Statice Cut Flower Production in Utah

Kellie Webb, Melanie Stock, Ben Scow, Cheyenne Reid, Victoria Xiong, Ali Harrison, Lorin Harrison, Amanda Pratt, Claudia Nischwitz, and Nick Volesky

Overview

Statice is a cut-and-come-again, full-sun annual with clustered, papery blooms. Plants have lower water needs and a moderate tolerance to salinity, making this crop a sustainable choice for cut flower production in Utah and other states with water and soil limitations. Blooms come in a diverse color palette, featuring subtle apricot, yellow, white, purple, pink, and blue hues. Statice is an exceptional flower for drying, as it is nearly dried in the field at harvest and does not require hanging. The versatility of selling statice as both a fresh and dried cut flower increases its value for Utah growers. Suited to both high tunnel and field production, statice is a hardworking and consistent filler that thrives when given a cool start to the season.

Cultivars

Three types of statice (*Limonium sp.*) are used in commercial cut flower production: annual statice (*L. sinuatum* and *L. suworowii*), perennial statice (*L. bellidifolium*, *L. latifolium*, *L. perezii*, *L. altaica*, and *L. dumosa*), and hybrid or peripheral statice (*L. sinzii* and *L. sinense*). Most statice is propagated by seed and readily available from cut flower seed suppliers.

Cultivars of *L. sinuatum* are one of the most popular annual cut flowers and the focus of this fact sheet. These cultivars have distinctive, nearly leafless stems that rise from basal rosettes. The blooms appear as 1.5- to 3-inch clusters of papery, funnel-like florets (Figure 1). Popular cultivars include 'Forever Happy, 'QIS Apricot', and 'Seeker Blue' (Table 1). Plants can reach up to 30 inches tall in the field, and each plant may produce 10 to 30 stems under ideal conditions. Through Utah State University (USU) trials, 10 to 15 stems per plant were typical yields to expect locally.

It is important to note that many newer annual and hybrid cultivars are offered exclusively through tissue-cultured starts (i.e., not available as seed) from wholesale suppliers. Tissue-culture methods are meant to genetically maintain selected traits for greater predictability and increased production of blooms. Example traits include heat and cold tolerance, longer blooming windows, greater yield per plant, and more consistent color shades. Confirming the traits and economics of tissue-grown versus seed-grown statice may be an interesting research area for Intermountain West growers.

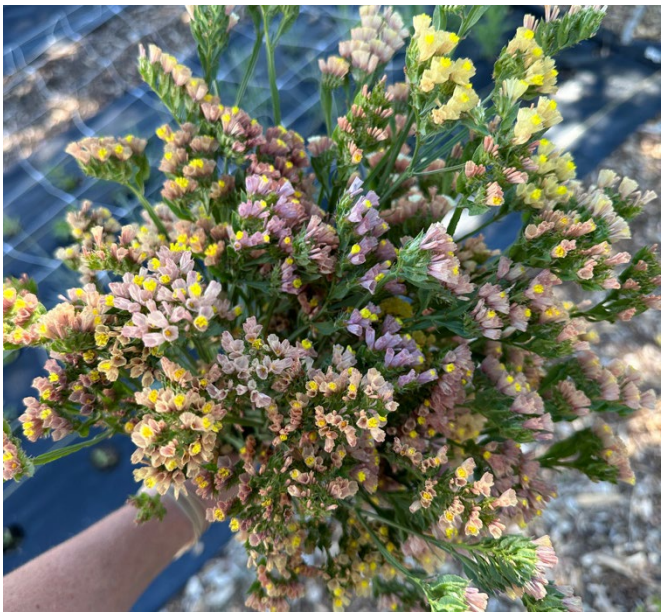
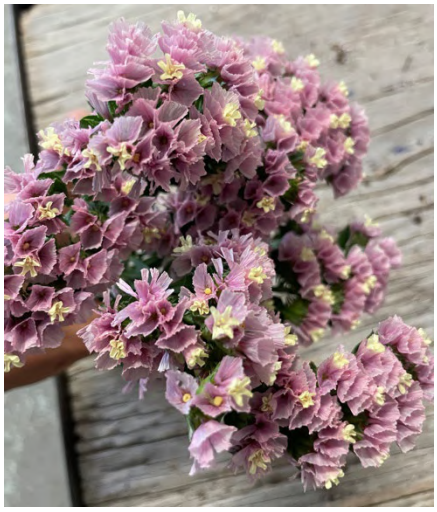
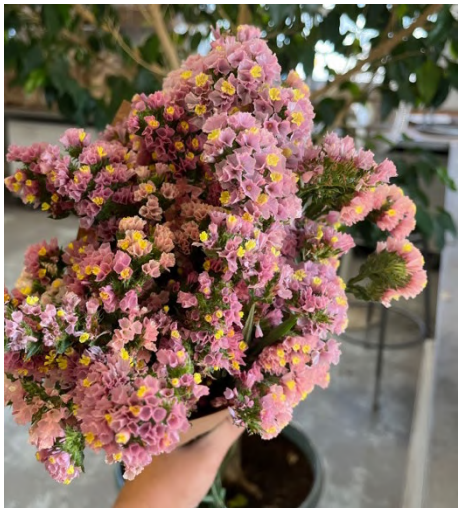


