

Annex-1 Facilities and Equipment for YAU, and Equipment for DOA and DAR

Annex-1 (01)

Facilities for YAU

No.	Major Components	Q'ty	Remarks (Following matter should be respected)	Priority
1	Laboratory Buildings	2	Laboratory Buildings with necessary infrastructure (Electricity, Water supply and drainage, etc.) 2 stories, Reinforced concrete structure buildings. Laboratory Building - 1 (6 rooms) Laboratory Building - 2 (4 rooms)	A
2	Library	1	Library with IT room and etc. included 2 stories, Reinforced concrete structure building.	B

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Annex-1 (02) EQUIPMENT

Equipment for YAU

Name of Department: Agricultural Botany

No.	Name of Equipment	Quantity	Frequency of Use	Priority
1	Automatic digital osmometer	10	Teaching aid at weekly practical.	A
2	Potometer	10	Teaching aid at weekly practical	A
3	Urometer	5	Teaching aid at weekly practical.	A
4	Spectrophotometer	5	Teaching aid at weekly practical.	A
5	Plant Photosynthesis meter	1	Teaching aid at weekly practical.	A
6	Soil moisture meter	2	Teaching aid at weekly practical.	B
7	Auxanometer	5	Teaching aid at weekly practical.	A
8	Thistle funnels	20	Teaching aid at weekly practical.	A
9	Measuring cylinders	10	Teaching aid at weekly practical.	B
10	Micro Pipette	10	Teaching aid at weekly practical.	B
11	Test Tube + Stand	100 + 10	Teaching aid at weekly practical.	B
12	Chlorophyll Meter	2	Teaching aid at weekly practical.	A
13	Leaf Area Meter	2	Teaching aid at weekly practical.	A
14	Temperature-Humidity-Illumination Meter	2	Teaching aid at weekly practical.	B
15	Permanent slides	5 set	Teaching aid at weekly practical.	A
7	Plant Growth Chamber	1	Weekly practical work	A
8	Digital Hand-Held Refract meter	2	Measure the sugar content and temperature	B
9	Photometer	2	Weekly practical work	A
10	Hot water flask	10	Weekly practical work	B
11	Thermometer	10	Weekly practical work	B
12	Pipette	15	Weekly practical work	B
13	Moisture tester	10	Weekly practical work	A
14	Digital Scale	10	Teaching aid at weekly practical.	B

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15	Digital Balance	10	Teaching aid at weekly practical.	B
16	VWR-vista vision microscope slides	10 packs	Teaching aid at weekly practical.	A
17	VWR-vision cover glasses	10 packs	Teaching aid at weekly practical.	A
18	Microscope with camera and computer (complete set)	2	Teaching aid at weekly practical.	A
19	Microscope	20	Teaching aid at weekly practical.	B
20	Stature of Biology	5 set	Teaching aid at weekly practical.	B
21	Slide box	5 set	Teaching aid at weekly practical.	A
22	DNA structure, DNA model, DNA simulation kits etc.	3 sets	Teaching aid at weekly practical.	A
23	Model of plant cell division etc.	3 sets	Teaching aid at weekly practical.	B
24	Fluorescence microscope joining with computer (complete sets)	2	Teaching aid at weekly practical.	A
25	Cavity Slide	10 packs	Teaching aid	A
26	LCD Projector + Computer + Scanner (Set complete)	1	Teaching aid at weekly practical.	A
27	Air-condition (Split type 2.0 HP and above)	5	Using daily in Laboratory	A
28	Safe Guard (any type)	5	Using daily in Laboratory	B
29	Generator 20 KW	1	Using daily in Laboratory	B
30	Laboratory Refrigerator	5	Using daily in Laboratory	A
31	Motor	2	Using daily in Laboratory	B
33	Steel shelves	3	Using daily in Laboratory	B
34	Lab table	1	Using daily in Laboratory	A
35	Side table	1	Using daily in Laboratory	A
36	Side table	1	Using daily in Laboratory	B
37	Lab chair	5	Using daily in Laboratory	A
38	Steel basin	1	Using daily in Laboratory	B

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39	Steel Sink tap	1	Using daily in Laboratory	B
40	Single Chamber Storage Refrigerator or Freezer	1	Using daily in Laboratory	B
41	Digital Balance	1	Using daily in Laboratory	A
42	Leaf area meter	1	Using daily in Laboratory	B
43	Lux meter	1	Using daily in Laboratory	B
44	Air compressor	1	Using daily in Laboratory	B
45	Digital camera	1	Using weekly in Laboratory	B
46	Quantum Light Meter	1	Using weekly in Laboratory	B
47	Vacuum Emasculator	1	Using daily in rice field practical	A
48	Silica gel	5 Package	Using weekly in Laboratory	A
49	Plastic measuring cup	5 sets	Teaching aid at weekly practical.	B
50	Plastic measuring cylinder	5 sets	Teaching aid at daily practical.	B
51	Plastic beaker	5 sets	Teaching aid at daily practical.	B
52	Desiccator (Vacuum)	2	Teaching aid at daily practical.	A
53	Petri dish	50	Teaching aid at daily practical.	A
54	Measuring vernier caliper	2	Teaching aid at weekly practical.	A
55	Magnifier	5	Teaching aid at daily practical.	B
56	Filter paper	3Boxes	Teaching aid at weekly practical.	B
57	Measuring tape	2	Teaching aid at daily practical.	A
58	Scissor	30	Teaching Aid at daily practical.	A
59	Forceps	30	Teaching Aid at daily practical.	A

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Name of Department: Department of Research Farm

First priority (Option-1): All complete set of meteorology instrument from Japan is available.

Second priority (Option-2): All set of digital agro-meteorology instrument.

RainWise Portable Weather Logger

The instruments record the following parameters:

- Wind Speed
- Wind Direction
- Temperature
- Humidity
- Dew Point
- Barometer
- Rainfall
- Solar radiation

Third priority (Option-3): Manual agro-meteorology instrument.

