Get Faster Turns with

Production changes at Greiling Farms yield new

by Paul Thomas Extension Horticulturist The University of Georgia

 \mathcal{J}^{f} you're a bedding plant grower, what is your biggest operational headache? Do any of the following answers sound familiar?

- I can't seem to find good labor or anyone willing to work part time for minimum wage.
- I need more greenhouse space.
- Spring transplanting time is a logistical/labor nightmare.

Getting the finished product from the greenhouse to the delivery truck is too slow and labor intensive.

Given good weather, most bedding plant growers experience excellent sales. Many growers report they run out of product too soon and lose potential sales.

To avoid future losses, some growers are considering expanding facilities. However, a pitfall of increasing production capacity can be worse transplant and shipping problems. Costly, frustrating delays may occur unless there is an unlimited supply of part-time workers or the capital exists to hire a new full-time staff. Also, new facilities, transplanting machines and transport systems are all significant capital expenditures some growers may not be able to afford. Pre-planted flats may provide an alternative solution.

Gene and Arlis Greiling, owners of Greiling Farms Inc., recently implemented changes in plug production and marketing that may offer new opportunities for bedding plant growers and may help alleviate certain production problems, too.

Greiling Farms produces more than 600 million plugs annually, making it the largest plug growing operation in the United States. The company's 7-acre Blairsville, Ga., operation is the smallest of its three production facilities. However, it is the birthplace of the company's pre-planted flat program.

Benefits of Pre-Planted Flats

Pre-planted flats may reduce the need for hiring additional part-time spring transplant labor or the need to carry over expensive and unnecessary full-time staff during less laborintensive periods. Moving pre-planted flats into a greenhouse presents the same logistical problems as getting them out again for delivery. By reducing the immediacy of the spring transplant bottleneck, using pre-planted flats should allow growers to focus capital expenditures on shipping and handling improvements.

Also, the consistent quality achieved by machine-planted flats may reduce productionmanagement headaches. Pre-planted flats can assist small growers and retail garden centers in generating more consistent crops. And more time to concentrate on marketing should generate stronger sales.

Who Should Consider Pre-Planted Flats?

Keep in mind that the intent of pre-planted flats is not to increase your profit margin at the sales end. Rather, you are substituting your labor/management headaches, time



\$

25



Pre-Planted Flats

opportunities for small- and mid-sized growers

limitations, material storage and cost considerations for a slightly higher material cost. For most growers, the savings generated by reduced labor and smoother operations will offset the lower return. This decision also allows growers to spend more time on crop planning, marketing and promotion, which can result in increased sales.

For a small grower, the ballpark purchase price of \$3.90-\$4.10 per flat may not allow pre-planted flats to be a mainline production method unless labor problems or contract demand is extreme. However, for mid-sized growers with a number of part-time employees, growers who do both wholesale and retail, and especially large retail garden centers that dabble in "we-grow-our-own" products, pre-planted flats can be a good financial decision.

Trying to Maximize Production

The hidden benefit of pre-planted flats may be what doesn't happen during production. Many bedding plant growers find that, as they finish and ship their first crop, their second crop needs attention, and the plugs for their third crop are sitting in their coolers.

"First of all, the second crop or 'turn two' is less than perfect as things 'get away' from a grower during shipping activities involving 'turn one,' " said Greiling Farms director of sales Dean Chaloupka. "Secondly, substantial numbers of 'turn three' plugs are not transplanted on time or are dumped and, thirdly, bench space goes unfilled near the end of the second rotation and continues through the third. Managers order fewer plants next season or at least never reach optimal production per square foot of bench space because of too many overlapping bottlenecks and headaches."

"What is that lost production and/or sales opportunity worth?" Chaloupka asked. For many growers, the figure can be substantial. Pre-planted flats move in and out rapidly as labor is either focused on growing or handling.

Another reason to consider pre-finished flats is the time spent unraveling the production squeeze is time taken away from marketing and sales efforts, thus preventing the potential maximum sales from being realized. The pre-finished flats usually take growers four to six weeks to finish, depending on growing conditions, species and cultivar. The advantages of the flats are in the labor savings, not in a faster crop.

Will Pre-Planted Flats Work for You?

The only sure way to determine if the economic advantages of pre-planted flats fit with your business is to do a labor-cost analysis. You need to ask yourself these questions:

- 1. How many full- and part-time employees would I need if I didn't have to worry about labor associated with seeding, plug transplanting, flat filling, loading flats into delivery trucks and the necessary supervision for large work crews?
- 2. What are the dollar figures per month, per year and over the next 10 years that I will save by converting to pre-planted flats and investing in material-handling technology? By saving as much as one full-time employee or three to four part-time employees, you may find sufficient income to justify a complete retrofit of a greenhouse with some other new technology designed to improve shipping and receiving bottlenecks. Conveyors or monorails are very affordable if the cost to install them will solve two ends of a production problem at the same time, especially if cost is spread over a 10-year payment period.
- 3. The other way to analyze the situation is to do a yearly "aspirin count." How many

Greiling Farms Inc.

ESTABLISHED: Incorporated in Wisconsin in 1961

LOCATIONS: Denmark, Wis. Apopka, Fla. Blairsville, Ga.

OWNERS: Gene & Arlis Greiling

CROPS:

Plugs, pre-planted flats, prefinished cyclamen, poinsettias, primula, finished pansies and poinsettias

OPERATION SIZE: 20 acres in Wisconsin,

30 acres in Wisconsin, 30 acres in Florida and 7 acres in Georgia

SHIPPING AREA:

Pre-planted flats are currently being shipped east of the Mississippi River.