***Figure 1**. 'QIS Apricot' freshly harvested from the field.*

***Table 1**. Popular cultivars of statice for cut flower production.*

 **'Forever Happy'** Beautiful light rose to lavender shades with a touch of sunny yellow. Plants are highly uniform in color and popular with florists for bridging multiple colors in floral arrangements.	 **'QIS Apricot'** Lovely warm tones that span from vibrant and soft pinks to apricots, purples, and yellows. The color range is perfect for summer and fall floral design but may need to be marketed to florists as a mix, as the cultivar has less color uniformity.	 **'Seeker Blue'** Stunning cultivar that ranges from purple to blue tones. Used both fresh and dried, the blue shades are valued by florists as this color can be more difficult to find in cut flower production.

Site Preparation

Statice is well-suited to field production and is an easy-to-grow annual with low water and medium nutrient requirements. Optimal conditions include loamy, well-drained soil with full sun. Notably, *L. sinuatum* 'American Beauty' and *L. perezii* 'Blue Seas' have been the subject of salinity and recycled water research. The U.S. Salinity Laboratory classified *L. sinuatum* as moderately tolerant to salinity, and *L. perezii* as sensitive, after applying saline irrigation water from 2.5 to 30 dS/m in greenhouse trials (Grieve et al., 2005). Stem yield and quality were greatest at 2.5 dS/m, and *L. sinuatum* continued to produce marketable stem lengths (i.e., >18 in.) at 7 dS/m, while *L. perezii* could not (Grieve et al., 2005). As many cut flower crops are extremely sensitive to salinity (i.e., thresholds <2 dS/m), *L. sinuatum* presents a productive option for soils with elevated salinity.

For plants grown in high tunnels, planning and preparation begin the previous fall by installing the plastic high tunnel covering before heavy rain or snowfall. This ensures the soil will not be too wet to work early the following spring and decreases the risk of disease. For both high tunnel and field plantings, till or broadfork (if practicing) and rake the soil smooth, forming 3- to 4-foot-wide beds. If desired, install drip irrigation prior to planting.

Germination

Sow seeds indoors 6 weeks before transplanting out, with two to three seeds per cell in 72-cell flats or preferred size. Fill trays with a high-quality peat/perlite soilless media or seedling mix. Light is required for germination, so cover the seeds lightly with fine vermiculite. Bottom water or mist the soil until the plants emerge to avoid seed displacement. Expect germination between 5 and 14 days at 70 degrees (Fahrenheit). Thin to the strongest seedling per cell (Figure 2). Once the seedlings emerge, begin watering deeply to moisten the entire cell and reduce temperatures to 50 to 55 degrees for 3 to 8 weeks. This cold treatment while plants are young encourages rooting and cannot be accomplished by chilling the seeds before sowing. High temperatures during the seedling stage may affect stem length and yield once statice is planted.