No.	Item	Unit	Frequency of Use	Priority
1	Evaporation Pan	1 Complete set	Daily records	A
2	Cup Counter Anemometer	1	Daily records	A
3	Wind Vane	1	Daily records	A
4	Maximum/Minimum Thermometer	1 set	Daily records	A
5	Stevenson screen 26" x 20" x 24" (WxDxH)	1	Daily records	A
6	Hygrometer	1	Daily records	A
7	Barometer	1	Daily records	A
8	Sunshine recorder	1	Daily records	A
9	Rain fall recorder	1	Daily records	A
10	Flux meter	1	Daily records	A
11	Digital soil temperature meter	1	Daily records	A
12	K14 In/Out Minimum and Maximum Thermometer	1	Daily records	B
13	Light intensity meter	5	Daily records	B
14	Green House			B

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Name of Department: Agricultural Chemistry

No	Name of Equipment	Q'ty	Frequency of Use	Priority
1	Atomic Absorption Spectrophotometer	1	weekly to monthly	A
2	Oil Content Tester (Multi sample Soxhlet Extraction Unit)	1	weekly to monthly	A
3	Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	1	weekly to monthly	A
4	Gas Chromatography (with different column)	1	weekly to monthly	A
5	Grinder (Soil, Plant)	1	weekly to monthly	A
6	Oven (0 - 120°C)	2	Daily to weekly	A
7	Auto Burette	2	Daily to weekly	A
8	Electrical Conductivity Meter	2	weekly to monthly	A
9	Muffle Furnace	1	weekly to monthly	A
10	Soil Sampling Apparatus	1 set	monthly	A
11	Water sampling and field analysis set	1 set	monthly	A
12	Casagrande's apparatus	5 set	weekly to monthly	A
13	Chlorophyll meter (SPAD meter)	2	Daily to Weekly	A
14	Tensiometer	5	weekly to monthly	A
15	Water Distillation Unit	1	Daily	A
16	Ultra-water distiller (Water purifying apparatus)	1	Daily	A
17	Deionizer	1	Daily	A
18	Refrigerated Centrifuge	1	weekly to monthly	A
19	Centrifuge, top loading	5	Daily to Weekly	A
20	Analytical Balance	2	Daily	A
21	Top Loading Balance	5	Daily	A
22	Vortex Mixer	10	Daily	A
23	Water Bath	3	Daily	A
24	pH Meter	2	Daily to Weekly	A
25	Incubator	2	Daily to Weekly	A
26	Magnetic Stirrer	10	Daily to Weekly	A
27	Laboratory Tables and Furniture	1 Lot	Daily	A
28	Glasswares	1 Lot	Daily	A
29	Refrigerator (for Chemical and Samples)	1	Daily	A
30	Deep Freezer	1	Daily	A

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No	Name of Equipment	Q'ty	Frequency of Use	Priority
31	Ice Making Machine	1	Daily	A
32	Fume Hood	1	Daily to Weekly	A
33	UV-Vis Spectrophotometer	1	Daily to Weekly	A
34	Digestion Block	3	Daily to Weekly	A
35	Wet Sieving Apparatus	1 set	weekly to monthly	A
36	Turbidimeter	2	weekly to monthly	A
37	Thermometers (100 °C and 300 °C)	5 each	Daily to weekly	A
38	Pan Evapometer (Class A Pan)	3	Daily to weekly	A
39	Cold Room (3 x 3 x 3 m); 10 °C	1	Daily to Weekly	A
40	Drying Shelf (Heating system with timer)	2	Daily to Weekly	A
41	Cupboard (Multistorey; Steel Body with Glass Slide Door; with Lock)	5	Daily to Weekly	A
42	Desktop Computer	5	Daily to Weekly	A
43	LCD Projector with Screen	1	Daily to Weekly	A
44	Green House	1	Daily to Weekly	A

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Name of Department: Agricultural Economics

No	Name of Equipment	Q'ty	Frequency of Use	Priority
1	Laptop computers	40	5 days per week	A
2	Color photocopier (all paper sizes)		5 days per week	A
3	Laser printer	2	5 days per week	B
4	scanner	2	5 days per week	B
5	LCD projectors and screens	5	5 days per week	A
6	Computer tables and chairs	40	5 days per week	A
7	Cameras	2	5 days per week	A
8	Video Cameras	1	5 days per week	B
9	Air Condition	4	5 days per week	A
10	Sound box system set	2	5 days per week	B
11	STATA software	1	5 days per week	A
12	EVIEW software	1	5 days per week	A
13	GTAP	1	5 days per week	A
14	GAMS	1	5 days per week	A
15	GPS	1	5 days per week	A
16	GIS	1	5 days per week	A
17	Fascimile	1	5 days per week	C
18	Room partition	3	5 days per week	C
19	White board	5	5 days per week	C

Name of Department: Entomology and Zoology

No.	Name of Equipment	Q'ty	Frequency of Use	Priority
1.	Water distiller	1 set	Daily	A
2.	Hot air sterilizer	1 set	Daily	A
3.	Top loading balance	1	Daily	A
4.	Water bath (Ultrasonic cleaning machine)	1	Daily	A
5.	Glass ware	1 lot	Daily	A
6.	Chemical reagent	1 lot	Daily	A
7.	Temp. humidity control room	1	Daily	A
8.	Incubator	4 sets	Daily	A
9.	Analytical balance	2	Daily	A
10.	Autoclave(vertical)	1	Weekly	A
11.	Electric Soil sterilizer (50L)	1		B
12.	Refrigerator	1	Daily	A
13.	Laboratory tables and furniture	1 lot	Daily	A

