potatos								
Irish potatos								
Beans								
Cow pea								
Sweet Banana								
Cooking Banana								

Note:

i) Annual target for planted area should be set at the beginning of a fiscal year (in July).

iii) Annual target for total production should be set at the beginning of a fiscal year (in July).

iv) Planted area is accumulated planted area from July to the end of the reporting month.

vi) Production quantity is accumulated production from July to the end of the reporting year.

3. Plant Health and Chemical Control

Name of pests/Disease (i)	Name of the crop Affected (ii)	Severity (Large, Meidum, Small) (iii)	Affected Area (iv)	Number of Villages Affected (v)	Pesticide Applied (vi)	Amount used (vii)	Unit (Kg or Litre) (viii)	Number of Villages served (ix)	Number of House hold served (x)	Area Rescued (ha) (xi)	Comments (xii)
Total											

i) Write the name of pest/disease that broke out during this particular month.

ii) Write the name of a crop that has been attacked by pest/disease. (use one row for each crop).

iii) Select the severity of the crop disease/insects based on the affected area (large: greater than 50%, medium: 10%-50%, small: less than 10%)

vi) Write the name of the pesticides that is applied the most.

v) Area rescued is estimated based on the number of households served.

4. Livestock Slaughtered

Type of Livestock	Total number slaughtered (This Month)	Average retail price kg (Tsh)
Cattle		
Sheep		
Goat		
Pig		
Chicken (Local)		
Chicken (improved)		
Others		

5. Meat Inspection

Name of Place for Slaughter/ Inspection	Type of Animal (i)	Number of Animals affected (ii)	Condemnations	
			Reasons for Condemnations (iii)	Number of cases (iv)

i) Write the names of animals (e.g.. cattle, sheep, goat, pigs) which were condemned.

ii) Write the number of animals condemed corresponding to the animals in column (i).

iii) Use one row for each disease/condition in each animal type. If there are more than one reasons, use different rows and leave the preceding columns blank.

iv) Write the number of cases for each reason of condemnations.

6. Livestock Products

6.1 Milk

Type of product	Whole milk (This Month)
Milk - Indigenous Cattle (litre)	
Milk Dairy Cattle (litre)	
Cheese (kg)	
Butter (kg)	
Ghee (kg)	

6.2. Hide and Skin

Type of Product	Unprocessed (piece) (This Month)		Processed (piece) (This Month)	Remarks
	Dry suspended	Dry salted	Wet Blue	
Hide				
Skin				

7. Livestock Health

7.1 Medication

Type of livestock	Type of disease	Number Affected	Number Treated	Number Recovered	Number Died	Treatment/Medicine Applied

7.2 Dipping, Spraying and vaccination

Type of Livestock	Number Dipped	Medicine Applied	Number Sprayed	Medicine Applied	Number vaccinated	Vaccine Applied

7.3 Livestock Service

Type of Livestock	Cutting hoof	Castration	AI	Cutting Horn	Branding	Cutting tail	Cutting teeth	Cutting bill/beak
Cattle								
Goat								
Sheep								
Pig								
Chicken								
Duck								

* Please write the number of services cumulative from July.

PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT (PMO -RALG)
QUARTERLY AGRICULTURAL SECTOR REPORT FORMAT (VILLAGE/WARD)

Name of Village/Ward : Revised September 2013

Name of Extension Officer: Telephone Number:

Quarter: _____ (Month: Up to) Financial Year:_____ date of Submission:

To be submitted to WAEO before the end of each quarter by VAEO. To be submitted to DALDO within first week of the following quarter by WAEO.

NOTE:
1) If your village/ward do not produce the crop / livestock products or do not have the machinery/infrastructure in question, write "0". (zero)
2) If the item exists in your village/ward, write the best estimated number.
3) Use National Standard Measurement in each table where needed.
4) Read the instruction in each table carefully before writing.

1. Village Food Situation

	Check one	Remarks
Good		
Average		
Bad		

Describe food situation in this quarter

Number of household with no food	Number of household with insufficient food	Number of household with enough food	Number of household with excess food

2. Farmers groups/Associations

2.1 SACCOs

Number of SACCOs	Number of Members				Amount of Loans (Tsh)				
	Individual members		Group *	Total	Crop	Livestock	Fishery	Marketing	Total
	Male	Female							

Note: * A group should be counted as one member.

2.2 Other Farmer groups

Type of Associations/Groups		Number of Associations/ Groups	Number of Members			Total number Registered	Total number with Bank Account
			male	Female	Total		
Crop	Production						
	Processing						
	Marketing						
Livestock	Production						
	Processing						
	Marketing						
Fisheries	Production						
	Processing						
	Marketing						

3. Extension Services

3.1 Training of farmers through the methods other than FFS

Topic of Training	Total number of farmers trained		Total number of Farmers Trained		Training method	Training providers	Remarks
	Male	Female	Equal or Less than one week	More than one week			
Crop							
Livestock							
Fishery							
Marketing and Processing							
Irrigation							

4. Plant health

4.1 Biological Control Measures

Type of disease	Type of Crop	Control Measures	Area Controlled (ha)	Number of Households involved	Comments

5. Irrigation

5.1 Crops harvested under irrigation

Type of Crops harvested under irrigation	Planted area (ha) (i)		Yield (ton/ha) (ii)		Production (tons) (iii) = (i) x (ii)	
	Rainy season (iv)	Dry season (v)	Rainy season (vi)	Dry season (vii)	Rainy season (viii)	Dry season (ix)

Note:

(iv) (vi) (viii) Rainy season - Write planted area (ha), yield (ton/ha), and production (ton) for each crop harvested under irrigation during rainy season in the irrigation scheme.

(v) (vii) (ix) Dry season - Write planted area (ha), yield (ton/ha), and production (ton) for each crop harvested under irrigation during dry season in the irrigation schemes.

6. Soil Erosion

Type of Erosion (i)	Name of Village(s) Involved	Area Destroyed (ha)	Type of Control Measures	Area Controlled (ha)	Remarks

i) Write the names of erosion using an English term.

7. Area Cultivated by Village/Ward and Means of Cultivation

7.1 Short Rains Season (Vuli)

	By Tractors/power tillers (ha) (i)	By Draught Animals (ha) (ii)	By hand hoes / hand (ha) (iii)	No tillage (ha) (iv)	Total Area (ha) (v) = (i)+(ii)+(iii)+(iv)
Cultivated					
Planted					
Weeded					
Harvested					

Note : Do not double - count if the same land is cultivated more than once in one season.

7.2 Rainy Season (Masika)

	By Tractors/power tillers (ha) (i)	By Draught Animals (ha) (ii)	By hand hoes / hand (ha) (iii)	No tillage (ha) (iv)	Total Area (ha) (v) = (i)+(ii)+(iii)+(iv)
Cultivated					
Planted					
Weeded					
Harvested					

Note : Do not double - count if the same land is cultivated more than once in one season.

PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT (PMO-RALG)
ANNUAL AGRICULTURAL SECTOR REPORT FORMAT

Revised September 2013

Name of Village/Ward:

Name of Extension Officer: Telephone Number: _____

Month: _____ Financial Year: _____ Date of Submission:

To be submitted to WAEO before the end of each year by VAEO. To be submitted to DALDO within first week of the following year by WAEO.

NOTE:
1) If your village/ward do not produce the crop / livestock products or do not have the machinery/infrastructure in question, write "0". (zero)
2) If the item exists in your village/ward, write the best estimated number.
3) Use National Standard Measurement in each table where needed.
4) Read the instruction in each table carefully before writing.

1. Introduction, Basic Information of Village/Ward

	Male headed household	Female headed household	Total	Number of household engaging in agriculture
Number of Household				
	Male	Female	Total	Population engaging in agriculture
Population				

2. Number of Smallholder Households Participating in Contracting Production and Out-growers Schemes

	Contracting Production (i)			Out-growers scheme (ii)		
	Number of household involved (iii)	Number of Contractors Involved (iv)	Major Products (v)	Number of household involved (vi)	Number of Contractors Involved (vii)	Major Products (viii)
Crop						
Livestock						
Fishery						

Note

i) Contracting production is defined as a partnership between smallholder household/group and an agribusiness company for the production of commercial products detailed in formal contract.

ii) Out-growers scheme is defined as a partnership between smallholder household/group and an agribusiness company for the production of commercial products that may not involve formal contracts.

v), viii) Write the names of major products.

3. Irrigation

3.1 Irrigation scheme

Name of the Scheme (i)	Name of water source (e.g. Rufiji river) (ii)	Potential Area (ha) (iii)	Area under Improved irrigation (ha) (iv)	Season irrigated (1=Both rainy and dry season, 2=Only rainy season, 3=Only dry season)	Status of the scheme (1=Good, 2=Acceptable, 3=Need repairment, 4=Not known)	Number of members in Irrigation Organisations (IO)		Number of farmers using irrigation infrastructures (both members and non members of IO)	
						Male	Female	Male	Female
Improved scheme									
Traditional scheme									

Note: (iii) "Irrigation potential area" means the total area of the scheme which has been brought under irrigation and which can be planned for irrigation on the basis of water availability.

(iv) "Area under irrigation" is the area developed for irrigation within the scheme.

4. Machines and other Agricultural, livestock and Fishery machines

This section refers to the machines/equipment which are basically stationed in your village. The machines which farmers rent from other villages are not included .

4.1 Number of agricultural, livestock and fishery machines

Type of machines/Equipment	Working		Not Working		Reason for not working
	Individually-owned	Group-owned	Individually-owned	Group-owned	
Tractor					
Power Tiller					
Combine harvester					
Mower					
Bailer					
Feeder					
Drinker					
Milking Machine					
Chillers					
Electric Meat Cutter					
Patrol Boat					
Fishing Boat with Engine					
Fishing Boat without Engine					
Others					

Note: Write the number of machines which are owned by either individual or group. Those owned by the Government or institutions (private companies) are regarded as group-owned.

4.2 Number of Agricultural Implements

a) Machinery Drawn (Tractors /Power Tillers)

Type of implement	Working	
	Individually-owned	Group-owned
Harrow		
Planter		
Disk plough		
Sub-soiler		
Weeder		
Boom Sprayer		
Ripper		
Rake for Hay Making		
Trailer		
Others		

b) Animal Drawn (Draught Animals)

Type of Implement	Working	
	Individually-owned	Group-owned
Harrow		
Planter		
Moldboard plough		
Sub-soiler		
Weeder		
Ripper		
Ridger		
Cart		
Other		

4.3 Number of Hand Operated Implements

Hand hoes	Spray pump (Plant/ Livestock)	Flaying Knives	Flaying Nets	Branding Iron*	Others(specify)		

Note: *For Livestock identification

4.4 Number of Agro-processing Machines

Type of Machine	Working		Not Working		Reason for not working
	Individually-owned	Group-owned	Individually-owned	Group-owned	
Milling Machines					
Dehulling Machines					
Oil Extractor					
Kernel Opening					
Pulperies					
Ginneries					
Shelling					
Hay Making Machines					
Dairy Products Processing Machines					
Hatching Machines					
Meat Processing Machines					
Hides and Skins Processing Machines					
Meat Vans					
Milk Vans					
Ice Making Machines					
Fish Product Processing Machines					
Others (specify)					

Note: i) Count the number of machine in a factory or plant.

ii) Write the number of machines which are owned by either individual or group. Those owned by the Government or institutions (private companies) are regarded as group-owned.

5. Extension Services

5.1 Farmers Field School (FFS)

Purpose of FFS (i)	Number of Field School	Number of Farmers Started		Average Duration (days)	Number of Farmers Completed		Number of Villages Covered	Number of Farmers who applied the techniques learned	Remarks
		Male	Female		Male	Female			
Crop									
Livestock									
Fishery									

Purpose of FFS (i)	Number of Field School	Number of Farmers Started		Average Duration (days)	Number of Farmers Completed		Number of Villages Covered	Number of Farmers who applied the techniques learned	Remarks
		Male	Female		Male	Female			
Marketing and Processing									
Others									

6. Input Use

6.1 Inorganic Fertilizer

Type of Fertilizer	Annual requirement	Amount used per year (ton)	Remarks
SA			
CAN			
UREA			
TSP			
DAP			
NPK 10:10:10			
NPK 25:5:5			
NPK 6:20:18 / 10:18:24			
NPK 4:17:15			
NPK 17:17:17			
MRP (Minjingu Rock Phosphate)			
MOP			
Others (specify)			

Note: The amount of fertilizer includes those used for preparation of grazing area.

6.2 Agro Chemicals

Type of Chemicals	(Generic or Trade) Name of Chemicals	Unit (kg/ litre)	Amount used per year	Remarks
A: INSECTICIDES				
A: INSECTICIDES				
A: INSECTICIDES				
A: INSECTICIDES				
A: INSECTICIDES				
B: FUNGICIDES				
B: FUNGICIDES				
B: FUNGICIDES				
B: FUNGICIDES				
B: FUNGICIDES				
C: HERBICIDES				
C: HERBICIDES				
C: HERBICIDES				
C: HERBICIDES				
C: HERBICIDES				
D: RODENTICIDES				
D: RODENTICIDES				
D: RODENTICIDES				
D: RODENTICIDES				
D: RODENTICIDES				
E: AVICIDES				
E: AVICIDES				
E: AVICIDES				
E: AVICIDES				
E: AVICIDES				
F: Others				
F: Others				
F: Others				
F: Others				
F: Others				

Note: Write about the most common brand (trade) names in each category.

6.3 Improved Seeds

Type of Crops	Annual Requirement for the reporting year (kg)	Name of Improved Variety	Amount used in the reporting year (kg)		Remarks
			Quality Declared Seed	Certified seed	
Maize					
Maize					
Maize					
Maize					
Maize					
Paddy					
Paddy					
Paddy					
Paddy					
Paddy					
Beans					
Beans					
Beans					
Beans					
Beans					
Sorghum					
Sorghum					
Sorghum					
Wheat					
Wheat					
Wheat					
Sunflower					
Sunflower					
Sunflower					
Others (Specify)					

Note: Write the names of the most common varieties of improved seeds for each crop.

7. Livestock population

Type of Animal	Number of indigenous	Number of Improved		Total	Total Registered
		Meat	Dairy		
1. Cattle					
Bull*					
Cow**					
Steer***					
Heifer****					
Male Calf*****					
Female Calf					
Ox					
Unknown					
Sub Total Cattle					
2. Sheep					
Male Sheep					
Female sheep					
Unknown					
Sub total Sheep					
3. Goat					
Male Goat					
Female Goat					
Unknown					
Sub Total Goat					
4. Others					
Pig					
Water Buffalo					
Donkey					
Horse					
Camel					
Dog					
Cat					
Rabbit					
5. Avian	Number of Indigenous	Broiler	Layer	Total	
Chicken					
Duck					
Turkey					
Guinea Fowl					

Note: Count all livestock population EXCEPT those owned by large scale farmers (who have more than 50 head of cattle, and/or more than 100 head of sheep/ goats/pigs, and/or more than 1000 chickens/turkeys/ducks/rabbits, and who have permanent stations/farm, use machines such as milking machine, drinker, etc., practice commercial farming (with modern facilities) and usually have title of the land they own).

* Bull is mature uncastrated male cattle used for breeding.

** Cow is mature female cattle that has given birth at least once.

*** Steer is castrated male cattle over 1 year of age.

**** Calf is young cattle under 1 year of age .

8. Livestock Infrastructure

Type of Infrastructure	Working	Not working	Number Required	Number of Registered	Reasons for not working
Slaughter House *					
Slaughter Slab **					
Butcher					
Hide and Skin Banda					
Permanent Crash					
Charco					
Water Trough					
Cattle Dip					
Dog Dip					
Spray Race					
Hatchery ***					
Milk Collection Centre					
Auction Market					
Godown					
Others (specify)					

Note: * Slaughter house is defined as a facility where animals are slaughtered to carcasses (no processing).
** Slaughter slab is defined as a flat concrete floor where animals are slaughtered in an open air.
*** Hatchery includes a facility for producing on day chicks of any size.

9. Grazing land

Type of Animals (i)	Number of Animals (ii)	Total Grazing Land in the Village (ha) (iii)	Utilized land (ha) (iv)	Total Demarcated Area (ha) (v)	Total Area Leased (ha) (vi)
Cattle					
Goat					
Sheep					
Donkey					

Note:
(ii) Number of animals in the grazing land.
(iii) Total area available for grazing.
(iv) Area actually used for grazing.
(vi) Area officially leased to individuals or groups by village and certified by Ministry of Land.

10. Pasture

10.1 Improved Pasture

Number of farms / plots	Area (ha)	Seed Production (kg)	Amount of Hay Bales/Bundles produced (Hay*)	Remarks

* One bale of hay is about 20kg.

10.2 Crop Residue

Type of crop	Amount of Hay Bales/Bundles produced	Area of Farms/ Plots Grazed in Situ (ha)	Remarks

* One bale is approximately 20kg.

11. Dissemination of Agricultural Information (TV, radio and telecommunication)

11.1 TV and Radio station

Name of TV Station Available	Number of villages covered
TBC	
ITV	
Star TV	
Local, specify:	

Name of Radio Station Available	Number of villages covered
Radio 1	
TBC Taifa	
Radio Free Africa	
Local, specify:	

If the LOCAL radio or TV station air any program on agriculture/ livestock, please write.

Name of station	Name of program	Frequency (time in a week)	Type of information

11.2 Telecommunication

Name of telecommunication company	Number of villages covered
Sasatel	
Tigo	
TTCL	
Vodacom	
Airtel	
Zantel	
Others, specify	

List of Crops

Na.	Sub category	Items											
1	**Cereals**	Maize	Paddy	Sorghum	Bulrush Millet	Finger Millet	Wheat	Barley					
2	**Roots and Tubers**	Cassava	Sweet Potato	Irish Potato	Yam	Coco Yam							
3	**Industrial Crops**	Seed Cotton	Tobacco	Coffee	Tea	Pyrethrum	Cocoa	Rubber	Wattle	Sugar cane	Jute	Sisal	Cashew nut
4	**Oil Crops**	Sunflower	Simsim/Sesame	Groundnut	Palm Oil	Coconut	Soya Bean	Castor Oil Seed	Jatropha				
5	**Pulses**	Cow Pea	Pigeon Pea	Green /Black Gram (Choroko)	Garden Pea	Chick Pea/Lenti	Bambara	Bean					
6	**Spices**	Ginger	Black Pepper	Coriander	Cinnamon	Turmeric	Vanilla	Chilli Pepper	Clove	Garlic	Cardamom	Paprika	
7	**Vegetables**	Cucumber	Mushroom	Cauliflower	Cabbage	Amaranthus	Spinach	Chinese Cabbage	Tomato	Eggplant	Onion	Sweet Pepper	Carrot
		African Eggplant	Black Night Shade (Mnafu)	Kale	Leek	Swiss Chard	Okra						
8	**Fruits**	Sweet Banana	Cooking Banana	Mango	Pawpaw	Orange	Tangerine	Guava	Apple	Pineapple	Avocado	Water Melon	Lemon
		Lime	Plum	Pear	Passion Fruit								
9	**Flowers**	Rose	Chrysanthe-mum	Carnation	Aster	Gypsophylla	Ginger rose	Helianthus					
10	**Others**	Rosella											

PRIME MINISTER'S OFFICE-REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT (PMO-RALG)

MONTHLY AGRICULTURAL SECTOR REPORT FORMAT (VILLAGE/WARD) [Revised and Page Reduced March 2015]

Village/Ward Name		Extension Officer Name:		Tel/Mobile:	
Month:		Financial Year:		Date of Submission	

To be submitted to WAEO before the end of each month by VAEO. To be submitted to DAICO/DLFO within first week of the following month by WAEO.

NOTE: 1) If your village/ward do not produce the crop / livestock products or do not have the machinery/infrastructure in question, write "0". (zero)
2) If the item exists in your village/ward, write the best estimated number. 3) Use National Standard Measurement in each table where needed. 4) Read the instruction in each table carefully before writing.

1. Introduction

1.1 Weather Condition: a) Rainfall: Write the number of days it rained, and the amount of rainfall.

Number of days		Amount of rain (mm)		Comments	*(Much, Average, Little, no rain)*

Note: i) If there is a rain gauge in your station, please write amount of rainfall in millimeters in the second column. ii) If there is no rain gauge in your village, skip the second column and fill in the third column.

1.2 Disaster: Please describe if any disaster (drought, flood, hunger, plant/livestock diseases etc.) occurred in this month.

1.3 Achivement and Challenges: Please summarize your output of main activities, and any comments in agricultural sector in this month.

Achievement:	Challenges / Problems :

2. Target, Implementation and Crop Prices: Before filling in this section, please read the note at the end of the table.

Annual target should be written only in July and left blank for the other months. Please refer to the "**List of Crops**" attached separetly and select crops. But the key crops (**bold** in the list), if any, must be reported first.

Name of the Crop	Annual Target			Implementation			Market (Retail) price	Remarks
	Planted Area (ha) (i)	Productivity (ton/ha) (ii)	Expect'd Product'n Qty (ton) (iii)=(i)x(ii)	Planted Area (ha) (iv)	Productivity (ton/ha) (v)	Product'n Qty (ton) (vi) =(iv)x(v)	(Tsh / Kg)	

Note: i) Annual target for planted area should be set at the beginning of a fiscal year (in July). ii) Annual target for total production should be set at the beginning of a fiscal year (in July).
iii) Planted area is accumulated planted area from July to the end of the reporting month. iv) Production quantity is accumulated production from July to the end of the reporting year.

3. Plant Health and Chemical Control

Name of pests/Disease (i)	Name of the crop Affected (ii)	Severity (Large, Meidum, Small) (iii)	Affected Area (iv)	Number of Villages Affected (v)	Pesticide Applied (vi)	Amount used (vii)	Unit (Kg or Litre) (viii)	Number of Villages served (ix)	Number of House hold served (x)	Area Rescued (ha) (xi)	Comments (xii)
Total											

Note: i) Write the name of pest/disease that broke out during this particular month. ii) Write the name of a crop that has been attacked by pest/disease. (use one row for each crop).
iii) Select the severity of the crop disease/insects based on the affected area (large: greater than 50%, medium: 10%-50%, small: less than 10%)
vi) Write the name of the pesticides that is applied the most. v) Area rescued is estimated based on the number of households served.

4. Livestock Slaughtered

Type of Livestock	Cattle	Sheep	Goat	Pig	Chicken (Local)	Chicken (imprvd)	Others (1)	Others (2)	Others (3)
Total number slaughtered (This Month)									
Average retail price kg (Tsh)									

5. Meat Inspection

Name of Place for Slaughter/ Inspection	Type of Animal (i)	Number of Animals affected (ii)	Condemnations	
			Reasons for Condemnations (iii)	Number of cases (iv)

Note: i) Write the names of animals (e.g.. cattle, sheep, goat, pigs) which were condemned. ii) Write the number of animals condemed corresponding to the animals in column (i).
iii) Use one row for each disease/condition in each animal type. If there are more than one reasons, use different rows and leave the preceding columns blank. iv) Write the number of cases for each reason of condemnations.

6. Livestock Products: 6.1 Milk

Type of product	Milk - Indigenous Cattle (litre)	Milk - Dairy Cattle (litre)	Cheese (kg)	Butter (kg)	Ghee (kg)
Whole milk (This Month)					

6.2. Hide and Skin

Type of Product	Unprocessed (piece) (This Month)		Processed (piece) (This Month)	Remarks
	Dry suspended	Dry salted	Wet Blue	
Hide				
Skin				

7. Livestock Health: 7.1 Medication

Type of livestock	Type of disease	No. Affected	No. Treated	No. Recovered	No. Died	Treatment/Medicine Applied

7.2 Dipping, Spraying and vaccination

Type of Livestock	Number Dipped	Medicine Applied	Number Sprayed	Medicine Applied	Number vaccinated	Vaccine Applied

7.3 Livestock Service: * Please write the number of services cumulative from July.

Type of Livestock	Cutting hoof	Castration	AI	Cutting Horn	Branding	Cutting tail	Cutting teeth	Cutting bill/beak
Cattle								
Goat								
Sheep								
Pig								
Chicken								
Duck								

PRIME MINISTER'S OFFICE-REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT (PMO-RALG)
QUARTERLY AGRICULTURAL SECTOR REPORT FORMAT (VILLAGE/WARD) [Revised and Page Reduced February 2015]

Village/Ward Name		Extension Officer Name:		Tel/Mobile:	
Quarter (No.) _____	Quarter (Month): From _____ up to _____	Financial Year:		Date of Submission	

To be submitted to WAEO before the end of each quarter by VAEO. To be submitted to DAICO/DLFO within first week of the following quarter by WAEO.

NOTE: 1) If your village/ward do not produce the crop / livestock products or do not have the machinery/infrastructure in question, write "0". (zero)
2) If the item exists in your village/ward, write the best estimated number. 3) Use National Standard Measurement in each table where needed. 4) Read the instruction in each table carefully before writing.

1. Village Food Situation: Slect one for the food situation (Good, or Average, or Bad)

Food situation (Good/ Average/ Bad)	Remarks	Describe food situation in this quarter			
		Number of household with no food	Number of household with insufficient food	Number of household with enough food	Number of household with excess food

2. Farmers groups/Associations

2.1 SACCOs Note: * A group should be counted as one member.

Number of SACCOs	Number of Members				Amount of Loans (Tsh)				
	Individual members		Group*	Total	Crop	Livestock	Fishery	Marketing	Total
	Male	Female							

2.2 Other Farmer groups Note: * **Sub-sector** must be specified: Crop, Livestock, and Fishery. ** **Stage of Activity** must be specified: Production, Processing, Marketing

Type of Associations/Groups		Number of Associations/ Groups	Number of Members			Total number Registered	Total number with Bank Account
Sub-sector* [Crop, Livestock, Fishery]	**Stage of Activity**** [Production, Processing, Marketing]		male	Female	Total		

3. Extension Services

3.1 Training of farmers through the methods other than FFS Note: * **Sub-sector** must be specified: Crop, Livestock, Fishery, Marketing and Processing, Irrigation

Sub-sector* Crop, Livestock, Fishery, Marketing and Processing, Irrigation	Topic of Training	Total number of farmers trained		Total number of Farmers Trained		Training method	Training providers	Remarks
		Male	Female	Equal or Less than one week	More than one week			

4. Plant health

4.1 Biological Control Measures

Type of disease	Type of Crop	Control Measures	Area Controlled (ha)	Number of Households involved	Comments

5. Irrigation

5.1 Crops harvested under irrigation

Type of Crops harvested under irrigation	Planted area (ha) (i)		Yield (ton/ha) (ii)		Production (tons) (iii) = (i) x (ii)	
	Rainy season (iv)	Dry season (v)	Rainy season (vi)	Dry season (vii)	Rainy season (viii)	Dry season (ix)

Note: (iv) (vi) (viii) Rainy season - Write planted area (ha), yield (ton/ha), and production (ton) for each crop harvested under irrigation during rainy season in the irrigation scheme.
(v) (vii) (ix) Dry season - Write planted area (ha), yield (ton/ha), and production (ton) for each crop harvested under irrigation during dry season in the irrigation schemes.

6. Soil Erosion Note: Write the names of erosion using an English term.

Type of Erosion (i)	Name of Village(s) Involved	Area Destroyed (ha)	Type of Control Measures	Area Controlled (ha)	Remarks

7. Area Cultivated by Village/Ward and Means of Cultivation

7.1 Short Rains Season (Vuli) Note : Do not double - count if the same land is cultivated more than once in one season.

	By Tractors/power tillers (ha) (i)	By Draught Animals (ha) (ii)	By hand hoes / hand (ha) (iii)	No tillage (ha) (iv)	Total Area (ha) (i)+(ii)+(iii)+(iv)
Cultivated					
Planted					
Weeded					
Harvested					

7.2 Rainy Season (Masika) Note : Do not double - count if the same land is cultivated more than once in one season.

	By Tractors/power tillers (ha) (i)	By Draught Animals (ha) (ii)	By hand hoes / hand (ha) (iii)	No tillage (ha) (iv)	Total Area (ha) (i)+(ii)+(iii)+(iv)
Cultivated					
Planted					
Weeded					
Harvested					

PRIME MINISTER'S OFFICE-REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT (PMO-RALG)
ANNUAL AGRICULTURAL SECTOR REPORT FORMAT (VILLAGE/WARD) [Revised and Page Reduced February 2015]

Village/Ward Name:		Extension Officer Name:		Tel/Mobile:	
Month:		Financial Year:		Date of Submission	

To be submitted to WAEO before the end of each quarter by VAEO. To be submitted to DAICO/DLFO within first week of the following year by WAEO.

NOTE: 1) If your village/ward do not produce the crop / livestock products or do not have the machinery/infrastructure in question, write "0". (zero)
2) If the item exists in your village/ward, write the best estimated number. 3) Use National Standard Measurement in each table where needed. 4) Read the instruction in each table carefully before writing.

1. Introduction, Basic Information of Village/Ward

Number of Household				**Population**			
Male headed household	Female headed household	Total	Number of household engaging in agriculture	Male	Female	Total	Population engaging in agriculture

2. Number of Smallholder Households Participating in Contracting Production and Out-growers Schemes

	Contracting Production (i)			Out-growers scheme (ii)		
	Number of household involved (iii)	Number of Contractors Involved	Major Products (v)	Number of household involved (vi)	Number of Contractors Involved (vii)	Major Products (viii)
Crop						
Livestock						
Fishery						

Note: i) Contracting production is defined as a partnership between smallholder household/group and an agribusiness company for the production of commercial products detailed in formal contract.
ii) Out-growers scheme is defined as a partnership between smallholder household/group and an agribusiness company for the production of commercial products that may not involve formal contracts.
v), viii) Write the names of major products.

3. Irrigation

3.1 Irrigation scheme Note: * **Type of Scheme** must be selected: Improved or Traditional

Name of the Scheme (i)	**Type of Scheme*** [Improved, Traditional] (ii)	Name of water source (e.g. Rufiji river) (Iii)	Potential Area (ha) (iv)	Area under Improved irrigation (ha) (v)	Season irrigated (1=Both rainy and dry season, 2=Only rainy season, 3=Only dry season)	Status of the scheme (1=Good, 2=Acceptable, 3=Need repairment, 4=Not known)		Number of farmers using irrigation infrastructures (both members and non members of IO)	
						Male	Female	Male	Female

Note: (iv) "Irrigation potential area" means the total area of the scheme which has been brought under irrigation and which can be planned for irrigation on the basis of water availability.
(v) "Area under irrigation" is the area developed for irrigation within the scheme.

4. Machines and other Agricultural, livestock and Fishery machines This section refers to the machines/equipment which are basically stationed in your village. The machines which farmers rent from other villages are not included .

4.1 Number of agricultural, livestock and fishery machines

Please refer to the "**List of Machine/Implements**" attached separetly and select machine/implements from there for the Table 4.1, 4.2 a), b), and 4.4.

Type of machines/Equipment	Working		Not Working		Reason for not working	Type of machines/Equipment	Working		Not Working		Reason for not working
	Individually-owned	Group-owned	Individually-owned	Group-owned			Individually-owned	Group-owned	Individually-owned	Group-owned	
Tractor											
Power Tiller											
Milking Machine											
Chillers											

Note: Write the number of machines which are owned by either individual or group. Those owned by the Government or institutions (private companies) are regarded as group-owned.

4.2 Number of Agricultural Implements

Please refer to the "**List of Machine/Implements**" and select machine/implements from there

a) Machinery Drawn (Tractors /Power Tillers)

Type of implement	Working	
	Individually-owned	Group-owned

b) Animal Drawn (Draught Animals)

Type of Implement	Working	
	Individually-owned	Group-owned

4.3 Number of Hand Operated Implements

Note: *For Livestock identification

Type of Implement	Number
Hand hoes	
Spray pump (Plant/ Livestock)	
Flaying Knives	
Flaying Nets	
Branding Iron*	
Branding Iron*	
Others(specify)	
Others(specify)	

4.4 Number of Agro-processing Machines

Please refer to the "**List of Machine/Implements**" and select machine/implements from there.

Type of Machine	Working		Not Working		Reason for not working
	Individually-owned	Group-owned	Individually-owned	Group-owned	

Note: i) Count the number of machine in a factory or plant.

ii) Write the number of machines which are owned by either individual or group. Those owned by the Government or institutions (private companies) are regarded as group-owned.

5. Extension Services

5.1 Farmers Field School (FFS) Note: * **Sub-sector** must be specified: Crop, Livestock, Fishery, Marketing and Processing, Others

Sub-sector* Crop, Livestock, Fishery, Marketing and Processing, Others	Purpose of FFS (i)	Number of Field School	Number of Farmers Started		Average Duration (days)	Number of Farmers Completed		Number of Villages Covered	Number of Farmers who applied the techniques learned	Remarks
			Male	Female		Male	Female			

6. Input Use

6.1 Inorganic Fertilizer Note: The amount of fertilizer includes those used for preparation of grazing area.

Type of Fertilizer	SA	CAN	UREA	TSP	DAP	NPK 10:10:10	NPK 25:5:5
Annual requirement							
Amount used per year (ton)							
Remarks							

Type of Fertilizer	NPK 6:20:18 / 10:18:24	NPK 4:17:15	NPK 17:17:17	MRP (Minjingu Rock Phosphate)	MOP	Others (specify)	Others (specify)	Others (specify)
Annual requirement								
Amount used per year (ton)								
Remarks								

6.2 Agro Chemicals Note: Write about the most common brand (trade) names in each category.

Type of Chemicals	A: INSECTICIDES					B: FUNGICIDES				
(Generic or Trade) Name of Chemicals										
Unit (kg/ litre)										
Unit (kg/ litre)										
Amount used per year										
Remarks										

Type of Chemicals	C: HERBICIDES					D: RODENTICIDES				
(Generic or Trade) Name of Chemicals										
Unit (kg/ litre)										
Unit (kg/ litre)										
Amount used per year										
Remarks										

Type of Chemicals	E: AVICIDES					F: Others				
(Generic or Trade) Name of Chemicals										
Unit (kg/ litre)										
Unit (kg/ litre)										
Amount used per year										
Remarks										

6.3 Improved Seeds Note: Write the names of the most common varieties of improved seeds for each crop.

Type of Crops	**Maize**					**Paddy**				
Annual Requirement for the reporting year (kg)										
Name of Improved Variety										
Amount used in the reporting year (kg) [Quality Declared Seed]										
Amount used in the reporting year (kg) [Certified seed]										
Remarks										

Type of Crops	Beans					Sorghum				
Annual Requirement for the reporting year (kg)										
Name of Improved Variety										
Amount used in the reporting year (kg) [Quality Declared Seed]										
Amount used in the reporting year (kg) [Certified seed]										
Remarks										

Type of Crops	Wheat			Sunflower			Others (Specify)			
Annual Requirement for the reporting year (kg)										
Name of Improved Variety										
Amount used in the reporting year (kg) [Quality Declared Seed]										
Amount used in the reporting year (kg) [Certified seed]										
Remarks										

7. Livestock population

Type of Animal	Number of indigenous	Number of Improved		Total	Total Registered
		Meat	Dairy		
1. Cattle					
Bull*					
Cow**					
Steer***					
Heifer****					
Male Calf*****					
Female Calf					
Ox					
Unknown					
Sub Total Cattle					
2. Sheep					
Male Sheep					
Female sheep					
Unknown					
Unknown					
Sub total Sheep					
3. Goat					
Male Goat					
Female Goat					
Unknown					
Unknown					
Sub Total Goat					

Type of Animal	Number of indigenous	Number of Improved		Total	Total Registered
		Meat	Dairy		
4. Others					
Pig					
Water Buffalo					
Donkey					
Horse					
Camel					
Dog					
Cat					
Unknown					

5. Avian	Number of Indigenous	Broiler	Layer	Total	
Chicken					
Duck					
Turkey					
Guinea Fowl					

Note: Count all livestock population EXCEPT those owned by large scale farmers (who have more than 50 head of cattle, and/or more than 100 head of sheep/ goats/pigs, and/or more than 1000 chickens/ turkeys/ducks/rabbits, and who have permanent stations/farm, use machines such as milking machine, drinker, etc., practice commercial farming (with modern facilities) and usually have title of the land they own).

* Bull is mature uncastrated male cattle used for breeding. ** Cow is mature female cattle that has given birth at least once. *** Steer is castrated male cattle over 1 year of age.

**** Calf is young cattle under 1 year of age .

8. Livestock Infrastructure

Type of Infrastructure	Working	Not working	Number Required	Number of Registered	Reasons for not working
Slaughter House *					
Slaughter Slab **					
Butcher					
Hide and Skin Banda					
Permanent Crash					
Charco					
Water Trough					
Cattle Dip					
Dog Dip					
Spray Race					
Hatchery ***					
Milk Collection Centre					
Auction Market					
Godown					
Others (specify)					

Note: * Slaughter house is defined as a facility where animals are slaughtered to carcasses (no processing).
** Slaughter slab is defined as a flat concrete floor where animals are slaughtered in an open air.
*** Hatchery includes a facility for producing on day chicks of any size.

9. Grazing land

Type of Animals (i)	Number of Animals (ii)	Total Grazing Land in the Village (ha) (iii)	Utilized land (ha) (iv)	Total Demarcated Area (ha) (v)	Total Area Leased (ha) (vi)
Cattle					
Goat					
Sheep					
Donkey					

Note: (ii) Number of animals in the grazing land. (iii) Total area available for grazing.
(iv) Area actually used for grazing. (vi) Area officially leased to individuals or groups by village and certified by Ministry of Land.

10. Pasture

10.1 Improved Pasture

Number of farms / plots	
Area (ha)	
Seed Production (kg)	
Amount of Hay Bales/Bundles produced (Hay*)	
Remarks	

10.2 Crop Residue

Type of crop	
Amount of Hay Bales/Bundles produced	
Area of Farms/ Plots Grazed in Situ (ha)	
Remarks	

* One bale is approximately 20kg.

* One bale of hay is about 20kg.

11. Dissemination of Agricultural Information (TV, radio and telecommunication)

11.1 TV and Radio station

If the LOCAL radio or TV station air any program on agriculture/ livestock, please write.

Name of **TV** Station Available		Number of villages covered		Name of **Radio** Station Available		Number of villages covered	Name of station			
TBC				Radio 1			Name of program			
ITV				TBC Taifa						
Star TV				Radio Free Africa			Frequency (time in a week)			
Local, specify:				Local, specify:						
Local, specify:				Local, specify:			Type of information			
Local, specify:				Local, specify:						

11.2 Telecommunication

Name of telecommunication company	Sasatel	Tigo	TTCL	Vodacom	Airtel	Zantel	Others, specify	Others, specify
Number of villages covered								

List of Crops

Na.	Sub category	Items											
1	**Cereals**	**Maize**	**Paddy**	**Sorghum**	**Bulrush Millet**	**Finger Millet**	Wheat	Barley					
2	**Roots and Tubers**	**Cassava**	**Sweet Potato**	**Irish Potato**	Yam	Coco Yam							
3	**Industrial Crops**	Seed Cotton	Tobacco	Coffee	Tea	Pyrethrum	Cocoa	Rubber	Wattle	Sugar cane	Jute	Sisal	Cashew nut
4	**Oil Crops**	Sunflower	Simsim/Sesame	Groundnut	Palm Oil	Coconut	Soya Bean	Castor Oil Seed	Jatropha				
5	**Pulses**	**Cow Pea**	Pigeon Pea	Green /Black Gram (Choroko)	Garden Pea	Chick Pea/Lenti	Bambara	**Bean**					
6	**Spices**	Ginger	Black Pepper	Coriander	Cinnamon	Turmeric	Vanilla	Chilli Pepper	Clove	Garlic	Cardamom	Paprika	
7	**Vegetables**	Cucumber	Mushroom	Cauliflower	Cabbage	Amaranthus	Spinach	Chinese Cabbage	Tomato	Eggplant	Onion	Sweet Pepper	Carrot
		African Eggplant	Black Night Shade (Mnafu)	Kale	Leek	Swiss Chard	Okra						
8	**Fruits**	**Sweet Banana**	**Cooking Banana**	Mango	Pawpaw	Orange	Tangerine	Guava	Apple	Pineapple	Avocado	Water Melon	Lemon
		Lime	Plum	Pear	Passion Fruit								
9	**Flowers**	Rose	Chrysanthe-mum	Carnation	Aster	Gypsophylla	Ginger rose	Helianthus					
10	**Others**	Rosella											

List of Machine/ Implements

Table 4.1
Type of agricultural, livestock and fishery machines

Tractor
Power Tiller
Combine harvester
Mower
Bailer
Feeder
Drinker
Milking Machine
Chillers
Electric Meat Cutter
Patrol Boat
Fishing Boat with Engine
Fishing Boat without Engine
Others

Table 4.2
Type of Agricultural Implements

a) Machinery Drawn (Tractors /Power Tillers)

Harrow
Planter
Disk plough
Sub-soiler
Weeder
Boom Sprayer
Ripper
Rake for Hay Making
Trailer
Others

b) Animal Drawn (Draught Animals)

Harrow
Planter
Moldboard plough
Sub-soiler
Weeder
Ripper
Ridger
Cart
Other

Table 4.4
Type of Agro-processing Machines

Milling Machines
Dehulling Machines
Oil Extractor
Kernel Opening
Pulperies
Ginneries
Shelling
Hay Making Machines
Dairy Products Processing Machines
Hatching Machines
Meat Processing Machines
Hides and Skins Processing Machines
Meat Vans
Milk Vans
Ice Making Machines
Fish Product Processing Machines
Others (specify)

THE UNITED REPUBLIC OF TANZANIA

AGRICULTURAL SECTOR DEVELOPMENT PROGRAMME (ASDP)

FORMAT FOR INTEGRATED DATA COLLECTION

QUARTERLY

Version September 2013

IDENTIFICATION DETAILS

Region .....

District .....

Quarter .....

First Quarter:	*(July - September)*
Second Quarter:	*(October - December)*
Third Quarter:	*(January - March)*
Fourth Quarter:	*(April - June)*

Financial Year .....

Name (contact person) .....

Address *P.O.Box* .....

E-mail .....

Mobile .....

Date of submission .....

Number of submitted wards .....

ASDP Monitoring & Evaluation Thematic Working Group
P.O.Box 9192, Dar es Salaam
Tel & Fax: +255 22 286 4460
E-Mail: dpp@kilimo.go.tz

Format for Integrated Data Collection (Quarterly)

Name of LGA: _____ Quarter: _____ Financial Year: _____

Important note: This note applies to all the questions in this format unless otherwise specified.

1. **If the item in question does not exist in your LGA, write 0 (zero).**
2. **If the item exists in your LGA, write the best estimated number.**
3. **Comments on data accuracy and/or data sources can be stated in remarks or in separate text boxes.**
4. **Use national standard measurement in all tables where applicable.**
5. **Please read the instruction in each table carefully before data entry.**

1 Types of Crops Grown, Planted Area and Total Production

Name of Crop	Planted Area (Hectare)		Production Qty (Ton)		Remarks
	Annual Target	Achieved to Date	Annual Target	Achieved to Date	
(i)	(ii)	(iii)	(iv)	(v)	(vi)
1.1: Cereals					
Maize					
Paddy					
Sorghum					
Bulrush Millet					
Finger Millet					
Wheat					
Barley					
1.2: Roots and Tubers					
Cassava					
Sweet Potato					
Irish Potato					
Yam					
Coco Yam					
1.3: Industrial Crops					
Seed Cotton					
Tobacco					
Coffee					
Tea					
Pyrethrum					
Cocoa					
Rubber					
Wattle					
Sugar Cane					
Jute					
Sisal					
Cashewnut					
1.4: Oil Crops					
Sunflower					
Simsim/ Sesame					
Groundnut					
Palm Oil					
Coconut					
Soya Bean					
Castor Oil Seed					
Jatropha					
1.5: Pulses					
Cow Pea (Kunde)					
Pigeon Pea (Mbaazi)					
Green/Black Gram (Choroko)					
Garden Pea (Njegere)					
Chick Pea/ Lenti (Dengu)					
Bambara Nut (Njugu Mawe)					
Bean (Maharage)					

Note: (i) If you have other crops than those listed above, please write their names in "1.10 others".

(ii), (iv) Annual target should be set at the beginning of the year (July).
Write how you set the target values in the Remarks.

(iii) Planted area achieved to date is defined as total planted area from July to the end of the quarter.

(v) Total production achieved to date is defined as the sum of production from July to the end of the quarter.
In the 4th quarter report, write the estimated amount of production in this crop year (Vuli and Masika).

Name of Crop	Planted Area (Hectare)		Production Qty (Ton)		Remarks
	Annual Target	Achieved to Date	Annual Target	Achieved to Date	
(i)	(ii)	(iii)	(iv)	(v)	(vi)
1.6: Spices					
Ginger (Tangawizi)					
Black Pepper (Pilipili Manga)					
Coriander (Giligiliani)					
Cinnamon (Mdalasini)					
Turmeric (Binzali)					
Vanilla					
Chilli Pepper (Pilipili kali)					
Clove (Karafuu)					
Garlic (Vitunguu swaumu)					
Cardamom (Iliki)					
Paprika					
1.7: Vegetables					
Cucumber (Matango)					
Mushroom (Uyoga)					
Cauliflower					
Cabbage					
Amaranthus (Mchicha)					
Spinach					
Chinese Cabbage					
Tomato					
Eggplant (Biringanya)					
Onion					
Sweet Pepper (Pilipili hoho)					
Carrot					
African Eggplant (Nyanyachungu)					
Black Night Shade (Mnafu)					
Kale (Figiri)					
Leek					
Swiss Chard (Salad)					
Okra (Bamia)					
1.8: Fruits					
Sweet Banana					
Banana (Plantain)					
Mango					
Pawpaw					
Orange					
Tangerine (Machenza)					
Guava (Mapera)					
Apple					
Pineapple					
Avocado (Parachichi)					
Water Melon (Tikiti maji)					
Lemon (Limau)					
Lime (Ndimu)					
Plum (Tunda damu)					
Pear					
Passion Fruit					
1.9: Flowers					
Rose					
Chrysanthemum					
Carnation					
Aster					
Gypsophylla					
Ginger rose					
Helisianthus					
1.10 Others					
Rosella					

Note: (i) If you have other crops than those listed above, please write their names in "1.10 others".

(ii), (iv) Annual target should be set at the beginning of the year (July).
Write how you set the target values in the Remarks.

(iii) Planted area achieved to date is defined as total planted area from July to the end of the quarter.

(v) Total production achieved to date is defined as the sum of production from July to the end of the quarter.
In the 4th quarter report, write the estimated amount of production in this crop year (Vuli and Masika).

2 Plant Health Services

Name of Pests/Diseases (i)	Name of Crop Affected (ii)	Severity (large, average, small) (iii)	Area Attacked (ha) (iv)	Number of Villages Attacked (v)	Name of Pesticide Applied (vi)	Amount of Pesticide applied (vii)	Unit (kg, litre) (viii)	Number of Villages Served (ix)	Number of Households Received Service (x)	Area Rescued (ha) (xi)	Comments (xii)
Total for this quarter											

Note: (i) Write the name of the pest/disease broke out during the quarter.
(ii) Write the name of crop affected by the pest/disease. Use one row for each crop.
(vi) Write the name of the most applied pesticides.
(x) Area rescued is estimated based on the number of households received service (ix).

3. Livestock/ Products Movement

3 (a) Livestock Movement

Type of Livestock (i)	Animals moved into the district from other areas			Animals moved to other areas from the districts			Animals translocated within the district	
	Non-trade (ii)	Trade		Non-trade (v)	Trade		Non-trade (viii)	Trade (ix)
		From other LGAs in Tanzania (iii)	From other countries (imported) (iv)		To other LGAs in Tanzania (vi)	To other countries (exported) (vii)		
Cattle (number)								
Sheep (number)								
Goat (number)								
Pig (number)								
Other (specify)								

Note: (ii), (v) and (viii) Non-trade includes the movement of animals looking for pasture/ranch and for the purpose of dowry.
(viii) and (ix) It means movement of animals from one place in a district to another place in the same district.

3 (b) Livestock Products Movement

(i)	Livestock products movement in the district		
	Products sold within the district (ii)	Products sold to other districts (iii)	Products sold to other countries (exported) (iv)
Beef (kg)			
Others (specify)			

4. Livestock Slaughtered (Short-listed indicator OC2)

Type of Livestock (i)	Total number slaughtered		Total carcass weight (kg)	
	This quarter (ii)	Cumulative to date* (iii)	This quarter (iv)	Cumulative to date* (v)
Cattle				
Sheep				
Goat				
Pig				
Chicken (local)				
Chicken (improved)				
Others (specify)				

Note: Information on chicken can be collected at the markets and slaughter houses. Domestic consumption is not included.
Note: * Please write the amount cumulative from the 1st quarter.

5. Meat Inspection/ Hygiene

Type of Animal (i)	Number affected (ii)	Condemnations	
		Reasons for Condemnations (iii)	Number of cases for each reason (iv)

Note: (iii) Please use one row for each disease/condition in each animal type. If there are more than one reasons, use different rows and leave the preceding

6. Marketing of Livestock Products

6 (a) Meat from Commercial Farms

Type of Product (i)	Volume Handled						Comments (viii)
	Warm		Chilled		Frozen		
	This Quarter (ii)	Cumulative to Date* (iii)	This Quarter (iv)	Cumulative to Date* (v)	This Quarter (vi)	Cumulative to Date* (vii)	
Beef (kg)							
Goat Meat (kg)							
Mutton (kg)							
Pork (kg)							
Indigenous Chicken Meat (kg)							
Improved Chicken Meat (kg)							

Note: * Please write the amount cumulative from the 1st quarter.

6 (b) Milk

Type of Product (i)	This Quarter (ii)	Cumulative to Date* (iii)
Milk- Indigenous Cattle (litre)		
Milk - Dairy Cattle (litre)		
Cheese (kg)		
Butter (kg)		
Ghee (kg)		

Note: Focus on the amount of products marketed. Domestic consumption is not included.

Note: * Please write the amount cumulative from the 1st quarter.

6 (c) Hide and Skin

Type of Product (i)	Raw (piece)				Processed (piece)	
	Dry Suspended		Dry Salted		Wet Blue	
	This Quarter (ii)	Cumulative to Date* (iii)	This Quarter (iv)	Cumulative to Date* (v)	This Quarter (vi)	Cumulative to Date* (vii)
Hide						
Skin						

Note: * Please write the amount cumulative from the 1st quarter.

(vi) Wet blue: semi finished leather.

7 (a) Animal Feeds, Acaricides, Vaccines and Treatment

Generic Name (i)	Trade name (ii)	Source (iii)	Measure-ment Unit (iv)	Quarterly Requirement (v)	Quarterly Amount (vi)	Low Price (vii)	High Price (viii)	Remarks (ix)
Animal Feeds								
Acaricides								
Vaccines								
Treatment (Drugs)								

Note: (i) Animal feeds include hey, silage, concentrates, etc.

(i), (ii) Write the most common generic and trade names in each category.

(iii) Source= government subsidy or privately acquired

(iv) Measurement Unit should be standard unit - kg, litre, dose etc.

(vi) Amount used is estimated from subsidies and VAEO/WAEO report.

(vii)~(viii) Low and high prices are retail prices.

7 (b). Inputs for reproduction of improved livestock

Type of input (i)	Breed (ii)	Amount required in the quarter (doses or number) (iii)	Amount available in the quarter (doses or number) (iv)	Remarks (v)
Semen				
Bulls				
Heifer				

Note: (iii) and (iv) Number of doses for semen; numbers for bulls and heifer.

THE UNITED REPUBLIC OF TANZANIA

AGRICULTURAL SECTOR DEVELOPMENT PROGRAMME (ASDP)

FORMAT FOR INTEGRATED DATA COLLECTION

ANNUAL

Version September 2013

IDENTIFICATION DETAILS .....

Region .....

District .....

Financial Year .....

Name (contact person) .....

Address *P.O.Box* .....

E-mail .....

Mobile .....