Transplanting and Spacing

For optimal production, time transplant and the initial growth period with cool outdoor temperatures, ideally 40 to 60 degrees for 3 to 8 weeks. This time can include

the cold treatment received at the seedling stage. Planting into cool conditions results in earlier flowering and the greatest yields. If planted later with warmer temperatures (i.e., 75 to 80 degrees), statice may have vegetative growth but few blooms. To overcome these conditions and promote flowering, giberellic acid (GA, a plant hormone) may be applied 12 weeks after sowing or 3 weeks after planting (Armitage, 2003). Long days also promote flowering, with optimum day lengths exceeding 12 hours.

***Figure 2**. Statice seedlings ready for transplant.*

USU trials focused on spring transplant to establish baseline production for high tunnel and field systems in Utah, while simulating drought conditions (see USU Statice Trials at the end of this fact sheet). Spring transplant can also reduce variability from overwintering. For spring transplant, plant in high tunnels 4 to 6 weeks before the last freeze date (March or April). For field production, transplant after the last freeze date (e.g., May in Cache Valley and the Wasatch Front), but before the night temperatures are above 55 degrees. Harden off flats and plant in the morning, evening, or on a cloudy day to reduce transplant stress. Space plants 8 to 12 inches apart to avoid overcrowding at maturity; USU trials used and found 12-inch spacing accommodated the plant growth and size at maturity. Separate compacted roots. Settle the plants into place by gently packing and firming the displaced soil. Water deeply after planting.

Transplanting into high tunnels in the fall, however, is a new method to stagger production with spring transplant systems. While overwintering research is needed to determine survival, timing, quality, and yield thresholds in the U.S. Intermountain West, other regions reported success. In Maine (USDA Hardiness Zone 5a), Johnny's Selected Seeds overwintering trials showed 90% to 100% survival from a fall transplant around the first freeze date (i.e., early October) in an unheated high tunnel. Harvests began in early June of the following year, about 1 month earlier than USU's spring-transplanted high tunnels. Overwintered plants also reached up to 60 inches tall, with robust stems and high-quality blooms. The winter conditions in tunnels may have provided additional cold treatment that encouraged greater stem production.

Pinching and Trellising

Pinching is generally not recommended. A horizontal mesh trellis (also known as netting) is optional and can be used in high-wind areas to reinforce plants and promote straight stems. Using a trellis, however, can result in less efficient harvests. If used, a mesh trellis (6-by-6-inch) is easiest to install before or right after planting and can also serve as a planting grid. Installing when the plants are taller can damage the stems. Two methods for staking the trellis can be implemented. If using shade or low tunnels, the hoops can support the trellis across the row. See USU's Low Tunnels for Field Cut Flower Production fact sheet for more information. Alternatively, install wooden stakes or rebar at 3- to 5-foot intervals along the bed edge. Move the trellis upward as the plants grow to match half the height of the tallest stems (Figure 3).

***Figure 3**. Horizontal trellis installed at half the crop height adds support for straight stems.*

Nutrient Management

As always, a soil nutrient test is recommended in new planting areas or where soil testing has not occurred in 2 years. USU's Analytical Laboratories (USUAL) perform soil tests, with pricing and sampling instructions available on their website. Statice has moderate nutrient requirements. A general recommendation is 0.2 pounds per 100 square feet applied as a split application. For example, use up to 2/3 cup of conventional urea fertilizer (46-0-0) or 1¾ pounds (about 6 cups) of organic 12-0-0. Split applications