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14.	Fume hood	1 set	Daily	A
15.	Ocular Micrometer	5	Daily	A
16.	GPS	1	Monthly	A
17.	Dissecting sets	10	Daily	A
18.	Corning Volumetric pipettes Pipetvolumetric Pyrex	5 each	Daily	A
19.	HPLC	1 set	Weekly	A
20.	Rotator evaporatory	1 set	Weekly	A
21.	Glass ware for pesticide residue analysis	1 Lot	Weekly	A
22.	Drying Oven	1	Everyday	A
23.	Homogenizer	1 set	Weekly	A
24.	Nitrogen and Hydrogen gas cylinder	1 set	Weekly	A
25.	Reagent and Analytical standard Pesticides for residue analysis	1 Lot	Weekly	A
26.	Hot plate and magnetic stirrer	2	Weekly	A
27.	Pipetter filler	10	Daily	A
28.	Hamilton Repeating Dispenser plus a 10- μL microsyringe	1 pair	Daily	A
29.	Wire mesh screw cap vial	200	Daily	A
30.	40-1600X Binocular biological digital microscope USB connection to PC Integral Camera	1	Daily	A
31.	Clear tumbler cages	100	Daily	A
32.	PCR (Polymerase Chain Reachain) machine	1	Monthly	A
33.	Nano-drop (RNA/ DNA measurement)	1	Monthly	A
34.	UV light illuminator with digital camera	1	Monthly	A
35.	Lattex rubber gloves	1000	Monthly	A
36.	Deep freezer for storing reagents	1	Monthly	A
37.	High speed refrigerated centrifuge	1	Monthly	A
38.	1.5 ml plastic tubes	1000	Monthly	A
39.	QIAGEN RN easy Minikit Catalog no. 74/04	1	Monthly	A
40.	Purelink Genomic DNA kits Catalog no. K 1820-01	1	Monthly	A
41.	Smart Tag premix kit	1	Monthly	A
42.	1% agarose gel	1 Bottle	Monthly	A
43.	100 bp plus DNA ladder	1	Monthly	A
44.	Ethidium Bromide (for staining)	200 ml	Monthly	A
45.	Biological safety cabinet standard	21	Monthly	A
46.	Variable volume Micropipette	22	Monthly	A
47.	Tips for micropipette	1000	Monthly	A
48.	Spin column	1000	Monthly	A
49.	Agarose gel electrophoresis apparatus	1	Monthly	A
51.	Gel Platform and Cool Pack with combs	1	Monthly	A

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52.	Staining box	1	Monthly	A
54.	Safety glasses/goggles	5	Monthly	A
55.	Micro pestles	1	Monthly	A
56.	Vortex shaker	1	Monthly	A
57.	Micro centrifuge tubes	100	Monthly	A
58.	Reagents compatible with the DNA/RNA analysis	1 Lot	Monthly	A
59.	PCR tubes rack	5	Monthly	A
60.	Beaker (Different size)	1 Lot	Monthly	A
61.	Measuring cylinders	20	Monthly	A
62.	Light trap cage	10	Daily	B
63.	Collecting Jars	20	Daily	B
64.	Aspirator	10	Daily	A
65.	Hygrothermometer	5	Daily	B
66.	Photocopier	1	Daily	B
67.	Video Camera	1	Daily	B
68.	Malaise trap	2	Sometimes	B
69.	Sticky traps	200	Sometimes	B
70.	Test tube rack	20	Daily	A
71.	Rack	10	Daily	B
72.	Petridish (Different size)	1 Lot	Daily	B
73.	Entomological Pins (Different Size)	1 Lot	Daily	A
74.	Frog Dissected Model	1	Daily	A
75.	Slide Storage Rack	20	Daily	A
76.	Insect Magnifying Bottle	10	Daily	A
77.	Insect rearing cage	10	Daily	A
78.	Insect net	10		A

Name of Department: Entomology and Zoology (General purpose and office use)

No.	Name of Equipment	Q'ty	Frequency of Use	Priority
1.	LCD projector	1	daily	A
2.	Photocopier (Canon iRC 2880)	1	daily	B
3.	Computer (Laptop)	2	daily	A
4.	Digital camera	1	frequent	A
5.	Air Conditioner	3	Daily	A
6.	Green House	1		B

Name of Department: Plant Pathology (Molecular Biology Lab)

No.	Name of Equipment	Q'ty	Frequency of Use	Priority
1	DNA thermal cycler and accessories for PCR	1	Weekly	A

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2	Electrophoresis systems and supplies	1	Weekly	A
3	Refrigerated micro centrifuge (250-1400 rpm)	1	Weekly	A
4	Ultra low temperature freezer (-40°C to -80°C)	1	Weekly	A
5	Micropipette (0-25µl) and micropipette tips (5 packs)	5 & 5 packs	Weekly	A
6	Micropipette (20-200µl) and micropipette tips (5 packs)	5 & 5 packs	Weekly	A
7	Micropipette (100-500µl) and micropipette tips (5 packs)	5 & 5 packs	Weekly	A
8	DNA isolation kit (for fungi, bacteria, nematodes and viruses)	each 3	Weekly	A
9	Vortex (× 2)	2	Weekly	A
10	DNA auto-sequencer	1	Weekly	A
11	Vacuum pump	1	Weekly	A
12	UV Trans-illuminator	1	Weekly	A
13	Supplies and reagents for PCR (5)	1	Weekly	A
14	Gel dryer	1	Weekly	A
15	Instant gel camera	1	Weekly	A
16	Step one real time PCR and accessories supply	1	Weekly	A
17	SYBR green master mix (10 packs)	1	Weekly	A
18	Specific primers for check	1	Weekly	A
19	Gene quant 100 (for optical density)	1	Weekly	A
20	pH meter	1	Weekly	A
21	EC meter	1	Weekly	A
22	ATP photometer	1	Weekly	A
23	Monofas DNA purification kit	1	Weekly	B
24	Sonicator	1	Weekly	B
25	Agarose gel powder (100g)	2	Weekly	A
26	Ethanol (10 bottles)	10 bottles	Weekly	B
27	Chloroform	10 bottles	Weekly	B
28	Glass bead and zirconia bead	10 bottles	Weekly	A
29	Isoproponal	10 bottles	Weekly	B
30	Water Distiller	1		A
31	Deionizer	1		A

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32	Analytical Balance	1		A
33	Top Loading Balance	5		A
34	Refrigerator (for storing chemicals & samples)	2		A
35	Deep Freezer	1		A
36	Ice Making Machine	1		A
37	Hot Air Sterilizer	1		A
38	Fume Hood	1		A
39	Glassware	1		A
40	Laboratory Tables and Furniture			A
41	Laminar Flow (Clean Bench)	1		A
42	Stirrer	10		A
43	Shaker	5		A
44	Vortex Mixer	20		A
45	Refrigerated Centrifuge	1		A
46	PCR Machine	1		A
47	Electrophoresis System and Supply	2		A

Name of Department: Plant Pathology (Plant Disease Diagnosis Lab)

