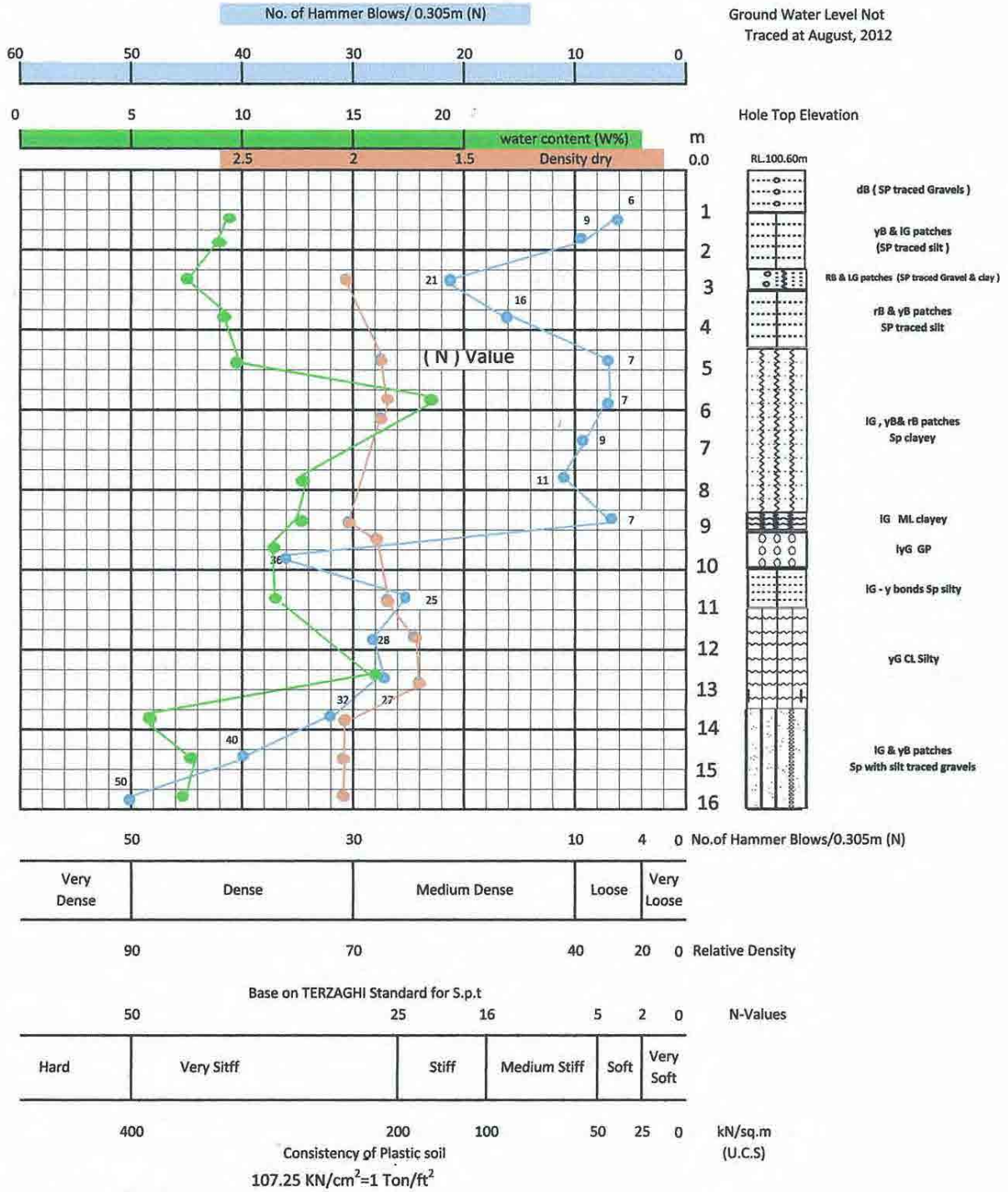


5. Boring Survey Results

Appendix 5. Boring Survey Results



Geological and soil Mechanical Investigation (YAU) Yezin

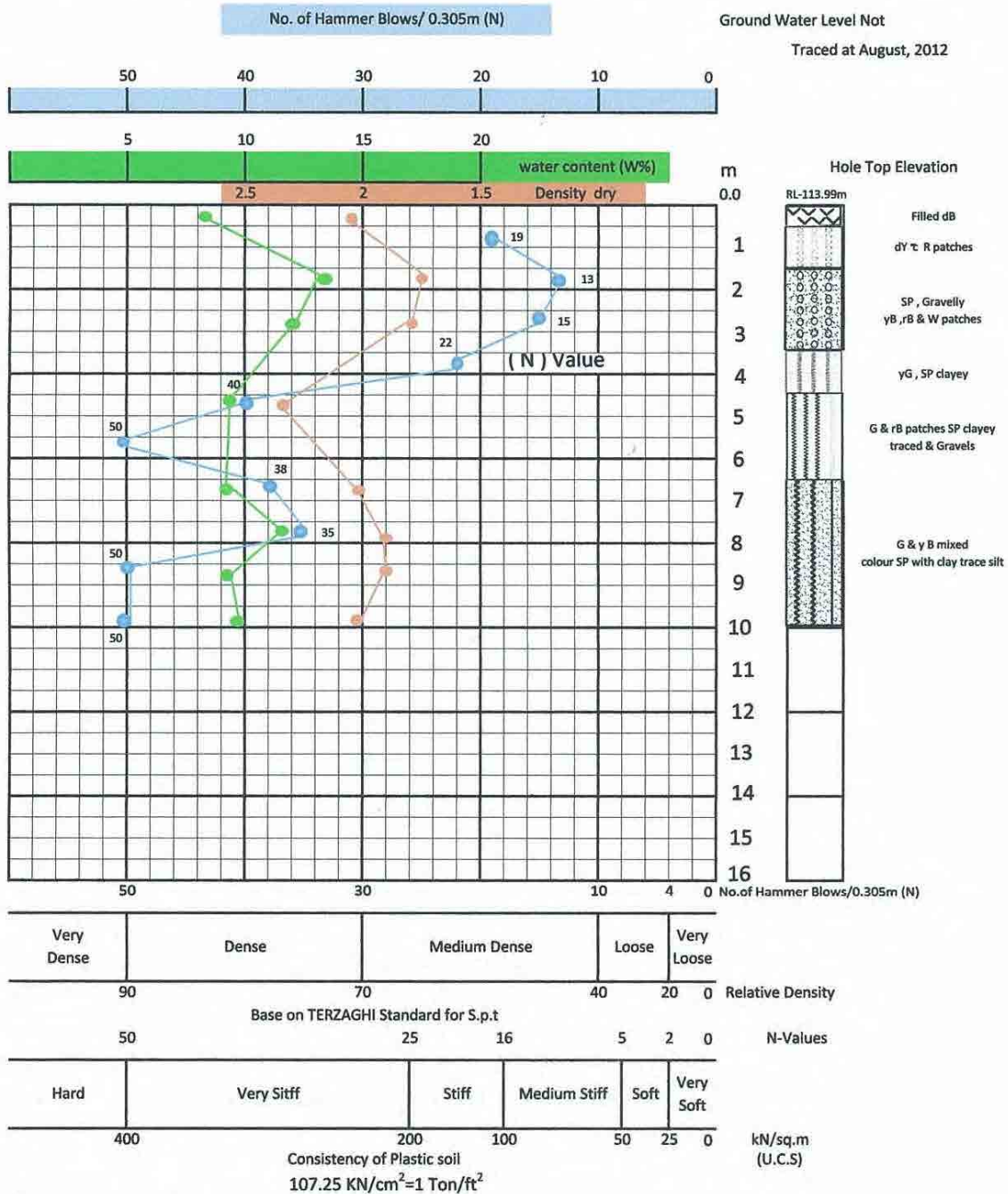


Commence 6 . 8 . 2012
 Complete - 9 . 8 . 2012

By survey
 Location - Easting 214403.85
 Northing 2195000.45
 Elevation - 100.60m

FIGURE No. ()
 SOIL PROFILE OF BORD HOLE No. (1)

Geological and soil Mechanical Investigation (YAU) Yezin



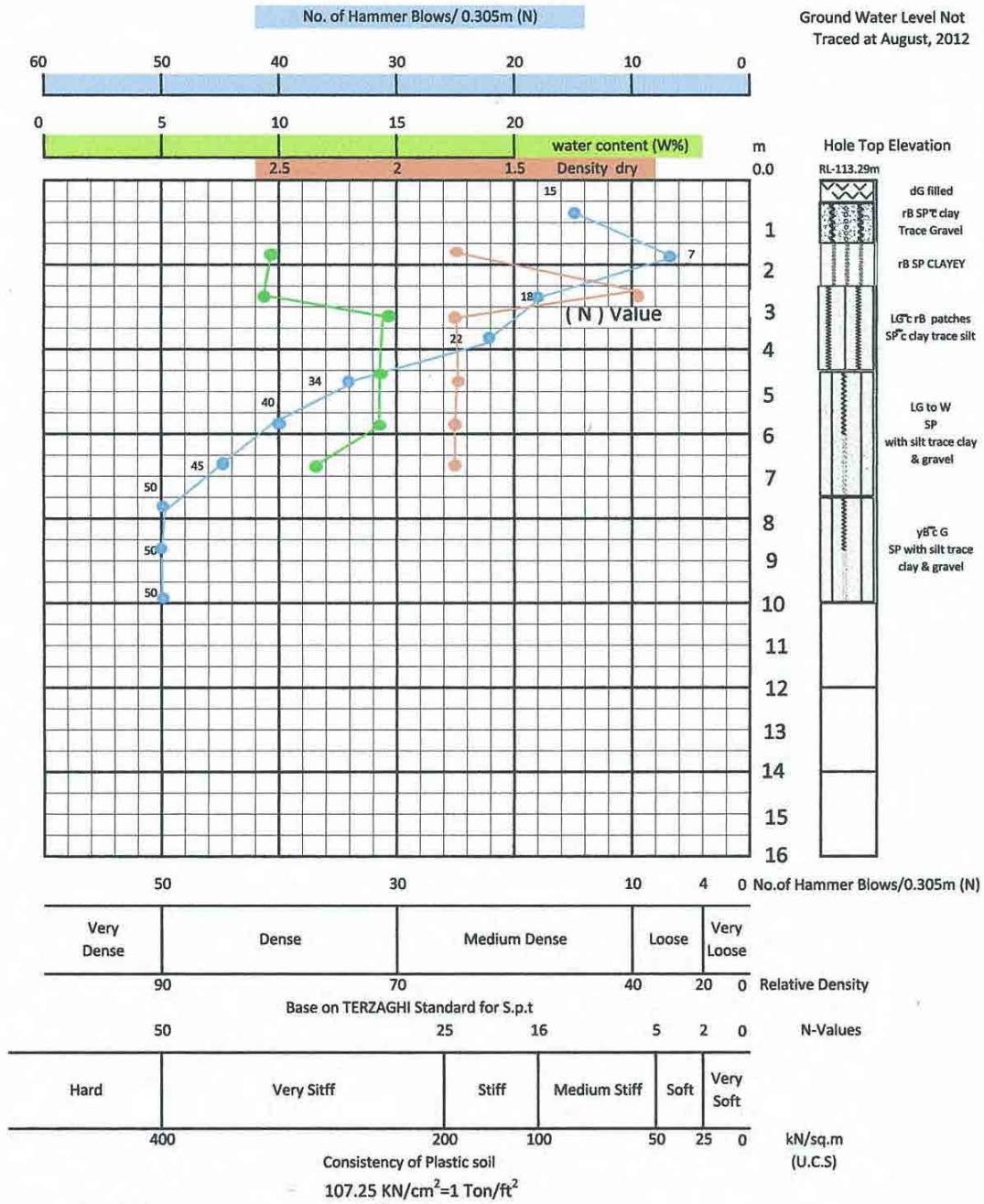
Commence 12 . 8 . 2012.
Complete - 14 . 8 . 2012

By Survey

Location - Easting 214650.26 m
Northing 2195069.82 m
Elevation 113.99 m

FIGURE No. ()
SOIL PROFILE OF BORD HOLE No. (3)

Geological and soil Mechanical Investigation (YAU) Yezin



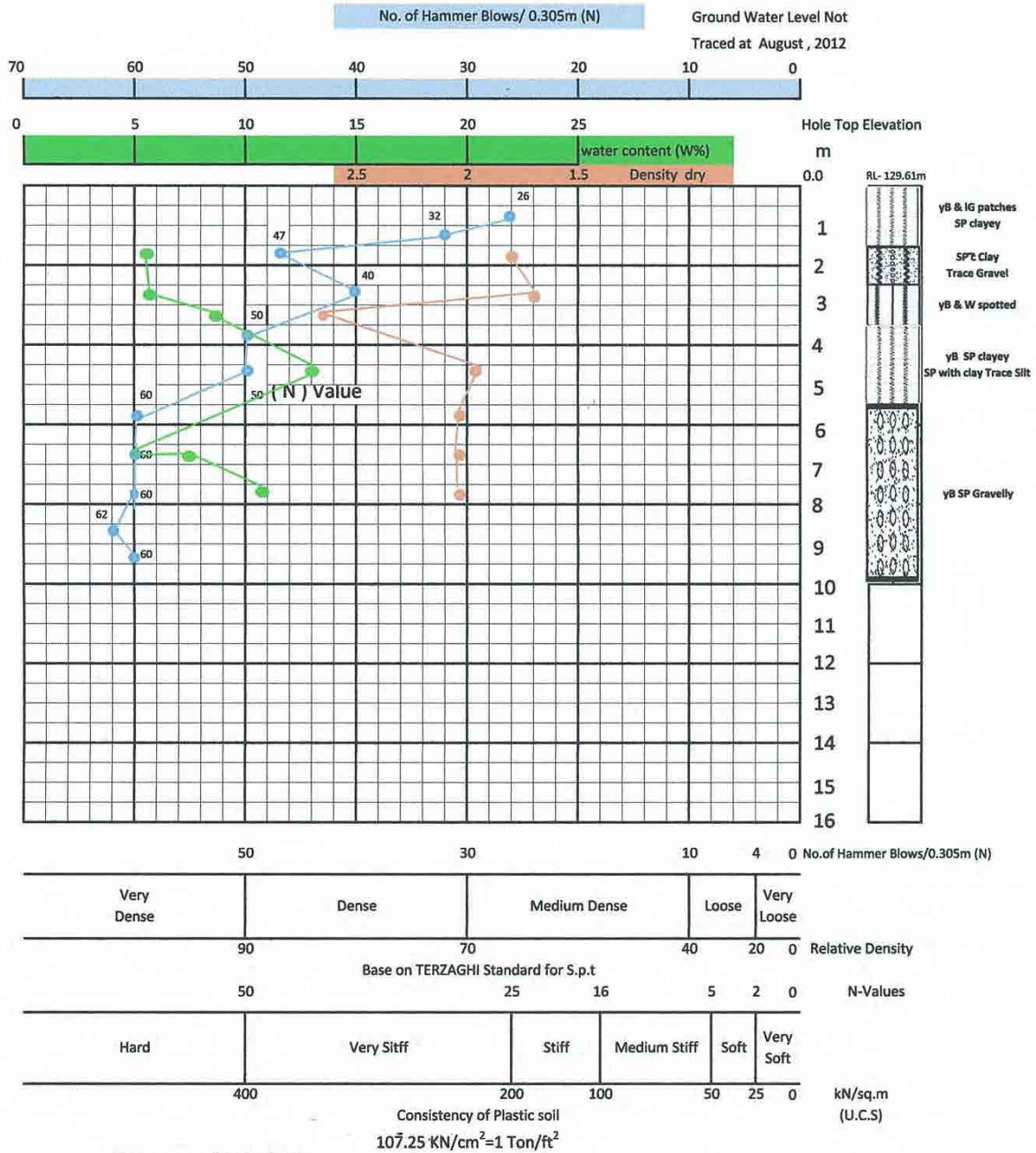
Commence 14.8 . 2012
 Complete - 15 . 8 . 2012