Date of submission .....

Number of submitted wards .....

ASDP Monitoring & Evaluation Thematic Working Group
P.O.Box 9192, Dar es Salaam
Tel & Fax: +255 22 286 4460
E-Mail: dpp@kilimo.go.tz

Format for Integrated Data Collection (Annual)

Name of LGA: _____ Financial Year: _____

Number of wards in LGA: _____

Number of villages* in LGA: _____ * if it is a town, please write number of mitaa.

Number of household: _____

Number of household engaging in agriculture: _____

Important note: This note applies to all the questions in this format unless otherwise specified.

1. **If the item in question does not exist in your LGA, write 0 (zero).**
2. **If the item exists in your LGA, write the best estimated number.**
3. **Comments on data accuracy and/or data sources can be stated in remarks or in separate text boxes.**
4. **Use national standard measurement in all tables where applicable.**
5. **Please read the instruction in each table carefully before data entry.**

1. Food Situation

District population: _____ (Please calculate the current population based on the latest Population Census)

Food Type (i)	Food Crops (ii)	Total Production (Ton) (iii)	Factor (iv)	Cereal Equivalent (Ton) (v) = (iii) x (iv)	Total Cereal Equivalent (Ton) (vi)	Requirement of Cereal Equivalent (Ton) (vii)	Surplus/ Deficit (Ton) (viii) = (vi) - (vii)
Cereal	Maize		1				
	Paddy		0.65				
	Sorghum		1				
	Millet*		1				
Non-cereal	Banana		0.201				
	Cassava		0.34				
	Potato**		0.255				

Note: (ii) *Millet includes both finger millet and bulrush millet. **Potato includes both sweet potato and irish potato.

(iii) Total production should be taken from the figure of total production of the same crop in "1. Type of crops grown, planted area and total production" of the quarterly format in the 4th quarter. Total production of millet is the sum of both finger millet and bulrush millet.

(v) Cereal equivalent is calculated by; Total production x factor

(vi) Total cereal equivalent is the sum of the cereal equivalent of each food crop.

(vii) Requirement of Cereal equivalent is calculated by; 0.65 x population x 365 / 1000

(viii) Surplus/ Deficit is calculated by; (vi) - (vii)

2. Irrigation

2 (a) Irrigation scheme

Name of the Scheme	Name of water source (e.g., Rufiji river)	Potential Area (ha)	Area under irrigation (ha)	Season irrigated (1=Both rainy and dry season, 2=Only rainy season, 3=Only dry season)	Status of the scheme (1=Good, 2=Acceptable, 3=Need repairment, 4=Not known)	Number of members in Irrigation Organisations (IO)		Number of farmers using irrigation infrastructures (both members and non members of IO)	
						Male	Female	Male	Female
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
Improved scheme									
Traditional scheme									

Note: (iii) "Potential area" is the total area of the scheme which has been brought under irrigation and which can be planned for irrigation on the basis of water availability.
(iv) "Area under irrigation" is the area developed for irrigation within the scheme.
(v), (vi) Write an applicable number.

2 (b) Crops harvested under irrigation

Type of Crops harvested under irrigation	Planted area (ha) (i)		Yield (ton/ha) (ii)		Production (tons) (iii)	
	Rainy season (iv)	Dry season (v)	Rainy season (vi)	Dry season (vii)	Rainy season (viii) = (iv)*(vi)	Dry season (ix) = (v)*(vii)

(iv) (vi) (viii) Rainy season - Fill out the cells with data on planted area, yield, and production for respective crop under irrigation during rainy seasons.
(v) (vii) (ix) Dry season - Fill out the cells with data on planted area, yield, and production for respective crop under irrigation during dry seasons.

3. Agricultural Mechanization

In this section, mechanization equipment refers to those which are basically stationed in your district. The machines which farmers rent from other districts are not included.

3 (a) Number of Agricultural Machines and Equipment

Type of machines and equipment	Working		Not working		Reasons for not working
	Individually owned	Group-owned	Individually owned	Group-owned	
(i)	(ii)	(iii)	(iv)	(v)	(vi)
Tractor					
Power Tiller					
Combine Harvester					
Mower					
Bailer					
Feeder					
Drinker					
Milking Machine					
Chiller					
Electric Meat Cutter					
Patrol Boat					
Fishing Boat with Engine					
Fishing Boat without Engine					
Others (specify)					

3 (b) Number of Working Agricultural Implements: Machinery Drawn (Tractor/ Power tiller)

Type of Implements	Individually	Group-owned
(i)	(ii)	(iii)
Harrow		
Planter		
Disk Plough		
Sub-soiler		
Weeder		
Boom Sprayer		
Ripper		
Rake for Hay Making		
Trailer		
Other (specify)		

3 (c) Number of Working Agricultural Implements: Animal Drawn (Draught Animals)

Type of Implements	Individually	Group-owned
(i)	(ii)	(iii)
Harrow		
Planter		
Plough		
Sub-soiler		
Weeder		
Ripper		
Ridger		
Cart		
Other (specify)		

3 (d) Number of Equipment / Implements

Type of Equipment / implements	Number
(i)	(ii)
Flaying Knives	
Fishing Nets	
Branding Iron	

3 (e) Number of Agricultural Processing Machines (Short-listed Indicator OP2 d,e)

Type of Machines	Working		Not working		Reasons for not working
	Individually owned	Group-owned	Individually owned	Group-owned	
(i)	(ii)	(iii)	(iv)	(v)	(vi)
Milling Machines					
Dehulling Machines					
Oil Extractor					
Kernel Opening					
Pulperies					
Ginneries					
Shellers					
Hay Making Machines					
Small holder Dairy Products Processing Machines					
Hatching Machines					
Meat Processing Machines					
Hides and Skins Processing Machines					
Meat Vans					
Milk Vans					
Ice Making Machines					
Fish Product Processing Machines					
Others (Specify)					

Note: Count the number of machines in the factory/ plant.

3 (f) Area Cultivated and Means of Cultivation

Short rain season

(i)	By Machine (Tractor/ Power Tiller/ Combine Harvester) (ii)	By Draught Animal (iii)	By Hand (iv)	Zero tillage (v)	Total Area (vi) = (ii)+(iii)+(iv)+(v)
Area Cultivated (ha)					
Area Planted (ha)					
Area Weeded (ha)					
Area Harvested (ha)					

Note: (ii)~(v) Do not double-count if the same land is cultivated more than once in one season.

Long rain season

(i)	By Machine (Tractor/ Power Tiller/ Combine Harvester) (ii)	By Draught Animal (iii)	By Hand (iv)	Zero tillage (v)	Total Area (vi) = (ii)+(iii)+(iv)+(v)
Area Cultivated (ha)					
Area Planted (ha)					
Area Weeded (ha)					
Area Harvested (ha)					

Note: (ii)~(v) Do not double-count if the same land is cultivated more than once in one season.

3 (g) Number of Oxenization Centres and Tractor Hiring Services (Short-listed indicator OP1 e)

Type of Centres (i)	Working (ii)	Not working (iii)	Reasons for not working (iv)
Oxenization Centre			
Tractor Hiring Service			

4 Input

4 (a) Inorganic Fertilizer Requirements and Availability

Type of Fertilizer (i)	Annual Requirement for the Reporting Year (tons) (ii)	Amount Used in the Reporting Year (tons) (iii)	Remark (iv)
SA			
CAN			
UREA			
TSP			
DAP			
NPK 10:10:10			
NPK 25:5:5			
NPK 6:20:18 / 10:18:24			
NPK 4:17:15			
NPK 17:17:17			
MRP			
MOP			
Others (specify)			

Note: Fertilizer should be for both crops and pastures.

4 (b) Agrochemicals Requirements and Availability

Type of agrochemicals (i)	(Generic or Trade) Name of Chemicals (ii)	Measurement unit (kg / litre) (iii)	Amount Used in the Reporting Year (iv)	Remark (v)
Insecticides				
Fungicides				
Herbicides (Chemicals to control weeds)				
Rodenticides (Chemical to kill rodents (e.g. rats, mice))				
Avicides (Chemical to kill avian (e.g. quelea-quelea))				

Note: (ii) Write about the most common brand (trade) names in each category.

4 (c) Requirements for and Amount Used of Improved Seed Variety

Type of Crop	Annual requirement for the reporting year (kg)	Name of Improved Variety	Amount used in the reporting year (kg)		Remark
			Quality Declared Seeds	Certified Seeds	
(i)	(ii)	(iii)	(iv)	(v)	(vi)
Maize					
Paddy					
Beans					
Sorghum					
Wheat					
Sunflower					
Others (Specify)					

Note: (iii) Write about the most common varieties of improved seeds for each crop.

5 Extension Services

5 (a) Number of Extension Officers

Area of Specialization	Number of Extension Officers Available						Total	Total Registered/ Enlisted
	District HQ		Wards		Villages			
	Male	Female	Male	Female	Male	Female		
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
Crop								
- Crop Production								
- Land Use								
- Irrigation								
- Nutrition								
- Horticulture								
- Agro Mechanization								
- Others (Specify)								
Livestock								
- Animal Production								
- Animal Health								
- Veterinarians								
- Livestock officers								
- Others (Specify)								
Agro Vet								
Cooperatives								
Fishery								
Total								

5 (b) Level of Education

Level of Education	Number of Extension Officers						Total
	District HQ		Ward		Village		
	Male	Female	Male	Female	Male	Female	
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
Non-Certificate							
Certificate							
Diploma							
1st Degree							
2nd Degree							
Ph D							

5 (c) Working Facilities/ Equipment

Station	Vehicle		Motorcycle		Bicycle		Housing	
	Required	Available	Required	Available	Required	Available	Required	Available
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
District HQ								
Ward								
Village								
Total								

Station	Extension Kit		Photocopier		Computer		Other (specify)	
	Required	Available	Required	Available	Required	Available	Required	Available
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
District HQ								
Ward								
Village								
Total								

Note: Write the number of "available" facilities/equipment which are "in operation" or "not in operation but repairable".

5 (d) IT Facilities

Q. Do you have an access to Internet (whatever means) in your office?

Write the number which best describes the situation in a box in the right.

1) Yes, access to Internet is stable.
2) Yes, it is available sometimes.
3) Yes, but it is not good at all
4) No, we don't have an access to Internet.
5) No, but it is available out of office e.g. internet café etc.

5 (e) Number of Extension Officers Trained (Short-listed Indicator OP3)

i) Total number of extension officers who attended at least one training (Do not double count the same officers)

ii) Number of extension officers trained

Topic of Training	Total Number of Officers Trained			Number of Officers Trained for		Training methods	Training providers	Remarks
	Male	Female	Total	Equal to or Less than Six Month	More than Six Month			
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
Crop								
Livestock								
Fishery								
Marketing and Processing								
Irrigation								
Others								

Note: For i) Both short and long courses are included.
vii) Training method includes study tour, workshop, courses at agricultural colleges, etc.
viii) Write the names of training providers

5 (f) Training of farmers through Farmers' Field Schools

Purpose of FFS	Number of Field Schools	Number of Farmers Completed			Average Duration (days)	Number of Villages Covered	Remarks
		Male	Female	Total			
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
Crop							
Livestock							
Fishery							
Marketing and Processing							
Others							

Note: (i) Write the purpose of FFS.
(ii) Write the number of FFS that were actually held.

5 (g) Farmers Trained through other methods than FFS

Topic of Training	Total number of farmers trained			Number of farmers trained for		Training methods	Training providers	Remarks
	Male	Female	Total	Equal to or less than one week	More than one week			
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
Crop								
Livestock								
Fishery								
Marketing and Processing								
Irrigation								
Others								

Note: (i) List all topics of training for farmers which were conducted this year.
(vii) Training method includes study tour, workshop, courses at agricultural colleges, etc.
(viii) Write the names of training providers

5 (h) Non-Government Agricultural Extension Service Providers

Name of Service Provider (i)	Type of Service Providers (ii)	Type of Service (iii)	Number of Villages Served by Providers (iv)

Note: (ii) Type of service providers: NGOs, Religious Organizations, Private companies, Individuals (e.g. stockist) etc.
(iii) Type of service: Crop, Livestock, Cooperatives, Financial services etc.
(iv) Number of villages which received extension service from service providers

6. Associations/ Groups

6 (a) SACCOs

Number of SACCOs (i)	Number of Members				Amount of Loans (Tsh)				
	Male (ii)	Female (iii)	Group (iv)	Total (v)	Crop (vi)	Livestock (vii)	Fishery (viii)	Marketing (ix)	Total (x)

Note: (x) If the breakdown of the loan (crop, livestock etc.) is not available, write the total amount only.

6 (b) Other Associations/ Groups

Type of Associations/ Groups (i)	Number of Associations/ Groups		Number of Members			Total Number Registered (vii)	Total Number with Bank Account (viii)
	Urban (ii)	Rural (iii)	Male (iv)	Female (v)	Total (vi)		
Crop							
Livestock							
Fishery							

7. Number of Smallholder Households Participating in Contracting Production and Out-growers Schemes (Short-listed Indicator OC7)

Type of Product (i)	Contracting Production			Out-Growers Schemes		
	Number of Smallholder Households (ii)	Number of Contractors Involved (iii)	Major Products (iv)	Number of Smallholder Households (v)	Number of Contractors Involved (vi)	Major Products (vii)
Crop						
Livestock						
Fishery						

Note: (ii) Contracting production is defined as a partnership between smallholder households and an agribusiness company for the production of commercial products detailed in formal contracts.
(iii) Out-growers schemes is defined as a partnership between smallholder households and an agribusiness company for the production of commercial products that may not involve formal contracts. The company may provide smallholders some services e.g. input credits, tillage, spraying and harvesting.

8. Proportion of Female Members in Finance Management and Planning Committee (District Council) (Short-listed Indicator OP9)

(i)	Number (ii)	Percentage (%) (iii)
Male		
Female		
Total		

9. Livestock Population (Large Scale Farmers) (on June 30th)

Note; Large scale farmers should have more than 50 head of cattle, and/or more than 100 head of sheep/ goats/pigs, and/or more than 1000 chickens/turkeys/ducks/rabbits. They should also have permanent stations/farm, use machines such as milking machine, drinker, etc., practice commercial farming (with modern facilities) and usually have title of the land they own.

Name of Farm /Farmer (i)	Type of Ownership (ii)	Registration Number (iii)	Number of Livestock						
			Cattle (iv)	Sheep (v)	Goats (vi)	Pigs (vii)	Layers (viii)	Broilers (ix)	Remarks (x)

Note: (ii) Write the type of ownership: Public, CBO, NGO, Individual, or Private.
(xi) If there are important livestock other than listed here, please write their names in Remarks.

10. Livestock Population (Small Scale Farming) (June 30th)

Note; Count all livestock population except for those owned by large scale farmers defined in Table 9 above.

Type of Animal	Number of Indigenous	Number of Improved		Total	Total Registered
		Meat	Dairy		
(i)	(ii)	(iii)	(iv)	(v)	(vi)
1. Cattle					
Bull*					
Cow**					
Steer***					
Heifer****					
Male Calf*****					
Female Calf*****					
Ox					
Unknown					
Sub Total Cattle					
2. Sheep					
Male Sheep					
Female Sheep					
Unknown					
Sub Total Sheep					
3. Goat					
Male Goat					
Female Goat					
Unknown					
Sub Total Goat					
4. Others					
Pig					
Water Buffalo					
Donkey					
Horse					
Camel					
Dog					
Cat					
Rabbit					
5. Avian	Number of Indigenous	Number of Improved		Total	Total Registered
		Broiler	Layer		
(i)	(ii)	(iii)	(iv)	(v)	(vi)
Chicken					
Duck					
Turkey					
Guinea Fowl					

Note: (i) Rabbit refers to domesticated ones only.

(ii) The numbers in the sub-total cells for cattle/sheep/goat may not be equal to the sums of each type of cattle/sheep/goat, respectively, because there may be extension officers who report sub-total only.

* Bull is mature uncastrated male cattle used for breeding

** Cow is mature female cattle that has given birth at least once

*** Steer is castrated male cattle over 1 year

**** Heifer is female cattle of 1 year up to the first calving

***** Calf is young cattle under 1 year of age

11. Livestock Products Processing Plants / Units

Name of Business/ Owner	Registration Number	Type of Product	Measurement unit (piece, kg, litre, ton, number etc.)	Installed Production Capacity per year	Utilized Production Capacity per year
(i)	(ii)	(iii)	(iv)	(v)	(vi)
Milk and Milk Product					
Meat and Meat Product					
Hide and Skin					
Animal Feed					

Note: (ii) Write the registration number of national livestock registry for traceability

(iii) If there are more than one product, please use one row for each product.

12. Livestock Infrastructure and Status (Short listed Indicator OP1 b,c, OP2a,c)

Type of Infrastructure (i)	Number of infrastructure		Number Required (iv)	Number Registered (v)	Reasons for not working (vi)
	Working (ii)	Not working (iii)			
Slaughter House *					
Slaughter Slab **					
Butcher					
Hide and Skin Banda					
Permanent Crash					
Charco (malambo) ***					
Water Trough					
Cattle Dip					
Dog Dip					
Spray Race					
Hatchery ****					
Milk Collection Centre					
Auction Market					
Godown (Ghala)					
Abattoirs					
Veterinary Centre					
Veterinary Clinic					
Veterinary Laboratory					
Veterinary Hospital					
Check Point					
Holding Ground					
Quarantine Station					
Stock Route					
Primary Market					
Secondary Market					
Border Market					
Feeder Road (km)					
Dam ***					
Livestock Input Shop					
Artificial Insemination Centre					
AI kit					
Meat Processing Facility/ Plant					
Milk Processing Facility/ Plant					
Fish Processing Facility/ Plant					
Others (specify)					

Note: * Slaughter house is defined as a facility where animals are slaughtered to carcasses (no processing).

** Slaughter slab is defined as a flat concrete floor where animals are slaughtered in an open air.

*** Dam (excluding hydro-power dams) is a barrier that impounds water and bigger in size relative to a charco. Charcos are usually excavated and smaller than dams.

**** Hatchery includes a facility for producing one day chicks of any size.

13. Grazing land

Type of Animals (i)	Number of Animals (ii)	Number of animals in livestock unit (iii)	Total Number of animals in livestock unit [Total of (iii)] (iv)	Total Grazing Land (ha) (v)	Utilized Land (ha) (vi)	Stocking Rate (ha) (Current status on area per livestock unit) (vii) = (vi)/(iv)	Carrying Capacity (ha) (potential) (viii)	Number of animals (livestock unit) that can be kept in the District (ix) = (v)/(viii)	Total Demarcated Area (ha) (x)	Total Area Leased (ha) (xi)	Remarks (xii)
Cattle											
Goat											
Sheep											
Donkey											

Note:

(iii) Livestock unit (LU): 1 cattle = 0.8 LU, 1 goat/sheep = 0.15 LU, 1 donkey = 0.6 LU.

(v) Total area available for grazing in the district.

(vi) Area actually used for grazing.

(vii) Number of hectares each livestock unit consumes currently. It is calculated as "Utilized land (vi)"divided by "Total number of animals in livestock unit (iv)".

(viii) Number of hectares that can potentially support one livestock unit per year. This depends on the ecological zone. (The larger, less fertile the land is.)

(ix) Maximum potential number of animals in livestock unit that can be grazed. It is calculated by "Total grazing land in the district (v)" divided by "Carrying capacity (viii)".

(x) Total area specifically demarcated for grazing.

(xi) Area officially leased to individuals or groups by village and certified by Ministry of Land.

14. Pasture

14 (a) Improved pasture

Number of Farms/ Plots (i)	Area (ha) (ii)	Seed Production (kg) (iii)	Amount of Hay Bales/ Bundles Produced (Tonnes) (iv)	Remarks (vi)

Note (iv) One hay bale is equal to 20 kg.

14 (b) Crop residues

Type of Crop (i)	Planted Area (ha) (ii)	Amount of Bales/ Bundles Produced (Tonnes) (iii)	Area of Farms/ Plots Grazed in Situ (ha) (iv)	Remarks (v)

Note (iii) One bale is approximately 20kg.

15. Dissemination of Agricultural Information

15 (a) Radio and TV Station

Name of TV Station Available (i)	Number of villages covered (ii)
TBC	
ITV	
Star TV	
Local, specify:	

Name of Radio Station Available (i)	Number of villages covered (ii)
Radio 1	
TBC Taifa	
Radio free Africa	
Local, specify:	

If the LOCAL radio or TV station air any program on agriculture, please write.

Name of Station (i)	Name of Program (ii)	Frequency (times in a week) (iii)	Type of Information (iv)

Note: (iv) Type of information: Crop, Livestock or Fishery

15 (b) Telecommunication

Name of Telecommunication Company (i)	Number of Villages Covered (ii)
Sasatel	
Tigo	
TTCL	
Vodacom	
Airtel	
Zantel	
Others, specify	

16. Number of Ward Agricultural Resource Centres

Training Guide for District Officers on Data Consolidation, Analysis and Feedback in Agricultural Routine Data System (ARDS)

ASDP M&E Thematic Working Group
February 2011

Table of Contents

1. Introduction

1.1 Purpose of Training Guide

The purpose of this Training Guide is to guide district officers involved in data consolidation/ analysis, particularly but not limited to statisticians and M&E officers, on:

- How to collect and consolidate data from VAEO/WAEO,
- How to fill the Integrated Data Collection Format in LGMD2,
- How to create tables and charts with the data, and
- How to provide feedback to VAEO/WAEO.

This guide is developed based on the lessons learned and good practices from the pilot implementation at the four districts (Morogoro DC, Kilosa DC, Mpwapwa DC, and Kondoa DC). National and Regional officers can also utilize this manual for data check, analysis and feedback at their levels.

Another Training Guide has been prepared for VAEO/WAEO on how to fill the VAEO/WAEO format. The district officers are recommended to be familiar with both guides.

In this guide, the term "district" is used to refer to all districts, municipalities, towns and cities[1]. Chapter 3, 4, and 5 include instruction on Excel procedure, covering both Excel 2003 and 2007. If procedure is different between the two versions, it is explained separately. Readers are recommended to check which Excel version your computer has.

1.2 Role of District Officers

At all levels of administration, including village, ward, district, region, and national, agricultural data is important for understanding the situation on the ground, making decision, and taking necessary action. In the data flow of the Agricultural Routine Data System (ARDS), the role of district is particularly important because districts oversee data collection at village and ward levels, consolidate the data collected from wards, utilize them and provide the consolidate data to the regional and national levels.

Not only data collection, consolidation and provision, district officers should also play two more important roles: data analysis and provision of feedback. As a decision making body itself, district should analyze the data to develop and monitor its policy, plan and program. Feedback to village and ward officers is also essential in order to enhance their understanding and motivation in data collection.

[1] This is to avoid confusion by using the term "LGA" which includes ward and village, or the term "council" where some councils share one DALDO office.

2. Training of VAEO/ WAEO and Format Distribution

2.1 Training of VAEO/WAEO

When introducing VAEO/WAEO format, district should conduct a 2-day training of VAEO/WAEO (and if necessary VEO in villages which do not have VAEO) on the VAEO/WAEO format. Suggested program of the training is shown in Table 1.

Table 1: Overview of VAEO/WAEO Training

Purpose	VAEO/WAEO understand the VAEO/WAEO reporting format and become able to use it.	
Facilitators	District officers (DALDO, statistician, M&E officer, etc.)	
Participants	All WAEO and VAEO (if necessary VEO in villages without VAEO*)	
Materials	VAEO/WAEO reporting format VAEO/WAEO Training Guide	
Budget items	Per diem, transportation, venue, refreshment, printing, stationery	
Suggested Agenda		
Day 1	8:00-8:30	Registration
	8:30-8:45	Opening remarks, Self-introduction
	8:45-9:00	Introduction: Purpose of the training
	9:00-10:00	- Session 1 (monthly format)
	10:00-10:30	Refreshment
	10:30-13:00	- Session 2 (monthly format continued)
	13:00-14:00	Lunch break
	14:00-15:00	- Session 3 (quarterly format)
	15:00-15:30	Wrap up for Day 1
Day 2	8:30-10:00	- Session 4 (annual format)
	10:00-10:30	Refreshment
	10:30-13:00	- Session 5 (data entry exercise)
	13:00-14:00	Lunch
	14:00-15:00	- Session 6 (Continue data entry)
	15:00-15:30	Way forward: How to distribute and collect format
	15:30-16:00	Closing remarks

*: VEO in a village without VAEO is expected to collaborate with WAEO in charge of the village in filling out the format.

Box 1. Good Practice from Pilot LGAs: Follow Up Training

In January 2010, M&E Officer of Morogoro DC visited each division to conduct a refresher training of VAEO/WAEO on the format. This was the district's own initiative. The M&E Officer went with the filled-in format and showed participants some areas for improvement as a feedback. The refresher training was also a good opportunity for experienced extension officers to share how to collect data with newly recruited extension officers.

2.2 Format Distribution

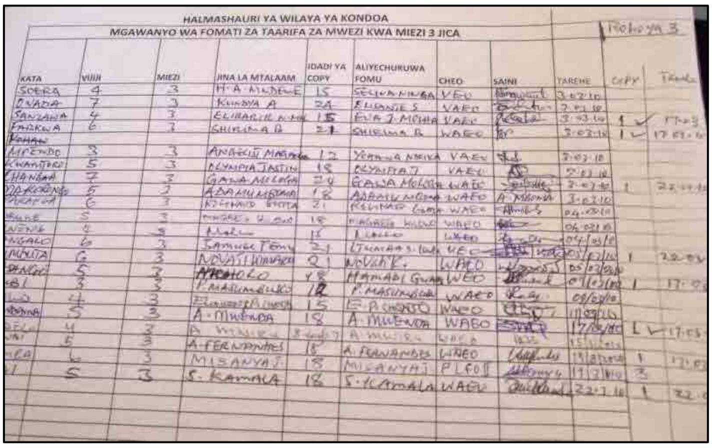
For each month, quarter, and year, district officers should print necessary copies of VAEO/WAEO format and distribute them to VAEO/WAEO. District should prepare the copies well in advance so that there is enough time for distribution.

Direct distribution in person is highly recommended rather than passing them through other people/bus. Distribution should be completed before the end of the month so that VAEO/WAEO has enough time to fill and consolidate the form. Distribution can be done in the following manners:

- (Priority 1) Responsible district officer distributes the format to VAEO/WAEO by directly visiting them. This is especially important if VAEO/WAEO is not visiting the district headquarters regularly.
- VAEO/WAEO pick up the format utilizing any opportunity to visit the district headquarters. In this case, it is recommended to identify one specific place at DALDO office to distribute the blank format and collect the filled-in report.
- If district officer do not visit village/ ward and VAEO/WAEO do not come to the district headquarters, district officer may deliver the format to the WAEO at division center, who in turn will distribute it to the other VAEO/WAEO in the same division or ask VAEO/WAEO to pick them up there.

Box 2. Good Practice from Pilot Districts: Format Distribution

- Kondoa DC has photocopied the format for <u>three months and distributed them at once</u> between 20th to 30th of the last month of a quarter (for next quarter). Quarterly format is also distributed together. Annual format is distributed together with the fourth quarter format in March. This way, the district can avoid late distribution and save time and energy for monthly photocopying and distribution.
- In Kondoa, Mpwapwa and Kilosa, district officers prepared a distribution list to which VAEO/WAEOs sign once they receive the format. This helps them to avoid forgetting any ward (See example here). Annex 1 provides a suggested format of distribution list.



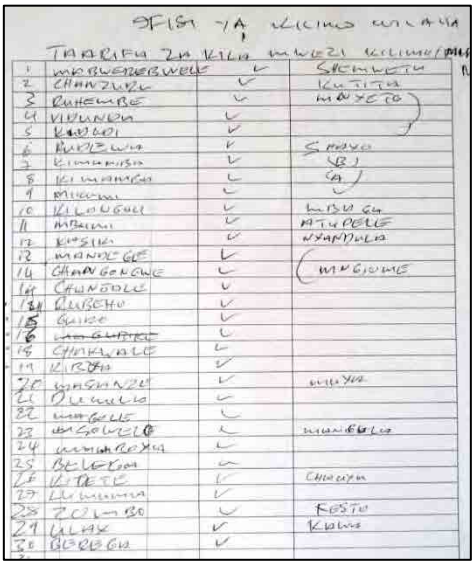
2.3 Collection and Follow Up

For report collection, again, district officers should advise WAEOs that they should not submit the report through bus. They should submit it directly or through reliable fellow extension officers. In order to collect filled-in reports, follow up is very important. In the pilot districts, officers make phone calls to WAEOs if they fail to submit the report in time. Especially for quarterly and annual reports, experience of pilot implementation suggests that VAEO/WAEOs tend to forget about them as they are not required every month. It is recommended for districts to monitor the status of format distribution and report collection. Annex 1 and 2 provides a suggested table format to do this task.

Also, proper feedback is a key to motivate VAEO/WAEOs to fill out the format with reliable information and submit it on time. For details on feedback, see Chapter 6.

Box 3. Good Practice from Pilot LGAs: Report Collection

- Kondoa, Mpwapwa and Kilosa DCs keep status of submission in a list for each report so that they can track who has submitted and follow up with those who have not (See example here). Suggested format for this list is provided in Annex 1 of this guide.
- Experiences of the pilot districts suggest that the submitted report is on high demand among officers in DALDO office. Sometimes officers borrow a few reports and do not return them for a long time. To avoid misplacement of any report, LGAs should keep record on who has taken which report.



2.4 Budget

During the budget preparation for the next fiscal year, DALDO should ensure that the budget include the following items:

- Training of VAEO/WAEO format for newly recruited officers or for retraining
- Follow-up cost (fuel, etc.)
- Printing (paper, toner, etc.)
- Budget for internet access (in order to fully utilize LGMD2)
- Budget for technical support of Regional ICT staff (communication, transportation, etc.)
- Training for LGA officers on, for example, Excel

3. Consolidation of VAEO/WAEO Report

3.1 Data Check and Revision

When the district officer receives the report from WAEO, s/he should check the data in the following points. If there are mistakes or questionable data, s/he should visit or make phone call to WAEO and clarify the question or provide instruction.

- Are all tables filled (except for those not applicable)?
- Are the data period appropriate in each table (data for the particular month/quarter or cumulative)?
- Are the data using appropriate unit of measurement (i.e. not bundle but kg)? [2]
- Are the data realistic compared to the following?
    - Previous report data
    - District total data
    - Latest National Sample Census Agriculture data (i.e. 2002/03, 2007/08)
    - Your field observation
- Cross check the data with relevant officers at the district: officers in charge of crop, livestock, cooperative, extension, marketing, irrigation, etc.

Box 4. Good Practice from Pilot Districts: Sharing within DALDO Office

After they returned from the training of district officers on the format, officers of Morogoro DC have shared the content of the training with fellow officers in a small training of their own. As a result, other officers are now helping M&E Officer in report collection and data entry. Moreover, this helped other officers recognize the presence of useful data in the format. Now, M&E Officer can easily consult these officers to check the data of their specialization.

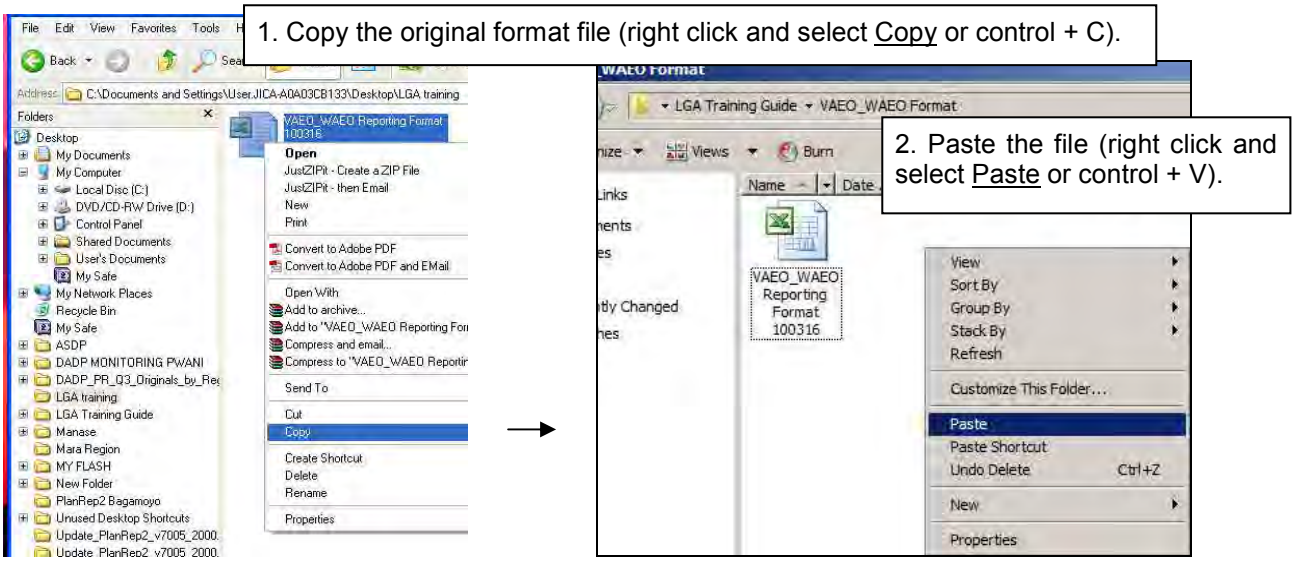
[2] Training guide for VAEO/WAEO has a conversion table in its annex.

3.2 Data Entry

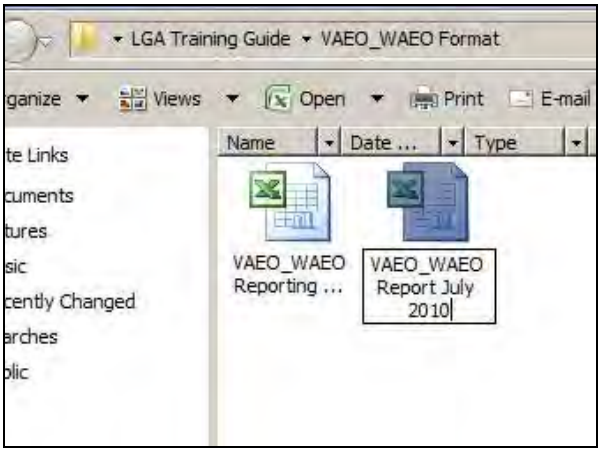
3.2.1 Creating Excel file

After checking and revising the data collected from WAEO, let's enter data in Excel.

First, create a file for each month, quarter and year.

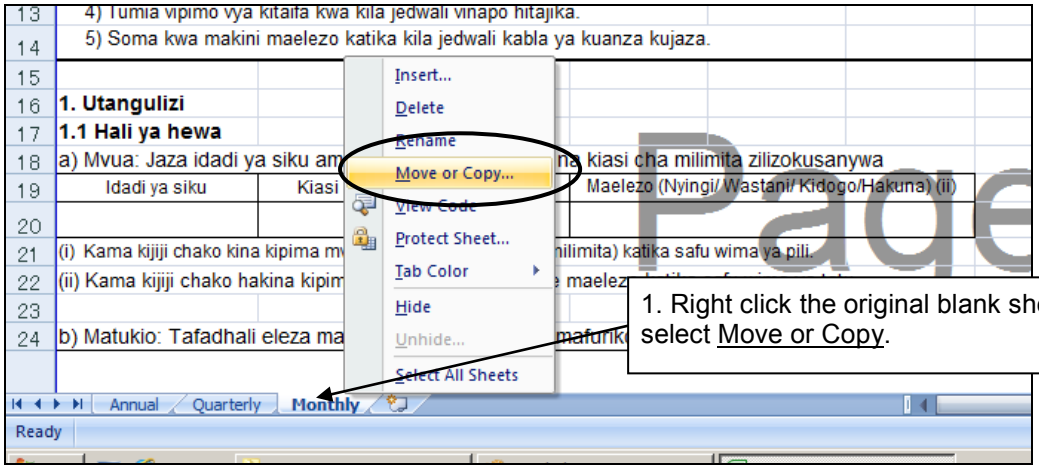


3. Rename the file (right click and select Rename or double click the name).
For example, "VAEO_WAEO Report July 2010."

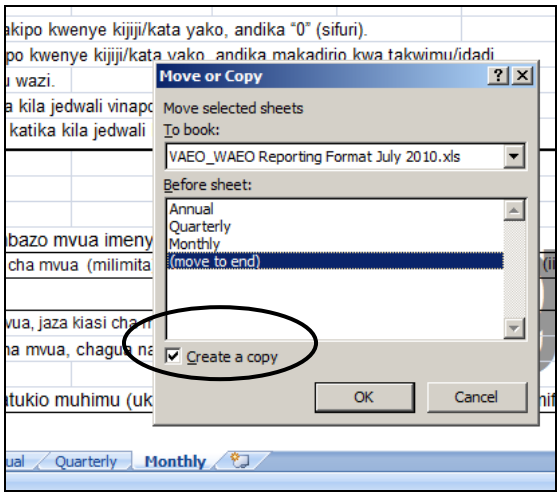


3.2.2 Creating data entry sheet

Open the file and create one data entry sheet for each ward.

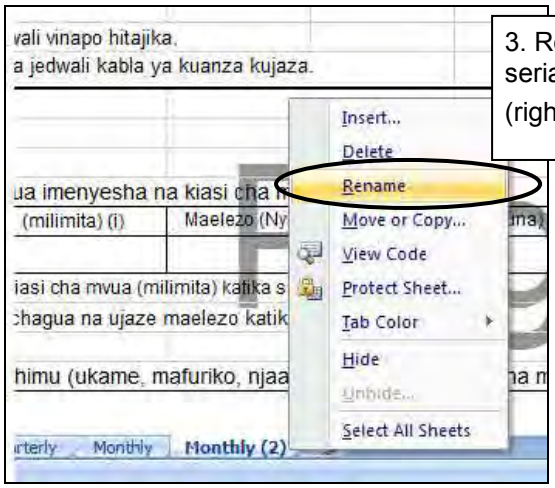


1. Right click the original blank sheet and select Move or Copy.

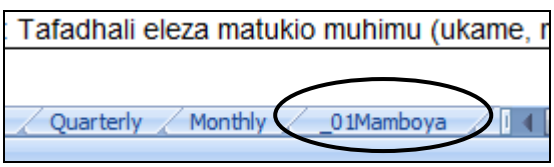


2. Once Move or Copy window pops up, click create a copy and select (move to end). Then, click OK.

Now, you have created a new sheet with the same contents as the original sheet.

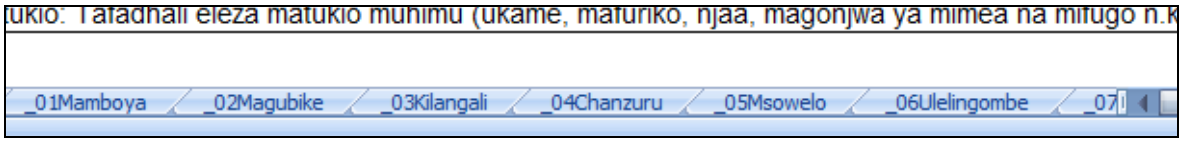


3. Rename the newly created sheet as a ward name with serial number preceded by "_" (under bar).
(right click and select Rename or double click the name)



IMPORTANT NOTE:	- Do not start a worksheet name with a number (i.e. "1Mamboya"), as this will block formula calculation. Put under bar "_" before the number. - Be careful not to add any space and be consistent with capital/small letter across wards.

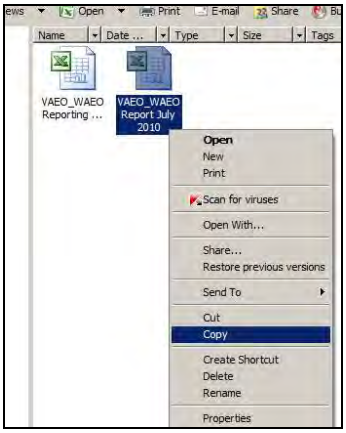
Repeat the above action until you create one sheet each for all wards in your district. Create one sheet for each of all wards even though some wards have not submitted the filled-in VAEO/WAEO format. The order of wards should be division-wise. Assign serial number with "_" to ward names. Serial number should be always the same for the same ward in any reports. For your convenience, write the same number on the hard copy of the filled-in format.



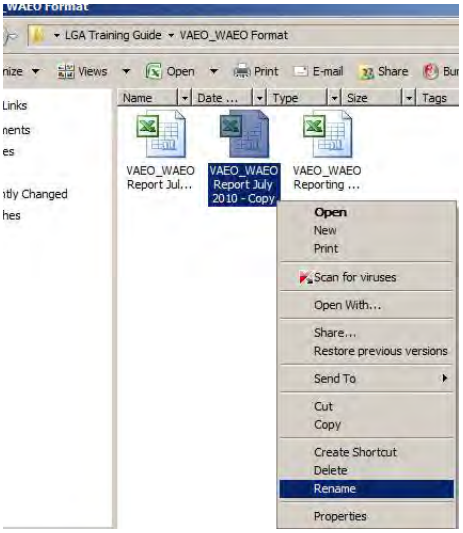
Repeat the step 1) and 2) for quarterly and annual reports.

3.2.3 Creating file for the following month

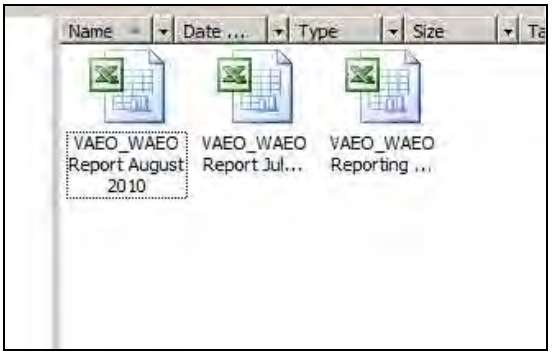
In order to avoid repeating the above step 3.2.2 every month, let's copy the file for the following month now.



1. Copy and paste the file that you have just created (right click and select Copy and Paste or control + C and P).



2. Rename the file (right click and select Rename or double click the name)
For example, "VAEO_WAEO Report August 2010."



3.2.4 Entering data

Now, let's enter data from WAEO report one by one.

Utekelezaji wa malengo msimu

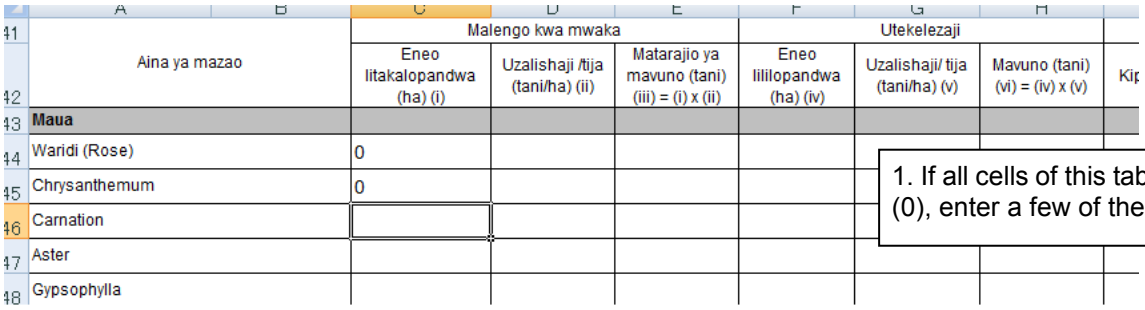
Aina ya mazao	Malengo kwa mwaka			Utekelezaji		
	Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha) (ii)	Matarajio ya mavuno (tani) (iii) = (i) x (ii)	Eneo lililopandwa (ha) (iv)	Uzalishaji/ tija (tani/ha) (v)	Mavu (vi) =
Nafaka						
Mahindi	1575	1.5	2362.5	2645	1	
Mpunga						
Mtama						

IMPORTANT NOTE: Once you enter data, do not forget to save the data frequently. The easiest way to save is to press Control and S simultaneously. Save as often as possible to prevent your data from disappearing due to unexpected blackout, etc.

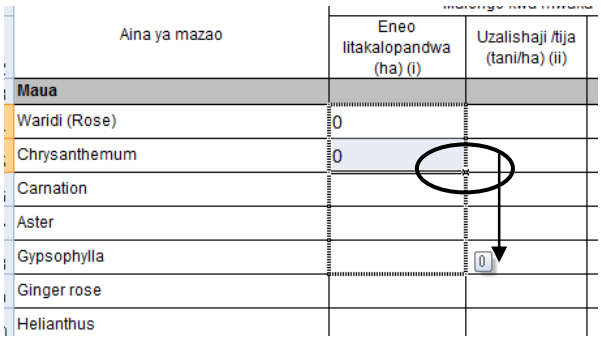
IMPORTANT NOTE: Do not insert any row or column!
Otherwise, aggregation in later stage will become difficult.
If you want to write additional information, write it in "remarks", "others" or somewhere outside the table.

A. How to copy data in many cells

When many cells have same data, rather than typing one by one, use copy function effectively.

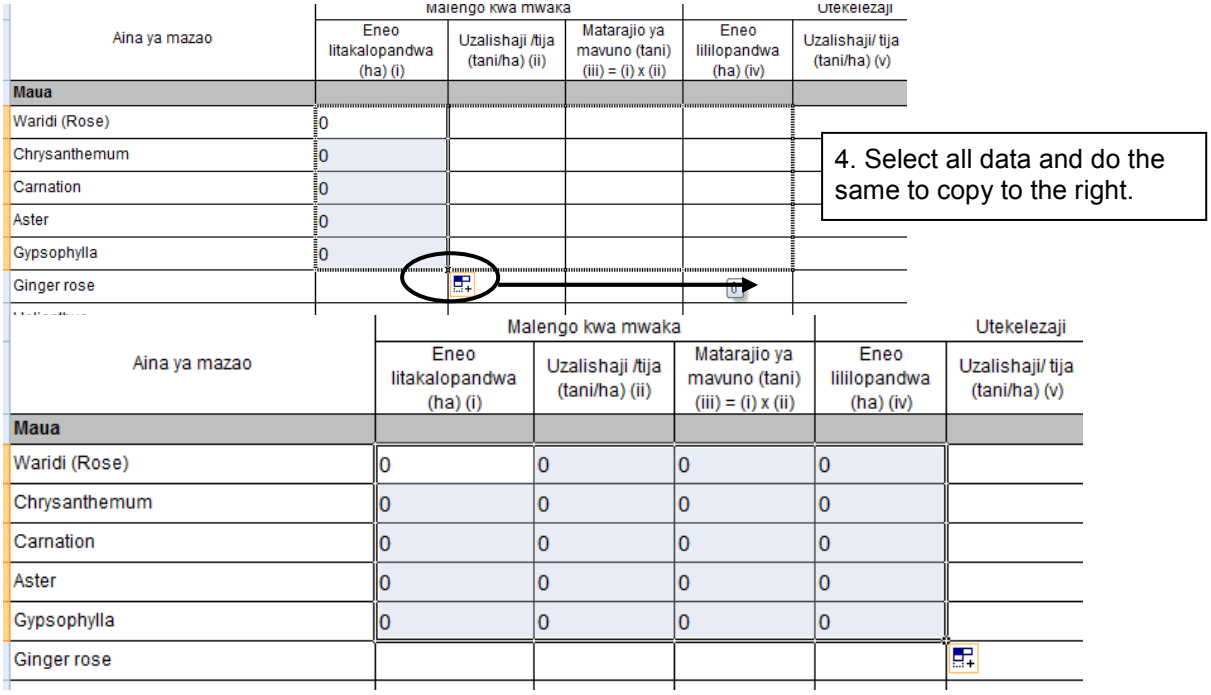


1. If all cells of this table are zero (0), enter a few of them.



2. Select both of them. Then, click the bottom right corner of the cell and drag down.

3. Then, release the click. You see the data are now copied to these cells.



Aina ya mazao	Malengo kwa mwaka			Utekelezaji	
	Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha) (ii)	Matarajio ya mavuno (tani) (iii) = (i) x (ii)	Eneo lililopandwa (ha) (iv)	Uzalishaji/ tija (tani/ha) (v)
Maua					
Waridi (Rose)	0	0	0	0	
Chrysanthemum	0	0	0	0	
Carnation	0	0	0	0	
Aster	0	0	0	0	
Gypsophylla	0	0	0	0	
Ginger rose					

B. Tips for data entry

It is a good idea to color the tabs of the sheets (wards) in which the data are already entered. To do so, move the cursor to the sheet of the ward (_20Zombo, in this case), right click, choose “Tab color” and the color you want to put as shown in the figure below.

C. Tips for Quarterly report table 1 “Hali ya chakula kijijini” (Village food situation)

In this table, there is a column where VAEO/WAEO are asked to mark a check among “nzuri (good)”, “wastani (average)”, or “mbaya (bad).” In data entry, it is recommended to type “1” for the check. This will make summation easy in the later stage.

1. Hali ya chakula kijijini		
	Weka alama	Maelezo
Nzuri		
Wastani	1	
Mbaya		

D. Checking data

After data entry, check if there is no typing mistake.

Common mistakes to be avoided:

- Mistyping of letter “o” for number zero “0”. Check if, for example, “20” (twenty) is not typed as “2o” (two o).

- Do not write text (such as “kg”) and number together in the same cell. Instead of typing “50kg,” type “50.” Otherwise, this will not be counted when you consolidate the data. The unit of measurement is either stated in the table heading or written in separate cell.

- Do not enter data with different unit of measurement. For example, do not enter “500” kg in a cell for ton. Instead, enter “0.5” after conversion.

3.3 Two Types of Consolidation

There are two ways to consolidate the tables in VAEO/WAEO format (excel formula and pivot table), depending on the type of tables. Each method is explained in the following sections. The table below shows which type of consolidation each table uses.

Table 2: Consolidation Method for Tables in VAEO/WAEO Format

Tables in VAEO/WAEO Format	Method
Monthly Report	
1. Utangulizi 1.1 Hali ya hewa a) Mvua	Pivot table
b) Matukio, 1.2 Kazi zilizofanyika	Copy and paste
2. Malengo, utekelezaji na bei ya mazao	Formula
3. Afya ya mimea (Kutumia kemikali)	Pivot table
4. Mifugo iliyochinjwa	Formula
5. Ukaguzi wa nyama	Pivot table
6. Mazao yatokanayo na mifugo	Formula
7. Afya ya Mifugo 7.1 Tiba 7.2 Uogeshaji, kunyunyizia na chanjo	Pivot table
7.3 Huduma za mifugo	Formula
8. Maoni ya afisa ugani wa kijiji/ kata kuhusu sekta ya kilimo katika eneo lake	Copy and paste
9. Wageni waliotembelea kijiji/ kata kwa shughuli za kilimo au ufugaji	
Quarterly Report	
1. Hali ya chakula kijijini	Formula
2. Vikundi/Ushirika wa wakulima	Formula
3. Huduma za ugani	Pivot table
4. Afya ya mimea (njia za kibaiolojia)	Pivot table
5. Umwagiliaji	Pivot table
6. Mmomonyoko wa ardhi	Pivot table
7. Eneo la uzalishaji katika kijiji/ kata na njia iliyotumika kulima	Formula
Annual Report	
1. Utangulizi, Taarifa za msingi za Kijiji/ Kata	Formula
2. Kilimo cha mkataba na makubaliano	Formula

3. Umwagiliaji		Pivot table
4. Mashine, zana na vifaa vya kilimo/ ufugaji na uvuvi		Formula
5. Huduma za ugani		Pivot table
6. Pembejeo	6.1 Mbolea	Formula
	6.2 Viuatilifu/ Viuadudu 6.3 Mbegu	Pivot table
7. Idadi ya mifugo		Formula
8. Miundombinu katika mifugo		Formula
9. Eneo la malisho (Grazing land)		Formula
10. Malisho ya wanyama	10.1 Malisho ya wanyama yaliyopandwa na kuendelezwa	Formula
	10.2 Masalia ya mazao	Pivot table
11. Njia mbalimbali za mawasiliano (TV, radio, simu, nk.)		
	11.1 TV na Radio	Formula
	Program on Agriculture / livestock	Pivot table
	11.2 Simu	Formula

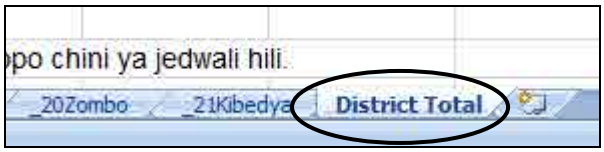
3.4 Consolidation with Excel Formula

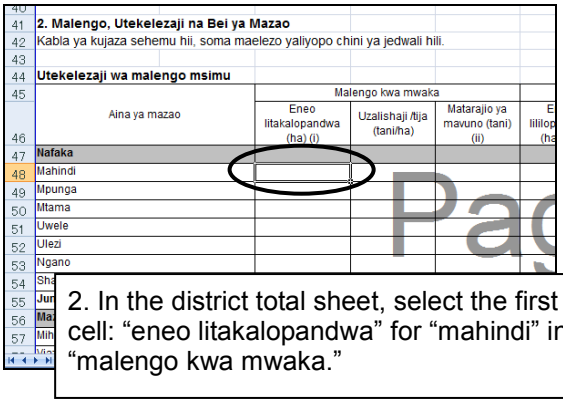
3.4.1 Summation

Let's take an example of Table 2 "Malengo, Utekelezaji na Bei ya Mazao" in the monthly format to conduct summation of ward level data into district total. In this example, we have 21 wards starting from "_01Mamboya" to "_21Kibedya."

