

Cultural Information for: Sunflower Vincent®s Series Annual
Common Name: Sunflower
Botanical Name: Helianthus annuus
Seed Count: 450-500/ounce 16-18/gram
Optimum Germination Temperature: 75°F / 24°C
Optimum Growing Temperature: 55-65°F / 13-18°C
Optimum pH: 5.8 – 6.2
EC – Plug: 0 – 0.3 mmhos/cm (1:2) / 0 – 0.8 (SME) / 0 – 1.0 (Pour Thru)
EC – Finished: 0.4 – 0.8 mmhos/cm (1:2) / 0.9 – 2.0 (SME) / 1.1 – 2.6 (Pour Thru)

- Vincent®s are faster than competitive varieties -a shorter crop cycle means quicker profits!
- Day length neutral - better length under short days, more flexibility in programming
- Round, overlapping petals form sturdy flower heads that hold up better during transport
- An extra ring of petals provides a better filled and more attractive flower
- Upward facing flowers don't hang their heads, but look consumers proudly in the eye
- Deep orange color of Vincent®s Choice is the true 'Sunflower shade' that customers prefer
- Green heart of Vincent®s Fresh is a crisp, clear alternative to the current Sunflower market selection

Site Selection: Choose a sunny site with good drainage.

Soil Preparation: Sunflowers do best planted in soils with relatively low nutrient content. Soils with an EC greater than 2.0 mmhos (SME) will cause the plants to grow too tall.

Seed Sowing: Sow seeds directly into beds and cover lightly with soil. Water the seed beds thoroughly being careful not to oversaturate the bed which depletes the soil of oxygen. For greenhouse sowings maintain a maximum air temperature of 75°F/25°C with a minimum soil temperature of 50°F/10°C. For outdoor production sow when the soil has warmed to a minimum of 50°F/10°C. Seeds germinate in about 7 days. 7 to 10 days after seedlings emerge, thin out leaving only the strongest and most sturdy seedlings. A final spacing of 4 x 5 inches/10 x 12 cm. is ideal. Dense growing will help to reduce the amount of side branching and yield a flower size of 5 inches/12 cm.

Note: Vincent®s are very uniform and vigorous in growth therefore it's better to keep the sowing window shorter than with comparative varieties.

Temperature: After thinning, maintain a minimum air temperature of 50°F/10°C at night, and a maximum of 75°F/25°C during the day.

Choice	Les affected by temperature
Fresh	Earlier flowering under warm temperatures.

Fertilizer: Sunflowers require less fertilizer to produce flower stems of high quality. Fertilize with a calcium nitrate-based formulation at 50-75 ppm N. Monthly supplemental drenches with magnesium sulfate (MgSO4) at 30 ppm Mg (4 ounces per 100 gallons / 30 grams per 100 liters) are recommended to maintain a healthy leaf color. Water the plants only moderately to avoid overgrowth and weak plants. To prevent boron deficiency, apply 0.25 ppm B in the fertilizer.

Note: Excessive Nitrogen, especially in the summer, causes plants to grow too vigorously with abnormal flower shapes. .

Timing: Flowering time will be about 60 days in summer and 70 days in winter and is related to day length and temperature. In general, during short days (<12 hours), plants will flower more quickly with smaller discs on shorter stems. Under long day conditions (>13 hours), plants will flower later with larger discs on taller stems.

Note: Vincent®s are less sensitive to day length than other Sunflower varieties because they are almost day length neutral.

Insects: Aphids, lygus bugs and whiteflies are the principal pests.

Harvesting: Cut stems when the flowers are 1/4 open with the petals perpendicular to the center disc. To ensure the longest vase life, cut the stems at the proper stage. Late harvesting will result in reduced vase life.

Post-Harvest Care: Stems should be cut into and held in a commercial holding solution with a biocide or acidified water. Sunflowers benefit greatly from solution with a low pH (acidic). Sunflowers are prone to water stress problems so make sure stems stay hydrated. After cutting keep out of direct sun to prolong freshness. Store at 36-41°F (2-5°C) for up to a week.

"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 America 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."