No.	Name of Equipment	Q'ty	Frequency of Use	Priority
1	Binocular Microscope	30	Daily	A
2	Plant growth chamber	2	Daily	A
3	Autoclave (vertical)	1	Daily	A
4	Portable autoclave (35 L)	1	Daily	B
5	Laminar flow	1	Daily	A
6	Binocular microscope with digital camera attached and software included	1	Daily	A
7	Electric Soil sterilizer (50L)	1	Weekly	A
8	CCD camera with multi-adapter and software driver	1	Weekly	A
9	Colorimeter	1	Weekly	A
10	Haemocytometer	2	Weekly	A
11	Ocular micrometer	10	Weekly	A
12	Hot plate and magnetic stirrer	2	Weekly	A
13	Petri dishes (Glass- 9cm)	1000	Daily	B
14	Water distiller (steel)	1	Weekly	B
15	Hot water bath (10 L)	1	Weekly	B
16	Shaker (Chamber type)	1	Weekly	B
17	Colony counter	1	Weekly	A
18	Camera	1	Weekly	B
19	Video camera	1	Weekly	B
20	Hot Air Sterilizer	1		A
21	Drying Oven	1		A

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22	Vortex Mixer (Test tube shaker)	10		A
23	Ice Making Machine	1		A
24	Centrifuge	1		A
25	Glassware	1		A
26	Laboratory Table and Furniture	1		A
27	Magnetic Stirrer	10		A
28	Green House with equipment			A

Name of Department: Agricultural Engineering

No.	Name of Equipment	Q'ty	Frequency of Use	Priority
Land Survey Instruments				
1	Digital Total Station and Accessories (Reflectorless)	5		A
2	Reflector Set (for Total Station)	5		A
3	Digital Theodolite and Accessories	5		A
4	Digital Auto Level and Accessories	5		A
5	Surveying Compass (with Accessories)	5		A
6	Digital Pointfinder (Distance meter)	10		A
7	Clinometer	10		B
8	Differential GPS Instrument (Base and Rover Unit)	2		A
9	Line Laser Level (height/depth)	5		B
10	GIS Data Collection Equipment and Software	10		A
11	GPS Tracking System Equipment	10		A
12	Plane Table and Accessories (Pole, Tripod, Staff, Sight rule, Plumbing fork and Sprit Level)	10		B
13	Laboratory Tables and Furniture	1 lot		A
Tractor and Equipments				
14	Tractors	5		A
15	Disc Plough, Rotary Cultivator	3 each		A
16	Rice Transplanter	5		A
17	Thresher	2		A
18	Combine Harvester and Mill Machine	1 each		A
19	Sprayer	2		A
20	Seed Drill	1		A
Laboratory Equipment				
21	Prototypes for Engine and Components (cross-section)	10		A
22	Testing Tools (for Engine)	10		A
23	Electric/Electronic Testing Tools	10		A

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24	Measuring Instruments	10		A
25	Water Measuring Instruments	5		A
26	Digital Camera and DV Cam	2+1		A
	Teaching Aids			
27	Computer & Accessories	4+1		A
28	Projector and Board (overhead/stand)	1		A
29	Teaching Aid Instruments			A
30	Laser Printer	2		A
31	Digital Copier	1		A
32	Scanner	1		A
	Research and Development			
33	Workshop with Equipment and Instruments	1		A
34	Air-conditioning System	6		A
35	Engineering Drawing Kit	1		A
36	Rotary Tiller	5		A

Name of Department: Animal Science

No.	Name of Equipment	Q'ty	Frequency of use	Priority
1	Dairy cattle housing for 10 dairy cattle	1 set		A
2	Battery Cage housing and equipment for 200 layers	1 set		A
3	Pig housing and equipment for 20 pigs	1 set		A
4	Overhead Water-tank	1		A
5	Small scale feed mill	1set		A
6	Equipment for proximate analysis of feed	1		B
7	Incubator	1		C
8	Deep freezer	1		B
9	Computer and printer	1 set		B
10	Egg candler	2		C
11	Laptop	1		A
12	Digital balance (small, medium & large)	3		A
13	Digital video camera	1		C
14	Dissecting tray	2 set		B
15	White board (4ft x 8 ft)	2		B
16	LCD projector	1 set		C
17	Lactometer	20		B
18	wing band for marking in poultry	1000		B
19	leg band for marking in poultry	1000		B
20	ear notcher for marking swine	20		B
21	tail tags for marking in cattle	500		B
22	ear tags for marking in cattle and swine	500		B
23	Debeaking machine for debeaking chick	5		C
24	Stethoscope	20		B

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25	Update references and text-books for large ruminants, small ruminants, poultry and swine	1 lot		A
26	Soft copy for improved systems for livestock and poultry production	1 lot		A
27	Dairy cattle	10		A
28	Poultry layers	200		A
29	Pig	20		A
30	Laboratory table and furniture	1 Lot		A
31	Glassware for laboratory	1 lot		A

Name of Department: Agronomy

No.	Name of Equipment	Q'ty	Frequency of Use	Priority
Seed Laboratory				
1.	Grain moisture tester	5	frequently	A
2.	CSC infrared moisture balance	1	weekly	B
3.	All-purpose laboratory ovens	2	frequently	A
4.	Digital electronic thermometer	5	frequently	A
5.	hay sampler kit	2	frequently	A
6.	desiccators and Drierite indicating desiccant	5	frequently	A
7.	electric grinding mill	1	weekly	A
8.	Battery operated ultraviolet lamp	2	frequently	A
9.	Aflatoxin, vomitoxin and fumonisin test kits	2	rarely	C
10.	Alpha amylase testing	2	frequently	A
11.	Easi-way portable hectoliter test weight kit	3	frequently	B
12.	hand type density testers	1	weekly	A
13.	computer grain scale	1	frequently	
14.	grain probes	3	frequently	B
15.	Grain sampling canvas	10	daily	
16.	pneumatic sampling systems	1	frequently	C
17.	precision divider	1	weekly	A
18.	Dockage tester and sieves	1	frequently	A

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19	Sieve shaker	2	frequently	A
20	select germinator	2	frequently	B
21	germination paper	10	frequently	A
22	germination blotters	10	frequently	A
23	Analytical dishes	1	frequently	B
24.	Seed containers	1	frequently	A
25.	Seed measures	5		B
26.	inverted display bottles	100	frequently	A
27.	Shelving units	2	frequently	B
28.	Heavy duty utility carts	2	frequently	B
29.	seed counters	2	weekly	A
30.	hygrothermograph	2	frequently	A
31.	portable dual-purpose scopes	5	frequently	A
32.	counting and placement trays	5	frequently	A
33.	tetrazolium powder	2	weekly	A
34.	Seed storage room dehumidifier	1	daily	A
35.	electric seed scarifier	2	weekly	B
36.	gravity separator	1	frequently	A
37.	Laboratory model centriccoater	1	frequently	C
38.	table mounted electronic packer	1	weekly	C
39.	Laboratory seed and grain dryer	1	frequently	A
40.	Port-a-pic grain inspection table	2	frequently	A
41.	Custom brass sieves	10	weekly	B
42.	forceps	30		
43.	De-stoner	1	frequently	A
44.	Triangular Sample Pans	10	frequently	B

