

FLOWERS THAT DIDN'T MAKE THE HANDBOOK



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Ageratum houstonianum

Ageratum

Ageratum is one of those blue flowers that we just can't pass up. We love using it as a filler flower in bouquets, where its unusual clusters of small "fuzzy" flowers are a unique element that's sure to grab your attention.

Historically available mainly in the blue/lavender color, more recently we've seen white and violet red varieties tall enough for cuts that are also strong growers. Be careful to select varieties that will be tall enough for cutting, as several bedding plant varieties (sometimes referred to as 'dwarf') are also available.

• Seeding and Growing Tips: Before germination, these surface-sown seeds may benefit from light misting in addition to bottom watering. Ageratum seedlings tend to grow a bit slower than other popular summer annuals like zinnias and cosmos, so plan accordingly. Plant out after all danger of frost has passed and soil begins to warm, typically about 2 weeks after last frost date. Ageratum thrives with temperatures in the 60-70F range.

In warmer climates, focus on early-season plantings and/or experiment with providing shade from hot afternoon sun. Recommend succession plantings throughout the warm growing season and pinching.

Rooting Cuttings: Ageratum is a strong branching
plant that makes it a great candidate to pinch. What
better use of those pinched-off little stems than to
make more plants! Ageratum has a natural tendency
to root, so when we give it a hand, it is easy to grow
more plants quickly. Follow standard pinching
recommendations on page 53 of The Cut Flower
Handbook. Have on hand rooting hormone powder

home garden tip

Great in landscapes, providing a nice color contrast for Rudbeckia and other flowers in the yellow/gold/orange color range.



Ageratum blooms continue to develop in the bouquet or bunch after harvesting. This color is so great with the hot summer colors!



A tray of 4 week old transplants growing in 3/4" soil blocks. These 3-5" tall seedlings are ready to be planted in the garden.

and a saucer to pour some into, a cup of water, a pencil, and either a 128-plug tray filled with potting soil or some soil blocks in the 2" or 1-½" size. Because of the volume of plants I grow, I tend to use plug trays. Using the pencil, I make a hole in the soil to place the cutting so that it will not scrape the rooting powder off while placing it. To prepare the cuttings, remove all but one leaf from the stem and cut the stems to 2-4" if needed. Dip the lower half of the stem into water to wet it and then roll it in the rooting powder and place it into the premade hole, firm the soil around the stem. I place the tray in my warm grow room and water the tray as needed when it dries out. Once roots start to grow, I place them under grow lights or move them outdoors if conditions are warm enough to support them. After 2-3 weeks, well-rooted plants are ready to go to the garden.

- Flower Farmer Tip: Late-season plantings may not bloom as day lengths shorten. Consider using those stems as cuts for foliage rather than flowers.
- **Flower Support Notes:** Though this plant has sturdy stems, as it gets taller and can be prone to toppling, so strong floral netting is suggested.
- Harvesting & Conditioning Notes: See stage to harvest image. I prefer to harvest just as the first flower in the cluster begins to show color. They continue to develop after harvest and the color seems to be more vivid when protected from the hot sun and wind. The first central cut is made near ground level, just above the bottom side shoots. Future cuts are made at the base of the stem. Follow standard conditioning steps on page 30 in *The Cut Flower Handbook*. Ageratum is not known to be ethylenesensitive. Expect fresh stems to last 10 days in the vase or hang to dry. Fully developed blooms dry beautifully.
- Good to Know: While these blooms can tend to be small, the
 color makes them a worthy part of my succession plan. To
 increase the impact of the blooms in a bouquet, we group 2-4
 stems together in a mixed bouquet for a wowza pop of color.

growing facts

Preferred season: Warm **Starting from seed:**

- Prefer to start seed indoors
- Start seeds 6 weeks before planting outdoors
- Prefer to start in 34" soil blocks
- Need light to sprout, do not cover
- Soil temperature: 80F
- 7-10 days to sprout
- Air temperature for optimal seedling growth: 55-60F

Sun requirement: Full Sun

Height: 30"

Rows of plants per 36" wide bed: 4

Plant spacing in row: 6"

Days to bloom: 80-100

Flower support: Yes

Fertilization: Standard bed preparation, see page 35 in *The Cut Flower Handbook*, additional field

applications may be beneficial.



