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### Cultivation information

# HELIANTHUS Sunrich DMR



### General

**USE** Cut Flowers

**TIME FRAME SALES PERIOD** May – September

**SEED COUNT** 15-25 seeds/gram

**COMMON NAME** Sunflower

**STANDARD PACKAGING** 100.000; 10.000; 1.000

**UNIT** seeds

APPEARANCE Precision

### Germination

**SOWING MEDIUM** Lightly fertilized peat or soil based on coco.

**GERMINATION METHODE** Direct sowing or in a plug.

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#### SPECIFIC GERMINATION REQUIREMENTS

For early sowing between weeks 10-13, you will have to cover the flowerbed with plastic sheeting.

#### **GERMINATION DESCRIPTION**

Direct sowing or in a plug. For early sowing between weeks 10-13, you will have to cover the flowerbed with plastic sheeting.

#### **MEDIA COVER SEED**

yes

GERMINATION TEMPERATURE °C 18-20

**DAYS TO GERMINATE** 04-06

### Sowing

## **PLUG SIZE** 288

**SOWING PERIOD** April - July

**SOWING PERIOD INDOORS** March – August

#### SOWING PERIOD OUTDOORS

April – July

#### DISTANCE IN ROW FOR DIRECT SOWING

Plant density is approximately 35-40 plants per gross (bruto) m<sup>2</sup>. The number of flowers that can be cut as quality flowers is about 27-30. For one hectare you need approximately 6-8 kg. of seeds. The distance between rows is 60 cm. The distance on the row is around 7-8 cm.

#### **DISTANCE BETWEEN FOR DIRECT SOWING** 75

#### **STAGE OF TRANSPLANTING**

3 weeks after sowing.

#### PLANTS PER M<sup>2</sup> INDOORS 25

**PLANTS PER M<sup>2</sup> OUTDOORS** 20

### Growing on

#### **TEMPERATURE DAY °C**

18-20 °C. On a dark cloudy day not higher than 18 °C. On a sunny day, temperatures may go up to 20 °C.

#### **GROWING ON TEMPERATURE NIGHT °C.**

15-18 °C. After a dark cloudy day +/- 15 °C. After a day with a lot of sun temperatures at night maybe 18 °C.

#### **GROWING LIGHT REQUIREMENT**

Use lighting when the day length is shorter than 13 hours. Otherwise, the flower will remain too small and flowers may get out of shape. A 150W lightbulb or a LED Flower lamp every 14 m<sup>2</sup> is sufficient.

#### FERTILIZER DESCRIPTION

A standard organic (4-3-3) (20 kg/are) or an organic (12-10-18)(5 kg/are) multi-fertilizer is suitable to use in advance. During the growing cycle, add a standard fertilizer mix with the irrigation water if grown in a greenhouse. This mix consists of 25% Calcium Nitrate, 25% Calcium Chloride, 25% Potassium Nitrate, and 25% Magnesium Sulphate or Nitrate. Magnesium Sulphate is preferable, but for this, you need an A+B container to make a concentrated mix, Magnesium Sulphate cannot be mixed with Calcium Nitrate and Calcium Chloride.

#### **GROWTH REGULATOR**

With Alar or B9, the growth can be controlled with 2-3 grams/ltr. Apply if needed several times to get the desired length.

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#### **GROWING ON DESCRIPTION**

Avoid temperatures lower than 10 °C.

#### **EC REQUIREMENT**

1.25-2.0

#### **PH REQUIREMENT**

5.8-6.5. Never go lower than a pH of 5,5. Especially when you have a silo where you can lower the pH in advance, then don't go lower than 5,8. If you lower the pH of the irrigation water by direct injection you can use a setpoint as low as 5,5. The irrigation water will have a pH of +/- 6,0.

#### HUMIDITY

Watering depends strongly on the soil structure. Water frequently until plants have reached a length of 30 cm. Otherwise, water is very little. In the last part of the growing cycle limit the amount of water.

### Growing

#### WEEKS TO FLOWER FROM DIRECT SOWING

Crop production time may vary depending on the season, day length, and temperature, but is approximately 10 weeks in summer and up to 13-14 weeks in spring and autumn.

### Harvest and post-harvest

#### HARVEST DESCRIPTION

When the ray florets are standing harvest of the flowers can be started. Make sure that you put the flowers in fresh water with a Chlorine pellet as soon as possible. Beware of temperature differences after harvesting to avoid botrytis infestation.

### Diseases

#### INSECTS

Caterpillars, thrips, whiteflies. Be aware of nibbling of mice, pigeons, rabbits, and trips after sowing: The crop is susceptible to aphids and snails. Check/ monitor the crop regularly on insects. Depending on the level of infection in the greenhouse or from the surrounding area it can be useful to use an insecticide (chemical) with a broad effect once every 2-3 weeks.

#### FUNGI

Botrytis, Downy mildew, Sclerotinia as mentioned, if you are growing in a greenhouse with heating, use standard heat at night, especially when the outside humidity is getting higher. By adding less nitrate with the fertilizers and more Sulphate and Chloride the plants can be made more resilient against Botrytis and Mildew. For good post-harvest transport, it can be useful to spray a fungicide against Botrytis 3 weeks before harvest.

Check the crop weekly for plagues and diseases. After detecting a plague or disease it is possible to make a plan for adjusting biological control or chemicals to the crop.

#### Notes

As with all Sunflowers, requires full sun to bloom – so don't use coatings when in a greenhouse and try to get as much light as possible in the greenhouse (clean plastic/glass). Spacing too closely will result in shorter stems (6') and smaller heads (5" in diameter). Greater spacing will result in taller stems (7 – 8') and larger heads. Full Sun Imp. will bloom 2-3 weeks later than the F1 Sunrich series.

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