By survey

Location - Easting 214612.79 m
 Northing 2195082.94 m
 Elevation 113.29 m

FIGURE No. ()
 SOIL PROFILE OF BORD HOLE No. (4)

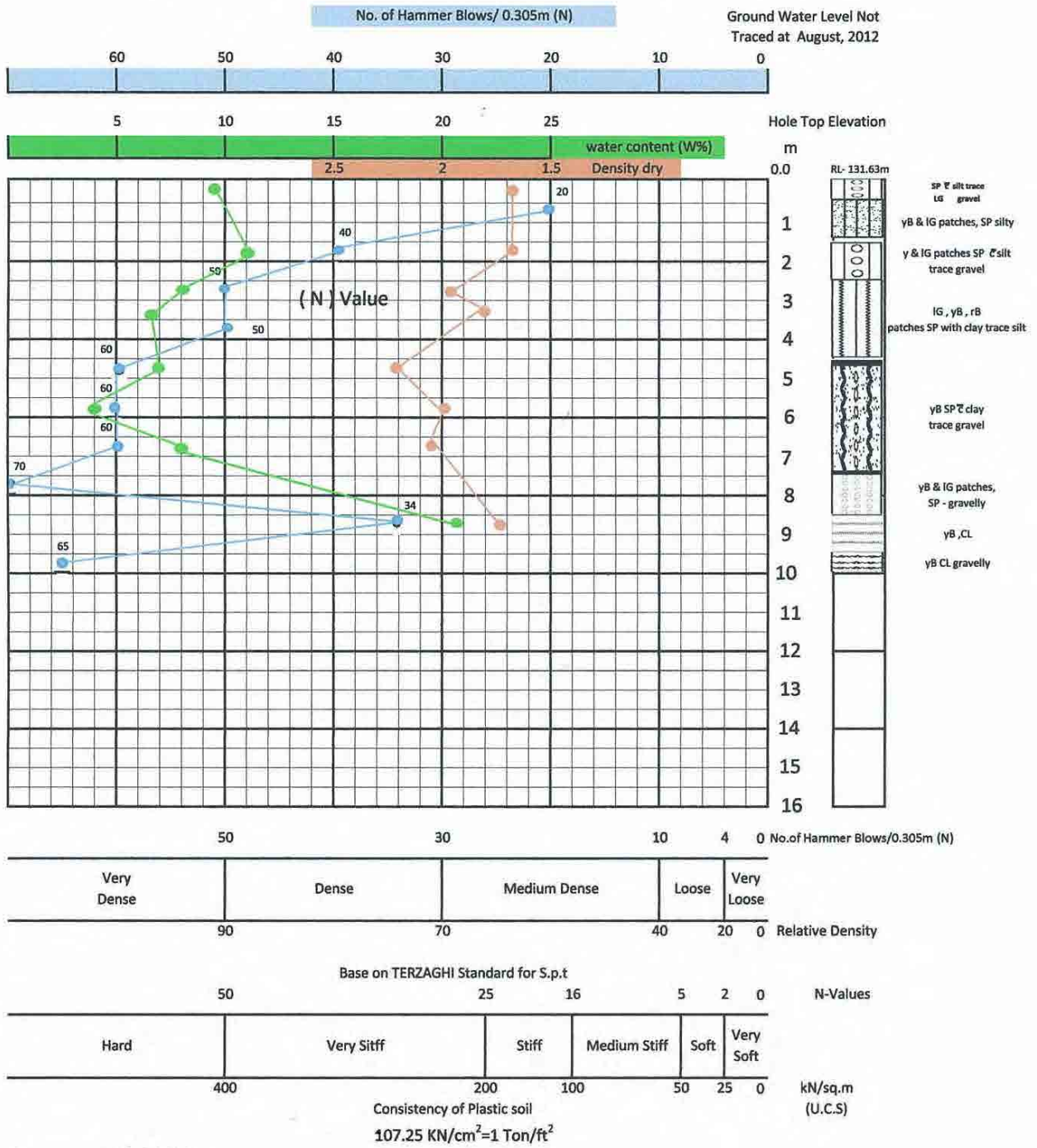
Geological and soil Mechanical Investigation (YAU) Yezin



Commence 17 . 8 . 2012
 Complete - 19 . 8 . 2012
 By survey
 Location - Easting 215019.03 m
 Northing 2195062.64 m
 Elevation 129.61 m

FIGURE No. ()
 SOIL PROFILE OF BORD HOLE No. (5)

Geological and soil Mechanical Investigation (YAU) Yezin



Commence - 20.8.2012
Complete -21.8.2012

By survey
Location-Easting 215117.25 m
Northing 2195150.20 m
Elevation -131.63 m

FIGURE No. ()
SOIL PROFILE OF BORD HOLE No. (6)

6. Equipment Selection Results

YAU Department of Agronomy

No.	Name of Equipment	Number required and priority		Number of Existing Equipment	Consistency of Curriculum	Necessity of expensive consumables	Equipment number and priority after discussion	
		Q'ty	Priority by YAU				Q'ty	Priority
1	Grain moisture tester	5	A	0	○	Non	5	A
2	CSC infrared moisture balance	1	B	0	○	Non	1	B
3	All purpose laboratory ovens	2	A	1	○	Non	1	A
4	Digital electronic thermometer	5	A	0	○	Non	5	A
5	Seedburo hay sampler kit	2	A	0	×	Non	1	B
6	Seedburo desiccators and Drierite indicating desiccant	5	A	0	○	Non	2	A
7	desiccant	1	A	0	○	Non	2	A
8	Seedburo electric grinding mill	2	A	0	○	Non	1	A
9	Battery operated ultraviolet lamp	2	A	0	○	Non	1	A
10	Aflatoxin, vomitoxin and fumonisin test kits	2	C	0	-	-	-	C
11	Easi-way portable hectoliter test weight kit	3	B	0	○	Non	1	B
12	Seedburo hand type density testers	1	A	0	○	Non	1	A
13	Seedburo computer grain scale	1	A	0	○	Non	1	A
14	Seedburo grain probes	3	B	0	○	Non	3	B
15	Grain sampling canvas	10	A	0	○	Non	3	B
16	VAC-a-sample® pneumatic sampling systems	1	C	0	○	Non	0	C
17	Seedburo precision divider	1	A	0	○	Non	1	A
18	Dockage tester and sieves	1	A	0	○	Non	1	A
19	Sieve shaker	2	A	0	○	Non	2	A
20	Seedburo select germinator	2	B	0	○	Non	1	B
21	Seedburo kimpak germination paper	10	A	0	○	Non	10	B
22	Seedburo germination blotters	10	A	0	○	Non	10	B
23	Analytical dishes	1	B	0	○	Non	1	B
24	Seed containers	1	A	0	○	Non	1	B
25	Seed measures	5	B	0	○	Non	4	B
26	Seedburo inverted display bottles	100	A	0	○	Non	100	A
27	Shelving units	2	B	0	○	Non	2	B
28	Heavy duty utility carts	2	B	0	○	Non	1	B

29	seed counters	2	A	0	○	Non	2	A
30	Seedburo hygrothermograph	2	A	0	○	Non	2	A
31	Seedburo portable dual-purpose scopes	5	A	0	○	Non	3	A
32	Seedburo counting and placement trays	5	A	0	○	Non	5	A
33	Seedburo tetrazolium powder	2	A	0	○	Non	2	A
34	Seed storage room dehumidifier	1	A	0	○	Non	1	A
35	Seedburo electric seed scarifier	2	B	0	○	Non	1	B
36	La-k gravity separator	1	A	0	○	Non	1	A
37	Laboratory model centricoater	1	C	0	○	Non	-	C
38	Te10 table mounted electronic packer	1	C	0	○	Non	-	C
39	Laboratory seed and grain dryer	1	A	0	○	Non	1	A
40	Port-a-pic grain inspection table	2	A	0	○	Non	1	A
41	Custom brass sieves	10	B	0	○	Non	7セット	B
42	Seedburo forceps	30	A	0	○	Non	21	A
43	De-stoner (DS -120)	1	A	0	×	Non	1	B
44	Triangular Sample Pans	10	A	0	○	Non	7	B
45	Half gallon and gallon Containers	10	A	0	○	Non	7	A
46	Spouted sample pans	5	C	0	○	Non	-	C
47	Seedburo Bag Sealers	1	A	0	○	Non	1	A
48	Polyethylene Grain Sample Bags	100	A	0	○	Non	1	A
49	UV-VIS Spectrophotometer	1	A	0	○	Non	1	A
50	Gas Chromatograph	1	C	0	×	Yes	-	C
	Gus analyzer	1	A	0	○	Non	1	A
51	Freeze Dryer	1	C	0	×	Non	-	C
52	Hot Water Bath	2	A	0	○	Non	2	A
53	0L Rotary Evaporator	1	A	0	×	Yes	1	B
54	Hot plate magnetic stirrer	2	A	0	○	Non	2	A
55	Laboratory refrigerated centrifuge	1	B	0	×	Non	1	B
56	Storage cabinets	2	A	0	○	Non	0	C
57	Harvest monitor	2	B	0	×	Non	2	B
58	Near Infrared component analyze	1	A	0	○	Non	1	A
59	Single grain inspector	1	A	0	○	Non	1	A
60	Rice freshness tester	1	A	0	○	Non	1	A

61	Grain crusher	1	B	0	○	Non	0	C
62	Laboratory fume hood	1	A	0	○	Non	1	A
63	Lab stools	20	B	0	○	Non	0	C
64	First aid kit	1	A	0	-	Non	0	C
65	Grain & feed safety signs	1	A	0	-	Non	0	C
66	Cool room for seed storage	1	A	0	-	Non	0	C
67	Air conditioner	2	A	0	-	Non	0	C
68	Computer and its accessories	3	A	0	○	Non	3	A
69	Vortex mixture	2	A	0	○	Non	2	A
70	Micropipettes	4	A	0	○	Yes	4	A
71	Photometric Colorimeter (DR/890 Portable Colorimeter)	1	A	0	○	Non	1	B
72	Water Distiller	1	A	0	○	Non	1	A
73	Deionizer	1	A	0	○	Non	-	C
74	pH Meter	3	A	1	○	Non	3	A
75	Autoclave	1	A	1	○	Non	1	A
76	Hot Air Sterilizer	2	A	1	○	Non	-	C
77	Analytical Balance	2	A	2	○	Non	2	A
78	Top Loading Balance	5	A	0	○	Non	3	A
79	Refrigerator (for storing chemicals and sample)	1	A	1	○	Non	1	A
80	Deep Freezer	1	A	1	×	Non	1	A
81	Glassware	1	A	0	○	Non	1	A
82	Laboratory Tables and Furniture	1	A	0	○	Non	1	A
83	Plant Growth Chamber (XT5401-CC275TLH)	1	A	0	○	Non	1	A
84	Brix Hand Refractometer (HR-032ATC)	5	A	0	○	Non	5	A
85	Soil Moisture Meter (VG-METER-200)	5	A	0	○	Non	5	A
86	Soil pH Meter	5	A	0	○	Non	5	A
87	Minolta Chlorophyll Meter (SPAD meter)	5	A	0	○	Non	5	A
88	LI-3000 C Potable Leaf Area Meter	1	A	0	○	Non	1	A
89	LI-6400 XT Photosynthesis Meter	1	A	0	×	Non	1	A
90	Solar power meter (Potable type)	3	A	0	○	Non	1	A
91	Operation Manual for temperature and humidity meter (Potable type)	3	A	0	○	Non	-	C
92	Anemometer (Potable type)	3	A	0	○	Non	1	A

93	Rain Gauge (Potable type)	3	A	0	○	Non	1	A
94	pH conductivity meter (Potable type)	3	A	0	○	Non	3	A
95	Water Distiller	1	A	0	○	Non	-	C
96	Glassware	1	A	0	○	Non	-	C
97	Laboratory Tables and Furniture	1	A	0	○	Non	-	C
98	Refrigerator (for samples and reagents)	1	A	0	○	Non	1	A
99	Top Loading Balance	2	A	0	○	Non	-	C
100	Drying Oven	1	A	0	○	Non	-	C
101	Autoclave	1	A	0	○	Non	-	C
102	Hot Air Sterilizer	1	A	0	○	Non	-	C
103	Small Green House	1	A	0	○	Non	-	C
104	LCD projector	1	A	1	○	Non	1	A
105	Photocopier (Canon iRC 2880)	1	B	0	○	Non	0	C
106	Computer	2	A	0	○	Non	-	C
107	Video camera	1	A	0	○	Non	1	A
108	Digital camera (Sony A57)	1	A	0	○	Non	1	A
109	Air Conditioner	3	A	0	○	Non	-	C
110	Green House	1	B	0	○	Non	-	C
	Incubator					Non	1	A