Favorite Variety: 'Blue Horizon' was the first variety made available with a stem length long enough for cut-flower use, and it has been our go-to variety for all these years.

Left: Harvest blooms when less than 1/3 of the blooms are fuzzy.

Orach, Mountain Spinach

Vegetable gardeners might already be familiar with this plant as a larger and more robust cousin of spinach, with its edible leaves that produce over a longer harvest period and in more varied conditions. Atriplex is thought to have been grown as a vegetable since the time of the Ancient Greeks.

Cut-flower growers, on the other hand, celebrate this spiky textural element for its brightly-colored paper-thin seed pods that come later in the season, as its unnoteworthy flowers are fading. Tall and prolific, it is considered a good landscaping plant as well, one that reseeds itself in ideal conditions. It is a popular choice in Victorian-style gardens.

A significant part of growing Atriplex is protecting the plants from hungry deer and rabbits. They find the leaves as delicious as we do. In spring as growth starts, a visit from the deer and their "pinching" resulted in the best branching ever, so pinching is recommended.

• Seeding and Growing Tips: I get very nice stem length from fall and very early spring planted seedlings (30" or more). Fall-planted seedlings may benefit from additional fertilization in the field after the soil has warmed in spring and new growth has restarted. Atriplex naturally produces many stems per plant, however pinching part of the crop (or harvesting center stems early for foliage only) will encourage additional branching. Succession planting can further extend the harvest.

home garden tip

Left to mature in the garden or landscape, the flowers are short-lived, developing into lots of tiny curved seed pods. Plants left to dry in the garden will become a light golden textural element in the off-season and are very good reseeders. Reseeding can be controlled by cutting blooms before they mature into seed pods.



The gorgeous seed pods that follow the insignificant tiny flowers.





Top: 8 week old seedlings that were sown directly in the garden.

Bottom: 2 week old 'Red Plume'

Atriplex seedlings.

- Seed Sprouting Tip: Priming the seed before planting can make the difference between success and failure. Soak the seeds in water for about 24 hours. Then to dry the seeds, dump them onto a paper towel for a couple of days. Next, roll up the paper towel and place it in a plastic Ziploc bag for another 5 days or so. Now the seeds are ready to plant and you should have excellent germination! These priming steps also work with spinach seeds.
- Flower Farmer Tip: Atriplex can also be cut before bud formation for use as brightly-colored foliage. Wilting may be an issue due to the large leaves, so experiment with how much foliage you can keep on the stem and consider Quick Dip to help stems hydrate quickly.
- **Flower Support Notes:** Though this plant has sturdy stems, as it gets taller and starts to form seed pods it is increasingly prone to toppling, so strong floral netting is suggested.
- Harvesting & Conditioning Notes: See stage to harvest image.
 Harvest when seed pods have formed. Make the cut at the base of the stem. Atriplex is not known to be ethylene-sensitive.
 Follow standard conditioning steps on page 30 in the The Cut Flower Handbook. Expect fresh stems to last 10 days in the vase or hang to dry.
- **Good to Know:** Atriplex leaves, when young and tender, are a great addition to salads. Mature leaves and young stems are better cooked as a recipe substitution for spinach or Swiss Chard. Even the seeds are edible and are sometimes ground into flour.



growing facts

Preferred season: Cool

Winter temperature survival low:

10 F

Starting from seed:

- Prefer to sow directly in the field or garden
- Plant seeds 6-8 weeks before the first fall frost
- Needs darkness to sprout, cover lightly with soil (see sprouting tip on this page)
- Soil temperature: 68-70 F
- 7-14 days to sprout

Sun requirement: Full Sun

Height: 48+"

Rows of plants per 36" wide bed: 4

Plant spacing in row: 6" Days to bloom: 75-100 Flower support: Yes

Fertilization: Standard bed preparation, see page 35 in *The Cut Flower Handbook*, additional field applications may be beneficial.