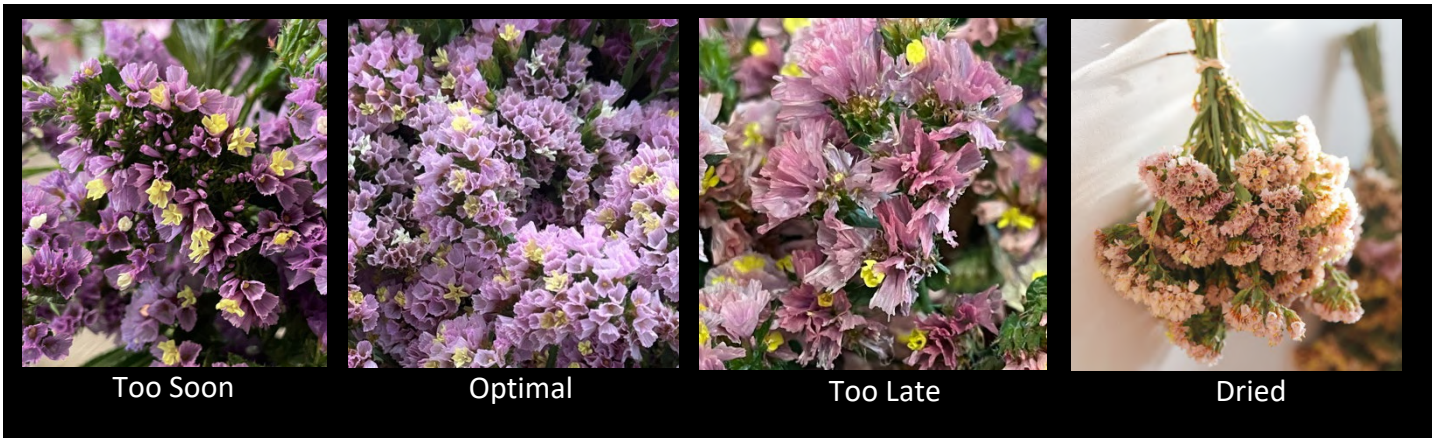


***Figure 4**. Harvest stages of statice for cut flower production.*

or slow-release nitrogen sources are recommended. Phosphorus and potassium should be added before or at planting, but only after soil test results indicate the need, as these nutrients build up in the soil. USU Extension's Urban Garden Soils: Testing and Management is a useful tool for calculating nutrient applications.

Irrigation, Pests, and Diseases

Loamy, well-drained soil and consistent moisture are optimal, but research is needed to establish specific irrigation rates. Avoid overwatering, as this may lead to root rot. In general, during root establishment, lightly irrigate 2 to 3 times per week to ensure adequate soil moisture for the new transplants. Once established, statice has lower water needs. USU trials reduced irrigation and applied no more than 1.0 to 1.5 inches of water per week (i.e., up to 0.5 to 0.75 inches each time). Very early spring plantings may initially require less water, depending on soil moisture at planting, weather, and growth rate. For early high tunnel plantings, water may need to be supplied from a freeze-protected culinary source, as most secondary irrigation systems in Utah are not turned on until later in the spring. Statice may be prone to several viruses that are still under research, as well as aphids, caterpillars, grasshoppers, and spider mites. Keep a watchful eye on young plants for early intervention and management. See Tables 2 and 3 for common diseases and pests.

Harvest and Storage

For field production, expect harvest to begin approximately 70 to 90 days after transplanting (late June along the Wasatch Front for statice transplanted outdoors mid-April). Based on USU trials and regional grower feedback, harvest when at least 40% of the florets on a stem are open and showing color (Figure 4). If harvested prematurely, florets will not fully open, and stems may wilt. If harvested too late, the inflorescences may shatter or show browning (Figure 4).

Early morning harvest is optimal. Cut the main flowering stem at the base of the plant to encourage subsequent stems to develop from the basal rosettes. Place bunches in clean buckets filled with cool water immediately after cutting. Remove excess foliage that may interfere with banding. Band in 8- to 10-stem bunches, depending on stem thickness and length. Stems may be marketable at 12 inches long, but local markets more commonly accept a minimum length of 14 inches. Initial harvests produce thicker, taller stems than later-season harvests. Line up the flower spikes carefully and cut the bunch evenly to the shortest stem, wrapping securely with a rubber band (Figure 5). Stems are unmarketable (culls) if they are too short, deformed, or have insect damage. Store between 36 and 41 degrees. Statice can be held in the cooler for up to 14 days and may benefit from hydration solutions (particularly true for hybrid and perennial statice). Statice harvests may persist even after the first freeze, with some growers in Idaho reporting cold tolerance in statice down to 26 degrees (Rice, 2015).