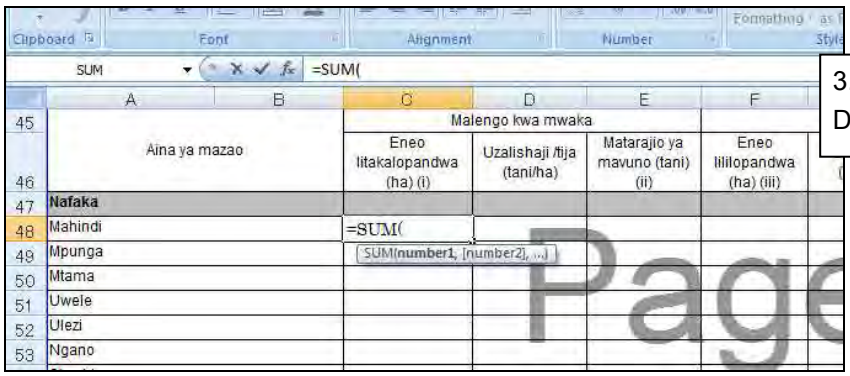
1. Create a new sheet at the end by copying the original blank format and rename it as "District Total." [See 2.3.2]

It is a good idea to color the tab as you will be able to find the sheet easily.

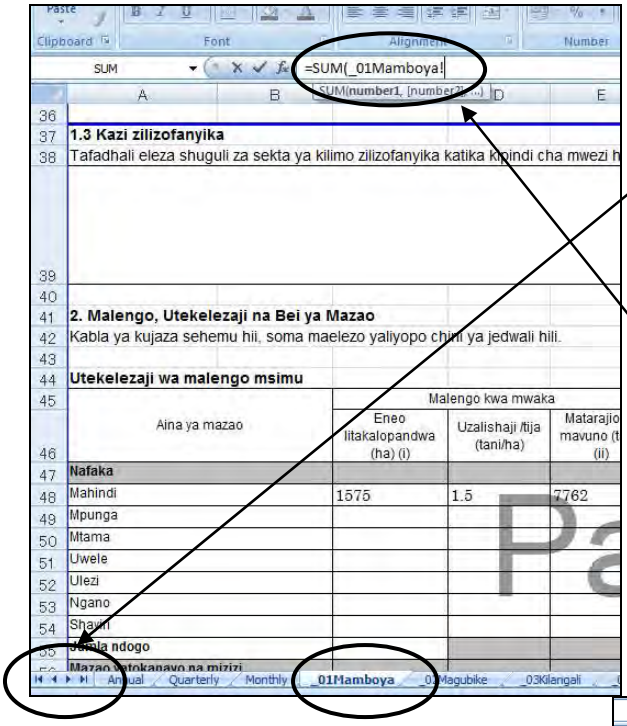




2. In the district total sheet, select the first cell: "eneo litakalopandwa" for "mahindi" in "malengo kwa mwaka."



3. Type " =SUM(" in the cell.
Do NOT press Enter key.

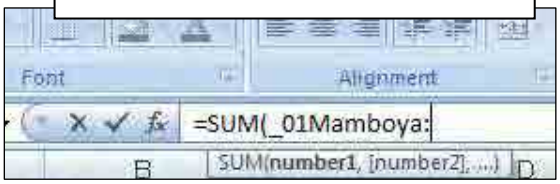


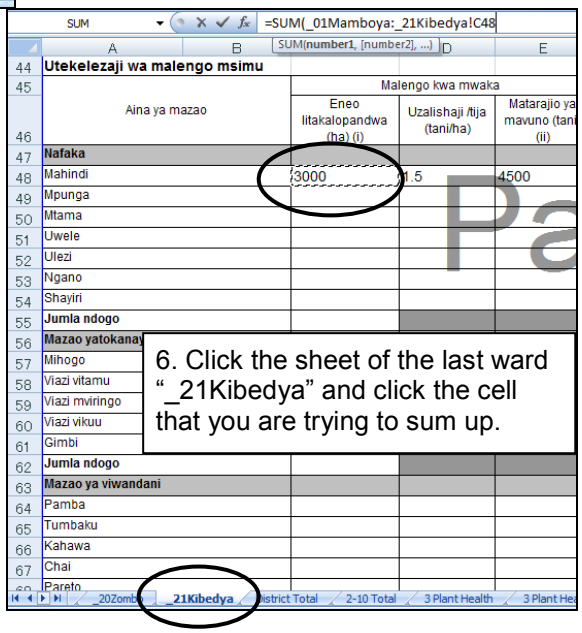
Use the arrow here to find a sheet of the first ward

4. Click the sheet of the first ward "_01Mamboya."

Then, the formula bar will show " =SUM(_01Mamboya! "

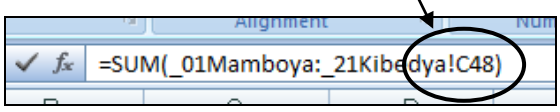
5. In the formula bar, delete " ! " and type " : ". It should now show " =SUM(_01Mamboya: "

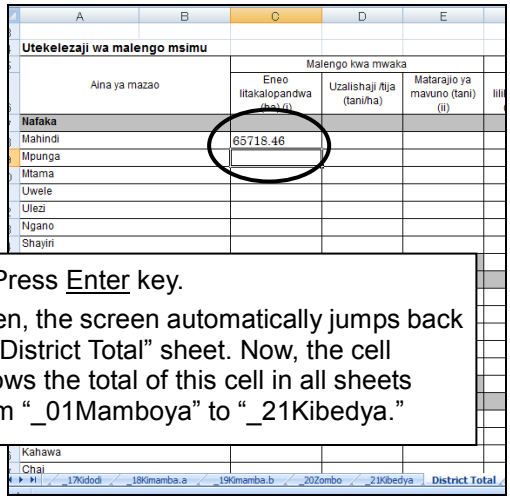




6. Click the sheet of the last ward "_21Kibedya" and click the cell that you are trying to sum up.

7. Type the closing bracket ") " in the formula bar.



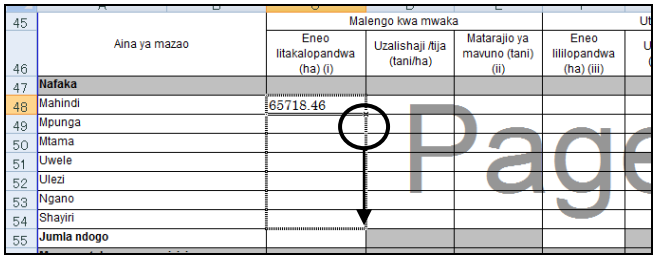


8. Press Enter key.

Then, the screen automatically jumps back to "District Total" sheet. Now, the cell shows the total of this cell in all sheets from "_01Mamboya" to "_21Kibedya."

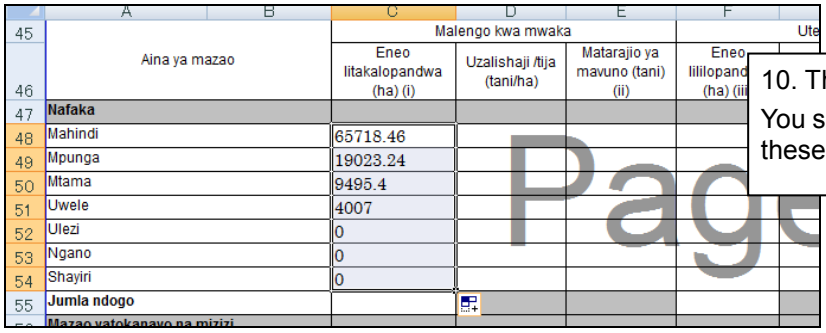
To summarize, in order to conduct summation of the data in same cell across many sheets, use the formula: =SUM("first sheet name":"last sheet name"!cell number).

Now, let's copy this formula in other cells.



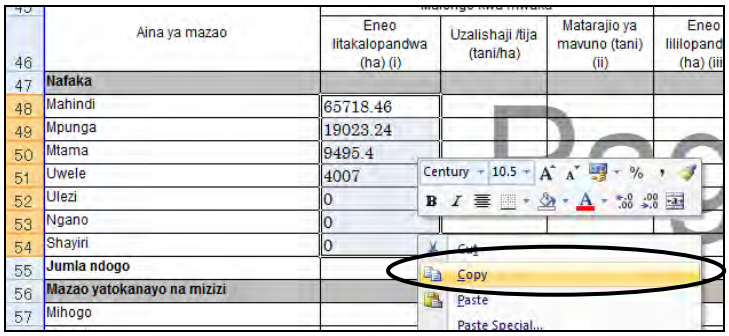
	Aina ya mazao	Malengo kwa mwaka: Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Matarajio ya mavuno (tani) (ii)	Eneo lililopandwa (ha) (iii)
47	**Nafaka**				
48	Mahindi	65718.46			
49	Mpunga				
50	Mtama				
51	Uwele				
52	Ulezi				
53	Ngano				
54	Shayiri				
55	**Jumla ndogo**				

9. Select the cell you want to copy.
Then, click the bottom right corner of the cell and drag down.



	Aina ya mazao	Malengo kwa mwaka: Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Matarajio ya mavuno (tani) (ii)	Eneo lililopandwa (ha) (iii)
47	**Nafaka**				
48	Mahindi	65718.46			
49	Mpunga	19023.24			
50	Mtama	9495.4			
51	Uwele	4007			
52	Ulezi	0			
53	Ngano	0			
54	Shayiri	0			
55	**Jumla ndogo**				

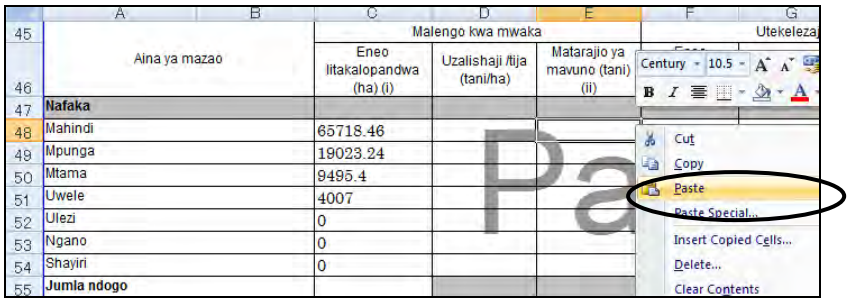
10. Then, release the click.
You see the formula is now copied to these cells.



	Aina ya mazao	Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Matarajio ya mavuno (tani) (ii)	Eneo lililopandwa (ha) (iii)
47	**Nafaka**				
48	Mahindi	65718.46			
49	Mpunga	19023.24			
50	Mtama	9495.4			
51	Uwele	4007			
52	Ulezi	0			
53	Ngano	0			
54	Shayiri	0			
55	**Jumla ndogo**				
56	**Mazao yatokanayo na mizizi**				
57	Mihogo				

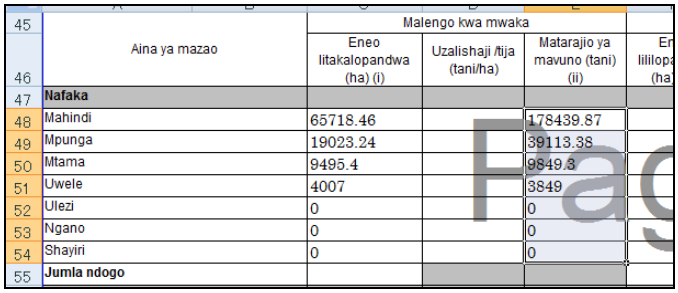
Century 10.5 | Cut | Copy | Paste | Paste Special...

11. Copy and paste also works to copy the formula to other cells.



	Aina ya mazao	Malengo kwa mwaka: Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Matarajio ya mavuno (tani) (ii)
47	**Nafaka**			
48	Mahindi	65718.46		
49	Mpunga	19023.24		
50	Mtama	9495.4		
51	Uwele	4007		
52	Ulezi	0		
53	Ngano	0		
54	Shayiri	0		
55	**Jumla ndogo**			

Century 10.5 | Cut | Copy | Paste | Paste Special... | Insert Copied Cells... | Delete... | Clear Contents

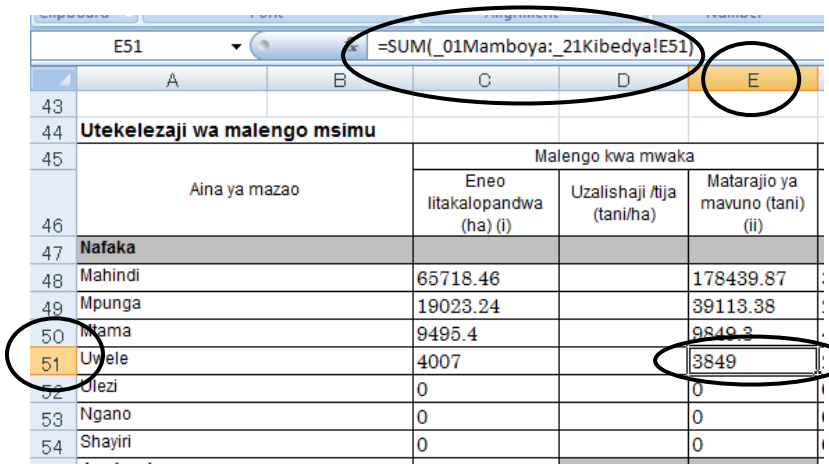


	Aina ya mazao	Malengo kwa mwaka: Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Matarajio ya mavuno (tani) (ii)
47	**Nafaka**			
48	Mahindi	65718.46		178439.87
49	Mpunga	19023.24		39113.38
50	Mtama	9495.4		9849.8
51	Uwele	4007		3849
52	Ulezi	0		0
53	Ngano	0		0
54	Shayiri	0		0
55	**Jumla ndogo**			

12. Copy the formula to all cells applicable for summation.

	Aina ya mazao	Malengo kwa mwaka			Utekelezaji		
		Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Matarajio ya mavuno (tani) (ii)	Eneo lililopandwa (ha) (iii)	Uzalishaji (tani/ha)	Mavuno (tani) (iv)
47	**Nafaka**						
48	Mahindi	65718.46		178439.87	30749.9		
49	Mpunga	19023.24		39113.38	2952.3		
50	Mtama	9495.4		9849.3	4371.3		
51	Uwele	4007		3849	2750		
52	Ulezi	0		0	0		
53	Ngano	0		0	0		
54	Shayiri	0		0	0		
55	**Jumla ndogo**						
56	**Mazao yatokanayo na mizizi**						
57	Mihogo	14756.7		84241.9	1744.2		
58	Viazi vitamu	7380.05		53091.95	1117		
59	Viazi mviringo	1138		30539	450		
60	Viazi vikuu	0		0	0		0
61	Gimbi	106		0	102		0

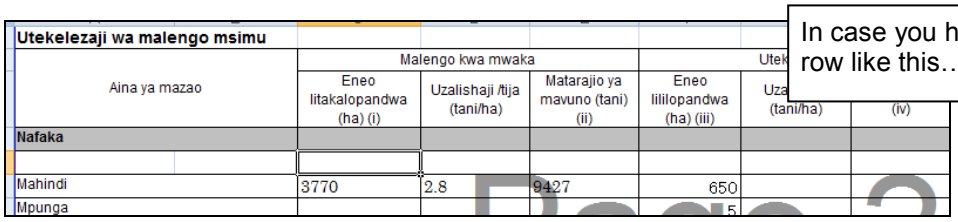
Note: Even though some wards were left blank at the time of aggregation and later entered with data, the total table will automatically show the total with the newly entered data, as long as the sheet exist between the first and last sheets.



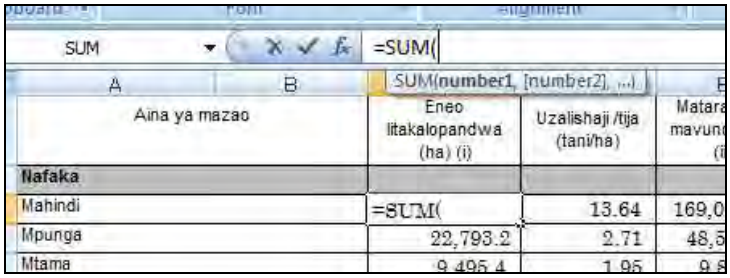
13. Select some cells and check that the formula reflects correct cell number.

Note: In case you inserted a row / column and the formula does not work:

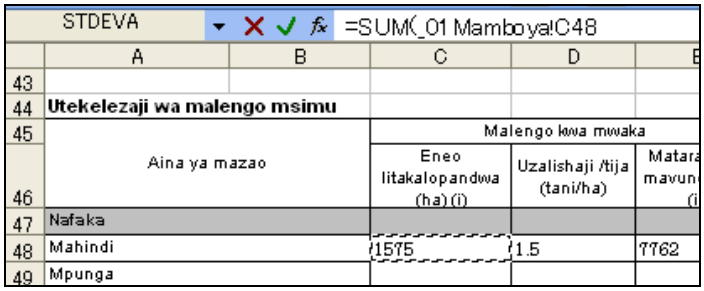
The formula above works only when the cells to be consolidated are located at exact same column and row throughout the sheet (ward). So, if this is not adhered to, the following can be used to consolidate the data.



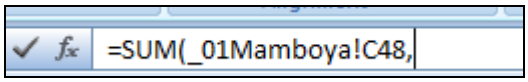
In case you have inserted a row like this…



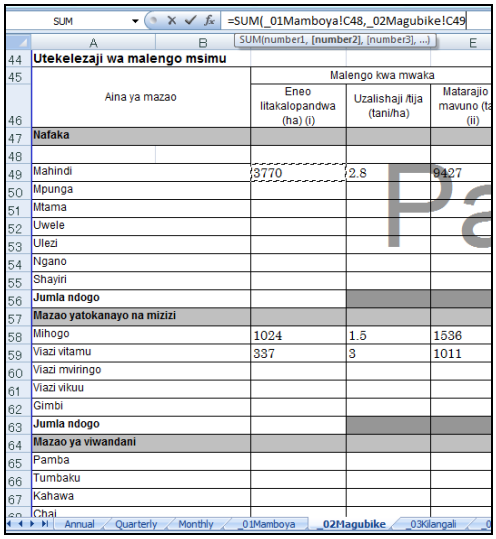
1. At “District Total” sheet, type “ =SUM(“ in a cell.



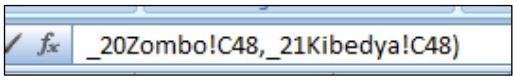
2. Go to the first ward sheet and select the cell.



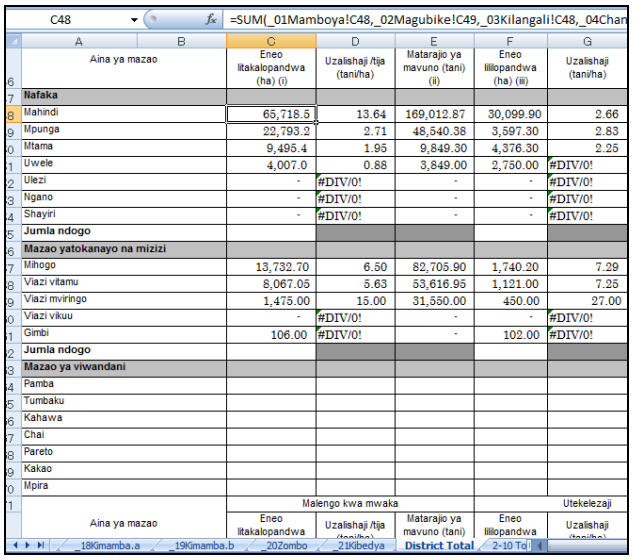
3. Type comma “,” in the formula bar.



4. Go to the next ward sheet and select the cell. Type comma “,” .



5. Continue until the final ward sheet. Then, type closing bracket “)”. Press Enter key.

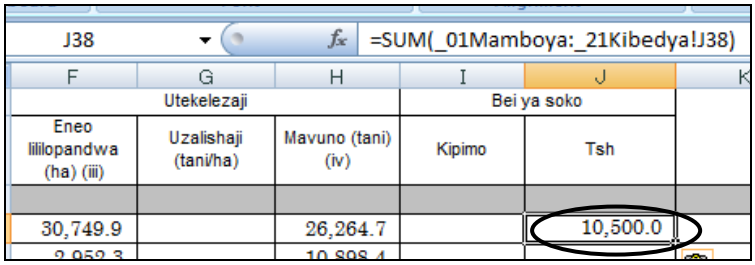


The screen automatically jumps back to “District Total” and show the total.

6. Copy the formula to all the other cells.

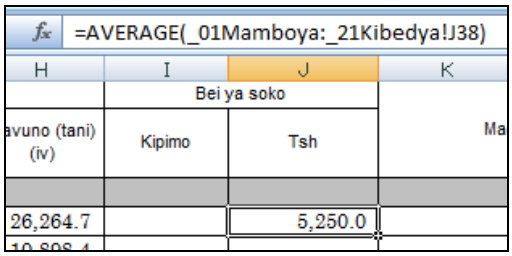
3.4.2 Average

To consolidate items such as “productivity” and “price,” you need to calculate average instead of summation. For “price,” take the following steps.



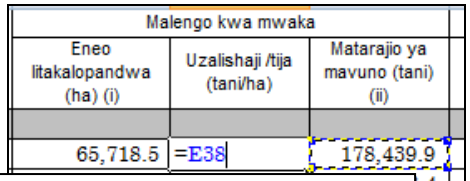
1. Copy the cell which has already the summation formula. Paste it in the cell for “Tsh.”

2. In the formula bar, delete “SUM” and type “Average.”

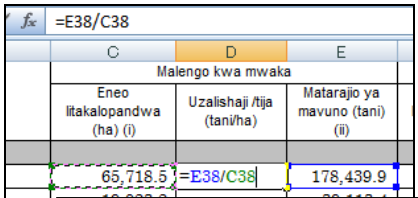


3. Press Enter key.
Now, the cell shows the average of this cell in all sheets from “_01Mamboya” to “_21Kibedya.”

For “productivity,” you cannot simply calculate average of all wards to get district productivity, as the weight (amount of production or planted areas) of each ward is different. Calculate the district productivity average as follows.



4. Type “ = ” in the cell for “uzalishaji / tija.” Then, click the cell of “matarajio ya mavuno.”



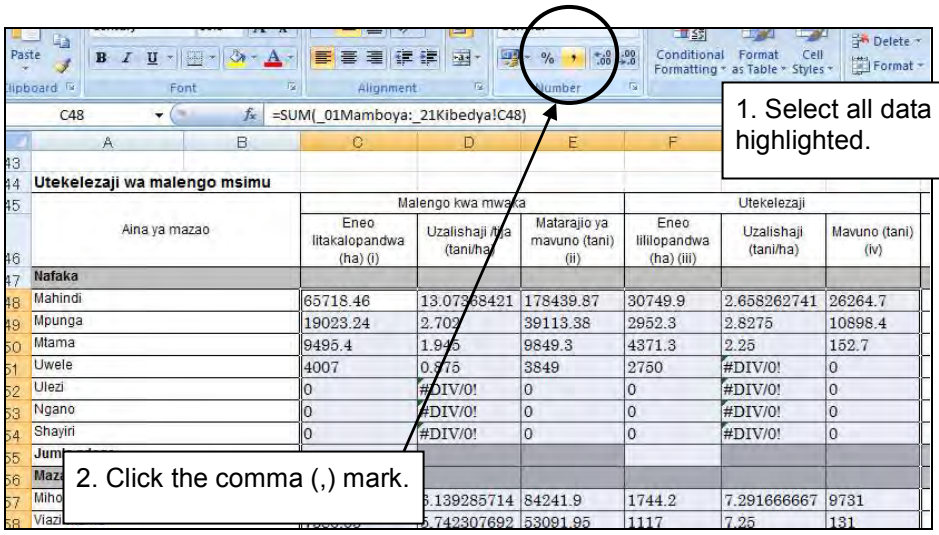
5. Type “ / ”. Then, click the cell of “eneo litakalopandwa.” Press Enter.

Aina ya mazao	Malengo kwa mwaka			Utekelezaji			Bei ya soko	
	Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Matarajio ya mavuno (tani) (ii)	Eneo lililopandwa (ha) (iii)	Uzalishaji (tani/ha)	Mavuno (tani) (iv)	Kipimo	Tsh
Nafaka								
Mahindi	65,718.5	2.72	178,439.9	30,749.9	0.85	26,264.7		5,250.0
Mpunga	19,023.2	2.06	39,113.4	2,952.3	3.69	10,898.4		5,500.0
Mtama	9,495.4	1.04	9,849.3	4,371.3	0.03	152.7		#DIV/0!
Uwele	4,007.0	0.96	3,849.0					
Ulezi	-	#DIV/0!	-					
Ngano	-	#DIV/0!	-					
Shayiri	-	#DIV/0!	-					

6. Copy and paste the formula to all relevant cells. If there is no data, it shows “ #DIV/0! ”.

3.4.3 Presentation

Once the data are consolidated, you can also improve the presentation of the tables to make them look nicer.

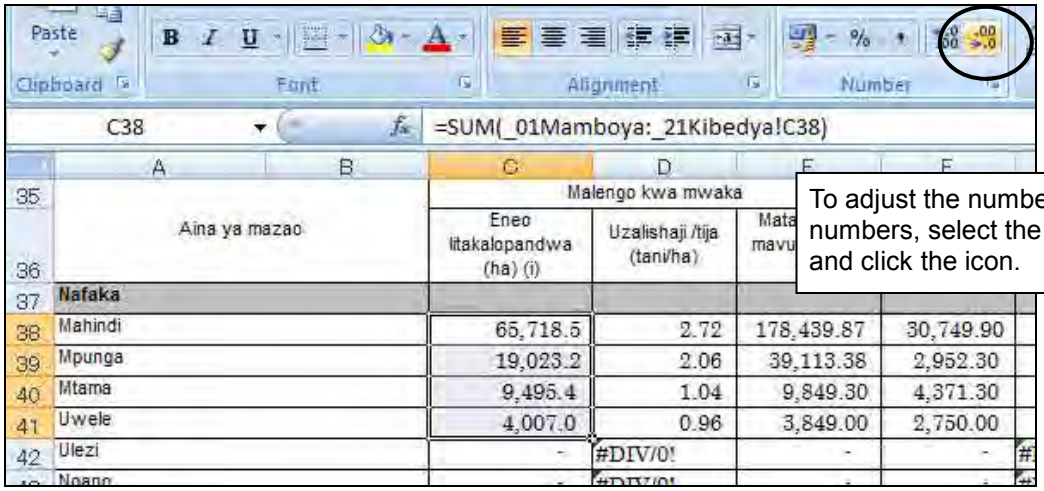


Utekelezaji wa malengo msimu

Aina ya mazao	Malengo kwa mwaka: Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Matarajio ya mavuno (tani) (ii)	Utekelezaji: Eneo lililopandwa (ha) (iii)	Uzalishaji (tani/ha)	Mavuno (tani) (iv)
Nafaka						
Mahindi	65718.46	13.07368421	178439.87	30749.9	2.658262741	26264.7
Mpunga	19023.24	2.703	39113.38	2952.3	2.8275	10898.4
Mtama	9495.4	1.945	9849.3	4371.3	2.25	152.7
Uwele	4007	0.875	3849	2750	#DIV/0!	0
Ulezi	0	#DIV/0!	0	0	#DIV/0!	0
Ngano	0	#DIV/0!	0	0	#DIV/0!	0
Shayiri	0	#DIV/0!	0	0	#DIV/0!	0
Jumi						
Maz						
Miho		6.139285714	84241.9	1744.2	7.291666667	9731
Viazi		5.742307692	53091.95	1117	7.25	131

65,718.46	13.07	178,439.87	30,749.90	2.66	26,264.70
19,023.24	2.70	39,113.38	2,952.30	2.83	10,898.40
9,495.40	1.95	9,849.30	4,371.30	2.25	152.70
4,007.00	0.88	3,849.00	2,750.00	#DIV/0!	-
-	#DIV/0!	-	-	#DIV/0!	
-	#DIV/0!	-	-	#DIV/0!	
-	#DIV/0!	-	-	#DIV/0!	
14,756.70		84,241.90	1,744.20		9,731.00
7,380.05		53,091.95	1,117.00		131.00
1,138.00		30,539.00	450.00		-
-		-	-		-
106.00		-	102.00		-

Then, the data will be presented nicely, aligned to the right, with only two decimal numbers, and shown with commas.



Aina ya mazao	Malengo kwa mwaka: Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Mata mavu	
Nafaka				
Mahindi	65,718.5	2.72	178,439.87	30,749.90
Mpunga	19,023.2	2.06	39,113.38	2,952.30
Mtama	9,495.4	1.04	9,849.30	4,371.30
Uwele	4,007.0	0.96	3,849.00	2,750.00
Ulezi	-	#DIV/0!	-	-

3.4.4 Checking

After data consolidation, you should check if there is any strange data. If a cell shows "#VALUE!," there may be some error. Check the formula and original data in each ward. Randomly select a few items and check the excel calculation by hand calculation. If there is a strange figure even if the formula is correct, check back the ward level data. For example…

Aina ya mazao	Malengo kwa mwaka			Utekelezaji			Bei ya soko	
	Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Matarajio ya mavuno (tani) (ii)	Eneo lililopandwa (ha) (iii)	Uzalishaji (tani/ha)	Mavuno (tani) (iv)	Kipimo	Tsh
Nafaka								
Mahindi	65,718.5	2.72	178,439.87	30,749.90	0.85	26,264.70		5,250
Mpunga	19,023.2	2.06	39,113.38	2,952.30	3.69	10,898.40		23,500

1. "Bei ya soko" of "mpunga" is "Sh 23,500"? Is this realistic?

1704			KG	5,500
115			KG	40,000
11				

_18Kimamba.a _19Kimamba.b **_20Zombo** _21Kibedya

2. After checking each ward, there is one strange figure in this ward: "Tsh 40,000/kg".

Utekelezaji			Bei ya soko	
Eneo lilopandwa (ha) (iii)	Uzalishaji (tani/ha)	Mavuno (tani) (iv)	Kipimo	Tsh
1704			KG	5,500
115			KG	4,000
11				

a.b **_20Zombo** _21Kibedya District Total 2-10 To

3. Check the original report submitted by WAEO and correct the figure. For example, from "40,000" to "4,000".

Aina ya mazao	Malengo kwa mwaka			Utekelezaji			Bei ya soko	
	Eneo litakalopandwa (ha) (i)	Uzalishaji /tija (tani/ha)	Matarajio ya mavuno (tani) (ii)	Eneo lililopandwa (ha) (iii)	Uzalishaji (tani/ha)	Mavuno (tani) (iv)	Kipimo	Tsh
Nafaka								
Mahindi	65,718.5	2.72	178,439.87	30,749.90	0.85	26,264.70		5,250
Mpunga	19,023.2	2.06	39,113.38	2,952.30	3.69	10,898.40		5,500
Mtama	9,495.4	1.04	9,849.30	4,371.30	0.03	152.70		#DIV/0!
Uwele	4,007.0	0.96	3,849.00	2,750.00	-	-		#DIV/0!
Ulezi	-	#DIV/0!	-					

_18Kimamba.a _19Kimamba.b _20Zombo _21Kibedya **District Total** 2-1

4. Now, go back to "District Total" sheet. The figure is automatically recalculated and not strange any more!

Check average carcass weight per head as below. If you find that something is strange, check the information in each ward.

3.4.5 Text entry information

It should be noted that text data in such columns as "remarks" and "unit" cannot be aggregated. They should be hand typed.

ezaji		Bei ya soko	
shaji /ha)	Mavuno (tani) (iv)	Kipimo	Tsh
2.66	26,264.70	Kg	5250
2.83	10,898.40	Kg	5500
2.25	152.70		#DIV/0!

For Table 2 “Malengo, Utekelezaji na Bei ya Mazao“ in VAEO/WAEO Monthly format, the information filled by each ward under “mengineyo” cannot be aggregated using the method described above (except for “rosella”) because each ward may have different crops in different rows. In order to aggregate information in “others,” you need to create a list of all the information provided in “others” and aggregate with the Pivot Table method explained in the next section.

158	Ginger rose		
159	lisianthus		
160	**Jumla ndogo**		
161	**Mengineyo**		
162	Choya (Rozella)		
163	jackfruit	50	6
164	rambutan	20	0.5

Do not aggregate these rows with the excel formula shown above.

3.5 Consolidation with Pivot Table

Pivot table function is useful when you want to consolidate tables which have not only numeric information but also text information such as the name of disease, purpose of training, etc (listed in Table 2, page 12, of this guide). Let’s take an example of Table 3.1 “Kuzuia magonjwa/ visumbufu kwa kutumia kemikali” in the monthly VAEO/WAEO format to conduct pivot table analysis.

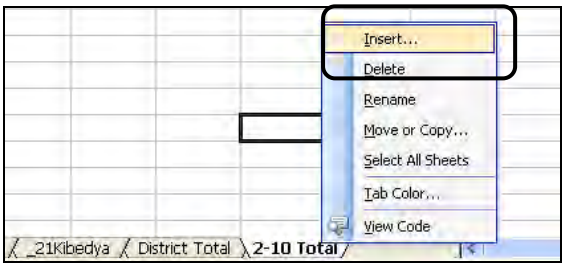
3.5.1 List preparation

First, you need to create a list in a new blank sheet by copying all rows into the sheet. (If there is “*” in procedure explanation, Excel 2003 uses different steps shown in dashed boxes).

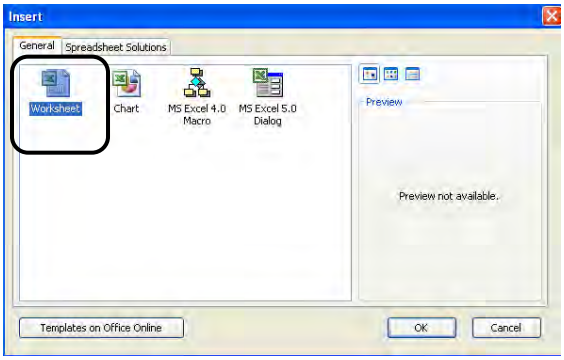
1. Create a new blank sheet at the end by clicking this icon. *

2. Then, rename the sheet as the name of the table that you want to consolidate.

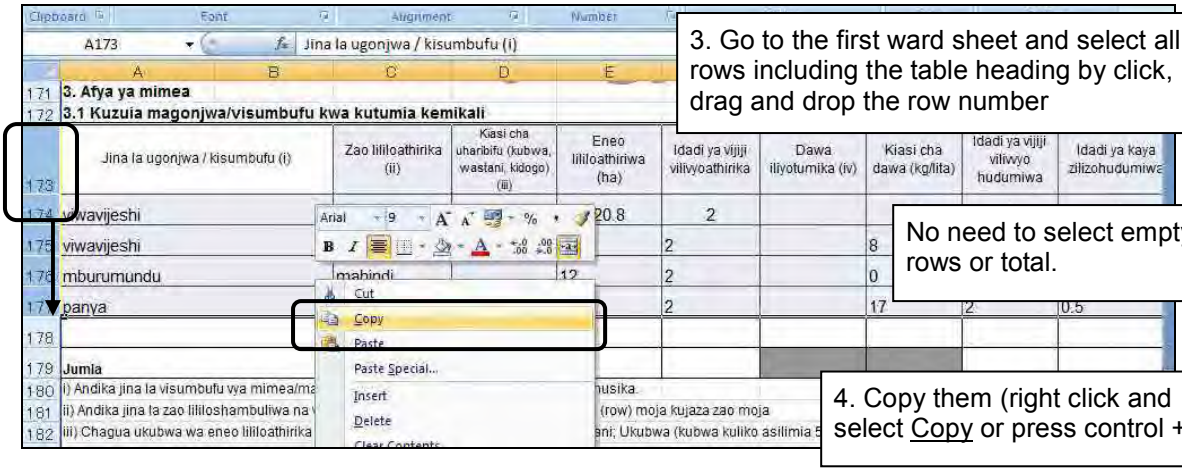
* For Excel 2003, a new blank sheet can be created in the following manner:



(1-1). Right click the existing sheet name and select Insert.



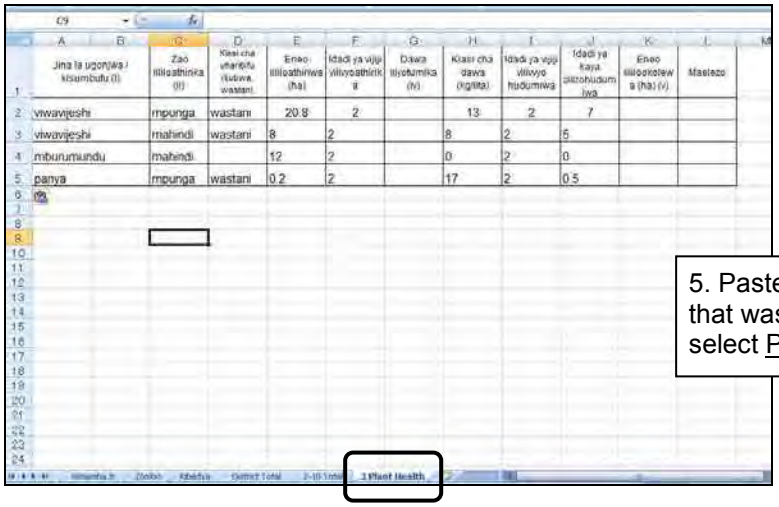
(1-2). Once Insert window pops up, select Worksheet. Then, click OK.



3. Go to the first ward sheet and select all rows including the table heading by click, drag and drop the row number

No need to select empty rows or total.

4. Copy them (right click and select Copy or press control +C)



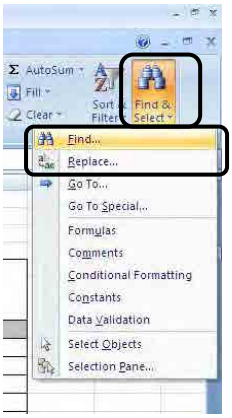
	Jina la ugonjwa / kisumbufu (i)	Zao lililoathirika (ii)	Kiasi cha uharibifu (kubwa, wastani, kidogo) (iii)	Eneo lililoathiriwa (ha)	Idadi ya vijiji vilivyoathirika	Dawa iliyotumika (iv)	Kiasi cha dawa (kg/lita)	Idadi ya vijiji vilivyo hudumiwa	Idadi ya kaya zilizohudumiwa	Maelezo
2	viwavijeshi	mpunga	wastani	20.8	2		13	2	7	
3	viwavijeshi	mahindi	wastani	8	2		8	2	5	
4	mburumundu	mahindi		12	2		0	2	0	
5	panya	mpunga	wastani	0.2	2		17	2	0.5	

5. Paste them in the new blank sheet that was just created (right click and select Paste or press control + V).

	H	I	J	K	L	M
	Kiasi cha dawa (kg/lita)	Idadi ya vijiji vilivyo hudumiwa	Idadi ya kaya zilizohudumiwa	Eneo lililookolewa (ha) (v)	Maelezo	ward
	13	2	7			chanzuru
	8	2	5			chanzuru
	0	2	0			chanzuru
	17	2	0.5			chan

6. Add one column at the end of the table to write the name of ward.

7. Continue to copy and paste rows with data in the following wards.



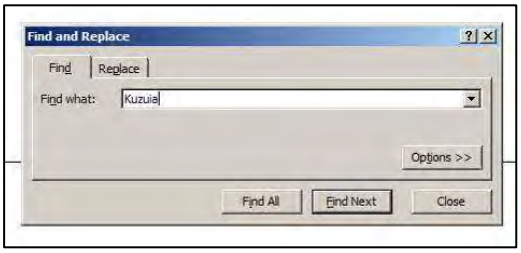
8. To find Table 3.1 quickly in the following wards, it is convenient to use "Find" function.

To do so, in Home, left-click Find & Select and left-click Find again. *

* For Excel 2003, Find can be found under Edit in the menu bar.

9. Type "kuzuia" and click Find Next.

Then, automatically a cell containing a word "Kuzuia" is shown.



10. From the second ward, no need to copy the table heading.

71	**3. Afya ya mimea**					
72	**3.1 Kuzuia magonjwa/visumbufu kwa kutumia kemikali**					
	Jina la ugonjwa / kisumbufu (i)	Zao lililoathirika (ii)	uha wa	Dawa iliyotumika (iv)	Kiasi cha dawa (kg/lita)	Idadi ya vijiji vilivyo hudumiwa
74	viwavijeshi	mahindi	wa	dezis	45	5
75						
76						
77						

	Jina la ugonjwa / kisumbufu (i)	Zao lililoathirika (ii)	Kiasi cha dawa (kg/lita)	Eneo lililookolewa (ha) (v)	Idadi ya vijiji vilivyo hudumiwa	Dawa iliyotumika (iv)	Kiasi cha dawa (kg/lita)	Idadi ya vijiji vilivyo hudumiwa	Idadi ya kaya zilizohudumiwa	Eneo lililookolewa (ha) (v)	Maelezo	ward
2	viwavijeshi	mpunga	wastani	20.8	2		13	2	7			chanzuru
3	viwavijeshi	mahindi	wastani	8	2		8	2	5			chanzuru
4	mburumundu	mahindi		12	2		0	2	0			chanzuru
5	panya	mpunga	wastani	0.2	2		17	2	0.5			chanzuru
6	viwavijeshi	mahindi	wastani	324.4	5	dezis	45	5	36	36		Ulaya
7	viwavi	mahindi	wastani	26	3	karate	0	3				Mikumi
8	viwavi	mahindi	wastani	3.5	3	karate	180	3	2.5			Berega
9	viwavi	mpunga	kidogo	2	1	thionex	2		1			Kisanga
10	thrips	vitunguu	wastani	80	3	karate	279	3		81		Malolo
11	magugu	mtwa	kidogo	25	2		20	2	150			Kidodi
12	ukungu	nyanya	kidogo	2	1		3	1	480			Kidodi
13	wadudu	mpunga	kidogo	25	3		18	3	25000			Kidodi

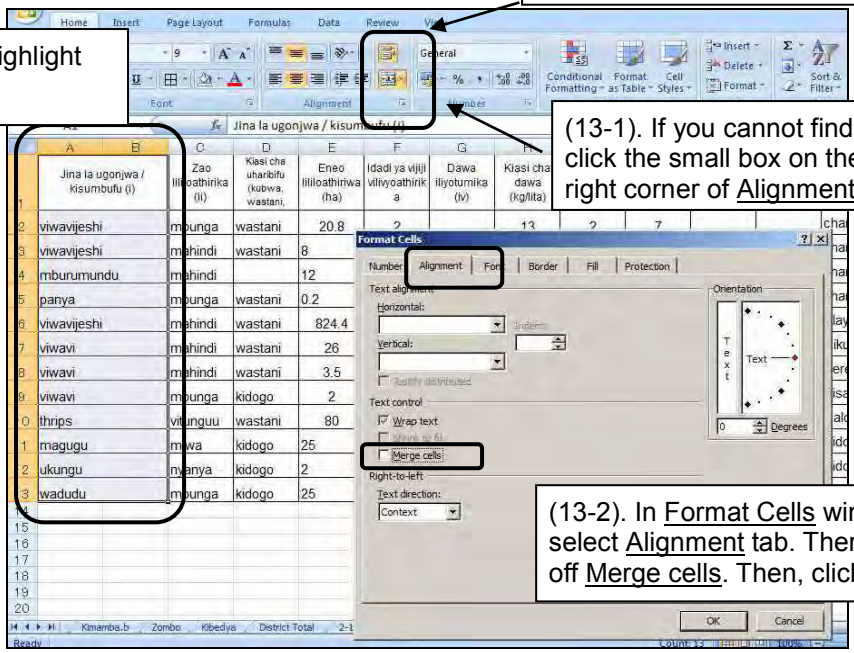
11. Now, data from all wards are copied in the list.

Pivot table function cannot be used if there are merged cells in the list. So if there are merged

cells, you need to unmerge them.

13. Click this icon in a Home tab. 

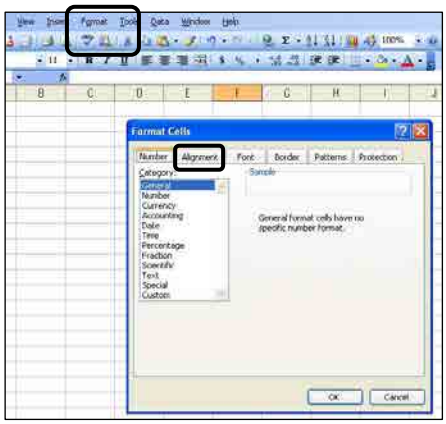
12. Select and highlight merged cells.



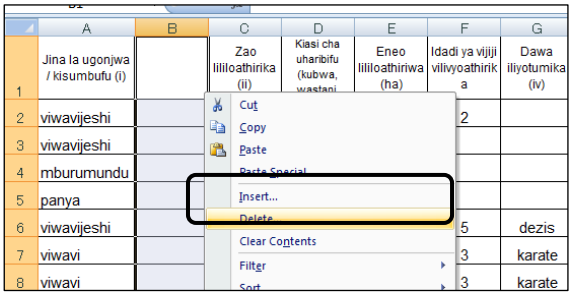
(13-1). If you cannot find the icon, click the small box on the bottom right corner of Alignment. *

(13-2). In Format Cells window, select Alignment tab. There, click off Merge cells. Then, click OK.

* For Excel 2003, the following step should be taken to open Format Cells window.



(13-1). Go to Format on the menu bar and select Cells.

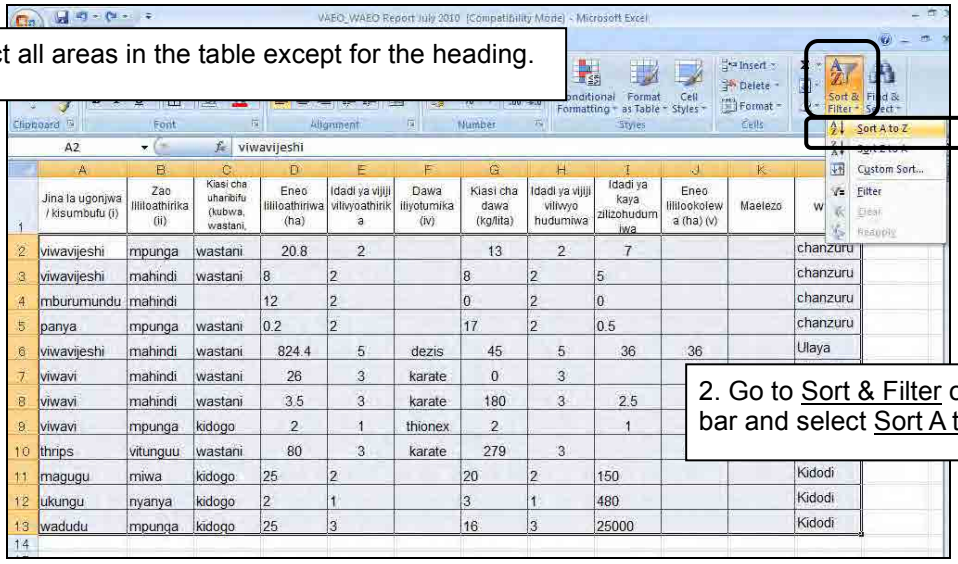


14. After the cells are unmerged, select and delete the blank column (right click and select Delete).

3.5.2 Sorting and standardizing the names

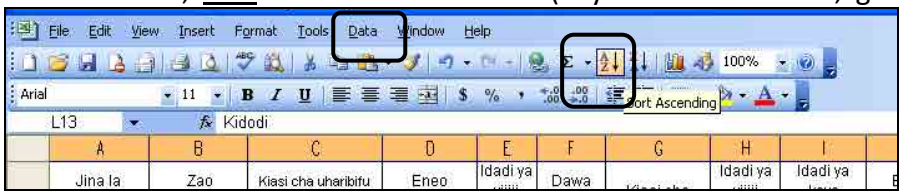
In order to consolidate text entry, the spellings of the same item need to be exactly the same. To do this easily, you should first sort the rows in alphabetical order.

1. Select all areas in the table except for the heading.



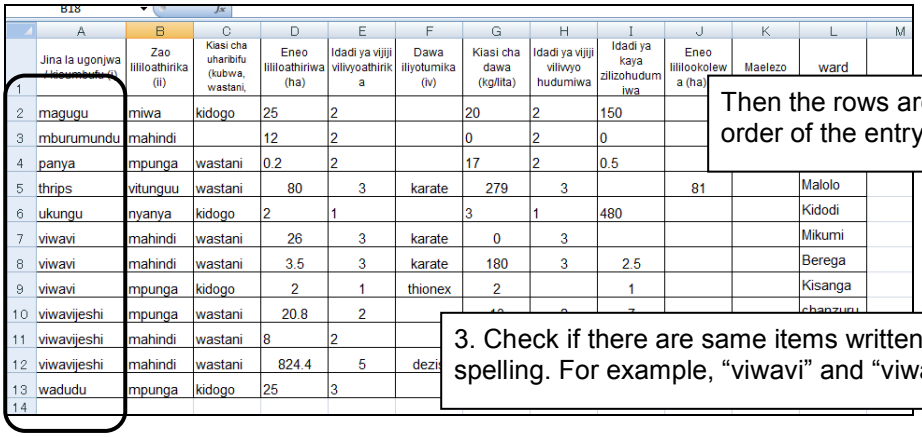
2. Go to Sort & Filter on the tool bar and select Sort A to Z. *

* In Excel 2003, Sort icon is located here (If you cannot find it, go to Data on the menu bar:



IMPORTANT NOTE: Always select all areas of the table. If you select only a few columns, the connection between the selected columns and unselected columns will be lost.

Only this column will be sorted while other columns remain unchanged.



Then the rows are sorted in alphabetical order of the entry in the first column.

3. Check if there are same items written in different word or spelling. For example, “viwavi” and “viwavijeshi” are the same.