Favorite Variety:

- 'Red Plume' is the most popular wine-red cut-flower variety of this plant, with lovely foliage and seed pods. Grows 48+"
- 'Green Plume' is the most popular emerald-green cut-flower variety of this plant, with lovely foliage and seed pods. Grows 48+"

Left: Atriplex 'Red Plume' and 'Green Plume'

Persian Cress, Ornamental Cress

You may be familiar with a type of cress that is mostly used as a culinary herb, which is also known as garden cress. Ornamental cress, while still edible, was specifically bred to be taller, airy, and more suitable as a cut flower (more flowers than leaves).

This taller textural element is great as a light green backdrop in the garden as well. The tiny white flowers produced, while pretty, are not the main reason that cress is so attractive. Instead, this plant is mainly admired for the numerous little coin-shaped light green seed pods that form once those flowers have faded.

As the common name suggests, Persian Cress originates from the Middle East and is thought to have been grown in the region since at least 400 BC. The 'Green Dragon' variety is a recent introduction to my farm and was recommended by our friend Daniel of Petal Pickers Flower Co. It has a different seed head structure and is such an interesting addition to bouquets, a customer favorite!

• Seeding and Growing Tips: I get very nice stem length from fall and very early spring planting. Both offer excellent stem length with fall plantings towering in at over 48". Plantings may benefit from additional fertilization in the field after the soil has warmed in spring and new growth has restarted. These can be planted pretty closely, 4-6" or so for cut flowers. I treat this as a flash crop, leaving the plants spaced closer together because I only harvest one main stem per plant. However, pinching part of the crop may augment the already nice natural branching habit.

home garden tip

Left to develop in the garden or landscape, the flowers are short-lived, developing into lots of tiny curved seed pods. Plants left to dry in the garden will become a light golden textural element in the off season and are very good reseeders. Reseeding can be controlled by cutting blooms before they mature into seed pods.



Persian Cress developing green seed pods following the insignificant tiny flowers.



Newly sprouted tray, just born.



'Green Dragon' transplant coming out of winter.

- Flower Farmer Tip: Florists are always looking for interesting foliage and textural elements to add character to their bouquets and arrangements, and ornamental cress fits that bill!
 Succession plant every couple of weeks for as long as your season allows.
- **Flower Support Notes:** Though this plant has sturdy stems, as it gets taller and starts to form seed pods it is increasingly prone to toppling, so strong floral netting is suggested.
- Harvesting & Conditioning Notes: See stage to harvest image.
 Harvest when seed pods have formed but haven't begun to shatter (how the seed is spread). We harvest the whole plant (cutting the center stem to the ground). Cress is considered to be ethylene-sensitive, which is important to note if using fresh. Follow standard conditioning steps on page 30 in The Cut Flower Handbook. Expect fresh stems to last 7-10 days in the vase or hang to dry. A spritz of hair spray may help to hold seed pods in place while working with dried materials.
- **Good to Know:** Fresh ornamental cress leaves are edible and have a mild pepper flavor which can be a nice addition to salads.



A harvest bucket of 'Green Dragon' Cress courtesy of Daniel Schavey of Petal Pickers Flower Co.. Beautiful!

growing facts

Preferred season: Cool

Winter temperature survival low:

10 F

Starting from seed:

- Prefer to start seed indoors
- Start seeds 4-6 weeks before planting outdoors
- Prefer to start in ¾" soil blocks
- Needs darkness to sprout, push seed down into the block
- Soil temperature: 55-65 F
- 2-5 days to sprout
- Air temperature for optimal growth: 60-65 F

Sun requirement: Full Sun

Height: 30"

Rows of plants per 36" wide bed: 4

Plant spacing in row: 4-6" Days to bloom: 65-75 Flower support: Yes

Fertilization: Standard bed preparation, see page 35 in *The Cut Flower Handbook*, additional field applications may be beneficial.

Favorite Variety:

'Persian' is the most popular cutflower variety of this plant, and you may also see it listed simply as ornamental cress. Grows 36-40". 'Green Dragon' is a newer variety with an airier look, with flowers covering a longer stretch of the stems and less foliage. Grows 36-40".

