

マラウイ

Mazganga Suzanna PHIRI

**FROM: MAZGANGA SUZANNA PHIRI
(MALAWI)**

**TO: COURSE COORDINATOR, UTILIZATION AND
PRESERAVATION TECHNIQUES OF AGRICULTURAL
AND ANIMAL PRODUCTS**

RE: ACTION PLAN

DATE: 7TH MAY 2004.

ACTION PLAN

Table 1: Problems identified and their background		
	Problems identified	Background
1.	Low animal productivity- poor body condition and animal health condition	<p>Poor Housing Condition</p> <ul style="list-style-type: none"> ▪ Cattle kraals do not have roofs; as a result, there is no protection to harsh weather conditions. <p>Low Quality Of Feed</p> <ul style="list-style-type: none"> ▪ Cattle depend mainly on pastures and crop residues which contain very high fibre and low crude protein, minerals and vitamin. ▪ Protein supplements being very expensive, farmers supplement their animals maize bran which contains very high fibre content and very low crude protein minerals and vitamin. <p>Poor Animal Health Condition</p> <ul style="list-style-type: none"> ▪ Animals Grazing In Uncontrolled Areas - get infected with parasites and air borne diseases. ▪ Government no longer fund dipping program, therefore, no dipping of animals due to high cost of acaricides (dip wash) this has led to an increase in tick borne disease <p>Uncontrolled breeding</p> <ul style="list-style-type: none"> ▪ a lot of inbreeding and dependency on natural mating other than AI
2.	Lack of knowledge / skills in animal production and processing techniques.	<ul style="list-style-type: none"> ▪ Limited training in meat science due to few colleges which offer meat science course. This has led to having very few meat specialist and extension workers.

3.	Poor conditions of slaughter houses (abattoirs)	<ul style="list-style-type: none"> ▪ Lack of funds to construct modern slaughter houses (abattoirs) ▪ Hazard Analysis Critical Control Point (HACCP) laws/rules and regulations not followed
4.	Few processing plants and cooling centres- cause food rot	<ul style="list-style-type: none"> ▪ Lack of electricity in some areas, high cost of electricity installation, electricity failures and lack of funds
5.	Lack of market and marketing skills	<ul style="list-style-type: none"> ▪ Poor infrastructures and lack of knowledge of consumer preference ▪ lack of producers' associations (cooperatives) to facilitate localized markets
6.	Theft	Lack of animal identification techniques, no registration of individual animal, no proper housing of animals and lack of centralized slaughter houses. Therefore, no traceability for stolen animals

TABLE 2. Obtained useful techniques and knowledge		
	Problem	Obtained useful techniques and knowledge
1.	Low animal productivity due to poor body condition and animal health condition	<ul style="list-style-type: none"> ▪ Producers commitment to produce a healthier and heavier animal to make big profits through high carcass yield and low milk bacterial count ▪ Government commitment through financial support in form of subsidies
2.	Lack of knowledge/skills in animal production and processing techniques.	<ul style="list-style-type: none"> ▪ Flow of information among processors, producers and consumers ▪ It is more effective to reach producers organized in co-operatives ▪ Role of agricultural research centers in disseminating research findings to producers and processors
3.	Few processing plants and cooling centers	<ul style="list-style-type: none"> ▪ Government commitment through financial support in form of subsidies
4	Poor conditions of slaughter houses (abattoirs) which may lead to food poisoning	<ul style="list-style-type: none"> ▪ Strictness of processors in following meat sanitation policies/laws and regulations (HACCP)
5	Lack of market services and marketing skills	<ul style="list-style-type: none"> ▪ Centralized market system which provide trade opportunities to producers
6	Theft	<ul style="list-style-type: none"> ▪ Animal identification from farm to table ▪ Animal registration soon after birth ▪ Centralized slaughter houses ▪ DNA test and Introduction of traceability techniques

Framework For Proposed Activities

Objectives	<ol style="list-style-type: none"> 1. To improve animal productivity 2. To introduce animal identification 3. To improve producers' and processors' (butcher men) knowledge and skills 		
Outputs	<ol style="list-style-type: none"> 1. Improved animal productivity and increased income earnings of producers leading to high contributing of animal production to national GDP 2. Reduced animal theft 3. Well trained producers and processors (butcher men) 		
Activities	<ol style="list-style-type: none"> 1a. Lease with government and donor agencies to provide credits to producers 1b. Lease with government and donor agencies to reintroduce dipping programs 1c. Identification of good breeding stock for both meat and dairy production 2a. Introduction of animal registration 2b. Introduction of DNA test 3. Training producers and processors (butcher men) in animal production and modern processing (slaughtering) techniques 		
Inputs	Staff personnel	Cost US\$	
		Staff personnel	Materials
	1. 40 people for 60 months	\$60,000	\$200,000
	2. 65 people for 60 months	\$40,000	\$160,000
3. 30 people for 60 months	\$40,000	\$90,000	
Constraints	<ol style="list-style-type: none"> 1. Inadequate funds <ul style="list-style-type: none"> • Acaricides (dip wash) are very expensive therefore difficult to sustain the program • DNA test equipment very expensive 2. Poor infrastructure (poor road networks in the rural areas) 		