YAU Department of Botany

No.	Name of Equipment	Number required and priority		Number of Existing Equipment	Consistency of Curriculum	Necessity of expensive consumables	Equipment number and priority after discussion	
		Qty	Priority by YAU				Qty	Priority
1	Option 1: Sun System Handheld PAR meter	2	A	0	○	Non	1	A
2	Option 2: LI-6400 XT Photosynthesis Meter	2	A	0	○	Non	-	C
3	Chlorophyll Meter	2	A	0	○	Non	1	A
4	Permanent slides	3	A	2	○	Non	0	C
5	Artificial Climate Chamber	1	A	0	○	Non	1	B
6	Photometer	5	A	0	○	Non	4	B
7	Spectrophotometer	2	A	0	×	Non	1	A
8a	Microscope with camera and computer (complete set)	2 sets	A	2	○	Non	1	A
8b	Microscope	20	B	5	○	Non	0	C
9a	Mitotic Cell Division, Permanent Slide	5	A	0	○	Non	4	B
9b	Mitotic Cell Division, Permanent Slide	5	A	0	○	Non	4	B
10	Fluorescence microscope joining with computer (complete sets)	2	A	0	×	Non	1 set	B
11	Cavity Slide	10 packs	A	0	○	Non	4 packs	B
12	Stereo Microscope	2	A	0	○	Non	3	A
13	Laboratory Refrigerator	5	A	0	○	Non	2	A
14	Single Chamber Storage Refrigerator	1	A	0	○	Non	0	C
15	Electronic Balance	2	A	0	○	Non	1	A
16	Electronic Balance	2	A	1	○	Non	1	A
17	Leaf Area Meter	5	A	0	○	Non	3	A
18	Trinocular Laboratory Microscope (Binocular)	2	A	0	○	Non	1	A
19	Quantum Light Meter	1	A	0	○	Non	1	A
20	Vacuum Emasculator	2	A	0	○	Non	2	A
21	Measuring venire caliper	5	A	0	○	Non	4	A
22	Vacuum Emasculator	2	A	0	○	Non	0	C
23	Cold storage room with facilities	1	A	0	○	Non	0	C
24	Moisture tester	2	A	0	○	Non	1	A
25	Cardy twin EC meter	2	A	0	○	Non	2	A
26	General Incubator	3	A	0	○	Non	2	A
27	Laminar Flow	1	A	0	○	Non	1	A

28	Specular Stainless Steel Drying Oven	2	A	2	○	Non	1	A
29	PCR machine (with complete set accessory and followed by technical cooperation project)	1	B	0	×	Yes	1	B
30	Vortex	10	A	0	○	Non	7	A
31	Plant Growth Chamber	1	A	0	○	Non	1	A
32	Autoclave	1	B	0	○	Non	1	B
33	Portable autoclave	1	A	0	○	Non	1	A
34	Water Distiller	1	A	0	○	Non	1	A
35	Hot Air Sterilizer	1	A	0	○	Non	1	B
36	Magnetic Stirrer	1	A	0	○	Non	2	A
37	Refrigerator	2	A	2	○	Non	0	C
38	Hot Water Bath	5	A	0	○	Non	3	A
39a	pH meter	1	A	0	○	Non	1	A
39b	pH meter	2	A	0	○	Non	2	A
40	Glass ware	1 set	A	0	○	Non	1 set	A
41	Laboratory Table and Furniture	1 set	A	0	○	Non	1 set	A
42	Deep Freezer	1	A	1	○	Non	1	A
43	Micro- pipette	1 set	A	0	○	Non	1 set	B
44	Small Green House	1	A	0	○	Non	0	C
45	Near Infrared Reflectroscopy (NIRS)	1	B	0	×	Non	0	C
				0	○	Non	1	A
46	Seedburo select germinator	2	A	0	○	Non	1	A
47	Seedburo kimpak germination paper	10	A	0	○	Non	0	C
48	Laboratory seed and grain dryer	1	A	0	○	Non	1	B
49	Brix Hand Refractometer	5	A	0	○	Non	3×2	A
50	LCD projector + Laptop computer (Complete set)	2	A	1	○	Non	1 set	A
51	Photocopier	1	A	0	×	Yes	0	C
52	Computer	2	A	2	○	Non	0	C
53	Video camera	1	A	0	×	Yes	1	A
54	Digital camera	1	A	0	×	Yes	1	A
55	Air Conditioner	3	A	0	×	Yes	3	C
56	High Performance Liquid Chromatography (HPLC)	1	B	0	×	Yes	0	C
57	Gas Chromatography	1	B	0	×	Yes	0	C
58	Micropipette (0-25µl)	5	A	0	○	Non	5	A

59	Micropipette (20-200µl)	5	A	0	○	Non	5	A
60	Analytical Balance	2 sets	A	0	○	Non	2	A
61	Micropipette (100-500µl)	5	A	0	○	Non	5	A
62	Solar power meter	3	B	0	○	Non	1	A
63	operation Manual for temperature and humidity meter	3	B	0	○	Non	0	C
64	Anemometer	3	B	0	×	Yes	1	A
65	Rain Gauge	3	B	0	○	Non	0	C
66	pH conductivity meter	3	B	0	○	Non	0	C
67	Planimeter	20	A	2	○	Non	10	A
68	Laboratory Hot plate	5	A	0	○	Non	2	A
69	Digital Thermometer Max/Min Pocket Thermometer	10	A	0	○	Non	7	A
70	Sand bath	2	A	0	○	Non	2	A
71	Cabinet	1	A	0	○	Non	0	C
	Incubator					Non	1	A
	Infrared Moisture meter					Non	1	A

YAU Department of Agricultural Chemistry

No.	Name of Equipment	Number required and priority		Number of Existing Equipment	Consistency of Curriculum	Necessity of expensive consumables	Equipment number and priority after discussion	
		Qty	Priority by YAU				Qty	Priority
1	Atomic Absorption Spectrophotometer	1	A	1	○	Yes	1	A
2	Oil Content Tester (Multi sample Soxhlet Extraction Unit)	1	A	0	○	Non	1	A
3	Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	1	A	0	×	Yes	0	C
4	Gas Chromatography (with different column)	1	A	0	○	Yes	1	A
5	Grinder (Soil, Plant)	1	A	0	○	Non	1	A
6	Oven (0 - 120°C)	2	A	0	○	Non	2	A
7	Auto Burette	2	A	0	○	Non	2	A
8	Electrical Conductivity Meter	2	A	0	○	Non	2	A
9	Muffle Furnace	1	A	0	○	Non	1	A
10	Soil Sampling Apparatus	1 set	A	0	○	Non	1 set	A
11	Water sampling and field analysis set	1 set	A	0	○	Non	1 set	A
12		1	A	0	○	Non	1	A
13	Casagrande's apparatus	5 set	A	0	○	Non	5	A

14	Chlorophyll meter (SPAD meter)	2	A	0	○	Non	2	A
15	Tensiometer	5	A	4	○	Non	5	A
16	Water Distillation Unit	1	A	0	○	Non	1	A
17	Ultra-water distiller (Water purifying apparatus)	1	A	0	○	Non	0	C
18	Deionizer	1	A	0	○	Non	0	C
19	Refrigerated Centrifuge	1	A	0	○	Non	1	A
20	Centrifuge, top loading	3	A	1	○	Non	3	A
21	Analytical Balance	2	A	0	○	Non	2	A
22	Top Loading Balance	5	A	2	○	Non	2	A
23	Vortex Mixer	10	A	0	○	Non	6	A
24	Water Bath	3	A	0	○	Non	3	A
25	pH Meter	3	A	0	○	Non	3	A
26	Incubator	2	A	0	○	Non	2	A
27	Magnetic Stirrer	10	A	0	○	Non	7	A
28	Laboratory Tables and Furniture	1 Lot	A	0	○	Non	1 Lot	A
29	Glasswares	1 Lot	A	0	○	Non	1 Lot	A
30	Refrigerator (for Chemical and Samples)	1	A	0	○	Non	1	A
31	Deep Freezer	1	A	0	○	Non	1	A
32	Ice Making Machine	1	A	0	○	Non	1	A
33	Fume Hood	1	A	0	○	Non	1	A
34	UV-Vis Spectrophotometer	1	A	1	○	Non	1	A
35	Digestion Block	2	A	0	○	Non	2	A
36	Wet Sieving Apparatus	1 set	A	0	○	Non	1 set	A
37	Turbidity meter	2	A	0	○	Non	2	A
38	Thermometer	5 each	A	0	○	Non	5	A
39	Evaporating Dish	3	A	0	○	Non	3	A
40	Cold Room (3 x 3 x 3 m); 10 °C	1	A	0	○	Non	0	C
41	Drying shelf	2	A	0	○	Non	0	C
42	Cabinet	5	A	0	○	Non	0	C
43	Desktop computer	3 each	A	0	○	Non	3 each	A
44	LCD projector	1	A	0	○	Non	1	A
45	Green House	1	A	0	○	Non	0	C
46	Auto Pipette	3 each	A	0	○	Non	2	B
	Micro pipette					Non	4	A

YAU Department of Plant Pathology

No.	Name of Equipment	Number required and priority		Number of Existing Equipment	Consistency of Curriculum	Necessity of expensive consumables	Equipment number and priority after discussion	
		Qty	Priority by YAU				Qty	Priority
1	DNA thermal cycler and accessories for PCR	1	A	0	×	Yes	0	C
2	Electrophoresis systems and supplies	1	A	0	○	Non	1	B
3	Refrigerated micro centrifuge	1	A	0	○	Non	1	A
4	Ultra low temperature freezer	1	A	0	○	Non	1	A
5	Micropipette (0-25 mL)	5 & 5 packs	A	0	○	Non	5	A
6	Micropipette (20-200 mL)	5 & 5 packs	A	0	○	Non	5	A
7	Micropipette (100-500 mL)	5 & 5 packs	A	0	○	Non	5	A
8	DNA isolation kit	each 3	A	0	×	Yes	0	C
9	Vortex	2	A	0	○	Non	0	C
10	DNA auto-sequencer	1	A	0	×	Non	0	C
11	Vacuum pump	1	A	0	○	Non	0	C
12	UV Trans-illuminator	1	A	0	○	Non	1	A
13	Supplies and reagents for PCR	1	A	0	×	Non	0	C
14	Gel dryer	1	A	0	○	Non	1	A
15	Polaroid instant gel camera	1	A	0	○	Non	1	A
16	Step one real time PCR and accessories supply	1	A	0	×	Yes	1	A
17	SYBR green master mix (10 packs)	1	A	0	×	Yes	1	A
18	Specific primers for check	1	A	0	○	Non	0	C
19	Spectrophotometer	1	A	0	○	Non	0	C
20	pH meter	1	A	0	○	Non	1	A
21	EC meter	1	A	0	○	Non	1	A
22	ATP photometer	1	A	0	○	Non	1	A
23	Monofas DNA purification kit	1	B	0	×	Yes	0	C
24	Monofas DNA purification kit	1	B	0	○	Non	1	B
25	Agarose gel powder	2	A	0	○	Non	0	C
26	Ethanol	10 bottles	B	0	○	Non	0	C
27	Chloroform	10 bottles	B	0	○	Non	0	C
28	Glass bead and zarconia bead	10 bottles	A	0	○	Non	0	C
29	Isoproponal	10 bottles	B	0	○	Non	0	C
30	Water Distiller	1	A	0	○	Non	1	A

31	Deionizer	1	A	0	○	Non	0	C
32	Analytical Balance	1	A	0	○	Non	1	A
33	Top Loading Balance	5	A	0	○	Non	3	A
34	Refrigerator	3	A	2	○	Non	2	A
35	Deep Freezer	2	A	1	○	Non	0	C
36	Ice Making Machine	1	A	1	○	Non	0	C
37	Hot Air Sterilizer	1	A	1	○	Non	1	A
38	Fume Hood	1	A	1	○	Non	1	A
39	Glassware	1	A	1	○	Non	1	A
40	Laboratory Tables and Furniture	1	A	1	○	Non	1	A
41	Laminar Flow (Clean Bench)		A	0	○	Non	1	A
42	Stirrer	1	A	0	○	Non	0	C
43	Shaker	10	A	0	○	Non	0	C
44	Vortex Mixer	5	A	0	○	Non	10	A
45	Refrigerated Centrifuge	20	A	0	○	Non	0	C
46	PCR Machine	1	A	0	○	Non	0	C
47	Electrophoresis System and Supply	1	A	0	○	Non	1	A
48	Binocular Microscope	30	A	13	○	Non	20	A
49	Plant growth chamber	2	A	1	○	Non	1	A
50	Autoclave (vertical)	1	A	1	○	Non	1	A
51	Portable autoclave (35 L)	1	B	1	○	Non	1	A
52	Laminar flow	1	A	1	○	Non	0	C
53	Binocular microscope with digital camera attached and software included	1	A	0	○	Non	1	A
54	Electric Soil sterilizer (50L)	1	A	1	○	Non	1	A
55	CCD camera with multi-adapter and soft ware driver	1	A	0	○	Non	0	C
56	Colorimeter	1	A	0	○	Non	1	A
57	Haemacytometer	2	A	0	○	Non	0	C
58	Ocular micrometer	10	A	0	○	Non	0	C
59	Hot plate and magnetic stirrer	2	A	0	○	Non	2	A
60	Petri dishes (Glass- 9cm)	1000	B	0	○	Non	1000	B
61	Water distiller (steel)	1	B	0	○	Non	1	B
62	Hot water bath (10 L)	1	B	1	○	Non	1	B
63	Shaker (Chamber type)	1	B	0	○	Non	1	B

64	Colony counter	1	A	0	○	Non	1	A
65	Camera	1	B	0	○	Non	0	C
66	Video camera	1	B	0	○	Non	0	C
67	Hot Air Sterilizer	1	A	0	○	Non	0	C
68	Drying Oven	1	A	1	○	Non	1	A
69	Vortex Mixer (Test tube shaker)	10	A	0	○	Non	7	C
70	Ice Making Machine	1	A	0	○	Non	1	A
71	Centrifuge	1	A	1	○	Non	1	A
72	Glassware	1	A	0	○	Non	0	C
73	Laboratory Table and Furniture	1	A	0	○	Non	0	C
74	Magnetic Stirrer	10	A	0	○	Non	7	A
75	Green House with equipment	1	A	0	○	Non	0	C
76	Microtome	1	A	0	○	Non	1	A
77	LCD Projector	1	A	1	○	Non	1	A
78	Desktop Computer	5	A	2	○	Non	3	A
	Incubator					Non	1	A
	UV-Vis Spectrophotometer	1	A	1	○	Non	1	A

