growing green: **research**

Teaming Up To Teach

Researchers at Purdue, New Hampshire and Maine share preliminary and final research results following surveys they recently compiled.

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Purdue University grew sustainable bedding plants and sold them at five garden centers across the state of Indiana. Researchers found sustainably grown plants sold at nearly the same rate as commercially grown plants – even though sustainable plants sold at three garden centers were pricier.

HOW do growers make informed decisions about sustainable greenhouse production and marketing techniques when all things sustainability are still relatively new to the industry? Through research, for starters.

Jennifer Dennis and Roberto Lopez at Purdue University, Brian Krug at the University of New Hampshire and Stephanie Burnett at the University of Maine have combined their own research and Extension efforts by forming the Sustainability Research Coalition to help growers and consumers weed their way through the new world of sustainability. They are currently focusing their research on production issues such as crop production and energy efficiency, plant nutrition and irrigation while marketing local, sustainable and organic floriculture crops. They produced surveys this summer, sorted through some preliminary results and recently shared a few of their early findings with us.

Purdue's Consumer Survey

Dennis, Lopez and graduate student Tanya Hall grew bedding plants at Purdue this spring and prepared them for retail at five garden centers throughout Indiana.

One set was grown using the Ball Horticultural Company Circle of Life program. They grew plants in compostable pots with energy-efficient heating, Daniel's organic fertilizer, Organica plant growth activator and biological controls. The same plants – New Guinea impatiens, petunia, vinca, geranium and marigold – were grown elsewhere in plastic pots with regular commercial fertilizer. The researchers also used plant growth regulators (PGRs) and regular pesticides.

"We delivered those plants to the five garden centers in Indiana, and we had a survey on those plants," Lopez says. "So we recorded how many of the sustainable plants sold and how many of the conventional sold."

At three of the garden centers, the sustainably grown plants were priced about 20 percent higher than the conventionally grown plants. The average price of the sustainable New Guinea impatiens and 4-inch geranium pots ranged from $4.79 to $7.19, and conventional petunias, marigolds and vinca ranged from $3.59 to $5.15. The researchers found 71 percent of the higher-priced sustainably grown plants sold at retail while 78 percent of the conventionally grown plants sold.

At two other garden centers, sustainably grown plants were priced the same as conventionally grown plants. Prices ranged from $3.99 to $4.49, and the researchers found 85 percent of sustainable plants sold versus 87 percent of conventional plants.

On surveys attached to plants, consumers were asked why they purchased the respective items. Was it because of the environment? Because the pot was compostable as opposed to plastic?

"We had lots of questions," Lopez says. "Unfortunately, we didn't get the response rate we wanted. We now plan to do an online survey where we will ask similar questions and hope to get a much better response rate. At the garden centers, there was even an incentive to fill out the survey. Customers would get a $5 coupon for that garden center."

Purdue's Grower Survey

Purdue also compiled a survey for growers that was distributed at OFA Short Course and mentioned in two separate Benchrunner sends over the last few months. Surveys were also distributed at other industry events, and the goal of the research was to determine whether growers perceive an existing barrier in being sustainable.

"Are there beliefs that there's a large amount of plastic and pesticide used in the industry?" Lopez says. "We're also looking at the size of the operation, if that has an impact or if their customer is a mass merchandiser or a regular consumer. Does that influence whether they're interested in becoming sustainable?"

Some of Purdue's preliminary results revealed the following about growers:

- Nearly 98 percent have heard of the term "sustainable floriculture."
- About 62 percent consider sustainable practices to the environment "very important." About 25 percent believe sustainable practices are "somewhat important," and 11.6 percent were uncertain about the importance of sustainable practices to the environment.
- More than 62 percent use sustainable practices in their operation. About 16 percent don't, and 21 percent say they're in the process of becoming sustainable.
- VeriFlora is the most-heard-of sustainable floriculture certification program at 56 percent with MPS in second at 30 percent. Nearly 40 percent of growers had not heard of either program.
- More than half are not interested in becoming certified sustainable floriculture producers, whereas 40 percent are interested.

Purdue's grower research is ongoing, and Lopez expects to complete it in the coming months.

Get In Touch

For more information on the Sustainability Research Coalition, which consists of researchers Jennifer Dennis and Roberto Lopez at Purdue University, Brian Krug at the University of New Hampshire and Stephanie Burnett at the University of Maine, contact them by e-mail. You can reach Dennis at jhdennis@purdue.edu; Lopez at rglopez@purdue.edu; Krug at brian.krug@unh.edu; and Burnett at sburnett@maine.edu.

What About Organics?

Researchers at the University of Maine conducted two surveys over the last two years to explore the possibilities of growing plants for the organic market. The university's first survey was mailed to organic and conventional growers in Maine to learn about the greatest problems they face in organic container production.

Organic growers reported their greatest problem is control of insects and disease. Fertility maintenance using organic fertilizers and substrates was also a major problem and a close second to insects and disease.

Another question Maine researchers wanted to answer with their research was who will buy organic plants if growers make them available? Also, how much would consumers pay for them?

Those were two focuses of Maine's second survey conducted this year. Researchers asked gardeners attending flower shows in Maine to rank their interest in organically grown vegetable and ornamental plants.

The results indicate gardeners have an average interest of 7.3 on a scale from 1 to 10 in organic ornamentals. Results also revealed gardeners will pay 13.3 percent more for organic ornamentals than conventional ornamentals. Gardeners will pay 15 percent more for organically grown vegetables, according to survey results. •