

# **Growing Strong**

## **Seed Starting Basics**

What could be better than the special satisfaction that comes from harvesting the bounty of a spectacular plant that was once only a tiny speck of a seed in the palm of your hand? Well, perhaps for some it's knowing that you can buy a packet of seeds which will grow 50 plants for about the same price it would cost to buy one plant. Or, for others, that you can choose exactly the varieties you want for an earlier harvest, a better flavor or a more beautiful color. Or maybe because you want to know that you have the healthiest, most vigorous seedlings available to take full advantage of our challenging climate. Whatever your reason this article will provide you with some useful, straightforward tips that will help you successfully navigate the seed starting process.

There are five basic requirements for successful seed starting: good seeds, good light, good starting medium, proper watering and, finally, a sense of adventure. Let's take a look at these important points one at a time.

### **GOOD SEEDS**

No matter how careful you are with all the other aspects of seed starting you will not be satisfied with the results unless you have heeded the call for good seeds. None of the other factors can compensate for seeds that are not strong and vigorous. Most seed companies provide high quality, healthy seeds because their livelihood depends on customers purchasing again next year. (See the IFCGA web page for an extensive list of seed sources.) Even the 10 cent packets are generally good seeds although sometimes the quality is inconsistent. If you have any concerns about the quality of seeds you have purchased or saved it is easy to do a simple germination test:

- Take ten seeds and place them on a dampened paper towel.
- Roll up the paper towel with the seeds inside and place it inside a plastic bag .
- Partially close the plastic bag - do not seal.
- Place in a warm place (top of a refrigerator) and check every couple of days. Add moisture to keep towel damp if necessary.
- After ten days or so count how many seeds have germinated, multiply by ten and you have the germination rate. For rates under 70% adjust the number of seeds you sow accordingly.

### **GOOD LIGHT**

Good lighting is essential to ensure sturdy, strong seedlings ready to take on the

rigors of the Idaho climate. Even a bright, sunny window does not provide sufficient light to avoid leggy, weak-stemmed seedlings. The system I have used with excellent results for the last several years is simple and inexpensive: a standard shoplight with regular florescent bulbs suspended so that the lights are never more than 3 inches from the plants. You can hang the lights from a ceiling or, as I do, from the shelves of a three-tiered plant stand that will hold 12 flats of plants. For optimal growth most plants require 16-18 hours of light with a few hours of rest. (A timer is handy for this purpose.) Special full spectrum bulbs are available but cost about 10 times more than florescent bulbs and in my experience do not improve the results enough to justify the extra cost. As the seedlings grow be sure to re-pot them in larger pots as they start crowding one another. This not only provides more root space but spreads them out so that the leaves have more surface area exposed to the light. A final hint: replace your florescent bulbs each year with new ones so that the light is as intense as possible.

### **GOOD PLANTING MEDIUM**

This is an easy one - don't use soil! Do use any good, light, soiless planting mix, many types of which are readily available at garden centers. A soiless planting medium is preferred for several reasons; it is light and open to encourage those tiny sprouts to push up to the surface, it can hold generous amounts of water without becoming water-logged, and because it is sterilized it will not harbor the harmful bacteria which cause damping off. If you are going to re-use planting containers from last year be sure to disinfect them in a 9/1 water to bleach solution.

### **PROPER WATERING**

This aspect of starting seeds is probably the most troublesome. It requires some practice (and not a few failures) to get the hang of what we gardeners mean when we say 'Well, keep them wet enough but not too wet'. The best explanation I can offer is that the soil should be consistently slightly moist but not at all soggy. It is OK for the surface to be a bit dry but if the leaves are beginning to droop or a shiny leaf is starting to look dull it is a sign that the roots do not have adequate moisture down deep. While it is probably better to err on the side of too little water rather than too much either extreme will stress the plants and produce a weaker seedling. In my experience the best method for watering seedlings is bottom watering. It avoids wetting the leaves and assures even and thorough watering of the planting medium. I have a 48x18x5" plastic container (from Target) that I use for this purpose. It is especially handy if you have lots of 6-cell planters that you need to water but any flat container that meets your needs will suffice. Just add 2-4" of un-softened water to the container and set your pots into the water. The water will slowly filter upwards through the planting medium until the surface is wet. As soon as you begin to see the surface

darkening lift the pots from the water, drain for a moment or two and return them to their place under the lights. When the seeds are newly planted and covered with plastic you will need to water much less frequently than when the plants have grown to 5 or 6" and have more leaf surface area transpiring. Watch carefully during your first seed-starting season and you will soon get the hang of it.

## **PLANTING**

Getting the seeds in the planting mix is one of the most enjoyable parts of the process. You will need:

- Planting containers - I use re-useable, deep, 6-cell planters but you can use almost any container that has good drainage. All nurseries have convenient trays, cell planters and plastic domes.
- Plant markers for identifying the seeds planted ( I use plastic milk cartons cut into strips)
- A notebook for taking notes on when, how and what you've done (you'll love yourself next year!)
- Good seeds!

Fill the containers with planting mix and pack it down gently. Check seed packets for proper planting depth\*, plant several seeds in each container, and cover with planting mix according to the directions. (Later, after the seedlings have their first set of true leaves, you will either transplant the extras or clip them out with a pair of small scissors.) Gently water each individual container thoroughly, label each container and then cover with a clear plastic bag or a plastic dome. Put into a warm place like the top of your refrigerator\*\*. Some seeds will germinate in 3-4 days so keep a close eye on them because as soon as the seedlings are up they need to be moved immediately under lights. Other seeds can take up to three weeks to germinate so read your packets. Remember to check on the moisture level periodically.

\* Some seeds require light to germinate so read the packets carefully - sprinkle these on the surface and water very gently.

\*\* If you are germinating a lot of seeds you can use an electric blanket covered with a plastic shower curtain. Use a thermometer to calibrate the soil temperature so that it's maintained at 72-75 degrees.

## **OTHER TIPS**

### **FEEDING SEEDLINGS**

Once your seedlings have their first set of true leaves you can begin feeding them at every other watering. Any good plant food with a balanced N-P-K will do but be sure to use it at ¼ strength for the first few weeks and ½ strength later.

## **HARDENING OFF**

It will make you crazy if you successfully get your plants to the point at which they are ready to go outside and then you damage or kill them by skipping this step so even though you are really anxious to get them out of your living room and into the dirt please take the time to follow this step. The process of hardening off readies the plant to withstand the rigors of the outdoors and can be accomplished in about 4 days. Start out by taking the plants outside on a calm day for about an hour. Bring them back under the lights. Repeat the process each day doubling the time until they are out all day. Now they are ready to go into the soil. If the weather gets particularly cold or windy you may want to abort the process and begin again when the weather improves. This is definitely worth doing!

## **IT'S AN ADVENTURE**

This is the final and maybe most important of the five basic requirements I mentioned at the start. Growing your own plants gives you the opportunity to learn about growth and nurturing, about patience and perseverance. It will ignite your imagination and your sense of the possible if you let it. Be willing to try what you haven't, accept the failures you will undoubtedly experience and realize that, as with most of life, if you stick with it, learn from your mistakes and keep trying you will keep growing and enjoying your own bountiful harvest.