YAU Department of Entomology and Zoology

No.	Name of Equipment	Number required and priority		Number of Existing Equipment	Consistency of Curriculum	Necessity of expensive consumables	Equipment number and priority after discussion	
		Q'ty	Priority by YAU				Q'ty	Priority
1	water distiller	1 set	A	0	○	Non	1 set	A
2	hot air sterilizer	1 set	A	0	○	Non	0	C
3	top loading balance	1	A	0	○	Non	0	C
4	water bath	1	A	0	○	Non	1	A
5	glass ware	1 lot	A	0	○	Non	1 lot	C
6	chemical reagent	1 lot	A	0	○	Non	0	C
7	temp. humidity control room	1	A	0	○	Non	1	A
8	incubator	4 sets	A	0	○	Non	4	A
9	Analytical balance	2	A	1	○	Non	2	A
10	Autoclave	1	A	0	○	Non	1	A

11	Electric Soil sterilizer (50L)	1	B	0	○	Non	1	B
12	Refrigerator	1	A	1	○	Non	1	A
13	laboratory tables and furniture	1 lot	A	0	○	Non	1 lot	A
14	Draft chamber	1 set	A	0	○	Non	1 set	A
15	Micrometer for objective Lenz	5	A	0	○	Non	0	C
16	GPS	1	A	0	○	Non	1	A
17	Dissecting sets	10	A	0	○	Non	7	A
18	Whole pipette	5 each	A	0	○	Non	0	C
19	HPLC	1 set	A	0	×	Yes	1 set	A
20	Rotator evaporator	1 set	A	0	○	Non	1 set	A
21	Glass ware for pesticide residue analysis	1 Lot	A	0	○	Non	1	A
22	Drying Oven	1	A	0	○	Non	1	A
23	Homogenizer	1 set	A	0	○	Non	1 set	A
24	Gus container for N2 and H2	1 set	A	0	○	Non	0	C
25	Regents	1 Lot	A	0	×	Non	0	C
26	Hot plate and magnetic stirrer	2	A	0	○	Non	2	A
27	Pipette filler	10	A	0	○	Non	7	A
28	Hamilton Repeating Dispenser plus a 10- μ L micro syringe	1 pair	A	0	○	Non	1 pair	A
29	Wire mesh screw cap vial	200	A	0	○	Non	200	A
30	Binocular biological digital microscope	1	A	5	○	Non	0	C
31	Clear tumbler cages	100	A	0	○	Non	100	A
32	PCR (Polymerase Chain Reachain) machine	1	A	0	○	Non	0	C
33	Nano-drop (RNA/ DNA measurement)	1	A	0	○	Non	0	C
34	UV light illuminator with digital camera	1	A	0	○	Non	1	A
35	Latex rubber gloves	1000	A	0	○	Non	0	C
36	Deep freezer for storing reagents	1	A	0	○	Non	1	A
37	High speed refrigerated centrifuge	1	A	0	○	Non	1	A
38	1.5 ml plastic tubes	1000	A	0	○	Non	100	C
39	QIAGEN RN easy Minikit Catalog no. 74/05	1	A	0	○	Yes	1	A
40	Purelink Genomic DNA kits Catalog no. K 1820-02	1	A	0	○	Yes	1	A
41	Smart Tag premix kit	1	A	0	○	Yes	1	A
42	1% agarose gel	1 Bottle	A	0	○	Yes	0	C
43	101 bp plus DNA ladder	1	A	0	○	Yes	1	A
44	Ethidium Bromide (for staining)	200 ml	A	0	○	Yes	1	A

45	Safety cabinet	1	A	0	○	Non	0	C
46	Micropipette	2 sets	A	0	○	Non	2 sets	A
47	Tips for micropipette	1000	A	0	○	Non	1000	A
48	Spin column	1000	A	0	○	Non	1000	A
49	Agarose gel electrophoresis apparatus	1	A	0	○	Non	1	A
50	Gel Platform and Cool Pack with combs	1	A	0	○	Non	1	A
51	Staining box	1	A	0	○	Non	1	A
52	Safety glasses/goggles	5	A	0	○	Non	0	C
53	Spatula	20	A	0	○	Non	20	A
54	Vortex shaker	1	A	0	○	Non	1	A
55	Micro centrifuge tubes	100	A	0	○	Non	0	C
56	Reagents compatible with the DNA/RNA analysis	1 Lot	A	0	○	Non	0	C
57	PCR tube rack	5	A	0	○	Non	0	C
58	Beaker	1 Lot	A	0	○	Non	0	C
59	Measuring cylinder	20	A	0	○	Non	0	C
60	Light trap cage	10	B	0	○	Non	7	B
61	Collecting Jars	20	A	0	○	Non	20	A
62	Aspirator	10	A	0	○	Non	10	A
63	Hygrothermometer	5	B	0	○	Non	4	B
64	Copy machine	1	B	0	○	Non	0	C
65	Video camera	1	B	0	○	Non	0	C
66	Malaise trap	2	A	0	○	Non	2	A
67	Sticky traps	200	A	0	○	Non	100	A
68	Test tube rack	20	A	0	○	Non	0	C
69	Rack	10	B	0	○	Non	10	B
70	Petri dish	1 Lot	B	0	○	Non	0	C
71	Entomological Pins (Different Size)	1 Lot	A	0	○	Non	1000	A
72	Frog Dissected Model	1	A	0	○	Non	0	C
73	Slide Storage Rack	20	A	0	○	Non	20	A
74	Insect Magnifying Bottle	50	A	0	○	Non	50	A
75	Insect rearing cage	10	A	0	○	Non	30	A
76	Insect net	10	A	0	○	Non	30	A
77	LCD projector	1	A	1	○	Non	1	A
78	Copy machine	1	B	0	○	Non	0	C

79	Laptop computer	2	A	2	○	Non	2	A
80	Video camera	1	A	0	○	Non	1	A
81	digital camera	1	A	0	○	Non	1	A
82	Air conditioner	3	A	0	○	Non	0	C
83	Green house	1	B	0	○	Non	0	C
	Microscope with camera					Non	1	A

YAU Department of Horticulture

No.	Name of Equipment	Number required and priority		Number of Existing Equipment	Consistency of Curriculum	Necessity of expensive consumables	Equipment number and priority after discussion	
		Q'ty	Priority by YAU				Q'ty	Priority
1	Drip Irrigation system	1 set	A	0	○	Non	0	C
2	Sprinkler	2 sets	A	0	○	Non	0	C
3	Chlorophyll Meter	1	B	0	○	Non	1	A
4	SYBR Green Master Mix	1	A	0	○	Non	1	A
5	On-table Pressure Bomb	1	A	0	○	Non	0	C
6	Light/ Lux meter	2	A	0	○	Non	2	A
7	Tensiometer (6 inches depth)	1	A	0	○	Non	1	A
8	Tensiometer (18 inches depth)	1	A	0	○	Non	1	A
9	Pectinase Cellulase Enzyme	10L	B	0	○	Non	1	A
10	Power tiller	1	A	0	○	Non	1	A
11	Budding knives and grafting knives	30	A	0	○	Non	30	A
12	Secateurs	30	A	0	○	Non	30	A
13	Plant growth chamber	2	A	0	○	Non	1	A
14	Plant growth chamber	1	A	0	○	Non	0	C
15	Steel Cabinet	4	A	0	○	Non	2	A
16	Photocopier (Canon iRC 2880)	1	A	0	○	Non	0	C
17	Air conditioner/ air cooler	3	A	0	○	Non	0	C
18	Digital Balance (60 kg)	1 set	A	0	○	Non	1 set	A
19	Cold storage facilities	1 set	B	0	○	Non	0	C
20	Woodchipper	1	B	0	○	Non	0	C
21	Soil sterilizer	2	A	0	○	Non	1	A
22	Safety wares	4 sets	A	0	○	Non	0	C

23	Flammable storage cabinet	1	A	0	○	Non	0	C
24	Cylinder storage cabinet	1	A	0	○	Non	0	C
25	Green House	1	B	0	○	Non	0	C
26	Water Distiller	1 set	A	2	○	Non	1 set	A
27	Deionizer	1 set	A	0	○	Non	0	C
28	Drying Oven	3 sets	A	2	○	Non	1	A
29	Autoclave	1 set	A	1	○	Non	1 set	A
30	Hot Air Sterilizer	1 set	A	0	○	Non	1 set	A
31	Incubator	2 sets	A	0	○	Non	2 sets	A
32	Vortex Mixer	5 sets	A	0	○	Non	5 sets	A
33	Water Bath	2 sets	A	0	○	Non	2 sets	A
34	Refrigerator	1 set	A	3	○	Non	2	A
35	Deep freezer	1 set	A	0	○	Non	1 set	A
36	Ice making Machine	1 set	A	0	○	Non	1 set	A
37	Laboratory Table and Furniture	1 lot	A	0	○	Non	1 lot	A
38	Analytical Balance	2 sets	A	0	○	Non	2	A
39	Top Loading Balance	3 sets	A	0	○	Non	2	A
40	Refrigerated Centrifuge	1 set	A	0	○	Non	1 set	A
41	Table-top Centrifuge	3 sets	A	0	○	Non	2	A
42	Laminar Flow (Clean Bench)	3 sets	A	0	○	Non	2 sets	A
43	Standard PCR	2 sets	A	0	○	Non	0	C
44	Real Time PCR	1 set	A	0	×	Yes	1 set	A
45	Electrophoresis system with Power Supply	2 set	A	0	○	Non	1 set	A
46	UV image recorder and printer	2 set	A	0	○	Non	1 set	A
47	Liquid nitrogen +Dewar transport container	5 sets	A	0	○	Non	2	A
48	Milling system	5 sets	A	0	○	Non	1 set	A
49	Heating block	1 set	A	0	○	Non	1 set	A
50	Nano-drop Photometer with Cuvette	1 set	A	0	○	Non	1 set	A
51	Gel Electrophoresis system	2 sets	A	0	○	Non	2	A
52	UV Gel detection system with camera	2 sets	A	0	○	Non	2	A
53	Incubator with shaking function	2 sets	B	0	○	Non	2	A
54	Tissue culture roller drum	2 sets	A	0	○	Non	2 sets	A
55	Automatic pipette washer	1 set	A	0	○	Non	1 set	A
56	Automatic glassware cleaner	1	A	0	○	Non	0	C

57	Pipette holder	3	A	0	○	Non	3	A
58	Orbital shaker	3sets	A	0	○	Non	2	A
59	Medium dispenser	1 set	A	0	○	Non	1 set	A
60	Filter sterilization unit with complete accessories	1	A	0	○	Non	1	A
61	Laboratory Vacuum pump	1	A	0	○	Non	1	A
62	Generator	1	A	0	○	Non	0	C
63	Ultrasonic cleaner	1	A	0	○	Non	1	A
64	Electric digital timer	10	A	0	○	Non	5	A
65	Micropipette holder	3 sets	A	0	○	Non	0	C
66	Micropipette	each 1	A	0	○	Non	3	A
67	Tips for micropipettes	5 packs	A	0	○	Non	1000	A
68	Hotplate with Magnetic stirrer (including magnetic bar and Stirring bar retriever)	5 sets	A	0	○	Non	3 sets	A
69	Glass wares for plant tissue culture lab	2 sets	A	0	○	Non	0	C
70	Chairs for laboratory	10	A	0	○	Non	0	C
71	Tissue culture room	1unit	A	0	○	Non	0	C
72	Glass wares for plant tissue culture lab	1 lot	A	0	○	Non	1 lot	A
73	Reagents for Tissue culture	1 lot	A	0	○	Non	0	C
74	Research stereo Microscope	1	A	0	○	Non	1	A
75	Fume Hood	1	A	0	○	Non	0	C
76	Humidifier	2	A	0	○	Non	2	A
77	TDR (Time Domain Refractometry)	1	A	0	○	Non	1	A
78	Plant moisture stress (PMS) analyzer	1	A	0	○	Non	1	A
79	Thermo Hygrometer (Extech Humidity and Temperature Data logger)	2	A	0	○	Non	2	A
80	Venire Caliper	10	A	0	○	Non	10	A
81	Multi-parameter for pH/ temperature/ conductivity of soil	2	A	0	○	Non	2	A
82	Photosynthesis Yield Analyzer (miniPPM, WALZ)	1	A	0	○	Non	0	A
83	Portable Leaf area meter	1	A	0	○	Non	1	A
84	Refractometer	(10)					(10)	A
	(a) Digital hand-held pocket refractometer	2	A	0	○	Non	2	A
	(b) Digital hand-held pocket refractometer	2	A	0	○	Non	2	A
	(c) hand-held refractometer	2	A	0	○	Non	2	A
	(d) hand-held refractometer	2	A	0	○	Non	2	A
	(e) hand-held analog refractometer	2	A	0	○	Non	2	A

85	Dial Fruit Pressure Tester	2	A	0	○	Non	2	A
86	Fruit Juice Extractor	2	A	0	○	Non	2	A
87	Hand-held pH/ conductivity meter	1	A	0	○	Non	2	A
88	Gas Chromatographs (GC-8AIT), Shimadzu	1	A	0	○	Yes	1	A
89	Gas Chromatographs (GC-8AIT), Shimadzu	1	A	0	○	Yes	1	A
90	UV-VIS Spectrophotometer	1	A	0	○	Non	0	C
91	Rotary Evaporator	1	A	0	○	Non	1	A
92	Total acidity mini titrator and pH meter	1	A	0	○	Non	1	A

YAU Department of Agricultural Economy

No.	Name of Equipment	Number required and priority		Number of Existing Equipment	Consistency of Curriculum	Necessity of expensive consumables	Equipment number and priority after discussion	
		Q'ty	Priority by YAU				Q'ty	Priority
1	Laptop computers	10	A	0	○	Non	10	C
2	Desk top computer	30	A	10	○	Non	40	A
3	photocopier (all paper sizes)	1	A	0	○	Yes	1	A
4	Laser printer	2	B	0	○	Non	2	B
5	scanner	2	B	0	○	Non	2	B
6	LCD projectors and screens	3	A	0	○	Non	3	A
7	Computer tables and chairs	40	A	0	○	Non	40	A
8	Cameras	2	A	0	○	Non	2	A
9	Video Cameras	1	B	0	○	Non	0	C
10	Air conditioner	4	A	0	○	Non	0	C
11	Sound box system set	2	B	0	○	Non	0	C
12	STATA software	1	A	0	○	Non	0	C
13	EVIEW software	1	A	0	○	Non	0	C
14	GTAP	1	A	0	○	Non	0	C
15	GAMS	1	A	0	○	Non	0	C
16	GPS	1	A	0	○	Non	1	A
17	GIS	1	A	0	○	Non	1	A
18	FAX machine	1	C	0	○	Non	1	C
19	partition	3	C	0	○	Non	0	C
20	White board	5	C	0	○	Non	0	C