Activities	Expected outputs	Person/ organization responsible	Schedule (month)												Input			
			1	2	3	4	5	6	7	8	9	10	11	12	Man-power	Materials and equipment	Cost US\$	
Share knowledge obtained, discuss action plan and identify target groups	Donor agencies identified	Stakeholders	*	*	*	*	*	*	*	*	*	*	*	*	*	10 people	Stationary, and transport	\$2,000
Formation of credit schemes and cooperatives	Credit schemes and cooperatives formed	Cooperatives banks, Govt., NGOs					*	*	*	*	*	*	*	*	*	15 people	Accommodation and transport	\$5,500
Training producers and processors	Producers and processors trained	Stakeholders					*	*	*	*	*	*	*	*	*	15 people	Accommodation and transport	\$6,000
Rehabilitation of dip tanks	Reintroduction of dipping program	Government and donors				*	*	*	*	*	*	*	*	*	*	15 people	Equipment, dip wash	\$30,000
Identification of breeder stock (meat & dairy)	Improved meat and dairy productivity	Donors, Govt (researchers), and NGOs	*	*	*	*	*	*	*	*	*	*	*	*	*	10 people	Accommodation and transport	\$2,150
Advocate and stir up government commitment and private sector participation	participation & commitment (govt & private sector)	Stakeholders				*	*	*	*	*	*	*	*	*	*	10 people	Accommodation and transport	\$4,500

Table 4. Plans Of Operations (5-Year Plan)

Activities	Expected outputs	Person/ organization responsible	Schedule (year)					Input		Cost (US\$)
			1	2	3	4	5	Man-power	Materials & equipments	
Formation of credit schemes and cooperatives	Credit schemes and cooperatives formed	Cooperatives banks, Govt., NGOs	*	*	*	*	*	15 people	Accommodati on and transport	\$60,000
Rehabilitation of dip tanks	Donor agencies identified and dipping program reintroduced	Government and donors	*	*	*	*	*	35 people	Equipments and dip wash (chemicals)	\$260,000
Identification of breeder stock (meat and dairy)	Improved animal productivity through superior breeds	Govt.(researchers), Donors and NGOs	*	*	*	*	*	20 people	Accommodati on and transport	\$60,000
Introduction of animal identification through DNA test and animal registration	Animal registration policies /laws introduced and DNA test introduced for animal traceability from farm to table	Government, NGO and donors	*	*	*	*	*	15 people	DNA test equipment and stationary	\$200,000

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Taurayi Belo MLEWA

TITLE: PROJECT ACTION PLAN

NAME OF PARTICIPANT: TAURAYI B. MLEWA

(MALAWI)

COURSE: UTILIZATION AND PRESERVATION

TECHNIQUES FOR ANIMAL PRODUCTS.

(22nd February to 28 May, 2004)

CONTENTS OF ACTION PLAN
IDENTIFIED PROBLEMS AND THEIR BACKGROUND

PROBLEMS	BACKGROUND
Inadequate number of trained government and private sector staff.	Few high school and college/university students opting for science
Lack of knowledge of farmers in adding value to animal products.	Farmers do not get the benefit of beef fattening due to lack of organized animal markets.
Informal slaughter of animals and marketing of animal products	Liberalization of meat and meat products marketing.
Insufficient hygiene management and quality control in slaughter, and meat and milk processing houses.	Lack of routine inspections of slaughter and meat and milk processing houses.

IDENTIFIED PROBLEMS AND OBTAINED USEFUL TECHNIQUE AND KNOWLEDGE

PROBLEM	OBTAINED USEFUL TECHNIQUE AND KNOWLEDGE
Inadequate number of trained government and private sector staff.	Meat and milk products processing, HACCP, packaging.
Lack of knowledge of farmers in adding value to animal products.	Beef fattening, milk products, cooperatives system, marketing.
Informal slaughter of animals and marketing of animal products.	Zoonotic diseases, microbiology in meat and meat products
Poor hygiene management in slaughter and milk processing houses.	HACCP, one-way system of animal slaughtering in slaughter houses.

FRAMEWORK FOR PROPOSED ACTIVITIES

<p>Objectives</p>	<p>To prevent zoonotic diseases and food poisoning through HACCP in slaughter houses and processing houses,</p> <p>To improve meat and milk quality through introduction of beef fattening (stall-feeding), organized marketing, and improved village dairy processing units.</p> <p>To increase human resource capacity in animal products utilization preservation, processing technology.</p>
<p>Outputs</p>	<ol style="list-style-type: none"> 1. Introduction of HACCP system in slaughterhouses, meat and milk processing houses. 2. Slaughter slabs constructed in townships and district markets. 3. Beef fattening schemes and village dairy processing units established. 4. Cattle markets established in districts with high number of beef and dairy animals. 5. In situ training of government and private sector staff in animal products processing.
<p>Activities</p>	<ol style="list-style-type: none"> 1.1 Conducting seminars on HACCP with management of slaughter houses and milk and meat products. 2.1 Construction of slaughter slabs in townships and districts markets in collaboration with city, town and district assemblies 3.1 Training of farmers in principles of beef fattening, and milk and milk products processing, marketing and accounting. 3.2 Servicing of loans for farmers doing stall feeding 3.3 Procurement and installation of mini milk processing units 3.4 Procurement of packaging materials

