

PLATO

F1 Hybrid Sweet Pepper



OUTSTANDING QUALITIES

- ◆ IDEAL FOR OPEN FIELD PRODUCTION
- ◆ LARGE BLOCKY FRUIT
- ◆ STRONG ROBUST PLANT
- ◆ EXCELLENT DISEASE PACKAGE

Plato is a widely adapted blocky hybrid pepper for production of large green to red sweet peppers in the open field. The yields of fruit are of outstanding quality in the open field. The fruit are uniformly large and blocky (approx. 10 x 11 cm), show very little purpling and ripen to a uniform bright red colour that is suitable for pre-packing and bulk packaging. The strong robust plants are well adapted and protect the fruit well against sun scald, especially when trellised. Fruit set is concentrated, resulting in high first pick yields. **Plato** has high resistance against Bacterial spot races 1, 2 and 3 (Xcv: 1 – 3), Tomato spotted wilt (TSWV), Potato Y (PVY) and Tobamo viruses races 0 (Tm: 0). The yield is good throughout a long growth season.

SPECIAL VARIETAL REQUIREMENTS

- **Plato** is a strong robust plant. We therefore suggest that plants are trellised for open field production
- As fruit set is concentrated, we suggest that flowers of the 1st and 2nd bottom splits are removed to allow the plant to maintain a good balance between leaf cover, fruit load and roots
- If fruit of the first set are picked at the mature green stage, the plant may be allowed to set fruit continuously

CHARACTERISTIC*	PLATO
KIND	F1 hybrid pepper (<i>Capsicum L.</i>)
TYPE	Blocky
MATURITY	Early
FRUIT DIMENSIONS	Approximately 10 x 11 cm (app. 190 – 240 g)
FRUIT SHAPE	Large, uniform blocky
FRUIT WALL	Thick
SMOOTHNESS	Smooth surface with slight ribbed lobes
FRUIT COLOUR	Dark green turning bright red
PLANT TYPE	Strong robust
DISEASE REACTION (SCIENTIFIC)	High resistance: <i>Xanthomonas campestris</i> pv. <i>Vesicatoria</i> races 1, 2 and 3 (Xcv: 1 – 3), <i>Tomato spotted wilt virus</i> (TSWV), <i>Potato Y virus</i> (PVY) and <i>Tobamo viruses</i> races 0 (Tm: 0)
PRODUCTION	Open field
POPULATION GUIDE	Open field: 20 000 – 25 000 plants per ha Under protection: 2 – 2.3 stems per m ²
USE	Pre-packing and bulk packaging
SPECIAL FEATURES	Uniform large blocky, dark green to bright red fruit and widely adapted. Strong robust plant

* Characteristics given are affected by production methods such as soil type, nutrition, planting population, planting date and climatic conditions. Please read disclaimer.

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Resistance: is the ability of a plant variety to restrict the growth and development of a specified pest or pathogen and/or the damage they cause when compared to susceptible plant varieties under similar environmental conditions and pest or pathogen pressure. Resistant varieties may exhibit some disease symptoms or damage under heavy pest or pathogen pressure (HR = High resistance, IR = Intermediate resistance).

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GENERAL TIPS FOR SWEET PEPPER PRODUCTION

Seedling production

- The Sakata Range Test is available for hybrid peppers and is used to determine suitable germination temperatures of a specific seed lot.
- Cold sensitivity: low temperatures have a detrimental effect on germination. Seed will not germinate at temperatures below 15 °C.
- Pepper seedlings should be transplanted before root growth becomes stunted. It is suggested to transplant seedlings from 200-cavity trays when the first pair of true leaves is fully extended. Seedlings in larger cavities can be transplanted later.
- Make sure to plant seedlings in deep enough cavities to avoid J-roots and subsequent poor growth.

Poor shelf life

- Wilted fruit has a compromised shelf life, so avoid harvesting in the heat of the day. Cold storage conditions should be maintained at a consistent 8.3 – 9 °C.
- Temperature fluctuations lead to condensation and bacterial rotting, higher temperatures lead to ripening, and lower temperatures result in cold injury.

Flat fruit

Causes

- The occurrence of short-blocky or flat fruit is common for some varieties under high temperature conditions
- Low temperatures can cause flat fruit as fertilisation does not take place when temperature is too low
- Incidence of short blocky fruit increases with high N-concentration in the nutrient solution

Control

- Select varieties suited to the environmental conditions.

Fruit cracking

- This defect is often a problem with high diurnal temperature swings and high humidity at night, for example in spring and autumn.
- Fruit become very turgid at night as a result of water uptake. If the humidity is very high, little transpiration takes place and eventually fruit cracks as a result of the pressure in the fruit wall.
- Reduce humidity in the greenhouse through ventilation before sunrise.
- Control greenhouse temperature to 18 – 30 °C, or produce during a cooler time of year.

- Keep the ratio ppm N-NO₃ : ppm N-NH₄ to around 5:1 and limit the N-NH₄ concentration to < 32 ppm.

Climatic requirements

- Peppers grow best when relative humidity (RH) is 65 – 75 %
- Maintain good ventilation (0.5 m/s) to keep conditions favourable for transpiration
- Pepper plants need good light (1 100 – 1 300 µs/m² or 60 000 lux). Heavy shade can induce stress, but light shade stimulates growth
- The ideal temperature is around 18 °C (minimum) and 25 °C (maximum)
- Temperatures lower than 15 °C result in very poor growth
- Temperatures higher than 28 °C induce stress

Despite the need for warm conditions the plant is sensitive to high temperatures. Above 32 °C the flowers are inclined to fall off and few fruits, if any, set at temperatures above 35 °C, especially when these high temperatures are coupled with dry winds. Fruit that form at such high temperatures is usually malformed. The fruit is also very sensitive to sunburn and for this reason Sakata has select varieties that develop well leaf covering to protect the fruit.

Unmarketable fruit

Malformed, sun scalded, cracked or diseased fruits must be removed as soon as possible to allow the plant to set new fruit. If plants lose leaves due to disease, young fruit should be removed so the plant can restore the balance between fruit (nutrient sink) and leaves (nutrient source).

- Do not irrigate in the late afternoon.
- Application of Calcium as a foliar spray every two weeks can reduce cracking.

Sun scald

Sudden exposure of fruit to high light intensity (mainly the UV spectrum) can cause sun scald (sunken, pale tissue that often becomes infected by secondary pathogens). This is more of a problem in open field production, and when foliage cover is reduced. Avoid over pruning of the canopy and use varieties with adequate foliage cover.

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