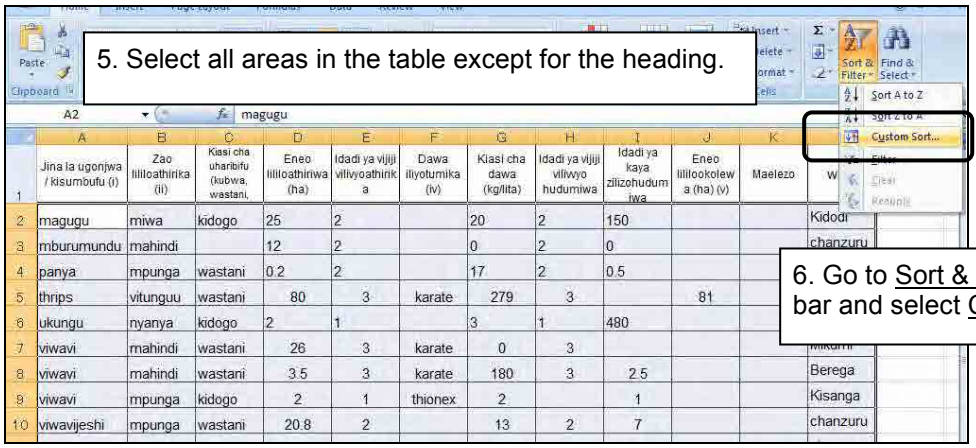
magugu	miwa	kidogo	25
mburumundu	mahindi		12
panya	mpunga	wastani	0.2
thrips	vitunguu	wastani	80
ukungu	nyanya	kidogo	2
viwavijeshi	mpunga	kidogo	2
viwavijeshi	mahindi	wastani	26
viwavijeshi	mahindi	wastani	3.5
viwavijeshi	mahindi	wastani	8
viwavijeshi	mahindi	wastani	824.4
viwavijeshi	mpunga	wastani	20.8

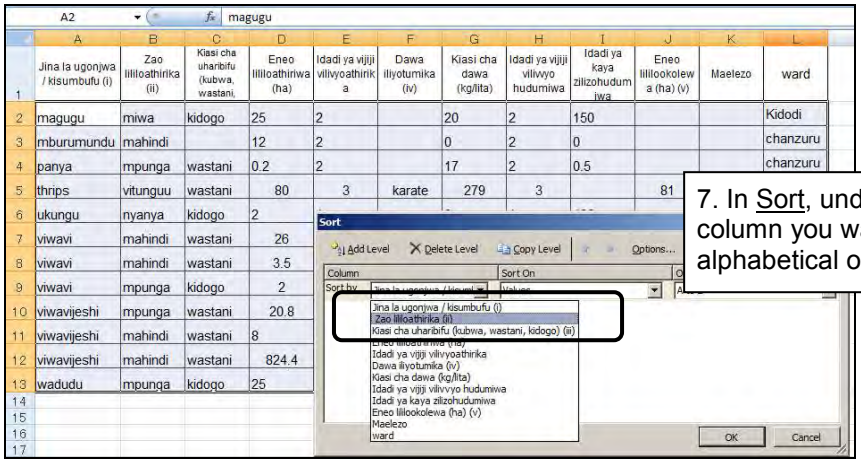
4. Standardize the names of same items.
For example, “viwavi” is changed to “viwavijeshi”

Examples of same items in different word / spelling:

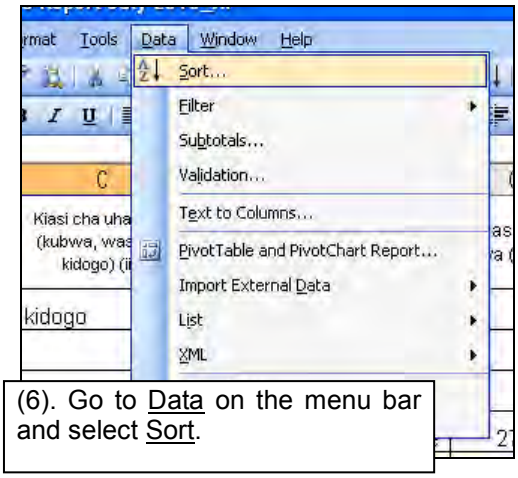
- “mbegu bora” and “mbegubora”
- “mandalizi” and “mandaliziyashamba”
- “ngombe”, “n’gombe”, and “ng’ombe”

In order to standardize spellings / names in <u>other</u> columns, you can also sort the rows based on the alphabetical order of other columns.

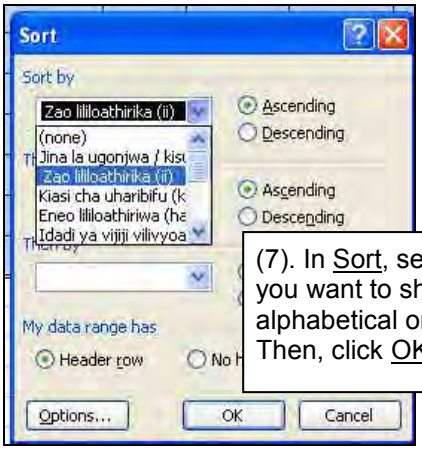




* For Excel 2003, this custom sort is done in the following way:



(6). Go to Data on the menu bar and select Sort.



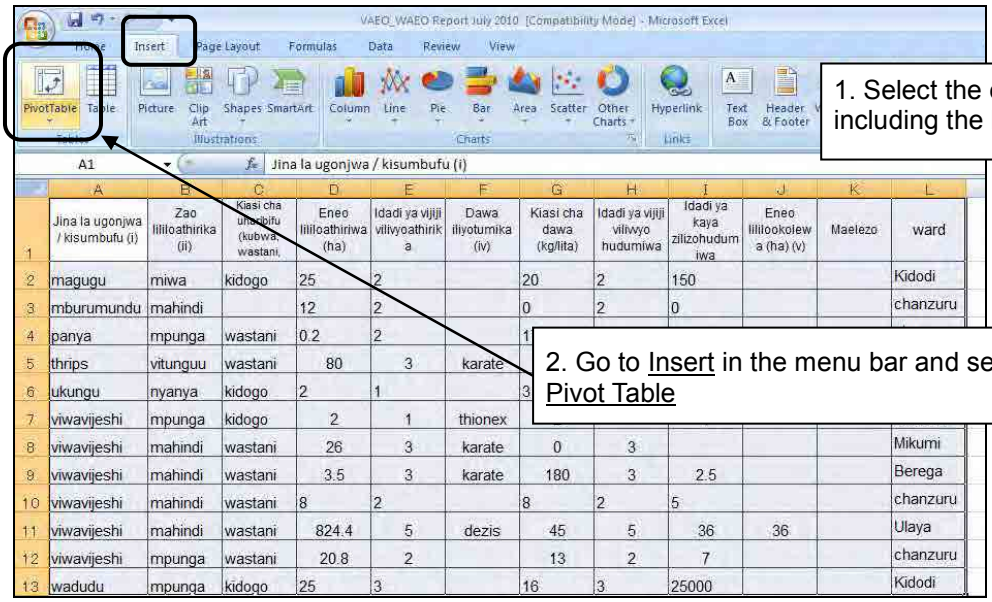
(7). In Sort, select the column you want to show in the alphabetical order at Sort By. Then, click OK.

After standardizing words and spellings of same items in each column, the list is ready for pivot table analysis.

3.5.3 Pivot table analysis

Here let us examine the area attacked by disease in each ward.

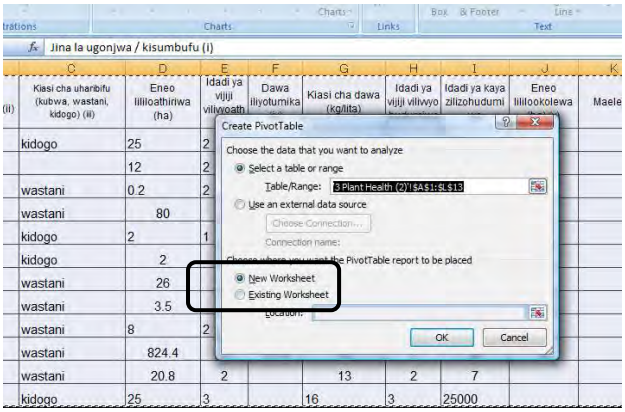
*If you are using Excel 2003, go to page 32.



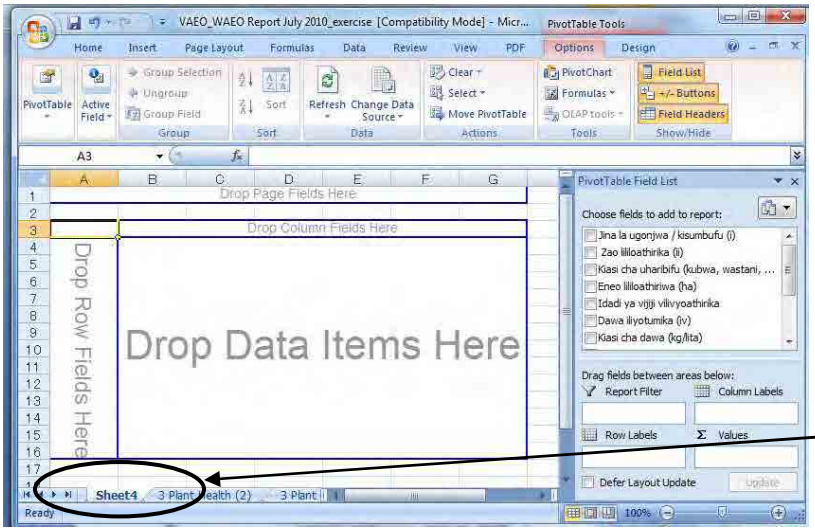
	A	B	C	D	E	F	G	H	I	J	K	L
1	Jina la ugonjwa / kisumbufu (i)	Zao lililoathirika (ii)	Kiasi cha uharibifu (kubwa, wastani,	Eneo lililoathiriwa (ha)	Idadi ya vijiji vilivyoathirika	Dawa iliyotumika (iv)	Kiasi cha dawa (kg/lita)	Idadi ya vijiji vilivyo hudumiwa	Idadi ya kaya zilizohudumiwa	Eneo lililookolewa (ha) (v)	Maelezo	ward
2	magugu	miwa	kidogo	25	2		20	2	150			Kidodi
3	mburumundu	mahindi		12	2		0	2	0			chanzuru
4	panya	mpunga	wastani	0.2	2		1					
5	thrips	vitunguu	wastani	80	3	karate						
6	ukungu	nyanya	kidogo	2	1		3					
7	viwavijeshi	mpunga	kidogo	2	1	thionex						
8	viwavijeshi	mahindi	wastani	26	3	karate	0	3				Mikumi
9	viwavijeshi	mahindi	wastani	3.5	3	karate	180	3	2.5			Berega
10	viwavijeshi	mahindi	wastani	8	2		8	2	5			chanzuru
11	viwavijeshi	mahindi	wastani	824.4	5	dezis	45	5	36	36		Ulaya
12	viwavijeshi	mpunga	wastani	20.8	2		13	2	7			chanzuru
13	wadudu	mpunga	kidogo	25	3		16	3	25000			Kidodi

1. Select the entire list including the heading.

2. Go to Insert in the menu bar and select Pivot Table



3. Once Create Pivot Table window pops up, select New Worksheet.
Then click OK



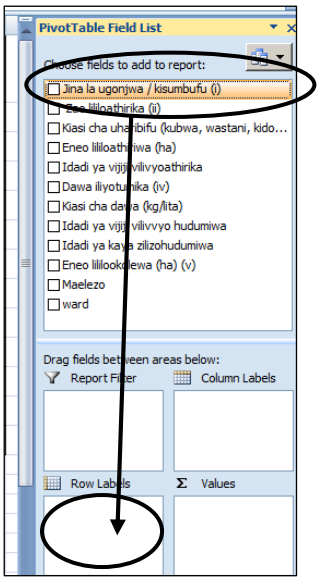
Then, the pivot table appears in a new sheet like this.

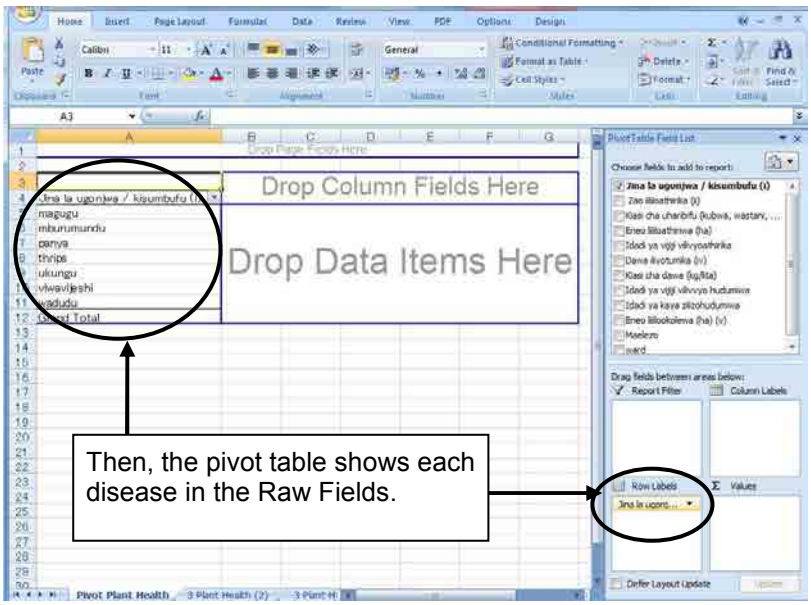
You will find Pivot Table Field List. Each column of the table is listed in Field List.

To conduct pivot table analysis, Tick the box and then, drag and drop it in applicable box below.

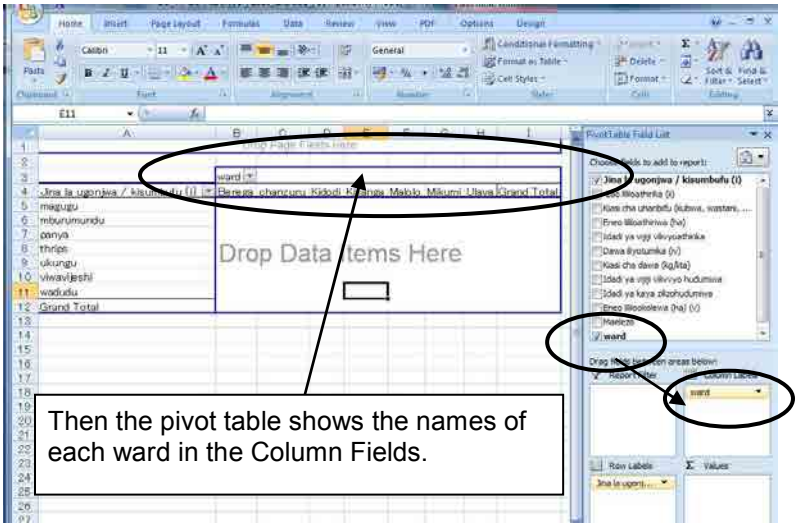
4. Let's rename the new sheet as "Pivot Plant Health".

5. Select, drag and drop "Jina la ugonjwa" to Row Labels.



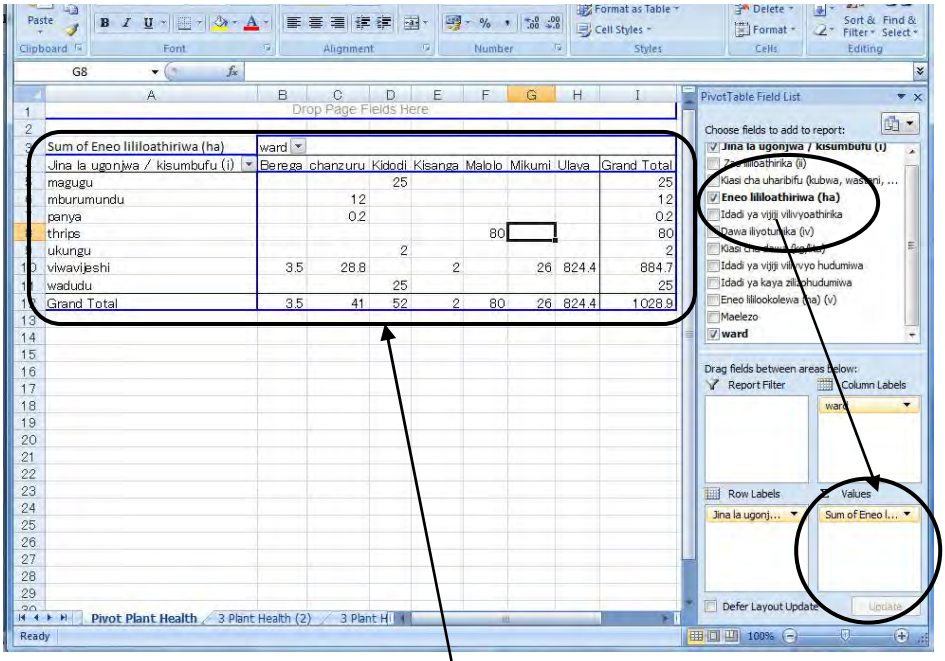


Then, the pivot table shows each disease in the Raw Fields.



Then the pivot table shows the names of each ward in the Column Fields.

6. Next drag and drop “ward” to Column labels.”



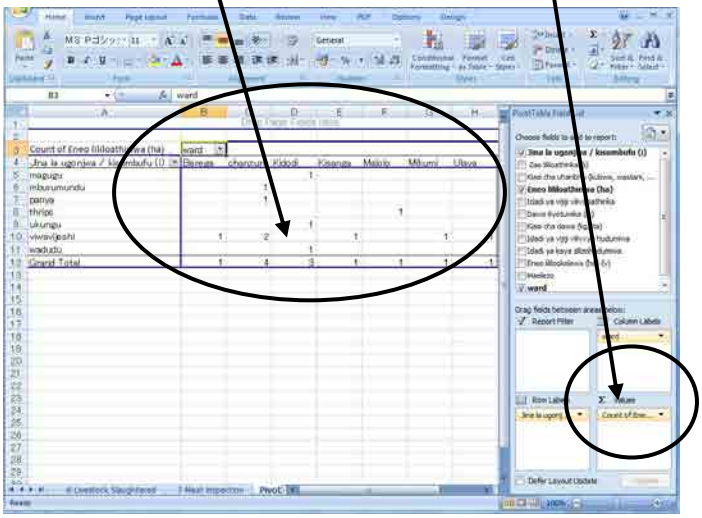
7. Next, drag and drop “Eneo lililoathiriwa” to Values.

Then, the amount is automatically calculated from the original list and presented in the pivot table!

Now you know the area attacked by each disease in each ward!

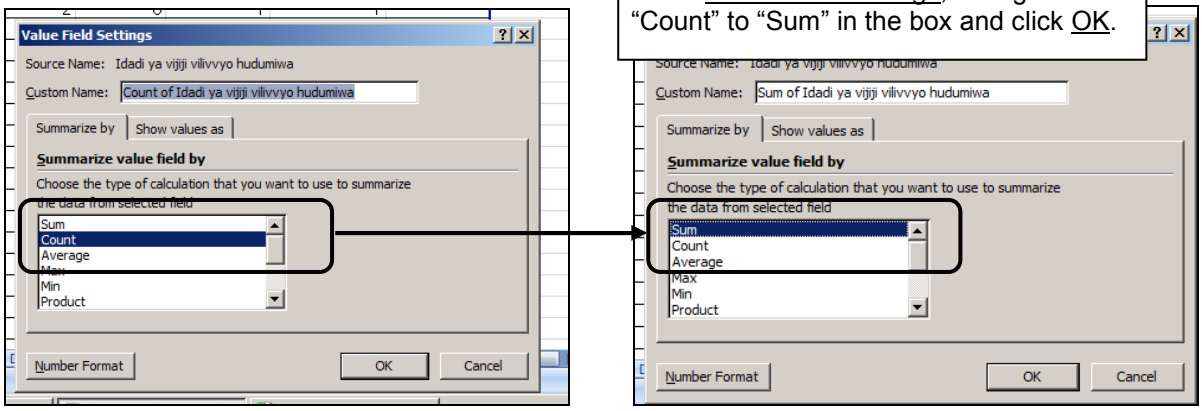
Tips: In general,
Columns for text entry (such as “Jina la ugonjwa”) should go to Row Labels or Column Labels.
Columns for numeric entry (such as “Eneo lililoathiriwa”) should go to Values.

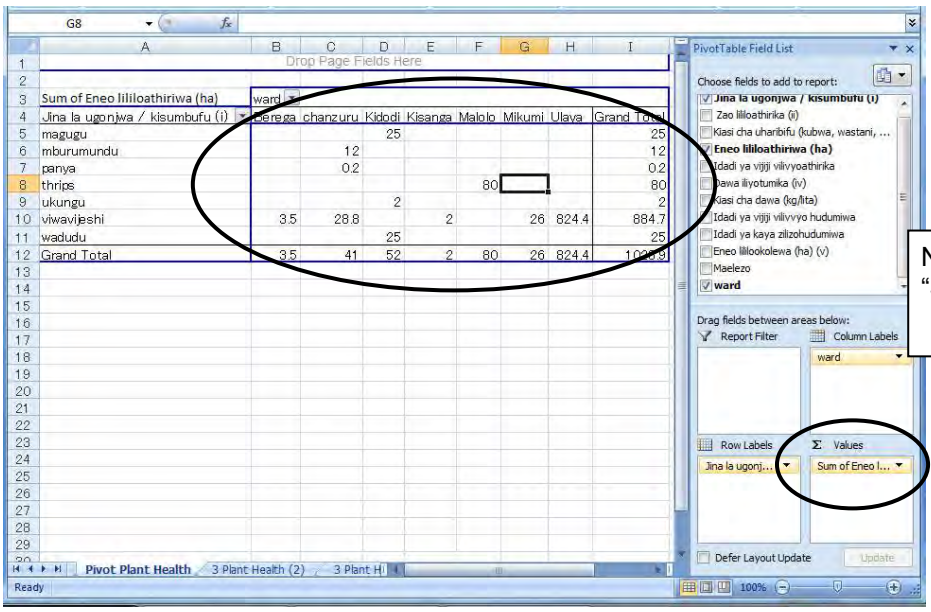
8. If the consolidated data shows “Count” (how many data exist), rather than “Sum” (total value of all data), do one of the following:
1) right click in the data field , or 2) left click on the count,



9. Then, select Value Field Settings

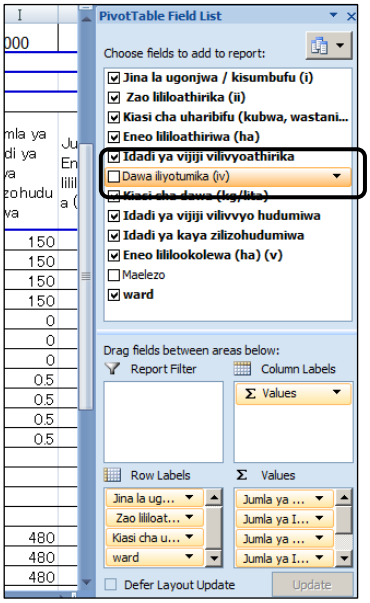
10. In Value Field Settings, change from “Count” to “Sum” in the box and click OK.



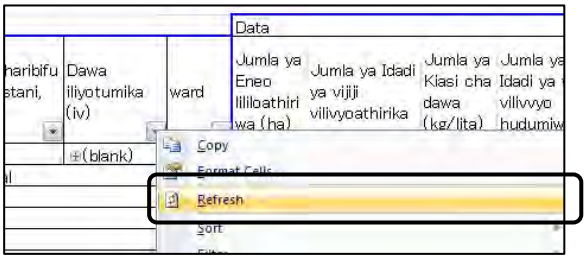


Now, it also shows “Sum”!

To delete an item from the pivot table, click off the check in Field List.

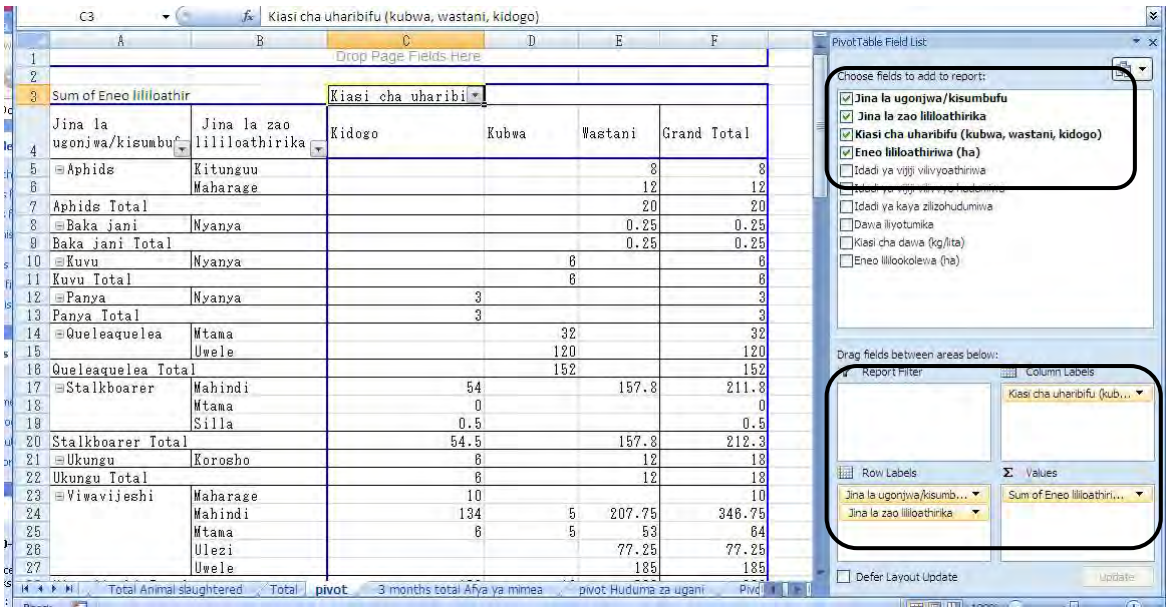


If you make change in the original list after making pivot table, you can right click the pivot table and select refresh.



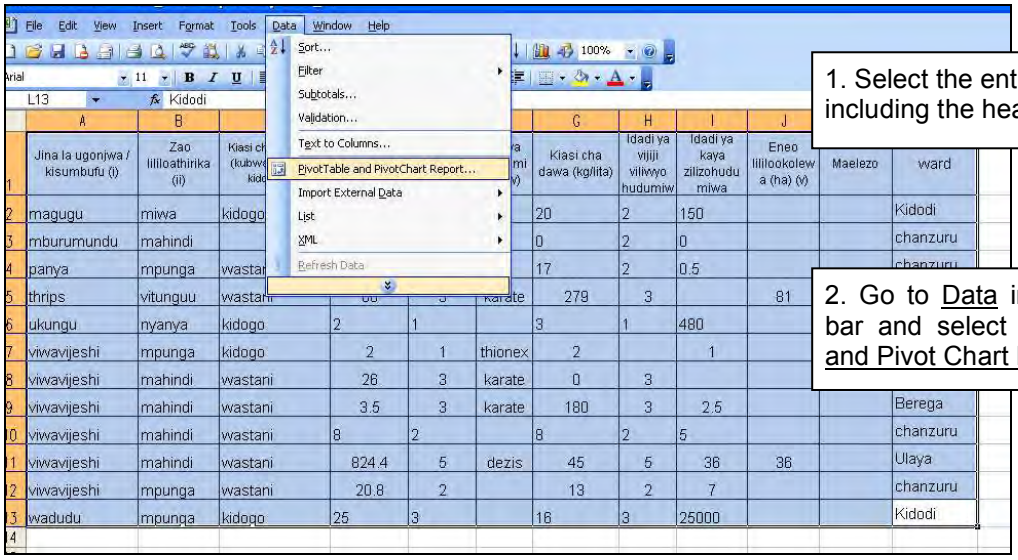
Then, the pivot table is automatically updated.

In Pivot Table, you can make a more complicated table like the one below by dragging and dropping more than one field in columns and/or rows.



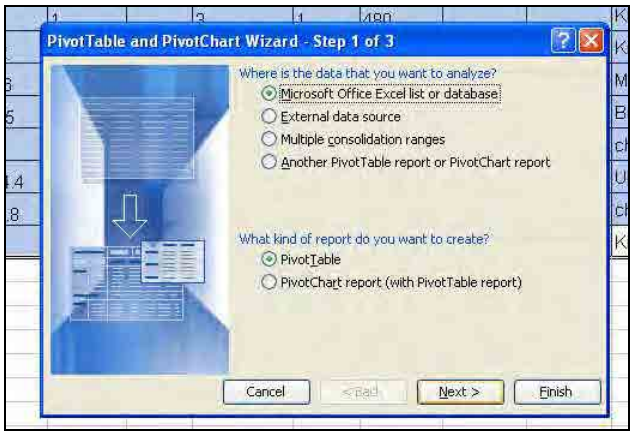
In this figure, the area affected is shown by severity (kidogo, wastani, kubwa) for each type of disease and crop.

<Excel 2003>



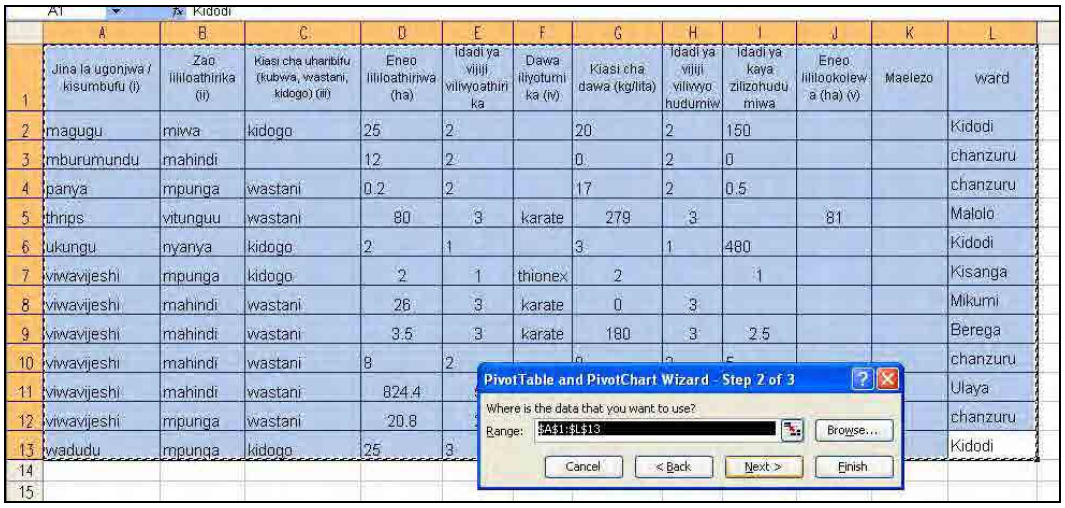
1. Select the entire list including the heading.

2. Go to Data in the menu bar and select Pivot Table and Pivot Chart Report.

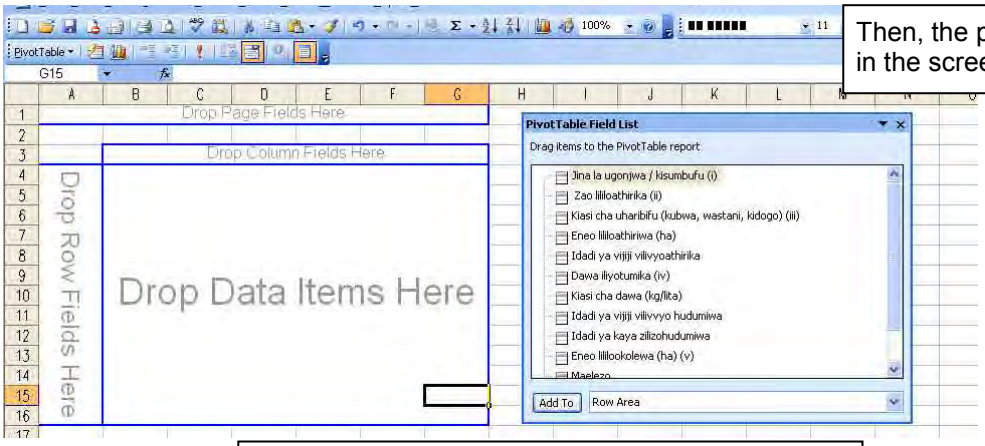


3. Click Next.

4. Check if the area selected is correct, and click Next.

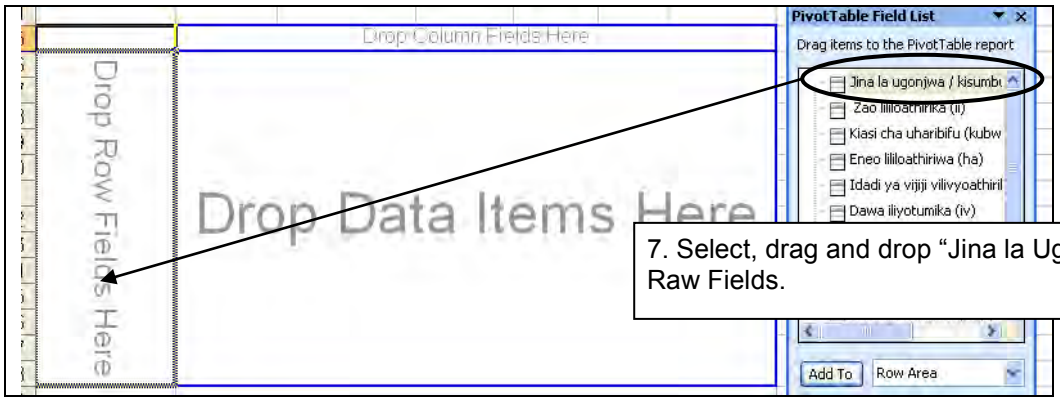


5. Select New worksheet and click Finish.

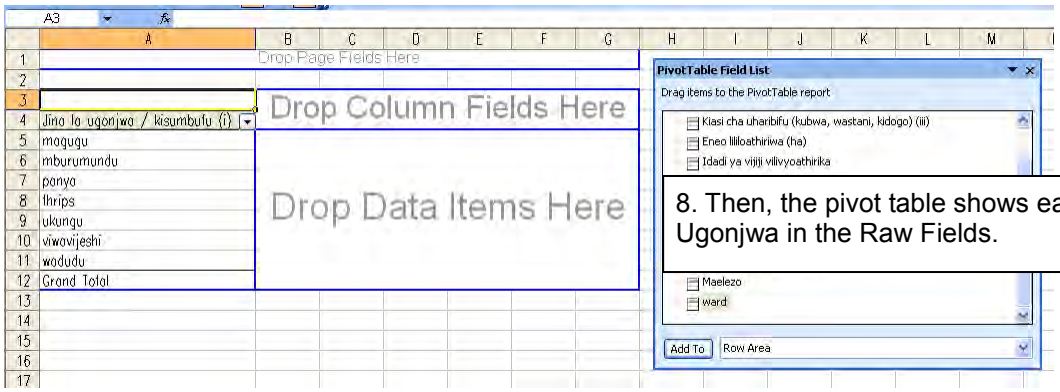


Then, the pivot table appears in the screen like this.

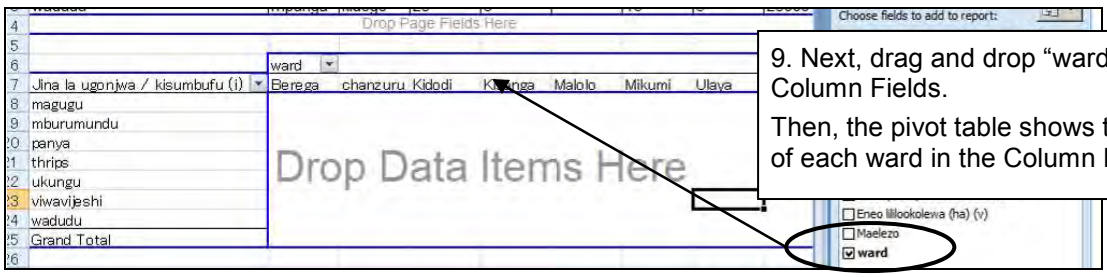
6. Each column is listed in Field List. Drag and drop it in applicable field in the blue frame table.



7. Select, drag and drop “Jina la Ugonjwa” in the Raw Fields.



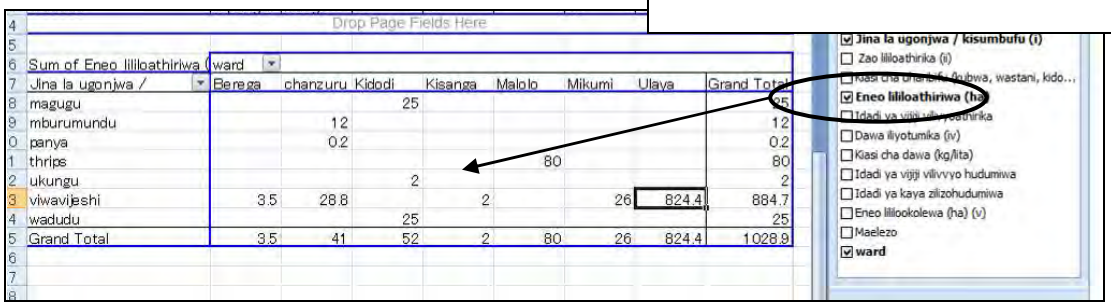
8. Then, the pivot table shows each Jina la Ugonjwa in the Raw Fields.



9. Next, drag and drop “ward” to Column Fields.

Then, the pivot table shows the names of each ward in the Column Fields.

10. Next drag and drop “eneo lililoathiriwa” in the Data Items.



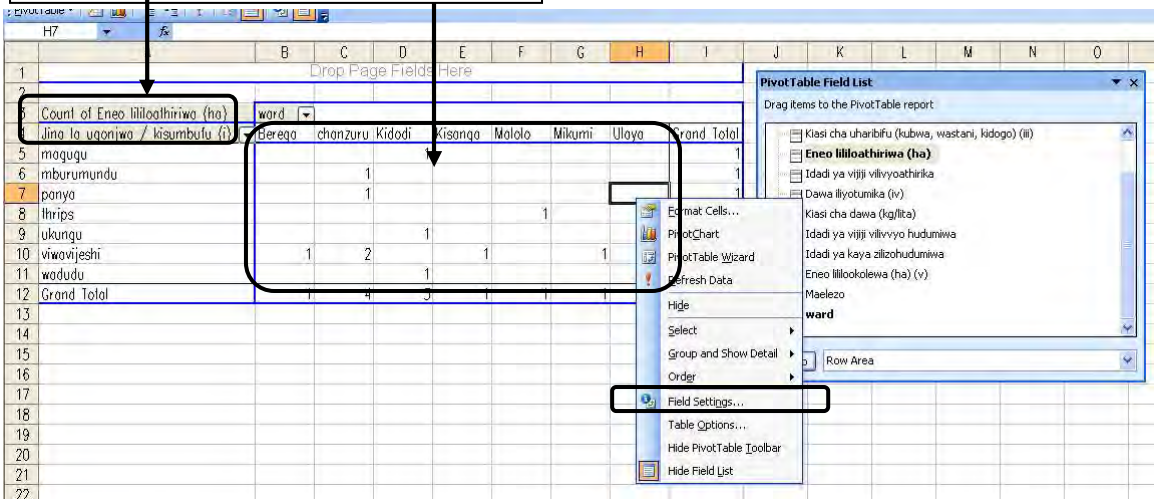
Now the amount is automatically calculated from the original list and presented in the pivot table!

Now you know the area attacked by each disease in each ward

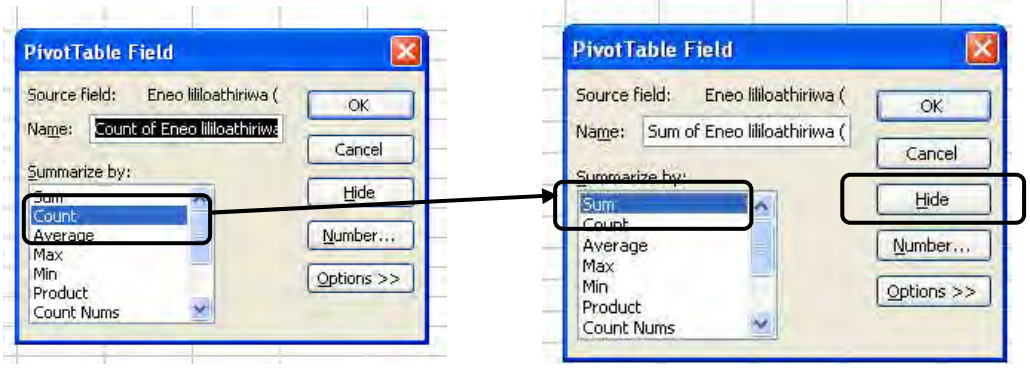
Tips: In general,
Columns for text entry (such as “Jina la ugonjwa”) should go to Row Labels or Column Labels.
Columns for numeric entry (such as “Eneo lililoathiriwa”) should go to Values.

If the consolidated data shows “Count” (how many data exist), rather than “Sum” (total value of all data) as shown right,

11. Put your cursor in the data area, right click and select Field Settings.



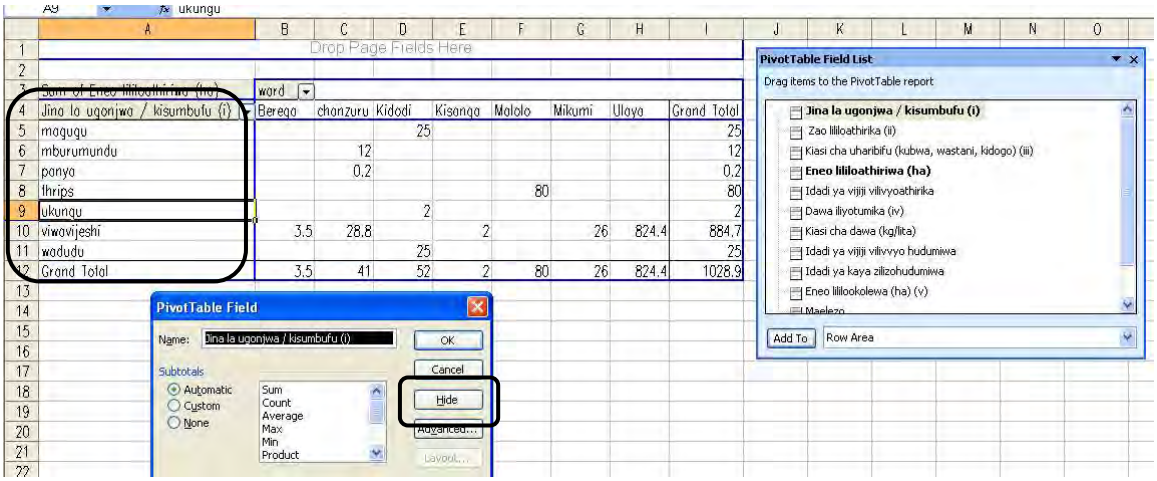
12. Pivot Table Field appears. In the field change from “Count” to “Sum” in the box and click OK.

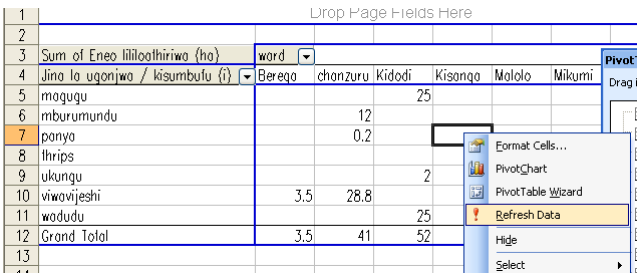


	A	B	C	D	E	F	G	H	I
1	Drop Page Fields Here								
2									
3	Sum of Eneo lililoathiriwa (ha)	ward							
4	Jina la ugonjwa / kisumbufu (i)	Berega	chanzuru	Kidodi	Kisanga	Mololo	Mikumi	Ulaya	Grand Total
5	magugu			25					25
6	mburumundu		12						12
7	panya		0.2						0.2
8	thrips					80			80
9	ukungu			2					2
10	viwavijeshi	3.5	28.8		2		26	824.4	884.7
11	wadudu			25					25
12	Grand Total	3.5	41	52	2	80	26	824.4	1028.9
13									

Now, it also shows “Sum”!

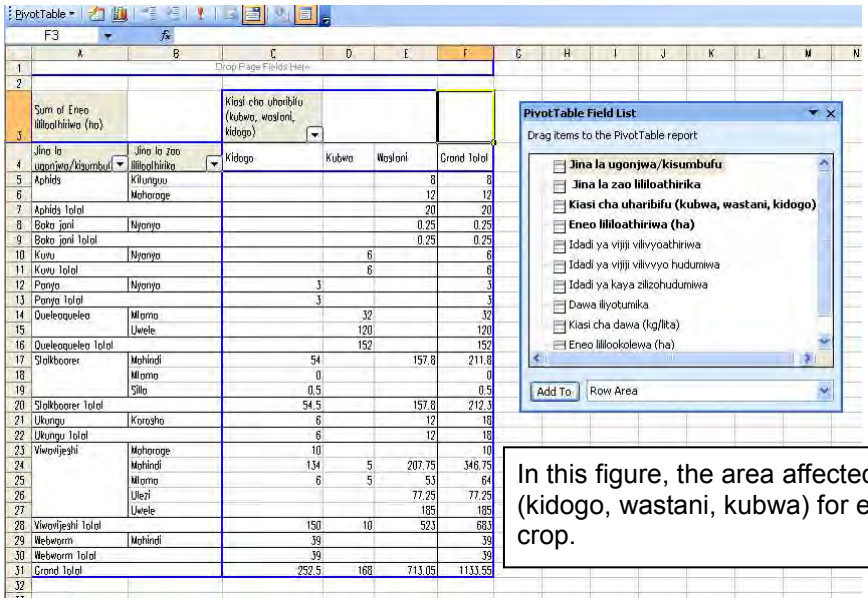
13. To delete an item from the pivot table, go to respective field (column, row or data), right click and choose Field Setting. In the Pivot Table Field, choose Hide. Then the item will disappear.





If you make change in the original list after making pivot table, you can right click the pivot table and select Refresh Data.

Then, the pivot table is automatically updated.



Using the Pivot Table, you can make a more complicated table like this one by dragging more than one field in columns and/or rows.

In this figure, the area affected is shown by severity (kidogo, wastani, kubwa) for each type of disease and crop.

4.1 Integrated Data Collection Format (LGMD2)

Districts are requested to submit the Integrated Data Collection Format (quarterly and annual) in LGMD2 to the national server. In order to fill out tables in these formats, there are two types of data sources: consolidated VAEO/WAEO format (created in Chapter 3) and district's own sources. In the following sections, data sources and how the data are processed are explained for quarterly and annual formats, respectively.

4.1 Quarterly Format

4.1.1 Two types of data sources

Table 3 below shows how to obtain data for each table in the quarterly format in LGMD2, whether from VAEO/WAEO format or district.

Table 3: Data Sources of Quarterly Integrated Data Collection Format (LGMD2)

Table	Source
1. Types of Crops Grown, Planted Area and Total Production	VAEO/WAEO
2. Plant Health Services	VAEO/WAEO
3. Livestock/ Products Movement	District
4. Livestock Slaughtered	VAEO/WAEO
5. Meat Inspection/ Hygiene	VAEO/WAEO
6 (a). Marketing of Livestock Products	District
6 (b), (c). Marketing of Livestock Products	VAEO/WAEO
7 (a). Animal Feeds, Acaricides, Vaccines and Treatment	District
7 (b). Inputs for reproduction of improved livestock	District

4.1.2 Tables with VAEO/WAEO data sources

Relationship between the tables in LGMD2 and tables in VAEO/WAEO format is shown in Table 4. The data source of tables in quarterly format is monthly, rather than quarterly, VAEO/WAEO format. Therefore, you should pay attention which report (all or only the latest) to consolidate. In addition, "remarks" should be hand typed by referring to each ward.

Table 4: Data Source of Quarterly Report Format (VAEO/WAEO Format)

Tables in LGMD2	WAEO format Table No.	Report to be consolidated	Note
1. Types of Crops Grown, Planted Area and Total Production	Monthly Table 2 Malengo, Utekelezaji and Bei ya Mazao	Annual Target: July Achieved to date: Final month of the quarter (Sep, Dec, Mar, June)	Productivity and price are not required in LGMD2. For calculation, see 4.3.1.
2. Plant Health Services	Monthly Table 3 Kuzuia magonjwa/visumbufu kwa kutumia kemikali	All three months of the quarter	For calculation, see 4.3.2.
4.Livestock Slaughtered	Monthly Table 4 Mifugo iliyochinjwa	Total number slaughtered: All three months of the	"Cumulative to date" is automatically calculated in

		quarter. Total carcass weight: Calculated by districts based on the number slaughtered.	LGMD2. Price is not included in LGMD2. For calculation of the total number slaughtered, See 4.3.4.
5. Meat Inspection/ Hygiene	Monthly Table 5 Ukaguzi wa nyama	All three months of the quarter	For calculation, See 4.3.3.
6. Marketing of Livestock Products (b) ~ (c)	Monthly Table 6.1 Maziwa, Table 6.2 Ngozi	This quarter: All three months of the quarter	"Cumulative to date" is automatically calculated in LGMD2. For calculation, See 4.3.4.

4.2 Annual Format

4.2.1 Two types of data sources

Table 5 below shows how to obtain data for each table in the annual format in LGMD2, whether from VAEO/WAEO format or district.

Table 5: Data Sources of Annual Integrated Data Collection Format (LGMD2)

Table	Source
1. Food Situation	District
2. Irrigation	VAEO/WAEO
3. (a) ~ (f) Agricultural Mechanization	VAEO/WAEO
3. (g) Agricultural Mechanization	District
4. Input	VAEO/WAEO
5. (a) ~ (e), (h) Extension Services	District
5. (f) ~ (g) Extension Services	VAEO/WAEO
6. Associations / Groups	VAEO/WAEO
7. Number of Smallholder Households Participating in Contracting Production and Out-growers Schemes	VAEO/WAEO
8. Proportion of Female Members in Finance Management and Planning Committee	District
9. Livestock Population (Large scale farmers)	District
10. Livestock Population (Small Scale Farming)	VAEO/WAEO
11. Livestock Products Processing Plants / Units	District
12. Livestock Infrastructure and Status	VAEO/WAEO District
13. Grazing land	District
14. Pasture	VAEO/WAEO
15. Dissemination of Agricultural Information	VAEO/WAEO
16. Number of Ward Agricultural Resource Centres	District

4.2.2 Tables with VAEO/WAEO data sources

Relationship between the tables in LGMD2 and tables in VAEO/WAEO format is shown in Table 6. It is relatively easy to copy the information from VAEO/WAEO format to annual format in LGMD2 compared to quarterly format, as most tables only require simple copying from annual or the fourth quarter consolidated WAEO report to LGMD2 annual report. “Remarks” should be hand typed by referring to each ward.

Table 6: Data Source of Annual Report Format (VAEO/WAEO Format)

Tables in LGMD2	WAEO format Table No.	Report to be consolidated	Note
2.(a) Irrigation	Annual Table 3.1 Skimu ya umwagiliaji	Annual	Copy and paste from each WAEO format.
2. (b) Irrigation	Quarterly Table 5.1 Mazao yanayolimwa katika eneo la umwagiliaji	The 4th quarter only	For calculation, see 4.3.2.
3. (a) ~ (e) Agricultural Mechanization	Annual Table 4.1 Idadi ya mashine/vifaa vya kilimo, ufugaji na uvuvi Table 4.2 Idadi ya zana za kilimo Table 4.3 Idadi ya vifaa vinavyotumiwa kwa mkono Table 4.4 Mashine za kusindika mazao ya kilimo.	Annual	For calculation, see 4.3.1.
3. (f) Agricultural Mechanization	Quarterly Table 7 Eneo la uzalishaji katika kijiji/kata na njia iliyotumika kulima	The 4th quarter only	For calculation, see 4.3.1.
4. Input	Annual Table 6.1 Mbolea za viwandani, Table 6.2 Viatilifu / Viuadudu, Table 6.3 Mbegu bora	Annual	For calculation in Table 6.1, see 4.3.1. For Tables 6.2 and 6.3, see 4.3.2.
5. (f) Extension Services	Annual Table 5.1 Mafunzo ya wakulima kupitia shamba darasa	Annual	Be careful that the forms in LGMD2 and VAEO/WAEO format are slightly different.
5. (g) Extension Services	Quarterly Table 3.1 Mafunzo kwa wakulima kwa kutumia njia mbalimbali nje ya shamba darasa	All four quarters of the year.	For calculation, see 4.3.5.
6. (a)~(b) Associations / Groups	Quarterly Table 2.1 Vyama vya kuweka na kukopa (SACCOS) Table 2.2 Vikundi vingine vya wakulima	The 4th quarter only	(b) Differentiation of urban and rural depends on the official township status of ward.