The economics of pre-planted 606 flats*

Based on 40,000 flats generated in an average, non-automated greenhouse in the Atlanta area, two owners, one grower, one crew supervisor-grower (time shared between duties) and six part-time workers.

GROWN FROM PLUGS	COST	PRE-PLANTED	COST
Average cost to produce one flat	\$3.40	Pre-plant cost for one flat	\$4.00
(Labor & handling included)	\$0.55	(Handling only)	\$0.15
Average finishing cost	\$1.25	Average finishing cost	\$1.25
Average wholesale price	\$7.25	Average wholesale cost	\$7.25
Net return	\$2.05	Net return	\$1.85
Net income	\$82,000	Net income	\$74,500
Transplant labor costs (16-week spring and fall bedding plant growing seasons)			
6 part-time employees @\$5/hr, 8 hr/day, 5 days/week, 28 weeks/year	\$33,600	2 part-time employees	\$11,200
1 full-time crew supervisor/grower @\$19,500/year + benefits	\$25,000	1 full-time grower	\$25,000
Total labor	\$58,000	Total labor	\$39,200
Net profit	\$24,000	Net profit	\$35,300
*Costs and prices are for the Atlanta area during 1994-1995.			

headaches will you eliminate over the next 10 years if you can alleviate transplant/ shipping crunches?

What Customers Want

Greiling's Georgia facility produces plugs, bedding plants, cyclamen and poinsettias. The preplanted bedding plant flats were added this past fall.

Gene Greiling said the decision to expand into pre-planted flats came from external requests and a simple need to maximize use of new transplanting equipment.

"Some of our customers have been requesting our pre-planted flats to help them over their busiest times," he said. "Providing that product helps them and gives us more work for our transplanting machines."

The decision made sense as the

company already had a transplant and shipping infrastructure in place to support its plug operations.

"Few companies have the trucking capability we have," Chaloupka said. "Shipping plug trays is one thing. Shipping planted flats is another." The system the company developed is referred to as the Plug-and-Ship Bedding Plant Program.

Fitting into A Transplant System

At first, the pre-planted flat production line appears to be very simple, until you look closely at how synchronous operations have to be. Using plugs from its production ranges, Greiling has designed an efficient system to produce pre-planted flats.

"Our system was set up so the plugs go directly from our plug production range onto a conveyor," general manager Bill Powell said.

The conveyor feeds through a wall into a large workroom where cultivars and quantities are checked against orders. Simultaneously, pre-filled flats are loaded onto a conveyor and fed into the transplant production line.

The company's Hawe Transports System transplant machine has the capability to plant 606s, Greiling's main product, and 1204s. Standard 288 plug trays are used for the 606s, although the switch can be made to 384 plug trays for transplanting into 1204s.

How many headaches will you eliminate over the next 10 years if you can alleviate transplant/ shipping crunches?



Pre-planted flats are loaded directly onto custom designed carts.

Any cultivar available as a plug from Greiling can be transplanted into pre-planted flats.

"With a short setup, we can produce 450 flats per hour using two employees per production line rather than the usual six." Powell said.

Greiling employees demonstrated how fast they can shift production sizes and cultivars during my recent visit. From the time the command was given to change products to pulling the first new tray off the line took less than three minutes.

The pre-planted flats are then automatically watered as they travel down a conveyor and then proceed to a loading zone, where they are stacked into a customized Cannon rack system. From there, the loaded carts are wheeled into

New improved

Formula

14.3

ATER SOLUBLE

THE STANDARD' DE SOLUBLE FERTILIZERS

20-10-20

Marysville, OH 43041

(Scotts) PETERS

tractor trailers and shipped immediately. Delivery is within 24 hours.

The production line was designed so that no plug trays or other input materials (growing medium, shipping materials, etc.) ever reenter the greenhouses once they are pulled. This one-way-out Plugand-Ship program also supports the company's rigid integrated pest management program.

Any Drawbacks?

Are current customers happy with pre-planted flats? After a bit of checking around, it was obvious that the growers currently on Greiling's supply routes were very satisfied.

One possible drawback a grower may need to consider is the terms of sale. Many growers are interested in the concept but fear the cash outlay that may be required if due in 30 days. Many growers work on a net 60- or 90-day system. That may cause a cash-crunch for small growers and garden centers. It will be interesting to see how market forces work this out.

Effects of **Pre-Planted Flats**

How will production changes such as pre-planted flats affect the bedding plant market? Most growers will agree that production automation/mechanization is going to be a requirement for survival in the future. Whether pre-planted flats or just a simple conveyor. growers will need to consider how to reduce labor and implement some form of automation. There



The Choice of Professionals!

Now better than ever because it will not cake!

- Pours easily and flows freely ... no matter how long it is stored!
- High nitrate to ammonium ratio is excellent for year around production
- Excellent solubility for injector stock tanks
- Three new formulations with special trace

For information on Scotts quality products: 1-800-492-8255

are, however, caveats to mechanization.

"Mechanization requires the highest level of uniform quality products and the discipline in your managers to ensure this quality is attained," Greiling said. "It will still take the same work ethic and dedication to product quality.

"The bedding plant market for the future will be as good as we make it. We must give customers what is perceived as a good value for their money, and they must receive pleasure and satisfaction from our product. They will continue to use our products instead of some other industry's. The cut flower industry is an example of the customer wanting the product but being forced to buy silks instead because of poor quality and high prices. This could also happen to the bedding plant industry if we are not competitive." This article appeared in the December issue of GM Pro magazine. Reprinted with permission.





Page 34, Georgia Floriculture