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45.	Half gallon and gallon Containers	10	frequently	A
46.	Spouted sample pans	5	weekly	C
47.	Bag Sealers	1	rarely	C
48.	Polyethylene Grain Sample Bags	100	frequently	A
49.	UV-VIS Spectrophotometer	1	frequently	A
50.	Gas Chromatograph	1	rarely	C
51.	Freeze Dryer	1	rarely	C
52.	Hot Water Bath	2	daily	A
53.	20L Rotary Evaporator	1	weekly	A
54.	Hot plate magnetic stirrer	2	frequently	A
55.	Laboratory refrigerated centrifuge	1	weekly	B
56.	Storage cabinets	2	frequently	A
57.	Harvest monitor	2	weekly	B
58.	Near Infrared component analyzer	1	frequently	A
59.	Single grain inspector	1	frequently	A
60.	Rice freshness tester	1	frequently	B
61.	Grain crusher	1	weekly	B
62.	Laboratory fume hood	1	frequently	A
63.	Lab stools	20	frequently	B
64.	First aid kit	1		A
65.	Grain & feed safety signs	1	frequently	A
66.	Cool room for seed storage	1	frequently	A
67.	Air conditioner	2	frequently	A
68.	Computer and its accessories	3	frequently	A
69.	Vortex mixture		frequently	A
70.	Micropipettes	4	daily	A

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71.	Photometric Colorimeter	1	frequent	A
72.	Water Distiller	1	frequent	A
73.	Deionizer	1	frequent	A
74.	pH Meter	3	frequent	A
75.	Autoclave	1	frequent	A
76.	Hot Air Sterilizer	2	frequent	A
77.	Analytical Balance	2	frequent	A
78.	Top Loading Balance	5	frequent	A
79.	Refrigerator (for storing chemicals and sample)	1	frequent	A
80.	Deep Freezer	1	frequent	A
81.	Glassware	1	frequent	A
82.	Laboratory Tables and Furniture	1	frequent	A
Crop Physiology				
1.	Plant Growth Chamber	1	Frequent	A
2.	Brix Hand Refractometer	5	Frequent	A
3.	Soil Moisture Meter	5	Frequent	A
4.	Soil pH Meter	5	Frequent	A
5.	Minolta Chlorophyll Meter	5	Frequent	A
6.	Potable Leaf Area Meter	1	Frequent	A
7.	Photosynthesis Meter	1	Frequent	A
8.	Solar power meter (Potable type)	3	Frequent	A
9.	Operation Manual for temperature and humidity meter (Potable type)	3	Frequent	A
10.	Animometer (Potable type)	3	Frequent	A
11.	Rain Gauge (Potable type)	3	Frequent	A
12.	pH conductivity meter (Potable type)	3	Frequent	A
13.	Water Distiller	1	Frequent	A
14.	Glassware	1	Frequent	A
15.	Laboratory Tables and Furniture	1	Frequent	A
16.	Refrigerator (for samples and reagents)	1	Frequent	A
17.	Top Loading Balance	2	Frequent	A
18.	Drying Oven	1	Frequent	A
19.	Autoclave	1	Frequent	A
20.	Hot Air Sterilizer	1	Frequent	A
21.	Small Green House	1	Frequent	A
General purpose and office use				
1.	LCD projector	1	daily	A
2.	Photocopier	1	daily	B
3.	Computer	2	daily	A
4.	Video camera	1	frequent	A
5.	Digital Camera	1	frequent	A
6.	Air Conditioner	3	daily	A
7.	Green House	1		B

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Name of Department: Horticulture

No.	Name	Q'ty	Frequency of Use	Priority
1.	Drip Irrigation System	1 set	High	A
2.	Sprinkler/mist Irrigation System	2 sets	High	A
3.	Chlorophyll Meter	1	Medium	B
4.	On-table Pressure Bomb	1	Medium	A
5.	Light/ Lux meter	2	High	A
6.	Tensiometer (6 inches depth)	1	High	A
7.	Tensiometer (18 inches depth)	1	High	A
8.	Pectinase Cellulase Enzyme	10 L	Medium	B
9.	Power tiller	1	High	A
10.	Budding knives and grafting knives	30	High	A
11.	Secateurs	30	High	A
12.	Plant growth chamber	2	High	A
13.	Plant growth chamber	1	Medium	A
14.	Steel Cabinet	4	High	A
15.	Photocopier (Canon iRC 2880)	1	High	A
16.	Air conditioner/ air cooler	3	High	A
17.	Digital Balance (60 kg)	1 set	Medium	A
18.	Cold storage facilities	1 set	frequently	B
19.	Woodchipper	1	medium	B
20.	Soil sterilizer	2	high	
21.	Chemical protective safety suit	4 sets	high	A
22.	Flammable storage cabinet	1	high	A
23.	Cylinder storage cabinet	1	high	A
24.	Poly Acid/ Corrosive Cabinet	1	high	A
25.	Green House	1	High	B
1.	Water Distiller	1 set	High	A
2.	Deionizer	1 set	High	A
3.	Drying Oven	3 sets	High	A
4.	Autoclave	1 set	High	A
5.	Hot Air Sterilizer	1 set	High	A
6.	Incubator	2 sets	High	A
7.	Vortex Mixer	5 sets	High	A
8.	Water Bath	2 sets	High	A
9.	Refrigerator	1 set	High	A
10.	Deep freezer	1 set	High	A
11.	Ice making Machine	1 set	High	A
12.	Laboratory Table and Furniture	1 lot	High	A
13.	Analytical Balance	2 sets	High	A
14.	Top Loading Balance	3 sets	High	A

