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SWEET PEA (*Lathyrus odoratus*)

The annual Sweet Pea, originating in wild form in the Mediterranean region, specifically Sicily and southern Italy, has long since been domesticated and is grown in all parts of the world. The thin, wiry stems hold 3–6 pea-like blooms in a variety of colors from pinks and reds to blues and purples, with bicolor, streaked, and picotee color patterns being common. Sweet Peas are known for their easily recognized and bountiful fragrance, especially in the older varieties. Breeding efforts have developed species with larger flowers and as many as 6 blooms per stem.

CAUTION: All parts of this plant are poisonous, including the seeds. Exercise extreme caution around children and pets. The purchaser assumes all liabilities relating to the use of this product.

SITE SELECTION:

Sweet Peas generally thrive in cool weather and flourish in locations that receive full sun. Sweet Peas tolerate dappled shade and will even benefit from a little afternoon shade in areas that have high temperatures and levels of humidity in summer. Slight amounts of shade are beneficial and will prevent vibrant colors from blanching out.

SOIL REQUIREMENTS:

Soil should be rich, deep, loamy, moist, and well drained. Sweet Peas grow best in slightly alkaline soil with a pH of 7.0–7.5. Johnny's offers a pH meter and a variety of soil test kits to provide you with a quick and accurate reading in order to properly amend your soil. Ample organic matter in the soil helps retain moisture to allow Sweet Peas to continue to grow and bloom throughout the heat of the summer. Sweet peas are heavy feeders so it is important to amend the soil before planting. If you need to amend your soil to incorporate organic matter, do so 5–6 days before sowing or transplanting.

IRRIGATION:

Plants should never be allowed to dry out at any time during their lifecycle. Using drip irrigation placed near the plants, along the base of the trellis or support, is the best method to ensure adequate moisture levels. Using white on black mulch will keep the soil cool and suppresses weeds, which is particularly helpful for weed control around drip irrigation.

TRELLISING/SUPPORT:

Due to their height, which can reach maximums of 8 feet, a trellis is highly recommended. Vines can be trained to climb on any vertical surface, such as a fence or arbor. However, the use of netting or mesh as a trellis is very common in larger plantings. Beds should be prepared and trellis erected prior to planting.

To construct a trellis for large plantings, the following materials are required:

- 9-gauge galvanized wire
- 8-foot tall T-posts or U-posts; the advantage of U-posts is that they have holes predrilled at the top of the post to easily run the top wire through; if using T-posts you will need to drill a hole
- Zip ties or twine
- Hortonova FG (vertical trellis)

Constructing the trellis structure: Begin by placing fence posts 8–10 feet apart in the row; driven 1 foot into the ground. Run a support wire at the top of the posts by stringing the wire through the predrilled holes. Run a second wire along the bottom of the posts as close to the ground as possible; secure the ground wire to the posts with short lengths of wire. At the first post, begin securing the Hortonova FG to the post with zip ties. As you stretch the trellis down the length of the row, use zip ties or short lengths of twine to anchor the trellis to the top and ground wires and all posts. Maintain firm tension on the Hortonova, resulting in a taught trellis to minimize sagging once the plants begin to fill the trellis.



Trellis or other support should be erected prior to sowing or transplanting to avoid root disturbance.

GERMINATION:

Any given lot of Sweet Pea seed has a percentage of hard seeds, which is noted on the seed package. The hard seed coats are a survival mechanism to allow seeds to germinate at varying times, under different environmental conditions. Hard seeds are alive, but are less permeable to water. To aid in overcoming this natural physical dormancy, presoak seeds for 24 hours in room-temperature water prior to planting. You will notice that the seeds will swell from taking on water. If any seeds do not swell, remove them from the water and nick the seed coat with a small file or by rubbing the seed with sandpaper on the side away from the radical. Return these seeds to the water and wait until they also swell up with water before planting.

Germination will occur in 14–21 days after planting, if a temperature of 55–65°F/13–18°C is maintained.

TRANSPLANTING:

Start the seeds indoors instead of sowing directly into the garden soil to help ensure a good germination rate and earlier blooms.

Sow seed 4–6 weeks before planting out; ultimately, you will transplant the seedlings as soon as the soil can be worked. Sow 2 seeds directly into each deep cell or 3–4 inch pot, $\frac{1}{4}$ – $\frac{1}{2}$ inch deep. Darkness is required for germination, so be sure to cover the seed completely with potting soil. Place the cell flats or pots in a location that will receive good ventilation. Keep the soil surface moist, but not oversaturated, until emergence. As the plants continue to grow, ensure that they do not dry out at any point in their life cycle. Thin to one plant when the true leaves appear. If desired, prior to transplanting, pinch the plants as described below.