	3.5 Procurement of one-ton vehicles for distribution of processed milk and milk products.			
	4.1 Sensitization campaigns and Formation of cattle marketing associations on the benefits of formal cattle marketing.			
	4.2 Construction of cattle markets and cattle holding grounds:			
	5.1 In situ training of government and private sector staff			
	Staff personnel	Costs		
Inputs		Staff personnel	Materials	
1.1	3.33 man-months	1.1 785.455 USD	1.1	5625.455 USD
2.1	9.33 man-months	2.1 1890.909 USD	2.1	378636.364 USD
3.1	13 man-months	3.1 3840.00 USD	3.1	4418.18 USD
3.2	6.0 man-months	3.2 1745.455 USD	3.2	101545.455 USD
3.3	5.33 man-months	3.3 1163.636 USD	3.3	205090.901 USD
3.4	2.0 man-months	3.4 567.273 USD	3.4	4109.091 USD
3.5	0.4 man-months	3.5 113.455 USD	3.5	386545.455 USD
4.1	16 man-months	4.1 3944.7273 USD	4.1	7359.091 USD
4.2	20 man-months	4.2 5026.919 USD	4.2	301154.546 USD
5.1	111.3 man-months	70560.000 USD	5.1	250071.818 USD

Constraints	<ul style="list-style-type: none"> ▪ Financial resources and mobility/transportation. ▪ Low farm-gate prices for beef animals and milk.
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Plans of operations (1-year plan)

Activities	Expected outputs.	Person/organization responsible	Schedule(month)												input			
			1	2	3	4	5	6	7	8	9	10	11	12	Man-power	Materials & equipments	Cost (US\$)	
1.1 Conducting seminars on HACCP	HACCP system introduced.	DAHLD																
2.1 Construction of slaughter slabs	10 Slaughter slabs constructed																4	Fuel, stationery, accommodation
5.1 Staff training	Staff trained																10	Tender documents, Fuel acc.
																	5	Stationery, acc.
																		320631.82

Plans of operation (5-year plan)

Activities	Expected outputs	Persons/org anization responsible	Schedule (year)					input		Cost (US\$)	
			1	2	3	4	5	Man- power	Materials & equipments		
3.1 Train farmers in beef fattening and milk processing.	Farmers trained	DAHLD							13	Stationery, Fuel	8293.09
3.2 Servicing of loans for farmers doing stall feeding.	High grade beef animals produced	DAHLD							9	Stationery, Fuel	103306.78
3.3 Procurement/installation of mini milk processing units.	Mini milk processing units established								6	Processing unit Generators, Acc.	206265.12
3.4 Procurement of packaging materials	Materials procured	DAHLD							6	Acc., Packets	4681.521
3.5 Procurement of one-ton vehicles	One-ton vehicles procured								2	Acc. Vehicles	386659.94
4.1 Sensitization campaigns on markets	Cattle market formed								4	Fuel	11339.679
5.1 Construction of cattle markets.	Cattle markets constructed.								5	Acc., stationery	306227.15

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MARUWO Golden Bobo

Interim Report

Name: Golden Maruwo

Country: Malawi

Course: Utilization and preservation techniques for animal products

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- CB, 2017
- a. **Project Title:** Improve the safety of meat & milk products.
 - b. **Organizer:** Department of Animal Health & Livestock Development.
 - c. **Target Group:** Slaughterslab workers and Dairy farmers
 - d. **Target Area:** Blantyre, Thyolo and Zomba districts.
 - e. **Duration:** Three years

INTRODUCTION

To improve the safety of meat and milk products, it is essential to process the products under hygienic conditions. The products must also be periodically examined for safety and quality control. However this is not done due to insufficient knowledge on good sanitary management and processes by dairy farmers and workers involved in the slaughter process respectively. There is also lack of equipments and reagents for the laboratory to conduct periodic examination of the samples. The report therefore focuses on the problems faced and the applicable techniques acquired in Japan which can be applied to solve the problems.

(f)

Problems	Background
1. Animals slaughtered under unhygienic conditions.	1. Lack of knowledge on hygienic slaughter process. Sanitary slaughter facilities not maintained
2. High incidence of sourness of milk due to mastitis	2. Dairy farmers have little knowledge on hygiene management of their animals
3. The laboratory is not able to conduct tests on hygiene quality of meat and milk samples for food safety.	3. Lack of facilities and insufficient knowledge for sample analysis.

