



Culture Tips for Sunflower Vincent[®]s



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Sunflower F1 Series Vincent[®]s

The extra ring of petals offers a more full and attractive flower.



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Sunflower F1 Series Vincent[®]s Choice

Vincent[®]s Choice shows a deep Orange color and is the preferred flower color that consumers demand.



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Sunflower F1 Series Vincent[®]s Fresh

The green center of Vincent[®]s Fresh is a vibrant color selection compared to competitors.



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Semilla



- *Seed of Vincent's offer strong vigor without the need for priming.*
- *Available in treated and non-treated seed.*
- *Sold in units of 10M*



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Direct sowing vs. plugs



Direct sowing outdoors.



Seedling production in greenhouse.



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Direct Sowing



- *Tolerates a wide variety of soils **low in salts.***
- *Space 4.5–7 inches/11.5-18 cm. apart outdoors in rows or 4 x 5 inches/10 x 12.5 cm. under cover for the best flower size.*
- *Minimum night temperature 54°F/12°C and maximum day temperature of 75°F/24°C.*
- *A tip for outdoor sowing is to spread some cracked corn over the planting bed to distract birds from eating the sunflower seeds.*



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Plug Production



- *Use a substrate low in salts to prevent overgrowth.*
- *Germinate at 75°F/24°C and then lower to 65°F/18°C after emergence.*
- *Ready to transplant in 10 days.*



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Sunflower F1 Series Vincent[®]s

Vincent's are known for their strong vigor and high germination rate.



Competencia

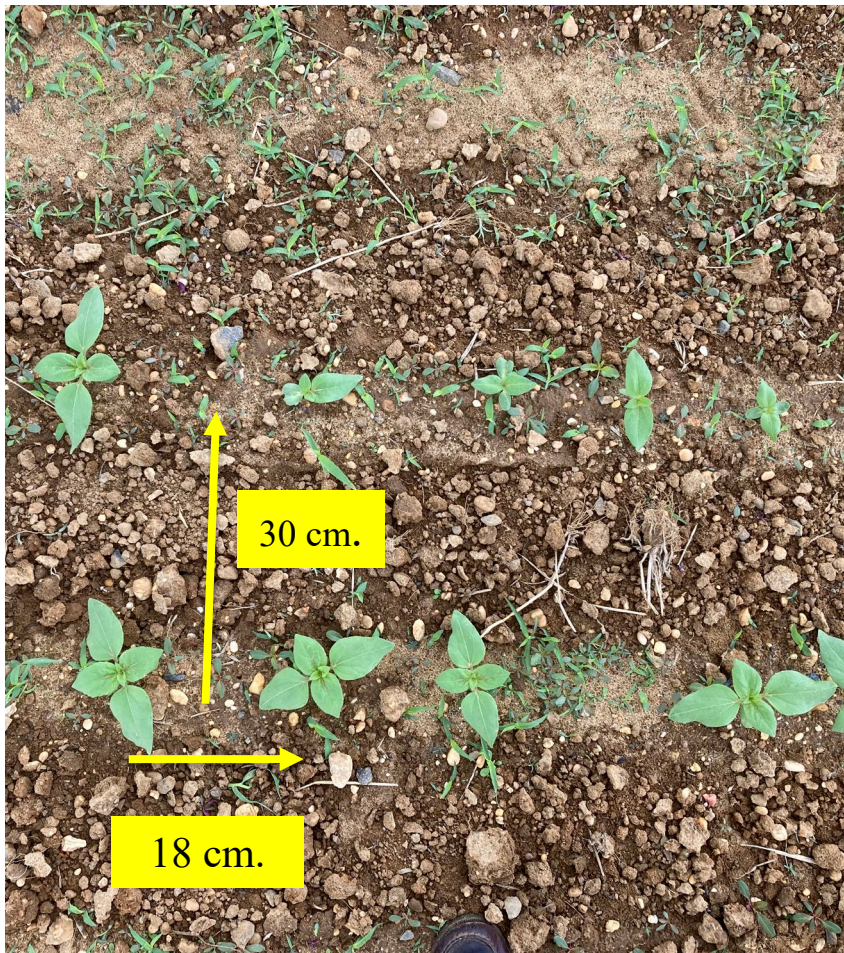


*F1 Vincent's Choice
(Naranja)*



*F1 Vincent's Fresh
(Amarillo/Verde)*

Spacing



- *A planting density of 4.5-7 inches /11,5-18 cm. apart in rows with 1 foot between rows is ideal and reduces excess lateral branching.*



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Sunflower F1 Series Vincent®s

Vincent's grow rapidly compared to the competition. Maintain constant fertilization until visible bud. Calcium nitrate-based formations work very well to build strong plants.



