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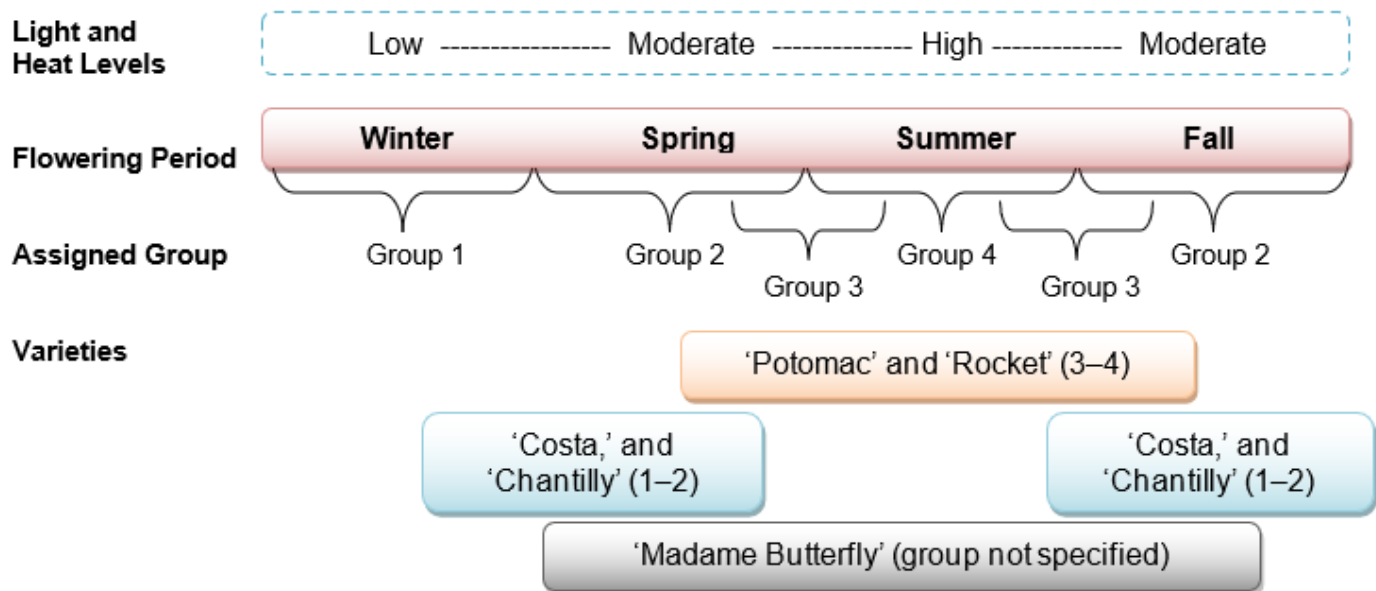
SNAPDRAGONS (*Antirrhinum majus*)

Sometimes called the garden snapdragon, but most commonly referred to simply as snapdragon, these plants originated in the Mediterranean region, but have now been introduced to areas around the world. The dense spikes bear tubular or butterfly-shaped blooms in an array of colors. Flower spikes can be used as a cut flower, alone or in mixed bouquets.

HARVEST PERIOD:

Snapdragons are very responsive to day length, light intensity, and temperature. With these 3 factors in mind, modern varieties have been bred for optimal performance under specific growing conditions and growing seasons. Most snapdragon varieties are classified into one of four numbered groups. Each group number corresponds with the growing and harvest periods for which the varieties are bred. Many varieties will bloom and produce usable stems outside of the assigned group but by slotting varieties by group and growing season, stem and flower quality will be optimal at harvest. Due to varying regional conditions, it can be essential to select a variety bred to perform for your desired harvest period. By doing so, you will ensure the maximum stem length and bloom quality for your climate and growing season.

The chart below refers to the flowering times for each variety we offer at Johnny's, in respect to the group in which they belong and the season in which they flower and can be harvested.



In addition to the different harvest groups, snapdragons also come in different types represented by the style and shape of the blooms that they bear. The choice as to which type to grow depends entirely upon your or your market's preference.

- **Traditional:** The most familiar, single-petaled type. Most notable for mimicking the appearance of a dragon's mouth snapping closed when pinched, from which snapdragons received their common name.
- **Azalea:** These blooms have double petals, which provide a unique, voluminous appearance.
- **Open Face:** Another single-petaled type, but instead of the closed bloom shape of the traditional type the petals are in an open array.

Variety	Group	Season	Bloom Type
Chantilly Series	1 and 2	Spring, fall, and winter	Open face
Costa Series	2	Spring and summer	Traditional
Potomac Series	3 and 4	Main season/all season	Traditional
Rocket Mix	3 and 4	Main season/all season	Traditional
Madame Butterfly Series	None specified	No specific season	Azalea



Traditional



Azalea type



Open Face

LIFE CYCLE:

Snapdragons are most commonly grown as an annual but may overwinter in protected areas in Zones as low as Zone 5. To overwinter first-year plants, provide protection such as a polytunnel caterpillar or greenhouse, including row cover.

