

Crop	Sunflower
Series	Sunbright Kids
Botanical name	Helianthus annuus
Plant type	Annual
Seed type	Raw
Seed count	30 seeds / gr
Germination	20-25°C - 5 days light inhibited
Growing	15-25°C
Optimum pH	5.8-6.2

Plug Culture: 2weeks (200 cell trays)

Stage 1 (Day 1-4) Sow seed into a 200 plug tray with the sterile and well-drained media with pH 5.5-6.2. The media should be with relatively low nutrients to avoid overgrowth of the seedlings, (EC < 0.4 mS/cm 1:2 slurry). Optimum germination temperature is $20-25^{\circ}$ C.

Stage 2 (Day 5-6) After seedlings emerge, move the plug tray to the bright and well ventilated area. Maintain the temperature to 20-21°C to reduce disease pressure.

Stage 3 (Day 7-9) Apply a light feed of 50-75 ppm nitrogen from a well-balanced calcium nitrate based fertilizer to strengthen the seedlings.

Stage 4 (Day 10) The seedlings will be ready to transplant with two pairs of true leaves.

Direct Sowing: Direct sowing also work for pots and outdoor field.

Transplanting to finish: 5-6 weeks

Media: Use well drained & disease free media with a low level of fertilizer (< 0.8 mS/cm). Optimum pH is 5.5 to 6.2.

Potting:

Pot Size	# of	Remarks
	seedlings/potss	
6 cm.	1 seedling	Spray daminozide /
		2-3 times
*10 cm.	1 seedling	
*15 cm.	3 seedlings	
Multi Sowing	9-10 seeds direct	Makes a beautiful
12-18 cm.	sown	full pot of color.
Field Planting	Direct sow	Sow 25-30 cm.
		apart

* plants may be pinched at 5 leaves for fuller plants.

Temperature: Optimum growing temperature is 20-21°C with a minimum soil temperature of 18°C. Low soil temperature results in poor root growth and subsequent malformed flowers.

Lighting: Sunflowers require high light intensity and grow best when grown and planted under full sun.

Fertilizer: Optimum EC level is 0.4 to 0.8 mS/cm Cal/Mag formulations at 75-100 ppm nitrogen is also recommended to use for building strong and healthy plants.

Disease: Poorly drained soil leads to alternaria and excess moisture promotes pseudomonas.

Pests: mites, thrips, leaf miners

Flowering: Flowering will be start in 7-8 weeks from sowing.

All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on Asian conditions such as in Japan and Sakata cannot be held responsible for any crop damage related to the information given herein. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best.