SAKATA®

Anemone Gemstone

Cultural Information for: Anemone Gemstone Annual
Common Name: Adonis or Windflower
Botanical Name: Anemone coronaria
Seed Count: 45,000-57,000/ounce 1,600-2,000/gram
Optimum Germination Temperature: 59-68ºF / 15-20ºC
Optimum Growing Temperature: 50-65ºF / 10-18ºC
Optimum pH: 5.8 – 6.2 (plug/peat moss) 6.0 – 7.0 (finishing/mineral soil)
EC - Plug: 0.4 – 0.8 mmhos/cm **(1:2)** / 0.9 – 2.0 **(SME)** / 1.1 - 2.6 **(Pour Thru)**
EC - Finished: 0.9 – 1.3 mmhos/cm **(1:2)** / 2.1 – 3.5 **(SME)** / 2.7 - 4.6 **(Pour Thru)**

Plug Culture: 9 weeks (128 deep tray)

Stage One (days 1 – 14) Sow seed into a 128 deep plug tray using a well-drained sterile media with good aeration. Cover with vermiculite and drench with 100 ppm's of Captan to avoid disease (damping off and botrytis). Optimum germination temperature is 59-68°F/15-20°C. Provide high humidity throughout the germination period, never allowing the media to dry out.

Pre-cooling: After sowing place trays in a chamber with a temperature of 45-50ºF/7-10ºC for 10 days to promote a strong and uniform emergence.

NOTE: Plants initially form a corm below the soil from which the leaves emerge.

Stage Two (day 15-35) The cotyledons are fully expanded. Place the plugs in a well-ventilated greenhouse with low humidity to avoid disease problems. Provide a light level of 2,000-2,500-foot candles/22,000-27,000 lux. Optimum growing temperature is 59-68°F/15-20°C. Maintain the temperature below 75ºF/24ºC during the day and above 41F/5C at night. Fertilize 2-3 times per week at 50-75 ppm N using a well-balanced formulation such as 15-16-17.

Stage Three (day 35-49) As the plugs begin to fill in the trays, allow the plants to dry down slightly in between irrigations to maximize root growth. Increase fertilizer rate to 100- 150 ppm of N as needed to maintain healthy growth. The seedlings form a corm after the cotyledons fully expand. True leaves emerge from the corm below the soil.

Stage Four (days 50-63) Increase light level to 2,500-5,000 f.c./ 27,000-54,000 lux to acclimate prior to transplanting into cut flower beds. Applying extra phosphorus at this stage will strengthen the root system prior to transplanting.

Finishing: 12-14 weeks

Transplanting: When the plugs have 4-6 true leaves, they are ready to transplant into cut flower beds. Take special care in removing the plugs from the trays to avoid root damage. Anemones will respond best in a soil with good fertility, high organic matter, and excellent drainage. Optimum pH in soil-based (natural earth) media is 6.0-7.0. Anemone roots are naturally brown in color.

Spacing: Recommended spacing is 6" x 6" (37 plants per square yard) / 15 cm. x 15 cm. (44 plants per square meter). **No support netting is needed.**

Fertilizer: Maintain the soil somewhat dry at first to promote new root growth. Once new roots emerge, apply 150- 200 ppm N from a well-balanced liquid fertilizer, such as 15-16-17, to promote healthy growth of the plants. Periodic applications of calcium nitrate are recommended to strengthen flower stems and plant tissue. Water thoroughly to prevent excess salinity. Excess nitrogen can promote overgrowth of the foliage. Water early in the day if irrigating overhead to prevent foliar diseases.

Temperature: After transplanting, establish at 60-65°F / 15-18°C for one week. Next, lower the temperature to 59-65°F / 15-18°C daytime and 50-55°F / 10-13°C nighttime for optimum development and flower stem length. Ideally, do not exceed 75°F / 24°C daytime and below 41°F / 5°C nighttime.

Light: Anemone grows best at 3,500-5,000 f.c. / 38,000-54,000 lux. Apply shading as needed to reduce excess heat from intense sunshine or to increase stem length in high light areas. Anemone Gemstone is day length neutral but develops faster under longer photoperiods and cool temperatures.

Insects: Aphids, spider mites, thrips and whiteflies

Diseases: Botrytis, downy and powdery mildew, pythium and rhizoctonia, TSWV.

Crop Schedule: Sow from July to September for flowering from January to June. Total crop time from sowing to first flowering is 20-22 weeks. Year-round sowing in cool equatorial regions.

Harvesting: Harvest when buds are fully colored. Cut early morning before 9:00 am when one-third to one-half of the petals (sepals) begin opening, but before fully open and shedding pollen. For local sales some growers pick after the flower has opened and closed once. Others wait until the distance between the flower petals, and the pedicel (circle of foliage) starts to elongate before harvesting. Test each system to see what works best.

NOTE: Removing the first flowers, often with shorter stems, promotes larger and more vigorous plants. The duration depends on the plant size.

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Post-Harvest: Maintain stems in a 2 to 4% sugar solution or commercial holding solution with a germicide to extend vase life. Holding solutions specifically made for anemones are available. Recutting stem ends during each transfer extends vase life. For straighter stems, keep the stems wrapped during rehydration.

Storage and shipping procedures: Store cut stems dry at 32-34ºF / 0-1ºC for a week or at 38-44ºF / 3-7ºC for 1 to 2 days. After conditioning, store stems in a holding solution containing sugar and germicide to improve flower opening. ***Stems should be stored and shipped in a vertical position to avoid stem bending***.

NOTE: Only add enough water to cover the lower portion of the stems in the post-harvest bucket or consumer vase to prevent stems from becoming mushy. Do not combine daffodils with anemone as daffodils exude a slimy substance that plugs up the cut end of other flowers preventing them from absorbing water.

Ethylene: Anemone is sensitive to ethylene and exposure to ethylene causes petal abscission and shorter vase life. Treat stems with STS or 1-MCP before shipping or storage.

"A true jewel among anemones: Gemstone produces over 20 flowers per plant, flowering under low light levels with no need for disbudding".

"All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North American conditions, and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best."

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