After 2–3 side-shoots develop and as soon as the soil can be worked transplant the seedlings outside 6 inches apart. If the seedlings are left in the cells or pots for longer, they may become root-bound or begin to flop over without support. If planted out when temperatures are still cool, seedlings won't be damaged by a light frost. A hard frost, however, can kill or damage Sweet Pea seedlings. Water freshly-planted seedlings thoroughly and apply a thin layer of well-rotted manure, organic matter, straw, or white-on-black plastic mulch.

DIRECT SEEDING:

Prepare the bed by incorporating any needed organic matter or other nutrients, as recommended above. Trellises or other supports should be in place prior to sowing. Six weeks before the last frost, dibble small holes in the soil 6 inches apart, $\frac{1}{4}$ – $\frac{1}{2}$ inch deep, and place 2–3 seeds in each. Darkness is required for germination, so be sure to cover the seed completely with soil. Thin to 1 seedling per hole when true leaves appear. Ensure that the plants do not dry out at any point in their life cycle. If desired, pinch the plants as described below.

PINCHING:

To encourage denser branching and greater numbers of flowers, it is customary to pinch out the main growing point when the plants are 6–8 inches tall. Use your thumb and index finger to pinch the shoot off about an inch above the soil, leaving 2–3 side shoots. Small scissors can also be used.

TRAINING PLANTS TO THE TRELLIS:

Sweet Peas may need some guidance to begin climbing the trellis when they are first growing. Young vines can be tied gently to the support, or if you have a mesh or netted trellis the vines can be woven into it.

Instead of tying individual plants to the trellis, or weaving them into the netting, an alternative method is to employ long lengths of twine to gather growing plants close to the trellis structure on each side of the row.



To do this, secure a length of twine across the front of the plants about 12 inches above ground level, gathering the growing plants close to the trellis structure as you move down the row maintaining tension, and tie the twine in place at each fence post. Use zip ties or short lengths of twine to attach the twine along the front of the plants to the Hortonova anywhere additional tension is needed. Repeat on the other side of the trellis. If the plants become top-heavy and lean away from the trellis, this can be repeated several times higher up the trellis. As the plants mature, their vines or tendrils will grab onto the support on their own.



After tying the twine to the first post, stretch it across the front of the plants. Keep tension on the twine until you reach the next post.



Tie the twine to the next post down the row.



After tying the twine to the post, continue down the row, repeating each step, until all of the plants have been secured.



If you find you need additional tension along the length of the twine, secure the twine to the trellis with zip ties or short lengths of twine.

As the season progresses, your Sweet Peas will begin to climb the trellis without further assistance.



PESTS AND DISEASES:

Sweet Peas are less susceptible to pests and diseases than many other garden plants. They are most vulnerable at the seedling stage, when plants are nearing the end of their life cycle, or when they are under stress.

Preventative measures can discourage problems before they have a chance to start. Provide good air circulation and, if over-head watering, avoid watering late in the day (leaves should be dry by night fall).

When direct sown, the first challenge is to prevent the seeds from being eaten by birds, mice, and other small rodents. Shield newly-sown seeds with bird netting if birds are an issue. Repel rodents by applying Plantskydd®. Seedlings are susceptible to slugs and snails. Sluggo® and diatomaceous earth are effective controls against slugs and snails.

Aphids can also be a problem with Sweet Peas. A strong spray of water will remove them or you can apply Safer® Insect Soap. Sticky Yellow Traps distributed throughout the vines will lure and trap aphids, in addition to whiteflies and other pests.

Thrips damage can cause unsightly foliage and, on rare occasion, cause reduced yields in healthy older plants. Young plants, however, can succumb to thrips damage if populations aren't properly controlled. PyGanic®, which flushes out and kills thrips, is Johnny's' preferred control.

For nonchemical control of insect pests, the use of beneficial insects such as lady bugs, lacewings, and minute pirate bug are successful controls that will benefit your other crops, as well.

The most prevalent disease for Sweet Peas is powdery mildew, a fungal disease causing the development of gray-to-white spots on the leaves. Preventative measures can discourage disease problems before they have a chance to start. Provide good air circulation and, if over-head watering, avoid watering late in the day; leaves should be dry by night fall. If powdery mildew occurs, Mildew Cure® is effective in combating it.

HARVEST:

Harvest when half the flowers on a stem are open. Cutting is best done in the morning before the sun is high in the sky, especially in summer. Cut the stem as long as possible and immediately place it in cool water. Continuous cutting encourages more blooms and prolongs the period of blooming. Sweet Peas can last up to 4–5 days when cut at the ideal stage for harvest and at the correct time of day, and stored in a cool place.



FALL HARVEST:

In addition to a spring planting for early summer harvest, Sweet Peas can be planted in midsummer for a fall harvest. Select varieties that were bred to grow and bloom under short days, such as the Elegance series.

Prepare your bed and erect the trellis prior to planting. Just as you would for early summer harvest, plantings for fall harvest can be either direct seeded or transplanted. You will want to plant Sweet Peas for fall harvest at least three months before the first hard frost.