			For calculation, see 4.3.1.
7. Number of Smallholder Households Participating in Contracting Production and Out-growers Schemes	Annual Table 2 Kilimo cha mkataba na makubaliano wa soko	Annual	For calculation, see 4.3.1 .
10. Livestock Population – Small Scale Farming	Annual Table 7 Idadi ya mifugo	Annual	For calculation, see 4.3.1.
12. Livestock Infrastructure and Status	Annual Table 8 Miundombinu katika mifugo	Annual	Some items are collected at district level. See 4.3.1.
13. Grazing land	Annual Table 9 Eneo la malisho (Grazing land)	Annual	Some items are collected at district level. See 4.3.1.
14. Pastures	Annual Table 10.1 Malisho ya wanyama yaliyopandwa na kuendelezwa Table 10.2 Masalia ya mazao	Annual	Convert the unit from Hay (=20kg) to ton. Planted area should be filled in at district level. See 4.3.1.
15. Dissemination of Agricultural Information (a) ~ (b)	Annual Table 11.1 TV na Radio Table 11.2 Simu	Annual	See 4.3.1.

4.3 LGMD2 Data Entry

In this section, techniques of consolidating or organizing the data in the VAEO/WAEO format to fill out the tables in LGMD2 are explained. The techniques are built upon the ones that are explained in Chapter 3.

4.3.1 Aggregating WARD level data to district level

District total has already been computed in the “district total” sheet by aggregating the ward level data [see 3.4.1]. Thus, simply copy the data from the sheet and paste it in LGMD2.

However, if there are WAEO who have not submitted the filled-n formats, it is important to take it into account. It is done as shown in the box.

Tips when there are WAEO who have <u>not</u> submitted the filled-in format

<Example>
There are 25 wards. 21 WAEO have already submitted the filled-in format, and 4 WAEO have not. In this case, the district level data should be calculated as follows.

District level estimate= (Sum of the data from 21 WAEO)x (25 / 21)

If the sum of the 21 WAEO is 1800 tons of maize, then,
District level estimate of maize production = 1800 x (25 / 21) = 2143.

Write 2,143 as the district maize production in LGMD2.

4.3.2 Pivot Table 1

This technique can be used for the following tables.

- Quarterly Table 2 Plant Health Services.
- Annual Table 4 (b) Agrochemicals Requirements and Availability
- Annual Table 4 (c) Requirements for and Amount Used of Improved Seed Variety

Let us work with Table 2 Plant Health Services of the LGMD2 Quarterly Report as an example. Explanation is built upon the ones made in 3.5.

First, copy the lists of "Monthly Table 3.1 Kuzuia magonjwa / visumbufu kwa kutumia kemikali" from the three months applicable in one sheet for the quarter.

1. Create a new sheet for consolidation.

Jina la ugonjwa / kisumbufu (i)	Zao lililoathirika (ii)	Kiasi cha uharibifu (kubwa, wastani, kidogo) (iii)	Eneo lililoathiriwa (ha)	Idadi ya vijiji vilivyoathirika	Dawa iliyotumika (iv)	Kiasi cha dawa (kg/lita)	Idadi ya vijiji vilivyoguduniwa	Idadi ya kaya zilizohudumiwa	Eneo lililookolewa (ha) (v)	Maelezo	ward	
magugu	miwa	kidogo	25	2		20	2	150			Kidodi	July
mburumundu	mahindi		12	2		0	2	0			chanzuru	July
panya	mpunga	wastani	0.2	2		17	2	0.5			chanzuru	July
thrips	vitunguu	wastani	80	3	karate	279						
ukungu	nyanya	kidogo	2	1		3	1					
viwavijeshi	mpunga	kidogo	2	1	thionex	2						
viwavijeshi	mahindi	wastani	26	3	karate	0						
viwavijeshi	mahindi	wastani	3.5	3	karate	180						
viwavijeshi	mahindi	wastani	8	2		8	2					
viwavijeshi	mahindi	wastani	824.4	5	dezis	45	5	36	36		Ulaya	July
viwavijeshi	mpunga	wastani	20.8	2		13	2	7			chanzuru	July
wadudu	mpunga	kidogo	25	3		16	3	25000			Kidodi	July
magugu	miwa	kidogo	50	2		20	5	130			Kidodi	August
mburumundu	mahindi		10	2		2	2	0			chanzuru	August
panya	mpunga	kidogo	3	2		17	2	1			chanzuru	August
thrips	vitunguu	wastani	50	3	karate	279	3		77		chanzuru	August
ukungu	nyanya	kidogo	3	1		3	1	350			chanzuru	August
viwavijeshi	mpunga	wastani	1	3	thionex	2		1				
viwavijeshi	mahindi	wastani	20	10	karate	0	5					
viwavijeshi	mpunga	wastani	20.8	2		10	2	7				
wadudu	mpunga	kidogo	26	3		10	3	500				
panya	mpunga	wastani	3.5	2		10	2	500				
thrips	vitunguu	wastani	80	3	karate	30	2		81			
ukungu	nyanya	wastani	2	1		17	1	480			Berega	September
viwavijeshi	mpunga	kidogo	2	1	thionex	2		1			Kisanga	September
viwavijeshi	mahindi	kidogo		3	karate	0	3				Mikumi	September

2. Copy and paste the list from each month in respective Excel files. [See 3.4.1]

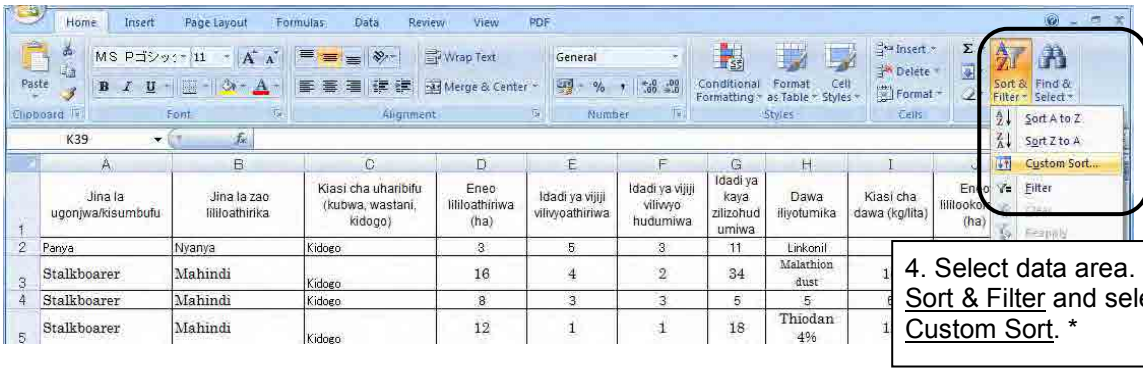
3. For reference and traceability, type the month next to each row.

The table in LGMD2 is like this.

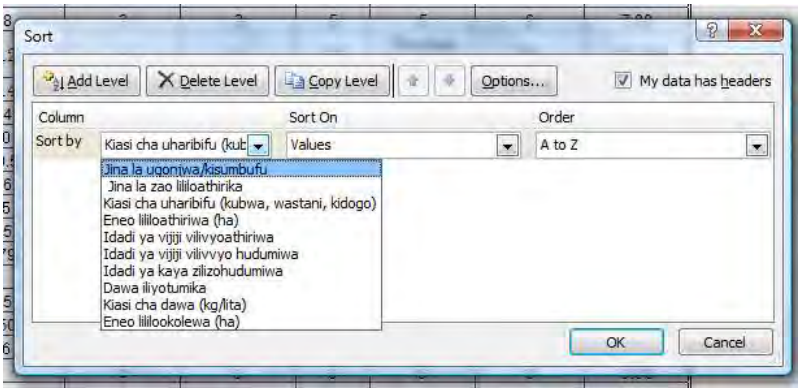
2 Plant Health Services

Name of Pests / Diseases (i)	Name of crop affected (ii)	Severity (large, average, small) (iii)	Area attacked (ha) (iv)	Number of villages attacked (v)	Name of pesticide applied (vi)	Amount of Pesticide applied (kg/litre) (vii)	Number of Villages Served (viii)	Number of Households Received Service (ix)	Area rescued (ha) (x)	Comments (xi)

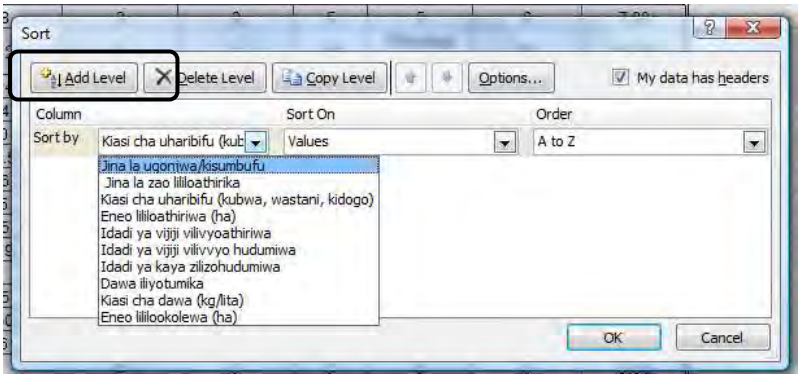
The table asks that you first organize information by i) Name of pests/diseases (Jina la ugonjwa / kisumbufu) [1st column] and then by ii) Name of crop affected (Zao lililoathirika) [2nd column]. The first step is to sort the whole data by these two columns.



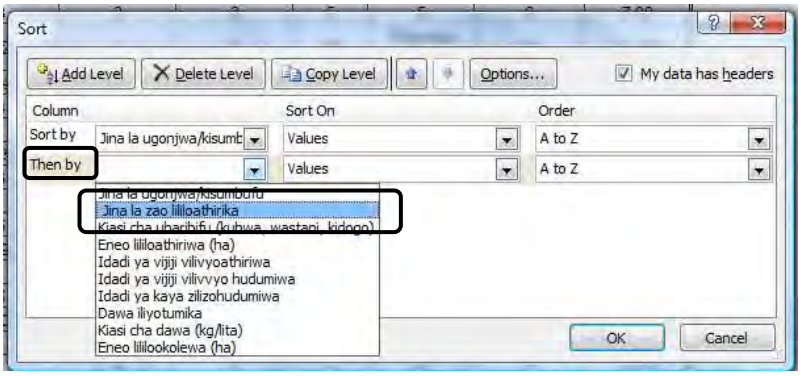
4. Select data area. Go to Sort & Filter and select Custom Sort. *



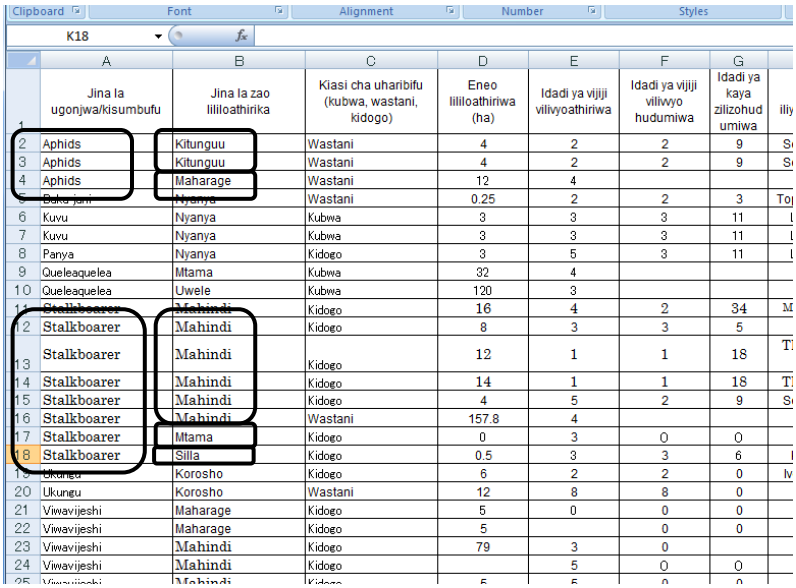
5. Select Jina la ngonjwa, for Sort by, if it is not pre-selected.



6. In Sort, click Add Level.



7. Select “Jina la zao lililoathirika” at Then by. Click OK.



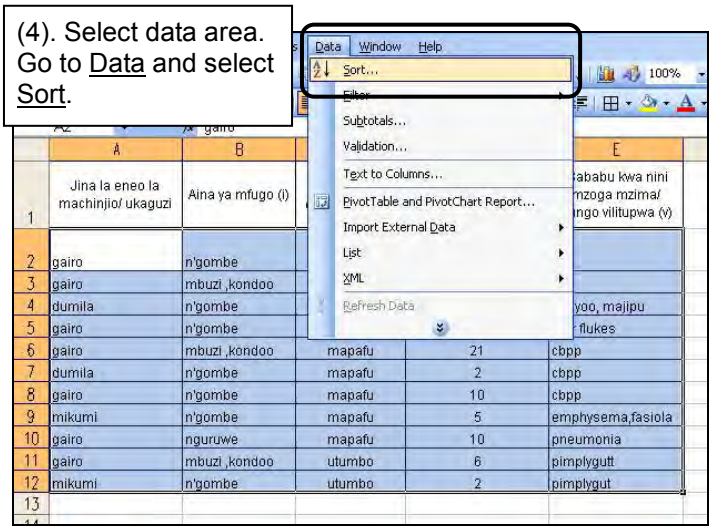
	A	B	C	D	E	F	G
1	Jina la ugonjwa/kisumbufu	Jina la zao lililoathirika	Kiasi cha uharibifu (kubwa, wastani, kidogo)	Eneo lililoathiriwa (ha)	Idadi ya vijiji vilivyoathiriwa	Idadi ya vijiji vilivyyo hudumiwa	Idadi ya kaya zilizohudumiwa
2	Aphids	Kitunguu	Wastani	4	2	2	9
3	Aphids	Kitunguu	Wastani	4	2	2	9
4	Aphids	Maharage	Wastani	12	4		
5	Boko jani	Nyanya	Wastani	0.25	2	2	3
6	Kuvu	Nyanya	Kubwa	3	3	3	11
7	Kuvu	Nyanya	Kubwa	3	3	3	11
8	Panya	Nyanya	Kidogo	3	5	3	11
9	Queleaquelea	Mtama	Kubwa	32	4		
10	Queleaquelea	Uwele	Kubwa	120	3		
11	Stalkboarer	Mahindi	Kidogo	16	4	2	34
12	Stalkboarer	Mahindi	Kidogo	8	3	3	5
13	Stalkboarer	Mahindi	Kidogo	12	1	1	18
14	Stalkboarer	Mahindi	Kidogo	14	1	1	18
15	Stalkboarer	Mahindi	Kidogo	4	5	2	9
16	Stalkboarer	Mahindi	Wastani	157.8	4		
17	Stalkboarer	Mtama	Kidogo	0	3	0	0
18	Stalkboarer	Silla	Kidogo	0.5	3	3	6
19	Ukungu	Korosho	Kidogo	6	2	2	0
20	Ukungu	Korosho	Wastani	12	8	8	0
21	Viwavijeshi	Maharage	Kidogo	5	0	0	0
22	Viwavijeshi	Maharage	Kidogo	5		0	0
23	Viwavijeshi	Mahindi	Kidogo	79	3	0	
24	Viwavijeshi	Mahindi	Kidogo		5	0	0

8. The whole table is organized, first by “Jina la ngonjwa” and then by “Jina la zao lililoathirika”.

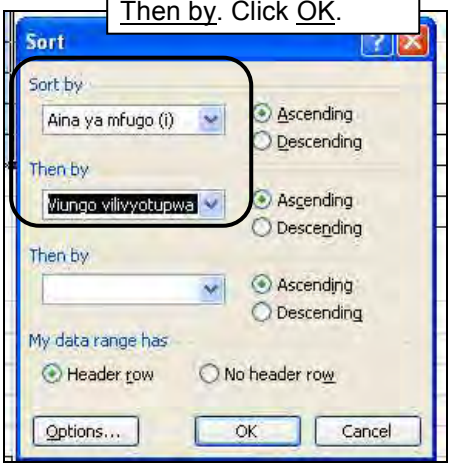
Make sure that the data are sorted as you instructed.

* In Excel 2003,

(4). Select data area. Go to Data and select Sort.



(5). Select “type of animals” at Sort by and “condemnations” at Then by. Click OK.



You may also want to standardize the words in other columns using the method as above [see 3.5.2]. After completing the standardization for all texts, sort the entire table again by first, “Jina la ugonjwa / kisumbufu” and then by “Zao lililoathirika”. This will make the subsequent computation easier.

Next step is to use Pivot Table. The data to be consolidated are either text or numeric as shown in Table 7. In Pivot Table, it is important to pay attention of whether the data is text or numeric.

Table 7: Types of data in Table 3.1 Kuzuia magonjwa / visumbufu kwa kutumia kemikali

Item		Data type
i)	Name of pests / disease (Jina la ugonjwa / kusumbufu)	Text
ii)	Name of the crop affected (Zao lililoathirika)	Text
iii)	Severity (Kiasi cha uharibifu)	Text
iv)	Areas attacked (Eneo lililoathiriwa)	Numeric
v)	Number of villages attacked (Idadi ya vijiji vilivyoathiriwa)	Numeric
vi)	Name of pesticide applied (Dawa iliyotumika)	Text
vii)	Amount of pesticide applied (Kiasi cha dawa)	Numeric
viii)	Number of villages served (Idadi ya vijiji vilivvyo hudumiwa)	Numeric
ix)	Number of households received service (Idadi ya kaya zilizohudumiwa)	Numeric
x)	Area rescued (Eneo lililookolewa)	Numeric

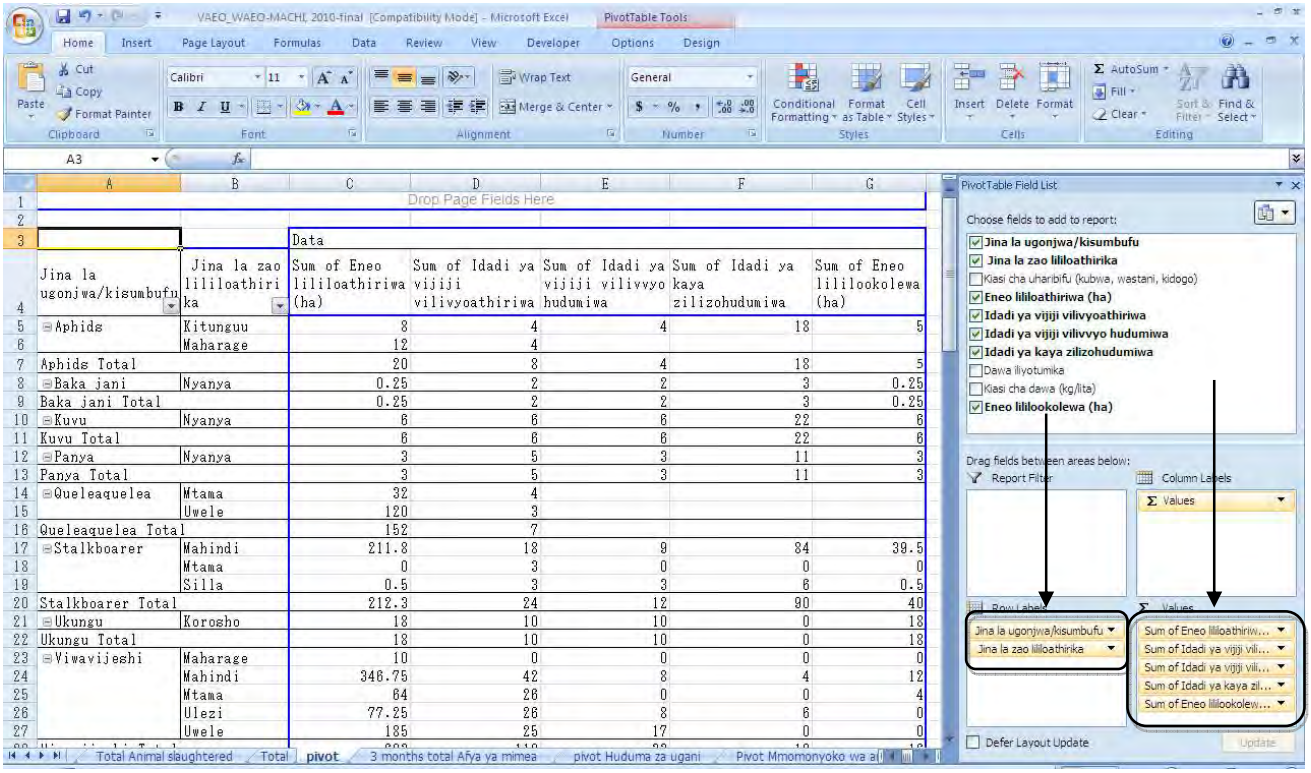
Of the numeric data, vii) Amount of pesticide applied is related to vi) Name of pesticide applied. So it will need to be handled separately.

Create Pivot Table, select, drag and drop the following 2 columns in the Raw Field*

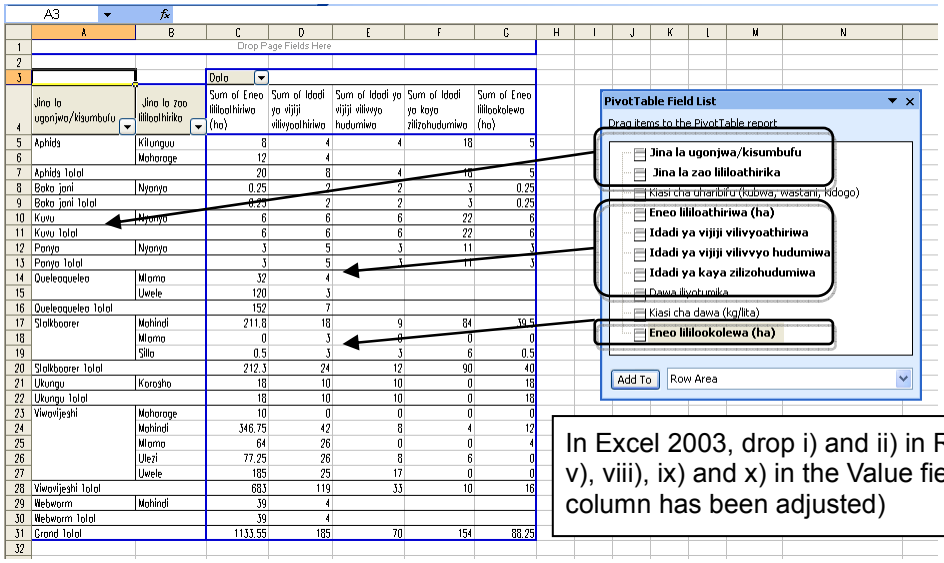
- i) Name of pests/diseases (Jina la ugonjwa / kisumbufu)
- ii) Name of crop affected (Zao lililoathirika)

Next, the 5 columns with numerical data are entered in the Values in the same order as in LGMD2.

iv) Areas attacked (Eneo lililoathiriwa)
v) Number of villages attacked (Idadi ya vijiji vilivyoathiriwa)
viii) Number of villages served (Idadi ya vijiji vilivvyo hudumiwa)
ix) Number of households received service (Idadi ya kaya zilizohudumiwa
x) Area rescued (Eneo lililookolewa)



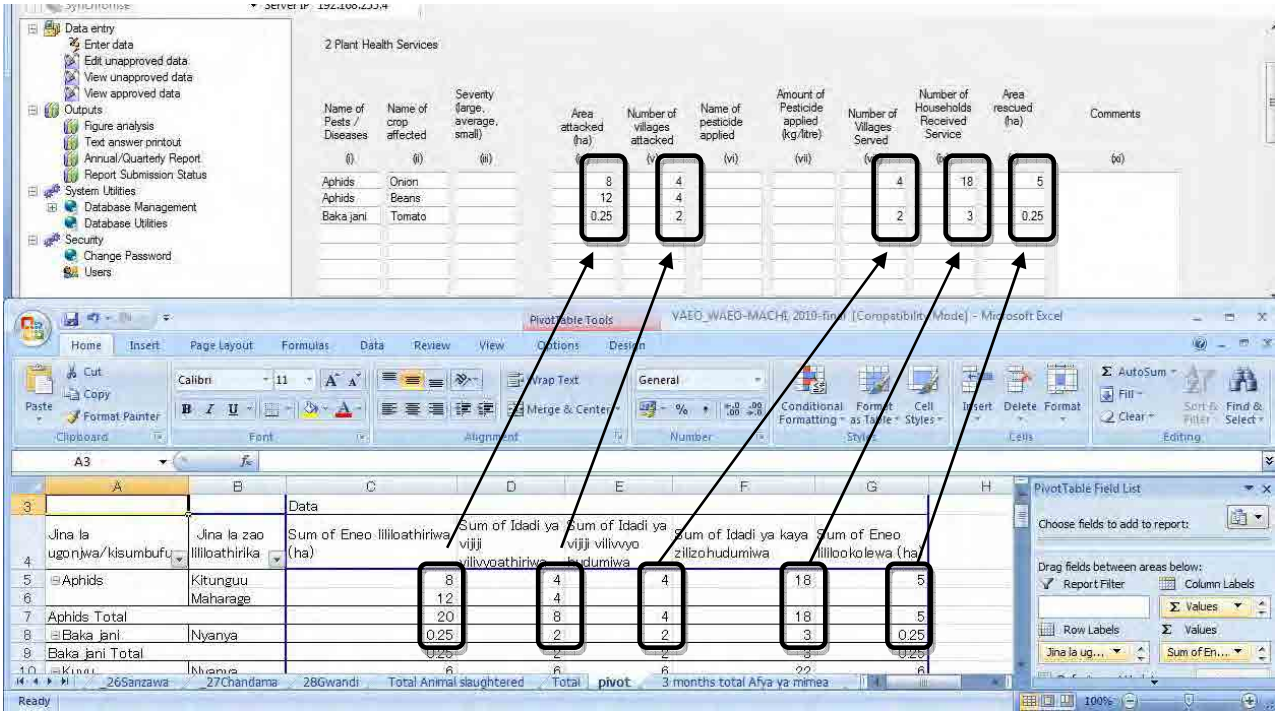
<Excel 2003>



In Excel 2003, drop i) and ii) in Row Fields and iv), v), viii), ix) and x) in the Value fields. (Width of each column has been adjusted)

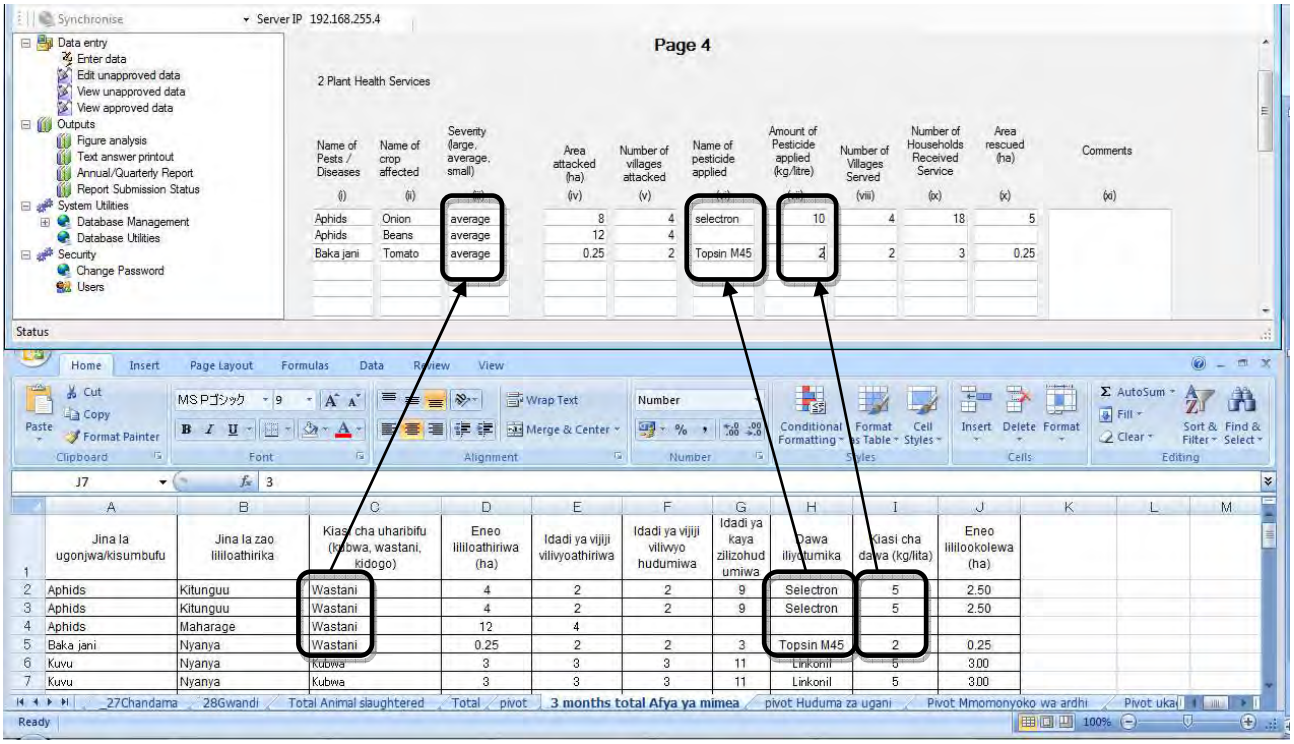
You will see a pivot table like the figure above.
(Width of each column has been adjusted)

Now you are ready to enter the data into LGMD2. Ignore the rows of Totals in the pivot table.



As for “iii) Severity” and “vi) Pesticide”, go back to the Pivot Table in Excel and choose the most common one for each disease and crop.

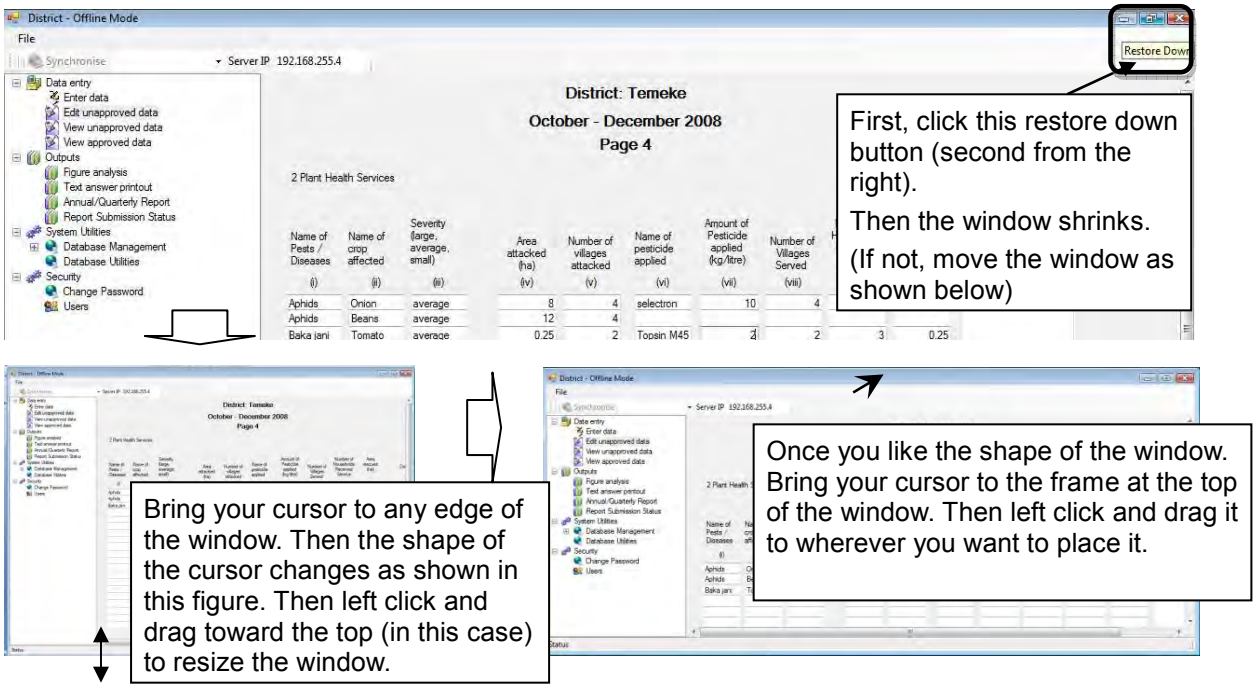
As for “Vii) Amount of pesticide applied”, write the amount for the pesticide you chose for vi).



You can complete Table 2 Plant Health Services if you continue this process.

Tips

When you copy data from Excel to LGMD2, it is convenient if you can see both windows in your screen. Size of each window can be changed and it can be moved in the screen as the following (The explanation is about LGMD2, but you can use exactly the same method for Excel).



4.3.3 Pivot Table 2

This technique can be used to the following tables.

- Quarterly Table 5 Meat Inspection / Hygiene

The data source for this table is VAEO/WAEO Monthly Report Table 5. Ukaguzi wa nyama. The ward level date should look like a figure below.

	A	B	C	D	E	F	G	H	I	J	K	L
1	**5. Ukaguzi wa nyama**											
2	Jina la eneo la machinjio/ ukaguzi	Aina ya mfugo (i)		Idadi ya wanyama walioathirika (ii)		Viungo vilivyotupwa (Mzoga mzima/ Moyo/ Mapafu/ Maini nk.)						
3						Sababu ya kutupa viungo / mzoga mzima (iii)				Idadi ya matukio kwa kila sababu (iv)		
4	MGUNGANI	Ng'ombe		15		Cysts				1		
5						Fascioliasis				2		
6						Liver fluke				9		
7						CBPP				3		
8		Mbuzi		23		Abscesses				6		
9						CCPP				16		
10						Pimply gut				3		
11												
12												
13												
14	i) Andika aina ya mfugo walioathirika (Ng'ombe, Kondoo, Mbuzi, Nguruwe n.k).											

If you copy and paste the same table from each ward, then the district level table will look like the following.

Jina la eneo la machinjio/ ukaguzi	Aina ya mfugo (i)	Idadi ya wanyama walioathirika (ii)	Viungo vilivyotupwa (Mzoga mzima/ Moyo/ Mapafu/ Maini nk.)	
			Sababu ya kutupa viungo / mzoga mzima (iii)	Idadi ya matukio kwa kila sababu (iv)
MGUNGANI	Ng'ombe	15	Cysts	1
			Fascioliasis	2
			Liver fluke	9
			CBPP	3
	Mbuzi	23	Abscesses	6
			CCPP	16
			Pimply gut	3
Chisale	Nguruwe	1	cyst	1
	Mbuzi	2	Pimplygut	1
			Abscesses	2
Mikumi	Ngombe	11	Emphysma	6
			abscesses	2
			CBPP	2
			Fasciolasis	1
			Minyoo	1
	Mbuzi	5	Pimply Guts	5
Kwamtoro	Ng'ombe	6	Liverhosis	6
	Mbuzi	3	CCPP	3
Igunga	Mbuzi	1	CCPP	1
hamai	Mbuzi	4	CCPP	4
Songolo	Mbuzi	2	Pimplyguts	2
Mondo	Ng'ombe	6	E.C.F	6
	Mbuzi	16	Minyoo	16
Dumila	Ngombe	15	Minyoo	11
			T.B	3
			Infacts	2
	Mbuzi	1	Pim plyguts	1

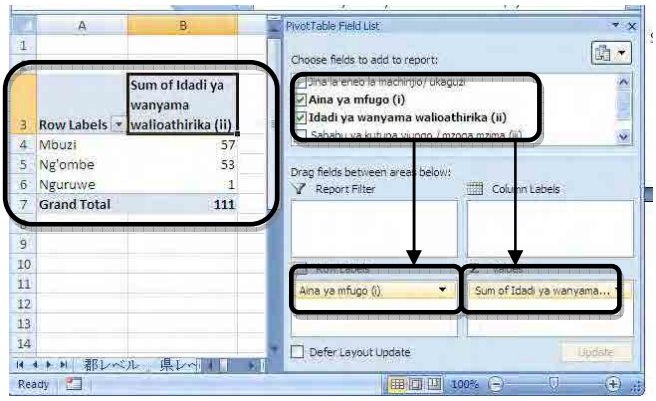
1. Unmerge all the cells and delete the columns without data.

2. Copy the A1-C1 cells to A2-C2, respectively, and delete the entire first row.

3. Copy the name of slaughter slab (in this case "MGUNGANI") and paste the cells immediately below it until you see the next name. Continue this for all the cells in the first column (Jina la machinjio/ukaguzi) and second column (Aina ya mfugo).

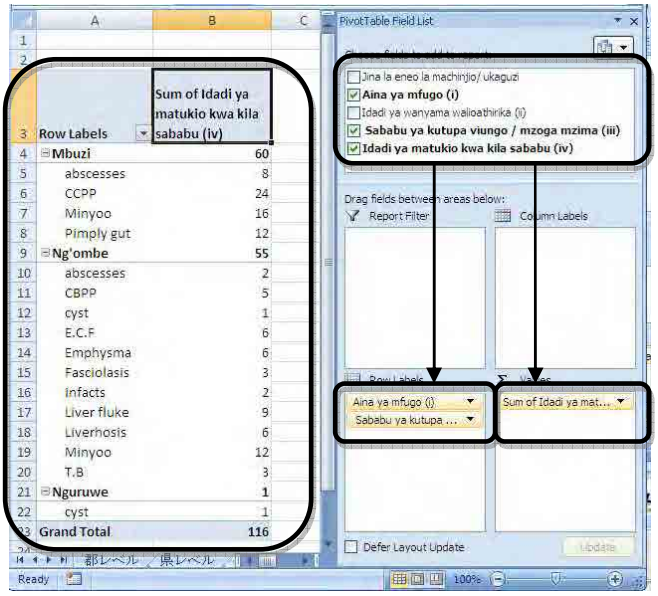
Then the table will look like this. As for the third column leave it as it is (leave blank cells as they are).

Now standardize the words if necessary [see 3.5.2].



4. Run pivot table putting “Aina ya mifugo (i)” in row lables and “Idadi ya wanyama walioathirika (ii)” in Values. Now you know the number of animals affected by animal type.

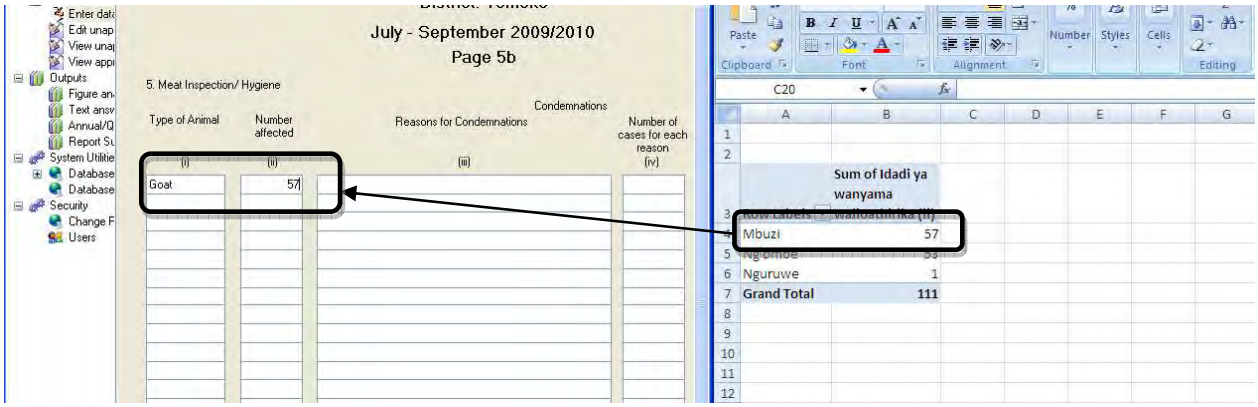
<Excel 2003> Drop i) in Row Field and ii) in Value Fields, respectively.



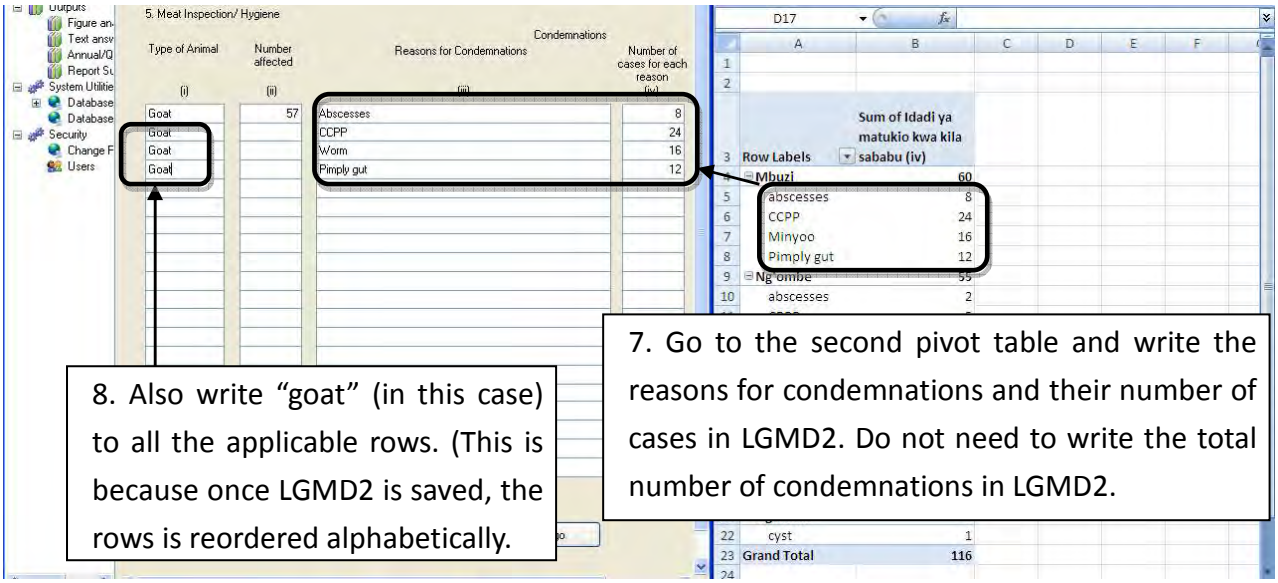
5. Run another pivot table in a <u>new</u> seat. This time, put “Aina ya mifugo (i)” and “Sababu ya kutupa viungo / mzoga mzima (iii)” in row lables and “Idadi ya matukio kwa kila sababu (iv)” in Values. Now you know the number of cases by animal type and by reasons for comdemnations.

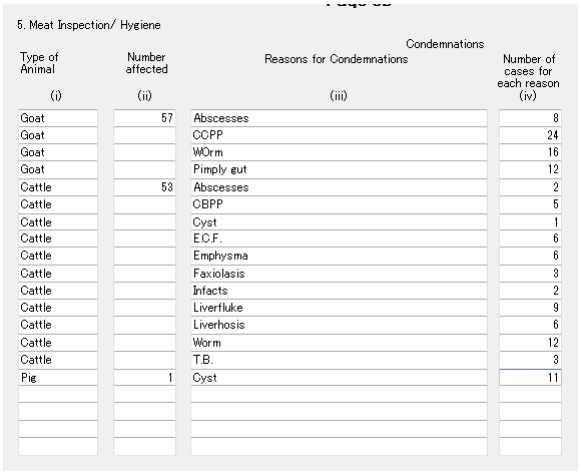
<Excel 2003> Drop i) and (iii) in Row Field and iv) in Value Fields, respectively.

Now you are ready to enter data in LGMD2.



6. Resize and arrange LGMD2 and Excel so that both windows appear in the computer screen.
Write goat (mbuzi) and its number in LGMD2 from the first pivot table.





5. Meat Inspection/ Hygiene

Type of Animal (i)	Number affected (ii)	Reasons for Condemnations (iii)	Number of cases for each reason (iv)
Goat	57	Abscesses	8
Goat		CCPP	24
Goat		WOrm	16
Goat		Pimply gut	12
Cattle	53	Abscesses	2
Cattle		CBPP	5
Cattle		Cyst	1
Cattle		E.C.F.	6
Cattle		Emphysma	6
Cattle		Faxiolasis	3
Cattle		Infacts	2
Cattle		Liverfluke	9
Cattle		Liverhosis	6
Cattle		Worm	12
Cattle		T.B.	3
Pig	1	Cyst	11

Continue the same process with cattle, etc.

Now you have completed Quarterly Table 5 Meat Inspection / Hygiene!

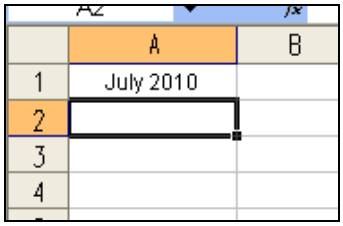
4.3.4 Three Month Data Aggregation

This technique can be applied to

- Quarterly Table 4 Livestock Slaughtered
- Quarterly Table 6 (b)-(c) Livestock Products

Now explanation is given as Table 4 Livestock Slaughtered as an example.

You can consolidate the three months data by copying and pasting tables in one sheet, and calculate. Here we explain with Quarterly Table 4. Livestock slaughtered.

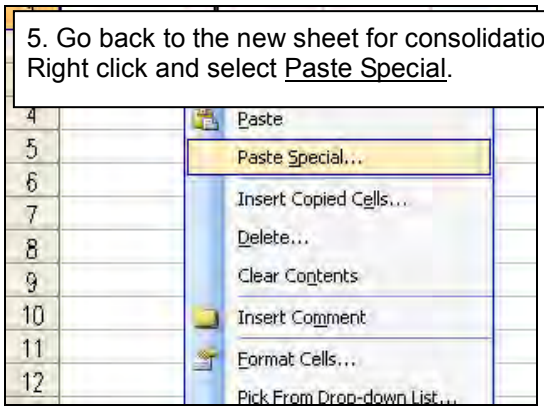


1. Create a new sheet for consolidation.

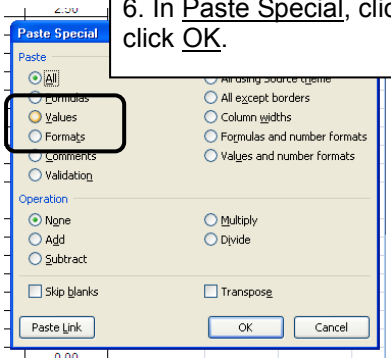
2. Write the month of the data.

3. Open District Total sheet of the excel file of the first month (i.e. July).

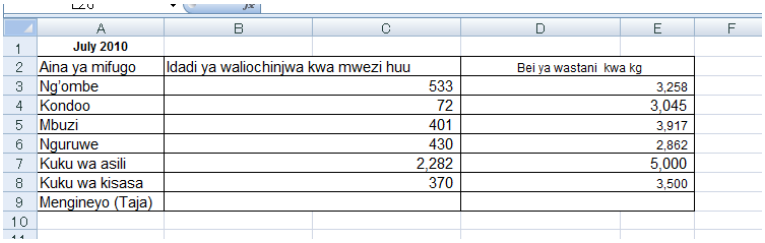
4. Select the entire table and copy (Right click and select Copy or Control +C).



5. Go back to the new sheet for consolidation. Right click and select Paste Special.

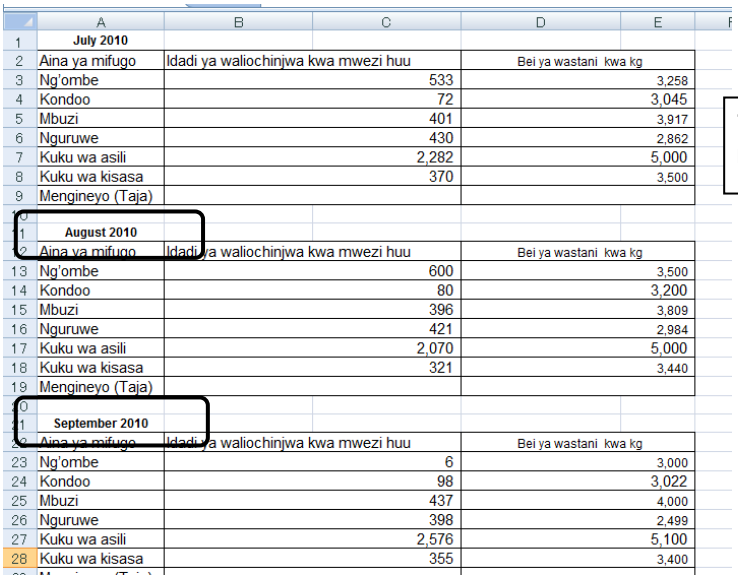


6. In Paste Special, click Values. Then, click OK.



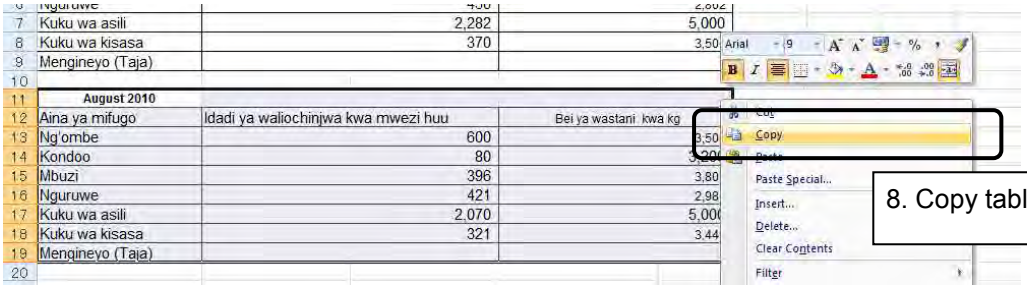
	A	B	C	D	E
1	July 2010				
2	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
3	Ng'ombe		533	3,258	
4	Kondoo		72	3,045	
5	Mbuzi		401	3,917	
6	Nguruwe		430	2,862	
7	Kuku wa asili		2,282	5,000	
8	Kuku wa kisasa		370	3,500	
9	Mengineyo (Taja)				

Then, the table is copied with numbers intact.



	A	B	C	D	E
1	July 2010				
2	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
3	Ng'ombe		533	3,258	
4	Kondoo		72	3,045	
5	Mbuzi		401	3,917	
6	Nguruwe		430	2,862	
7	Kuku wa asili		2,282	5,000	
8	Kuku wa kisasa		370	3,500	
9	Mengineyo (Taja)				
11	August 2010				
12	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
13	Ng'ombe		600	3,500	
14	Kondoo		80	3,200	
15	Mbuzi		396	3,809	
16	Nguruwe		421	2,984	
17	Kuku wa asili		2,070	5,000	
18	Kuku wa kisasa		321	3,440	
19	Mengineyo (Taja)				
21	September 2010				
22	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
23	Ng'ombe		6	3,000	
24	Kondoo		98	3,022	
25	Mbuzi		437	4,000	
26	Nguruwe		398	2,499	
27	Kuku wa asili		2,576	5,100	
28	Kuku wa kisasa		355	3,400	

7. Copy tables from other two months below in the same way.



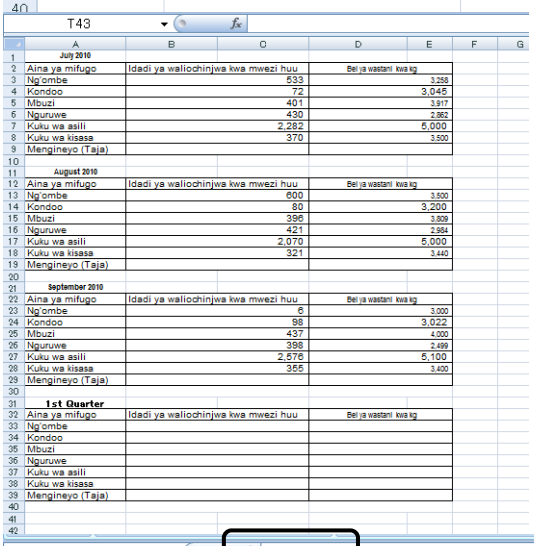
7	Kuku wa asili	2,282	5,000
8	Kuku wa kisasa	370	3,50
9	Mengineyo (Taja)		
10			
11	**August 2010**		
12	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu	Bei ya wastani kwa kg
13	Ng'ombe	600	3,50
14	Kondoo	80	3,20
15	Mbuzi	396	3,80
16	Nguruwe	421	2,98
17	Kuku wa asili	2,070	5,00
18	Kuku wa kisasa	321	3,44
19	Mengineyo (Taja)		
20			

Arial 9 Copy Paste Special... Insert... Delete... Clear Contents Filter

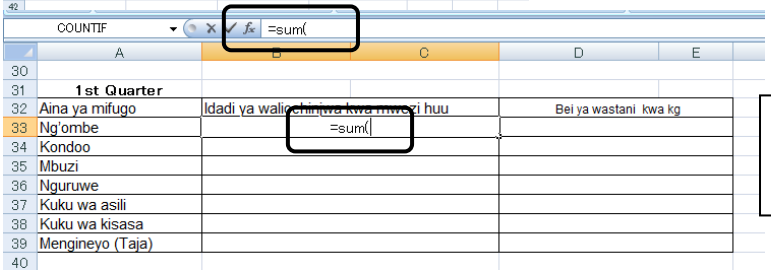
8. Copy table of any month.