Autumn Sunspray, Sneezeweed

Native to North America and considered a weed in many parts, Helenium may not be an obvious choice for use as a cut flower. The common native variety is a clumping short-lived perennial from the aster family with yellow daisy-like flowers. However, hybrid varieties have been introduced with blooms in bold warm tones (gold, orange, red, copper), making it a nice filler flower to add to late-season mixed bouquets.

Helenium thrives in moist conditions such as low-lying meadows and the edges of wet wooded areas. Pollinators love this one, particularly butterflies, making it a great addition to cottage gardens and wildflower gardens. Though it is a short-lived perennial, we grow it as a hardy annual to guarantee we will have a bounty of blooms late in the summer.

Note that there are a lot of hybrid varieties of Helenium that were developed as bedding plants. These varieties are too short to be used as cut flowers, so it's important to check the expected mature height of any variety or mix to ensure it is suited to the desired use.

• Seeding and Growing Tips: I get very nice stem length from fall and very early spring planting.

Because Helenium naturally blooms later in the season, even very early spring plantings have time to elongate and grow tall stems towering in at over 48".

Helenium can also be propagated from cuttings using the same steps described for Ageratum. This plant sends up stem shoots from a low clumping base (similar to Rudbeckia), so no pinching is required.

Seedlings may benefit from additional fertilization in the field after the soil has warmed in spring and new growth has restarted, but excessive fertilization can

home garden tip

If not harvesting as cuts, remove spent blooms (deadhead) to encourage additional flowering.

Bottom Left: Helenium 'Red & Gold Hybrids' has a fantastic mix of autumn colors **Botttom Right:** 6 week old Helenium transplant





result in lanky, less sturdy plants. In areas with hot, humid summers, spacing plants further apart may help reduce or delay the onset of mildew and rust. Recommended spacing grown as a perennial is 12" and they will need to be divided every 3-4 years for continued flowering.

- Flower Farmer Tip: This is an excellent flower for florist and supermarket sales, as it is not often available and tends to bloom at the time when fall sales start to pick back up.
- **Flower Support Notes:** Though this plant has sturdy stems, as it gets taller it is prone to toppling, so strong floral netting is suggested.
- Harvesting & Conditioning Notes: See stage to harvest image. Harvesting when less than 1/3 of the flowers on the stem are open allows for a long vase life. Blooms continue to open after cutting which gives bouquets a unique changing appearance for customers. Helenium is not known to be ethylene-sensitive. Follow standard conditioning steps on page 30 in *The Cut Flower Handbook*. Expect fresh stems to last 7-10 days in the vase or hang to dry.
- **Good to Know:** The common name "sneezeweed" comes not from allergy concerns but from its use as a folk remedy, in which the petals were dried, crushed, and used as snuff.
- **Favorite Variety:** 'Red & Gold Hybrids' is the mix we prefer to grow, a lovely blend of gold, crimson, maroon, and bronze tones that pairs well with many other late-summer/fall flowers. Grows 30-48".

Bottom Left: Harvest when 1/3 of the blooms on a stem are open **Bottom Right:** A newly sprouted tray, just born.



growing facts

Preferred season: Cool

Winter temperature survival low:

-30 F

Starting from seed:

- Prefer to start seed indoors
- Start seeds 4-6 weeks before planting outdoors
- Prefer to start in 3/4" soil blocks
- Needs light to sprout, do not cover
- Soil temperature: 70 F
- 10-14 days to sprout
- Air temperature for optimal growth: 65 F

Sun requirement: Full Sun

Height: 30-48"

Rows of plants per 36" wide bed: 4

Plant spacing in row: 4-6"

Days to bloom: 150 **Flower support:** Yes

Fertilization: Standard bed preparation, see page 35 in *The Cut Flower Handbook*, additional field applications may be beneficial.



Carthamus tinctorius

Safflower

Carthamus has its origins in the drier regions of Asia, Africa, and Europe. Most people will have heard of this plant by its common name, widely used for seed oil, seed meal, and the petals for an edible dye. Reminiscent of thistle in form, Safflower is also a very attractive addition to bouquets as either filler (with tufts of petals in the gold/orange/red range) or as foliage (before blooming).

Flower farmers will also appreciate the short number of days to maturity, and may find that it pairs well with early summer sunflowers and grasses.

