



SPECIAL GARDEN PROJECT



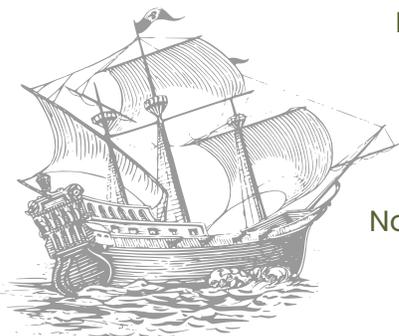
ALUMIA VANILLA CREAM MARIGOLD

MARIGOLD FACTS

- In Mexico, marigolds are called “the flower of the dead” and are used to decorate alters on Dia De Los Muertos or Day of the Dead
- Some marigold flowers are edible and can be used to create natural food colorings
- Marigold flowers can come in a wide range of colors including orange, yellow, red, gold, copper, brass, white, pale green, or a combination of those colors

Many plants were found growing here when Columbus discovered North America. We call these native plants.

Marigolds are an introduced plant in North America. They are native to South and Central America.



A TOUCH OF HISTORY

MARIGOLD'S FAMILY



PLANTS ARE GROUPED INTO FAMILIES. MARIGOLDS ARE IN THE PLANT FAMILY CALLED *ASTERACEAE*. THIS FAMILY INCLUDES *ASTERS, DAISIES, COSMOS, AND ZINNIAS*. IT'S IMPORTANT TO KNOW WHICH PLANTS ARE RELATED BECAUSE THEY SOMETIMES HAVE THE SAME DISEASE AND INSECT PROBLEMS. USING CROP ROTATION CAN DECREASE INSECT AND DISEASE PRESSURE. AVOID PLANTING THE SAME FAMILY IN THE GARDEN LOCATION FOR 3 YEARS.

PLANTING BASICS

Marigolds are a warm season crop. Seeds can be started inside, then planted directly in the ground after the last frost date and when soils are warm, usually in mid to late May.

Warm soils allow the seeds and plants to grow rapidly. Cold, wet soils will cause seeds to rot.



»»» WHERE TO PLANT?

Marigolds will flower the best when placed in full sun. This is an area that will receive 6-8 hours or more of direct sunlight a day. It will tolerate partial sunlight conditions, but it won't produce as many flowers.

Marigolds will do best in fertile, well-drained soil. Make sure to leave enough room for the plants to grow. The more crowded the plants are, the taller they get as they reach for sunlight. Marigolds like at least 8-12" between plants.

Prepare the soil, spade 6 to 8 inches deep; then work in about a two-inch layer of organic matter. Organic matter is good for all soil types. It helps sandy soils hold water better. In clay soils, it improves drainage so excess water drains away quicker and oxygen is then available to roots. Roots need oxygen to grow and function. Organic matter also adds nutrients to soil as it decomposes.

Compost and manure are examples of organic matter. Do not use fresh manure in spring. It can burn seedlings or cause some plants to grow lots of leaves or stems. Manure is best added in the fall.

HOW TO PLANT MARIGOLDS

3

➤➤➤ STARTING INDOORS

Sow into cell trays 4-6 weeks before the last frost. Can be sown close together, 1/4" deep, and transplanted into individual pots. Keep the soil moist until seedlings emerge, then only water when seed mix is dry. Plant outdoors once threat of frost has passed.

➤➤➤ DIRECT SEEDING

After the average last frost, plant the seeds 1/4" deep with 8-12" apart. Water marigolds well at planting and keep the soil evenly moist for the first couple of weeks until they become established.

The average last spring frost dates in Nebraska are: eastern Nebraska, April 24; central Nebraska, May 1; and May 10 in western Nebraska. Check with your local Nebraska Extension Office for the frost-free date in your area.