YAU Department of Animal Science

No.	Name of Equipment	Number required and priority		Number of Existing Equipment	Consistency of Curriculum	Necessity of expensive consumables	Equipment number and priority after discussion	
		Qty	Priority by YAU				Qty	Priority
1	Dairy cattle housing for 10 dairy cattle	1 set	A	0	○	Yes	0	C
2	Battery Cage housing and equipment for 200 layers	1 set	A	0	○	Yes	0	C
3	Pig housing and equipment for 20 pigs	1 set	A	0	○	Yes	0	C
4	Overhead Water-tank	1	A	0	-	Non	0	C
5	Small scale feed mill	1set	A	0	○	Non	0	C
6	Equipment for proximate analysis of feed	1	B	0	○	Non	0	C
7	Incubator	1	C	0	○	Non	1	A
8	Deep freezer	1	B	0	○	Non	0	C
9	printer	1 set	B	0	○	Non	1 set	A
10	Egg candler	2	C	0	○	Non	2	A
11	Laptop	1	A	0	○	Non	2	A
12	Digital balance (small, medium & large)	3	A	0	○	Non	3	A
13	Digital video camera	1	C	0	○	Non	0	C
14	Dissecting tray	2 set	B	0	○	Non	0	C
15	White board (4ft x 8 ft)	2	B	0	○	Non	0	C
16	LCD projector	1 set	C	0	○	Non	1 set	A
17	Lactometer	20	B	0	○	Non	0	C
18	wing band for marking in poultry	1000	B	0	○	Non	0	C
19	leg band for marking in poultry	1000	B	0	○	Non	0	C
20	ear notcher for marking swine	20	B	0	○	Non	0	C
21	tail tags for marking in cattle	500	B	0	○	Non	0	C
22	ear tags for marking in cattle and swine	500	B	0	○	Non	0	C
23	Debeaking machine for debeaking chick	5	C	0	○	Non	0	C
24	Stethoscope	20	B	0	○	Non	0	C
25	Update references and text-books for large ruminants, small ruminants, poultry and swine	1 lot	A	0	○	Non	0	C
26	Soft copy for improved systems for livestock and poultry production	1 lot	A	0	○	Non	0	C
27	Dairy cattle	10	A	0	○	Non	0	C
28	Poultry layers	200	A	0	○	Non	0	C
29	Pig	20	A	0	○	Non	0	C

30	Laboratory table and furniture	1 Lot	A	0	○	Non	1 Lot	A
31	Glassware for laboratory	1 lot	A	0	○	Non	1 lot	A

YAU Department of Agricultural Engineering

No.	Name of Equipment	Number required and priority		Number of Existing Equipment	Consistency of Curriculum	Necessity of expensive consumables	Equipment number and priority after discussion	
		Qty	Priority by YAU				Qty	Priority
1	Digital Total Station and Accessories (Reflectorless)	5	A	0	○	Non	0	C
2	Reflector Set (for Total Station)	5	A	0	○	Non	0	C
3	Digital Theodolite and Accessories	5	A	0	○	Non	5	A
4	Digital Auto Level and Accessories	5	A	0	○	Non	5	A
5	Surveying Compass (with Accessories)	5	A	0	○	Non	5	A
6	Digital Pointfinder (Distance meter)	10	A	1	○	Non	0	C
7	Clinometer	10	B	0	○	Non	5	A
8	Differential GPS Instrument (Base and Rover Unit)	2	A	0	×	Non	2	A
9	Line Laser Level (height/depth)	5	B	0	×	Non	0	C
10	GIS Data Collection Equipment and Software	10	A	0	×	Non	0	C
11	GPS Tracking System Equipment	10	A	0	×	Non	0	C
12	Plane Table and Accessories (Pole, Tripod, Staff, Sight rule, Plumbing fork and Sprit Level)	10	B	3	○	Non	5	A
13	Laboratory Tables and Furniture	1 lot	A	0	○	Non	1 lot	A
14	Tractors	5	A	1	○	Non	0	C
15	Disc Plough, Rotary Cultivator	3 each	A	1	○	Non	0	C
16	Rice Trans planter	5	A	0	○	Non	0	C
17	Thresher	2	A	1	○	Non	0	C
18	Combine Harvester and Mill Machine	1 each	A	1	○	Non	0	C
19	Sprayer	2	A	1	○	Non	0	C
20	Seed Drill	1	A	1	○	Non	0	C
21	Prototypes for Engine and Components (cross-section)	10	A	1	○	Non	0	C
22	Testing Tools (for Engine)	10	A	0	○	Non	5	A
23	Electric/Electronic Testing Tools	10	A	0	○	Non	5	A
24	Measuring Instruments	10	A	0	○	Non	0	C
25	Water Measuring Instruments	5	A	0	○	Non	1	B

26	Digital Camera and DV Cam	2 1	A	0	○	Non	2 1	A
27	Computer & Accessories	4+1	A	1	○	Non	5	A
28	Projector and Board (overhead/stand)	1	A	1	○	Non	1	A
29	Teaching Aid Instruments	1 lot	A	1	○	Non	0	C
30	Laser Printer	2	A	1	○	Non	1	A
31	Digital Copier	1	A	1	○	Non	0	C
32	Scanner	1	A	1	○	Non	1	A
33	Workshop with Equipment and Instruments	1	A	1	○	Non	1	A
34	Air-conditioning System	6	C	1	○	Non	0	C
35	Engineering Drawing Kit	1	A	1	○	Non	0	C
36	Power tiller	5	C	1	○	Non	0	C
37	Power tiller	1	A	1	○	Non	1	B
38	Attachment for power tiller	1	A	1	○	Non	1式	B
39	Trailer for power tiller	1	A	1	○	Non	1	B
40	Manual Sprayer	1	A	1	○	Non	1	B
41	Thresher driven by power tiller	1	A	1	○	Non	1	B
42	Tractors	1	A	1	○	Non	1	A
43	Rotary tiller	1	A	1	○	Non	1	A
44	Disc Plough	1	A	1	○	Non	1	A
45	Disc harrow	1	A	1	○	Non	1	A
46	Trailer	1	A	1	○	Non	1	A
47	Seeder	1	A	1	○	Non	1	A
48	Broad caster	1	A	1	○	Non	1	A
49	Ridger	1	A	1	○	Non	1	A
50	Spring cultivator	1	A	1	○	Non	1	A
51	Disc more	1	A	1	○	Non	1	A
52	Roll baler	1	A	1	○	Non	1	A
53	Sprayer	1	A	1	○	Non	1	A
54	Cutter	1	A	1	○	Non	1	A
55	Trans planter	1	A	1	○	Non	1	A
56	Seeder for trans planter	1	A	1	○	Non	1	A
57	Nursery box	1	A	1	○	Non	1000	A
58	Combine Harvester	1	A	1	○	Non	1	A

Department of Agricultural Research (DAR)

No.	Equipment Name	Required number and priority		Number of research worker	Number of existing equipment	Consistency of Research	Necessity of expensive consumables	Equipment number and priority after discussion	
		Q'ty	Priority					Q'ty	Priority
Horticulture Section									
1	Freeze dryer	1	A	0	0	×	Non	0	C
2	Spectrophotometer	1	A	0	0	×	Non	0	C
3	Freezer	1	A	19	0	○	Non	1	A
4	Rotary Shaker	1	A	19	0	○	Non	1	A
5	Water bath with shaker	1	A	19	0	○	Non	1	A
6	Oven	1	A	19	0	○	Non	1	A
7	Texture analyzer (Hardness meter)	1	A	0	0	×	Non	1	C
8	Portable pesticide residue detector	1	A	19	0	○	Yes	1	A
9	Seed storage kit (Low temperature incubator)	1	A	0	0	×	Non	0	C
10	Seed germination chamber	1	A	19	0	○	Non	1	A
11	Refrigerated super speed centrifuge	1	B	0	0	×	Non	0	C
12	pH meter	1	B	19	0	○	Non	1	B
13	Color meter	1	B	0	0	×	Non	0	C
14	Digital refractometer	1	B	19	0	○	Non	1	B
15	Miller	1	C	19	0	○	Non	0	C
16	Juicer	1	C	19	0	○	Non	0	C
17	Refrigerator	1	C	19	0	○	Non	0	C
18	Juicer	1	C	19	0	○	Non	0	C
19	Plastic cuvettes	1	C	19	0		Non	0	C
20	Pipette	1	C	19	0	○	Non	0	C
Soil Science Section									
1	Shaker	1	A	15	0	○	Non	1	A
2a	Digestion set (Digestion unit)	2	A	15	0	○	Yes	2	A
2b	Digestion set (Scrubber)	2	A	15	0	○	Yes	2	A
2c	Test tubes and gas collector	4	A	15	0	○	Non	4	A
3	Muffle furnace	1	B	15	0	○	Non	1	B
4	Program incubator	1	B	15	0	○	Non	1	C
5	Drying oven	1	B	15	0	○	Non	1	B
6	Grinder	1	C	15	0	○	Non	0	C

7	Grinder	1	C	15	0	○	Non	0	C
8	Magnetic stirrer	1	C	15	0	○	Non	0	C
Soil Science Section Glassware									
1	Funnels, Conicals, separating	20	C	15	0	○	Non	0	C
2	Funnels, Conicals, separating	20	C	15	0	○	Non	0	C
3	Absorption tubes, straight form	10	C	15	0	○	Non	0	C
4	Absorption tubes, straight form	10	C	15	0	○	Non	0	C
5	Absorption tubes, straight form	10	C	15	0	○	Non	0	C
6	Burettes	5	C	15	0	○	Non	0	C
7	Burettes	5	C	15	0	○	Non	0	C
8	Burettes	3	C	15	0	○	Non	0	C
9	Burettes	2	C	15	0	○	Non	0	C
10	Pipettes	10	C	15	0	○	Non	0	C
11	Pipettes	10	C	15	0	○	Non	0	C
12	Pipettes	10	C	15	0	○	Non	0	C
13	Pipettes	10	C	15	0	○	Non	0	C
14	Pipettes	10	C	15	0	○	Non	0	C
15	Pipettes	5	C	15	0	○	Non	0	C
16	Pipettes	3	C	15	0	○	Non	0	C
17	Pipettes	5	C	15	0	○	Non	0	C
18	Pipettes	5	C	15	0	○	Non	0	C
19	Bottle Top Dispenser	5	C	15	0	○	Non	0	C
20	Bottle Top Dispenser	5	C	15	0	○	Non	0	C
21	Micro pipette	10	C	15	0	○	Non	0	C
22	Disposable bulk tip	100	C	15	0	○	Non	0	C
23	Disposable bulk tip	100	C	15	0	○	Non	0	C
24	Disposable bulk tip	100	C	15	0	○	Non	0	C
Soil Science Section Teaching Aid									
25	LCD Projector	1	C	15	0	○	Non	0	C
26	Screen	1	C	15	0	○	Non	0	C
27	Lap top computer	3	C	15	0	○	Non	0	C
28	Desk top computer	1	C	15	0	○	Non	0	C

Plant tissue culture/ Biotechnology laboratory									
1	Water distiller	1	A	17	0	○	Non	1	A
2	Autoclave	1	A	17	0	○	Non	1	A
3	Growth chamber	1	A	17	0	○	Non	1	A
4	Oven	1	A	17	0	○	Non	1	A
5	Horizontal electrophoresis set and power supply	2	A	17	0	○	Non	2	A
6	pH meter	1	A	17	0	○	Non	1	A
7	Conductivity meter	1	A	17	0	○	Non	1	A
8	Green House	1	A	17	0	○	Non	1	C
9	LCD projector	1	A	17	0	○	Non	1	A
Entomology laboratory									
1	Dino-Eye Microscope Eyepiece Camera	1	A	13	0	○	Non	1	A
2a	Pipette	1	B	13	0	○	Non	1	B
2b	Pipette	1	B	13	0	○	Non	1	B
2c	Pipette	1	B	13	0	○	Non	1	B
2d	Tip	1,500	B	13	0	○	Non	1,500	B
3a	Petri Dish	500	B	13	0	○	Non	500	B
3b	Petri Dish	500	B	13	0	○	Non	500	B
4	Analytical Balance	1	B	13	0	○	Non	1	B
5	Portable Balance	1	C	13	0	○	Non	0	C
6	Laboratory Refrigerator	1	A	13	0	○	Non	1	A
Industrial crop laboratory									
1	Detector Scales (Hanging scale)	1	C	19	0	○	Non	1	C
2	Power sprayer	1	A	19	0	○	Non	1	A
3	Saw Gin-20 (Cotton miller)	1	A	19	0	○	Non	1	A
4	Microscopy cross section kit	1	B	19	0	○	Non	1	B
5	Halo Disc for cotton fiber length	1	B	19	0	○	Non	1	B
6	Cotton fineness maturity tester	1	B	19	0	○	Non	1	B
7	Fiber strength tester for cotton	1	B	19	0	○	Non	1	B
8	Precision standard electronic balance	1	A	19	0	○	Non	1	A
9	Two - roller sugarcane balance	1	A	19	0	○	Non	0	C
10	Technological research laboratory equipment for fiber strength and fineness for jute and kenaf	1	B	19	0	○	Non	1	B
11	Digital refractometer	1	A	19	0	○	Non	1	A