Economics

Statice is a mainstay in cut flower production. Though susceptible to a few pests and diseases, statice production is generally low-maintenance, low-input, and profitable. Statice can be used fresh to provide beautiful texture and color tones to arrangements and market bouquets (Figure 6). It is exceptional out of water and can be used for weddings in boutonnieres, bouquets, and installations. Statice is also one of the

most used flowers in dried florals, and unsold bunches can be dried upright or upside down to be sold for late-season sales in dried arrangements or wreaths. The wholesale price ranged from $1.00 to $1.20 per stem in Utah's Cache Valley and Wasatch Front floral markets for both fresh and dried stems. In 2024, the wholesale import price ranged from $0.65 to $1.05 per stem, depending on length and variety, with hybrid statice commanding the greatest pricing (USDA-AMS, 2024).

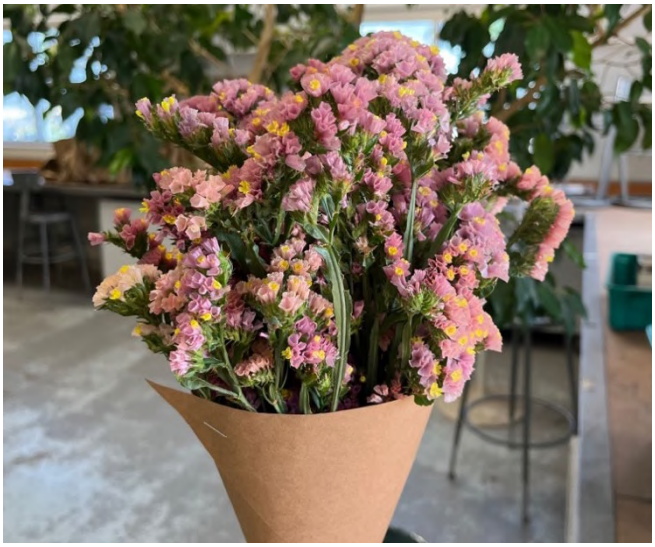


***Figure 5**. 'QIS Apricot' bunched and wrapped for market*.

USU Statice Trials

In 2023 to 2024, trials were conducted at the Utah Agricultural Experiment Station – Greenville Research Farm in North Logan, Utah (USDA Hardiness Zone 6a), as well as in Hurricane (8b), Kanab (7a), and Vernal (5b) in 2024. The goal of the North Logan study was to test production potential in high tunnel versus field systems under water restriction.

Irrigation was applied twice weekly and delivered up to 1.0 to 1.5 inches per week. Two cultivars, 'Forever Happy' and 'QIS Apricot', were trialed through transplanting into high tunnels in April (6 weeks before the last freeze date) and transplanting into the field in late May (right after the last freeze date). Methods to further conserve water were tested in each system. The plastic covering the high tunnels was replaced with shade cloth after the risk of frost passed, creating a cooler, protected microclimate and hence, lower water demand during the summer heat. In the field, half of the soils were left bare, and the other half was covered with raw sheep wool at an application rate of 10 pounds per 16 square feet, which was approximately 4 inches thick at the beginning of the season. The effects on harvest timing, yield, and quality of blooms were evaluated, as well as soil moisture and temperature.

The onset of harvest was uniform across years in North Logan, Utah: the first harvest occurred in high tunnels on July 3, 2023, and July 3, 2024, while the fields were first harvested on July 17, 2023, and July 16, 2024. Harvest was monitored until late September to early October. Across cultivars and years, the average yield was 8.4 to 12.9 stems per plant in the high tunnel, 9.2 to 14.0 stems per plant in the field without wool mulch, and 11.7 to 14.9 stems per plant with wool mulch. Statice thrived with low water, and production improved in the field with the applied wool mulch, which maintained greater soil moisture with limited irrigation, cooler root-zone soil temperatures, and provided a slow-release nitrogen source.

The satellite sites reported yields of 14.1 stems per plant in Hurricane, Utah (grown in an unshaded high tunnel, planted in early April, removed in late July), 8.3 stems per plant in Kanab, Utah (grown in an unprotected field late May to late August), and 15.3 stems per plant in Vernal, Utah (grown in an unprotected field from late May to mid-October). Across all farm sites, marketability ranged from 50.0% to 84.6%. In Southern Utah, production began in late May, continued to mid-June, and ended in the summer heat of July to August, while in Northern Utah, production began later but extended well into September. Statice presents a sustainable and profitable option for growers under water restriction, and benefits from mulching.

