

more satisfactory experience with gardening and landscaping. And, as mentioned earlier, it has stimulated the search for new plants within our industry and by consumers.

It's not just a matter of what's new in the way of propagating techniques but what new plants are there. We all talk about new plants, new techniques, what's new! Our landscape would be much less colorful if it were not for plant patents, plant breeders' rights, and trademarks.

## **FORECASTING FAST TURNOVER CROPS**

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Tatterson Greenhouses is a wholesale operation growing in 28 quonset greenhouses. Our greenhouse area equals 100,000 ft<sup>2</sup>, and we have 60,000 ft<sup>2</sup> in outside growing areas equipped with sprinkler irrigation. We are located in Mathews County, Virginia, located about 60 miles east of Williamsburg, Virginia.

Our product line consists of, in order of volume, bedding plant flats, 10-inch hanging baskets, 4-in. annuals, hardy garden mums, poinsettias, 4-in. perennials, and zonal geraniums.

The spring season is our busiest, and accounts for 75% of our annual sales. In five months we turn over 800 different crops, and sell 300,000 units—all on 160,000 ft.<sup>2</sup>. So, from our perspective, we think our crops can be classified as fast-turnover crops.

Now, I would like to share with you how an operation like Tatterson Greenhouses plans, grows, and prevents total chaos in the bedding plant season, or in other words, "how do we forecast fast-turnover crops?"

We have two types of forecasting: long-term and short-term.

### **LONG-TERM FORECASTING**

Long-term forecasting is done in advance. Our analyzing, planning, and ordering for a future season occurs when the present season is finished. For example: the 1986 bedding-plant season was forecast in June, 1985, and our 1986 poinsettia season was forecast in January, 1986. The following is the process we go through, and the factors we consider when forecasting our bedding-plant season.

When the Mother's Day rush is over, the owners, sales manager, crew supervisor, and grower gather written and mental notes, and discuss the season. We discuss each bedding plant cultivar in terms of quantity, quality, color, performance, durability, availability, timing of the crops, and what we would like to see next season. Then the rounds of decisions between the owner and grower begin.

The owner goes to his corner and uses money as the basis for his decision making. He decides on (1) what is affordable, (2) which product mix is the most profitable, and (3) what needs to be grown to obtain the desired sales. In the meantime, I am in the grower's corner using plant performance as the basis for my decisions. I decide on (1) what and how many plants to grow, (2) when to grow them, and (3) what grows best in our situation. Now we have to make joint decisions and plan for the next spring season.

We use these factors to help us make the plan:

*Production and sales records.* This data provides us with the knowledge to answer, "How much do we grow?" From our sales records we know cold-weather vegetables have declined since 1982, therefore, we cut them back in our plan. Also, these records tell us how much we realistically produce — do we stick with 60,000 hanging baskets a year, or go for 90,000; how about if we gamble on a late crop of tomatoes?

*Customer wants and needs.* We listen to them. They help us answer, "What do we grow?". If they want a certain cultivar, we will consider adding it, as we did when a customer requested gazanias in 1983. And most of all they tell us "color, color, color," especially for Easter and Mother's Day.

*Time of the year.* This factor answers, "When do we grow it?". As I mentioned, our customers want color throughout the season. Breaking the season into smaller seasons tells us when it is the most profitable to grow certain plants. It also helps simplify planning. For instance, pansies in February, hanging baskets in March, vegetables and bedding plants in April, and anything that blooms in May.

*Market trends and sales representatives.* These sources keep us informed. The October, 1985, issue of *Greenhouse Manager* (1) stated that impatiens are still number one, vegetables are on the decline, and petunias and vinca are on the rise. The sales representatives, of course, tell us about new seed and plant cultivars. We also consider results of AAS trials.

After considering the records, customers, profitability, and everything else that ever mattered, we complete our plan by July.

## SHORT-TERM FORECASTING

By January we are ready to put the plan into action, and this is where our short-term forecasting steps in. In other words, this is our day-to-day decision making. In our industry we must be aware of the following to manipulate our crops.

*Sticking to the plan.* We have found that it's okay to change the plan, but don't add to it. It is tempting to increase production numbers if the season is going well.

*Space.* It is limited, and availability changes from day to day. We utilize every inch by growing under, on, and above the greenhouse tables. If we increase one cultivar by 2,000 flats in the middle of the season, 2,000 flats of another cultivar need to be decreased. That's why it's important to stick to the plan.

*Timing of the crops.* Timing walks hand-in-hand with space. We allot space for germination, growing, holding, and shipping. Then we strive to keep the plant material moving from one area to the next, and stagger our propagation times to prevent clogging the system.

*Shelf life.* The shelf life of our product is relatively short. It takes a bedding-plant flat about 12 weeks to get from seed to sale. Once salable, decisions must be timely to prolong the shelf life if necessary, and to avoid plants being taken to the dump.

Being aware of the plan, space, timing, and shelf life helps us make decisions to manipulate our crops, but how do we manipulate? We can, for example: utilize sodium vapor lights to encourage growth; apply bottom heat to encourage growth; reduce temperatures to hold a crop; increase temperatures to hasten a crop; automate seeding, transplanting, and moving plants; apply growth regulators such as B-Nine<sup>1</sup> or Cyocel<sup>2</sup> to prevent stretching; withhold water and fertilizer also to prevent stretching (I've been accused of stepping on the plants to keep them short); place the plants outside after March 1 to hold them until sold; step up a flat into a four-inch pot, 10-inch hanging basket, or 7- × 15-inch window box.

So, that is how we try to forecast our fast-turnover crops at Tatterson Greenhouses. We plan in advance, try to stick to the plan, keep the plants moving, take advantage of our crop manipulation tools, and hope for good weather. We try to sell our product within the season, because we cannot profitably hold a fast-turnover crop.

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<sup>1</sup> B-Nine is a registered trademark of Uniroyal Chemical Co.

<sup>2</sup> Cyocel is a registered trademark of American Cyanamid Co.

## LITERATURE CITED

1. Cox, Pam. 1985. Bedding plant boom. *Greenhouse Manager* 4(6): 74-76.

### **CROP FORECASTING FOR TWO TO THREE-YEAR CROPS**

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What do we grow? Broadleaved evergreens primarily in raised field beds. How many do we grow? Currently over 300,000 plants of about 100 cultivars annually. What is the length of production cycle from propagation to sale?

Almost ½ of production is sold in 2 to 2½ years.

Almost ½ of production is sold in 3 to 3½ years.

(Exceptions — A few items are sold within 15 months. A few items are held for almost 4 years.)

#### HOW DO WE FORECAST FOR 2 TO 3 YEAR CROPS?

Our overall business philosophy actually sets the basic foundation for deciding what plants to grow and in what quantity. Over the years we have aimed to:

1. Build our nursery by growing the best broad-leaved evergreens available in the industry.

2. Limit production to what we can produce while maintaining the very top quality available.

3. Make a fair profit consistently.

4. Avoid the boom and bust cycles common to our industry.

5. Efficiently execute a planned production cycle.

6. Sell out every year at our preset catalog price.

7. Build business volume by supplying quality and service that holds regular customers who purchase in increasing quantities every year.

Of course, each grower has to choose the plan or philosophy that suits him and his nursery operation. There are certainly advantages and disadvantages to the plan we have chosen.

One of the advantages is that it makes deciding what and how many to grow fairly simple and effective. Our forecast now for two to three years ahead is primarily based on what we have been growing and selling in the past. These numbers