

## GROWING NATIVES FROM SEED

I do not pretend to be an authority on growing natives. I wasn't a gardener before I started growing them about three years ago. However I do have hundreds of native plants growing in my yard that were not there when I moved in. I'm sure more than that died. I've tried a lot of different things. Some didn't work at all. Some worked well. Most worked passably. Next year fewer will die, but there will still be significant mortality and some will not germinate at all. I've learned a lot but I've still got a lot to learn. The point of the above is not to discourage you but to illustrate that even if you don't know much about wildflowers or gardening, you can grow them from seed. You are not a professional gardener that has to provide an instant landscape. You have time to experiment. With only the most moderate success you should end up with far more plants than you would ever buy. If you follow these suggestions and do a good job of watering you should have more than moderate success.

Why you have to do some bed preparation and water the plants. A typical single native plant will produce thousands of seeds in its lifetime. Some produce tens of thousands or more. To maintain a stable population in that species on average only one of the thousand or more seeds has to survive to maturity. The single young plant replaces its parent. Think of it, if on average only two seeds would survive out of the thousands produced by each of the parents, the population of that species would double within the plant's lifetime!

If you want to grow more than one or two wildflowers you can't do it Mother Nature's way and just throw out the seeds. You have to do something to dramatically improve the odds of survival. Most seeds in the wild fall on ground not suitable for growth. It's too hard, dry, doesn't hold water, gets too much or little sun, etc. Many seeds lie there for years ungerminated, many are eaten, and many germinate then die a few days later for lack of moisture. If you expect to have lots of plants you have to provide conditions where a large portion of the seeds will germinate and grow. To do that you will have to provide a good bed and much more consistent moisture than Mother Nature usually provides.

My General Approach To Growing From Seed. Since I don't know how to do it otherwise, my approach has been to do it like Mother Nature does it for the successful seed. That is, I scatter the seed in the fall on a suitable soil and later make sure it has enough moisture. More specifically, I plant the seeds in October or November in a prepared bed, leave them alone until early spring then never let them become dry until they are mature enough to fend for themselves.

Bed Preparation. The objective here is to loosen the soil, provide nutrients and organic material to hold moisture, and construct a bed surface which when irrigated will hold water until it has time to soak in. There are probably many ways to accomplish these objectives. The following works well for me. Since nearly all the land around here is on a slope I make beds in terraces that resemble rice paddies. Then to irrigate the bed I just

shower it with water and let it soak in. (If you want to try an interesting experiment, water a dry gentle slope in your yard for several minutes. Then dig a hole to see how deep the water has penetrated. In most cases the water will not have penetrated very far. Nearly all of it will have run off.) If you don't like the look of terraces, make them narrow, don't maintain them and heavy rains will smooth them out in a year or so after the plants have matured.

Preparing beds like this is not easy in Genesee. You will probably need a pick. (I have a couple I'll lend out.) I loosen the soil to about 6 inches with the pick, then pick out the rocks which I arrange as a border on the downhill side. Then I sort out the grass root clumps and beat the loose soil off them. I finish by scooping out the center of the bed slightly or putting soil around the rocks so that the bed will hold water.

If there are some gopher mounds around you may want to add some of that rich soil to the bed. I generally also add some commercial compost mixing it well with the existing soil. The Top Choice brand mushroom compost is good. It's available at Wal-Mart for about \$1.50 per 1.25 cu ft bag during the growing season but not now. You can probably still get it at the larger garden centers or substitute other compost. I would use about one bag in a 6 ft by 3 ft bed. The mushroom compost is pretty rich and will make your plants look like they are on hormones. You may also grow some unexpected mushrooms. I had one columbine seedling that I transplanted into a compost-enriched bed in late summer. By the end of the following summer it had about a dozen flowers was two feet in diameter and crowded out all the smaller plants in the bed!

Planting The Seeds. This is easy. Break up any small clods that might be in the bed and smooth the surface. Sprinkle the seeds where you want them, then gently rake in the seeds or just pat the soil down around them. You don't have to bury the seeds except for the larger ones. And even they shouldn't be planted more than about one eighth inch deep. You should push the more visible seeds underground so the birds won't get them.

You should also consider whether a particular species grows naturally in sunny or shady areas and how much natural moisture it requires then plant accordingly. The information booklets distributed at previous plant sales may be helpful if you are not that familiar with the plants. Feel free to experiment however; the seed is free, and you might be surprised at how well seed planted in the wrong place does.