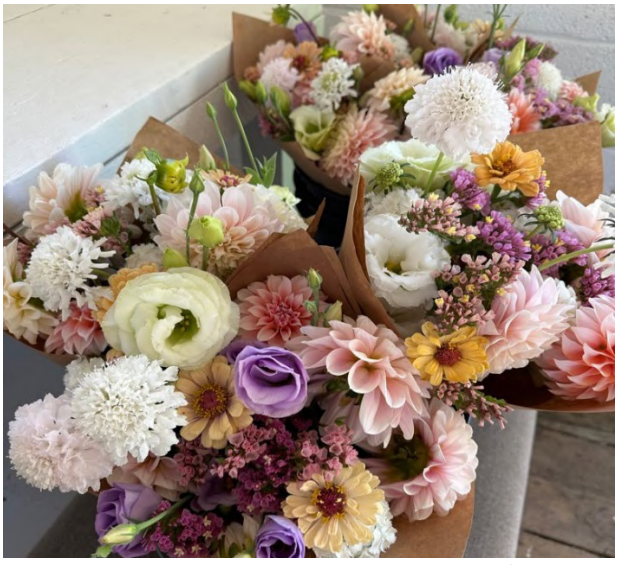


***Figure 6**. Statice adds excellent texture to floral arrangements, including market bouquets.*

Summary

Statice is a full-sun annual that benefits from an initial cool growing period and thrives with low water and minimal labor. Under drought conditions and irrigation limitations, consider mulching for additional water savings and yield response. The papery blooms vary from apricot, yellow, white, and pink to deep blue and lavender. Statice adds texture to floral design, and the diverse color palette can be used for both wedding and design work to market bouquets. Statice also lends itself exceptionally well to drying, as it is nearly dried in the field when ready for harvest. Unsold stems can be saved for later-season sales in dried arrangements and wreaths. Statice sells for $1.00 to $1.20 per stem in most local Utah florist markets.

***Table 2**. Common diseases of statice for cut flower production.*

Disease	Identification	Control
Root, stem, crown rots *(Pythium sp., Rhizoctonia sp.)*	Fungi infect roots and crowns produce dull-colored foliage or wilting, followed by yellowing. Roots are dark, soft, or decayed. Plants may be stunted and eventually die.	Plugs should be transplanted with well-developed roots that are not root-bound. Plant in well-drained soil and avoid excessive irrigation/moisture. Dig out and destroy infected plants.

***Table 3**. Common pests of statice for cut flower production.*

Pest	Identification	Control
Aphids	Aphids are a diverse group of small insects that damage plants by piercing tissues and sucking sap. This feeding causes distorted growth, yellowing, sticky honeydew residue, and may spread plant viruses.	Monitor frequently using visual observation and yellow sticky cards, as populations can increase rapidly. Release beneficial insects in covered crops (e.g., greenhouses, high tunnels) or attract them outdoors with flowering plants. A strong stream of water can dislodge and kill colonies. When reaching thresholds, use organic insecticidal soaps or horticultural oils.
Caterpillars	Caterpillars are the larval stage of moths and butterflies. Adults lay eggs on host plants, which hatch into larvae that feed on stems or foliage before pupating and continuing the life cycle. Common species like armyworms, cutworms, and loopers vary in the severity of damage they cause. *Identification:* Adult and larval coloration, host plant preferences, and life cycle timing differ by species, making accurate identification important for effective management.	Monitor caterpillar feeding damage, as severity indicates population levels. Use pheromone traps where applicable, and exclude egg-laying adults with insect netting or spunbond fabric. Support natural predators by planting flowers and maintaining suitable habitat. Hand-remove or squish larvae or apply an organic or synthetic foliar insecticide labeled for both the pest and crop when necessary.
Fungus Gnats	These gnats are common in greenhouses and enclosed spaces, especially wet areas. *Damage*: larvae feed on roots cause stunted growth or dieback in young plants. Adults are primarily a nuisance. *Identification:* Adults are small (~1/8 in.), delicate insects with dark bodies, long legs, and clear wings. The larvae are translucent white.	Monitor for adults in greenhouse spaces using yellow sticky traps. Monitor for larvae using potato slices on the soil surface. Ensure proper drainage in soil media trays and let soil surfaces dry between waterings. For biocontrol, drench pots/soil with beneficial nematodes or release beneficials (mites or rove beetles).
Grasshoppers	Adults are highly mobile and recognized by their large hind legs. Their feeding primarily damages foliage but can affect other plant parts as well. *Identification:* Size, color, and	Begin monitoring early for young nymphs and feeding damage. Because grasshoppers are highly mobile, manage across a wide area. Baits (e.g., wheat bran with carbaryl or *Nosema*