• Seeding and Growing Tips: I have planted in fall and very early spring with excellent abundance and stem length. I have started the seeds in several different ways including the 1-½" Swift soil blocker, the 2" hand tool soil blocker, and 128-plug trays. I select which to use based on the volume of plants I

need. I find growing in soil blocks they are quicker so I start them closer to my target plant out date. In trays, it may take 8 weeks to get seedlings to transplant size. Before germination seeds benefit from light misting in addition to bottom watering. Fall-planted seedlings may benefit from additional fertilization in the field after the soil has warmed in spring and new growth has restarted. Like many other cool-season annuals, Carthamus prefers well-drained soil and can suffer root rot, so planting in raised beds is encouraged. Carthamus thrives in a moderate climate. In warmer climates, provide shade from the hot afternoon sun.

home garden tip

IIndividual blooms have limited vase life, but with multiple blooms per stem it can still look nice even after removing spent petals (the tufts pull out easily).



Left: Carthamus stems are useful in all stages. For fresh use with open blooms, harvest when 1/3 of the blooms are open. Bottom: 8 week old transplant planted in fall into biodegradable film.



- Flower Farmer Tip: This is a fairly common crop seen in florist circles in bloom, but what I was most surprised with was how useful it is before the blooms open and afterward as a dried flower. A flower with such a wide window of harvest and use becomes an especially high-value crop in my eyes.
- **Flower Support Notes:** Though this plant has sturdy stems, as it gets taller it is prone to toppling, so floral netting is suggested.
- Harvesting & Conditioning Notes: See stage to harvest image. We consider this a single-stem plant, so we make the cut at the base of the plant to get the most stem length. I begin harvesting the fresh stems as soon as they are tall enough to be useful, typically weeks before buds open. The rigid stems and foliage make it a long-lasting fresh foliage filler for commercial sales or early-season bouquets. Alternatively, harvest as the first few buds on a stem are showing color. Buds cut before showing color will not continue to open. This plant is not known to be ethylene-sensitive. Follow standard conditioning steps on page 30 in *The Cut Flower Handbook*. Expect fresh stems to last 10 days in the vase or hang to dry.
- **Good to Know:** Safflower's golden orange petals are a natural dye that is sometimes used in place of saffron in dishes.

I love using Carthamus stems before any of the buds open as a sturdy long lasting foliage in bouquets.



growing facts

Preferred season: Cool

Winter temperature survival low:

10 F

Starting from seed:

- Prefer to start seed indoors
- Start seeds 4-5 weeks before planting
- Need light to sprout, cover only very lightly with soil
- Prefer to start in 1-½" or 2" soil blocks
- Soil temperature: 68-72 F
- 10-14 days to sprout

Sun requirement: Full Sun

Height: 24-36"

Rows of plants per 36" wide bed: 4

Plant spacing in row: 4-6" Days to bloom: 70-80 Flower support: Yes

Fertilization: Standard bed

preparation, see page 35 in *The Cut Flower Handbook*, additional field applications may be beneficial.

Favorite Variety:

'Zanzibar' is the preferred variety for use as a cut flower. It has nice natural branching (multiple smaller blooms per stem), grows taller, and is spineless, making it much easier to harvest and arrange than older varieties. Grows 24"- 36" tall depending on conditions.

Trachymene coerulea

Didiscus, Blue Lace Flower

Blue flowers are always welcome, and these pale blue umbel-shaped beauties are certainly among them. It somewhat resembles a cross between Scabiosa and Ammi, and the blooms offer a mild sweet scent, such a nice bonus!

We find that they are productive bloomers spanning several weeks, and are a very attractive filler flower that compliments the colors in our spring and early summer bouquets. Also available in pink and white hues, these delicate flowers would be a lovely addition to a cottage garden, where they would be sure to attract pollinators and beneficial insects. They can also be grown in larger containers, perhaps 3-gallon or larger.

I admired Didiscus from afar for quite some time before I tried growing it. Once I took the plunge I was so pleased with the robust habit of this flower and how sweet the delicate blooms are, yet they hold up for a long time. My farmer-florist friends especially love the pink blooms for wedding work.