How do you arrange them? That's up to you. I like to plant the single stemmed varieties in clumps putting about thirty seeds of a single species in an area about the size of a large dinner plate. Many of our wildflowers which as a single plant seem to disappear into the background look great in clumps. It also provides the deer with the opportunity to wipe out your entire crop of that plant in one big bite. I also plant more densely than I would like the mature plants to be on the theory that a lot might not germinate, and if I should be so lucky as to have too many plants it would not be such a bad thing if I had to thin or transplant them. Mark your planting locations with those little white plastic marker stakes to help you figure out which are the plants and which are the weeds in the spring.

There is no need to water after sowing, but I sometimes do it. Sprinkle lightly so you don't wash the seeds away. After sowing I let Mother Nature take charge and ignore the whole thing until spring. But sometimes when it snows I shovel a little extra snow on top the bed.

I have never put mulch on my beds except for a few aspen leaves that naturally fall on them. Mulch surely wouldn't hurt and probably would be of some benefit in that it would tend to hold in moisture and prevent drying. If you have lots of pine needles on your lot try them.

Watering. In most winters there should be enough snow to keep the seeds moist enough to condition them for germination in the spring. If there were to be a long warm dry spell in the winter I would probably dampen the soil although I don't really now if it would be necessary. In early spring I begin to watch things much more closely. Although there is usually plenty of natural moisture in the soil through June, I always worry that after a few hot dry days the seeds might dry out and not have enough moisture to germinate or survive as a short-rooted seedling. So I water the bed lightly never letting it dry out but never really soaking it. This process goes on for months until the last seeds germinate or you've given up. You really have to baby them until they get a couple true leaves. After that the roots should be long enough to get deeper moisture and you can let the soil dry out more at the surface. Use your finger to see if its damp a little way down.

Water is critical. Letting the bed dry out for even a short period at the wrong time will stop the germination or kill the seedlings. If you plan on leaving town for more than a couple days you really should have someone available to water if necessary.

A drip watering system with a timer might be a good investment. Some manufacturers sell a beginner's kit that hooks up to your hose faucet. You can install these yourself in a couple hours. Get a few of the miniature sprinklers which cover a wider area than the drip emitters. A minimal system with an electronic timer should cost less than \$75. Call me for more information.

Problems You Will Encounter. You will certainly have weeds. The soil is full of weed seeds waiting for the right conditions to germinate. Your challenge will be to figure which are the wildflowers and which are the weeds. Weed them by hand.

You won't get all the grass roots out when you prepare the bed and grass will soon appear. It's hard to weed by hand because you usually don't get all the root and it quickly comes back. The easiest remedy is to use a grass specific herbicide such as GrassBeGone. Its not easy to find. Most home centers don't handle it and you'll have to look around. If you do weed by hand remember that some of the young plants such as Iris or Gayfeather look like grass.

Deer are a real problem. They will much prefer your tender well watered plants to the struggling tough stuff growing in the wild. Not much that is legal can be done about it. The repellents are not generally considered very effective. I've used hot pepper sauce as a repellent with some success, but it washes off in the rain. If you want to try it buy the sauce with habanero peppers which are many times hotter than other peppers. Mix a bottle of sauce with about ten times its volume of water. Let the sludge settle. Draw off the clearer top portion and spray on the plants preferably on the bottom of the leaves. The sludge tends to clog small sprayers.

One local resident that I know well (but who for obvious reasons will remain anonymous) uses an air-powered pellet gun to discourage deer from grazing on his shrubs. This is in blatant disregard of local covenants and probably other regulations as well. However it seems to be fairly effective. The equipment required is available at the local Wal-Wart at a very reasonable price. I'm told that two or three pumps will produce the desired effect without drawing blood.

Another problem, if you can call it that, is that in the second year plants of one species will have gone to seed and then take over the entire bed. You then have to treat the small spreading plants like any other weed or transplant them somewhere else. If you have lots of mulch in the soil and the soil is moist you can usually extract the small plants without much root damage and transplant them easily.

Realistic Expectations. Some species (Horsemint, Coneflower, Aspen Daisy, Columbine, Tansy Aster, and many others) are very easy to grow and if you carefully follow the procedures you should get some of them to flower the first year. Others are tough and for some of the species you may get nothing. Still others may not do much for two or three years. If you plant lots of species (and there is no reason not to do so) and you are careful about watering you should be able to grow lots of plants no matter how little your previous experience is.

If you want a bed of flowers that stays in bloom all summer and provides a huge mass of blazing colors, don't expect to get it from our natives— try annual bedding plants instead. If you expect to throw out some seed and watch the flowers grow— it won't happen. If you expect seeds to germinate and grow with little or no watering as they do in nature, then as in nature less than one in a thousand will germinate and grow. If you expect lots of blooming plants the first year you will be disappointed— it takes longer than that. However with patience, a little work, and regular watering, within a couple years you should have many times more plants than you would ever purchase at plant sales.

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10/12/98  
rev 10/29/98