

CAST Research Equipment List

Fall 2006

Item #	Item Description	Researcher/ Person in charge	Location of Equipment	Comments or Limitation on Use
1	Reflectoquant soil nitrate meter (soil or water)	Benes	Grad Lab	
2	Cardy Meter (NO3, plant tissue sap)	Benes	Ag 100	
3	Cardy Meter (K, plant tissue sap)	Benes	Ag 100	
4	Dutch augers (soil)	Benes	Field site	
5	Bulk density (core) samplers (soil)	Benes	Ag 118	
6	Hand-held GPS	Benes	Field site	
7	Dycam ADC red/near camera + assoc. software	Benes	Ag 100	For plant cover estimates (distinguishes plant vs. soil)
8	Electrical conductivity (EC) probe-- laboratory	Benes	Grad Lab	
9	Electrical conductivity (EC) probe-- field	Benes	Field site	
10	Submersible pumps (small, 56 of them)	Benes	Field site	Permanently installed. Likely to be available as of Jan. 1, 2006.
11	Solenoid valves-- normally closed, 28	Benes	Field site	Permanently installed. Likely to be available as of Jan. 1, 2006.
12	Flow meters (low flow, numerical dial, 28)	Benes	Field site	Permanently installed. Likely to be available as of Jan. 1, 2006.
13	Relays (5 V?, 28)	Benes	Field site	Permanently installed. Likely to be available as of Jan. 1, 2006.
14	55 gal plastic drums (40)	Benes	Field site	Permanently installed. Likely to be available as of Jan. 1, 2006.
15	Campbell Scientific Hyrdosense Soil Moisture Meter	Goorahoo	Plant Science Lab	
16	Tunable Diode Lasers..Ammonia and Methane and H2S	Goorahoo	CWI	
17	Adjustable Suction Minidisk Infiltrrometer	Goorahoo	Plant Science Lab	
18	TDR Soil Moisture Sensors and Loggers	Goorahoo	Plant Science Lab	
19	0-30° Brix Hand Refractometer	Goorahoo	Plant Science Lab	
20	YSI-85 EC/pH meter ...Dairy Unit	Goorahoo	Plant Science Lab	
21	ORP Meter and Calibration kit	Goorahoo	Plant Science Lab	
22	Aquatech Model 200 Moisture Probe	Goorahoo	Plant Science Lab	
23	Diviner 2000 with 1m and 2 m probe	Goorahoo	Plant Science Lab	
24	Watermark Soil Moisture Meter	Goorahoo	Plant Science Lab	
25	Tensiometer	Goorahoo	Plant Science Lab	
26	Stopwatches	Goorahoo	Plant Science Lab	
27	Thermometers	Goorahoo	Plant Science Lab	
28	Hydrometer	Goorahoo	Plant Science Lab	
29	Canopy Tent	Goorahoo	Plant Science Lab	
30	Igloo Drinking water coolers	Goorahoo	Plant Science Lab	

31	CIRAS 2 Unit with Photosynthesis and Soil Respiration accessories	Cassel S.	Plant Science Lab	
32	One Rockwell Hardness tester (uncalibrated)	Don Austin	IT building	
33	Sanders + polishers to prepare metal samples for microscopic study	Don Austin	IT building	
34	Two optical microscopes linked to image capturing software	Don Austin	IT building	These are pretty decent microscopes that were donated to
35	Near Infrared Spectrometer	R. WAMPLE	VERC 106	
36	Pressure Chamber	R. WAMPLE	VERC 106	
37	Low Temperature Exo Therm Analyzer	R. WAMPLE	VERC 106	
38	Portable Gas Powered Generator	R. WAMPLE	VERC 106	
39	100 pound, Top Loading, Mechanical Balance	R. WAMPLE	VERC 106	
40	Firm Tech 2 / Firmtest Instrument	S. BADR	VERC 118	
41	FMS / Autotitrator	S. BADR	VERC 118	
42	Fisher ABIS / pH Meter	S. BADR	VERC 118	
43	Atago PR 32 / Digital Refractometer	S. BADR	VERC 118	
44	Ohaus-Scout Pro/ Digital Scale	S. BADR	VERC 118	
45	Ohaus ES / Digital Bench Scale	S. BADR	VERC 118	
46	A & D SK10K / Digital Scale	S. BADR	VERC 118	
47	Ultra-low Freezer	S. GU	VERC 125	
48	Spectrophotometer	S. GU	VERC 119	
49	Auto-Titrator	S. GU	VERC 119	
50	Portable Photosynthesis System	S. GU	VERC 119	
51	FMS / Chlorophyll Florescence Meter	S. GU	VERC 119	
52	Tensiometers-- various lengths (12, 18, 24, 36 in.)	Goorahoo	Grad Lab	
53	Watermark Soil Moisture sensing devices + meter	Goorahoo	Grad Lab	Watermark sensors are -old. Meters work fine
54	Scanning Electron Microscope with image analysis capab	Bacon	Grad Lab	Must be used at Graduate lab
55	Video Microscope- attaches to any microscope eyepiece 1	Bacon	Grad Lab	
56	Micro plate Reader (multichannel colorimeter) for ELISA t	Bacon	Grad Lab	
57	Atomic Absorption/Emission spectrophotometer (AA)	Bacon	Grad Lab	Must be used at Graduate lab
58	Bomb Calorimeter- energy content	Bacon	Grad Lab	Must be used at Graduate lab
59	Fiber Digestor	Bacon	Grad Lab	Must be used at Graduate lab
60	Fat Extractor	Bacon	Grad Lab	Must be used at Graduate lab
61	Total Nitrogen/ protein System (Digestor & Still)	Bacon	Grad Lab	
62	Ion Selective Analyzer- nitrate	Bacon	Grad Lab	
63	Photo synthetically Active Radiation Meter (PAR meter)	Bacon	Grad Lab	
64	Leaf area meter	Bacon	Grad Lab	
65	Hygrometer (digital)- humidity	Bacon	Grad Lab	

66	Vacuum Oven	Bacon	Grad Lab	
67	Muffle furnace	Bacon	Grad Lab	
68	Pt temperature meter	Bacon	Grad Lab	
69	Freeze dryer	Bacon	Grad Lab	Must be used at Graduate lab
70	Carbon dioxide meter	Bacon	Grad Lab	
71	Dissolved Oxygen meter	Bacon	Grad Lab	
72	YSI conductivity meter	Bacon	Grad Lab	
73	Spectrophotometer (400- 900 nm)	Bacon	Grad Lab	
74	Phase contrast microscope	Bacon	Grad Lab	
75	Laminar Flow Hood	Bacon	Grad Lab	Must be used at Graduate lab
76	Media Dispensing Pump	Bacon	Grad Lab	
77	Balances (various 0-16.0001 Kg to 0 - 200.0001g)	Bacon	Grad Lab	
78	General lab equipment - shakers, ovens etc.	Bacon	Grad Lab	
79	Soil grinder	Bacon	Grad Lab	
80	Wiley Mill (large and small)	Bacon	Grad Lab	
81	Tecator Cyclotect grinder	Bacon	Grad Lab	