If you don't have room to plant in a traditional garden setting, marigolds can be grown in containers. Aim for one plant per 12" container. Garden soil is not recommended for containers. A good potting mix will work well for growing plants in containers. Make sure the container has drainage holes in the bottom to allow excess water to run out.

MARIGOLD CARE

➤➤➤ WATERING

Marigolds can tolerate dry, hot conditions very well. Do not overwater. Plants will need about 1 inch of water a week. Try to keep the soil barely moist. At each watering, moisten the soil about 6-8" deep. Let the soil dry out slightly between waterings. Too much water decreases the soil oxygen, which roots need to grow steadily.

If you use a sprinkler to water the garden, try to water in the morning. This will allow the leaves to dry off throughout the day and decrease the possibility of disease.

➤➤➤ MULCHING

After the seeds begin to emerge, place a 2-3" layer of mulch around marigolds to conserve moisture, keep soil temperatures cooler, and reduce weeds. This will help roots to grow quickly and steadily.

Mulch should not touch plant stems or leaves. Use dried brown grass clippings or shredded wood. Do not use green grass clippings as they can "heat up" and damage plants. Adding too much mulch can make soils waterlogged and lack oxygen and can attract insects and slugs.

➤➤➤ WEEDING

Weeds steal water and nutrients from plants, causing them to grow slower. Control weeds when they're small by hoeing, hand-pulling or mulching. Do not hoe too close near plant stems or too deep near the roots, because this may cause damage to the plants.

➤➤➤ FERTILIZING

Marigolds don't require much fertilizer. Additional fertilizer may not be needed if they were planted in soils that had added organic matter. If you do fertilize, use a well-rounded, water-based fertilizer once the plants are blooming.

COMMON MARIGOLD PROBLEMS

➤➤➤ APHIDS

Aphids are tiny insects that have piercing-sucking mouthparts. They come in a wide range of colors from green, to yellow, and even a reddish color. Some aphids have wings and/or a set of little 'tail pipes' called cornicles out their back end.

They suck out the plant juices and leave a mottled, blotchy appearance to the leaves. If the infestation is large enough, they can also cause the leaves to look puckered or ruffled.



➤➤➤ JAPANESE BEETLE



Japanese Beetles are copper colored beetles that devour certain plants, including marigolds. The leaves will have a lacy appearance to them when eaten by Japanese Beetles. Squish the adult beetles when they are seen or consider using an insecticide labeled for use in the garden to prevent damage from happening. Pay close attention to when pesticides are applied to decrease the risk to pollinators like bees.

HARVESTING & DISPLAYING

➤➤➤ HARVESTING MARIGOLDS

Harvest flowers often. Plan to cut flowers in the evening or early morning. Always cut the stem several inches longer than necessary to allow for later trimming. Make a smooth, even cut with a knife or pruners, scissors can crush the stems. Deadheading, or removing old flowers, can help encourage more blooms.

➤➤➤ DISPLAYING MARIGOLDS

Remove any leaves on the stem that will be in water. Foliage below the water line will rot and cause discolored water and stem blockage. Blocked stems are unable to supply needed water to the living flower, decreasing the vase life of the flower. Marigolds have an average vase life of 5-10 days in water. Add floral preservative, a ¼ tsp of bleach, or 1 tsp of hydrogen peroxide to the water to increase the vase life.