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15.	Refrigerated Centrifuge	1 set	High	A
16.	Table-top Centrifuge	3 sets	High	A
17.	Laminar Flow (Clean Bench)	5 sets	High	A
18.	Standard PCR	2 sets	High	A
19.	Real Time PCR	1 set	High	B
20.	Electrophoresis system with Power Supply	2 set	High	A
21.	UV image recorder and printer	2 set	High	A
22.	Liquid nitrogen +Dewar transport container	5 sets	Medium	A
23.	Milling system	1 set	Medium	A
24.	Heating block	1 set	Medium	A
25.	Nano-drop Photometer with Cuvette	1 set	Medium	A
26.	Gel Electrophoresis system	2 sets	Medium	A
27.	UV Gel detection system with camera	2 sets	Medium	A
28.	Incubator with shaking function	2 sets	Medium	B
29.	Tissue culture roller drum	2 sets (one for each option)	High	A
30.	Automatic pipette washer	1	High	A
31.	Automatic glassware washer	1	High	A
32.	Pipette holder	3	High	A
33.	Orbital shaker	3sets	High	A
34.	Medium dispenser		High	A
35.	Filter sterilization unit with complete accessories	1	High	A
36.	Laboratory Vacuum pump	1	High	A
37.	Generator	1	High	A
38.	Ultrasonic cleaner	1	High	A
39.	Electric digital timer	10	High	A
40.	Micropipette holder		High	A
41.	Tips for micropipettes	5 packs	High	A
42.	Hotplate with Magnetic stirrer (including magnetic bar and Stirring bar retriever)	5 sets	High	A
43.	Safety laboratory apparatus	2 sets	High	A
44.	Ergonomic Lab chair	10	High	A
45.	Acclimatization room and facilities for plant tissue culture laboratory	1unit	High	A
46.	Glass wares for plant tissue culture lab	1 lot	High	A
47.	Chemicals for TC lab	1 lot	High	A
48.	Research stereo Microscope	1	High	A

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49.	Biosafety cabinet	1	Medium	A
50.	Humidifier	2	High	A
1.	TDR (Time Domain Refractometry)	1	Medium	A
2.	Plant moisture stress (PMS) analyzer	1	Medium	A
3.	Thermo Hygrometer (Extech Humidity and Temperature Datalogger)	2	High	A
9.	Vernier Caliper	10	High	A
10.	Multi-parameter for pH/ temperature/ conductivity of soil	2	High	A
11.	Photosynthesis Yield Analyzer (miniPPM, WALZ)	1	High	A
12.	Portable Leaf area meter	1	High	A
1.	Refractometer	10		
1-a	Digital hand-held pocket refractometer	2	High	A
1-b	Digital hand-held pocket refractometer	2	High	A
1-c	hand-held refractometer	2	High	A
1-d	hand-held refractometer	2	High	A
1-e	hand-held analog refractometer	2	High	A
2.	Dial Fruit Pressure Tester	2	High	A
3.	Fruit Juice Extractor	2	High	A
4.	Hand-held pH/ conductivity meter	1	High	A
5.	Gas Chromatographs (TCD)	1	Medium	A
6.	Gas Chromatographs (FID)	1	Medium	A
7.	UV-VIS Spectrophotometer	1	Medium	A
8.	Rotary Evaporator	1	Medium	A
9.	Total acidity mini titrator and pH meter	1	High	A

Name of Department: (General Equipment)

No.	Name of Equipment	Q'ty	Frequency of Use	Priority
1	Transport facilities - 5 Buses for Student and staff excursion /Study Tour	5	Daily/Weekly	A
2	Auto backup generator	1	Daily/Weekly	A
3	Library facilities - Text Books and Journals (Both printed version and on-line)			A
4	Facilities for student affairs and examination Sections (Computers and Software eg student registration, enrollment for specific course)	1 package	Daily/Weekly	A

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5	Main Server-Internet facilities	1 lot	Daily	A
6	Intercom facilities 100 Lines (Inter-Departmental communications)	1 set	Daily	A
7	Air-conditioning for Auditorium (500 seats) and 3 lecture theaters	6 10	Daily/Weekly Daily/Weekly	A A
8	Audio-Visual Equipment for new Library	1 set	Weekly	A

Name of Department: General Equipment for existing Auditorium /Lecture Theater

No.	Name of Equipment	Q'ty	Frequency of Use	Priority
1	AMPLIFIER N S.200 W	3	Every Weekday	A
2	12" SPEAKER BOX	12	Every Weekday	A
3	WIRELESS MIC	3	Every Weekday	A
4	SOUND BOX WIRE	3	Every Weekday	A
5	MEC TRONIC SAFEGUARD	3	Every Weekday	A
6	COOLING FAN	3	Every Weekday	A
7	NPE XL 1200 AMPLIFIER	2	Every Weekday	A
8	15" x 2 SPEAKER BOX	2	Every Weekday	A
9	18" SPEAKER BOX	2	Every Weekday	A
10	TREWEETER	2	Every Weekday	A
11	MIXER SX2442 MODEL	1	Every Weekday	A
12	BOX CABLE	2	Every Weekday	A
13	MIC WIRE 1 BOX	1	Every Weekday	A
14	MIC JECK	6	Every Weekday	A
15	MIC CONNEETOR	1	Every Weekday	A
16	SHURE MIC	3	Every Weekday	A
17	MIC STAND	2	Every Weekday	A
18	MEC TRONIC	2	Every Weekday	A

Name of Department: University Library

No.	Name of Equipment	Q'ty	Frequency of Use	Priority
1	Auto Book Scanner	1		A
2	Barcode Scanner	2		A
3	External Hard Disk	2		A
4	Server Computer	1		B
5	Office Copier	2		B
6	Inverter UPS and Battery	1 set		A

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REQUESTED LIST OF NEW BOOKS - YAU LIBRARY

No.	Title	Q'ty	Edition	Priority
1	Books for Agronomy	1 Lot		A
2	Books for Agricultural Botany	1 Lot		A
3	Books for Agricultural Chemistry	1 Lot		A
4	Books for Animal Science	1 Lot		A
5	Books for Plant Pathology	1 Lot		A
6	Books for Entomology	1 Lot		A
7	Books for Agricultural Economics	1 Lot		A
8	Books for Horticulture	1 Lot		A
9	Books for Agricultural Engineering	1 Lot		A
10	Books for Agricultural Mathematics	1 Lot		A
11	Books for Agricultural Physics	1 Lot		A
12	Books for Learning English Language	1 Lot		A
13	Books for Biotechnology	1 Lot		A
14	Books for Molecular Biology	1 Lot		A
15	Books for Sustainable Agriculture	1 Lot		A
16	Books for Computer Science	1 Lot		A
17	Books for Environmental Science	1 Lot		A
18	LanTTEAL2.0 Yearly Update(The Essential Electronic Agricultural Library)	Yearly		A
19	Statistical Software			A
20	Reference Manager			A
21	Library Furniture	1 Lot		A

Equipment for DOA

1. Equipment for Central Agricultural Research and Training Center (CARTC) 1 lot
2. Equipment for Vegetable and Fruit Research and Development Center (VFRDC) 1 lot

Equipment for DAR

1. Equipment for Seed Bank and other departments 1 lot

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Japan's Grant Aid Scheme

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, a new JICA law was entered into effect on October 1, 2008. Based on this law and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for General Projects, for Fisheries and for Cultural Cooperation, etc. The Grant Aid is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

The Japanese Grant Aid is supplied through following procedures:

- Preparatory Survey
 - The Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals".