20			
21	**September 2010**		
22	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu	Bei ya wastani kwa kg
23	Ng'ombe	6	3,000
24	Kondoo	98	3,022
25	Mbuzi	437	4,000
26	Nguruwe	398	2,499
27	Kuku wa asili	2,576	5,100
28	Kuku wa kisasa	355	3,400
29	Mengineyo (Taja)		
30			
31	**1st Quarter**		
32	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu	Bei ya wastani kwa kg
33	Ng'ombe		
34	Kondoo		
35	Mbuzi		
36	Nguruwe		
37	Kuku wa asili		
38	Kuku wa kisasa		
39	Mengineyo (Taja)		
40			

9. Paste it at the end for quarterly consolidation and delete all data.
Rename it to "1st Quarter".

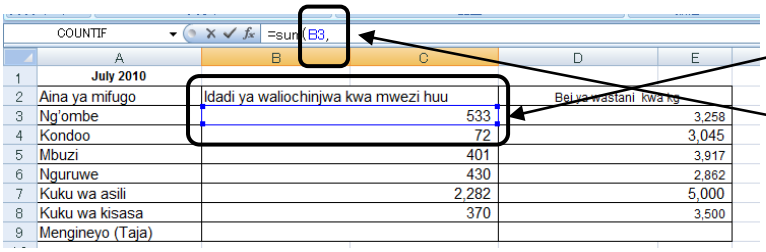


Now, tables of monthly and quarterly totals are all in one sheet!



30			
31	**1st Quarter**		
32	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu	Bei ya wastani kwa kg
33	Ng'ombe	=sum(	
34	Kondoo		
35	Mbuzi		
36	Nguruwe		
37	Kuku wa asili		
38	Kuku wa kisasa		
39	Mengineyo (Taja)		
40			

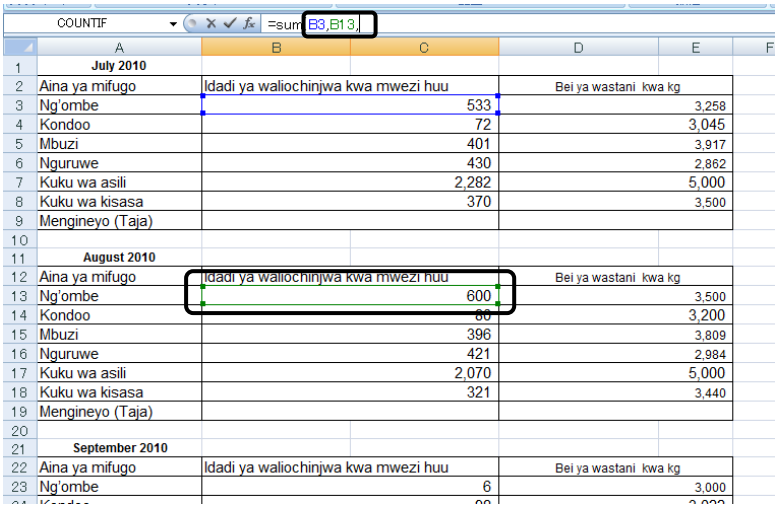
10. Type " =SUM(" in the first cell, "number of slaughtered" for "cattle" of the quarterly table.



1	**July 2010**		
2	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu	Bei ya wastani kwa kg
3	Ng'ombe	533	3,258
4	Kondoo	72	3,045
5	Mbuzi	401	3,917
6	Nguruwe	430	2,862
7	Kuku wa asili	2,282	5,000
8	Kuku wa kisasa	370	3,500
9	Mengineyo (Taja)		

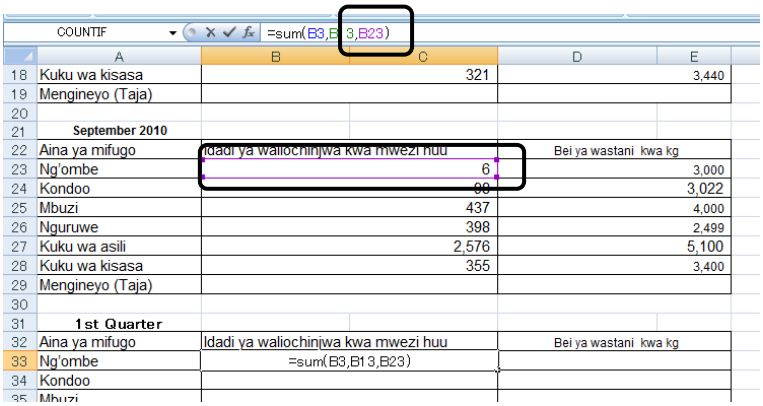
11. Click the cell of the same data in the first month table.

12. Type comma "," in the formula bar.



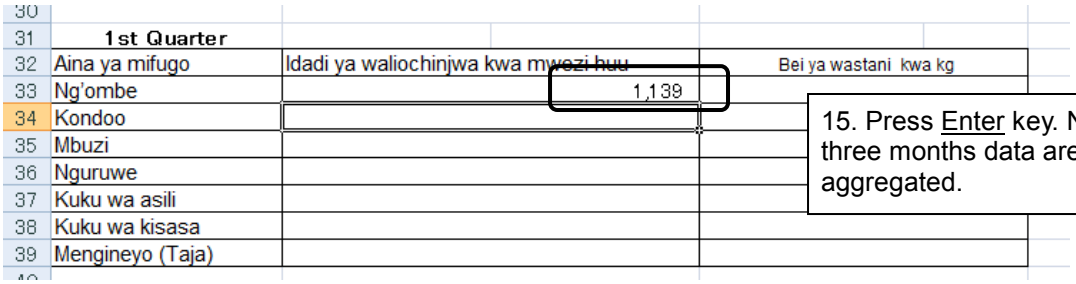
	A	B	C	D	E
1	**July 2010**				
2	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
3	Ng'ombe		533	3,258	
4	Kondoo		72	3,045	
5	Mbuzi		401	3,917	
6	Nguruwe		430	2,862	
7	Kuku wa asili		2,282	5,000	
8	Kuku wa kisasa		370	3,500	
9	Mengineyo (Taja)				
10					
11	**August 2010**				
12	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
13	Ng'ombe		600	3,500	
14	Kondoo		88	3,200	
15	Mbuzi		396	3,809	
16	Nguruwe		421	2,984	
17	Kuku wa asili		2,070	5,000	
18	Kuku wa kisasa		321	3,440	
19	Mengineyo (Taja)				
20					
21	**September 2010**				
22	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
23	Ng'ombe		6	3,000	

13. Click the cell of the same data of the second month and type comma ",".



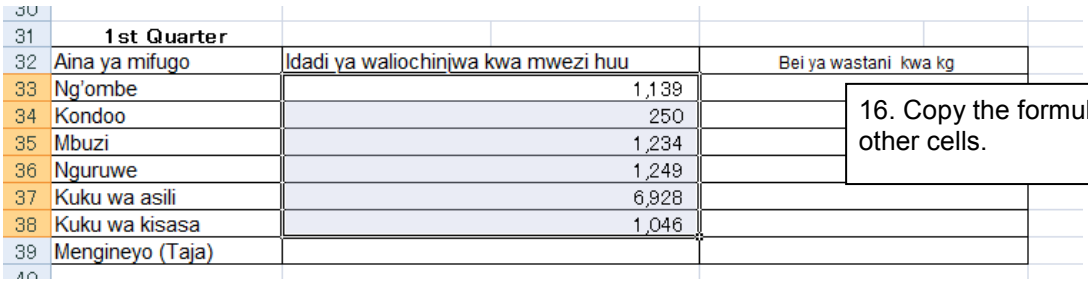
	A	B	C	D	E
18	Kuku wa kisasa		321	3,440	
19	Mengineyo (Taja)				
20					
21	**September 2010**				
22	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
23	Ng'ombe		6	3,000	
24	Kondoo		88	3,022	
25	Mbuzi		437	4,000	
26	Nguruwe		398	2,499	
27	Kuku wa asili		2,576	5,100	
28	Kuku wa kisasa		355	3,400	
29	Mengineyo (Taja)				
30					
31	**1st Quarter**				
32	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
33	Ng'ombe	=sum(B3,B13,B23)			
34	Kondoo				

14. Click the cell of the same data of the third month and type closing bracket ")".



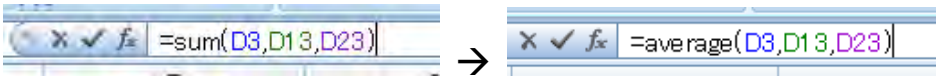
	A	B	C	D	E
31	**1st Quarter**				
32	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
33	Ng'ombe		1,139		
34	Kondoo				
35	Mbuzi				
36	Nguruwe				
37	Kuku wa asili				
38	Kuku wa kisasa				
39	Mengineyo (Taja)				

15. Press Enter key. Now, the three months data are aggregated.



	A	B	C	D	E
31	**1st Quarter**				
32	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu		Bei ya wastani kwa kg	
33	Ng'ombe		1,139		
34	Kondoo		250		
35	Mbuzi		1,234		
36	Nguruwe		1,249		
37	Kuku wa asili		6,928		
38	Kuku wa kisasa		1,046		
39	Mengineyo (Taja)				

16. Copy the formula to other cells.



17. For "average price," change "SUM" to "AVERAGE" in the formula bar.

31	1st Quarter		
32	Aina ya mifugo	Idadi ya waliochinjwa kwa mwezi huu	Bei ya wastani kwa kg
33	Ng'ombe	1,139	3,253
34	Kondoo	250	3,089
35	Mbuzi	1,234	3,909
36	Nguruwe	1,249	2,782
37	Kuku wa asili	6,928	5,033
38	Kuku wa kisasa	1,046	3,447
39	Mengineyo (Taja)		
40			

Now, you have created a consolidated table for the quarter and ready to enter the data in LGMD2!

4.3.5 Adding a column to facilitate pivot table analysis

The tables to be handled will require pivot table. However, before conducting the analysis, it will be necessary to prepare by adding a column in the first column. This technique will be used in the following tables, although in a different fashion.

- Annual Table 5 (f) Training of farmers through FFS
- Annual Table 5 (g) Farmers trained through other methods than FFS

For Table 5 (g), in consolidating the data in "Quarterly 3.1 Mafunzo kwa wakulima kwa kutumia njia mbalimbali nje ya shamba darasa," it is convenient to add a first column and write crop, livestock, fishery marketing and processing, or irrigation, respectively, before you conduct pivot table analysis.

	Aina ya mafunzo	Mada ya mafunzo katika (i)	Wanaume	Wanawake	Sawa au pungufu ya wiki moja	Zaidi ya wiki moja	Njia iliyotumika kutoa mafunzo	Mtoa mafunzo/ Mwezeshaji	Maelezo	Kata	Robo mwaka
3	Masoko na Usindikaji	Ukaushaji matunda	18	14	32	0	Ziara ya mafunzo	UMADEP		Tawa	2
4	Mazao	Hifadhi ya nafaka	36	18	0	54	Washa	Halmashauri		Kiroka	4
5	Mazao	Hifadhi ya nafaka	16	9	25	0	Washa	Halmashauri		Tununguo	4
6	Mazao	Hifadhi ya nafaka	12								4
7	Mazao	Kilimo bora cha maharage	350								3
8	Mazao	Kilimo bora cha mahindi	20								2
9	Mazao	Kilimo bora cha mtama	15								2
10	Mazao	Matumizi salama Dya viuadudu	102								3
11	Mazao	Uboreshaji wa Dnafaka	30								1
12	Mazao	Uzalishaji mbegu ya alizeti	9								2
13	Mazao	Uzalishaji mbegu ya alizeti	21								2
14	Ufugaji	Kuogesha mifugo	18								1
15	Ufugaji	Kuogesha mifugo	11								3
16	Ufugaji	Kutambua magojwa ya mifugo	73								1
17	Ufugaji	Ulishe bora kwa mifugo	5								2
18	Ufugaji	Ufugaji bora wa mbuzi wa maziwa	16								4
19	Ufugaji	Ufugaji bora wa nguruwe	18								2
20	Ufugaji	Ufugaji bora wa kuku wa kienyeji	12	6	18	0	Semina	Halmashauri		Mkuyuni	4
21	Ufugaji	Ufugaji bora wa kuku wa kienyeji	7	9	0	16	Washa	Halmashauri		Mkomborani	3
22	Ufugaji	Maksoi wa kulima	15	5	0	20	Kozi	Halmashauri		Mvuha	1
23	Ufugaji	Uenzi wa mabanda ya ng'ombe	7	6	13	0	Washa	Halmashauri		Mlombozi	1
24	Umwagiliaji	Irrigated rice farming	10	10	20	0		MATI			

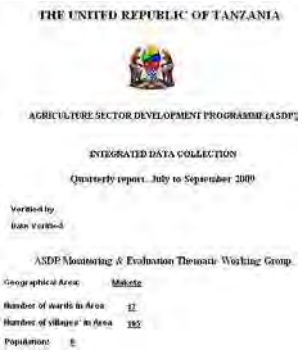
The column of whether crop, livestock fishery, marketing and processing and irrigation may be added in the first column. With this column, now it is possible to use pivot table only once to consolidate data.

Likewise, for Table 5 (f), in consolidating the data in "Annual 5.1 Mafunzo ya wakulima kupitia shamba darasa," write add crop, livestock or fishery before in the first column when you list the information from all wards.

5. Data Analysis and Reporting

After entering all necessary data in LGMD2 and submitting them to the national server, it is now time to analyze the data and produce report for the use in the district as well as for feedback to VAEO/WAEO. The following shows examples of analysis explained in this chapter.

Printed report [5.1.1]
Printed copy of LGMD2 report.


THE UNITED REPUBLIC OF TANZANIA

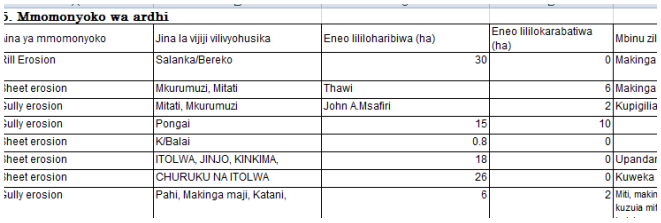
AGRICULTURE SECTOR DEVELOPMENT PROGRAMME (ASDP)

INTEGRATED DATA COLLECTION

Quarterly report...July to September 2009

ASDP Monitoring & Evaluation Thematic Working Group

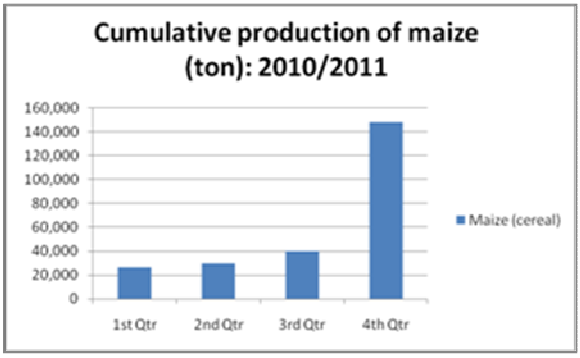
Tables copied from Excel to Word report
[5.1.2] Tables copied from consolidated Excel file or LGMD2 report exported to Excel.



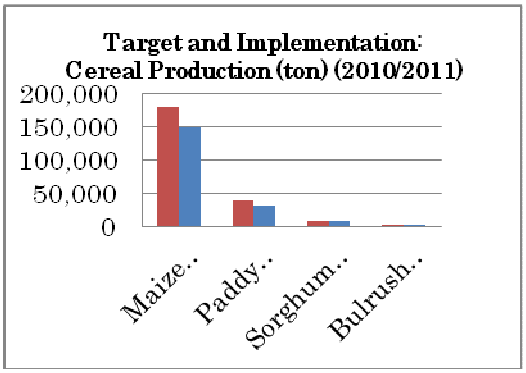
5. Mmomonyoko wa ardhi

ina ya mmomonyoko	Jina la vijiji vilivyohusika	Eneo lililoharibiwa (ha)	Eneo lililokarabatiwa (ha)	Mbinu zil
ill Erosion	Salanka/Bereko	30	0	Makinga
heet erosion	Mkurumuzi, Mitati	Thawi	6	Makinga
ully erosion	Mitati, Mkurumuzi	John A.Msafiri	2	Kupigilia
ully erosion	Pongai	15	10	
heet erosion	K/Balai	0.8	0	
heet erosion	ITOLWA, JINJO, KINKIMA,	18	0	Upandar
heet erosion	CHURUKU NA ITOLWA	26	0	Kuweka
ully erosion	Pahi, Makinga maji, Katani,	6	2	Miti, makin kuzuia mit

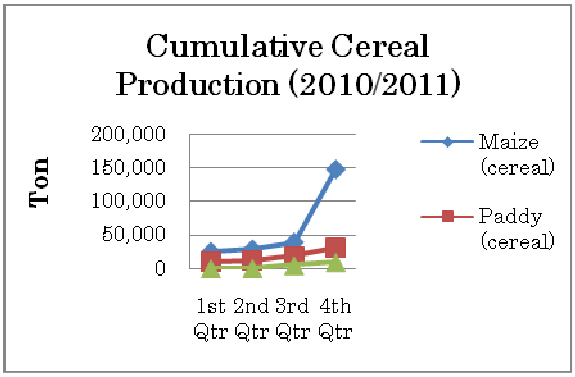
Time series analysis [5.1.3 A]
How the data of a variable change over time.



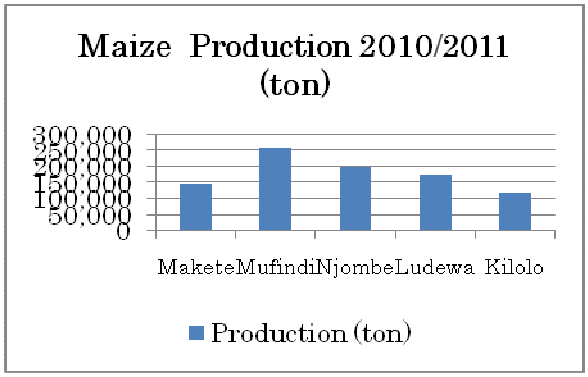
Comparison with target [5.1.3 B]
Whether the implementation meets the target/ annual requirement.



Cross section analysis [5.1.3 C]
Comparison of multiple variables.



Comparison with neighboring districts
[5.1.3 D] Comparison with other districts or regional and national data.



Ward disaggregated tables [5.2.1 and 5.2.4]
One or more variables disaggregated by ward, sorted by the value.

SN	Ward	No slaughtered
1	Mamboya	0
6	Ulelingombe	0
9	Masanze	2
16	Malolo	4
3	Kilangali	5
2	Magubike	6
10	Ulaya	6
15	Kisanga	6
14	Rubeho	8
4	Chanzuru	12
7	Gairo	60
5	Msowelo	61
8	Dumila	64
12	Mikumi	139
17	Kidodi	160
11	Vidunda	
13	Berega	
18	Kimamba.a	
19	Kimanba.b	
20	Zombo	
21	Kibedya	
	Total	533

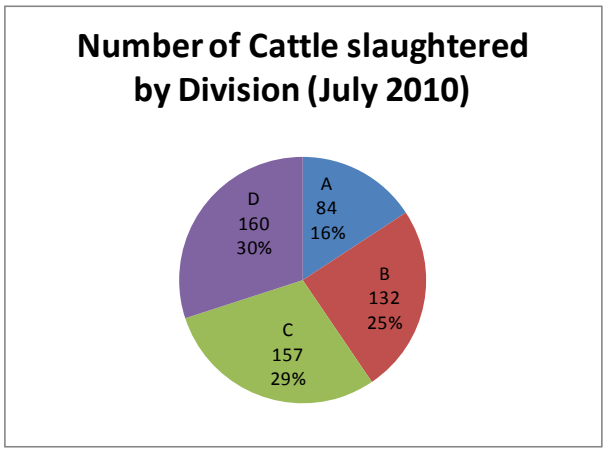
Division disaggregated tables [5.2.2]
One or more variables disaggregated by division.

Division	No slaughtered
A	84
B	132
C	157
D	160
Total	533

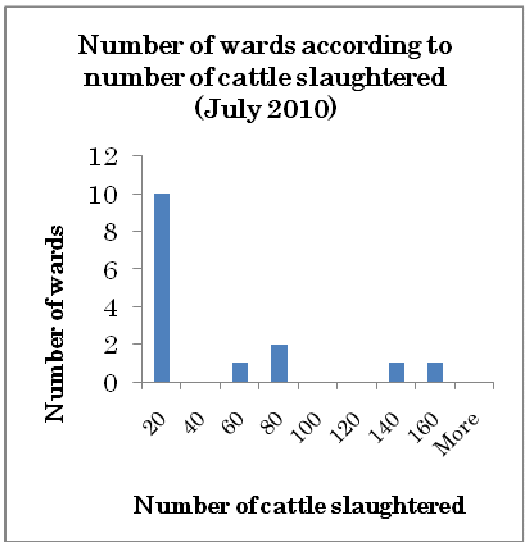
Basic analysis [5.2. 3]
Average (mean), Maximum (largest value in a set of data), Minimum (smallest value in a set of data), Standard deviation (value showing data variation from the average), and Median (the value in the middle of a set of data when counted from the smallest or largest).

Average	35.53
Maximum	160
Minimum	0
Standard deviation	50.17
Median	6

Ratio [5.2.5]
How much each ward/ division is contributing to the district total.



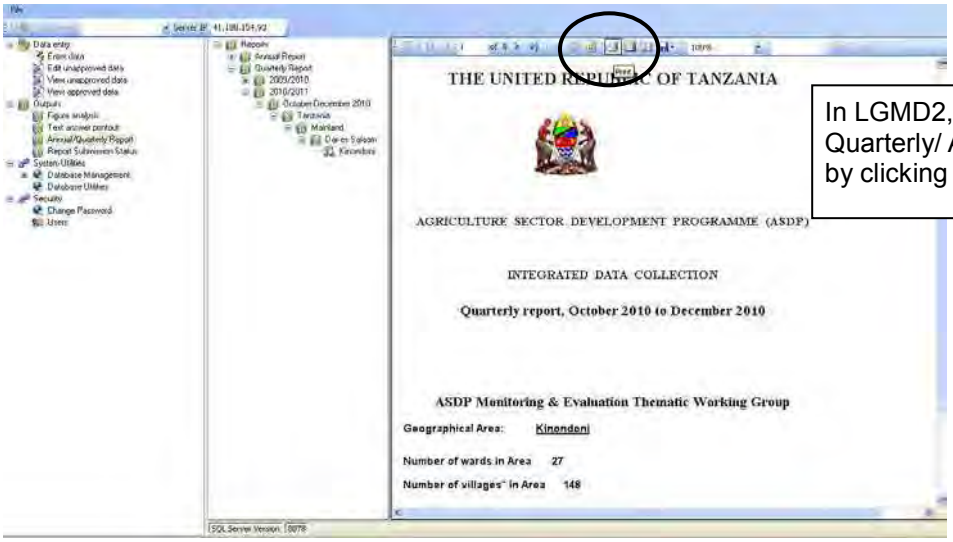
Distribution (histogram) [5.2.7]
How data are distributed among ward/ division.



5.1 District Level Information (LGMD2)

5.1.1 Report Printing

The easiest way to produce a report is to print the report from LGMD2. For this, see the LGMD2 Operating Manual on "Annual/Quarterly Reports." For tables not included in LGMD2, you can simply print the aggregated Excel tables created in Chapter 3.



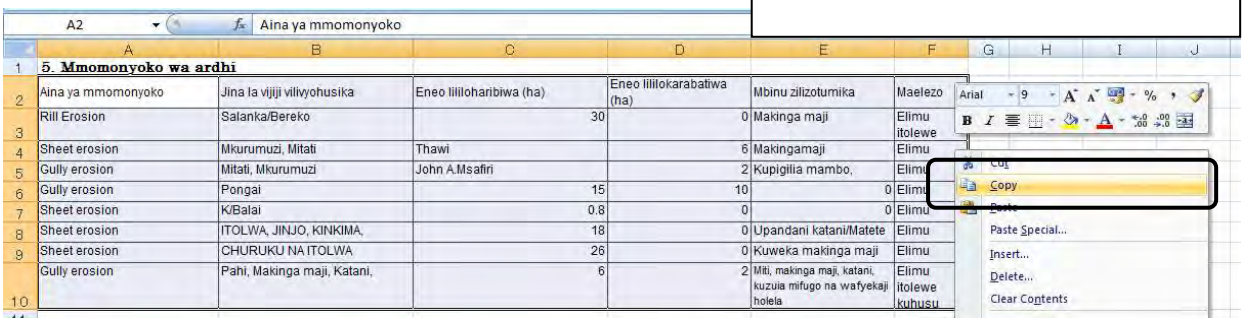
In LGMD2, you can print Quarterly/ Annual Report simply by clicking "Print".

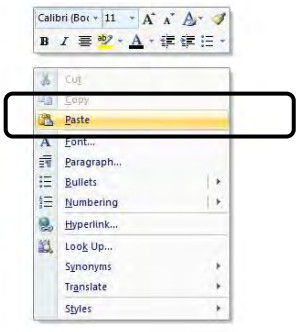
5.1.2 Copying table from Excel to Word

Tables in Excel or those exported from LGMD2 to Excel can be copied and pasted to a Word file in the following ways.

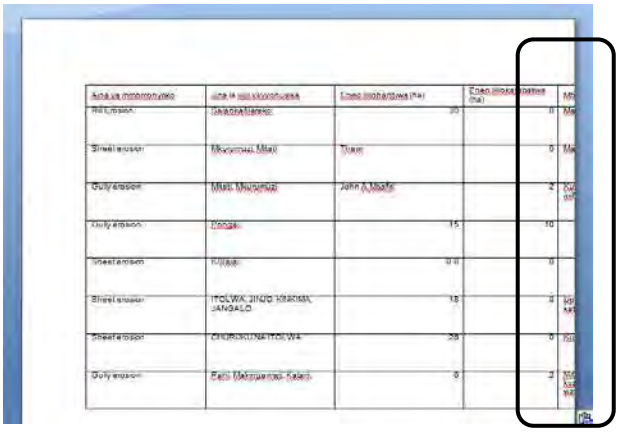
<When you want to modify the table in Word>

1. Select and copy the table (right click and select Copy or control + C).

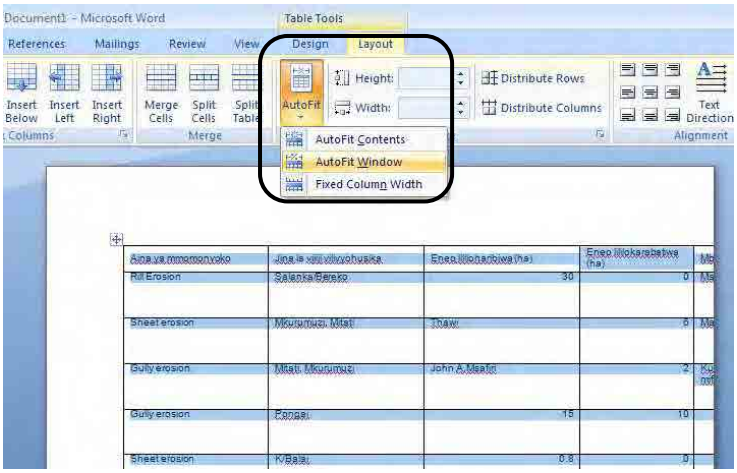




2. Paste in a Word file (right click and select Paste or control + V).

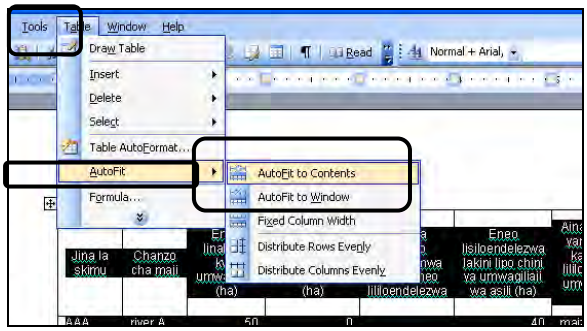


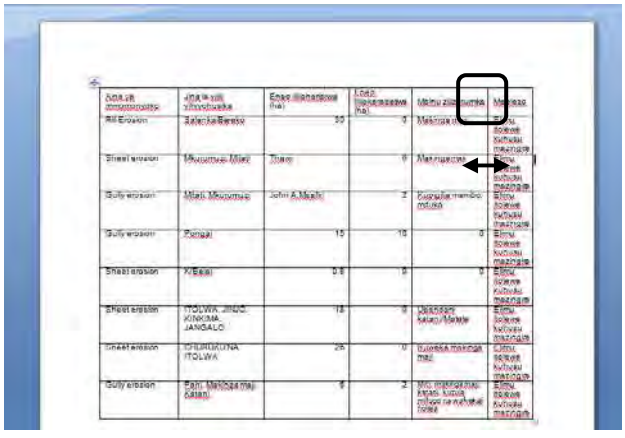
If it does not fit in the screen…



3. Select the table and go to Layout in the menu bar. Then, select AutoFit Window or AutoFit Contents in AutoFit. *

* In Word 2003, you can find AutoFit under Table in the menu bar.



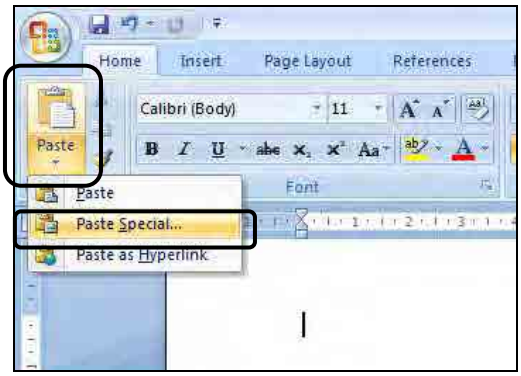


4. Then, all areas will fit in the screen. You can adjust the width of each column by bringing the cursor to the line between columns and clicking and moving the edge mark.

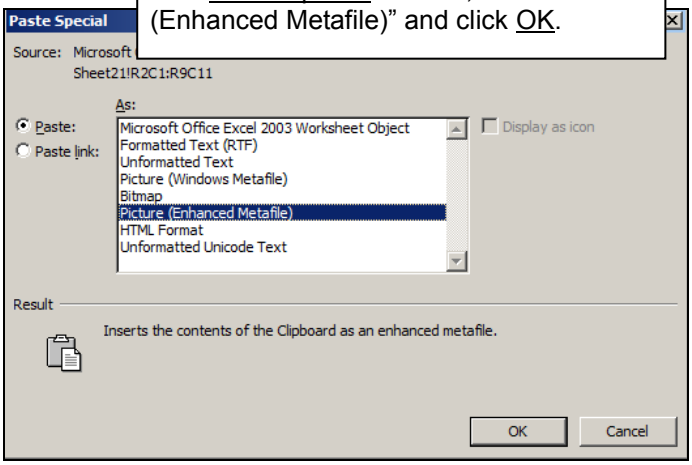
<When you do not need to modify the table in Word>

2. Select and copy the table (right click and select Copy or control + C).

2. In a Word file, click allow under Paste and select Paste Special. *



3. In Paste Special window, select “Picture (Enhanced Metafile)” and click OK.



* In Word 2003, Paste Special is found under Edit in the menu bar.

4. Then, the table is pasted as a picture.

Jina la skimu	Chanzo cha maji	Eneo linalofaa kwa umwagiliaji (ha)	Eneo lililoendelezwa na kumwagiliwa (ha)	Aina ya mazao yanayolimwa katika eneo lililoendelezwa	Eneo lisiloendelezwa lakini lipo chini ya umwagiliaji wa asili (ha)	Aina ya mazao yanayolimwa katika eneo lililopo chini ya umwagiliaji wa asili	Idadi ya wanachama katika chama cha watumiaji maji (WUA)		Idadi ya watumiaji wasio wanachama	
							Wanaume	Wanawake	Wanaume	Wanawake
AAA	river A	50	0		40	maize, rice	12	7	20	18
BBB	spring	210	150	rice	0		20	20	30	25
CCC	spring	40	0		40	maize, beans	5	5	5	5
DDD	ground water	150	100	beans, vegetable	50	maize, vegetable	60	70	88	82
Subtotal		450	250		130		97	102	143	130

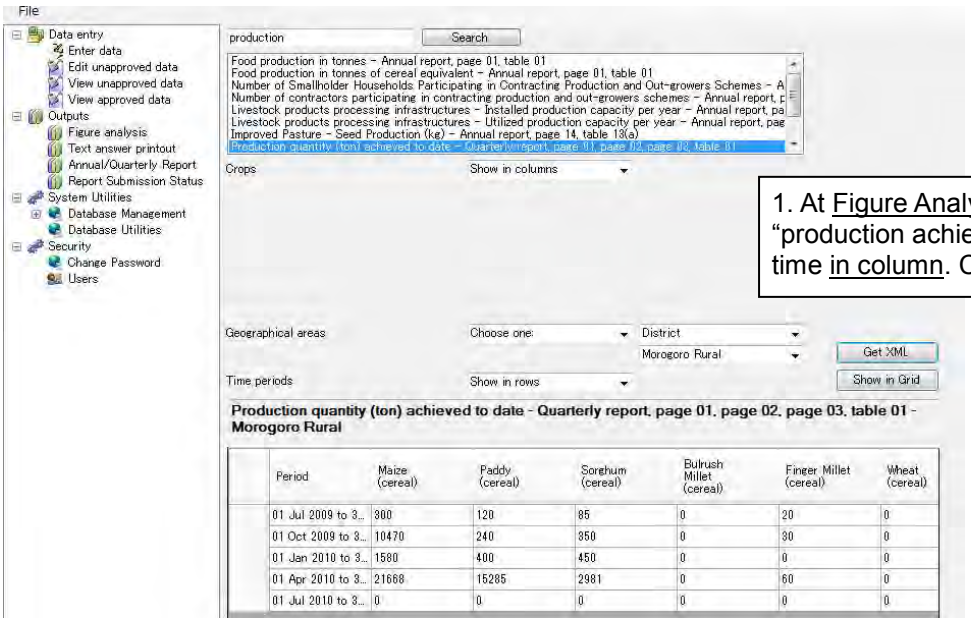
5.1.3 Data Analysis

In order to fully utilize the data and prepare a better report, presenting tables is not enough. Data analysis is important. In data analysis, you should grasp the trend and characteristics of the data (change over time, achievement of target, comparison, distribution, etc.) and think about the reasons behind these changes and characteristics and actions to be taken if necessary.

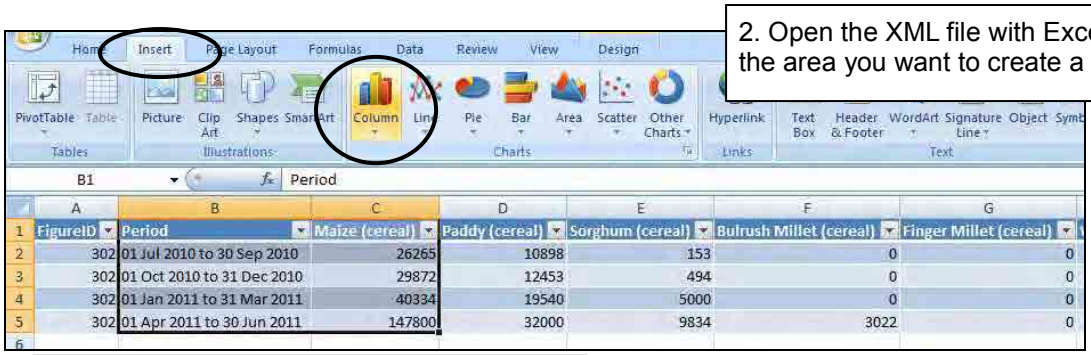
In order to facilitate this analysis, this section explains how to create additional tables and charts. For the district level data, data analysis is easily done by utilizing the Figure Analysis function in LGMD2. See the LGMD2 Operating Manual on "Figure Analysis" to design tables and export it to Excel files. If tables/items are not listed in "Figure Analysis," export the report to Excel and analyze with Excel functions.

A. Time series analysis

This analysis shows how the data of a variable change over time. Let's take an example of maize production.



1. At Figure Analysis of LGMD2, select "production achieved to date" in row and time in column. Click Get XML.

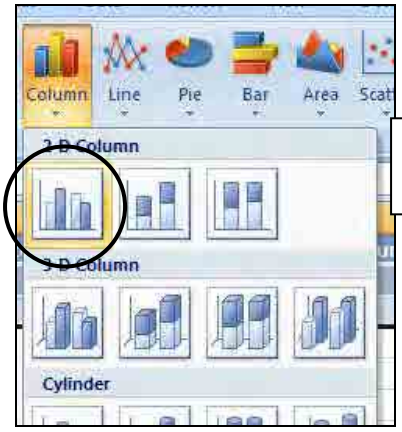


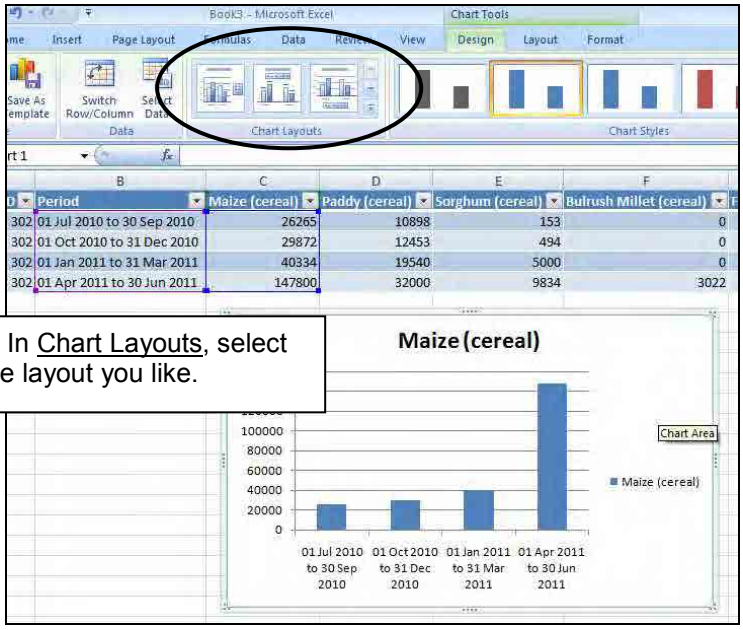
2. Open the XML file with Excel. Select the area you want to create a chart.

3. You can select four quarters of particular year (cumulative production of the year), or the 4th quarters of many years (comparison of annual production).

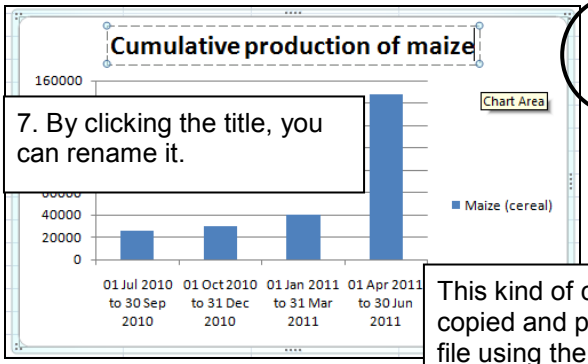
4. Go to Insert in the menu bar, then select Column in Charts.

5. Select 2-D Column.

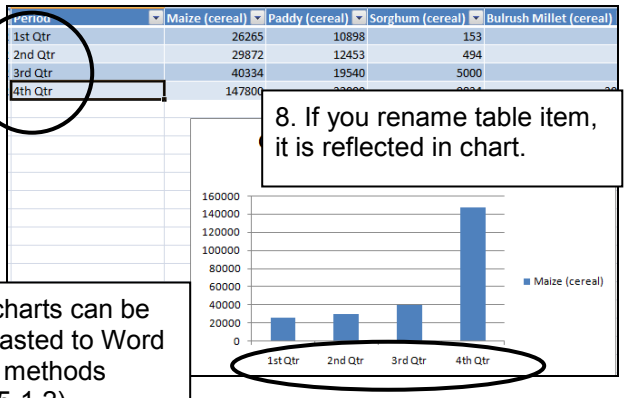




6. In Chart Layouts, select the layout you like.



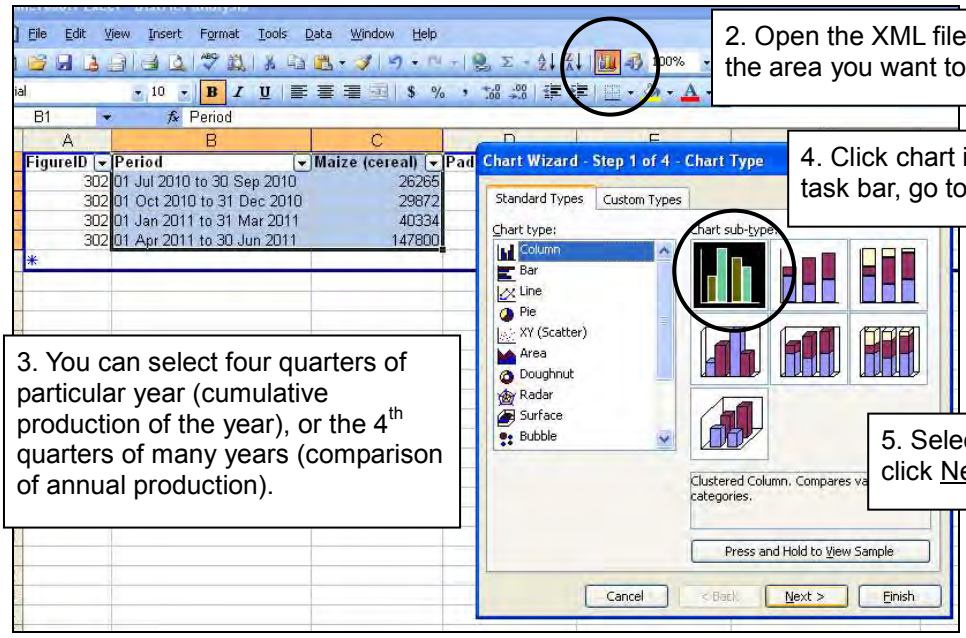
7. By clicking the title, you can rename it.



8. If you rename table item, it is reflected in chart.

This kind of charts can be copied and pasted to Word file using the methods explained in 5-1 2).

<Excel 2003>

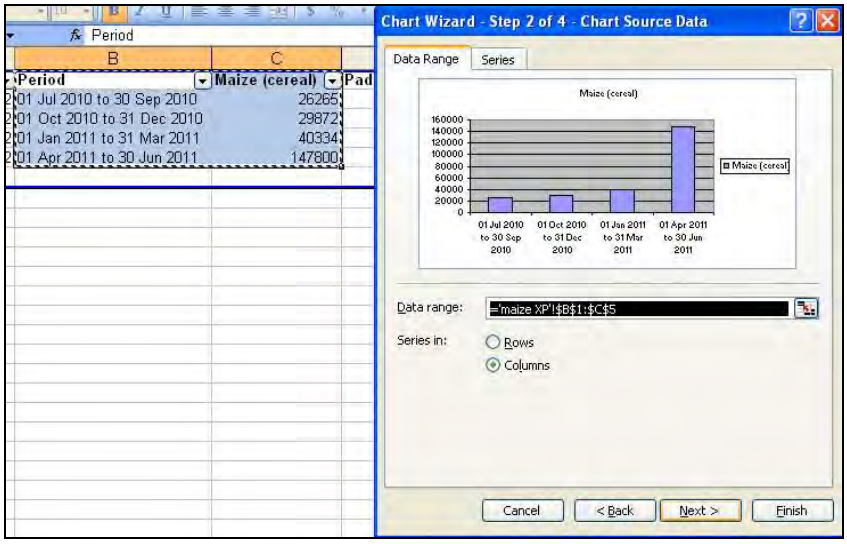


2. Open the XML file with Excel. Select the area you want to create a chart.

4. Click chart icon. (If it's not in the task bar, go to Insert).

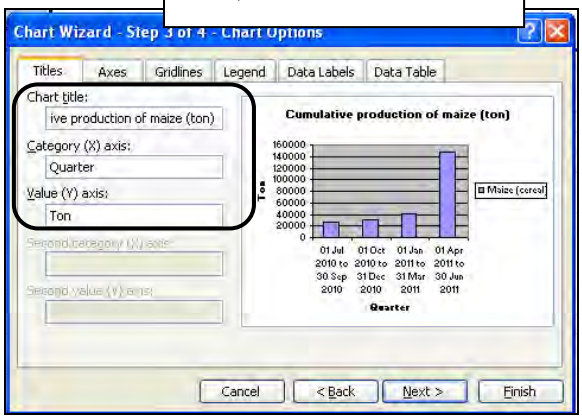
3. You can select four quarters of particular year (cumulative production of the year), or the 4th quarters of many years (comparison of annual production).

5. Select 2-D Column and click Next.

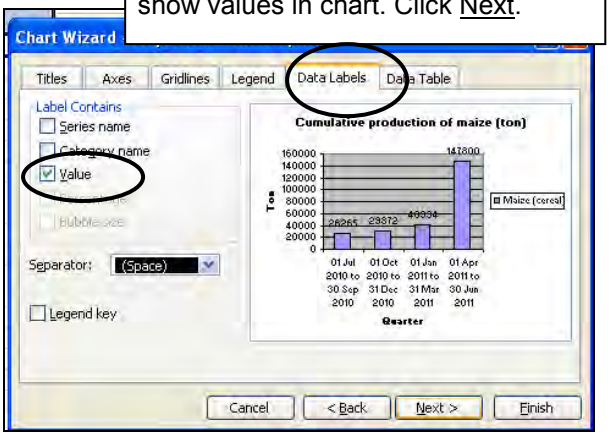


6. In Data Range, check if the area selected is OK. Then, click Next.

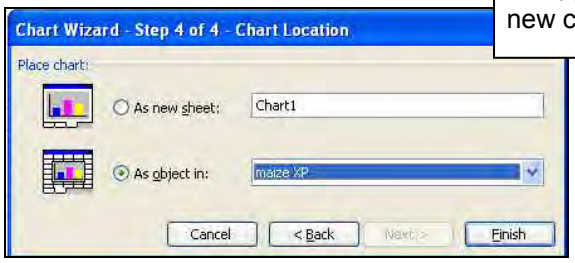
7. In Titles, type titles of chart, X axis and Y axis.



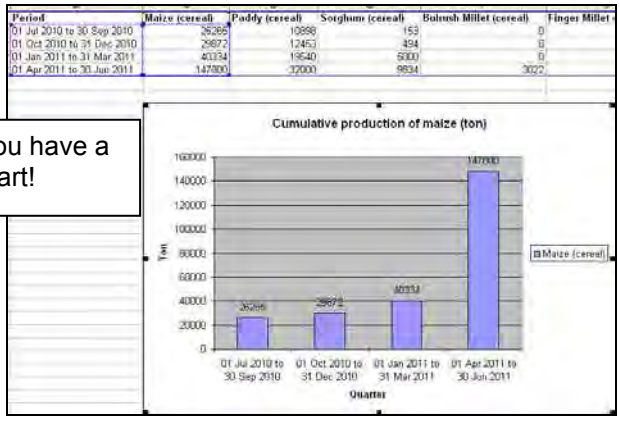
8. Click Data Labels tab. Click Value to show values in chart. Click Next.

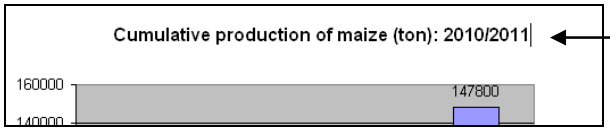


9. Click Finish.

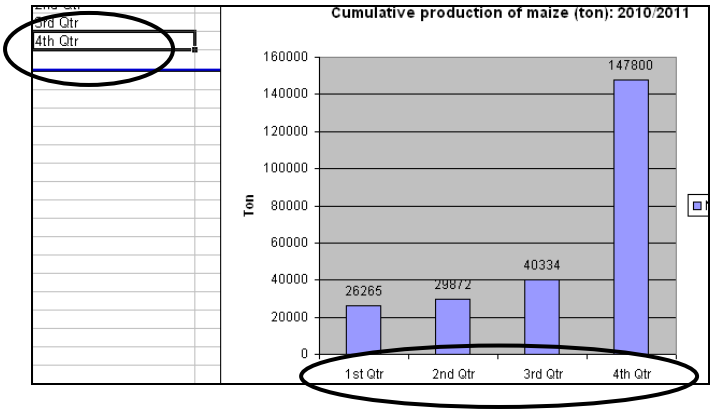


Now, you have a new chart!





10. If necessary, you can change title by clicking it.

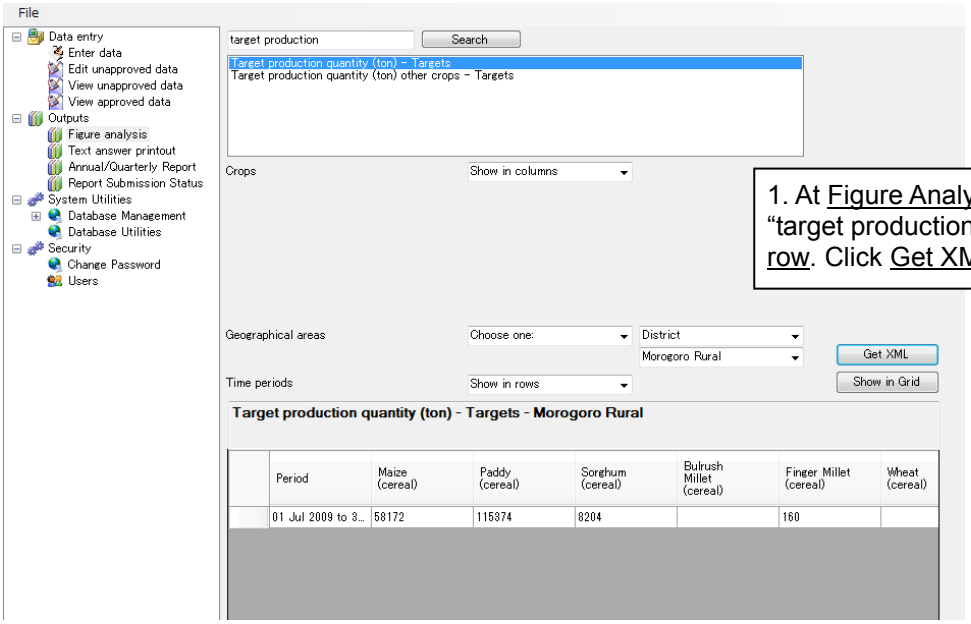


11. If you rename table item, it is reflected in chart.

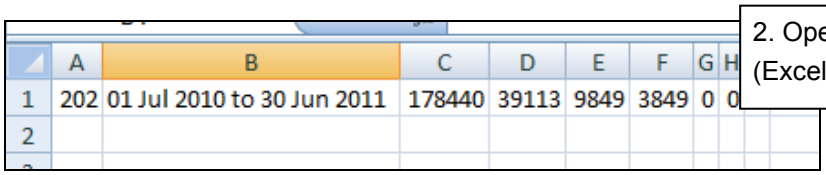
This kind of charts can be copied and pasted to Word file using the methods explained in 5-1 2)..

