

DOUBLE UP

F1 Hybrid Sweet Pepper

OUTSTANDING QUALITIES

- ◆ IDEAL FOR OPEN FIELD PRODUCTION
- ◆ BRIGHT RED, BLOCKY FRUIT
- ◆ EXCELLENT YIELD POTENTIAL
- ◆ INTERMEDIATE RESISTANCE AGAINST BACTERIAL LEAF SPOT

Double Up is a widely adapted, hybrid blocky pepper for production in the open field. **Double Up** yields fruit of outstanding quality in the open field. The fruit are uniformly blocky, approximately 10 x 10 cm, show very little purpling and ripen to a uniform bright red that is suitable for pre-packing and bulk packaging. Fruit set is concentrated, resulting in high first pick yields. **Double Up** has intermediate resistance against Bacterial spot race 1, 2 and 3 (Xcv 1.2.3). The yield is good throughout a long growth season.




SPECIAL VARIETAL REQUIREMENTS

- **Double Up** is a medium compact 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
- If fruit of the first set are picked at the mature green stage, the plant may be allowed to set fruit continuously

CHARACTERISTIC*	DOUBLE UP
KIND	F1 hybrid pepper (<i>Capsicum</i> L.)
TYPE	Blocky, California Wonder type
MATURITY	Early
FRUIT DIMENSIONS	Approximately 10 x 10 cm (app. 180 - 220 g)
FRUIT SHAPE	Very uniform blocky
FRUIT WALL	Thick
SMOOTHNESS	Smooth surface with shallow lobes
FRUIT COLOUR	Dark green turning bright red
PLANT TYPE	Medium compact
DISEASE REACTION (SCIENTIFIC)	Intermediate resistance: <i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> races 1, 2, 3 (Xcv 1.2.3)
PRODUCTION	Open field
POPULATION GUIDE	Open field: 20 000 – 35 000 plants per ha Under protection: 2 – 2.3 stems per m ²
USE	Pre-packing and bulk packaging
SPECIAL FEATURES	Uniform blocky, dark green to bright red fruit and widely adapted

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

 WARNING: VARIETY PROTECTED UNDER PLANT BREEDERS RIGHTS. UNAUTHORIZED MULTIPLICATION AND/OR MARKETING OF SEED PROHIBITED.

Disclaimer: This information is based on our observations and/or information from other sources. As crop performance depends on the interaction between the genetic potential of the seed, its physiological characteristics, and the environment, including management, we give no warranty express or implied, for the performance of crops relative to the information given nor do we accept any liability for any loss, direct or consequential, that may arise from whatsoever cause. Please read the Sakata Seed Southern Africa (Pty) Ltd Conditions of Sale before ordering seed.

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).

Recent version: Kindly contact Sakata or Area Representative for the most recent version of this Technical Bulletin.

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-hole 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.

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.

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.

Post-harvest rotting

Do not wash peppers in a dump tank as (contaminated) water can enter through the blossom end, especially if cracks occur. To clean fruit, spray washing is most effective, especially if water is chlorinated at a concentration of 75 – 100 ppm chlorine.

Wet fruit should be dried before packing by air blowers or sponge rollers.

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).

- 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.

Comparison between Dutch and Spanish trellising method

Trellising method	Advantages	Disadvantages
Spanish (Boxed)	<ul style="list-style-type: none"> • Relatively little labour required • Plants do not grow very tall, thus suitable for tall varieties • Reduced risk of disease transfer • Dense leaf canopy protect against sunburn 	<ul style="list-style-type: none"> • Fruit thinning may be required • Air circulation within the leaf canopy can be restricted • Leaf cover can be too dense during low light conditions • It is difficult to harvest green fruit
Dutch	<ul style="list-style-type: none"> • Good light interception • Little restriction of air movement within leaf canopy • Fruit tend to be heavy and blocky • Harvesting is easy 	<ul style="list-style-type: none"> • Labour intensive • Plants grow tall • Increased risk of disease transfer between plants through plant sap • Less leaf cover

Disclaimer: This information is based on our observations and/or information from other sources. As crop performance depends on the interaction between the genetic potential of the seed, its physiological characteristics, and the environment, including management, we give no warranty express or implied, for the performance of crops relative to the information given nor do we accept any liability for any loss, direct or consequential, that may arise from whatsoever cause. Please read the Sakata Seed Southern Africa (Pty) Ltd Conditions of Sale before ordering seed.

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).

Recent version: Kindly contact Sakata or Area Representative for the most recent version of this Technical Bulletin.