(g) **Obtained applicable techniques and knowledge:**

Problem	Obtained applicable techniques and knowledge
1. Animals slaughtered under unhygienic conditions.	1. Meat hygiene, Food sanitation management; Slaughterhouse waste and dead livestock treatment; slaughter and carcass dressing techniques; meat hygiene and HACCP
2. High incidence of sourness of milk due to mastitis	2. Sanitary management of dairy cows. Hygiene management of raw milk
3. The laboratory is not able to conduct tests on hygiene quality of meat and milk samples for food safety.	3. Assessment of quality in meat; Diagnosis of bacterial food-borne poisoning; Examination of raw milk and milk products;

(h) **Overall Goal:** Improve public health

(i) **Project Purpose:** Provide consumers with safe meat and milk products

(j) **Important assumptions:** - Animal diseases remain under control

- Trained staff remain unchanged

Pre-condition -Budget is available on time

Widen

(D) PLAN OF OPERATIONS

Activities	Expected Outputs	Person/ Organization responsible	Schedule				Inputs		Cost (US\$)
							Man power	Materials	
			2010	2011	2012				
1-1.Prepare a plan to improve equipment for the laboratory	Laboratory is better equipped	Officer in-charge (Bt. Lab)	3	6	9	1	Project coordinator, 2 Lab. Technicians	Lab. reagents and equipments, 4 computers, 1 vehicle, 1 motorcycle	70000
1-2.Procure necessary laboratory equipments									
2-1.Prepare training program for lab technicians	Laboratory technicians' skills are improved	DAHLD & (Bt. Lab)					Project coordinator, 2Facilitators	Training facility, computer, overhead projector, stationary	5000
2-2.Produce training materials									
2-3.Train lab technicians									
3.1.Draw up a routine sampling program	Examination of meat and milk for hygiene & safety improved	Officer in-charge (Bt. Lab)					Project coordinator, 8 Lab. technicians	1 vehicle, 1 motorcycle, reagents, lab. equipments (above)	30000
3.2.Conduct periodic sampling									
4.1. Formulate a training program on hygienic slaughter process.	Knowledge of workers(meat processors) in the slaughter slabs is improved	DAHLD & (Bt. Lab)					Project coordinator, 2 Facilitators	computer, overhead projector stationary, Training facility	15000
4.2.Selection of trainees									
4.3.Produce training materials									
4.4. Train slaughter slab workers									
4.5.Conduct routine supervision									
5.1.Conduct a survey to identify sanitary needs	Slaughter slabs have better sanitary facilities	DAHLD & (Bt. Lab)					Project coordinator, 2 experts	Slaughterhouse waste disposal facilities, rails, hooks	10000
5.2.Formulate a plan to improve sanitary facilities									
5.3.Provide necessary sanitary facilities									

6.1. Formulate a training workshop for Animal Health extension workers (TOT) on good sanitary management of dairy cows	Animal Health Extension workers' knowledge is improved	DAHLD & (Bt. Lab)	Project coordinator, 2 experts	Training facility, computer, overhead projector, stationary	15000
6.2. Selection of trainees.					
6.3. Produce training materials					
6.4. Train Animal Health Extension workers					
7.1. Draw up a training program for dairy farmers on sanitary management of dairy cows.	Dairy farmers' knowledge is improved	DAHLD & (Bt. Lab)	Project coordinator, 1 expert, 6 Animal Health Ext. workers	Training facility, vehicle (above)	15000
7.2. Selection of trainees					
7.3. Produce training materials					
7.4. Train dairy farmers					
8.1. Conduct routine monitoring	Monitoring & Evaluation	DAHLD & (Bt, Lab)	Project coordinator, 1 expert	1 vehicle, 1 motorcycle, 2 computers (above)	30000
8.2. Conduct Evaluation					
TOTAL Cost (USD \$)					190000

マラウイ

MPHEPO Ruth Matimati

Interim Report

Name: Ruth Matimati Mphepo

Country: Malawi

Course: Utilization and preservation of animal products

- a. **Project Title: Improve Beef and Dairy Productivity and Quality**
- b. **Organizer: Natural Resources College**
- c. **Target Group: Beef and Dairy section workers and The College students**
- d. **Target Area: Natural Resources College Farm**
- e. **Duration: Two Years**
- f. **Problems Identified/ to be solved and the background**

Problems	Background
1. Limited utilization of feeds hence low milk produced and low quality beef	1. Limited processing of feeds like silage, hay and concentrated feeds for cattle
2. Unhygienic conditions for cattle slaughtering at the abattoir	2. Lack of knowledge on hygienic slaughter process, sanitary facilities not maintained
3. Under utilization of cattle by products	3. Lack of knowledge on cattle by products management and utilization

g. Obtained applicable techniques and knowledge learn during the training

Problems	Obtained applicable knowledge and techniques
1. Cattle grazed in only green pastures hence low milk produced and low quality beef	1. Fattening techniques and feeding techniques, sanitary management of dairy cows, hygiene management of raw milk, mastitis diagnosis
2. Unhygienic conditions for cattle slaughtering at the abattoir	2. Slaughter and carcass dressing, safety of meat, application of HACCP and slaughter house hygiene
3. Under utilization of cattle by products	Cattle by products processing, preservation and utilization, dead livestock handling treatment.

h. Overall Goal: To serve consumers with safe and good quality beef and dairy products

i. Project Purpose: To improve the beef and dairy productivity and quality

j. The plan of operation

Plan of operations Activities	Expected Outputs	Person/ Organizatio n responsible	Schedule						Inputs Manpower	Materials	Cost (US\$)										
			2010/2011		2011/2012																
			6	9	12	3	6	9				12	3								
1.1 Briefing staff members	Improved knowledge in feed making, processing and utilization	NRC	X																		
1.2 Conduct an awareness on good feed management			X																		
1.3 Sourcing the pastures seeds			X																		
1.4 Land preparation for pastures			X																		
1.5 Concentrated feeds formulation			X				X														
1.6 Maintenances of the abattoir plant																					
1.7 Supervision on the progress																					
1.8 Silage making																					