F1 Vincent®s Choice

18 days after sowing.



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Temperature



- *For greenhouse production target 75°F/24°C in the day and a minimum of 45-55°F/7-13°C at night.*
- *For outdoor production target 84°F/29°C in the day and avoid night temperatures that regularly fall below 43°F/6°C.*



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Fertilizer Strategy (before visible bud)



- *Regularly apply fertilizer from sowing until visible bud. Sunflowers are not heavy feeders. Optimum conductivity is 0.4 to 0.8 (1:2 dilution).*



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Fertilizer Strategy (*after* visible bud)



- *At visible bud reduce moisture and fertilizer to the lowest level possible to promote strong stems, prevent overgrowth and improve flower vase life.*
- *Some growers apply Potassium Nitrate at a 100 ppm Nitrogen (10 ounces/100 gallons, 750 grams/1,000 liters) at this stage to increase the flower size.*



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Excessive Fertilizer



- *Sunflower are sensitive to high salts (> 1.0 mmhos/cm).*
- *Do not grow in beds following a high nitrogen crop (like tomatoes or chrysanthemums).*
- *High salt levels cause leaf edge burn and deformed flowers.*



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Sunflower F1 Series Vincent[®]'s Choice

The leaf structure of Vincent's is more open for improved aeration. – less moisture droplets for a reduced risk of botrytis damage.

↓ Vincent's Choice



Competencia ↓



Sunflower F1 Series Vincent[®]s

Vincent's leaves pull off clean without wounding the stem.



↑Competencia

↓Vincent[®]s
Choice →



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Vincent®s Choice grown cool

- The following photos are from a greenhouse in Spain grown side by side with carnations. The only heat source was a small wood burner.*
- The temperature dropped to around freezing one night and Vincent's Choice tolerated the lower temperatures better.*
- Sunflower buds form at the 3-5 leaf stage. To avoid damage maintain the following minimum temperatures for Sakata's sunflower genetics.*

Variety	Minimum night temperature
Sunbright	45°F/7°C
Sunbright Supreme	50°F/10°C
Vincent®s Choice and Fresh	43°F/6°C



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Production under cool temperatures



Sunbright Supreme

Vincent[®]s Choice



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Vincent[®]s Choice grown under cool condntions still shows strong performance.



Vincent[®]s Choice



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Sunflower F1 Series Vincent[®]s

Vincent[®]s flowers uniformly



- *Flowering window 5-7 days.*
- *Crop time ranges from 55 – 65 days depending on photoperiod and temperature.*
- *Best to make frequent sowings 4 days apart to avoid excess stems to harvest all at once.*



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Sunflower F1 Series Vincent®s

Flowers develop straight up without hanging their heads. They look up to the consumer with pride!



Vincent's Choice (left) holds its head high compared to the competition (right).



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Vincent's Choice field showing upright flowers.



Density and Flower disc size



Planting density determines disc and flower size. A minimum spacing of 4.5 inches/11.5 produces a 2-inch disc.



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Watering

- *Water the plants as needed to keep them turgid.*
- *To avoid overgrowth and disease, allow the soil to dry out in between irrigations.*
- *Do not allow the crop to go into the night with wet leaves.*



