

Best AVM Articles for 2001

Barbara Pershing – Problem Solving With Project Plants

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Many clubs have project plants where every club member receives a starter plant of one or two varieties. The members are to grow these plants for a year and show them at the next club show. Traditionally, our club members receive their club project plant(s) at the fall show and if they exhibit the current project plant (regardless of its condition although it must be alive!) they receive the new one at no cost. This is an incentive to get more members to enter at least one exhibit (and help with the Standard Show Award). One wonders how there could be so many variations in the plants of the same variety, all of which started out the same size just a few months earlier.

It seemed to me that we were passing up a great opportunity to use the project plants to help our members solve some of their plant 'problems' and to put the new information into practice with this year's project plants.

Slides were taken of the 1999 variegated club project plants exhibited in the show and were shown at the February club meeting. Several problems were identified (but no one had to claim any plant as theirs!) Possible causes and ways to prevent the same problems from occurring were discussed. As a follow up to this discussion and to benefit those who were not in attendance, an article was printed in the next club newsletter. Following is the text of the newsletter article.

The five most common problems found in the club project plants were:

- Few or no blooms
- Inconsistent or lack of variegation
- Tight centers or problems with the crown
- Smaller leaves in middle row
- Lack of proper grooming

Each of these problems or conditions has causes and there are things that can be done to improve or change the growing conditions. Some of the solutions are long term and need to be considered several months before the show. The following information addresses each of the above problems with some possible things to help with this year's project plants.

Blossom count:

Let's start by considering what it takes to get your plant to bloom at the right time with a lot of nice blossoms.

Consistent use of fertilizer: Plants should be fertilized consistently with ¼ tsp. fertilizer to 1 gallon of water. Start out with a balanced fertilizer with the numbers 20-20-20 or 12-14-12 when the plants are young. Change to a fertilizer with a higher middle number (15-30-15) after the plant is well established and growing rapidly.

Disbud! Disbud! Disbud! This may be one of the hardest things for a grower to do. We all

want to see those lovely blossoms, but if you want a good head of blossoms at show time, the plant should not be allowed to bloom from the time it is a young plant until about 8 weeks before show. If you must allow the plant to bloom, keep the blossom stems to one or two at a time. Follow the disbudding schedule starting three months before show. This is important because it allows the plant foliage and roots to grow and be well established before it puts its energy into producing a nice number of blossoms.

Repot Regularly: Repot at least every three months, but more often if the plant outgrows the pot. Remember the 1/3 rule. The pot should be 1/3 the diameter of the foliage. We know that plants like to be a bit root bound to bloom. The plant should be in the correct size pot so it has time to fill the pot with roots before it puts energy into blooming.

Plenty of light: Plants grown under lights are much more likely to bloom abundantly, but window grown plants also bloom well if they are near an unobstructed window. Care must be taken to provide a sheer curtain to filter the sun's rays and avoid sunburn on the leaves. Window grown plants should be rotated ¼ turn every week to develop a nice symmetrical shape. Light stand plants also benefit from regular turning.

Distance from fluorescent light tubes also makes a difference. Standards should be 12" to 15" from top of leaves to light tubes, semi-miniatures from 8" to 10" and miniature 6" to 8". Lights should be on at least 11 ½ to 12 hours per day, and they do need a period of 8 hours of darkness. Starting about 10 weeks before show, increase the length of light ½ to 1 hour per week until the lights are on 14 or 15 hours per day. If you follow the regimen of regular fertilization, regular repotting, disbudding and adequate light, you should see an increase in the number of blossoms on your project plants and other show plants. However, some of the tips on growing variegated plants seem to contradict techniques to get more blossoms. This may be the reason my variegates seem to have less bloom count than green foliage plants.

Variegation:

The slides of the project plants showed a great variation in the amount of variegation. Some plants had almost no variegation (all green), others had too much white or pink in inner rows and other had leaves with almost no green.

Variegated foliage is caused by a genetically transmitted lack of chloroplasts in the cells which shows up as areas of white or light green, rose, red, wine, pink in the leaves. We can use basically the same culture as for green varieties but due to the lack of chlorophyll, they grow more slowly.

Light: To maintain more consistent variegation, plants with variegated leaves should be grown at the ends of the light shelf.

Temperature: Place variegated plants on the lowest shelf near the floor where the temperature is usually cooler. Ideal temperature for variegates is 58 degrees at night to 68 degrees during the day. At 80 degrees, certain variegated varieties tend to revert to all green. No matter

how green a variegated leaf becomes, it retains its potential to variegate when in cooler temperatures. Variegated plants tend to be greener in spring and summer while the variegation returns in fall and winter.

Fertilizer: It is better to use a fertilizer with less nitrogen for variegated plants. Peters 5-50-17 is considered a fertilizer for variegates and also is used as a bloom booster for all plants. However, it is important to use a balanced fertilizer when the plant is growing rapidly or the leaves can become almost void of any green. Use fish emulsion, which is high in nitrogen, only if the variegated plant is unhealthily variegated and has very little green in the leaves.

Tight center and/or crown problems:

Too much light will cause the center of the plant to become tight. Either cut the light time back or move the plant further from the light. To check this, place a piece of tissue paper over the center of the plant for one week. If the center opens up, then you know it is a light level problem. If this doesn't work, then it may be a pest or fertilizer problem. Check very carefully for mites, as tight centers is one of the earliest signs of these pests. (Remember, club members are a great resource. Call someone to help you check for pests if you aren't sure how to do this.)

Give the affected plant a lower dosage of fertilizer: Too much fertilizer can cause tight centers. If you have been using $\frac{1}{4}$ tsp/gal consistently, cut back to $\frac{1}{8}$ tsp. for a month. If too much fertilizer is the problem, you should see improvement in a month.

The more **root-bound** a plant gets, the tighter the center will become. If the plant hasn't been repotted recently, lift it from the pot and check it for a tight root ball that fills the pot. Repotting may be the solution.

Smaller leaves in middle row: This may be a result of long overdue repotting. When the centers start to grow out, you may find a "culture break" where the leaves in the middle row are significantly smaller than the outer row or the new center row(s). This also occurs when a plant has been blooming heavily; the leaves that are formed at that time don't receive as much light and also, the plant's energy is going to the blossoms. These leaves must be removed. Given a few weeks the leaves will fill in where these undersized leaves were removed and you won't be able to tell where you removed them. This leaf removal should be a part of the general grooming.

Grooming: Consistent grooming can help a plant grow into a nice symmetrical plant. One of the problems noticed on some of the project plants was the outer leaves with long petioles could have been removed, which would have improved the overall appearance of some plants. This may have necessitated putting it into a smaller size pot. Remember – the size of the plant isn't the issue; it's the general appearance, symmetry and blossom count that the judges will be looking at and this is what makes all of your plants, whether grown for show or for your own pleasure, so nice to look at. Hopefully these tips will help you have good luck with your 2000 Project Plants.

