ZINNIA ELEGANS

Magellan™

Minimum Germination Rate: 85%
Seed Product Form: Raw, coated

FLOWERING

Time frame when plants are receptive to flower initiation: Days 18 – 24 days; 6 – 8 leaves.
Flowering Type: Zinnias are facultative short-day plants – short days enhance flowering.
Specific Flowering Mechanism: Short days needed for bud initiation; long days enhance flowering development. Irradiance overall enhances flowering.

PLUG CULTURE

Germination: Optimum conditions for seedling development that begins the day the crop is sown until cotyledon expansion. Expect radicle emergence in 1 day.
Cover: Seeds may be covered with a thin layer of coarse vermiculite to maintain moisture levels.
Media: • pH: 5.5 – 5.8
• EC: <0.5 Zinnias are very sensitive to high salts.
Light: Light is not necessary for germination.
Moisture: Saturated (5) for days 1 – 3. Beginning day 4, reduce to level moist (3). On day 10, reduce further to medium (2).
Humidity: 100% until radicle emergence then reduce to 40%.
Temperature: 70° – 75°F (21° – 24°C) until radicle emergence. Reduce to 65° – 68°F (18° – 20°C) until cotyledon expansion.
Plug Bulking: Optimum conditions during the vegetative period, beginning at cotyledon expansion, needed for the root to reach the edge of the plug cell. Stressful conditions may promote premature flowering in the plug trays. Budded seedlings may not size up properly in the finish container.
Media: • pH: 5.5 – 5.8
• EC: 0.5 – 0.75
Light: Lighting may trigger premature flowering in the plug. Provide 3,000 – 3,500 foot candles (30,000 – 35,000 lux)
Temperature: 65° – 68°F (18° – 20°C) after radicle emergence. As seedling matures, reduce temperatures to 62° – 65°F (17° – 18°C).
Moisture: Alternate between moisture levels wet (4) and medium (2). Allow media to approach level (2) before re-saturating to level (4). Do not overwater or let plants wilt.
Humidity: Zinnias prefer low humidity.
Dehumidify: Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.
Fertilizers: If desired fertilize established seedlings at 25 – 35 ppm nitrogen with a calcium-based fertilizer (13-2-13).
Growth Regulators: Zinnias will respond to B-Nine (daminozide) at 2,500 ppm.

GROWING ON

Good air circulation and water management are essential to produce healthy zinnias.
Transplant Ready: 2 – 3 weeks from sow in a '288' tray. Transplant as soon as root system is established. Root-bound plugs do not transplant well. Zinnias can also be sown directly into the finish container.
Finish Bulking/Flower Initiation: Optimum conditions during the vegetative period, beginning at transplant, needed for the root to reach the edge of the container AND to make the plant receptive to flower initiation.
Media: • pH: 5.5 – 5.8
• EC: 1
Light: Low light conditions will promote stretching of Zinnias. Crops finished under short days tend to exhibit a greater number of single blooms. Long days will correct this situation. Provide 3,500 – 4,500 foot candles (12 – 15 total mols or 35,000 – 45,000 lux) to hasten flower induction. Supplemental lighting under low light conditions at 350 – 450 foot candles (35,000 – 45,000 lux) will enhance flower development.
Temperature: 60° – 65°F (15° – 18°C) nights; 70° – 85°F (21° – 29°C) days.
Moisture: Alternate between moisture levels medium (3) and dry (1). Allow media to approach level (1) before re-saturating to level (3). Water early in the day to allow the foliage to dry thoroughly before night fall. Rapid drying of the foliage will discourage disease outbreaks.
Humidity: Zinnias prefer low humidity.
Dehumidify: Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.
Fertilizers: Fertilize weekly at 200 ppm nitrogen with a calcium-based fertilizer (13-2-13 or 14-4-14).
Growth Regulators: Pack production of Short Stuff may require one application of B-Nine (daminozide) at 5,000 ppm. Other Zinnias may need additional applications. Also responds to DIF treatments, A-Rest (ancymidol), Bonzi (paclobutrazol), Sumagic (uniconazol) or B-Nine/Cycocel (chlormequat chloride) tank mix.
Common Diseases: Powdery Mildew, Botrytis Blight, Bacterial Leaf Spot, Alternaria Leaf Spot
Common Pests: Aphids,Whitefly,Thrips

PRODUCT USE

Packs, pots, gallons, containers, mass plantings

GARDEN SPECIFICATIONS

Light: Full sun
USDA Hardiness Zone: 10
AHS Heat Zone: 12 – 1
Magellan 12 – 14" (30 – 35 cm) 10 – 12" (25 – 30 cm)

Zinnia SCHEDULING in We

Total crop time 8 – 9 8 – 11
'288' Plug crop time 1 – 2 2 – 3
****Transplant to finish crop time***
Packs 6 – 7 6 – 7
4" crop 7 – 8 7 – 8
6" crop 7 – 8 7 – 8

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Note: These suggestions are only guidelines and may have to be altered to meet individual grower's needs. Check all chemical labels to verify registration for use in your region.

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