Spacing

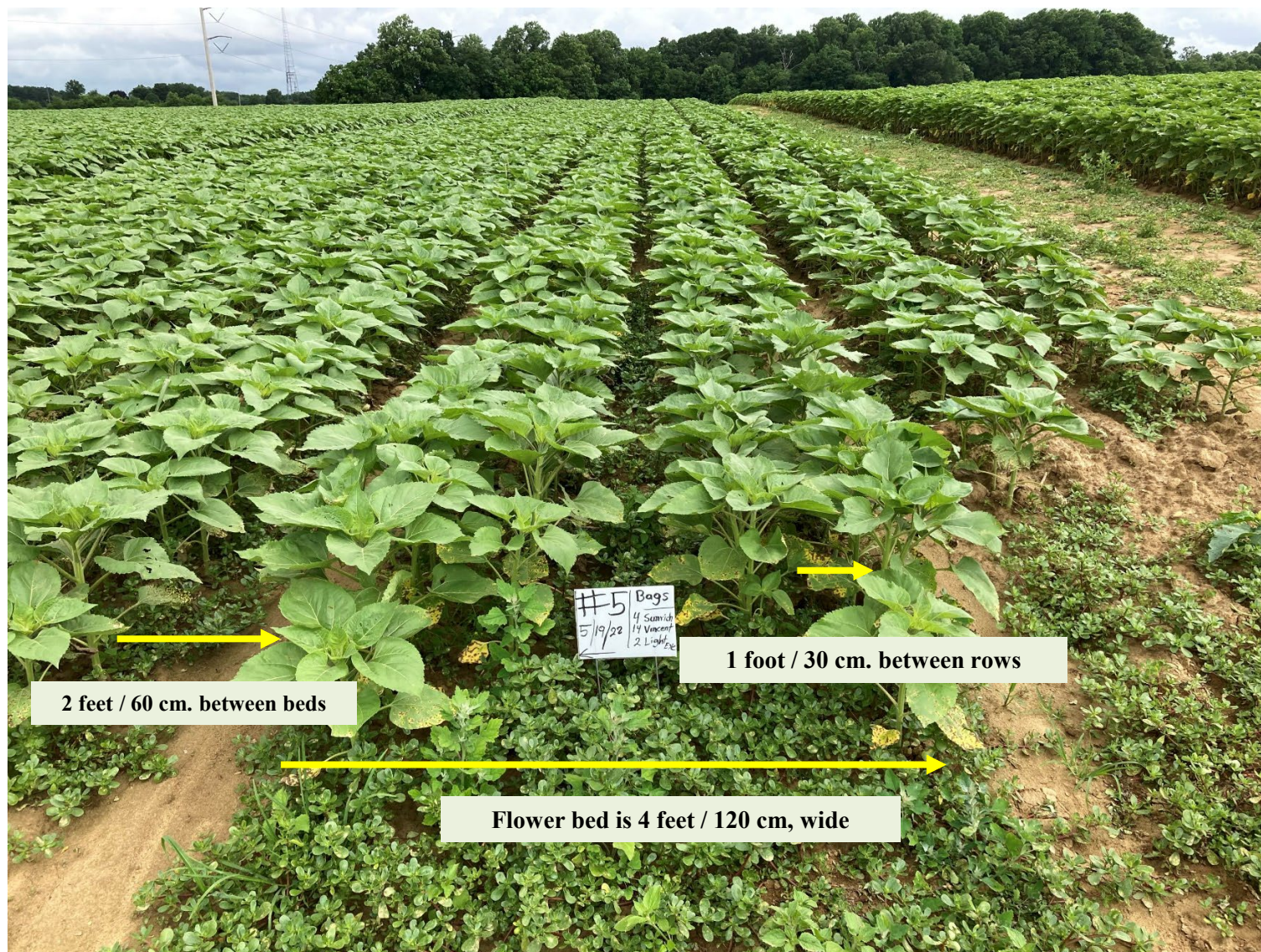
- *Leaving the center row empty improves air movement and reduces disease pressure.*



Large mechanized sunflower farm



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The center row is left empty for improved air flow

Design of the beds



The conveyor belt extends 5 beds on each side of the harvest wagon for improved efficiency.



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Cutting stage



Typical cutting stage for the Flower Auction in Holland. Cut when the flower petals are perpendicular to the stem.



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Hydration

- *Place the stems immediately in luke-warm water for the best vase life and strong flower necks.*



Shipment in water

- *Shipping stems in a vertical position and in water guarantees the best quality.*



Post Harvest

- *Place stems in a commercial holding solution with a biocide or acidified water.*
- *Sunflowers Benefit greatly with a low pH solution.*
- *Sunflowers are prone to moisture stress so be sure to maintain them well-hydrated.*
- *After cuttings keep out of direct sunshine.*
- *Store at 36-41°F/2-5°C for up to one week.*



Sunflower F1 Series Vincent[®]s

The vase life is excellent for both Vincent[®]s Choice and Vincent[®]s Fresh. In general, flowers last 10 – 14 days.