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex-4.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant Aid, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant Aid.

(7) "Export and Re-export"

The products purchased under the Grant Aid should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

- a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
- b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Social and Environmental Considerations

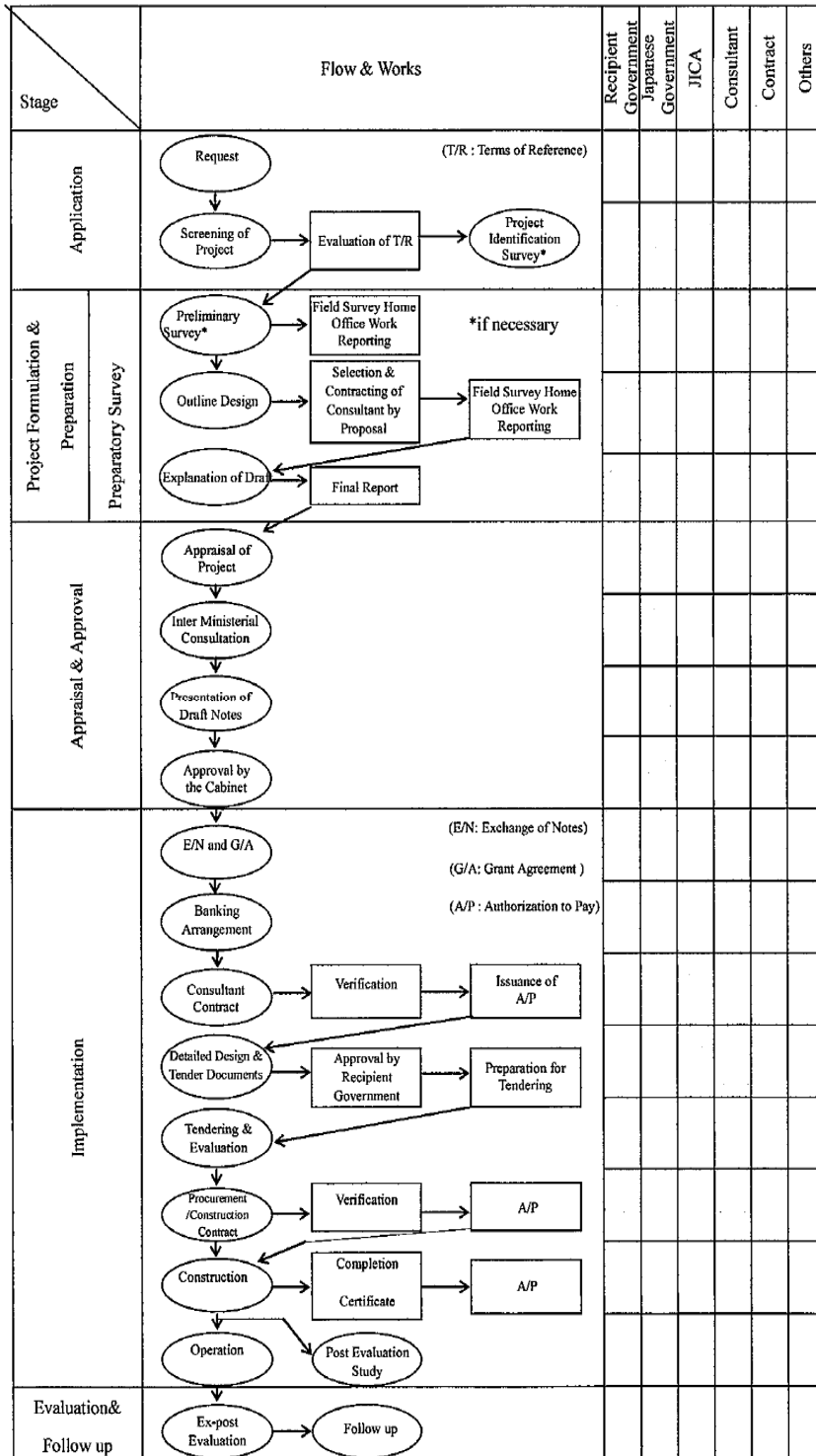
A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.

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FLOW CHART OF JAPAN'S GRANT AID PROCEDURES



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Major Undertakings to be taken by Each Government			
No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	To secure a lot of land and appropriate access road from the main road necessary for the implementation of the Project and to clear the site.		●
2	To construct the following facilities		
	1) The building	●	
	2) The gates and fences in and around the site		●
	3) The parking lot		●
	4) The road within the site	●	
	5) The road outside the site		●
3	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the site.		
	1) Electricity		
	a. The distributing power line to the site		●
	b. The drop wiring and internal wiring within the site	●	
	c. The main circuit breaker and transformer	●	
	2) Water Supply		
	a. The city water distribution main to the site		●
	b. The supply system within the site (receiving and elevated tanks)	●	
	3) Drainage		
	a. The city drainage main (for storm sewer and others to the site)		●
	b. The drainage system (for toilet sewer, common waste, storm drainage and others) within the site	●	
	4) Gas Supply		
	a. The city gas main to the site		●
	b. The gas supply system within the site	●	
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building		●
	b. The MDF and the extension after the frame/panel	●	
	6) Furniture and Equipment		
	a. General furniture		●
	b. Project equipment	●	
4	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products in the recipient country.		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the Products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	●	(●)
5	To ensure that customs duties, Value added Tax, any other taxes and fiscal levies charges which may be imposed in the recipient country with respect to the purchase of the products and the services be exempted.		●
6	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
7	To ensure that the Facilities, the products and the equipment be maintained and used properly and effectively for the implementation of the Project		●
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
9	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
10	To give due environmental and social consideration in the implementation of the Project.		●

(B/A: Banking Arrangement, A/P: Authorization to pay)

**MINUTES OF DISCUSSIONS
ON
THE PREPARATORY SURVEY
ON
THE PROJECT FOR STRENGTHENING HUMAN DEVELOPMENT
INSTITUTIONS IN AGRICULTURE
IN THE REPUBLIC OF THE UNION OF MYANMAR
(EXPLANATION OF DRAFT REPORT)**

In July, 2012, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Survey Team on the Project for Improvement of Equipment for Human Resource Development in Agriculture to the Republic of the Union of Myanmar (hereinafter referred to as "Myanmar"), and through discussions, field survey and technical examination of the results in Japan, JICA prepared the draft report of the survey.