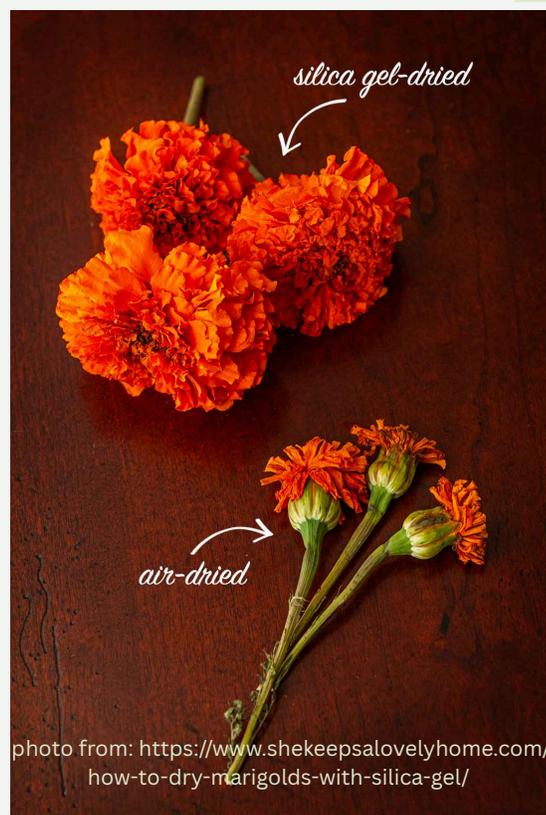
DRYING METHODS

➤➤➤ AIR DRYING

Harvest flowers before they are completely mature. Tie the stems into a bundle then secure bundles to a wire hanger using twine or twist-ties, make sure the heads are facing the floor. Hang cut stems upside-down in a cool, dry, dark location for several weeks to allow the blooms to dry completely.

➤➤➤ SILICA GEL

Snip the stems 2" below the bloom. Pour ½" of silica gel into the bottom of your container. Nestle the flowers upside down into the gel. Slowly fill the container around the flowers with gel, completely covering the flowers, leaving a little of the stem poking out. Place lid on container and store for 10 days. Silica gel dried flowers will appear fuller than the air dried ones.



MARIGOLD GARLAND

Step 1

- Gather marigolds by cutting the flower just below the receptacle (the green part where the flower meets the stem). If flower sizes vary, group into assorted sizes.

Step 2

- Prepare your garland string.
- Cut a piece of string to desired length. Be sure to leave extra space on either side for tying knots for hanging. Approximately 4 to 5 feet is optimum for draping over doorways or wearing as a decorative shawl.
- Tie a knot on one end of the string.
- Thread the other end of the string through the sewing needle and secure it in place.
- Now that the string has been prepared, it is time to start threading the marigolds onto the string.

Step 3

- Place the needle in the center of the flower.

Step 4

- Apply pressure to move the needle to the back side of the flower and pull the needle through.

Step 5

- Slide the flower to the end of the garland that has a knot.

Step 6

- Repeat steps 3-5 until the garland is at its desired length.

Step 7

- Cut the string at the base of the sewing needle to remove the needle. Tie another knot to secure the garland in place. Apply antitranspirant (like Wilt Pruf or Wilt Stop) spray according to manufacturer's recommendations to prolong the display.

EXHIBITING ALUMIA

VANILLA CREAM MARIGOLD

This marigold produces creamy yellow flowers on compact plants. This variety has a unique flower color with a long bloom time.

➤➤➤ EXHIBITING TIPS

State Fair Special Garden Project Educational Exhibit Class G-775-001. The educational exhibit is based on what was learned from the project. Present information on a poster 14" X 22" or in a clear plastic report cover. The 4-H member's name, age, and county must be on the back of the poster or report cover.

State Fair Special Garden Project Fresh Cut Flowers or Harvested Vegetables Class G-775-002. The current years' Special Garden Project fresh cut flowers, harvested vegetable or fruit should be entered in this class.

Alumia Vanilla Cream marigold can exhibited following the 'marigold' class description. Bring 5 stems following the guidelines in the publication 'Preparing Cut Flowers for Exhibits at County Fair and Nebraska State Fair' (revised 2022) (<https://go.unl.edu/sgpresources>).

The desirable traits the judge is looking for are 5 flowers that are at the same maturity and uniform in size. Avoid overly-mature, faded flowers; flowers with insect damage, or misshaped flowers.