12	Freezer for sugarcane and pollen storage	1	C	19	0	○	Non	0	C
13	Refrigerator	1	C	19	0	○	Non	1	C
14	Oven	1	A	19	0	○	Non	1	A
15	Leaf area meter	1	C	19	0	○	Non	0	C
16	LCD Projector	1	A	19	0	○	Non	1	A
17	Bio math coal apparatus	1	D	19	0	○	Yes	0	D
Plant pathology laboratory									
1	Laminar Flow Cabinet	1	1 (A)	22	0	○	Non	1	A
2	Biological Microscope	1	2 (A)	22	0	○	Non	1	A
3	Vertical Autoclave	1	7 (A)	22	0	○	Non	1	A
4	Water Bath	1	10 (B)	22	0	○	Non	1	B
5	Micro Pipette	1	8 (B)	22	0	○	Non	1	B
6	Top Loading Balance	1	6 (A)	22	0	○	Non	1	A
7	Incubator	1	4 (A)	22	0	○	Non	1	A
8	Magnetic stirrer with hot plate	2	9 (B)	22	0	○	Non	2	B
9	Gravity convection drying oven	1	5 (A)	22	0	○	Non	1	A
10	Table Top Centrifuge	1	3 (A)	22	0	○	Non	1	A
Water utilization Section									
1	Infra Analyzer	1	A	19	0	○	Yes	1	B
2	Soil Moisture Analyzer (TDR) (Long Stick Instrument)	3	A	19	0	○	Yes	3	A
3	Leaf Area Meter	1	A	19	0	○	Non	1	A
4	Photosynthesis Meter	1	A	19	0	○	Non	1	A
5	Vacuum dryer	1	B	19	0	○	Non	1	B
6	Vacuum dryer	1	B	19	0	○	Non	1	B
7	Incubator	1	B	19	0	○	Non	1	B
8	Projector	1	B	19	0	○	Non	1	C
9	Lap top computer	1	C	19	0	○	Non	0	C
10	Hot and cold water cup	1	C	19	0	○	Non	0	C
11	Sound system	1	C	19	0	○	Non	0	C
Seed bank									
1	Infrared Moisture Determination Balance	2	1(A)	22	0	○	Non	2	A
2	Thermo-Hygrograph (clock work)	4	2(A)	22	0	○	Non	4	A
3	UV-VIS Spectrophotometer	1	3(A)	22	0	○	Non	1	A

4	Infra Analyzer	1	4(A)	22	0	○	Yes	1	B
5	Water distiller	1	5(A)	22	0	○	Yes	1	A
6	Standard color charts	2	6(A)	22	0	○	Non	2	A
7	Grain Testing Mill	1	7(A)	22	0	○	Non	1	B
8	Cyclone Sample Mill	1	8(A)	22	0	○	Non	1	B
9	Vortex	1	9(A)	22	0	○	Non	1	A
10	Micro Pipette (Adjustable)	2	10(A)	22	0	○	Non	2	A
11	LAB THERMO	1	11(B)	22	0	○	Non	1	A
12	Low temperature incubator	3	12(B)	22	0	○	Non	1	A
13	Micro photograph attachment	1	13(B)	22	0	○	Non	1	A
14	Magnetic stirrer	1	14(B)	22	0	○	Non	1	A
15	Leaf area meter	2	15(B)	22	0	○	Non	2	C
16	Vertical Electrophoresis	3	16(B)	22	0	○	Non	3	C
17	Computer	2	17(C)	22	0	○	Non	2	C
18	Printer	1	18(C)	22	0	○	Non	1	C
19	LCD Projector	2	19(C)	22	0	○	Non	1	A
20	Water pump	2	20(C)	22	0	○	Non	2	C
21	Camera	1	21(C)	22	0	○	Non	1	C
22	Drive	1	22(C)	22	0	○	Non	1	C
23	Hard disk	1	23(C)	22	0	○	Non	1	C
24	Day light thermostat	3	24(C)	22	0	○	Non	3	C
25	5HP pump	1	25(C)	22	0	○	Non	1	C
26	Lap top computer	2	26(C)	22	0	○	Non	2	C
	Hot water bath						Non	1	A

Central Agriculture Research and Training Center (CARTC)

No.	Equipment Name	Required number and priority		Number of research worker	Number of existing equipment	Consistency of Research	Necessity of expensive consumables	Equipment number and priority after discussion	
		Q'ty	Priority					Q'ty	Priority
Farm Machinery Section									
1	Tractor (45HP)	2	A	7	1	○	Non	1	A
2	Tractor (25HP)	2	A	7	1	○	Non	1	B
3	Combine Harvester	1	A	7	1	○	Non	1	A
4	Power Tiller	2	A	7	2	○	Non	2	A
5	Folk lift	1	A	7	0	×	Non	1	B
6	Trailer for tractor	2	A	7	0	○	Non	1	B
7	Transplanted	2	A	7	0	○	Non	1	A
8	Thresher	1	A	7	1	○	Non	1	B
9	Cultivator	2	A	7		○	Non	1	A
10	Dryer	1	A	7	1	○	Non	1	B
11	Paddy husker	1	A	7	1	○	Non	1	B
12	Rice mill	1	A	7	1	○	Non	1	B
13	Water pump	3	A	7	3	×	Non	0	C
14	Engine head	3	A	7	-	×	Non	0	-
15	Pump	3	A	7	3	×	Non	0	-
16	Min back how	1	A	7	0	×	Non	1	B
	Rotary tiller						Non	1	A
	Disc plough						Non	1	A
	Seeder for trans planter						Non	1	A
	Nursery box for trans planter						Non	500	A
Tissue culture laboratory									
1	Shaker	1	A	2	1	○	Non	1	A
2	Air conditioner	3	A	2	1	○	Non	1	A
3	Balance	1	B	2	0	○	Non	1	B
Food processing laboratory									
1	Refrigerator	1	B	6	1	×	Non	1	B
2	Baking Machine	1	B	6	0	×	Non	1	B
3	Electric Gas oven	1	B	6	0	×	Non	1	B
4	Gas stove	2	B	6	0	×	Non	2	B
5	Kitchen Utensil	2	B	6	0	×	Non	2	B

Photo room									
1	Digital camera	2	A	10	0	○	Non	2	A
2	Photo printer	1	A	10	0	○	Non	1	A
3	Vinyl printer	1	A	10	0	○	Yes	1	B
Agro chemistry laboratory									
1	Digital pH meter	1	A	2	0	○	Non	1	A
2	Digital balance	1	B	2	0	○	Non	1	A
3	Spectrophotometer	1	A	2	0	○	Non	1	A
4	Nitrogen Distillation	1	A	2	0	○	Non	1	A
5	Microscope	1	A	2	0	○	Non	0	C
6	Photocolourimeter	1	A	2	0		Non	-	-
7	Flame Photometer	1	A	2	0		Non	-	-
8	Soil pF meter	1	A	2	0	○	Non	1	A
9	Chlorophyll meter	2	A	2	0	○	Non	1	A
10	Air conditioner	2	B	2	0	○	Non	1	B
Agro Biological Laboratory									
1	Microscope with camera	1	A	5	0	○	Non	1	A
2	Autoclave	1	A	5	0	○	Non	1	A

Vegetables and Fruits Research and Development Center (VFRDC)

No.	Equipment Name	Required number and priority		Number of research worker	Number of existing equipment	Consistency of Research	Necessity of expensive consumables	Equipment number and priority after discussion	
		Q'ty	Priority					Q'ty	Priority
Vegetable laboratory									
1	Seed germinator	1	A	13	0	○	Non	1	A
2	Seed separator	1	A	13	1	○	Non	1	B
3	Refrigerator	1	A	13	1	○	Non	1	A
4	Grain moisture meter	1	A	13	1	○	Non	1	A
5	Top loading balance	2	B	13	1	○	Non	2	B
6	Pollen corrector apparatus	2	A	13	0	○	Non	2	B
7	Thermal cycler	1	A	0	0	○	Non	1	B
8	Centrifuge	1	A	0	0	○	Non	1	B
9	Electrophoresis	1	A	0	0	○	Non	1	B
10	UV lamp	1	A	0	0	○	Non	1	B
11	Deep freezer	1	A	0	0	○	Non	1	B
12	Micro pipette	1	A	0	0	○	Non	1	B
13	PCR tube	1	A	0	0	○	Non	1	B
14	Pipette chip	1	A	0	0	○	Non	1	B
15	Chemical balance	1	A	13	0	○	Non	1	A
16	Leaf area meter	1	A	13	1	○	Non	1	A
17	Drying oven	1	A	13	0	○	Non	1	A
Soil laboratory									
1	Portable pH meter	1	A	13	1	○	Non	1	A
2	Soil tension meter	4	A	13	1	○	Non	1セット	A
3	Soil pH meter	1	A	13	0	○	Non	1	A
4	Muffle furnace	1	A	0	0	○	Non	1	B
5	Semi kjeldahl Distiller	1	A	0	0	○	Non	1	B
6	Micro kjeldahl Distiller	1	A	0	0	○	Non	1	B
7	Soxhlet extractor apparatus	1	A	0	0	○	Non	1	B
Plant protection laboratory									
1	Chemical balance	1	A	13	0	○	Non	1	A
Fruits laboratory									
1	Electrical balance	1	B	6	1	○	Non	1	B
2	Refrigerator	1	A	6	0	○	Non	1	A

Tissue culture laboratory									
1	Auto clave	1	A	6	1	○	Non	1	A
2	Digital balance	1	A	6	2	○	Non	1	B
3	Shaker	1	A	6	0	○	Non	1	A
4	p H meter	1	A	6	2	○	Non	1	A
5	Refrigerator	1	A	6	0	○	Non	1	A
6	Air conditioner	4	A	6	0	○	Non	4	B
Farm machinery									
1	Tractor (45HP)	2	A	7	0	○	Non	1	A
2	Tractor (25HP)	2	A	7	0	○	Non	1	B
3	Power tiller	1	A	7	0	○	Non	1	A
4	Trailer for tractor	2	A	7	0	○	Non	2	B
5	small back hoe	1	A	7	0	×	Non	1	B
6	submergible pump	4	A	7	0	×	Non	0	C
Training section									
1	Laptop computer	2	A	7	0	○	Non	2	A
2	Computer	2	A	7	0	○	Non	2	B
3	Projector	2	A	7	0	○	Non	2	A
4	Copy machine	1	A	7	0	○	Non	1	A
5	Air conditioner	6	A	7	0	○	Non	6	B
6	Refrigerator	1	A	7	0	○	Non	1	B
7	Digital camera	2	A	7	0	○	Non	1	A
8	Digital video camera	2	A	7	0	○	Non	1	B
9	Meteorological apparatus	1Set	A	7	0	○	Non	1Set	A

7. Equipment Plan

Appendix 7. Equipment Plan

YAU 農学科

Department of Agronomy

No.	Equip. No.	機材名	Equipment Name	Q'ty
1	1	穀類水分計	Grain Moisture Meter	5
2	2	乾燥器	Oven	1
3	3	デジタル電子温度計	Digital Electronic Thermometer	5
4	4	デシケーター+乾燥剤	Desiccator with Desiccant	2
5	5	電気粉砕機	Electric Grinding Mill	1
6	6	紫外線ランプ	Ultraviolet Lamp	1
7	7	携帯型密度計	Handy Type Density Tester	1
8	8	穀類天秤	Grain Scale	1
9	9	精密縮分器	Precision Divider	1
10	10	ドッキングテストター	Dockage Tester	1
11	11	ふるい振とう機	Sieve Shaker	2
12	13	種子標本ボトル	Seed Display Bottle	100
13	14	種子計数器	Seed Counter	2
14	15	温湿度計	Hygrothermograph	2
15	16	携帯型望遠・拡大鏡	Portable Dual-purposes Scope	3
16	17	計数トレイ	Counting and Placement Tray	5
17	18	テトラゾリウム粉末	Tetrazolium Powder	2
18	19	種子保存庫	Seed Storage Room	1
19	20	重量選別機	Gravity Separator	1
20	23	ピンセット	Forceps	21
21	25	半ガロン、ガロンコンテナ	Half Gallon and Gallon Containers	7
22	26	バッグシーラー	Bag Sealer	1
23	27	ポリエチレン穀類試料バッグ	Polyethylene Grain Sample Bag	1
24	28	携帯型ガスアナライザー	Handy Type Gas Analyzer	1
25	29	ウォーターバス	Hot Water Bath	2
26	30	成分分析計	Grain Taste Analyzer	1
27	31	穀粒判別機	Single Grain Inspector	1
28	32	精米機	Laboratory Rice Mill	1
29	33	ドラフトチャンバー	Draft Chamber	1
30	34	ボルテックスミキサー	Vortex Mixer	2
31	35	マイクロピペット (0.1 - 2μL)	Micro Pipette (0.1 - 2μL)	4
32	36	マイクロピペット (0.5 - 10μL)	Micro Pipette (0.5 - 10μL)	4
33	38	マイクロピペット (10 - 100μL)	Micro Pipette (10 - 100μL)	4
34	39	マイクロピペット (20 - 200μL)	Micro Pipette (20 - 200μL)	4
35	42	蒸留水製造装置	Water Distiller	1
36	43	pH計	pH Meter	3
37	44	分析天秤	Analytical Balance	2
38	45	上皿天秤 (1000g)	Top Loading Balance	3
39	46	ガラス器具A	Glassware A	1
40	52	実験室用家具A	Laboratory Table and Furniture A	1
41	55	植物栽培庫	Plant Growth Chamber	1
42	56	土壌水分計	Soil Moisture Meter	5
43	57	土壌pH計	Soil pH Meter	5
44	58	クロロフィルメーター	Chlorophyll Meter	5
45	59	携帯型葉面積計	Portable Leaf Area Meter	1
46	60	日照計	Heliograph	2
47	61	風速計	Anemometer	2
48	62	雨量計	Rain Gauge	2
49	63	pH/伝導度計	pH/Conductivity Meter	3
50	64	LCDプロジェクター	LCD Projector	1
51	65	光合成蒸散特性測定装置	Photosynthesis Meter	1
52	72	ラボ用冷蔵庫 (300L)	Laboratory Refrigerator (300L)	1
53	103	紫外可視分光光度計	UV-VIS Spectrophotometer	1
54	124	ホットプレートスターラー	Hot Air Stirrer	2
55	130	インキュベーター (40 to 50L, 10°C~)	Incubator (40 to 50L, 10 degree Celsius~)	1
56	141	低温フリーザー	Deep Freezer	1
57	198	アナログ屈折計	Analogue Type Refract Meter	5
58	216	ビデオカメラ	Digital Video Camera	1
59	218	コンピューター	Computer	3
60	254	オートクレーブ	Autoclave	1
61	262	デジタルカメラ	Digital Camera	1