SITE SELECTION:

Snapdragons can be grown either in a protected structure or in the open field. We've found that growing in a protected structure produces higher quality blooms due to the reduced weather and insect pressures.

Snapdragons grow best in cool weather and can tolerate a light frost. They perform best in full sun to part shade in rich, well-drained soil with a pH of

5.5–5.8. Amend poor soils with an application of organic matter, such as compost.

Drip irrigation is recommended, but overhead irrigation can be used until the plants start to flower. Water early in the day so that the foliage is dry by nightfall to prevent disease. Inside protected structures, ensure proper ventilation on sunny days by opening the vents of your structure.

Using white on black mulch keeps the soil cool and suppresses weeds, which is particularly helpful for weed control around drip irrigation. One or two layers of horizontal netting will support the stems, keeping them straight.

CULTURE:

Surface sow seed in a 512-cell tray, or a tray with larger cells, 8–10 weeks before planting out after the last frost. Light is needed for germination, but a thin layer of fine vermiculite covering the seed will help maintain moisture levels and prevent algae growth. Bottom water or mist lightly to avoid covering the seed with displaced soil. Germination should occur in 7–14 days at 70–75°F/21–24°C. Provide adequate air circulation to further prevent algae growth and the occurrence of disease.

After emergence, place cell trays in a location where they will continue to receive good air circulation. Reduce moisture levels and keep soil evenly moist but not saturated for best rooting. Maintain a soil temperature of 65–75°F/18–24°C.

Once the true leaves have developed, in approximately 21 days, allow the soil to dry out between watering but avoid wilting to promote root growth. Transplant into packs or larger containers or cell trays. After the seedlings have 3–5 true leaves, grow at 50–55°F/10–14°C at night and 60°F/16°C during the day.



Snapdragons can be grown in either the field or under protective cover. If grown in a tunnel, such as the one shown on the left, blooms will be higher quality.

If fertilizing is necessary, use an all-purpose fertilizer every 2–3 waterings. Occasional drenching with clear water is helpful to reduce soluble salts from building up.

Harden off by exposing the seedlings to controlled cold temperatures 8–10 weeks after sowing. Transplant when the plants are acclimated.

SPACING:

When transplanting, plants can be placed either in the field or greenhouse. The distance at which you space your plants depends upon your desired plant habit.

For a bushier plant that produces more flower-producing side branches, pinch young plants back by half their height when plants have formed 4–6 leaves or are approximately 3–4 inches tall. Alternately, plants can also be pinched at the time of transplanting. Either way, pinching will delay the crop time (flowering) by a few weeks. Place these plants at a spacing of 6–12 inches apart.

For a single-stem, one-cut flower, do not pinch the plants and transplant at a tighter spacing of 4-inch by 4-inch. This results in a strong stem with superior length and bloom quality. Flowering is faster and earlier than plants that were pinched.

A layer of horizontal netting is recommended for producing straight stems on both recommended spacings.

PESTS AND DISEASES:

Crop rotation should be practiced to prevent the build-up of pathogens and pests in the soil. The most common pests of snapdragons are aphids and thrips. Snapdragons are susceptible to rust, botrytis, powdery and downy mildews, and other diseases.

Of these diseases, rust is the most prominent. It is caused by the species-specific fungal pathogen *Puccinia antirrhini* and can be identified by a build-up of dark brown to purple spores on the stems and leaves. However, the most effective way of identifying any disease is to send a sample to your local Cooperative Extension Service agency or other agricultural research station.

If the presence of insects or disease is found, identify the problem and refer to our pest and

disease charts in our catalog or in the Grower's Library on our website for the proper control. Mildew Cure or Greencure® will protect against mildew and molds, and Safer® Insect Soap and Pyganic® are effective in controlling a number of insect pests.



HARVEST:

Harvest when the lower $\frac{1}{3}$ – $\frac{1}{2}$ of the spike is open. Harvest is best in the morning when temperatures are at their coolest. Place stems in clean buckets of cool water. For optimum storage, place buckets in a cooler at 32–40°F/0–4°C. Floral preservatives can be used to increase the length of vase life.

Snapdragons are geotropic, meaning the plant's response to gravity affects the stem shape. If the flower stems are laid horizontally or placed at an angle they will curve upward. Once the stems are curved, they will remain curved even if they are stored vertically after the fact, so it is important to always store them vertically in tall buckets after harvest and to keep them supported while growing in the field.

The flowers themselves are edible, providing a floral and slightly bitter flavor, and can be used as a garnish in salads, desserts, and drinks.

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