

Sowing Instructions for Seed Packets

Annuals

Annuals are plants that complete their entire life cycle in one season and die after going to seed. By allowing these plants to go to seed, you can have more flowers next year with little or no effort.

Annuals are best sown directly in the ground by broadcasting seed in an area that receives full sun and gets little to no foot traffic. Winter annuals are those that germinate in the fall/winter and bloom in spring, and these are best sown in November. Summer annuals can be sown anytime and will germinate and bloom in summer.

Sowing step-by-step:

1. If your soil is compacted, break up the top inch with firm rake.
2. Water area well 1-2 days prior to sowing.
3. Scatter seeds over moist soil.
4. Rake over lightly to cover.
5. Water again with gentle spray nozzle or watering can.
6. Water daily until seedlings appear, then water only when the top 1-2 inches of soil is dry.
7. If it rains, there is no need to water.

Note: For seed mixes, we recommend following the instructions for sowing annuals.

Perennials

Perennials are plants that live longer than one year and flower each year after reaching maturity. In the desert, many perennials do not bloom during drought years, instead conserving their energy until there is enough moisture to support flower and seed production.

We recommend starting most perennials from seed in small pots, plug trays, or seed flats, using a well-draining potting mix such as a “cactus mix” with plenty of pumice or perlite and a small amount of slow release fertilizer. Seeds should be protected from extreme cold, wind, and animals, either in a cool, sunny place indoors, or outdoors in a protected area like a screened porch.

For a growing media, we typically use a well-draining mix of wood shavings, bark, sand, perlite, and slow-release fertilizer. For plug trays, a peat and perlite seed starting mix with fertilizer will work just fine. For seed flats, we recommend either a cactus mix with added perlite/pumice and fertilizer or a 3:1 mix of perlite to vermiculite with fertilizer. Individual seedlings can be transplanted from the flat into pots when they have developed 2 to 3 sets of true leaves.

Sowing step-by-step:

1. Prepare your pots/trays/flats—make sure they are clean and filled with a good quality, moist sowing media of your choice.
2. Pre-treat seeds, if necessary.
3. Sow seeds into prepared pots/trays/flats. Large seeds (eg. *Parkinsonia florida*) should be sown at a depth of 1.5 times the diameter of the seed. Medium size seeds (eg. *Encelia actoni*, *Bahiopsis parishii*) should be sown 1/8 - 1/4 inch deep. For very small seeds (eg. *Nicotiana obtusifolia*, *Diplacus longiflorus*), sow on the surface.
4. Water in with a gentle spray nozzle or watering can.
5. Label with the name of the plant and the date sown.

Germination: Keep your pots moist (but not soggy) until seedlings emerge. After emergence, let the top of the media dry out between waterings. Overwatering seedlings will lead to “damping off”, a condition in which seedlings rot at the base and die. Too much water and/or humidity can cause this to happen to many desert seedlings.



Transplanting: From a flat, transplant seedlings when they have developed 2-3 sets of true leaves. True leaves are the leaves that develop after the cotyledon, or seed leaves (those typically rounded, fleshy leaf-like structures that are first to emerge).

From a pot, wait until roots have developed and it can be removed from the pot without soil and roots falling apart. At this stage, it is ready to be transplanted into a larger container or in the ground. Remember, the smaller the plant is when you put it in the ground, the more often it will need to be watered until it is established, and the more vulnerable it will be to predation. We recommend growing your seedlings to a 1 gallon container before transplanting.

Pre-Treatment

Some perennial seeds require something called pre-treatment in order to germinate. Pre-treatments typically mimic a natural process that breaks seed dormancy and induces germination.

Scarification: Seeds with hard, waxy coats need to be scarified so that water can penetrate the seed coat. This can be done by 1) pouring hot water over the seeds and soaking overnight, or 2) scratching the surface of the seed coat with sandpaper or a file, or 3) carefully nicking the seed coat with nail clippers or a knife.

If using the hot water method, heat water to 180 degrees F and pour over the seeds in a cup. Let soak for 8-12 hours, then sow. Do not allow seeds to dry out once they've been soaked.

If using the sandpaper or nicking method, sow seeds immediately after scratching/nicking. You can also soak the seeds in tepid water for one hour after nicking, but do not allow the seeds to dry out once they've been soaked.

Stratification: Some seeds, especially those from high elevations, need a period of cold to germinate. Seeds can be placed in a plastic bag with moist vermiculite or sand and stored in a refrigerator for 4 to 12 weeks, depending on the species.

