e-GRO Alert

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Weathering a Late Spring

When inclement weather causes scheduling issues and production delays, consider these strategies to keep plants and people moving in the right direction.

It's been a slow start to spring, at least for growers in the central states, the Midwest and the Northeast. Extended cool, wet weather(and some snow flurries have dampened consumer spending causing delays in cycling plants out of production greenhouses and into retail areas and local gardens (Figure 1). In Ohio, we estimate that spring sales are roughly two to three weeks behind normal for this time of year. Luckily, the extended forecast is calling for more favorable weather in the days to come.

Every growing season is a little bit different, and growers must deal with unexpected delays in varied ways. When shipping orders and sales halt due to inclement weather, things can back up quickly. Scheduling of multiple crops generally assumes that when one crop leaves a space, another takes its place. Following are a few things to consider when weather and scheduling issues cause production delays.

Strategies for Holding Plants

Many greenhouse operations use the same bench space for growing and retailing plants. Spacing can be tight with little extra room for overgrown plants or plants held for too long. Some strategies for limiting plant growth included growth regulator applications, trimming or pinching plants to remove excessive growth, reducing fertilizer and water applications, and maintaining lower greenhouse temperatures (Figure 2). This can be challenging when many different species are held in the same space, and multiple strategies may need to be used.

Figure 1. Blooming plants await warmer spring weather in an Ohio greenhouse. Extended cool, wet weather has delayed 2018 spring sales.

Low Temperatures

In some cases, plants that are least sensitive to low temperatures are moved to outdoor growing spaces or spaces with limited environmental control. The low temperature tolerance of plants varies by species and sometimes cultivar, and can be influenced by how growing techniques and environment (Figure 3). Use caution as even the flowers and foliage of hardened plants can be injured by low temperatures.

Growers should have a plan in place for frost protection, if the forecast calls for low temperatures that may cause crop injury. Frost protection can be provided through several different means – including irrigation and sprinkler systems that prevent freeze injury when heat is released as the water freezes (Figure 4). Protection via placement in unheated cold frames or covering with frost protection fabrics is also effective.

Space challenges can also force growers to use any available space – even spaces not ideally suited for plant growth. Plants may be placed beneath benches, in aisleways, shipping or storage areas, or extra plants hung above benches. Though these growing conditions may be temporary, some plants will tolerate low light levels or suboptimum temperatures better than others. Reduced light levels for extended periods can result in weakened stems, excessive stretching and reduced flowering in the crop, such as in plants grown beneath too many hanging baskets.

Another challenge occurs when incoming shipments of plant material continue to arrive. One of the last groups of plants to enter Ohio greenhouses this time of year is tropical and foliage plants shipped from warmer locations. Out of necessity, these are immediately mixed in with existing plants wherever space is available often bypassing quarantine protocols that are designed to identify incoming insects or diseases. Growers should be familiar with the pests of these late arrivals and have someone look over the plant material as soon as possible.

Most issues with holding plants will resolve within the next 10 days as the weather improves and customers begin purchasing plant material.

Figure 2. Employees of a retail greenhouse remove Begonia flowers and stems through pinching. Removing excess growth improves air circulation through the crop canopy and encourages branching.

Figure 3. New Guinea impatiens moved outdoors in the spring are zapped by a early morning frost without protective covering.

Figure 4. Hanging baskets covered with ice after being irrigated with a sprinkler frost-protection system. Photo courtesy of Claudio Pasian and Mark Foertmeyer.

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