



Beth Scheckelhoff
scheckelhoff.11@osu.edu

Getting Herbaceous Perennials Off to a Good Start

Herbaceous perennial starting material comes in all shapes and sizes - from large, #1 bare root divisions to 128-cell plugs, to fully overwintered containers and plugs. For growers who choose to overwinter or purchase vernalized perennials from industry suppliers, the following tips can help achieve saleable success this season.

Don't Judge a Book By Its Cover

Let's face it, perennials can look pretty rough this time of year. Sometimes it is difficult to tell if they are even alive and well. Many species lose their foliage and die back to the crown during the winter months (Figure 1). They can remain dormant with little to no visible growth until exposed to appropriate temperature and light levels that stimulate growth, as seen with this Sedum (Figure 2).



Figure 1. Over-wintering of hardy perennials in the greenhouse.

Figure 2. Sedum buds begin to develop as temperatures warm in the spring.

Growers should screen their existing overwintered stock and any incoming starting material for obvious signs of insects, disease, or other pests. Thoroughly inspect crowns and root systems for signs and symptoms of diseases that can take hold during cool, damp conditions.

2018 Sponsors



Funding Generations of Progress
Through Research and Scholarships



P.L. LIGHT SYSTEMS
THE LIGHTING KNOWLEDGE COMPANY



FARM CREDIT EAST



In some cases, overwintered perennials may have damage from moles, voles or other rodents who feast upon the roots and crowns (Figure 3). Losses can vary from minimal to severe, depending upon the pest pressure and efforts to eliminate them from production areas. Future efforts to exclude rodents could include installing chicken wire around the perimeter of growing areas and setting out bait stations.



Figure 3. Rodents such as voles (field mice) and moles can feast on perennial crowns and root systems. There is often a hole or series of depressions in the media along with damage to the plant.

Encourage Uniformity

The ability of perennials to endure low winter temperatures and conditions during dormancy can affect the uniformity of emergence and plant stands. Growers should address uniformity issues soon after emergence, or they can easily develop into larger issues in the future (Figure 4). Growers may need to group plants according to size or vigor to prevent issues with overwatering and fertility, growth regulation, and flower timing. Cull perennials that won't amount to a saleable plant this season.



Figure 4. The variability in daylily survival and vigor can lead to future issues with watering, pest management and quality. Plants that fail to emerge after several weeks of warm temperatures should be removed.

Proper Planting

Pair plants with the proper container size. A miniature hosta variety started in a 72-cell tray will not perform well if transplanted directly into a one-gallon container (Figure 5). Why? The genetics of the plant dictate plant size and the capacity of the root system to grow in a single season. This particular variety cannot adequately fill a gallon container in a single season. The soil volume is more likely to stay saturated and promote issues with root development - including potential disease and fungus gnat infestations. Smaller quart and 4" containers are more appropriate in this example.



Figure 5. *Hosta* 'Sun Mouse' is a miniature variety that grows best in a quart or small container. When planted directly into a gallon as a plug, it often suffers from root rot and lack of vigor.



Figure 6. This Shasta Daisy division is sized appropriately for a one-gallon container. However, divisions need to be properly oriented and roots covered adequately with soil for success.



Figure 7. The variability in soil volume, planting depth and proper coverage of perennial plugs will lead to future challenges in production, and ultimately, the sale of these plants.

Most perennials, such as hosta, can be started in smaller containers and transplanted to larger containers as the season progresses - as well as overwintered for the following sales season.

Large starting material and vigorous perennial varieties should be planted in containers that provide ample room to grow. These plants will show signs of crowding, such as roots pushing plants out of containers, lodging, the constant need for watering, and possible nutrient deficiencies.

Other issues encountered with planting of bare root perennials in particular include proper planting depth, soil volume in the container, and planting orientation. Large bare root divisions are nearly impossible to plant in quart containers and should be potted into larger containers with greater volume of soil to adequately cover the roots and allow for the proper planting depth (Figures 6, 7).

For some dormant plants, especially those that form bulbs, tubers, rhizomes, or corms, it can be difficult to determine which side should be planted up.

How Low Can You Go?

In the upper Midwest, greenhouse temperatures can fluctuate widely this time of year as we transition from cold, cloudy weather to warmer, brighter conditions. Many tender perennials and tropical plants may require special attention such as elevated night temperatures, protection from cold drafts, vents, and dripping condensation from plastic coverings.

Hopefully these few tips will get your herbaceous perennials off to a good start this spring!



Funding Generations of Progress
Through Research and Scholarships



P.L. LIGHT SYSTEMS
THE LIGHTING KNOWLEDGE COMPANY

e-GRO Alert

www.e-gro.org

CONTRIBUTORS

Dr. Nora Catlin
Floriculture Specialist
Cornell Cooperative Extension
Suffolk County
nora.catlin@cornell.edu

Dr. Chris Currey
Assistant Professor of Floriculture
Iowa State University
ccurrey@iastate.edu

Dr. Ryan Dickson
Extension Specialist for Greenhouse
Management & Technologies
University of New Hampshire
ryan.dickson@unh.edu

Thomas Ford
Commercial Horticulture Educator
Penn State Extension
tgf2@psu.edu

Dan Gilrein
Entomology Specialist
Cornell Cooperative Extension
Suffolk County
dog1@cornell.edu

Dr. Joyce Latimer
Floriculture Extension & Research
Virginia Tech
jlatime@vt.edu

Heidi Lindberg
Floriculture Extension Educator
Michigan State University
wolleage@anr.msu.edu

Dr. Roberto Lopez
Floriculture Extension & Research
Michigan State University
rglopez@msu.edu

Dr. Neil Mattson
Greenhouse Research & Extension
Cornell University
neil.mattson@cornell.edu

Dr. W. Garrett Owen
Floriculture Outreach Specialist
Michigan State University
wgowen@msu.edu

Dr. Rosa E. Raudales
Greenhouse Extension Specialist
University of Connecticut
rosa.raudales@uconn.edu

Dr. Beth Scheckelhoff
Extension Educator - Greenhouse Systems
The Ohio State University
scheckelhoff.11@osu.edu

Lee Stivers
Extension Educator - Horticulture
Penn State Extension
Washington County
ljs32@psu.edu

Dr. Paul Thomas
Floriculture Extension & Research
University of Georgia
pthomas@uga.edu

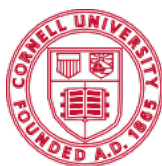
Dr. Ariana Torres-Bravo
Horticulture/ Ag. Economics
Purdue University
torres2@purdue.edu

Dr. Brian Whipker
Floriculture Extension & Research
NC State University
bwhipker@ncsu.edu

Copyright © 2018

Where trade names, proprietary products, or specific equipment are listed, no discrimination is intended and no endorsement, guarantee or warranty is implied by the authors, universities or associations.

Cooperating Universities



Cornell University

**Cornell Cooperative Extension
Suffolk County**



**University of
New Hampshire**
Cooperative Extension

PENNSTATE



Cooperative Extension
College of Agricultural Sciences



**MICHIGAN STATE
UNIVERSITY**

UCONN

**PURDUE
UNIVERSITY**



The University of Georgia



**THE OHIO STATE
UNIVERSITY**

**NC STATE
UNIVERSITY**

IOWA STATE UNIVERSITY

In cooperation with our local and state greenhouse organizations



Metro Detroit Flower Growers Association

