Zinnias

(*Zinnia elegans*)

for the

Farmer Florist

MISSISSIPPI STATE UNIVERSITY™ EXTENSION

There are about 20 species of zinnias, mostly annuals, native to Mexico, Texas, New Mexico, Colorado, and Chile. Today's zinnias have been developed primarily from **Zinnia elegans** *Jacq., named after Johann G. Zinn, an 18th century botany professor.*

Production

Narrow spacing is best for flowering, as it reduces side branching. It is recommended for a single harvest. For multiple harvests, the recommendation is 2 feet between rows and 6 inches within the row. Cut-flower zinnias often require additional support, often wire or mesh netting, to prevent lodging.

For flower bud initiation, zinnias are short-day plants. Vegetative growth is initiated when the days are long (dark period of 10 hours or less). Flower development initiates when the days are shorter. Stem length and flower size increase with day length and temperature. Flowering peaks when daylight lasts less than 14 hours.

Drip irrigation is recommended for zinnias to protect the blooms. Overhead watering is not recommended because it may cause spotting on the petals, splash soil onto the foliage, and promote disease spread and mildew.

Harvest/Postharvest

Harvest when flowers are fully developed, leaving two to three leaf pairs on the stem, and when temperatures are cool (early morning after dew has evaporated or evening). They are not ethylene sensitive, so they may be stored with other crops. Zinnia stems benefit from floral preservatives. Place cut stems immediately in a fresh flower food solution with 1 percent sugar. Place the buckets in a cool, shaded location, especially during the heat of summer, and store up to 7 days in refrigeration set at 38–42˚F. Take care to remove stems infected with vascular bacterial stem blight because it will reduce postharvest life. Fresh zinnias have a vase life of 7–10 days.

Drying

Harvest stems as you would for fresh zinnias when heads are fully open. Remove foliage in the field if flowers are to be processed immediately. If not, handle them like fresh until they are to be processed. Except for dark reds and scarlets, which usually turn black-red, most colors dry well.

Surround-and-Cover Method

- Remove most of the stem.
- Choose a drying substance (white cornmeal, sand, borax, cat litter, silica gel, or specialty product).
- Place flowers on a thin layer (½ to ¾ inch) of drying substance in a container 3–4 inches deep.
- Carefully pour the drying substance over, around, and through the petals to cover.
- See instructions on specialty product label for specific light, temperature, and drying times.

Flower Forms

Dahlia-flowered. Dahlia-flowered zinnias produce semi-double and double blooms. Growing to be about 30–40 inches tall, dahlia-flowered zinnias are perfect for the back border of the garden or cutting bed.

Cactus-flowered. Cactus-flowered zinnias have been around for decades, and they remain among the loveliest annuals. They include almost every color of the floral rainbow except blue. Plants grow to 3 feet tall and are covered with 4- to 5-inch, shaggy blooms.

Single-flowered. Single-flowered zinnias have a **single row of petals**. The center of each flower in this type is exposed.

Cultivar Recommendations

Benary's Giant Series. These are recommended by the Association of Specialty Cut Flower Growers. Stems of 40–50 inches bear 4- to 6-inch flower heads. These have an excellent vase life and hold up well to summer heat and rain. Available colors are Deep Red, Orange, Carmine Rose, Coral, Lime, White, Purple, Bright Pink, Wine, Salmon Rose, Scarlet, and Golden Yellow.

Giant Zinnia Series. Sturdy stems of 24–36 inches bear 4- to 6-inch double blooms. Available colors are Orange, Golden Yellow, and Coral.

Oklahoma Series. Prolific 1½- to 2½-inch double and semi-double, petite blooms on 30- to 40-inch stems. Excellent vase life and low susceptibility to powdery mildew. Recommended for use as accent flowers. Available colors are Pink, Golden Yellow, Carmine, Scarlet, Salmon, and White.

Queen Series. Mostly double and semi-double blooms reach 2–3½ inches on 30- to 40-inch stems. Available colors are Red Lime, Lime Orange, and Lime with Blush.

Common Diseases

Alternaria Leaf Spot. Small, round, reddish-brown spots with white to gray centers form on the upper surface of the leaves and along the midrib. The lesions may encircle the stems and cause wilt. This disease is worse in warm, wet, or very humid weather. Avoid getting water on the foliage. Remove infected plant parts and do not work around wet plants. Provide plenty of air circulation.

Aster Yellows. Plants are stunted and develop witches'-brooms (excessive growth). Petals turn green and become deformed. This virus-like condition is spread by leafhoppers. Remove infected plants and destroy them. Control leafhoppers. Remove weeds in the area, which serve as alternate hosts to the disease.

Bacterial Leaf Spot. First signs are small, translucent spots with a broad, yellowish edge that slowly enlarge and become angular or irregularly circular with a reddish center. It thrives in cooler temperatures. The disease may also affect and disfigure flower heads. Remove infected plants. Rotate crops with plants in a different family. Avoid overhead watering. Do not work around plants when they are wet.

Botrytis. This fungus causes a gray mold on flowers, leaves, stems, and buds. It thrives in cool, wet weather conditions. Remove affected plant parts. Avoid watering at night and getting water on the plant when watering. Make sure plants have good air circulation.

Powdery Mildew. This fungus disease occurs on the top of the leaves in humid weather conditions. The leaves appear to have a whitish or grayish surface and may curl. Avoid powdery mildew by providing good air circulation for the plants with good spacing and pruning.

Common Pests

Aphids. Aphids are greenish, red, black, or peach sucking insects that can spread disease as they feed on the undersides of leaves. They leave a sticky residue on foliage that attracts ants. Introduce or attract natural predators such as lady beetles and wasps, which feed on or parasitize aphids. You can also wash them off with a strong spray or use an insecticidal soap.

Leafhoppers. Leafhoppers injure leaves, stunt growth, and spread disease. Remove plant debris. Use insecticidal soaps.

Spider Mites. These tiny, spider-like pests are about the size of a grain of pepper. They may be red, black, brown, or yellow. They suck on plant juices, removing chlorophyll and injecting toxins, which leaves white dots on the foliage. There is often webbing visible on the plant. They cause the foliage to turn yellow and become dry and stippled. They multiply quickly and thrive in dry conditions. Control spider mites with a forceful spray every other day. Try insecticidal soap.

Design Applications

With their wide color range, from pale pastels to bold, pure hues, zinnias are terrific in floral designs. Explore the many ways they can be combined using floral design principles as a guide. The following arrangements use Benary Giant zinnias grown in south Mississippi.

Tabletop Arrangement

Layer zinnias, one atop another, in a simple cube vase. This arrangement can be mass-produced and sold individually or as sets. Use one for cocktail tables or several on fireplace mantels or dining tables. No specialized mechanics are necessary; the flowers' stems interlace to hold them in place.

Large-Scale Arrangement

We created a burst of color in this line-mass pyramid of zinnia flowers. Note that the larger flowers are placed within the heart of the design, while the smaller flowers tend to be on the outer edges of the pattern. This technique adds to the overall rhythm of the arrangement. A pair of these lively arrangements would set a celebratory tone, flanking the wedding couple or the entrance to the reception venue. We used fresh flower foam to make this arrangement.

Flowers to Carry

Short of a cold drink, there is nothing more refreshing than a bouquet of cool, white zinnias for a summertime wedding. This combination uses creamy, off-white zinnias with pale yellow and pale green variations arranged in a floral foam bouquet holder. We added some number 9, white satin ribbon to match a bridal gown. Suggest the flowers that grow well on your farm for weddings and events. Be bold and design with the flowers you grow!

Resources

Burpee Seeds. https://www.burpee.com

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