PENNSYLVANIA FLOWER GROWERS

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Penn State students visit J. L. Dillon, Inc., Bloomsburg, for working field trip. Fred Fries (left) of Dillons explains field production of chrysanthemums. Our floriculture students usually dress more sharply than they have in this photo, but this was a working field trip. Students spent the day at various jobs in the field and greenhouses to gain experience in flower crop production.

OUR BEST WISHES FOR A MERRY CHRISTMAS AND A JOYFUL AND PROSPEROUS NEW YEAR

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PENN STATE'S FLORICULTURE FACULTY

Cost of Poinsettia Production

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Of all the factors that influence costs of production, spacing is probably the one that is most important yet least appreciated by most growers. Spacing involves bench space which costs money to operate.

Often there is little agreement between florists on costs of production, and this may be due to the space they give plants. When the plants are grown close together, the cost per unit will be less, but eventually the quality will drop because of reduced light intensity which is one of the most important factors influencing plant growth.

If one were to add *all* costs for a one-year period, divide this figure by the square feet of bench area used for crop production, and then divide this latter figure by 52, the resulting figure would be the cost of production per square foot of bench area per week. Too few florists do this even though it isn't difficult, and it would be a great aid in determining production costs and desired selling prices.

For purposes of comparison, production costs of 5 cents per square foot of bench area per week will be used, and this figure will include such items as officers salaries, labor, soil, fertilizer, pots, pest control materials, delivery insurance, interest, utilities, depreciation, bad debts, etc., but not fuel, selling costs, or the cost of the plant material itself. Fuel costs vary with the month and temperature maintained and will be used as shown below:

	Cents per square foot per week at	
Month	*60°F*	*65°F*
October	.002	.003
November	.013	.020
December	.023	.036

The cost of the plant material will depend upon the type of cutting obtained and the distance it must be shipped. There is little reason to assume for most florists that producing your own cuttings will be cheaper than buying from a specialist propagater when losses, breakage, etc., are taken into consideration. The costs in Table 1 are typical.

Table 1. Typical Costs of Plant Material

Type of Plant	*Base Cost*	*Transportation*	*Total Cost*
Unrooted cutting	$.115	$ .005	$ .12
Callused cutting	.16	.005	.165
Rooted cutting	.20	.005	.205
2¼" plant	.30	.01	.31

The information in Table 2 below is based on 100 pots of various types of plants and the cost of production per week calculated at 5 cents plus cost of heat.

Variations in spacing, sales made earlier than indicated, differences in the selling price, losses, etc., will influence the results. Empty bench space after a crop is sold must be allocated to some crop and is often divided between poinsettias which are followed by Easter lilies, hydrangeas, or early forced bulbs.

Table 2. Data on Poinsettia Production Costs

Spacing No.	*Distance*	*Sq. Ft. Bench Area*	*Time of Year*	*No. of Weeks*	*Cost per Week*	*Cost of Growing (area x weeks x) Cost per week*	
			2 Single-Stemmed Plants in a 5-inch Pot, Panned 10/7				
1	10X10	70	10/7-10/31	3.5	.053(65F)	12.98	
2	12X12	100	11/1-11/30	4.5	.07 (65F)	31.50	
			12/1-12/14	2.0	.086(65F)	17.20	
			12/15-12/21	1.0	.073(60F)	7.30	69.89
			3 Single-Stemmed Plants in a 6-inch Pot, Panned 10/1				
1	12X12	100	10/1-10/31	4.5	.053(65F)	23.85	
2	13X13	117	11/1-11/30	4.5	.07 (65F)	36.85	
			12/1-12/7	1.0	.086(65F)	10.06	
			12/8-12/21	2.0	.073(60F)	17.08	87.84
			4 Single-Stemmed Plants in a 7-inch Pot, Panned 9/22				
1	12X12	100	9/22-9/30	1.0	.05 (65F)	5.00	
			10/1-10/7	1.0	.053(65F)	5.30	
2	14X15	146	10/8-10/31	3.5	.053(65F)	27.08	
			11/1-11/30	4.5	.07 (65F)	44.99	
			12/1-12/7	1.0	.086(65F)	12.56	
			12/8-12/21	2.0	.073(60F)	21.32	116.25

Table 3. Various Factors Influencing Costs and Profits

Kind of Plant	*Cost of Production*	*Cost of 2¼"*	*Total Cost*	*10% Loss*	*Selling Price*	*Selling Cost (20%)*	*Return*	*Profit*
2 in a 5"	.69	.62	1.31	1.44				
3 in a 6"	.88	.93	1.81	1.99				
4 in a 7"	1.16	1.24	2.40	2.64				

A STANDBY GENERATOR SELECTING AND INSTALLING

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Connecticut Greenhouse Newsletter

Power interruption can create serious problems for plant growers anytime during the year. If they occur in winter, temperatures in greenhouses can drop to freezing levels in a short time. If they occur in summer, ventilation systems as well as watering systems will be inoperative.

The causes of power interruption are many. Ice and snow, sleet and rain, wind and lightning, as well as automobile accidents or generating equipment failure, can all result in the loss of power for a period of time.

All growers should have a plan to meet such an emergency. A good plan will provide for emergency equipment and procedures to meet the power interruption. Today—while you have the opportunity—is the time to prepare and implement this plan as you will not have time when the emergency is upon you.

One of the first considerations when developing a plan is to determine the essential electrical needs of your operation during a power outage. The following is a list of some of the equipment found in most growing operations:

Lights
Controls
Water pump
Heating cable
Ventilation fans
Refrigeration equipment
Heating equipment
Materials handling equipment

A list of all the electrical equipment in each greenhouse and accessory building should be made. This should contain the size, type, HP, amperage, voltage, and phase of all motors. Also the number and wattage of all lamps. Now check those which MUST be operated during the emergency. Next discuss your needs with the electric supplier's farm representative as well as a couple of suppliers of generating equipment. They will help you determine your needs as well as give you the details of the suggested generating equipment. Before you purchase a unit, go over the details of the installation with your electrician and have him work up a wiring plan that would connect the unit to your present facilities.

To illustrate how this is done, take the example of a grower having two 20 foot x 100 foot glass greenhouses and a small retail sales stand. Here is a list of his equipment that has to operate during a power outage:

Equipment	Size	Voltage	Starting Amps	Total Watts
2 Furnace motors	½ HP	110	12.3 ea.	2700
4 Fan motors	¼ HP	110	6.7 ea.	2700
1 Water pump	½ HP	110	12.3 ea.	1350
1 Refrigerator	1 HP	220	12.1	2650
				6700
Plus ten 100-watt lights				1000
			TOTAL	7700

The maximum load would be during the summer when all the equipment except the heaters may be operating at the same time. The total load of this equipment is 7700 watts. Because all the motors will not be started at the same time, we can reduce this figure by one-third, giving a total of 5134 watts. A 5000-watt generator would handle this load during a power outage. If future expansion is planned, a 7500-watt generator should be purchase. For the 5000-watt size, a tractor driven unit will cost about $450 and a gasoline driven unit about $800, including a 100-ampere line transfer switch. The 7500-watt size will cost about $600, and $1000 for the tractor driven and engine driven units, respectively.

Several requirements must be met when installing a standby unit. The unit should be placed in a dry location. If the unit is to be powered by a tractor, a readily accessible location is needed. The exhaust of the power unit should be vented to the outside of the building.

The local building code as well as the National Electrical Code must be followed. The standby power unit must be connected to your wiring system through a double pole-double throw switch. This keeps power from your generator from being fed back through the power company lines and injuring linemen working on the wires.

After your standby generator has been installed, a strict maintenance

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