B. Comparison with target

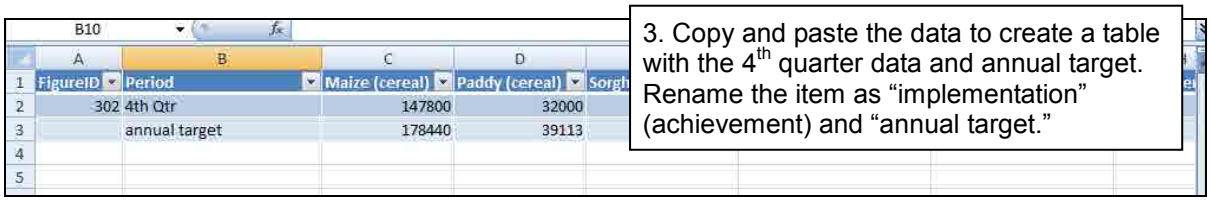
This analysis shows whether the district meets the target/ annual requirement. (For example, comparison between fertilizer requirement and amount used). Tables are already available in LGMD2 or Excel. Let's take an example of annual target and implementation (achievement) of maize production.



1. At Figure Analysis of LGMD2, select "target production" in column and time in row. Click Get XML.

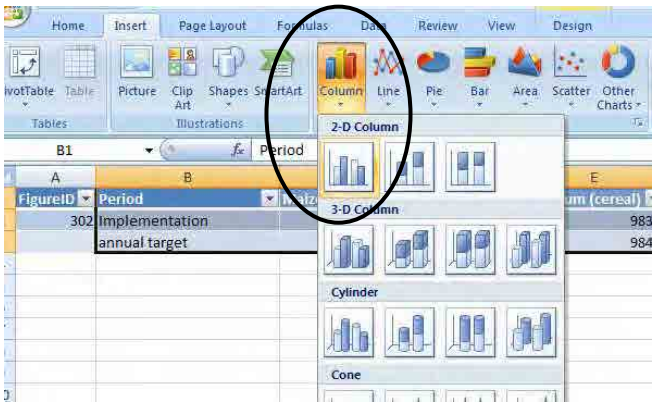


2. Open the XML file with Excel. (Excel 2003, see page 64)

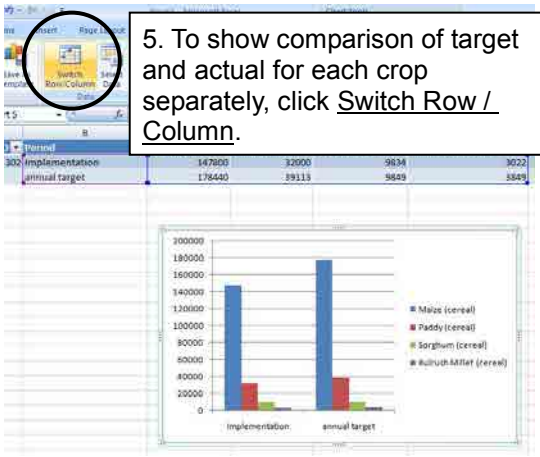


3. Copy and paste the data to create a table with the 4th quarter data and annual target. Rename the item as "implementation" (achievement) and "annual target."

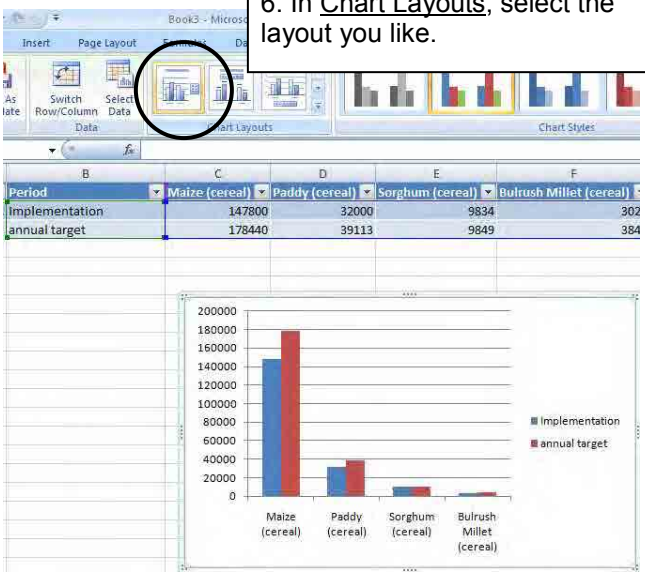
4. Select the area, got to Insert and Select Column (2-D Column).



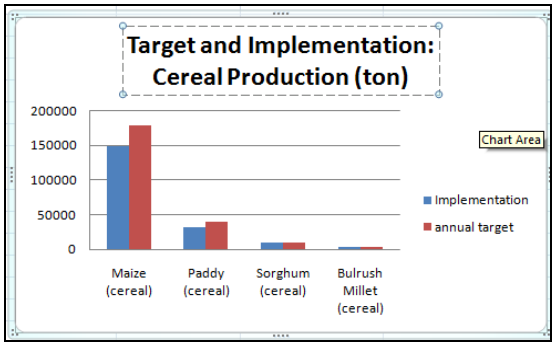
5. To show comparison of target and actual for each crop separately, click Switch Row / Column.



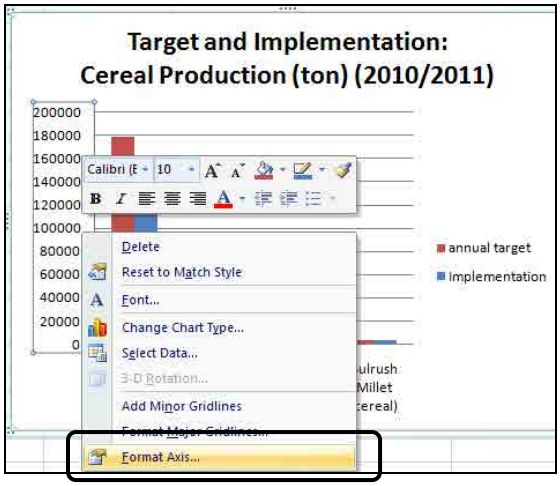
6. In Chart Layouts, select the layout you like.

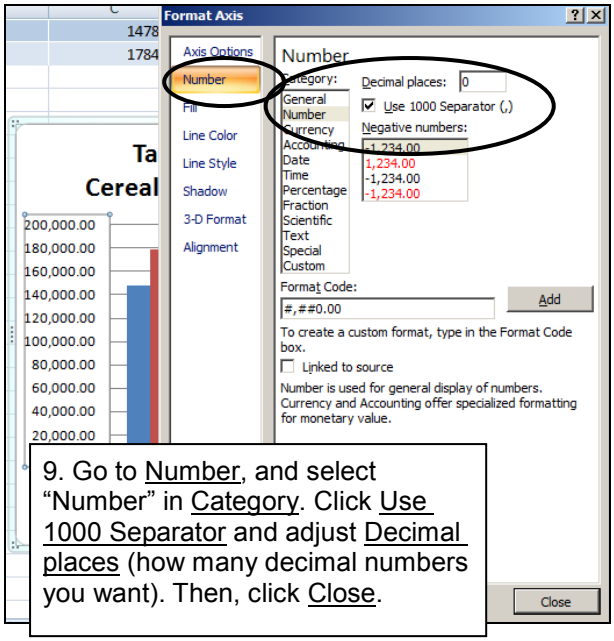


7. By clicking the title, you can rename it.

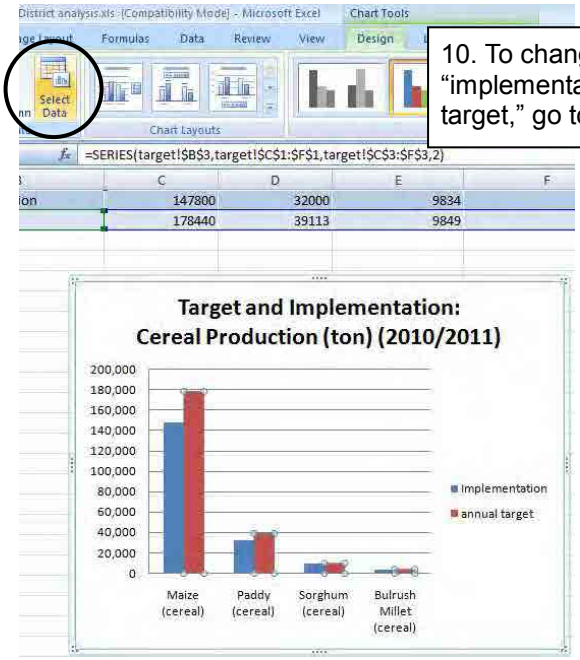


8. To improve the presentation of numbers, right click and select Format Axis.



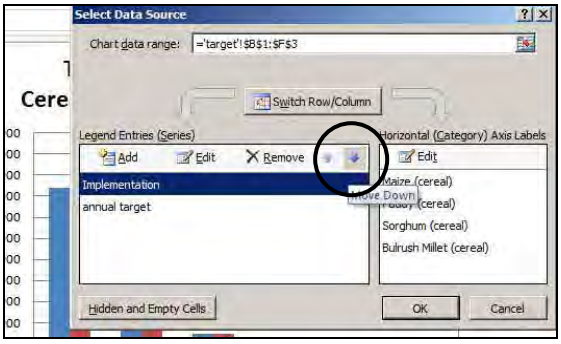


9. Go to Number, and select "Number" in Category. Click Use 1000 Separator and adjust Decimal places (how many decimal numbers you want). Then, click Close.

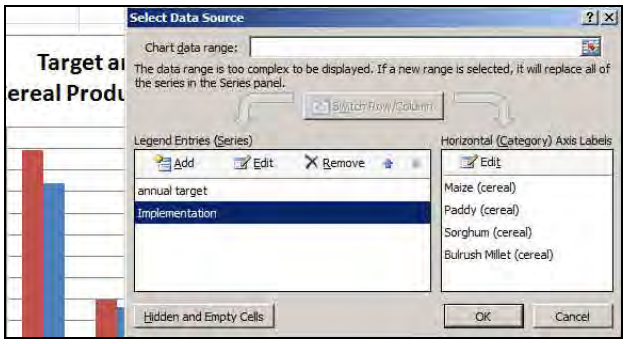


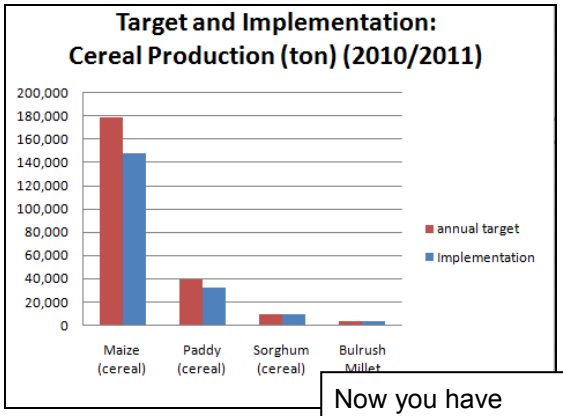
10. To change the order between "implementation" and "annual target," go to Select Data.

11. In Select Data Source window, select "implementation" and click "move down" allow.



12. Confirm that the order is changed, and click OK.





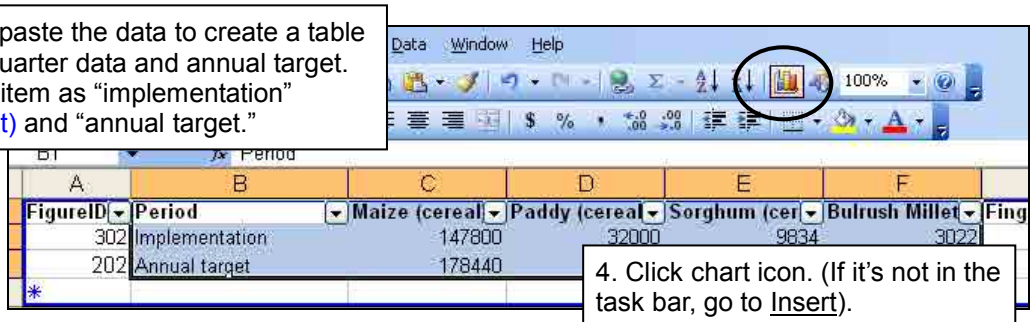
Now you have created a new chart!

<Excel 2003>

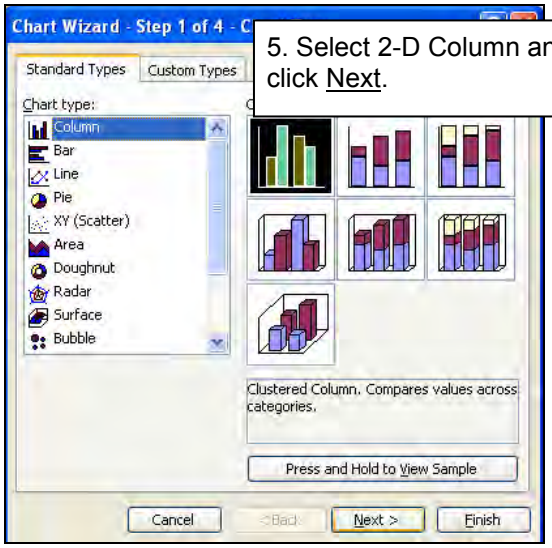
2. Open the XML file with Excel.

FigureID	Period	Maize (cereal)	Paddy (cereal)	Sorghum (cerea	Bulrush Millet (c	Fi
302	4th Qtr	147800	32000	9834	3022	
202	Annual target	178440	39113	9849	3849	

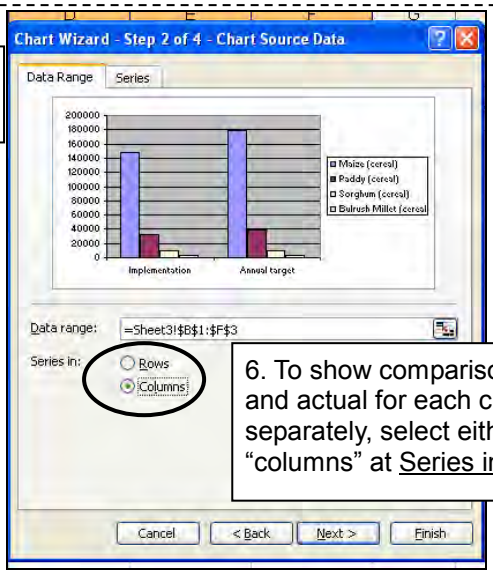
3. Copy and paste the data to create a table with the 4th quarter data and annual target. Rename the item as "implementation" (achievement) and "annual target."



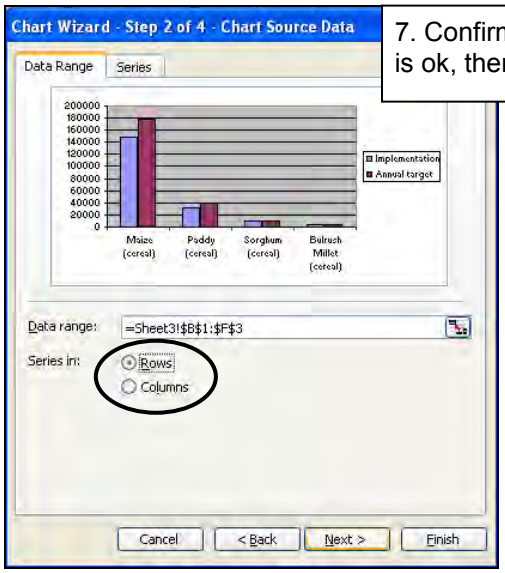
4. Click chart icon. (If it's not in the task bar, go to Insert).



5. Select 2-D Column and click Next.

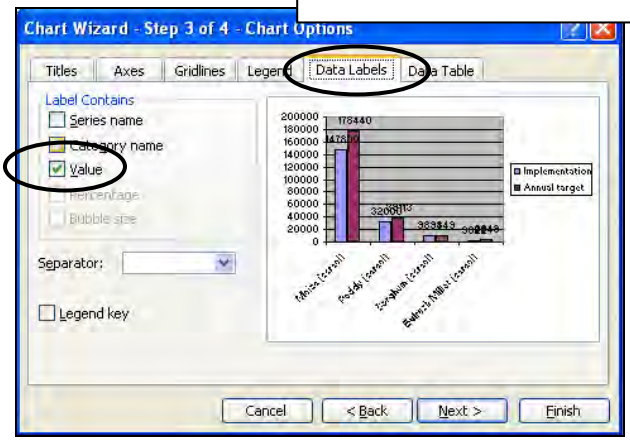


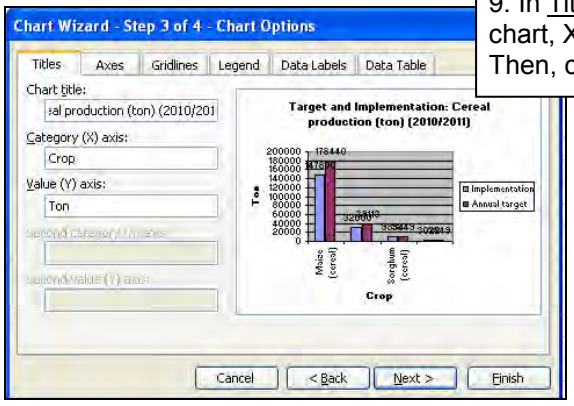
6. To show comparison of target and actual for each crop separately, select either “rows” or “columns” at Series in.



7. Confirm the row and column is ok, then click Next.

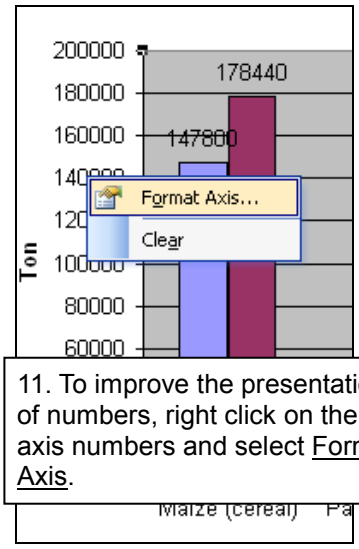
8. In Data Labels tab, click Value to show values in chart.



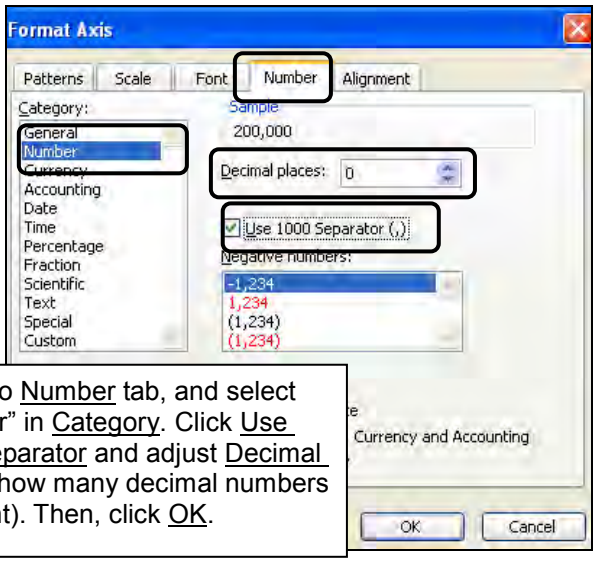


9. In Titles tab, type titles of chart, X axis and Y axis. Then, click Next.

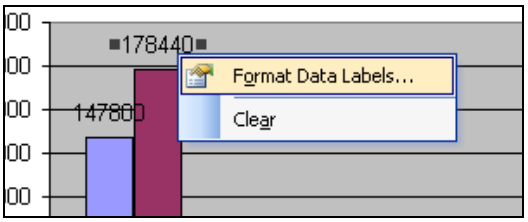
10. Click Finish.



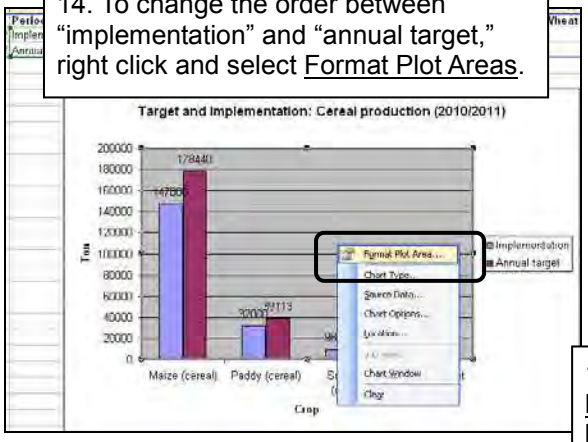
11. To improve the presentation of numbers, right click on the y axis numbers and select Format Axis.



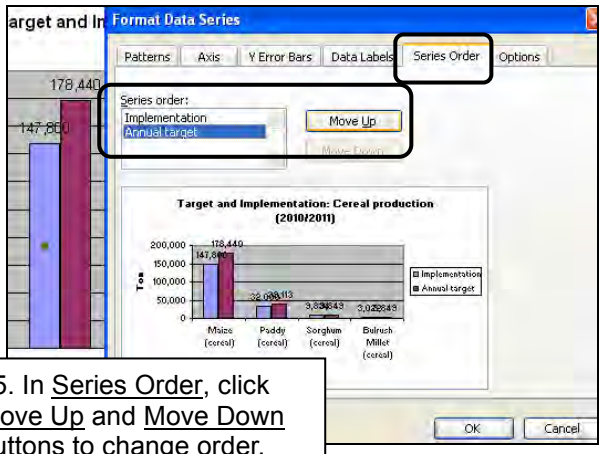
12. Go to Number tab, and select "Number" in Category. Click Use 1000 Separator and adjust Decimal places (how many decimal numbers you want). Then, click OK.



13. To do the same for values in chart, right click and select Format Data Labels.

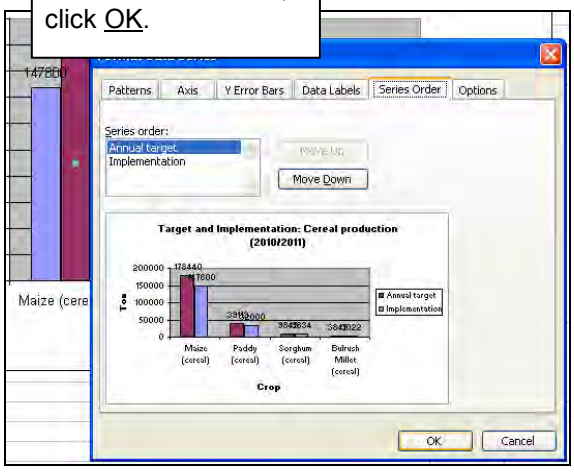


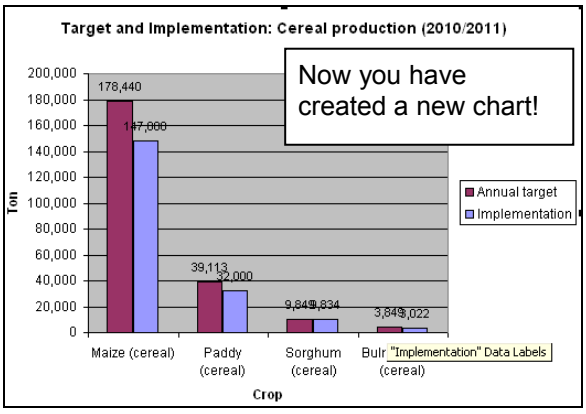
14. To change the order between "implementation" and "annual target," right click and select Format Plot Areas.



15. In Series Order, click Move Up and Move Down buttons to change order.

16. If the order is ok, click OK.

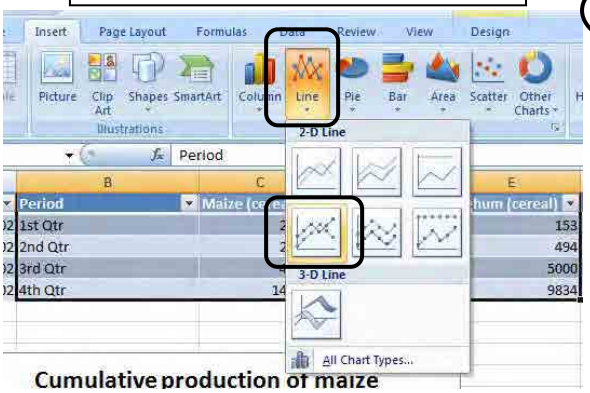




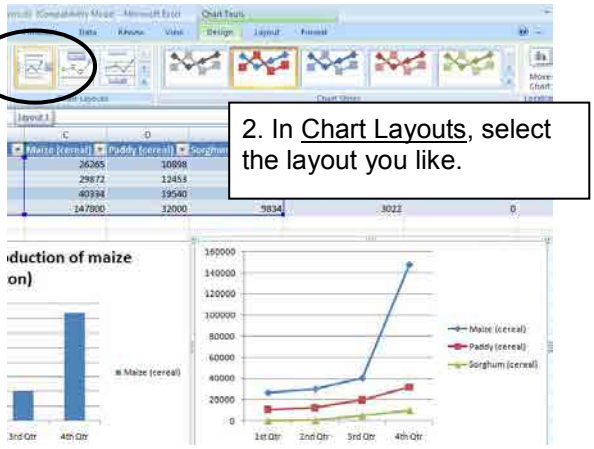
C. Cross section analysis

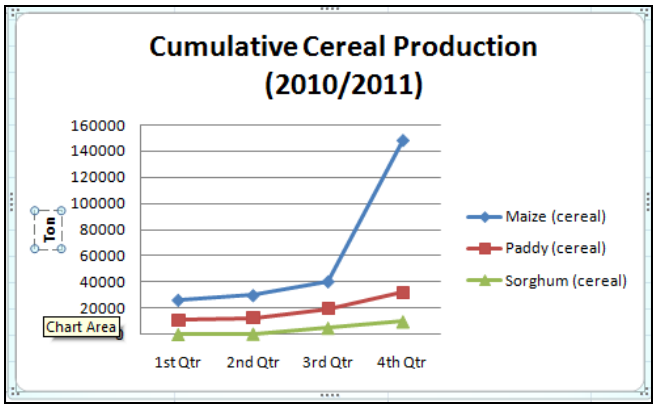
This analysis compares the data of multiple variables including items and time. Tables are already available in LGMD2 or Excel. Let's take an example of quarterly cumulative production of various cereals. For cross section analysis, column or bar charts can also be used.

1. Select the area, go to Insert and Select Line (Line with Marker).



2. In Chart Layouts, select the layout you like.

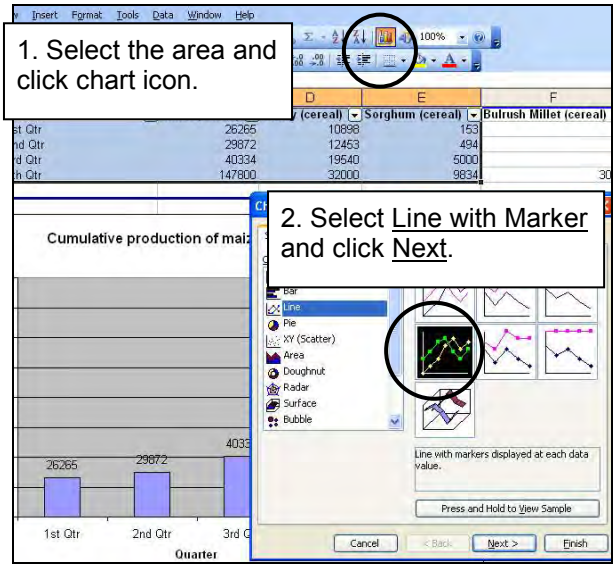




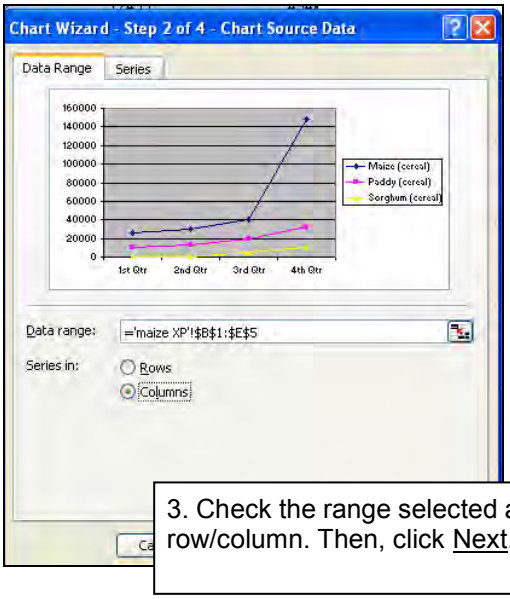
3. Change titles of chart and axis.

<Excel 2003>

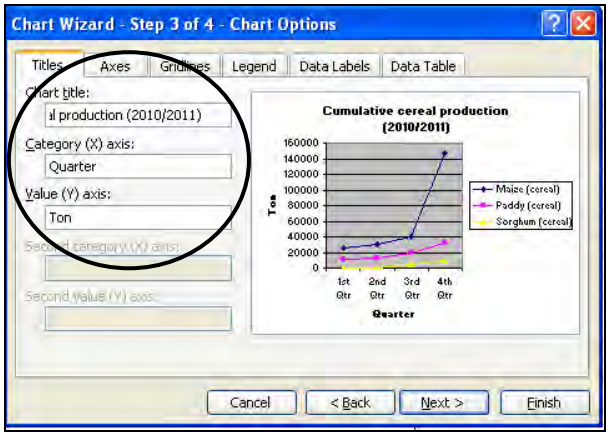
1. Select the area and click chart icon.



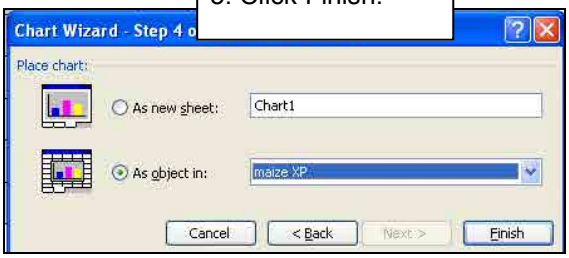
2. Select Line with Marker and click Next.



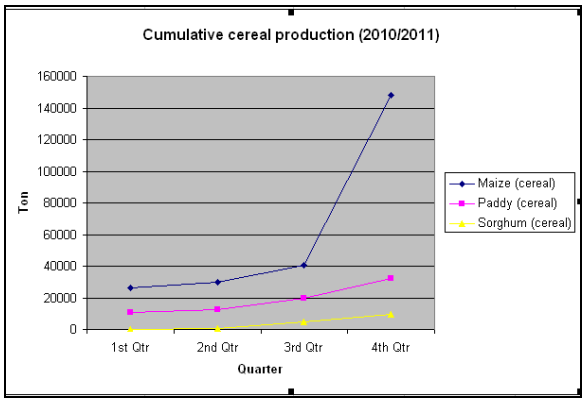
3. Check the range selected and row/column. Then, click Next.



4. In Titles tab, type titles of chart, X axis and Y axis. Then, click Next.



5. Click Finish.



Now you have created a new chart!

Other examples of cross section analysis are shown below.

Annual Livestock population	2007/08	2008/09	2009/10
Cattle			
Goat			
Sheep			
….			

Annual cereal production	Maize		Rice	
	Area (Ha)	Production (ton)	Area (Ha)	Production (ton)
2008/09				
2009/10				
….				

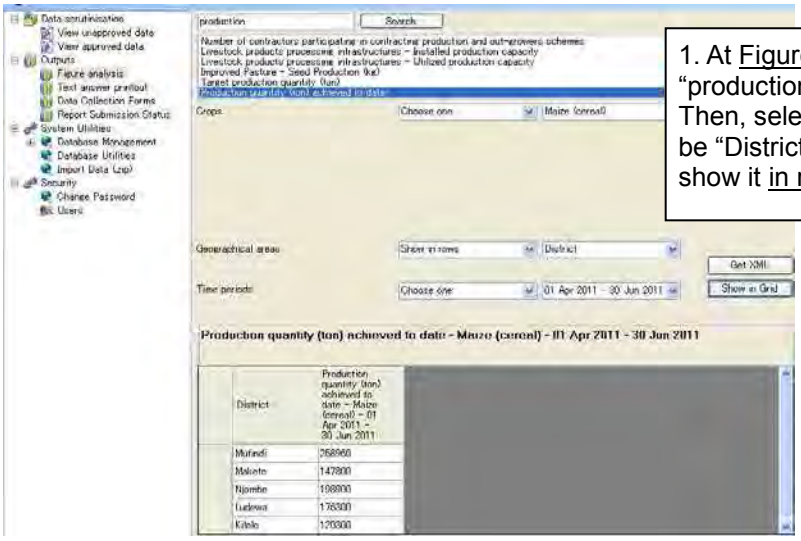
Monthly livestock production	Beef (kg)	Goat meat (kg)	Milk (litre)	Egg (piece)
July 2009				
August 2009				
….				

Monthly meat production	Production (kg)	Average price (Tsh)
July 2009		
August 2009		
….		

Monthly rain fall	2009		2010	
	No. of Days	MM	No. of Days	MM
January				
February				
…				

D. Comparison with neighboring Districts

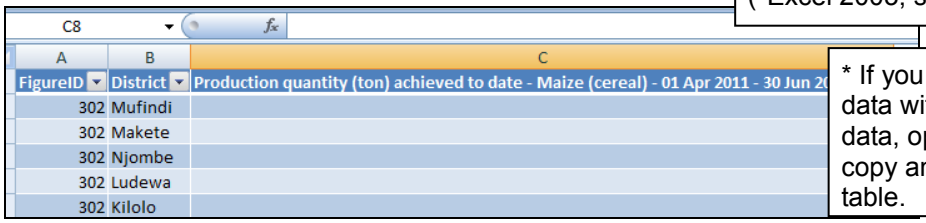
This analysis allows you to compare the data of your district with other districts or regional and national data. To do this comparison, you need to log into LGMD2 and synchronize through the national level database.



1. At Figure Analysis of LGMD2, select "production achieved to date" as Choose one. Then, select "Maize." Geographical areas should be "District" and shown in rows. Select time and show it in row. Click Get XML.

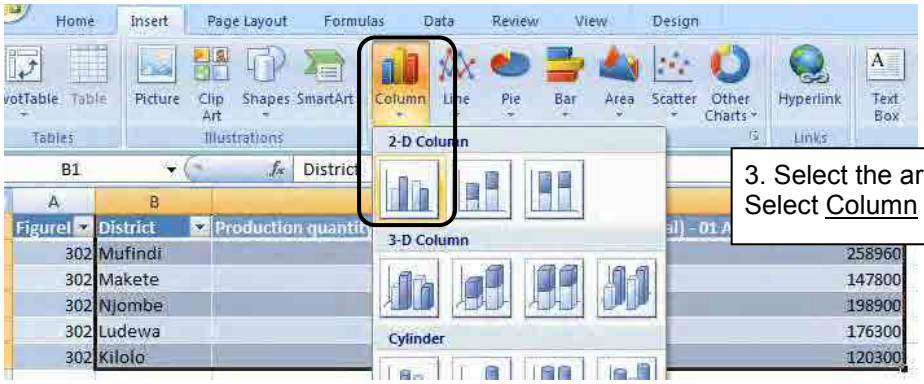
* If you want to compare LGA data with regional or national data, repeat this by selecting "region" or "national" for Geographical areas.

2. Open the XML file with Excel. (*Excel 2003, see page 72)

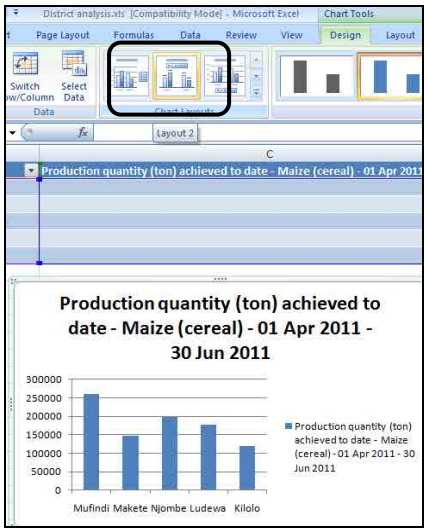


FigureID	District	Production quantity (ton) achieved to date - Maize (cereal) - 01 Apr 2011 - 30 Jun 2011
302	Mufindi	
302	Makete	
302	Njombe	
302	Ludewa	
302	Kilolo	

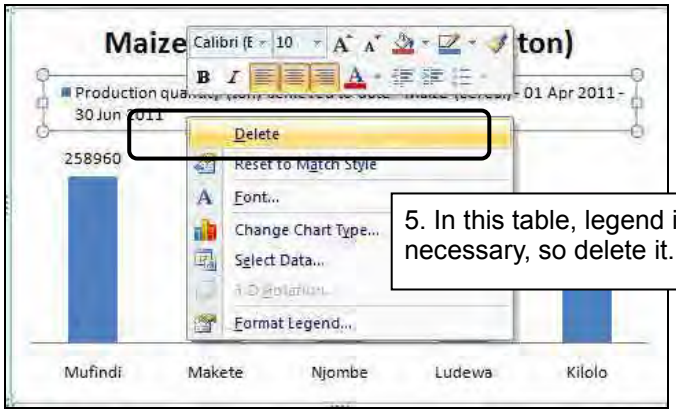
* If you want to compare LGA data with regional or national data, open all XML files and copy and paste data into one table.



3. Select the area, got to Insert and Select Column (2-D Column).

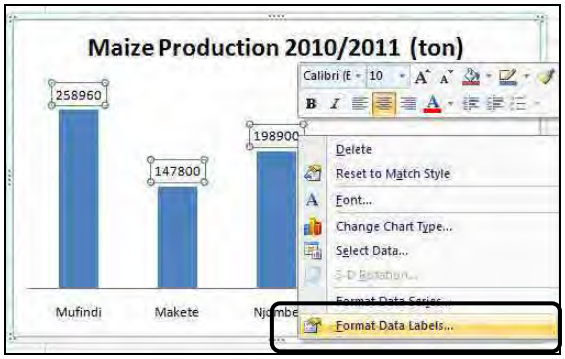


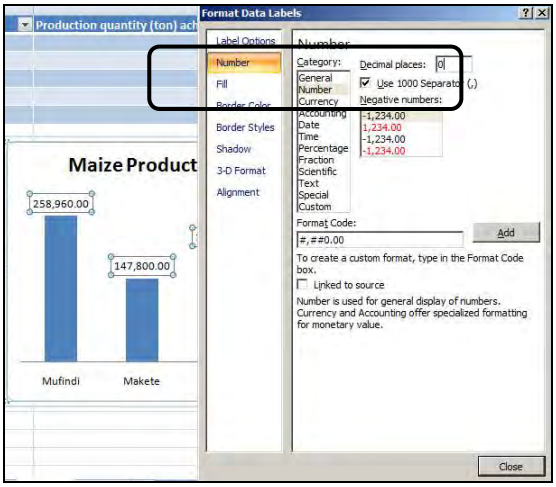
4. In Chart Layouts, select the layout you like.

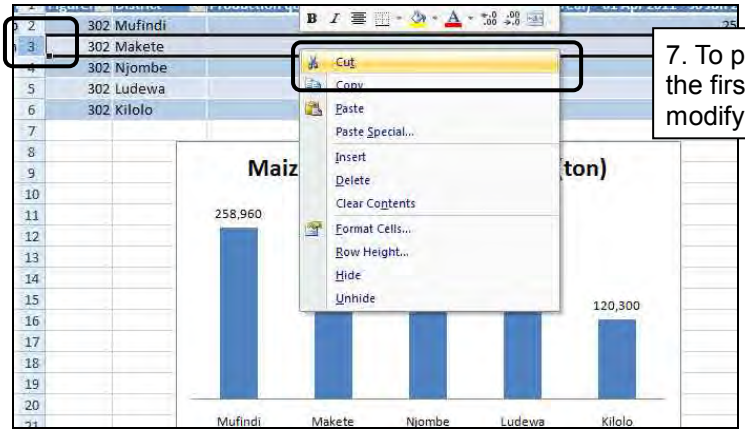


5. In this table, legend is not necessary, so delete it.

6. Rename the title (click and type) and adjust the presentation of numbers (Right click + Format Data Labels)

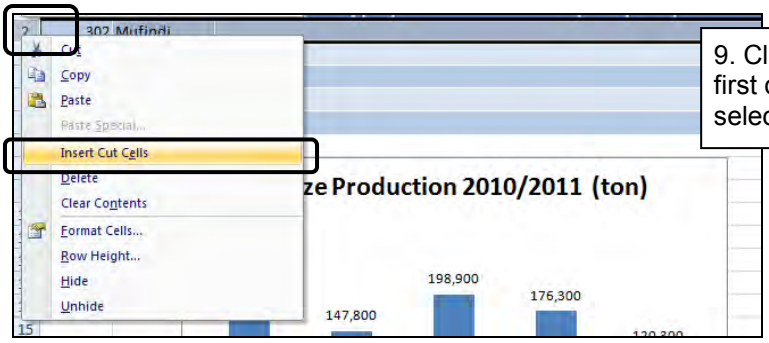




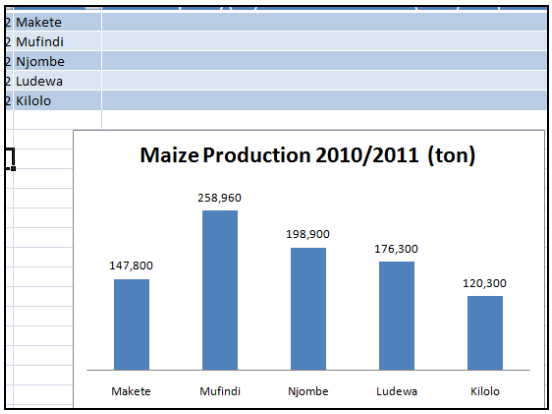


7. To place your district (e.g. Makete) at the first of the districts, you need to modify the order of the original table.

8. Select the row of your district (click row number) and cut it (Right click and select Cut or Control + X).



9. Click the row number of the first district. Right click and select Insert Cut Cells.

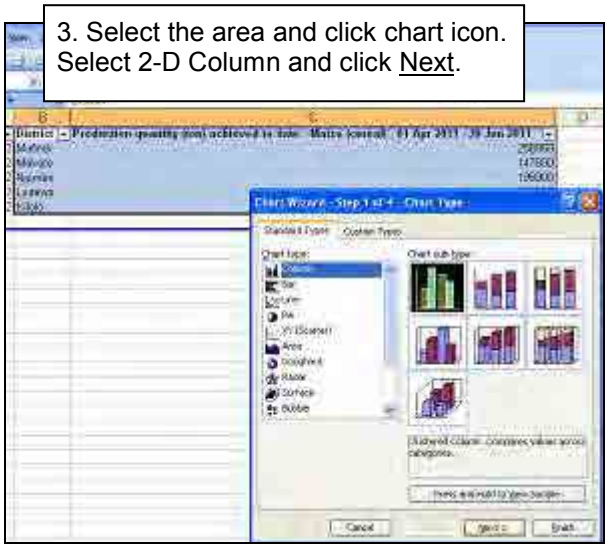


Now your district is at the top of the table and chart.

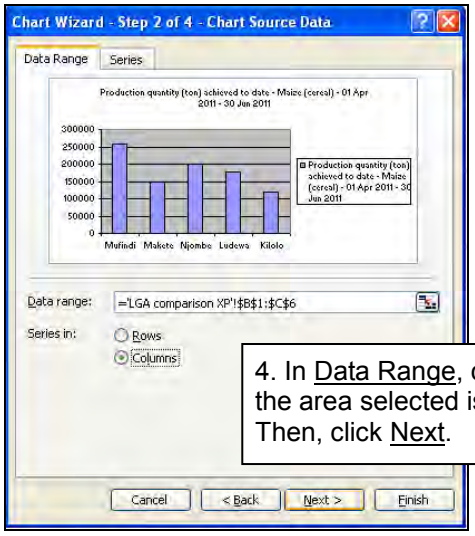
<Excel 2003>

ID	District	Production quantity (ton) achieved to date - Maize (cereal) -
302	Mufindi	
302	Makete	
302	Njombe	198900
302	Ludewa	176300
302	Kilolo	120300

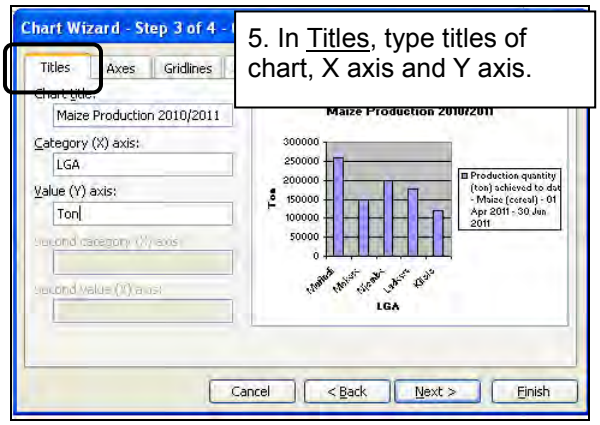
2. Open the XML file with Excel.



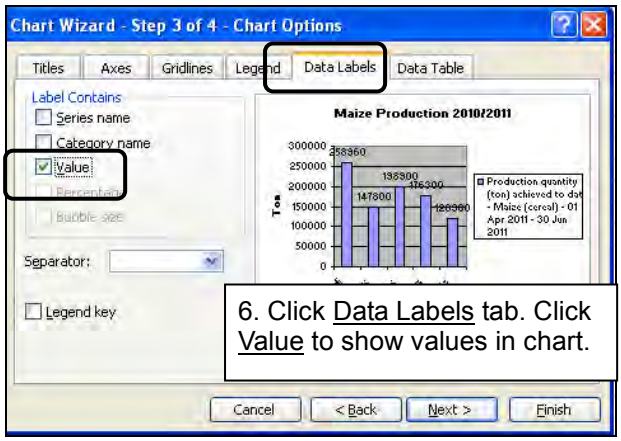
3. Select the area and click chart icon. Select 2-D Column and click Next.



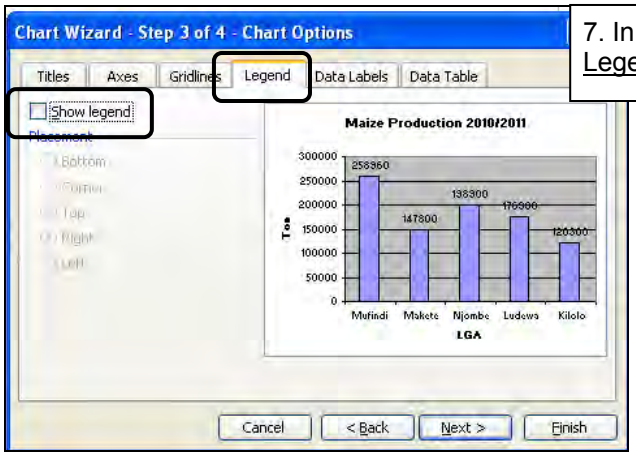
4. In Data Range, check if the area selected is OK. Then, click Next.



5. In Titles, type titles of chart, X axis and Y axis.

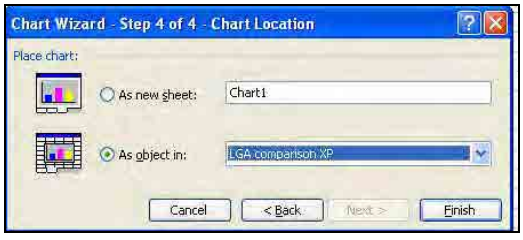


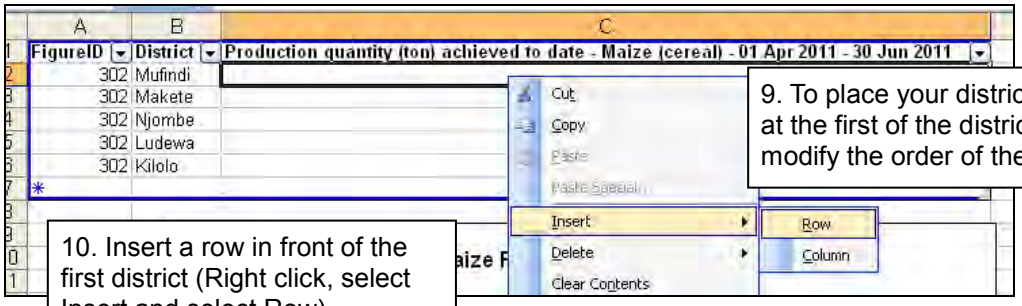
6. Click Data Labels tab. Click Value to show values in chart.



7. In this table, legend is not necessary. Click Legend tab and click off Show legend. Click Next.

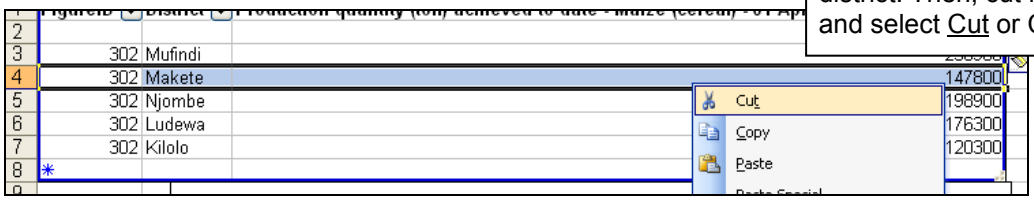
8 Click Finish.



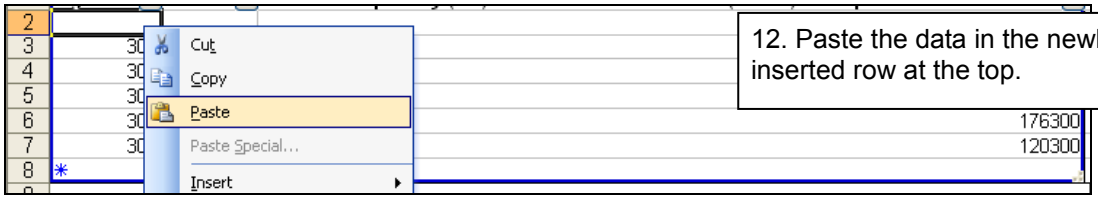


9. To place your district (e.g. Makete) at the first of the districts, you need to modify the order of the original table.

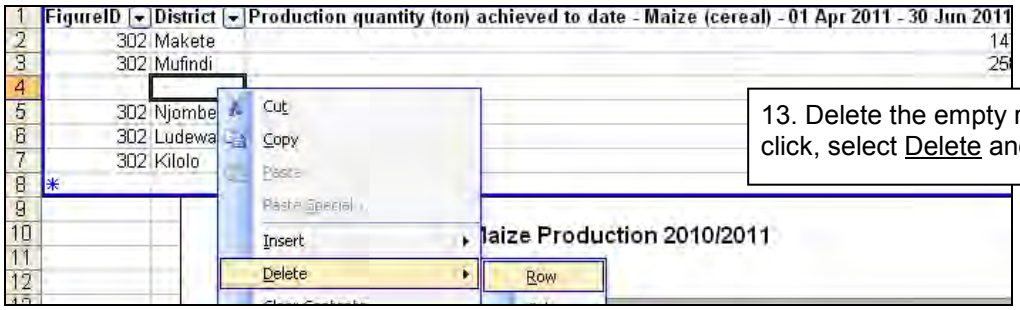
10. Insert a row in front of the first district (Right click, select Insert and select Row).



