



DAN MARSCHKA | STAFF PHOTOGRAPHER PHOTOS

Unlike some of the larger greenhouses in the county, Esbenshade's Garden Centers finishes many plants, like these cyclamen, growing them to full retail size.

GROWING UNDER GLASS

At greenhouses around the county, plant production is a year-round, high-tech operation



DID YOU KNOW?

There are 391 licensed plant nurseries throughout Lancaster County.

Esbenshade's Garden Centers heats its 14-acre site near Brickerville, including more than a half a million square feet of greenhouses, with a system fed with wood waste.

Each greenhouse at the nursery has a name, not just a number. Some come from their size (Goliath) or their features (Cooler 4). Others need more explanation. "Bonanza," "Ribeye," "Salad Bar" and "T-Bone" were named because they were built after a Bonanza franchise was sold. "Waffle" is the main greenhouse of salesman and grower Jim Dostal, named from the years he lived in Belgium.

SOURCE: PENNSYLVANIA DEPARTMENT OF AGRICULTURE, JIM DOSTAL

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Six-packs of pansies will soon be front and center at local garden stores, waiting to become the centerpiece of an early spring container or the colorful edge of a garden bed.

To get those flowers ready in time for early planting, workers at Esbenshade's Garden Centers put the seeds in soil just before Christmas. The seeds sprouted in heated greenhouses and grew under computer-controlled water misters.

By the first of February, a robotic machine transplants the pansies into six-pack containers big enough for the plugs to grow a little more before they're sold.

Lancaster County is known for its rich soil and agricultural indus-



About two-thirds of plants grown in the greenhouses start with cuttings. These sweet potato vine cuttings (above) are planted into soil-filled plastic trays. Larger plants, like the pansies (below), are transplanted into six-packs and watered.

try. Even in the coldest days of winter, there are hundreds of thousands of plants growing in greenhouses all over the county. Under glass and plastic, the greenhouses grow plants from aquatic to vegetable, annuals to perennials and edible herbs to cut flowers. While some of these greenhouses sell plants at their own retail stores, many grow for other sellers and aren't open to the public.

This winter, LNP/LancasterOnline will share



more about some of the largest nurseries in the county.

Started in 1960

Esbenshade's, a retail business, has more than

half a million square feet of space to grow plants, according to the state Department of Agriculture.

The company started in 1960 near Brickerville.

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WATCH THE VIDEO

To watch a video of how plants are grown at Esbenshade's Garden Centers, visit bit.ly/GHouseEsb

Garden: Greenhouses are a year-round operation

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Today, a second generation of siblings owns the company and seven members of the third generation also have joined the business.

The public knows the company through its three retail greenhouses, which are near Brickerville, near Adamstown and near Fleetwood, Berks County. At any given time, 200,000 to 600,000 plants are growing in the greenhouses behind the Lititz-area store, says Jim Dostal, salesman and grower.

It takes a lot of work and time to grow these plants.

"People think they can grow them in a couple of weeks," he says. "Sometimes it takes six months to grow a decent plant."

Scheduling

The 2019 growing season started in these greenhouses last year. In early February, the operation was in full swing, with growers zipping around the greenhouses in golf carts. Trays of plants move down conveyor belts and machines transplant seedlings.



Cyclamen blooms in the dead of winter, making it worth the 10 months to grow to full size.

The heaviest planting period is from mid-February through the end of March, which gives the business enough time to have plants ready to ship to garden centers and chain stores in mid-April through late May.

Then come Easter plants, tulips, daffodils, hyacinths and lilies.

Next are the bedding plants, which usually go out through mid-June. Easter is late this year, which means Easter plants will crowd into the bedding plants' time, Dostal says.

Poinsettia production starts in July and next are mums.

Creating a master schedule is all about organizing and managing space. Growing the plants combines science and art, Dostal says.

"We are scientists in terms of knowing how much strength of fertilizer and how we do different things that way," he says. "But we're also a bit of an artist, because we have to form those plants."

Seeding

About a third of the plants start in the seedling room.



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Jim Dostal is a grower and salesman at Esbenshade's. He grew up in northern Pennsylvania and spent time in California and Belgium before moving to Lancaster County.

Janice Eberly loads packets of Dreams Burgundy petunia seed into a machine that vacuums tiny yellow seeds and drops them into plug trays one at a time. The trays are misted with water and then loaded onto a rack.

"It amazes me by how quickly some stuff will come up," Eberly says.

Onion seeds will sprout in just a few days. For other plants, it takes long enough for her to wonder if she turned on the seeding machine that day.

Cuttings

The rest of the plants are grown from cuttings. In another room, workers plant stem cuttings of sweet potato vine into soil-filled plastic trays with a scannable label on the side. The trays roll down a conveyor belt and into a greenhouse set up for maximum rooting. Plants are misted from overhead.

Transplanting

When the plants are large enough, they go

through the transplant machine. Needles inside four metal "fingers" reach into the tray, grasp the plugs and pull them into a 36-cell plastic tray. Plant tags are pushed into the end of each six-pack.

The machine can transplant 3,600 flats in a day, one of the workers says.

Finishing

Unlike some of the larger greenhouses in the county, Esbenshade's finishes many plants, growing them to full retail size.

Some plants are ready in weeks, like basil. Cyclamen, on the other hand, takes 10 months to be ready. The houseplant blooms in the dead of winter in shades of pink, white and red, making it worth the effort.

"They're very small when we're in our peak time," Dostal says. "We like cyclamen because we can sell them in January and February, and there's not a lot of stuff you can sell in January and February, plant-wise."



It's 10 degrees and snowing outside, but inside the Waffle greenhouse, lilies need 70-plus degrees to grow.

Surrounded by tables filled with fully-grown cyclamen, Dostal looks around.

"We're actually ready

to start the next round," he says.

And with that, the 2020 garden season begins.

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