

OVERWINTERING PLANTS IN CONTAINERS

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Winter storage of container grown perennials is a confusing subject because the results will vary for many varieties from year to year. The principle method we use for about 65 to 70% of our plants is to winter them under microfoam. Many varieties winter well year in and year out using microfoam while other varieties are not as consistent.

The colder the winter, with good continual snow cover through the months of January and February are the years that we have the highest survival rate under our microfoam. The first year I learned about microfoam was December 4, 1972 from Francis Gouin. We thought we had the answer to all of our winter protection. That winter, we put the covers on late, not only had we just learned of the material to use, but the weather in our Cleveland area that year made it possible for us to work into late December. With much apprehension we uncovered early just to see if anything was alive.

I am not sure, after just one phone conversation with Dr. Gouin exactly what convinced me to cover approximately three quarters of our crop using this new untried or revolutionary method. At that time we were growing 200,000 pots. After sealing such a large part of our investment under microfoam and a tight seal of poly you can understand the feeling, when I tell you that many nights I lay awake worrying and wondering about the final outcome. But, as we found out over the years, this was the best experiment we ever tried. It put us on the road to fast growth in our branch of the industry with considerably more profit. None of this seemed possible before we tried Dr. Gouin's method, and for this I will be forever grateful. In later years we found out that open winters with long periods of sun and warm weather in late January, February or early March can cause the plants to force growth under the cover. This leads to damage from cold winds and weather after the beds are uncovered. Heat build-up also increases the chance of foliage and crown disease resulting in the loss of many plants.

Over the years we have increased our use of more frames and cold plastic greenhouses where we store many plants. In these cold greenhouses, we store the plants that frequently show the most loss under microfoam, and the plants that are potted after late September. Most of our potting, approximately 70 to 75% is done before September. These plants are well rooted and have sufficient top growth before the first killing frost. About 90% of these items are left in the beds where they were grown and will remain there until sold. The following items, for the most part are put in cold greenhouses, and in late winter or early spring are moved to cold frames: Canterbury Bells, Gaillardia, Myosotis palustris, Hollyhocks, Tritoma, and Gypsophila 'Bristol Fairy'. Still other plants, if we had the space, should be wintered in the greenhouse and frames. For example, our loss of Shasta daisies grown under microfoam some winters for some reason has been high. One of our main reasons for winterizing in plastic houses and frames is that 25% of our crop is planted after late September. We purposely plant some of our crop late and run cool after the first of the year. This spreads our work out, and we have finer looking plants for early sales - right from the cold frames. Delphinium, Poppies, Primula and Viola, are a few of the many items grown that way.

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Many of the other items - those that are nursery grown because they are not available to us until October or November are: Bleeding Heart, Astilbe, Hosta, Lupine, Hardy Aster, Platycodon, Asclepias, and Incarvillia are also wintered in cold houses.

Some of the above could be winterized under microfoam but for various reasons we find that other methods are better for us.

Now let me take a moment to explain our microfoam covering method. The beds are laid out about 10 feet by 196 feet. We cut all tall foliage back about one month before covering. We wait for several killing frosts. In our area this is usually late November. Plenty of mouse bait is added to the area to be covered. Loss to some of the plants, for example, Hosta, Platycodon as well as many other plants can be extensive if one or more rodents move in under the microfoam. Just before the covers are put on Daconil is sprayed on all plants. Then our little brut goes to work cutting a furrow next to each bed. Two rolls of microfoam 200 feet by 6 feet are rolled over each bed and also a 12 foot roll of plastic, either 3 or 4 mil, which is well covered on each edge in the ditch that was dug. We then lay 5 or 6 truck boards on each frame to keep the plastic from billowing too much or coming loose during a high wind when there is no snow on the covers.

We leave the covers on until the weather warms up and we feel that most of our extreme weather is over. Usually this would be early to mid-March, but this season we uncovered the last week of February.

We feel that if the covers are removed before there is any sort of new growth on the plants and are lucky enough not to have any nights below 30° for the next few days, after that the plants will be able to take colder weather in the mid to low teens, without causing too much real damage. Should the covers be left on too long, and soft growth starts, then any frost occurring in the week following the uncovering can cause considerable damage.

Our plastic greenhouse have large exhaust fans or sides and ends that can be removed on warm days. Any time during the winter that the temperature rises above 35 to 40 degrees we start the fans and let in as much outside air as we can to both cool the plants off and keep fresh air circulating around the plants until they can be moved to the frames or open field. The plants from our cold greenhouses are moved to frames or open fields in late winter or early spring, as soon as weather permits. Sometimes this is before the snow is gone. Usually only a glass cover is used over the frames, sometimes microfoam is placed on the plants under the glass. Water protection is used on the plants put in the field in late March or early April. In most cases this is all that is needed on cold nights until these plants harden off. In a few cases, we have also covered the plants with microfoam for a night, or even a few days after moving to the field should we have a very cold spell soon after moving the plants out.

You may be wondering why it wouldn't be better to leave the plants in the cold greenhouse if there is danger of frost? We like to sell "hardened-off" plants in most cases that will do well in adverse weather once it is delivered to the garden store in March or April. Leaving plants in the greenhouse too long leads to too much growth and a soft growth that will burn and wilt when put out in cold windy weather and will most likely be killed if we have a heavy frost. Secondly, it is practical to have the plastic houses cleared out and ready to accomodate a bedding plant crop.

I might add at this time that much work is being done on growth regulation of perennials and it will be a great help in getting a better crop ready for spring sales. Now what we need is a good spray that we could put on the plants that really would give frost protection until these plants harden-off.

We have been working on winter storage of potted perennials for over 20 years now, and each year we learn a little more. I am sure that many of you could add to our knowledge from your own experience, and in return, today I hope you can take home an idea or two from my experience. This exchange of ideas is what makes better perennial crops for all of us.