• Seeding and Growing Tips: Trials on my farm planting in the fall had mixed results. We seem to be right on the edge of didiscus winter survival conditions and often lose them over winter. This has led me to treat it much the same as strawflowers by only planting in very early spring. Giving additional protection has led to overwintering success, but I've found that the plant produces well with very early spring planting and eliminates the worry. While I've read that they are sensitive to root disturbance, I have not found that to be true when grown in soil blocks. Commercial growers that want a volume of transplants may find starting in the Swift Soil Blocker Mini 75 gives this transplant a little more room to grow. It's naturally branching, so pinching is not recommended.

home garden tip

As a landscape planting, remove spent blooms (deadhead) regularly to encourage additional flowering. This flower attracts parasitic wasps and other tiny beneficial insects like native bees.



Left: This was a trial harvest bucket of 'Lacy' series lavender blue that was over 2 weeks old!

Bottom: 6-week-old transplants planted in biodegradable film, 4 rows in the bed and 6" apart in the row.



- Flower Farmer Tip: Growers in milder climates may be able to sow a few successions for a strong harvest throughout the summer.
- Flower Support Notes: Recommended because stems are sturdy but wirey.
- Harvesting & Conditioning Notes: See stage to harvest image. This flower has a fantastic vase life and I find harvesting just as the first ½ of the tiny individual flowers begin to open gives the greatest quality of the blooms and the longest vase life. Make the cut at ground level right above the lowest side shoots, as stems emerge from the base of the plant. Follow standard conditioning steps on page 30 in *The Cut Flower Handbook*. Didiscus is considered ethylene-sensitive. Expect fresh stems to last 10 days in the vase.
- **Good to Know:** Native to southwestern Australia, they prefer well-drained soil with regular watering. In hot, humid climates this plant will prefer shade from afternoon sun.
- **Favorite Variety:** 'Lacy' series is the standard cut-flower variety, offering 2 ½" blooms on stiff but delicate-looking stems. We grow all colors: lavender blue, pink, and white. Grows 24-36"

Bottom Left: Harvest when 1/3 of the small flowers are open. **Bottom Right:** 'Lacy' series pink is an absolutely beautiful shade of pink!



growing facts

Preferred season: Cool

Winter temperature survival low: 10 F Starting from seed:

- Prefer to start seed indoors
- Start seeds 4-6 weeks before planting outdoors
- Prefer to start in 3/4" soil blocks
- Needs darkness to sprout, push seed down into the block
- Soil temperature: 70-72 F
- 14-21 days to sprout
- Air temperature for optimal growth: 60-70

Sun requirement: Full Sun or Part

Shade

Height: 24"

Rows of plants per 36" wide bed: 4

Plant spacing in row: 6" Days to bloom: 95-100 Flower Support: Yes

Fertilization: Standard bed

preparation, see page 35 in *The Cut Flower Handbook*, additional field applications may be beneficial.





Lisa Mason Ziegler isn't just a flower farmer; she's a teacher, an author, and a mentor. With over 25 years of experience in the field, Lisa is renowned for her expertise in flower farming and gardening rooted in organic practices. Her commitment to educating and empowering others in their flower-growing journey shines through her books, workshops, and online courses. She's the visionary founder of The Gardener's Workshop, an invaluable resource hub offering a wealth of knowledge, courses, seeds, and supplies for both novice and seasoned flower growers alike. Her newest book, *The Cut Flower Handbook*, was created as a guide that we hope will benefit cut flower growers for decades to come.



Jessica Graven's long-time love of gardening grew into a passion for flowers in 2017. Shortly thereafter she discovered Lisa and The Gardener's Workshop. She became an avid student of the TGW online courses as well as Lisa's books *Cool Flowers* and *Vegetables Love Flowers*. Lisa's dedication to inspiring and educating others resonated with her deeply and kept her engaged within the TGW student community. Jessi began work for The Gardener's Workshop as a Student Ambassador in 2021 and is now our Marketing and Content Manager along with contributing research and writing to *The Cut Flower Handbook*. Jessi grows cut flowers commercially as Blue River Blooms in Franklin County, Kansas.