	pattern vary by species and life stage. Egg clusters overwinter a few inches below the soil. Population levels depend on weather and past management practices.	*locustae*) are most effective early in the season. Use trap plants (grasses) around crops and/or row covers. Apply insecticides—preferably on trap plants—only when needed.
Plant Bugs	They represent diverse insect families, including species like lygus bug and boxelder bug. They feed on a wide range of host crops using piercing-sucking mouthparts, injecting toxic saliva that causes distortion, stippling, and possible wilting. *Identification*: Adults have a distinctive triangular shape on their backs when their wings are folded. Their size, color, and host preferences vary by species, and they are most active during the summer.	Monitor frequently during mid-summer when populations are greatest. Reduce nearby weeds that may also host plant bugs. If populations reach threshold, consider insecticides (concentrates) with active ingredients labeled for plant bugs and the crop.
Shore Flies	They are common in greenhouses, especially with excess irrigation and prolonged wet surfaces. Neither adults nor larvae feed directly on plants but can spread spores of plant pathogenic fungi, impacting seedling production. *Identification*: Adults are small (<1/16 in.) and dark gray with short antennae. Eggs are laid in algal scum, where the larvae feed before pupating into adulthood.	Monitor in greenhouse spaces using yellow sticky traps. Ensure proper drainage in soil media trays and prevent overwatering. Mitigate algae growth on the floor and benches. Consider insecticides (concentrates and soil drenches) with active ingredients labeled for shore flies and greenhouse use.
Slugs and Snails	Soft, slimy bodies with a distinct head and sensory tentacles, snails have a spiral shell, while slugs lack a shell.	Reduce excess moisture and standing water. Set up copper-based barriers around plants. Place traps or bait containing iron phosphate or metaldehyde.
Spider Mites *(Tetranychidae)*	With a wide range of host crops, spider mites feed on the undersides of leaves, causing leaf stippling (small yellow spots), bronzing, or scorch. High populations leave noticeable webbing. *Identification*: Microscopic, translucent, and yellow, they are most active during mid to late summer and have multiple generations in a season.	Avoid water stress. Minimize conditions in and around planting that cause dust to collect on plants (i.e., bare soil). Control surrounding weeds. Avoid or limit broad-spectrum insecticide, as mite outbreaks often follow. Spray plants with water, insecticidal oil, or soap.
Whiteflies	These small insects are commonly found in greenhouses. Adults and nymphs feed with piercing-sucking mouthparts, causing yellowing and eventual wilting. *Identification*: Adults are tiny (<1/8 in), white, with wings folded flat against their backs. Nymphs are scale-like, translucent, and have flat bodies.	Monitor in greenhouses with yellow sticky traps. Purchase beneficial insects for protected crops (greenhouse, high tunnels) or encourage them outdoors with flowering plants. Apply insecticidal soap or horticultural oil at the nymph stage and repeat when necessary. Reduce use of synthetic insecticides to prevent resistance.
Various Mammal Pests	Deer, rabbits, and rodents (mice, voles, gophers) are all mammal wildlife that can destroy cut flower production in home landscapes or farms. Damage may include feeding on above or below ground plant parts or plant trampling.	Larger mammal pests are best prevented through physical exclusion (i.e., fences). Rodent populations fluctuate season to season. Monitor for activity (e.g., burrows, feeding, etc.). Use lethal or nonlethal trapping mechanisms or bait stations with pelleted products labeled for controlling specific species.

Note. Most pests are general classifications, and research is ongoing for further classification.

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Disclaimers and Acknowledgments

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