2.1 Maintenances of the abattoir	Workers improve knowledge on by products preservation	NRC																		Stationary Abattoir maintenances	1000							
2.3 On job training to personnel engaged in cattle production on by products processing and preservation																				X	X	X	X	X	X	X	Farm manager	2000
2.4 Conducting farm practices to students																											10 farm workers	10000
2.5 Conduct on going supervisions on the progress																												
2.6 Land preparation for pastures																												
2.7 Silage making																												
2.7 Concentrated feeds making																												
TOTAL																						61,500						

Project Framework

Name: Ruth Matimati Mphepo

Organization: The Natural Resources College Farm

Country: Malawi

Overall Goal	<ol style="list-style-type: none"> 1. Increased milk productivity 2. Increased Dairy cow herd raised 3. Increased income from dairy products
Project Purpose	Increased dairy productivity
Outputs	<ol style="list-style-type: none"> 1. Personnel trained in dairy products processing 2. Milk processed into yorgurt, cheese, ice cream 3. Workers in dairy section trained in feed making
Activities	<ol style="list-style-type: none"> 1.1 Train dairy section personnel in processing dairy products <ol style="list-style-type: none"> 1.1.1 A personnel trained in dairy products processing 1.1.2 A personnel trained in Milk preservation 2.1 Milk processing into <ol style="list-style-type: none"> 2.1.1 Yogurt 2.1.2 Ice cream 2.1.3 Cheese 3.1 Dairy workers trained in feed making <ol style="list-style-type: none"> 3.1.1 Trained in feed formulas 3.1.2 Trained in feed materials mixing 3.1.3 Trained in Feeding the dairy cows

INTERIM REPORT

Name : Gabriella Chiutsi-Chapota
Country : Malawi
Course : Utilization and Preservation Techniques for Animal Products

Project Title : Improved Processing Techniques for Animal products applied
among food technicians in Malawi

Organizer : Natural Resources College (NRC)

Target Group: Students Pursuing Diploma in Food Nutrition and Livelihoods
Security (FNLS); Diploma and Degree in Food technology

Target area: Throughout Malawi

Duration : 2 years

Problems	Background
1. Inadequate knowledge among the technicians in animal products utilization and preservation	There is no institution which offers Food technology as a course in Malawi which could have more information on animal products preservation.
2. Locally processed animal food products are limited in Malawi.	The food processing and preservation techniques are bias towards food crops in most training institutions.
3. Unsafe locally produced animal products.	Hygienic practices not properly followed during food processing and preservation.

Problems	Obtained applicable techniques and knowledge
1. Inadequate knowledge among the technicians in animal products utilization and preservation	Fundamentals of Meat science, meat hygiene, factors affecting raw milk constituents, Sanitary management milk production, safety of meat and meat products, Conversion of meat to muscle, Assessment of meat quality, carcass grading; Livestock disease and meat inspection, Food processing techniques and bacterial, physiological analysis of meat products, Food packaging materials science,
2. Locally processed animal food products are limited in Malawi.	Food processing techniques and bacterial, physiological analysis of meat products, Processing techniques of dry cured ham, meat processing techniques with adding extra value.
3. Unsafe locally produced animal products	Meat hygiene, Hygiene management of raw milk, safety of meat and meat products, Meat hygiene and HACCP, problems related to meat products safety.

Overall Goal: Increase availability of locally produced animal products in Malawi

Project purpose: Increased number of technicians with knowledge in utilization and preservation of animal products

Operation Plan

Activities	Expected outputs	Schedule		Schedule	Input		Cost (USD)
		2000-11 4 Quarters	2011-12 4 Quarter		Personnel	Materials	
1.1 Incorporate animal products processing and preservation techniques in Food Technology curriculum	Draft Food Technology Curriculum developed	2	1	1	1 Lecturer	Stationery	100
		X	X	4			
1.1.1 Prepare course outline for the Food Technology curriculum	Draft course outline for Introduction to Food Science, Food analysis, Meat science, Food packaging developed.	X	X	2	3 Lecturer	Stationery	300
				3			
1.1.2 Organize curriculum development workshop for stakeholders.	Stakeholders input on the draft curriculum	X	X	1	1 Facilitator 40 Stake holders	Facilitation fee Stationery Meals Accommodation Allowance Conference room	650 500 10000 17000 11000 500
				4			

1.1.3	Revise the draft curriculum for Food technology	Food Technology curriculum developed	X														Stationery	100
1.2	Incorporate animal products processing and preservation techniques in Food Processing and Preservation module	Animal products preservation and processing techniques incorporated such as; ham, cheese, yogurt and sausage making	X														Meat grinder, stuffing machine, incubator Smoking chamber Kitchen ware Cheese equipment	300 250 2000 300 450 500
1.3	Train students in animal products and preservation techniques	120 students trained per year in ham, yogurt cheese and sausage making	X		X												Stationery Raw materials	100 400
1.4	Conduct research on preservation techniques of animal products that are suitable for households without refrigeration facilities.	Dried animal products promoted	X		X												Stationery Raw materials Solar drier	100 400 300
Total cost																		45250