No.	Equip. No.	機材名	Equipment Name	Q'ty
1	1	穀類水分計	Grain Moisture Meter	1
2	2	乾燥器	Oven	1
3	29	ウォーターバス	Hot Water Bath	3
4	34	ボルテックスミキサー	Vortex Mixer	7
5	35	マイクロピペット (0.1 - 2 μ L)	Micro Pipette (0.1 - 2 μ L)	5
6	39	マイクロピペット (20 - 200 μ L)	Micro Pipette (20 - 200 μ L)	5
7	40	マイクロピペット (100 - 1000 μ L)	Micro Pipette (100 - 1000 μ L)	5
8	42	蒸留水製造装置	Water Distiller	1
9	43	pH計	pH Meter	1
10	44	分析天秤	Analytical Balance	2
11	47	ガラス器具B	Glassware B	1
12	52	実験室用家具 A	Laboratory Table and Furniture A	1
13	55	植物栽培庫	Plant Growth Chamber	1
14	58	クロロフィルメーター	Chlorophyll Meter	1
15	59	携帯型葉面積計	Portable Leaf Area Meter	3
16	60	日照計	Heliograph	1
17	61	風速計	Anemometer	1
18	64	LCDプロジェクター	LCD Projector	1
19	65	光合成蒸散特性測定装置	Photosynthesis Meter	1
20	67	顕微鏡 (カメラ、コンピューター付き)	Microscope with Camera and Computer	1
21	71	実体顕微鏡	Stereoscopic Microscope	3
22	72	ラボ用冷蔵庫 (300L)	Laboratory Refrigerator (300L)	2
23	73	上皿天秤 (300g)	Top Loading Balance (300g)	2
24	74	光照度計	Lux Meter	1
25	75	真空去勢機	Vacuum Emasculator	2
26	76	ノギス	Venire Calipers	4
27	77	電気伝導度計	Conductivity Meter	2
28	78	インキュベーター (80L)	Incubator (80L)	2
29	79	クリーンベンチ	Clean Bench	1
30	80	卓上オートクレーブ	Table Type Autoclave	1
31	81	マグネチックスターラー	Magnetic Stirrer	2
32	82	携帯型 pH 計	Handy Type pH Meter	2
33	83	油分濃度計	Oil Content Meter	1
34	84	プランニメーター	Planimeter	10
35	85	ホットプレート	Hot Plate	2
36	86	デジタル最高最低温度計	Digital Maximum/Minimum Thermometer	7
37	87	サンドバス	Sand Bath	2
38	103	紫外可視分光光度計	UV-VIS Spectrophotometer	1
39	119	双眼顕微鏡	Binocular Microscope	1
40	130	インキュベーター (40 to 50L, 10 $^{\circ}$ C \sim)	Incubator (40 to 50L, 10 degree Celsius \sim)	1
41	141	低温フリーザー	Deep Freezer	1
42	194	デジタル携帯型屈折計 Brix 0.0 \sim 53.0%	Digital Handy Type Refract Meter, Brix 0.0 - 3.0%	3
43	195	デジタル携帯型屈折計 Brix 45.0 \sim 93.0%	Digital Handy Type Refract Meter, Brix 45.0 - 93.0%	3
44	216	ビデオカメラ	Digital Video Camera	1
45	218	コンピューター	Computer	3
46	262	デジタルカメラ	Digital Camera	1
47	274	温度制御発芽器	Thermostatic Germinator	1
48	275	穀物水分計	Grain Moisture Meter	1

No.	Equip. No.	機材名	Equipment Name	Q'ty
1	2	乾燥器	Oven	2
2	29	ウォーターバス	Hot Water Bath	3
3	33	ドラフトチャンバー	Draft Chamber	1
4	34	ボルテックスミキサー	Vortex Mixer	6
5	35	マイクロピペット (0.1 - 2 μ L)	Micro Pipette (0.1 - 2 μ L)	4
6	39	マイクロピペット (20 - 200 μ L)	Micro Pipette (20 - 200 μ L)	4
7	40	マイクロピペット (100 - 1000 μ L)	Micro Pipette (100 - 1000 μ L)	4
8	42	蒸留水製造装置	Water Distiller	1
9	43	pH計	pH Meter	3
10	44	分析天秤	Analytical Balance	2
11	48	ガラス器具C	Glassware C	1
12	52	実験室用家具 A	Laboratory Table and Furniture A	1
13	58	クロロフィルメーター	Chlorophyll Meter	2
14	64	LCDプロジェクター	LCD Projector	1
15	72	ラボ用冷蔵庫 (300L)	Laboratory Refrigerator (300L)	1
16	77	電気伝導度計	Conductivity Meter	2
17	81	マグネチックスターラー	Magnetic Stirrer	7
18	83	油分濃度計	Oil Content Meter	1
19	88	原子吸光分光光度計	Atomic Absorption Spectrophotometer	1
20	89	ガスクロマトグラフ	Gas Chromatography	1
21	90	グラインダー	Grinder	1
22	91	オートビューレット	Auto Burette	2
23	92	マッフル炉	Muffle Furnace	1
24	93	採土器	Soil Sampling Apparatus	1
25	94	採水器及び携帯型測定キット	Water sampling and field analysis set	1
26	95	携帯型土壌分析キット	Handy Type Soil Analytical Kit	1
27	96	カサグランデ装置	Casagrande's apparatus	5
28	97	冷却遠心機	Refrigerated Centrifuge	1
29	98	卓上遠心機	Table Top Centrifuge	3
30	99	上皿天秤 (4000g)	Top Loading Balance (4000g)	2
31	100	インキュベーター (150L)	Incubator (150L)	2
32	101	フリーザー	Freezer	1
33	102	製氷機	Ice Making Machine	1
34	103	紫外可視分光光度計	UV-VIS Spectrophotometer	1
35	104	アルミブロックバス	Aluminum Block Bath	2
36	105	湿式ふるい分け器	Wet Sieving Apparatus	1
37	106	濁度計	Turbidity Meter	2
38	107	温度計	Thermometer	5
39	108	蒸発皿	Evaporating Dish	3
40	165	テンシオメーター (12インチ)	Tensiometer (12 inches)	5
41	218	コンピューター	Computer	3

No.	Equip. No.	機材名	Equipment Name	Q'ty
1	2	乾燥器	Oven	1
2	33	ドラフトチャンバー	Draft Chamber	1
3	34	ボルテックスミキサー	Vortex Mixer	10
4	35	マイクロピペット (0.1 - 2 μ L)	Micro Pipette (0.1 - 2 μ L)	5
5	39	マイクロピペット (20 - 200 μ L)	Micro Pipette (20 - 200 μ L)	5
6	40	マイクロピペット (100 - 1000 μ L)	Micro Pipette (100 - 1000 μ L)	5
7	42	蒸留水製造装置	Water Distiller	1
8	43	pH計	pH Meter	1
9	44	分析天秤	Analytical Balance	1
10	49	ガラス器具D	Glassware D	1
11	52	実験室用家具 A	Laboratory Table and Furniture A	1
12	64	LCDプロジェクター	LCD Projector	1
13	72	ラボ用冷蔵庫 (300L)	Laboratory Refrigerator (300L)	2
14	77	電気伝導度計	Conductivity Meter	1
15	79	クリーンベンチ	Clean Bench	1
16	80	卓上オートクレーブ	Table Type Autoclave	1
17	81	マグネチックスターラー	Magnetic Stirrer	7
18	100	インキュベーター (150L)	Incubator (150L)	1
19	102	製氷機	Ice Making Machine	1
20	103	紫外可視分光光度計	UV-VIS Spectrophotometer	1
21	109	電気泳動装置	Electrophoresis Apparatus	1
22	110	冷却マイクロ遠心機	Refrigerated Micro Centrifuge	1
23	111	超低温フリーザー	Deep Freezer	1
24	112	UVトランスイルミネーター	UV Trans Illuminator	1
25	113	ゲルドライヤー	Gel Dryer	1
26	114	インスタントゲルカメラ	Instant Gel Camera	1
27	115	リアルタイムPCR	Real Time PCR	1
28	116	リアルタイムPCR用試薬	SYBR Green Master Mix	1
29	117	ATP光度計	ATP Photometer	1
30	118	上皿天秤 (400g)	Top Loading Balance (400g)	3
31	119	双眼顕微鏡	Binocular Microscope	20
32	120	グロースチャンバー	Plant Growth Chamber	1
33	121	デジタルカメラ付き双眼顕微鏡	Binocular Microscope with Digital Camera	1
34	122	電気土壌滅菌器	Electric Soil Sterilizer (50L)	1
35	123	色度計	Colorimeter	1
36	124	ホットプレートスターラー	Hot Air Stirrer	2
37	125	コロニーカウンター	Colony Counter	1
38	126	遠心機	Centrifuge	1
39	127	ミクロトーム	Microtome	1
40	218	コンピューター	Computer	3
41	246	強制対流オーブン	Drying Oven	1
42	254	オートクレーブ	Autoclave	1

YAU 昆虫学科

Department of Entomology

No.	Equip. No.	機材名	Equipment Name	Q'ty
1	2	乾燥器	Oven	1
2	33	ドラフトチャンバー	Draft Chamber	1
3	34	ボルテックスミキサー	Vortex Mixer	1
4	35	マイクロピペット (0.1 - 2 μ L)	Micro Pipette (0.1 - 2 μ L)	2
5	37	マイクロピペット (2 - 20 μ L)	Micro Pipette (2 - 20 μ L)	2
6	38	マイクロピペット (10 - 100 μ L)	Micro Pipette (10 - 100 μ L)	2
7	39	マイクロピペット (20 - 200 μ L)	Micro Pipette (20 - 200 μ L)	2
8	40	マイクロピペット (100 - 1000 μ L)	Micro Pipette (100 - 1000 μ L)	2
9	42	蒸留水製造装置	Water Distiller	1
10	44	分析天秤	Analytical Balance	2
11	50	ガラス器具E	Glassware E	1
12	52	実験室用家具 A	Laboratory Table and Furniture A	1
13	64	LCDプロジェクター	LCD Projector	1
14	67	顕微鏡 (カメラ、コンピューター付き)	Microscope with Camera and Computer	1
15	100	インキュベーター (150L)	Incubator (150L)	4
16	112	UVトランスイルミネーター	UV Trans Illuminator	1
17	124	ホットプレートスターラー	Hot Air Stirrer	2
18	128	超音波洗浄器	Ultrasonic Cleaning Apparatus	1
19	129	恒温恒湿室	Temperature and Humidity Control Room	1
20	131	冷蔵庫 (650 - 700L)	Refrigerator (650 - 700 L)	1
21	132	GPS	GPS	1
22	133	解剖セット	Anatomy Set	7
23	134	高速液体クロマトグラフ	High Performance Liquid Chromatography	1
24	135	ロータリーエバポレーター	Rotary Evaporator	1
25	136	ホモジナイザー	Homogenizer	1
26	137	安全ピペット	Safety Pipette	7
27	138	ディスペンサー	Dispenser	1
28	139	ワイヤーメッシュスクリューキャップバイアル	Wire Mesh Screw Cap Vial	200
29	140	飼育箱	Clear Tumbler Cage	100
30	141	低温フリーザー	Deep Freezer	1
31	142	高速冷却遠心機 + 1.5mLプラスチックチューブ (100)	High Speed Refrigerated Centrifuge with 1.5mL Plastic Tube (100)	1
32	143	RNA精製試薬	RN Easy Mini Kit	1
33	144	DNA回収キット	Genomic DNA Kit	1
34	145	リアルタイムPCR用プレミックス試薬	Smart Tag Premix Kit	1
35	146	100bp DNAラダープラス	100 bp Plus DNA Ladder	1
36	147	染色用臭化エチジウム	Ethidium Bromide (for Staining), 200mL	1
37	148	スピニングカラム	Spin Column	1,000
38	149	アガロースゲル電気泳動装置	Aga-rose Gel Electrophoresis Apparatus	1
39	150	ゲル作成器	Gel Platform and Cool Pack with Comb	1
40	151	染色ボックス	Staining Box	1
41	152	スパチュラ	Spatula	20
42	153	採取ジャー	Collecting Jar	20
43	154	アスピレーター	Insect Trap by Aspirator	10
44	155	マレーズトラップ	Malaise Trap	2
45	156	スティッキートラップ	Sticky Trap	100
46	157	虫ピン	Entomological Pin	1,000
47	158	スライドラック	Slide Rack	20
48	159	インセクト拡大ボトル	Insect Bottle with Lenz	50
49	160	インセクト飼育かご	Rearing Basket	30
50	161	インセクトネット	Insect Net	30
51	216	ビデオカメラ	Digital Video Camera	1
52	218	コンピューター	Computer	2
53	254	オートクレーブ	Autoclave	1
54	262	デジタルカメラ	Digital Camera	1

園芸学科

Department of Horticulture

No.	Equip. No.	機材名	Equipment Name	Q'ty
1	2	乾燥器	Oven	1
2	15	温湿度計	Hygrothermograph	2
3	29	ウォーターバス	Hot Water Bath	2
4	34	ボルテックスミキサー	Vortex Mixer	5
5	35	マイクロピペット (0.1 - 2 μ L)	Micro Pipette (0.1 - 2 μ L)	3
6	36	マイクロピペット (0.5 - 10 μ L)	Micro Pipette ト (0.5 - 10 μ L)	3
7	37	マイクロピペット (2 - 20 μ L)	Micro Pipette (2 - 20 μ L)	3
8	38	マイクロピペット (10 - 100 μ L)	Micro Pipette (10 - 100 μ L)	3
9	40	マイクロピペット (100 - 1000 μ L)	Micro Pipette (100 - 1000 μ L)	3
10	42	蒸留水製造装置	Water Distiller	1
11	44	分析天秤	Analytical Balance	2
12	51	ガラス器具F	Glassware F	1
13	53	実験室用家具 B	Laboratory Table and Furniture B	1
14	55	植物栽培庫	Plant Growth Chamber	1
15	58	クロロフィルメーター	Chlorophyll Meter	1
16	59	携帯型葉面積計	Portable Leaf Area Meter	1
17	72	ラボ用冷蔵庫 (300L)	Laboratory Refrigerator (300L)	2
18	76	ノギス	Venire Calipers	10
19	79	クリーンベンチ	Clean Bench	2
20	97	冷却遠心機	Refrigerated Centrifuge	1
21	98	卓上遠心機	Table Top Centrifuge	2
22	102	製氷機	Ice Making Machine	1
23	104	アルミブロックバス	Aluminum Block Bath	1
24	115	リアルタイムPCR	Real Time PCR	1
25	116	リアルタイムPCR用試薬	SYBR Green Master Mix	1
26	122	電気土壌滅菌器	Electric Soil Sterilizer (50L)	1
27	124	ホットプレートスターラー	Hot Air Stirrer	3
28	128	超音波洗浄器	Ultrasonic Cleaning Apparatus	1
29	135	ロータリーエバポレーター	Rotary Evaporator	1
30	163	照度計	Lux Meter	2
31	164	テンシオメーター (6インチ)	Tensiometer (6 inches)	1
32	165	テンシオメーター (12インチ)	Tensiometer (12 inches)	1
33	166	ペクチナーゼセルロース酵素	Pectinase Cellulose Enzyme	1
34	167	新芽・接ぎ木ナイフ	Budding Knives and Grafting Knives	30
35	168	剪定ばさみ	Secateurs	30
36	169	スチール製キャビネット	Steel Cabinet	2
37	170	デジタル天秤 (60kg)	Digital Balance (60kg)	1
38	171	乾熱滅菌器	Hot Air Sterilizer	1
39	172	インキュベーター (160L x 2.0 $^{\circ}$ C \sim)	Incubator (160L x 2.0 C \sim)	2
40	173	低温フリーザー	Deep Freezer	1
41	174	上皿天秤 (3000g)	Top Loading Balance (3000g)	2
42	175	電気泳動装置 (電源装置付き)	Electrophoresis with Power Unit	1
43	176	UVイメージレコーダー	UV Image Recorder	1
44	177	液体窒素コンテナ	Liquid Nitrogen Bomb	2
45	178	粉碎機	Crasher	1
46	179	微量用分光光度計	Micro Spectrophotometer	1
47	180	ゲル電気泳動装置	Gel Electrophoresis Apparatus	2
48	181	UVゲル検出システム (カメラ付き)	UV Gel Image Recorder with Camera	2
49	182	組織培養ローラードラム	Roller Drum for Tissue Culture	2
50	183	自動ピペット洗浄器	Automatic Pipette Cleaner	1
51	184	ピペットホルダー	Pipette Folder	3
52	185	中量デイスペンサー	Middle Volume Dispenser	1
53	186	フィルター滅菌ユニット	Filter Sterilizing Unit	1
54	187	真空ポンプ	Vacuum Pump	1

