

Pot Mums Respond To Soil-Less Media

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The introduction of the "Alphabet Mixes" by Professor Jim Boodley and Professor Ray Sheldrake at Cornell in early 1962 aroused some interest in Niagara County. Interest was further stirred at our 1962 growers tour, when Kirk Personius, Monroe County Associate Agricultural Agent, demonstrated the bedding plants grown on trial with the Joseph Harris Seed Company.

On December 20, 1962, Bill Treichler Jr. of Wilbur Treichler Greenhouses, Sanborn, prepared mix A and B for ten 6 inch pots of each.

The exact recipe for mix A was 5 pots Canadian peat moss, 5 pots Vermiculite, $\frac{1}{4}$ lb. ground dolimitic limestone, $1\frac{1}{2}$ tablespoons ammonium nitrate, $1\frac{3}{4}$ tablespoons 20% superphosphate. Mix B was identical, except for the replacement of vermiculite with perlite. Each mix was put in five clay and five styrofoam pots, giving four possible variations due to mixes and containers. Differences in varietal reaction were also desired, so five different varieties were used in both mixes and both pot types. Cost per pot of Mix A—2.93 cents; Mix B—2.33 cents.

Following directions on the Cornell recipe, all pots were watered, then re-watered later to dissolve the fertilizer



Fig. 1: Wilbur Treichler and son Wilbur Jr., Sanborn, check on growth of pot mums grown in soil-less medias A and B.

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Pot mums respond

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salts and leach some out. Later results indicate that this could have been done even more thoroughly. Another sidelight is that we have now learned how to run a soluble salts test with artificial media. The usual 50 gram soil plus 100 cc water mix only absorbed the water, leaving little free liquid in which to operate the solubridge electrode. Jim Boodley suggests one tablespoon of media in 40 cc distilled water.

What happened? December 21, all plants were erect and appeared set to go. December 27, one week later, wilting was severe in clay pots in mix A, with some wilt in clay pots with mix B. Both mix A and B still were OK in plastic pots. No water had been added since December 20. By December 31 even the plastic pots were showing wilt and were watered. By January 8 the same varieties in conventional soil were forging ahead and were more uniform. At this point mix A looked better than B.

Fertilization was begun on January at one teaspoon 20-20-20 per 3 qts. water. This was repeated January 15, 19, February 6. On January 19 most varieties were showing light green foliage, with variety Starburst quite yellow. By January 22 there was further chlorosis. By February 8 liquid feeding was showing a response with the exception of Starburst, which never fully recovered, but did respond better in the mix containing vermiculite. This probably indicates that potash was the most deficient element.

First bloom occurred just two months after starting and most varieties compared favorably in stage of bloom uni-



Fig. 2: Results with most varieties of mums grown in six inch pots seem satisfying to Wilbur Treichler and Bill Jr.

formity, etc., with those in soil. Sample plants were put in storage by March 10 to hold for demonstration on the March 27 tour.

It is not safe to make large production plans based on one pilot test, but something was learned. First, some potassium fertilizer could be used in Mix A to provide potash for early growth. Soluble fertilizer could be started earlier to avoid growth delays. Plants in Mix A seemed to behave somewhat better all the way through. Light weight

soil-less mix in a featherweight styrofoam pot surprises the buyer favorably. Since no disease problems appeared, we conclude that it pays to handle the sterile soil-less ingredients with sterile tools, clean hands, and on clean surfaces.

Mixes A and B have now been tried in Niagara County on potted geraniums, pot mums, bedding plants, peppers, tomatoes, begonias. The list is expected to lengthen.