Project Framework

Name: Gabriella Chapota
 Organization: Natural Resources College
 Country: Malawi

Overall Goal	Stunting levels among Infants and Young Children (0-2years) reduced. Child mortality among Infant and Young Children (0-2) reduced
Project Purpose	Wasting levels among children reduced
Outputs	1. Increased dietary intake among Infant and young Children 2. Reduced frequency of illness among Infant and Young Child
Activities	<p>1.1 Train community workers proper feeding practices of children</p> <p>1.1.1 Children should be given foods rich in protein and energy</p> <p>1.1.1.1 Children to be given eggs and milk at least 3 times a week</p> <p>1.1.1.2 Children to be given mashed or ground meat under hygienic conditions</p> <p>1.1.2 Care taker to practice responsive feeding</p> <p>1.1.2.1 Support children when eating through songs, help hold the spoon.</p> <p>1.1.2.2 Care taker monitors the child when eating</p> <p>Give mashed vegetables to children</p> <p>Improve hygienic practices around the home</p> <p>Wash hands (for care taker and baby) when feeding the baby</p> <p>Prepare and keep food under hygienic conditions</p> <p>Take children to the clinic for growth monitoring and when they are sick</p> <p>Vaccinate children following the regime</p> <p>Provide vitamin A to children every 6 months</p> <p>Provide albendazole to children more than 12 months every 6 months</p> <p>Treat infection according to the prescription</p>

INTERIM REPORT

Name: Kingsley George Masamba

Country: Malawi

Course: Utilization and Preservation Techniques for Animal Products

- a. Project Title: Development and improvement of beef and dairy products
- b. Organizer: Bunda College of Agriculture
- c. Target group: Small scale cattle farmers
- d. Target area: Lilongwe, Dedza, Ntchisi and Thyolo districts
- e. Duration: 3 years

(f)

Problems	Background
1. There are limited value added animal products from small scale cattle farmers.	1. Lack of processing skills in animal products for the small scale cattle farmers.
2. Limited processing skills in animal products for agricultural extension staff.	2. Inadequate or limited extension services in animal product processing.
3. Limited research in animal product processing	3. Limited expertise in animal product processing and inadequately equipped laboratories.
4. Limited knowledge in beef and dairy products safety and hygiene	4. Inadequate training to small scale cattle farmers on beef and dairy products safety and hygiene.

(g) Obtained applicable techniques and knowledge learnt during the training course

Problem	Obtained applicable techniques and knowledge
1. There are limited value added animal products from small scale cattle farmers.	1. Practical training for animal product processing, examination of raw milk and milk product, meat processing techniques, meat processing techniques with adding extra value and processing technique of dry cured ham.
2. Limited processing skills in animal products for agricultural extension staff.	2. Animal product processing, HACCP, assessment of meat quality.
3. Limited research in animal product processing	3. Meat aging, colour, water holding capacity, physiochemical meat quality evaluation, meat hygiene HACCP, provision of safe food through conducting research.
4. Limited knowledge in beef and dairy products safety and hygiene	4. Inspection of meat and securing safety, meat hygiene and HACCP, food processing techniques and bacterial, physiological analysis of meat products.

(h) Overall Goal: To increase and improve beef and dairy products from small scale cattle farmers

(i) Project Purpose: Develop and improve processing skills in small scale cattle farmers for beef and dairy products.

(j) Important assumptions: - Proper coordination with important stakeholders
 - Committed and willing small scale cattle farmers

Pre-condition - Funds are readily available to support activities.

(f) Plan of Operations

Activities	Expected Outputs	Person/Organisation responsible	Schedule			Inputs			Cost (US dollars)
			2010	2011	2012	Manpower	Materials		
1.1. Research in animal product processing	Reliable baseline information is available before the project commences.	Bunda College of Agriculture, Department of Home Economics and Human Nutrition, donors.	X X X		2012	3 Staff, Home Economics and Human Nutrition, 2 Government staff and donors	Funds for research, activities and laboratory equipment(incubators, water baths, thermometers, Ph meters, sterilizers, colony counter, autoclave, scales)	75,500.00	
1.2. Choice of products(yoghurt, cheese, smoked beef,)									
1.3. Farmers identification									
1.4. Stakeholders identification									
2.1. Baseline study	Farmers and stakeholders knowledge on processing of animal products is improved.	Bunda College, Department of Home Economics and Human Nutrition, Government and donors		XXXX		3 Staff, Home Economics and Human Nutrition, Bunda College, 2 Government staff	Stationery, flip charts, transport expenses, accommodation expenses, other materials for training	20,000.00	
2.2. Training program development									
2.3. Training of farmers, agricultural staff and stakeholders									
2.4. Monitoring of activities									
3.1. Monitoring and evaluation of farmers activities	Project goal and purpose are achieved	Bunda College, stakeholders, donors and independent evaluators.			XXXX	3 Government staff, 2 government staff and 3 independent evaluators	Vehicle, allowances and payment for evaluators	20,000.00	
3.2. Final evaluation of the project.									
Total cost								115, 500	