Exhibiting Tip: The center of this marigold is made up of a bunch of tiny, tubular flowers (disk florets). You can age a marigold flower based on the number of unopened disk floret buds in the center vs. the number of opened disk florets. Aim for flowers that have ½ of their disk florets open.



Information compiled by Elizabeth Exstrom, Extension Educator
 Marigold information: <https://extension.umn.edu/flowers/marigolds>, <https://plants.ces.ncsu.edu/plants/calendula-officinalis/>,
<https://www.shekeepsalovelyhome.com/how-to-dry-marigolds-with-silica-gel/>, <https://www.isuagcenter.com/articles/page1662131594449>
 Career information: <https://www.seedyourfuture.org/careers> Photo courtesy of Harris Seeds, <https://www.harriseseeds.com/>

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CAREERS

Horticulture is the science and art of growing and using fruits, vegetables, flowers, ornamental plants and grasses to enhance our living environment. A horticulturist is a person who works with plants. They can have many different jobs from plant breeding, to growing the crops, to processing and moving of plants.

DID YOU KNOW? A DEGREE IN HORTICULTURE CAN OFFER THE FOLLOWING CAREER OPPORTUNITIES:

- EDUCATOR
- FIELD OR LAB RESEARCHER
- FLORAL DESIGNER
- GREENHOUSE MANAGER
- HORTICULTURE ENTREPRENEUR
- LANDSCAPE DESIGNER
- LANDSCAPE CONTRACTOR
- NURSERY MANAGER
- PLANT BREEDER
- PLANT PROPAGATOR
- GROWER
- VINEYARD MANAGER

➤➤➤ ORNAMENTAL HORTICULTURIST

Ornamental horticulturists study the growing, arranging and tending of decorative plants and flowers.

Training/Education Needed

The minimum education requirement is typically an Associate's degree or certification. Additional degrees may be required for advanced positions.

Where to Study

2- and 4-year college and university programs across the country.

Salary Expectations

In August 2020, the median yearly salary for an ornamental horticulturist was \$44,597, according to ZipRecruiter.

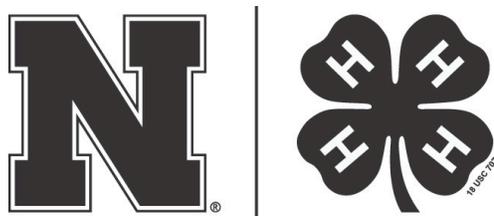


Want to find out more about careers like this in horticulture?

Visit UNL Agronomy and Horticulture Department at <http://agronomy.unl.edu/>

**Find Out More About
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<https://extension.unl.edu/>



EXTENSION

ALUMIA VANILLA CREAM MARIGOLD

Return completed surveys to your local office or fill out the Special Garden Project survey online at: <https://go.unl.edu/2026sgpsurvey> or by scanning the QR Code



Name: _____ County _____

Because I enrolled in the Special Garden Project about Vanilla Cream marigolds: (circle all that apply):

- First time exhibiting a 4-H garden project
- I grew Alumia Vanilla Cream marigolds for the first time
- First time growing marigolds
- I entered flowers at my County Fair for the first time
- I learned new information about gardening
- I learned new information about gardening

Please list three new things you learned by taking this project:

1.

2.

3.

Because I enrolled in the Special Garden Project this year, next year I plan to (please circle all that apply):

- enroll in a regular 4-H gardening project
- try a new cultivar of a plant I currently grow
- grow marigolds again
- amend garden soil with organic matter
- change a gardening method I've used or use a new gardening method

What change(s) do you plan to make or new methods do you plan to use?

Because I enrolled in the Special Garden Project this year: (please circle all that apply):

- I am learning skills that can be used in the future
- I found a connection between my interests and a project
- I can think of ways this 4-H project could be a business and a career
- I learned about a new career

How many years have you enrolled in the Special Garden Project?

Would you enroll in the Special Garden Project again? Yes No Maybe

If yes, what vegetable or flower would you like to grow and learn more about?