In order to explain and to discuss with the concerned officials of the Government of Myanmar on the components of the draft report, JICA sent the Preparatory Survey Team (hereinafter referred to as "the Team"), from December 12th to December 26th, 2012 headed by Mr. Kenji Kaneko, Advisor of Paddy Field Based Farming Area Division 1, Rural Development Department of JICA to Myanmar.

As a result of discussions, both sides confirmed the main items described in the attached sheets.

Nay Pyi Taw, December 20, 2012

金子健二

Mr. Kenji Kaneko
Team Leader
Preparatory Survey Team
Japan International Cooperation Agency



Dr. Tin Htut
Rector
Yezin Agricultural University
Ministry of Agriculture and Irrigation
The Republic of the Union of Myanmar



Dr. Thein Lwin
Director General
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Ministry of Agriculture and Irrigation
The Republic of the Union of Myanmar



U Kyaw Win
Director General
Department of Agriculture
Ministry of Agriculture and Irrigation
The Republic of the Union of Myanmar

ATTACHMENT

1. Title of the Project

Based on the minutes of meetings on the concerning Preparatory Survey (for Outline Design) on the Project for Improvement of Equipment for Human Resource Development in Agriculture in Myanmar signed on July 16, 2012, both sides confirmed that the Project title will be "the Project for Strengthening Human Development Institutions in Agriculture in the Republic of the Union of Myanmar (hereinafter referred to as "the Project")"

2. Components of the Draft Report

The Myanmar side agreed and accepted in principle the components of the draft report explained by the Team.

3. Japan's Grant Aid Scheme

The Myanmar side understood the Japan's Grant Aid scheme and necessary measures to be taken by the Myanmar side as explained by the Team.

4. Schedule of the Survey

JICA will complete the final report in accordance with the confirmed items and send it to Myanmar by January 2013.

5. Cost Estimation

5-1. The Team explained the cost estimation of the Project as described in Annex-I.

5-2. Both sides agreed that the Project Cost Estimation should never be duplicated or released to any outside parties before signing of all the contract(s) for the Project.

5-3. The Myanmar side understood that the Project cost estimation described in Annex-I is a provisional one as a result of the survey and could be subject to change according to further examination by the Government of Japan.

6. Other Relevant Issues

6-1. Cost of Operation and Maintenance of both the Facilities and the Equipment to be procured under the Japan's Grand Aid

The Myanmar side agreed to allocate necessary budget for the operation and maintenance of the facilities to be constructed in Yezin Agricultural University (hereinafter referred to as "YAU"), and for the operation and the maintenance of the equipment as described in Annex-I in order to conduct the educational, research and dissemination activities in YAU, Department of Agricultural Research (hereinafter referred to as "DAR"), Central Agricultural Research and Training Center (hereinafter referred to as "CARTC") and Vegetables and Fruits Research and Development Center (hereinafter referred to as "VFRDC") in a sustainable manner.

6-2. Assignment of Personnel

Both sides confirmed that the Myanmar side assigns necessary number of researchers and support staff such as technicians, drivers and so on, to fully utilize the facilities and the equipment for the educational, research and dissemination activities of the Project.

6-3. Preparation of Land

Both sides confirmed that the Myanmar side should prepare the land for the construction of the educational and research facilities to be procured through the said grant in YAU before the commencement of the construction work.

6-4. Reporting on Operational Plan

The Myanmar side agreed to cooperate to collect the monitoring data which are useful to evaluate the outputs of the Project and will submit annual reports described in Annex-II on the use of the facilities and the equipment procured under the said grant, in order to monitor the performance of the research, educational and training activities every year for at least 3 years after the completion of the construction work and the procurement of the equipment in the Project. The plan would include not only for the equipment procured by the Project but also the existing ones, if any, managed by YAU, DAR, CARTC and VFRDC.

ANNEXES:

Annex-I	Project Cost Estimation (Cost to be borne by Japan's Grant Aid)
Annex-II	Project Cost to be borne by the Myanmar side
Annex-III	Annual Report and Monitoring Sheet

(2) Project Cost to be borne by the Myanmar side

Item of Myanmar's Responsibility	Amount of Share (1000 Ks)	Yen equivalent (1000 yen)	Remarks
Before the commencement of the construction work Removal and relocation of obstacles (trees and existing structures) and ground leveling in construction work area	1,543	150	
During the construction period Lead-in wiring to the distribution box	3,087	300	
After the completion of the construction work Equipment and cable, planting and furniture and fixtures out of the scope of works by the Japanese side	7,203	700	
Other expenditures Commissions for banking arrangement (B/A) and authorization to pay (A/P)	2,058	200	
Total	13,891	1,350	

(2) Estimation Conditions

- a. Date of estimation : August, 2012
- b. Foreign exchange rates : US\$ 1 = 81.06 yen
: 1 MMK = 0.09718 yen
- c. Construction/procurement period:
Period of detailed design, construction work and procurement of equipment as shown in the execution schedule
- d. Miscellaneous:
The estimation shall be carried out in accordance with the rules of the Grant Aid Cooperation Scheme of the Government of Japan.

Annual Report Sheet

Annual Report on the Use of Japan's Grant Assistance (submitted on ○○○)

1. Outline of the Project

(1) Name of Country:

(2) Name of the Project:

(3) Date of the Grant Agreement:

(4) Name of the Executing Organization:

2. General Situation (how the facilities and/or equipment are used in general)

3. Detailed Explanation

Facilities and/or equipment;	How they are being used;	In case they haven't been used as planned	
		Reason for it; (Please specify the reason such as budgetary problems and problems in employing appropriate staffs etc.)	Measures to be taken to redress the situation;

4. Photos (please attach photos of the facilities and/or equipment)