Project Framework

Name: Kingsley George Masamba

Organization: University of Malawi, Bunda College of Agriculture

Country: Malawi

Overall Goal	Increased meat and milk products from small scale cattle farmers
Project Purpose	Improved processing skills in small scale farmers for animal products.
Outputs	<ul style="list-style-type: none"> - Adequate trained personnel in animal product processing - Availability of processing techniques in animal products ideal for small scale cattle farmers.
Activities	<ul style="list-style-type: none"> - Train more personnel in many aspects of animal product processing such as raw material handling, hygiene, quality control, packaging, safe storage of finished processed products and transportation of the products. - Train more cattle farmers on animal product processing techniques such as raw material handling, hygiene, quality control, packaging, safe storage of finished processed products and transportation of the products. - Conduct appropriate research on processing techniques for animal products which ideal for typical rural communities - Carry out campaigns to increase emphasis on value addition for animal products - Engage the institutions of higher learning and the responsible ministries on animal product processing to improve coordination - Encourage more farmers through campaigns to get involved in cattle farming.

マラウイ
KANTIKANA Owen Chipiliro

INTERIM REPORT

Name: Owen Chipiliro Kantikana
Country: Malawi
Course: Utilization and Preservation Techniques for Animal Products
Project Title: SAFE MILK
Organizer: Bunda College of Agriculture
Target Group: Milk Producing Farmers (Bulking Groups) around Bunda College
Duration: 3 years.

Identified Problems, Background and Applicable Techniques.

ITEM NO	PROBLEMS	BACKGROUND	OBTAINED APPLICABLE TECHNIQUES AND KNOWLEDGE LEARNT DURING THE COURSE
1	Poor sanitation/unhygienic practices by farmers.	Little involvement and supervision by extension workers	Field visits and microbiology lectures on problem identification. Hygiene Management of Raw Milk (Education & Training) Basic Milk testing methods.
2	Inadequate information dissemination systems/modes on basic hygiene to the primary milk handlers.	Unavailability of cheaper, appropriate and affordable means of disseminating information.	Group discussion with participants, course leader and coordinator. Effective information dissemination methods. i.e. charts, booklets.
3	Low participation from stake holders/secondary milk processors on hygiene practices implementation efforts.	Poor communication channels between parties involved in milk production and processing.	Field visits. (Yotsuba Visit) HACCP lecturer. Hygiene Management of Raw Milk (Education & Training)

Overall Goal: To produce safe and high quality milk for secondary processing of milk and milk products.

Project Purpose: To improve farmers' hygienic milk handling techniques.

PLAN OF OPERATION																		
ITEM No.	ACTIVITY	EXPECTED OUTPUT	PERSON/ ORGANIZATION RESPONSIBLE	SCHEDULE												MANPOWER	MATERIALS	COST (USD)
				2011				2012				2013						
				3	4	1	2	3	4	1	2	3	4					
1	Propose to College to include milk hygiene in most agricultural shows.	-Materials & resources to be used for the display	-Bunda College Home Economics & Human Nutrition Dept. (HE/HN)															
2	Obtain baseline information and data from Farmers and Companies.	-reliable data is collected on the actual problem.	Bunda College (HE & HN Dept) Milk Processors															15000.00

3	Conduct sensitization meeting with companies and extension workers to help distribute material and information. (Radio stations)	-Increased awareness of the problem and increased cooperation to improve the situation.	Bunda College, Processors, Radio Stations & press media.	2 technical staff. One from College & Processors.	Travel Expenses for two project staff from college	1000.00
4	Develop materials for problem awareness and rectification.	-Booklets posters are produced.	Bunda College (HE/HN, Animal Sc.) Donors (Processors, Govt. JICA Malawi)	2 members from HE/HN & animal Sci. Dept. Donors	Printer for Primary designing. Funds for Final Mass Printing Charge	3000.00
5	Conduct training with farmers on better milking Techniques	-Improved Milking Techniques and Hygienic practices.	Bunda College. Processors and	2 HE/HN Dept. & animal Sc. Dept. extension worker.	Charts, milking utensils, detergents, milk testing kit/equipment	2000.00
6	Lobby to companies to enforce their quality control systems (milk quality database) and involvement with farmers.	-Objective record keeping. -additional information. On product origin/source	Bunda College Processors & Farmers.	2 technical staff from College Dept (HE/HN)	Travel Expenses for two project staff from college	

7	Encourage companies to award farmers with equipment and facilities.	-Promotion messages or adverts of awards during meetings with farmers.	Bunda College, Processors & Media																	500.00
8	Collect data to check for trends in quality of (raw and processed) milk. Evaluation	-Final Report to evaluate project purpose.	-Bunda College (HE/HN Dpt.) Processors.																	1500.00
TOTAL																			23000.00	

マラウイ

NKHOMA Clemence Mickeas

~~Final~~ Interim Report

Name: Nkhoma Clemence Mickeas

Country: Malawi

Course: Utilisation and Preservation Techniques for Animal Products for Food Safety

- a. **Project title:** Healthy life through processor and consumer knowledge about meat hazards
- b. **Organiser:** Department of Animal Health and Livestock Development
- c. **Target group:** Butchermen and meat consumers
- d. **Target area:** Chikhwawa District
- e. **Duration:** Three years; June 2011 to June 2014
- f. **Identified problems and their background**

