

# TREASURE VALLEY NATIVE PLANT NETWORK

Basics of preparing a seed tray for native plants:

Materials:

Seed tray	Chicken grit
Soil	Water
Seeds	Chicken wire (not provided)
Aluminum tag and twist tie	Instructions

1. Start with a seed tray. We suggest a “plug” tray (Fig. 1) but an open flat would suffice. Seedlings started in plug trays are much easier to transplant in the spring. Open flats can produce more seedlings per unit area, however, it takes a lot of skill and patience to remove seedlings from the tray and into a pot. Expect higher mortality if you start with an open flat.



Figure 1. "Plug" seeding tray.

2. Fill the tray with soil about 70-80% to the top. A good, general soil mix for Idaho natives is about 5 parts Sunshine #4 soil, 2 parts perlite, and 1 part lava fines. If you can't get lava fines, replace that part with additional perlite. **If you get a bag of soil from the Network, this soil is already mixed and ready for use.** Reserve some of your soil for step 5.

3. In preparation for seeding, seek specific information about proper seed depth. Information provided with the materials you get from the Network may include this. Lacking specific information the general guide is the smaller the seed the shallower depth they should be planted ... from about ½ inch for large seeds to 1/8 inch for small seeds. If seed depth  $\geq$  ¼ inch use an instrument (or your finger) to create appropriate depth depressions in the soil in each cell. If seed depth is  $\sim$ 1/8 inch, you're ready to go.

4. Seeding: Place an abundance of seeds in each tray cell. For very small seeds (like sagebrush and rabbitbrush) do your best to spread seed mix over the tray, trying to ensure some seed gets in each cell. We say “seed mix” here because the very small seeds are very difficult to clean and sort out. You may get a mix of seed and chaff (remnant flower and plant parts). Spread this mix evenly across the tray paying special attention to cells in the corners and along the edges – make sure some seed is spread to the edge cells. If you get a species with larger seeds (for example, bitterbrush, Wood’s rose or milkweed) they are easier to handle and count. Place 3-5 seeds in each cell.

5. Use the remaining soil to cover the seeds. Seeds will germinate best if they get firm contact with soil on all sides. Ideally, use the remaining soil to cover the seeds completely. Do your best to pat down the seeded cells. While being careful not to re-expose the seeds, try to give each cell a firm (but not too compact) press to ensure the seeds have good contact with the soil.

6. Apply a thin but uniform layer of chicken grit over the seed beds. The grit functions to hold the seed-soil mixture in place. Especially when watered (step 7), lighter seeds tend to ‘float’ to the top of the soil. The chicken grit will help prevent this from happening. After this step your tray should look like Figure 2.



Figure 2: Fully seeded tray.

7. Label the tray using the provided aluminum tag and twist tie. Mark the tag with the species code (usually a 4-letter code) provided with your seed and the tray number provided by NPN. You make the tag by scratching using a ball point pen (or nail, etc). Use the twist tie to attach

the tag to the hole in one corner of the tray. If yours does not have a hole use the drain holes of the corner cell.

8. Water the tray thoroughly but gently. It's probably best to place the tray where you'll leave it until springtime before you water (see Step 9). Your goal here should be to thoroughly saturate the tray with water. Be very gentle (don't splash the tray disrupting the seed bed) but make sure each cell is soaked. A 'sippy' water bottle work well allowing a very targeted application and a light stream of water that does not disrupt the seed bed.

9. Now the seeds are ready to go! Many native Idaho plant seed require "cold stratification" in order for the seeds to germinate. This means the seeds need to be exposed to freezing or near freezing temperatures for the seed to germinate. Think about what happens in nature. The seeds are produced in the fall and drop off the plant, sitting on frozen ground through the winter. In spring the seed germinate. We are trying to replicate that process in our seed trays. Again, referring to specific instruction about the particular plant species, place the trays outside for the winter. The trays are OK exposed to the cold but they need protection from disturbance from pets, wildlife, neighbor kids, etc., so place them where they will have minimal disturbance through the winter. If you think marauding squirrels or birds might be a problem, consider covering your trays with chicken wire (Fig. 3). If needed, bend the wire so that it hooks under the outer lip of the seed tray and forms a 'dome' shape over the tray. That is, try not to lay the wire flat over the tray allowing squirrels to easily reach in and dig out the seeds. A little space will discourage them from doing too much damage (Fig. 3).



Figure 3. A chicken wire 'dome' elevated above the seed bed.

10. You should be set at this point through mid- to late March. It's OK if snow accumulates on top of the trays or if they end up soaked and frozen from rain and cold. The one danger is if it turns out to be an unusually dry winter. If that happens, try to water the tray once or twice during the winter. Try not to let it completely dry out.

11. After germination, which should occur near the end of March or early April (but will vary depending on the species) the seedlings will need exposure to light – preferably natural sun light. Keep the seed bed moist, the seedlings are very susceptible to drying out at this point. If you see some mold forming on the soil surface they are too wet. Gently remove the mold (it's harmless) and don't water for a few days, allowing the soil to dry out a bit.

12. In mid-April we will begin a re-potting phase. We will move the plants to bigger pots. Look for an email alerting you to resources and support the Network will provide. Following re-potting you may continue to grow some or all of your plants or we will find them a nice place for growing and care over the spring and summer.

13. That's it! The plants are given the space and care to grow to a size ready for replanting in the Fall. Instructions for these steps will follow. Thank you for helping restore native plants to the wonderful open spaces around the Treasure Valley!