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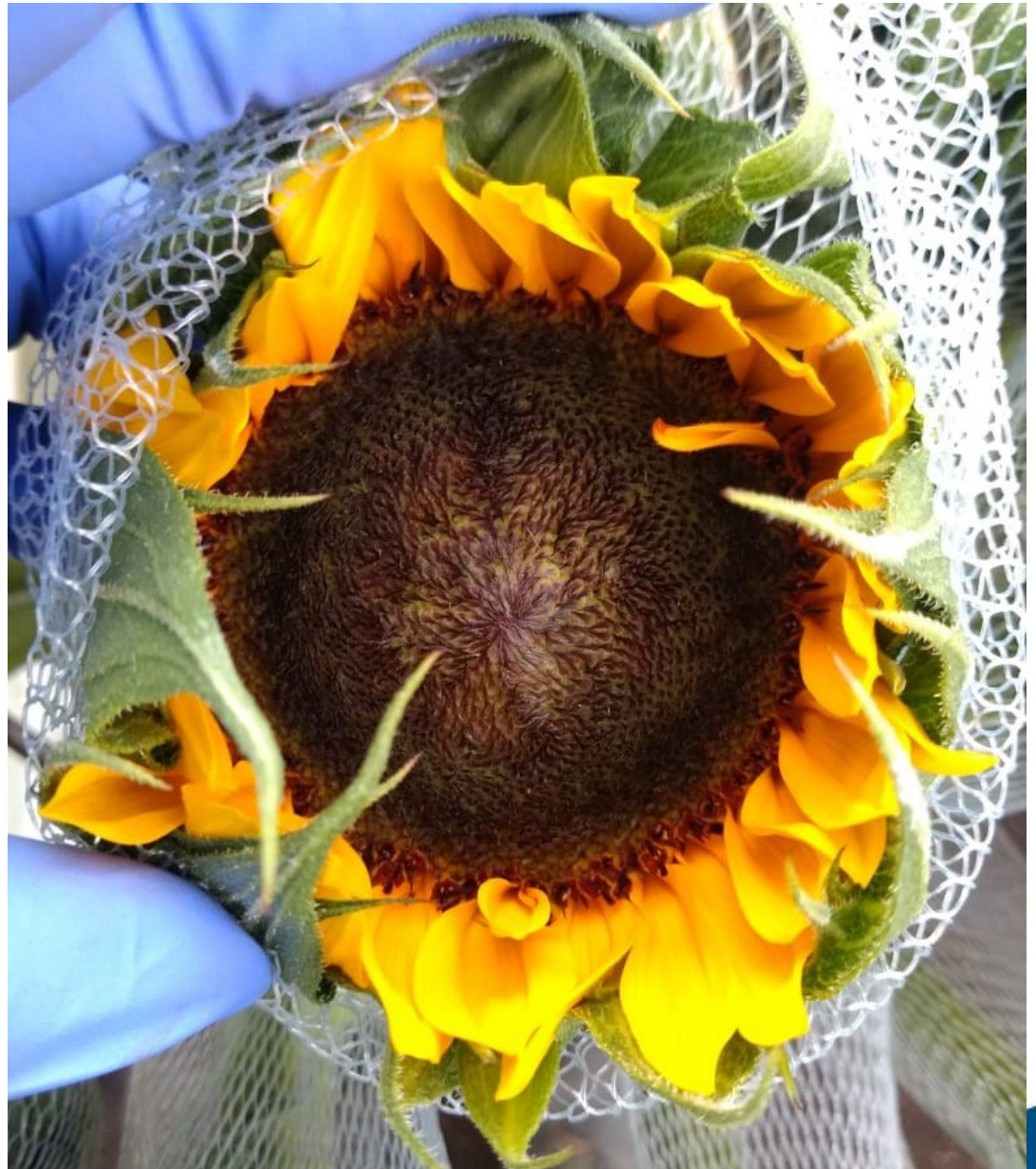
Post Harvest

- *Bortyris damage from placing stems in high pH water or from placing stems in poor quality (dirty) water in the field.*



Excess Nitrogen

- *Applying excess nitrogen, especially late in production, causes an overgrowth of the flower disc.*
- *It is best to apply quick release fertilizer rather than longer lasting granular types for better control.*



Excess Nitrogen

- *Monkey Butt syndrome is a physiological disorder caused by excess nitrogen, especially under long photoperiods and high temperatures (summer conditions).*



Boron Deficiency

- Boron works hand in hand with calcium to maintain calcium in a soluble form. Therefore, a boron deficiency results in a calcium deficiency causing deformed leaves and flowers.*



Calcium Deficiency

- *Calcium is an important element for sunflowers due to its large plant structure and rapid growth in a relatively short period of time.*
- *A calcium deficiency causes weak stems and deformed flowers.*



Stem Damage

- *Brown or dead tissue along the main stem is caused by a low level of calcium or a dry period followed suddenly by a wet period that causes cell burst.*



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Insect Damage

- *Lygus bugs are 2.5 inches long, green or brown with yellow markings.*
- *It is an insect that causes great damage to sunflower fields.*
- *The insects begin feeding on developing sunflower buds and the damage is not seen until the flowers open.*



Maintain the field and surrounding areas free of weeds that serve as a breeding ground for Lygus bugs. Insecticides also help to control them.

Thank you for your attention