Problem	Background	Obtained applicable techniques and knowledge
Meat and meat products are eaten without inspection	There are few trained personnel to do meat inspection against many places where animals are slaughtered	Construction of an abattoir
		Introduce abattoir sanitary practices
Inadequate knowledge by consumers about meat hazards	There has been very little information to educate consumers about meat hazards	Introduce food safety commission to Malawi
Inadequate knowledge by butchermen about meat hazards	Inadequate butchermen training on meat hazards and HACCP	Introduce Hazard Analysis and Critical Control Points
Inadequate channels of communication to educate consumers on meat hazards	There are no proper communication channels to educate consumers on meat hazards	Introduce Hazard Analysis and Critical Control Points

- g. **Overall goal:** Improved human health
- h. **Project purpose:** Inspected meat and meat products are eaten

Plan of operation

ACTIVITIES	OUTPUT	PERSON/ ORGANISATION RESPONSIBLE	SCHEDULE												INPUTS	COST (USD)	
			2011			2012			2013			2014					
			3	4	1	2	3	4	1	2	3	4	1	2			Manpower
1.1 Preparation of education manual on meat hazards	1. Consumers have adequate knowledge about meat hazards	Ministry of Agriculture and Food Security													3 officers from Department of Animal Health and Livestock Development	Paper, toner, book binding machine, computer, printer	4,875
1.2 Educate butchermen on importance of meat inspection		Ministry of Agriculture and Food Security													14 officers from Department of Animal Health and Livestock Development	Paper, toner, Hall hire, transport	2,500
1.3 Distribute education manuals to butchermen and consumers		Ministry of Agriculture and Food Security													14 officers from Department of Animal Health and Livestock Development	Transport	1,875
1.4 Conducting meetings with officers in the		Ministry of Agriculture and Food Security														Computer, paper, toner, soft drinks	2,500

**Follow-up Survey of the Training on
“Utilization and Preservation Technique for Animal Product”
Japan International Cooperation Agency (JICA)
Obihiro International Center**

Follow-up Seminar

8th March 2012 9:00 – 11:00

Venue: Rwanda Bureau of Standard (RBS)

1. Welcome Remarks

Dr. Mark Cyubahiro Bagabe, Director General, RBS

2. Opening Speech

Nobuyuki Kobayashi, Program Director
JICA Obihiro International Center

3. Introduction of training in Japan

Hidetoshi Kinoshita, Program Coordinator
JICA Obihiro International Center

4. Lecture on “Safe Handling and Processing of Meat and Meat Products”

Masayuki Mikami, Emeritus Professor
Obihiro University of Agriculture and
Veterinary Medicine

5. Discussion and Way Forward

6. Closing Remarks

Dr. Mark Cyubahiro Bagabe, Director General, RBS

Master of Ceremony: Nobuyuki Kobayashi, Program Director
JICA Obihiro International Center

co-master of Ceremony: Dr. Mark Cyubahiro bagabe
Director General, RBS

**Follow-up Survey of the Training on
“Utilization and Preservation Technique for Animal Product”
Japan International Cooperation Agency (JICA)
Obihiro International Center**

Follow-up Seminar

14th March 2012 14:00 – 16:00

Venue: JICA Malawi Office

1. Opening Speech

Nobuyuki Kobayashi, Programme Director
JICA Obihiro International Center

2. Introduction of training in Japan

Hidetoshi Kinoshita, Programme Coordinator
JICA Obihiro International Center

3. Lecture on “Microbiology of meat and meat products, and dry meat products”

Masayuki Mikami, Emeritus Professor
Obihiro University of Agriculture and
Veterinary Medicine

4. Discussion and Way Forward

5. Closing Remarks

Director, DAHLD

Master of Ceremony: Nobuyuki Kobayashi, Programme Director
JICA Obihiro International Center

Seminar Attendance List in Rwanda

No	NAMES	INSTITUTION	POSITION	TELEPHONE	EMAIL
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32	TAMBINEZA Ange Soubirous	NATIONAL MEDIA GROUP(KFM)	Reporter/Presenter and Producer	788308066	ange_ineza@yahoo.fr
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39	INZAIRE Philip	RBS	Director QUALITY INSURANCE	788303603	pnzaire@rbs.org.rw

Seminar Attendance List in Malawi

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1	P. S. Makhanbera	Lilongwe Agricultural Development Division	Chief Animal Health and Livestock Development Officer		
2	G.B. Marwo	Blantyre Regional Veterinary Laboratory	Officer In-Charge		
3	T.F.T. Mlewah	Blantyre Agricultural Development Division	Principal Animal Health and Livestock Development Officer		
4	Ruth Matimati Mphepo	Natural Resources College	Assistant Farm Manager		
5	I.L.C. Chulu (Dr.)	Department of Animal Health and Livestock Development Bunda	CAHD		caeserD3@yahoo.com
6	Oliver Dadii		Lecturer		
7	Wame J. Chipendeko	Central Veterinary Laboratory	Laboratory Technician		
8	G.M.T. Chidzanja	Central Veterinary Laboratory	Laboratory Technician		
9	Patric Chikungwa (Dr.)	Department of Animal Health and Livestock Development	Deputy Director	0888371509	pchikungwa@yahoo.com