



The best time to plant your seeds is before the beginning of December. To start you will need a clean 4 ½ " pot, plastic wrap, rubber band, seeds and a commercial seed growing mix, or you can make your own mix consisting of one part sphagnum peat moss, one part perlite and two parts fine pine bark mulch that has been strained through a one quarter inch screen.



Fill the pot to within an inch of the top with the mix. Gently tamp the mix so that the top is firm and even. Soak the mix with water. Spread your seeds evenly over the surface. Try not to sow any more than about 100 seeds or so in the pot. If you plant too many, they will choke themselves out as they grow.



Spray the surface with a multi purpose fungicide (Daconil will do) and then cover with the plastic wrap, held down with the rubber band. Put the pot about 12" under a fluorescent light and time the light to go on 14 hours each day. Ideally, the temperature of the pot should be in the 70 to 80 degree range.



At 75 degrees the seeds will start to germinate in two weeks. The cooler the mix temperature, the longer it will take to germinate and grow. The heat that the light generates is usually enough, but if you want to increase the heat, you can use a heating pad to raise the mix temperature up to 80 degrees.



After about 4 weeks, the cotyledons have formed. The plastic wrap should remain on the pot.



At 8 weeks, depending on the parents, the true leaves will start forming on the seedlings. You can now start conditioning them. Conditioning should be done gradually. Remove the rubber band from around the pot and turn

over a corner of the plastic wrap as shown in the photo. After two days, roll the plastic half way off the pot and then in another two days remove it altogether. Up to this point the stomates, which are the minute pores on the bottom of the leaves that control the plant's moisture loss, haven't had to be active because, with the cover on the pot, they have been in a 100% humidity environment. Lightly spray them a few times a day with water. Be careful not to spray too hard – the roots are still tiny and will dislodge if you overdo it. If you find that the spray is toppling the seedlings, it might be best to water from the bottom until the roots have more time to get a better hold. After a week, put one half TEASPOON of Miracid into a gallon of water and use it to spray with.



This photo shows the seedlings at ideal transplanting size. You can see here how just a few seeds can totally cover the surface of the mix.

It is now time to prepare a flat to transplant the seedlings. I find the best size for a flat is about 20"x24"x3" high. Two of these will fit nicely under one fluorescent light fixture. If you can't make your own flats out of wood, you can use a large storage container with holes drilled in the bottom for drainage.



Use the same soil mix that you used to plant the seeds in, although it doesn't need to be as fine. Fill the flat to the top with the mix, gently tamp and then soak with water. To transplant the seedlings, push a pencil into the mix under the roots and lift up. This will loosen them enough for you to gently take hold of a leaf and pull it from the mix.



Use the pencil and insert it into the flat to make a hole the size of the root system of the seedling. It is best to plant the seedlings two inches apart. Make your rows straight and label well if you are planting multiple crosses in the same flat. You will be thankful later that the flat was planted neatly. Continue watering, using the same method as before. You will find that as the seedlings get larger

they will require more water. Maintain your daily watch. If you detect mold, spray with fungicide. If the leaves start to turn brown along the edges, stop the fertilizer and use just water for a week or so. It is good to alternate the Miracid fertilizer with a high phosphorous fertilizer such as Upstart or Quickstart, mixed in the same proportions.



In May, after the threat of frost is past, place your seedlings outside in open shade. Fertilize once a week with the same mix that you have been using and the rain will do the rest. The flat at the left shows seedling growth in mid summer.

*Tom Ahern Lehigh Valley Chapter*