

COMPANIES MAKE MAJOR CONTRIBUTION TO FLORICULTURE RESEARCH WITH EQUIPMENT

Three companies in particular have made significant contributions to the energy, cover and rose production work being conducted in the CSU Heat Houses in the last year.

Resnor, Inc. provided eight, 125,000 BTU, natural gas heaters to replace those originally installed some ten years ago. Four of these are two staged units, providing a great deal more flexibility in computer control. All units are forced draft with one in each house taking combustion air from the outside. This combination greatly reduces possible ethylene pollution — always a problem if insufficient air, or lack of proper draft, happens to occur. These units are not cheap, and represent a significant investment of several thousand dollars.

In December, Wadsworth Controls provided materials and help in installing two shade screens. These are also used as thermal screens at night. Due to the shape and size of the houses, the systems were original, and George Dean spent several days with us in installation. The cost of these two systems exceeds \$8000 when our own labor is included. With the computer system, we now have the capability of obtaining information on energy consumption and crop growth with thermal and shade screening which has not been available to the industry.

Beginning two years ago, the generosity of Hewlett-Packard got us started in climate control with what amounted to a loan of equipment in excess of \$10,000. As

a result, the editor is now "expert" on software programming for greenhouse control. Hewlett-Packard has continued to be supportive through personal contacts with knowledgeable people in their nearby factories.

These donations and loans of equipment, and in some instances, actual labor, have permitted us to continue a reasonably productive research program in spite of severe financial and labor problems common to many universities

in the U.S. today. This makes the dollar contributions from organizations such as CGGA, Roses, Inc., Gloeckner, Kenneth Post Foundation, American Florist Endowment, etc. go a great deal further since many of these financial grants cannot cover costs of major capital equipment.

Among other companies who have provided major equipment in the last two to three years, are: Monsanto, DuPont, and Combustion Research Engineering.

FORT COLLINS GREENHOUSE CLIMATOLOGICAL SUMMARY FOR FIVE WEEKS, BEGINNING JANUARY 26, 1986, FORT COLLINS, CO. (See Bulletin 426 for details.)

	Week beginning									
	Jan. 26		Feb. 2		Feb. 9		Feb. 16		Feb. 23	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Average outside temperature (°F)	46	36	32	29	30	15	49	39	56	42
Maximum outside temperature (°F)	64	59	59	45	63	58	55	47	77	64
Minimum outside temperature (°F)	24	18	10	10	6	-4.9	40	28	31	21
Degree-days of heating	66	103	21	70	7	25	56	91	32	81
Average hours in the period	9	15	9	15	9	15	10	14	10	14
Accumulated total solar radiation (MJ/sq.m.)	63	1	53	1	64	1	72	1	84	1
Average relative humidity (%)	46	62	65	73	61	79	44	61	32	52
Maximum relative humidity (%)	75	88	96	100	87	94	66	80	69	93
Minimum relative humidity (%)	17	14	26	37	20	32	31	45	7	14
Average absolute vapor pressure (mb)	5	4	4	4	3	2	5	5	5	5
Average wind speed (mph)	2	1	4	2	4	1	7	3	6	2
Maximum wind speed (mph)	29	17	22	18	52	34	30	8	31	36
Average CO ₂ concentration (Pascal)	24	—	21	—	22	—	20	—	22	—
Maximum CO ₂ concentration (Pascal)	47	—	54	—	29	—	23	—	35	—
Accumulated gas consumption (cu.ft./sq.ft.)	6	68	4	8	3	10	23	60	12	55



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