No.	Equip. No.	機材名	Equipment Name	Q'ty
55	188	電気デジタルタイマー	Electric Digital Timer	5
56	189	研究用実体顕微鏡	Research Stereo Microscope	1
57	190	加湿器	Humidifier	2
58	191	時間領域反射計	Time Domain Refract meter	1
59	192	植物水分ストレス	On-table Pressure Bomb	1
60	193	土壌pH/温度/伝導度測定器	Multi-parameter Measuring Apparatus for pH / Temperature / Conductivity of Soil	2
61	194	デジタル携帯型屈折計 Brix 0.0~53.0%	Digital Handy Type Refract Meter, Brix 0.0 - 3.0%	2
62	195	デジタル携帯型屈折計 Brix 45.0~93.0%	Digital Handy Type Refract Meter, Brix 45.0 - 93.0%	2
63	196	携帯型屈折計 Brix 0.0~50.0%	Handy Type Refract Meter, Brix 0.0 - 50.0%	2
64	197	携帯型屈折計 Brix 45.0~93.0%	Handy Type Refract Meter, Brix 45.0 - 93.0%	2
65	198	アナログ屈折計	Analogue Type Refract Meter	2
66	199	デジタル果実圧縮テスター	Digital Fruit Firmness Tester	2
67	200	果汁抽出装置	Fruit Juice Extract Apparatus	2
68	201	携帯型pH/伝導度計	Portable pH / Conductivity Meter	2
69	202	ガスクロマトグラフ (TCD)	Gas Chromatography (TCD)	1
70	203	ガスクロマトグラフ (FID)	Gas Chromatography (FID)	1
71	204	滴定装置	Titration Apparatus	1
72	239	震盪器	Rotary Shaker	2
73	240	シェーカー付ウォーターバス	Water Bath with Shaker	2
74	254	オートクレーブ	Autoclave	1
75	261	耕耘機	Power Tiller	1

YAU 畜産学科

Department of Animal Science

No.	Equip. No.	機材名	Equipment Name	Q'ty
1	50	ガラス器具E	Glassware E	1
2	54	実験室用家具 C	Laboratory Table and Furniture C	1
3	64	LCDプロジェクター	LCD Projector	1
4	170	デジタル天秤 (60kg)	Digital Balance (60kg)	3
5	207	フラン器	Incubator	1
6	208	鶏卵キャンドラー	Egg Candler	2
7	218	コンピューター	Computer	2
8	267	フォト用プリンター	Photo Printer	2

YAU 農業経済学科

Department of Economy

No.	Equip. No.	機材名	Equipment Name	Q'ty
1	64	LCDプロジェクター	LCD Projector	3
2	132	GPS	GPS	1
3	205	コンピューターデスク、椅子	Computer Desk and Chair	40
4	206	GIS	GIS	1
5	218	コンピューター	Computer	40
6	262	デジタルカメラ	Digital Camera	2
7	269	コピー機	Copy Machine	1

No.	Equip. No.	機材名	Equipment Name	Q'ty
1	54	実験室用家具 C	Laboratory Table and Furniture C	1
2	64	LCDプロジェクター	LCD Projector	1
3	132	GPS	GPS	2
4	209	デジタルセオドライト	Digital Theodolite	5
5	210	デジタルオートレベル	Digital Auto Level	5
6	211	方向計	Digital Point Finder	5
7	212	傾斜計	Clinometer	5
8	213	基準テーブルおよびアクセサリ	Plain Table and Accessories	5
9	214	エンジン用測定工具	Testing Tools for Engine	5
10	215	電気・電子測定工具	Electric and Electronic Testing Tools	5
11	216	ビデオカメラ	Digital Video Camera	1
12	218	コンピューター	Computer	5
13	219	スキャナー	Scanner	1
14	220	ワークショップ機材	Workshop Equipment	1
15	221	トラクター(45HP)	Tractor (45HP)	1
16	222	ロータリーティラー	Rotary Tiller	1
17	223	ディスクプラウ	Disc Plough	1
18	224	ディスクハロー	Disc Harrow	1
19	225	トレーラー	Trailer	1
20	226	播種機	Seed Drill	1
21	227	ブロードキャスター	Broad Caster	1
22	228	リッジャー	Rodger	1
23	229	スプリングカルチベーター	Spring Cultivator	1
24	230	ディスクモア	Disc Mower	1
25	231	ロールベラー	Roll Baler	1
26	232	スプレーヤー	Sprayer	1
27	233	カッター	Cutter	1
28	234	田植機	Rice Transplanter	1
29	235	田植機苗箱用播種機	Seeder for Nursery Box of Rice Planter	1
30	236	田植機用苗箱	Nursery Box for Rice Transplanter	1,000
31	237	普通型コンバイン	Combine Harvester	1
32	262	デジタルカメラ	Digital Camera	2

No.	Equip. No.	機材名	Equipment Name	Q'ty
		工芸作物科	Industrial Crop	
1	2	乾燥器	Oven	1
2	44	分析天秤	Analytical Balance	1
3	64	LCDプロジェクター	LCD Projector	1
4	250	動力スプレーヤー	Power Sprayer	1
5	251	綿用粉砕器	Cotton Miller	1
6	252	デジタル屈折計	Digital Refractometer	1
		園芸科	Horticulture	
1	2	乾燥器	Oven	1
2	238	冷凍庫 (-20℃)	Freezer (-20 C)	1
3	239	震盪器	Rotary Shaker	1
4	240	シェーカー付ウォーターバス	Water Bath with Shaker	1
5	241	ポータブル農薬残留計	Portable Pesticide Residue Detector	1
6	242	種子発芽庫	Seed Germination Chamber	1
		バイオテクノロジー	Biotechnology	
1	42	蒸留水製造装置	Water Distiller	1
2	43	pH計	pH Meter	1
3	64	LCDプロジェクター	LCD Projector	1
4	120	グロースチャンバー	Plant Growth Chamber	1
5	246	強制対流オーブン	Drying Oven	1
6	247	水平電気泳動装置	Horizontal Electrophoresis System	2
7	248	電気伝導率計	Electrical Conductivity Meter	1
8	254	オートクレーブ	Autoclave	1
		水利用	Water Utilization	
1	59	携帯型葉面積計	Portable Leaf Area Meter	1
2	65	光合成蒸散特性測定装置	Photosynthesis Meter	1
3	255	土壌水分分析計	Soil Moisture Analyzer	3
		昆虫	Entomology	
1	72	ラボ用冷蔵庫(300L)	Laboratory Refrigerator (300L)	1
2	249	カメラ付き顕微鏡	Microscope with Camera	1
		植物病理	Plant Pathology	
1	73	上皿天秤 (300g)	Top Loading Balance (300g)	1
2	79	クリーンベンチ	Clean Bench	1
3	98	卓上遠心機	Table Top Centrifuge	1
4	100	インキュベーター (150L)	Incubator (150L)	1
5	246	強制対流オーブン	Drying Oven	1
6	253	生物顕微鏡	Biological Microscope	1
7	254	オートクレーブ	Autoclave	1
		土壌科学	Soil Science	
1	239	震盪器	Rotary Shaker	1
2	243	汚水分解セット (ケルダール分解)	Digestion Set (Kjeldahl, Digestion Apparatus)	2
3	244	汚水分解セット (ケルダール蒸留)	Digestion Set (Kjeldahl, Distillation Apparatus)	2
4	245	試験チューブ/ガスコレクター	Test Tube and Gas Collector	4
		シードバンク	Seed Bank	
1	29	ウォーターバス	Hot Water Bath	1
2	34	ボルテックスミキサー	Vortex Mixer	1
3	35	マイクロピペット (0.1 - 2μL)	Micro Pipette (0.1 - 2μL)	2
4	37	マイクロピペット (2 - 20μL)	Micro Pipette (2 - 20μL)	2
5	39	マイクロピペット (20 - 200μL)	Micro Pipette (20 - 200μL)	2
6	42	蒸留水製造装置	Water Distiller	1
7	64	LCDプロジェクター	LCD Projector	1
8	103	紫外可視分光光度計	UV-VIS Spectrophotometer	1
9	124	ホットプレートスターラー	Hot Air Stirrer	1
10	256	クォーツサーモヒドログラフ	Quartz Thermo Hydrograph	4
11	257	標準カラーチャート	Standard Color Chart	2
12	258	ラボ用温度計	Laboratory Thermometer	1
13	259	低温インキュベーター	Low Temperature Incubator	1
14	260	マイクロフォトグラフィックアタッチメント	Micro Photographic Attachment	1
15	275	穀物水分計	Grain Moisture Meter	2

No.	Equip. No.	機材名	Equipment Name	Q'ty
		農芸化学・土壌科学	Agrochemistry, Soil Science	
1	43	pH計	pH Meter	1
2	58	クロロフィルメーター	Chlorophyll Meter	1
3	103	紫外可視分光光度計	UV-VIS Spectrophotometer	1
4	270	デジタル秤	Digital Balance	1
5	271	ケルダール窒素抽出装置	Nitrogen Distillation Apparatus	1
6	272	土壌pF計	Soil pF Meter	1
		種子	Seed	
1	59	携帯型葉面積計	Portable Leaf Area Meter	1
2	264	種子選別機	Seed Separator	1
3	265	種子保存庫	Cool Storage	1
4	266	種子カウンター	Seed Counter	3
5	275	穀物水分計	Grain Moisture Meter	1
		組織培養	Tissue Culture	
1	239	震盪器	Rotary Shaker	1
2	263	エアコン	Air conditioner	1
		バイオテクノロジー・植物病理	Biotechnology, Plant Protection	
1	254	オートクレーブ	Autoclave	1
2	273	カメラ付き顕微鏡+プロジェクター	Microscope with Camera and Projector	1
		研修	Training Section	
3	64	LCDプロジェクター	LCD Projector	1
4	218	コンピューター	Computer	2
5	269	コピー機	Copy Machine	1
		オーディオ・ビジュアル	Audio Visual	
1	64	LCDプロジェクター	LCD Projector	1
2	216	ビデオカメラ	Digital Video Camera	1
3	218	コンピューター	Computer	1
4	262	デジタルカメラ	Digital Camera	1
		印刷	Printing	
1	268	カラーコピー機	Color Copy Machine	1
		写真	Photo	
1	262	デジタルカメラ	Digital Camera	2
2	267	フォト用プリンター	Photo Printer	1
		農業機械	Farm Machinery	
1	221	トラクター(45HP)	Tractor (45HP)	1
2	222	ロータリーティラー	Rotary Tiller	1
3	223	ディスクプラウ	Disc Plough	1
4	229	スプリングカルチベーター	Spring Cultivator	1
5	234	田植機	Rice Transplanter	1
6	235	田植機苗箱用播種機	Seeder for Nursery Box of Rice Planter	1
7	236	田植機用苗箱	Nursery Box for Rice Transplanter	500
8	261	耕耘機	Power Tiller	2

蔬菜・果樹研究開発センター

VFRDC

No.	Equip. No.	機材名	Equipment Name	Q'ty
		組織培養	Tissue Culture	
1	43	pH計	pH Meter	1
2	44	分析天秤	Analytical Balance	1
3	72	ラボ用冷蔵庫 (300L)	Laboratory Refrigerator (300L)	1
4	239	震盪器	Rotary Shaker	1
5	254	オートクレーブ	Autoclave	1
		蔬菜	Vegetables	
1	44	分析天秤	Analytical Balance	1
2	59	携帯型葉面積計	Portable Leaf Area Meter	1
3	72	ラボ用冷蔵庫 (300L)	Laboratory Refrigerator (300L)	1
4	246	強制対流オーブン	Drying Oven	1
5	274	温度制御発芽器	Thermostatic Germinator	1
6	275	穀物水分計	Grain Moisture Meter	1
		土壌	Soil	
1	57	土壌pH計	Soil pH Meter	1
2	82	携帯型 pH 計	Handy Type pH Meter	1
3	92	マッフル炉	Muffle Furnace	1
4	276	土壌テンションメーター	Soil Tensiometer	4
		果樹	Fruits	
1	72	ラボ用冷蔵庫 (300L)	Laboratory Refrigerator (300L)	1
		植物防除	Plant Protection	
1	44	分析天秤	Analytical Balance	1
		研修	Training	
1	60	日照計	Heliograph	1
2	61	風速計	Anemometer	1
3	62	雨量計	Rain Gauge	1
4	64	LCDプロジェクター	LCD Projector	2
5	216	ビデオカメラ	Digital Video Camera	1
6	218	コンピューター	Computer	4
7	262	デジタルカメラ	Digital Camera	2
8	269	コピー機	Copy Machine	1
		農業機械	Farm Machinery	
1	221	トラクター (45HP)	Tractor (45HP)	1
2	222	ロータリーティラー	Rotary Tiller	1
3	224	ディスクハロー	Disc Harrow	1
4	225	トレーラー	Trailer	1
5	229	スプリングカルチベーター	Spring Cultivator	1
6	261	耕耘機	Power Tiller	1