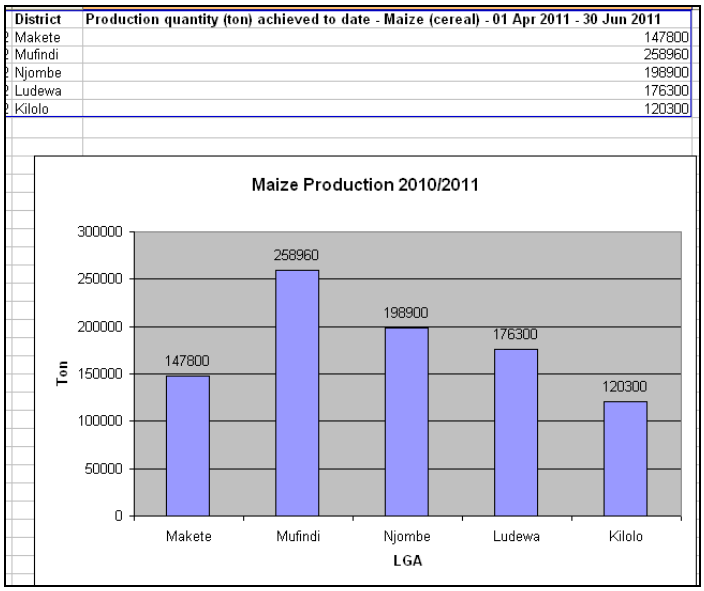
11. Select the data of your district. Then, cut it (Right click and select Cut or Control + X).



12. Paste the data in the newly inserted row at the top.



13. Delete the empty row (Right click, select Delete and select Row).



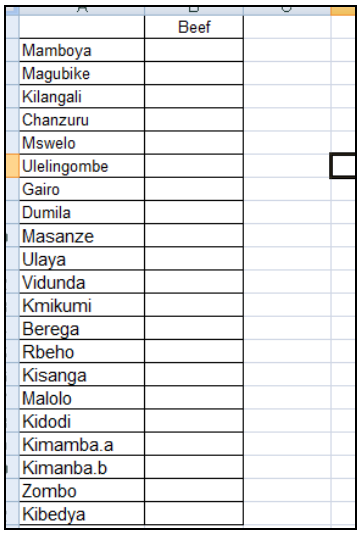
Now your district is at the top of the table and chart.

5.2 Ward/Division Level Information

Using the ward level data entered in the Excel file, you can create tables and chart for the ward/division disaggregated information.

5.2.1 Creating ward disaggregated tables

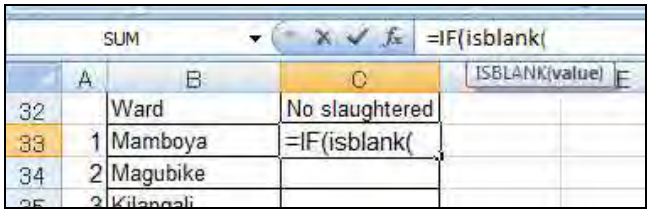
Let's take an example of Table 4 "Livestock Slaughtered" in VAEO/WAEO monthly report.

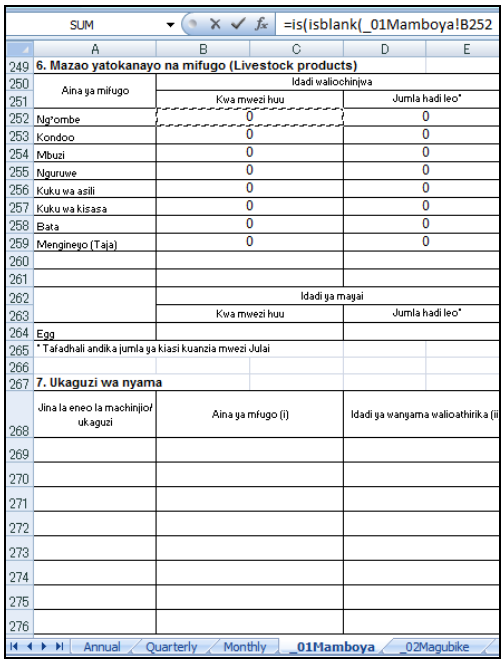


1. In Excel file for a month, quarter or year, create a new blank sheet. (Chapter 3-5. 1))

2. Create a blank table with each ward name.

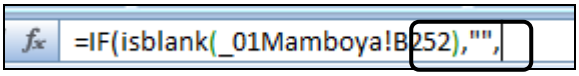
3. At the first ward, type " =IF(isblank(".

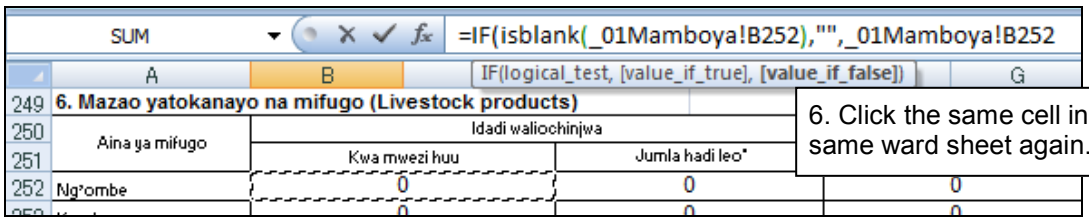




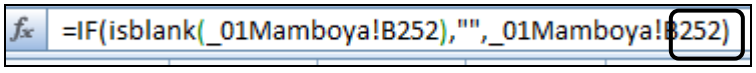
4. Go to the original sheet of that ward, and click the cell you want to create table.

5. Type "),"", ". (closing bracket, comma, double apostrophe, double apostrophe, comma) in the formula bar.

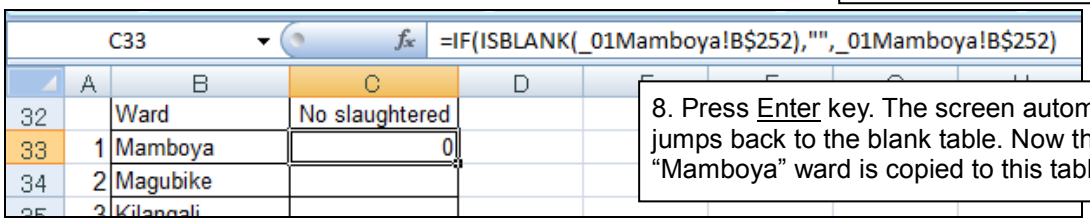




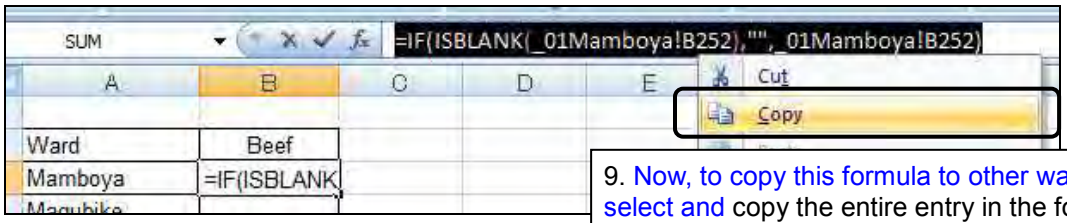
6. Click the same cell in the same ward sheet again.



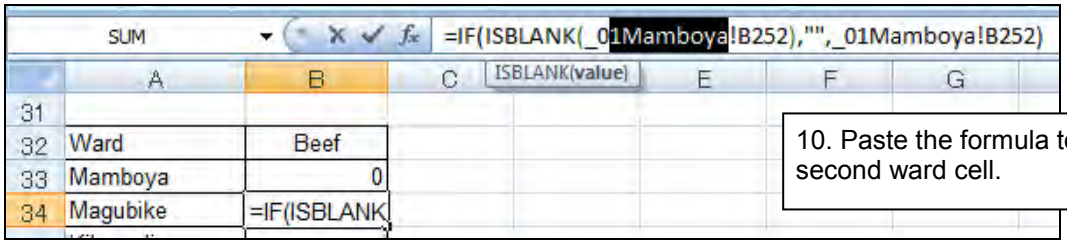
7. Type closing bracket ")" in the formula bar.



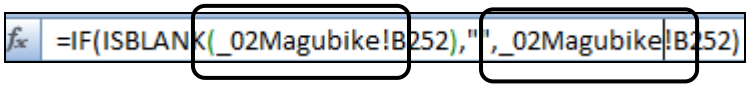
8. Press Enter key. The screen automatically jumps back to the blank table. Now the data of "Mamboya" ward is copied to this table.



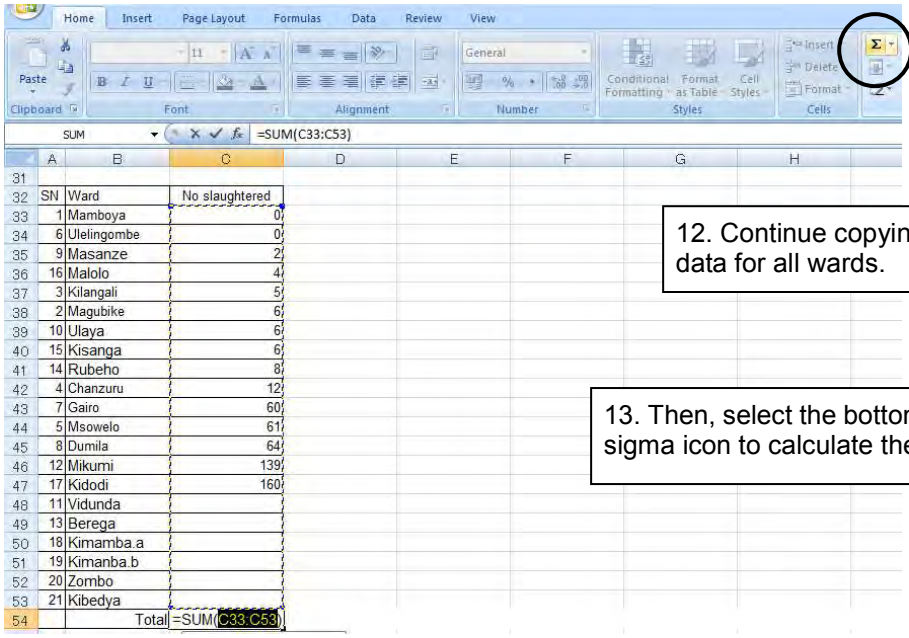
9. Now, to copy this formula to other wards, select and copy the entire entry in the formula bar of the first cell and press Enter key.



10. Paste the formula to the second ward cell.

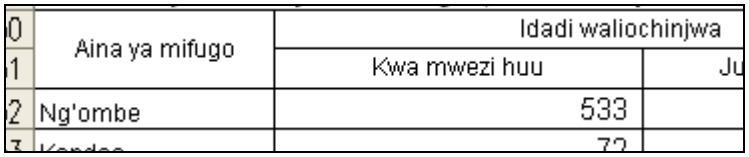


11. Change the sheet name in the formula, and press Enter key.



12. Continue copying the data for all wards.

13. Then, select the bottom cell and click sigma icon to calculate the total.



14. Cross check the total figure with the total shown in "District Total" sheet.

5.2.2 Creating division disaggregated tables

Division	No slaughtered
A	
B	
C	
D	
Total	

1. In Excel file for a month, quarter or year, create a new blank sheet.

2. Create a blank table with each division name.

C2 =SUM(_01Mamboya:_05Msowelo!B252)

	A	B	C	D	E	F
1		Division	No slaughtered			
2		A	84			
3		B	132			
4		C	157			
5		D	160			
6		Total				

3. By using the summation method shown in Chapter 3-4. 1), create a formula to summarize data from the first ward to the last ward of each division.

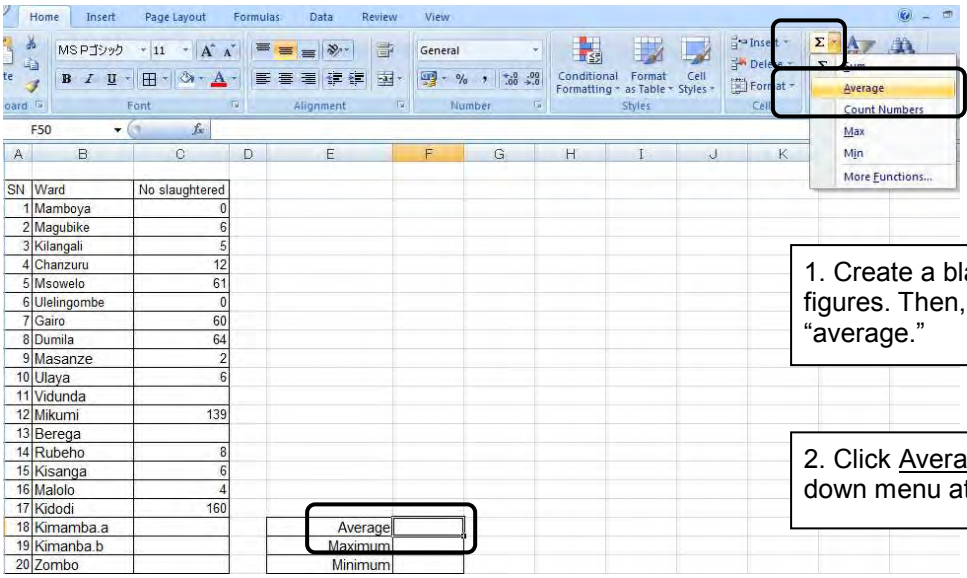
C6 =SUM(C2:C5)

	A	B	C	D
1		Division	No slaughtered	
2		A	84	
3		B	132	
4		C	157	
5		D	160	
6		Total	533	

4. Calculate the total and cross check with other tables.

5.2.3 Average, maximum, minimum, standard deviation, and median

To grasp the situation in your district, let's calculate average (mean), maximum (largest value in a set of data), minimum (smallest value in a set of data), standard deviation (value showing data variation from the average), and median (the value in the middle of a set of data when counted from the smallest or largest).

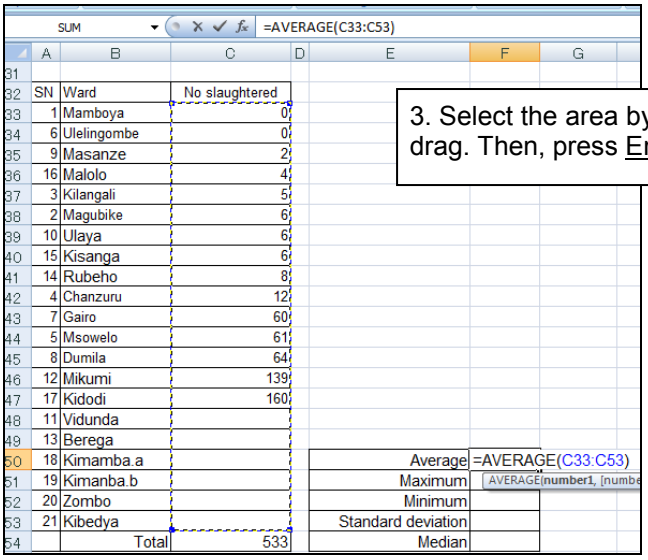


SN	Ward	No slaughtered
1	Mamboya	0
2	Magubike	6
3	Kilangali	5
4	Chanzuru	12
5	Msowelo	61
6	Ulelingombe	0
7	Gairo	60
8	Dumila	64
9	Masanze	2
10	Ulaya	6
11	Vidunda	
12	Mikumi	139
13	Berega	
14	Rubeho	8
15	Kisanga	6
16	Malolo	4
17	Kidodi	160
18	Kimamba.a	
19	Kimanba.b	
20	Zombo	

Average	
Maximum	
Minimum	

1. Create a blank table for these figures. Then, select the cell for "average."

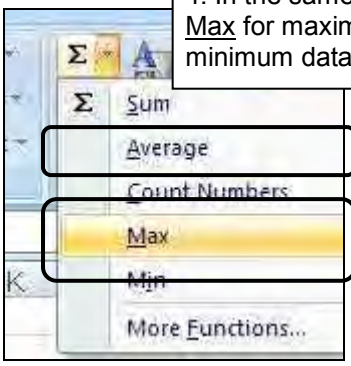
2. Click Average at the drop down menu at sigma mark.

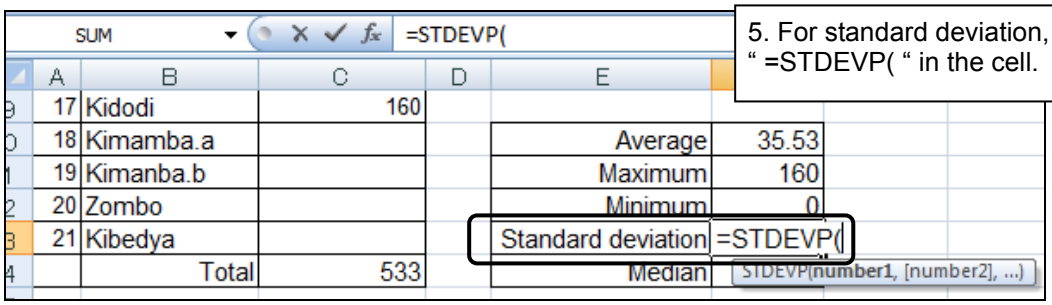


3. Select the area by click and drag. Then, press Enter key.

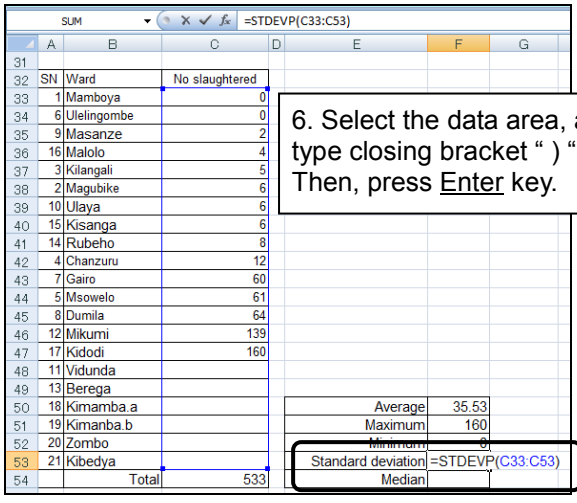
Include the wards with blank data. But be careful not to include “Total”.

4. In the same way, select Max for maximum data. For minimum data, select Min.

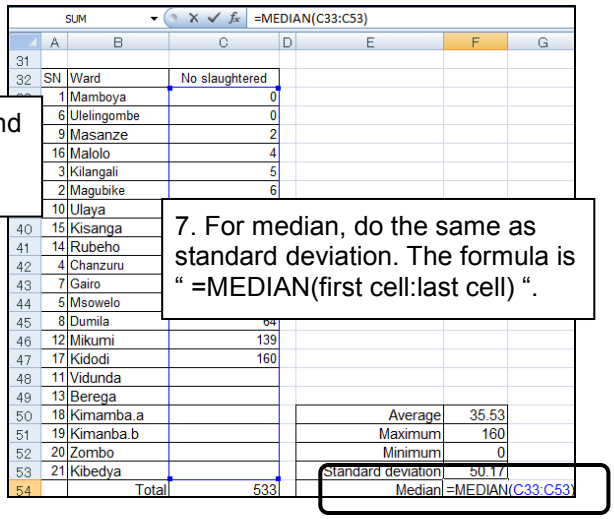




5. For standard deviation, type “ =STDEVP(“ in the cell.



6. Select the data area, and type closing bracket “) “. Then, press Enter key.



7. For median, do the same as standard deviation. The formula is “ =MEDIAN(first cell:last cell) “.

5.2.4 Ranking

With Excel, you can also sort the order of ward/division in ascending order to present the ranking. For this, see Chapter 3.5.2. Select all data area and select the column such as “No of slaughtered” to sort by in an ascending order.

SN	Ward	No slaughtered
1	Mamboya	0
6	Ulelingombe	0
9	Masanze	2
16	Malolo	4
3	Kilangali	5
2	Magubike	6
10	Ulaya	6
15	Kisanga	6
14	Rubeho	8
4	Chanzuru	12
7	Gairo	60
5	Msowelo	61
8	Dumila	64
12	Mikumi	139
17	Kidodi	160
11	Vidunda	
13	Berega	
18	Kimamba.a	
19	Kimanba.b	
20	Zombo	
21	Kibedya	
	Total	533

5.2.5 Ratio

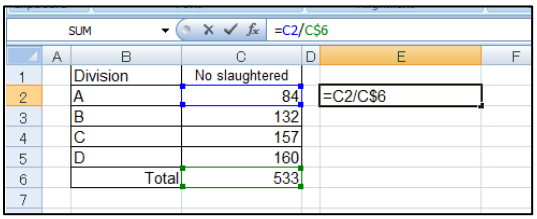
In order to understand how much each ward/ division is contributing to the district total, there are two ways to do this:

A. calculate the ratio in the spread sheet, and

B. create a pie chart.

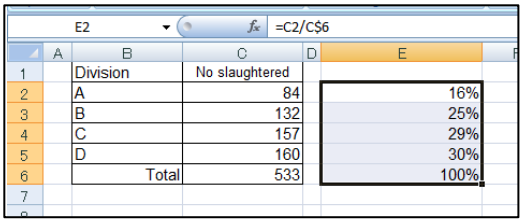
Let’s look at each method one by one.

A. Calculate the ratio in the spread sheet



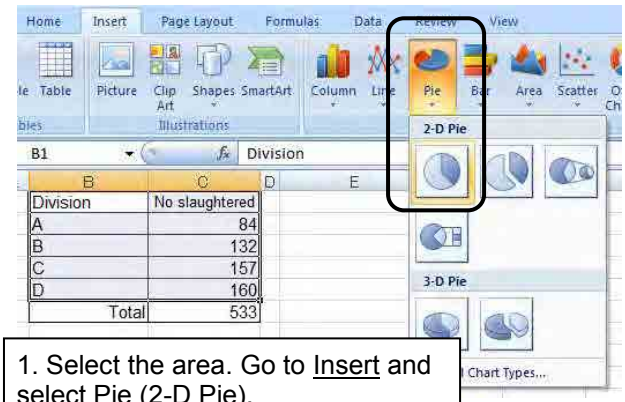
1. To get a ratio of Division A, first click E2 and write “=c2/c$6” in formula bar. Or after clicking E2, wirte “=” in formula bar, click cell C2, write “/”, click cell C6, and then insert “$” between C and 6.

The $ mark is important as the figure right after this mark will not change when the formula is copied to another cell.

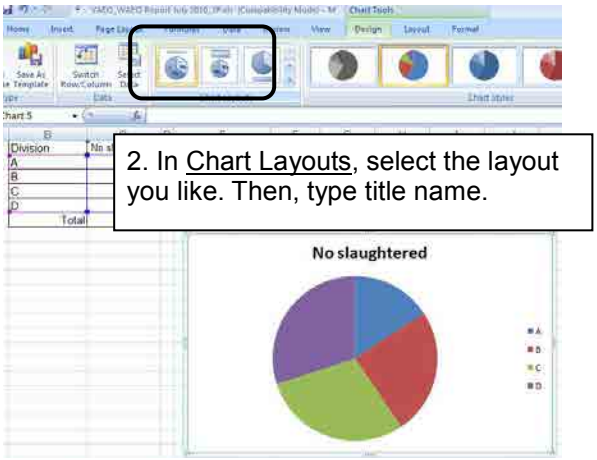


2. Copy the E2 cell by dragging down its corner to cell E6 and click a % button. Then you can automatically compute the ratio of each division to the total.

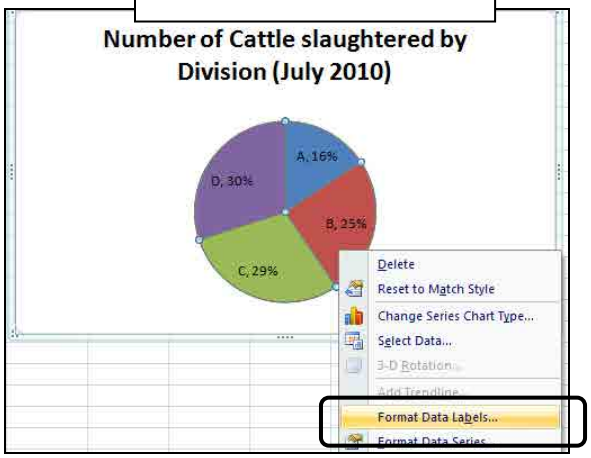
B. Create a pie chart



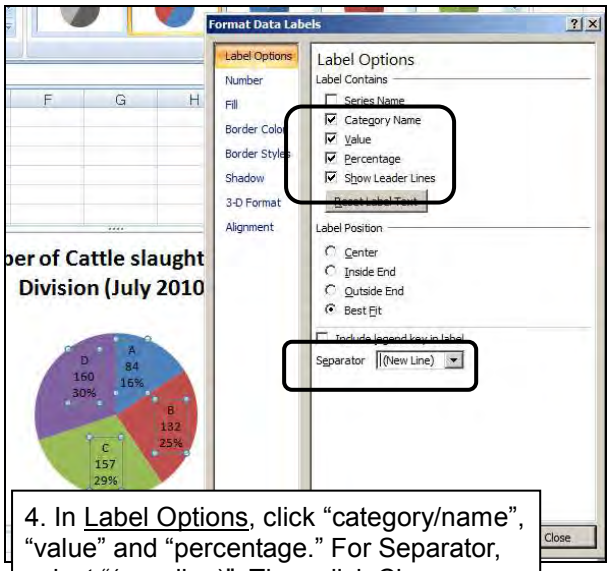
1. Select the area. Go to Insert and select Pie (2-D Pie).



2. In Chart Layouts, select the layout you like. Then, type title name.

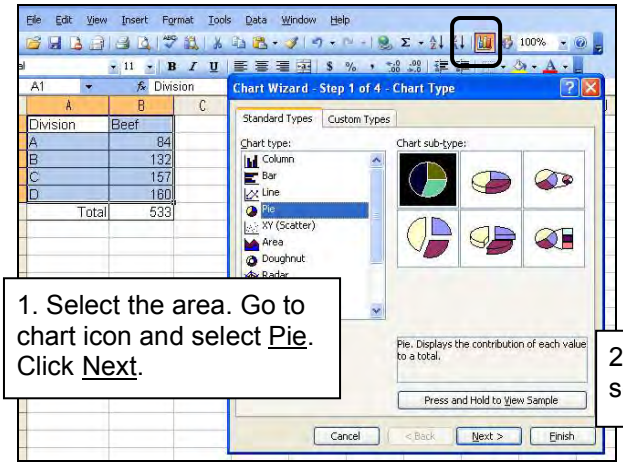


3. Right click the chart and select Format Data Labels.

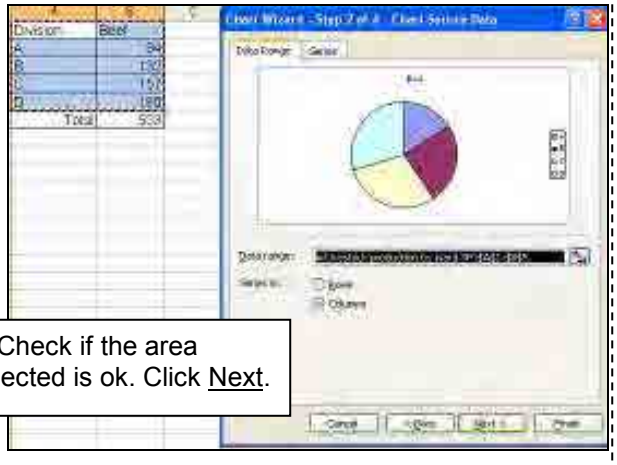


4. In Label Options, click “category/name”, “value” and “percentage.” For Separator, select “(new line)”. Then click Close.

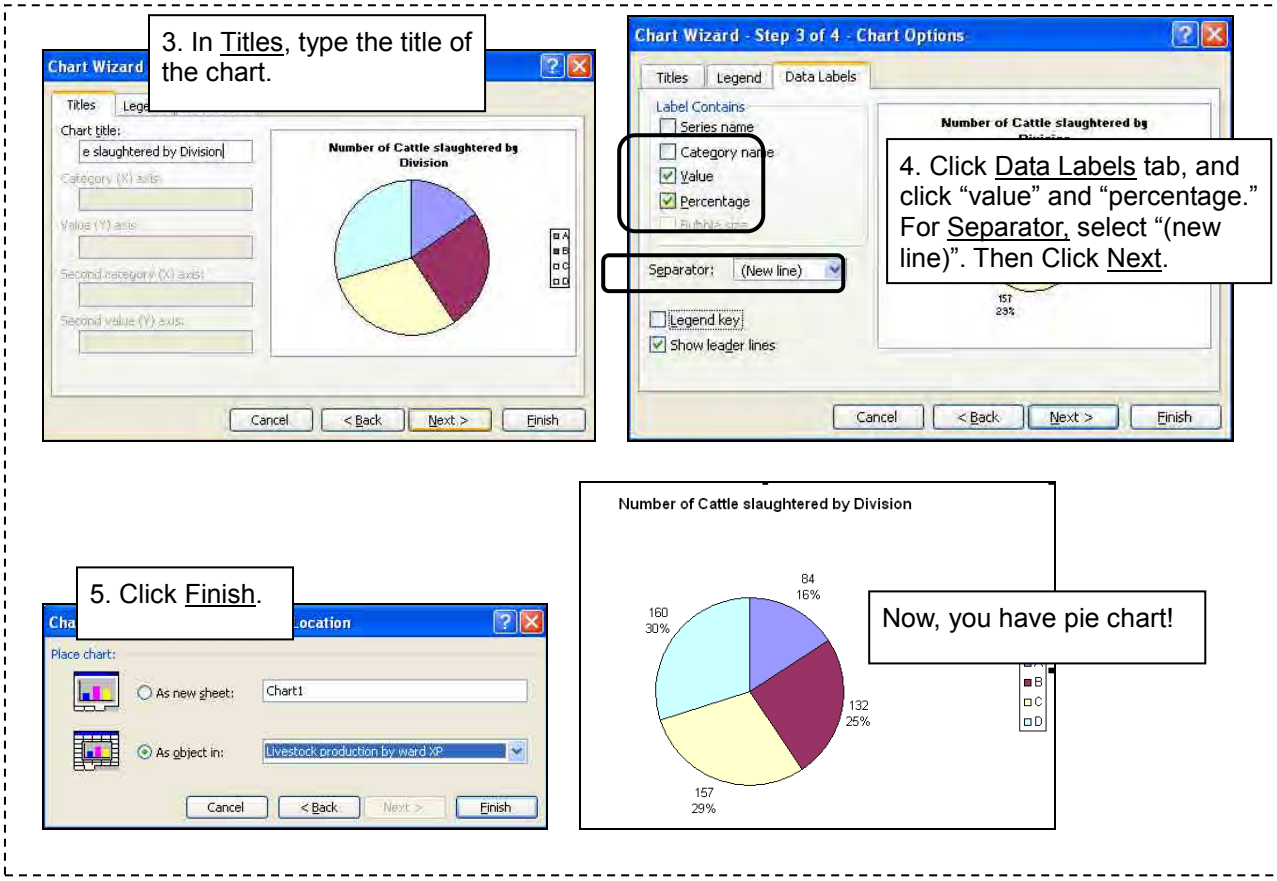
<Excel 2003>



1. Select the area. Go to chart icon and select Pie. Click Next.

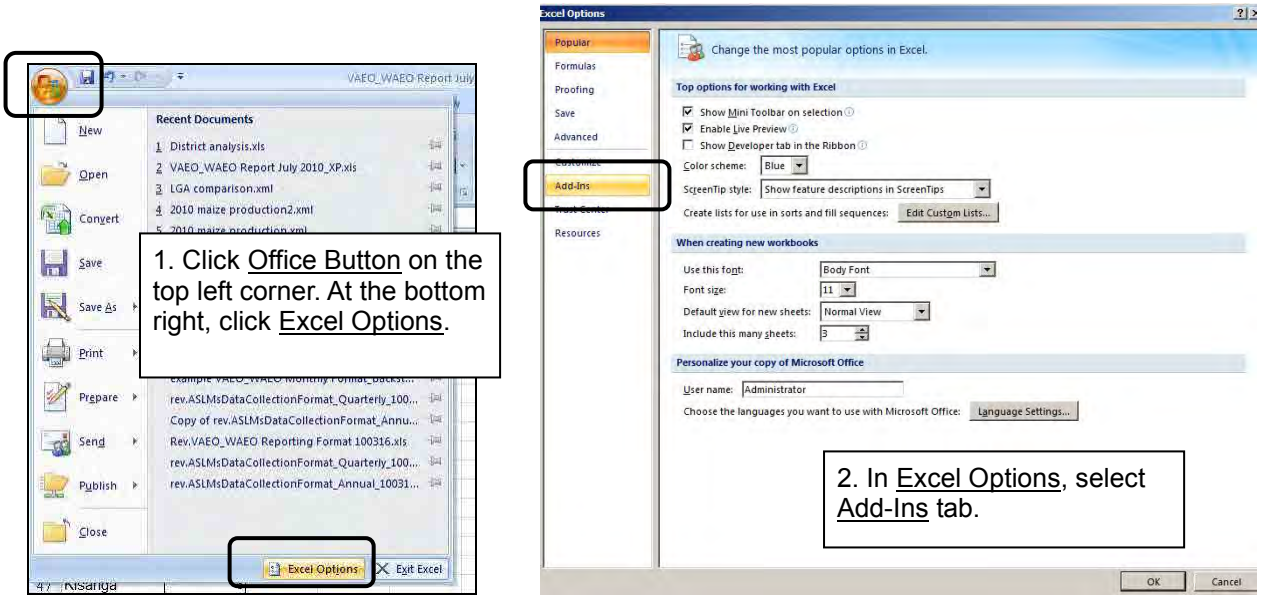


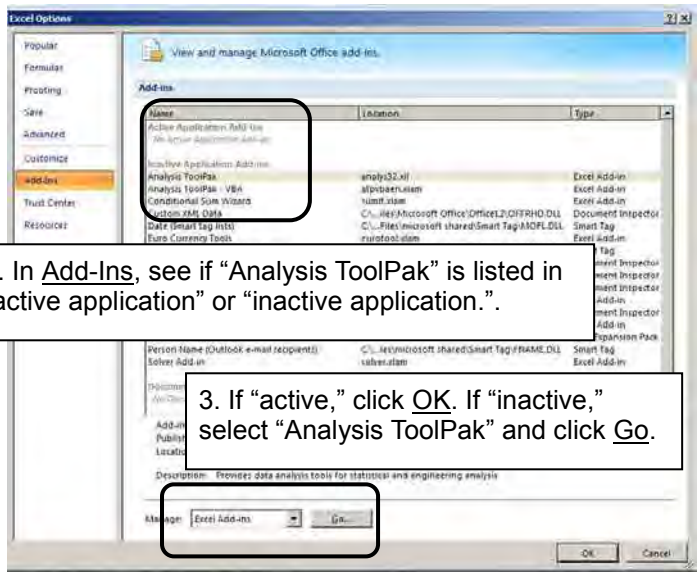
2. Check if the area selected is ok. Click Next.



5.2.6 Activation of "Analysis Tool Pack"

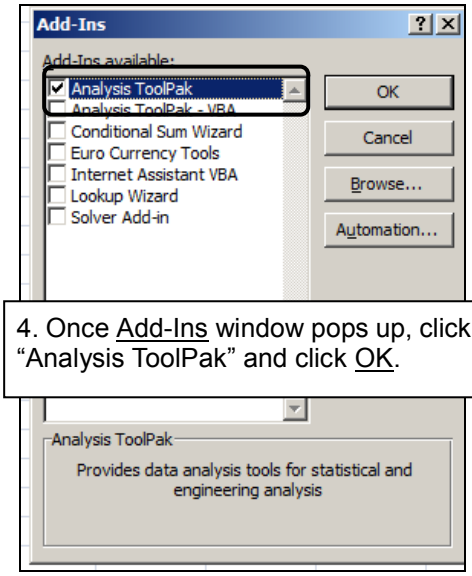
In order to create histogram which helps you to analyze distribution of data, your Excel needs to have "Analysis Tool Pack" activated. If you do not have it, take the following steps.





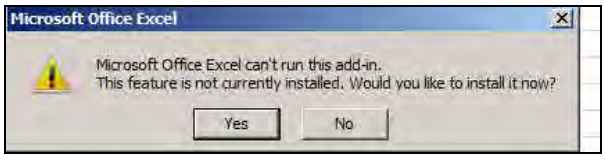
2. In Add-Ins, see if “Analysis ToolPak” is listed in “active application” or “inactive application.”.

3. If “active,” click OK. If “inactive,” select “Analysis ToolPak” and click Go.



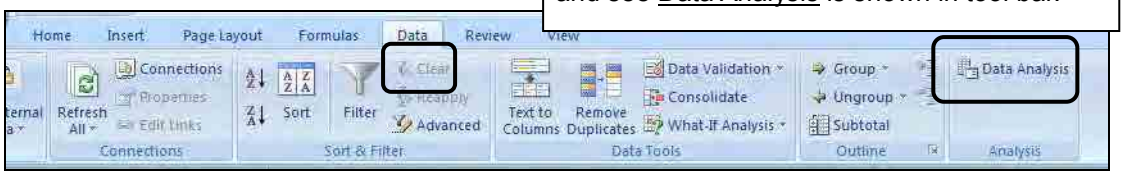
4. Once Add-Ins window pops up, click “Analysis ToolPak” and click OK.

5. You will be asked whether to install this feature. Click Yes.

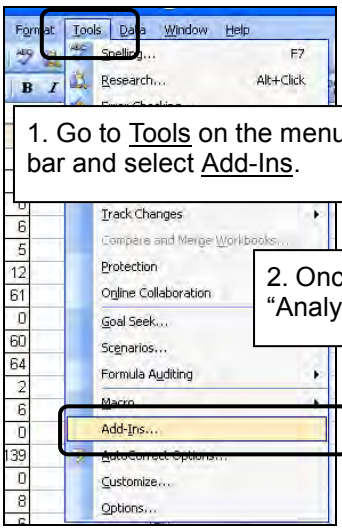


6. Then, installation starts.

7. Once installation is completed, go to Data and see Data Analysis is shown in tool bar.

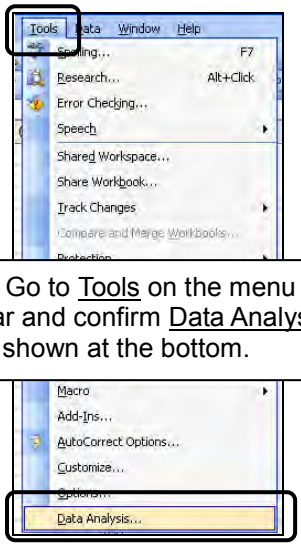


<Excel 2003>



1. Go to Tools on the menu bar and select Add-Ins.

2. Once Add-Ins window pops up, click “Analysis ToolPak” and click OK.

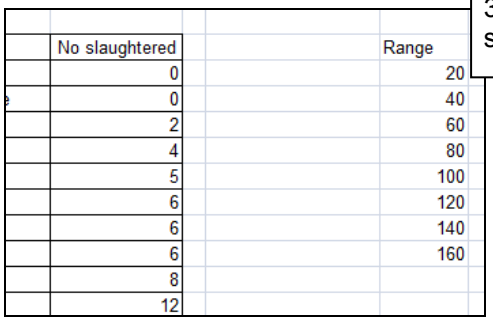


3. Go to Tools on the menu bar and confirm Data Analysis is shown at the bottom.

5.2.7 Distribution (histogram)

Now, let's create histogram which helps you analyze distribution of data.

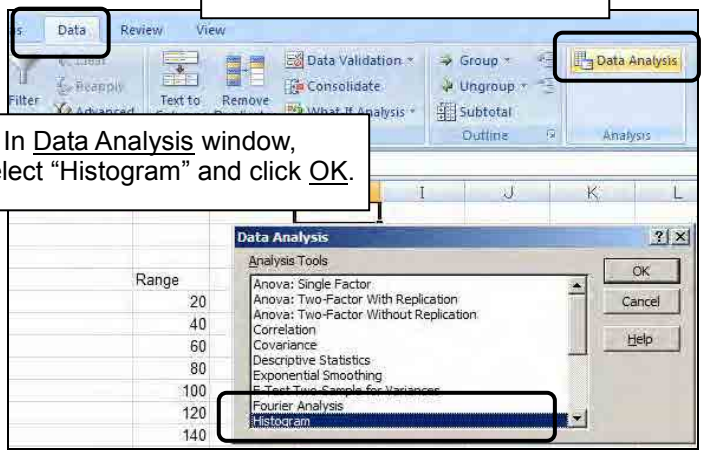
1. Near the table, type in the range you want to divide the data.



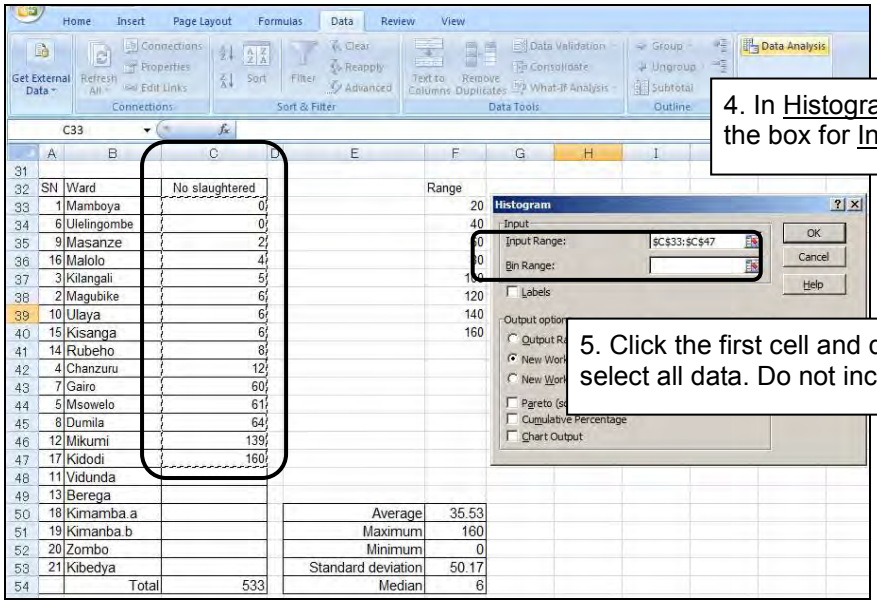
	No slaughtered		Range
	0		20
	0		40
	2		60
	4		80
	5		100
	6		120
	6		140
	6		160
	8		
	12		

2. Go to Data on the menu bar and select Data Analysis. *

3. In Data Analysis window, select "Histogram" and click OK.



* In Excel 2003, go to Tools on the menu bar and select Data Analysis.

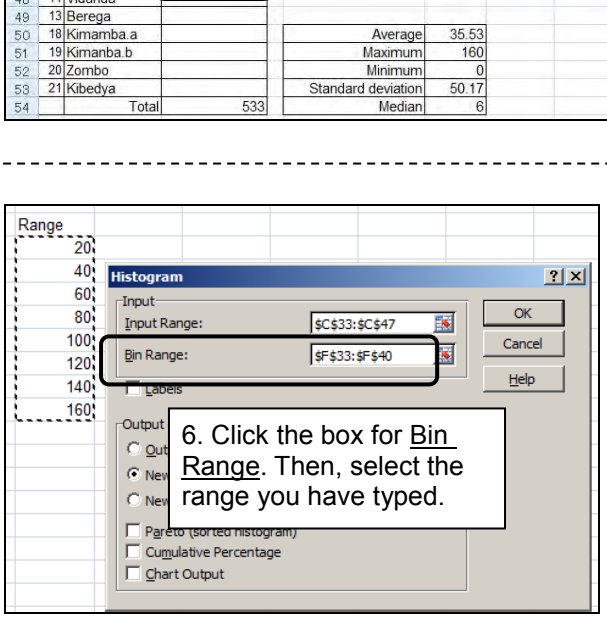


	SN	Ward	No slaughtered
31			
32	1	Mamboya	0
33	6	Ulelingombe	0
34	9	Masanze	2
35	16	Malolo	4
36	3	Kilangali	5
37	2	Magubike	6
38	10	Ulaya	6
39	15	Kisanga	6
40	14	Rubeho	8
41	4	Chanzuru	12
42	7	Gairo	60
43	5	Msowelo	61
44	8	Dumila	64
45	12	Mikumi	139
46	17	Kidodi	160
47	11	Vidunda	
48	13	Berega	
49	18	Kimamba.a	
50	19	Kimanba.b	
51	20	Zombo	
52	21	Kibedya	
53		Total	533

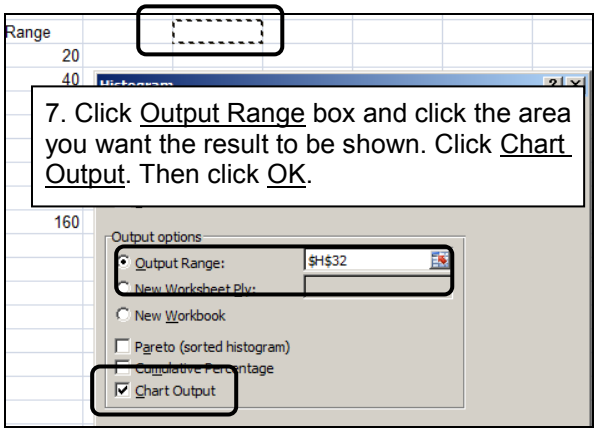
Average	35.53
Maximum	160
Minimum	0
Standard deviation	50.17
Median	6

4. In Histogram window, click the box for Input Range.

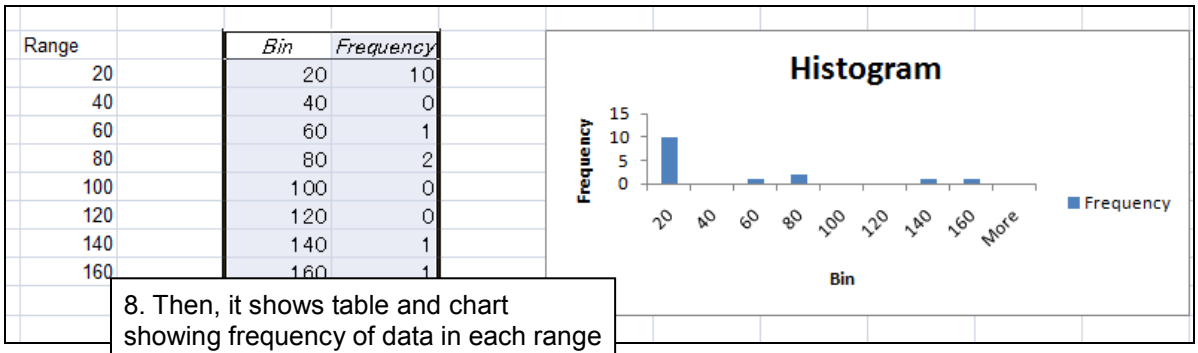
5. Click the first cell and drag down to select all data. Do not include blank cells.



6. Click the box for Bin Range. Then, select the range you have typed.

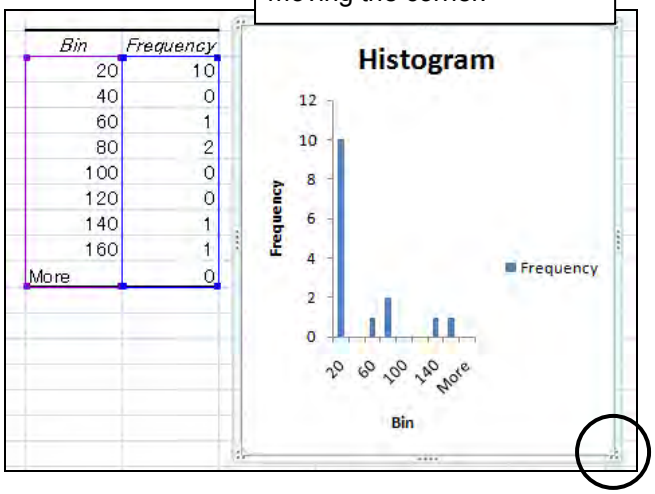


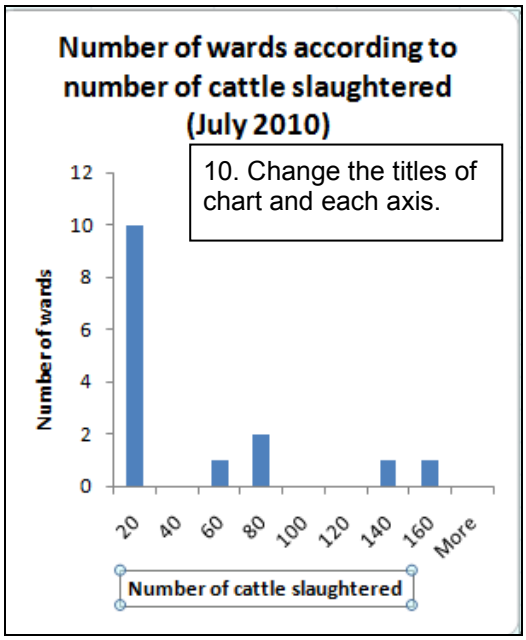
7. Click Output Range box and click the area you want the result to be shown. Click Chart Output. Then click OK.



8. Then, it shows table and chart showing frequency of data in each range (how many wards fall into each range).

9. Chart size and shape can be adjusted by clicking and moving the corner.





10. Change the titles of chart and each axis.

5.2.8 Cross section analysis

This analysis compares the data of multiple variables. (For example, number of animals, livestock products, crop production, or number of machines in each ward/division in the district). Some example tables are shown below. After creating these tables by the steps shown in 1) and 2), you can analyze the data by using steps shown from 3) to 7).

Number of machine	Division A	Division B	…
Tractor			
Power tiller			
…			

Livestock population	Cattle	Goat	…
Ward A			
Ward B			
…			

Cereal production	Maize		Rice	
	Area planted (Ha)	Production (ton)	Area planted (Ha)	Production (ton)
Ward A				
Ward B				
…				

6. Feedback

As mentioned in Chapter 2, proper feedback is a key to motivate VAEO/WAEOs to fill out the format with reliable information and submit it on time. Through feedback, VAEO/WAEOs need to see that their reports are read and the information they have provided is well used by the district. The following is some examples of how to give feedback to them.

- Once the report is prepared, the district should not only submit it to the District Executive Officer and the Council, but also to all wards to place it on the notice board at ward offices so that everyone can read it.
- District officer can discuss the result of analysis with VAEO/WAEO individually during his/her field visit or collectively at VAEO/WAEO meetings.
- Based on the data analysis, district and VAEO/WAEO can provide comment to village agriculture development plan.
- Another idea to motivate VAEO/WAEO is to provide an award to those performed well, such as “best WAEO of the quarter.”

Annex 1. Suggested Format of Format Distribution / Submission List

(For Distribution)

Report for : ____________________

SN	Name of Ward	Number of village	Number distributed	Received by			Remark
				Name	signature	date	

(For Collection)

Report for : ____________________

SN	Name of Ward	Submitted by		Data review (check)	Data entry (check)	Remark
		Name	date			

Annex 2. Table for WAEO Format Submission Record

District: _____
Year: _____

Month, Type of report		Village	Ward									
		Distribution (i)	Distribution (ii)	Submission			Submission rate			Quality		
				on time (iii)	late (iv)	total (v)=(iii)+(iv)	on time (vi)=(iii)/(ii)	late (vii)=(iv)/(ii)	total (viii)=(v)/(ii)	good	acceptable	bad
July												
August												
September	Monthly											
	Quarterly											
October												
November												
December	Monthly											
	Quarterly											
January												
February												
March	Monthly											
	Quarterly											
April												
May												
June	Monthly											
	Quarterly											
	Annual											