

PALADIN

F1 Hybrid Watermelon

OUTSTANDING QUALITIES

- ◆ DIPLOID CRIMSON SWEET
- ◆ EARLY MATURING
- ◆ 10 – 12 KG FRUIT
- ◆ VIGOROUS GROWTH HABIT
- ◆ GOOD DISEASE RESISTANCE



Paladin is an early maturing Crimson Sweet type diploid F1 hybrid watermelon, well known for its excellent yield potential. Fruit are uniform, short oblong in shape and weigh 10 - 12 kg. The medium-thick rind is tough, making it highly suitable for long distant shipping. **Paladin's** rind colour is dark green stripes on lighter green background.

Flesh is bright pinkish red, firm, crispy, juicy and has an excellent taste and a high brix level of about 11 – 12 %. The plants have a better fruit setting ability and a stronger growth habit than Crimson Sweet and mature 3 weeks earlier. **Paladin** is tolerant to sunburn and has a high resistance to Fusarium wilt race 1 (Fon: 1) and Anthracnose (Co).

SPECIAL VARIETAL REQUIREMENTS

- Plant populations of up to 6 000 plants per ha are suggested

CHARACTERISTIC*	PALADIN
KIND	F1 hybrid watermelon (<i>Citrullus lanatus</i> (Thunb.) Matsum. et Nakai)
TYPE	Diploid Crimson Sweet
MATURITY	Early (approx. 75 days after sowing during warm season)
GROWTH HABIT	Trailing
PLANT VIGOUR	Strong
SEASON	Summer
FRUIT WEIGHT	10 – 12 kg
FRUIT SHAPE	Short oblong
INTERNAL FLESH COLOUR	Bright pinkish red
FRUIT DIMENSION	40 x 25 cm
RIND QUALITIES	Dark green stripes on lighter green background
BRIX	Very high, 11 – 12 %
FLAVOUR	Excellent
UNIFORMITY	Very good
LEAF COVER	Very good
DISEASE REACTION (SCIENTIFIC)	High resistance: <i>Fusarium oxysporum f. sp. niveum</i> race 1 (Fon: 1) and <i>Collectotrichum orbiculare</i> (Co)
AVERAGE SEED COUNT	20 - 25 seeds per gram
MARKETS / END USE	Fresh market
POPULATION GUIDE	4 500 - 5 500 final stand per ha (60 - 100 cm in row, 1.6 – 2 meter between rows)
SPECIAL FEATURES	Tolerant to sunburn

* 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 WATERMELON PRODUCTION

Harvest maturity

Watermelon is harvested at full maturity as it does not develop in internal colour or increase sugar after being removed from the vine. Watermelon maturity can be determined by a combination of factors:

- Fruit colour
- Dull sound when thumped
- Yellow colour of ground spot
- Various stages of tendril and floral bract drying out near the fruit peduncle
- Gelatinous covering around the seed is no longer apparent.
- Mid pink to dark red flesh colour
- Brix with a refractometer of > 9 ° indicates maturity
- Tasting samples
- Slight cracking sound internally if pressed

Storage and transport conditions

Watermelon storage life is typically 14 days at 15 °C. Up to 21 days is attainable at 7 – 10 °C. Chilling injury occurs after storage below 7 °C.

Ideal storage humidity is between 90 – 95 %. High relative humidity is essential to maximize post-harvest quality and to prevent desiccation. Water loss through scuffed and damaged surfaces can be significant. Extended periods of higher humidity or condensation may encourage the growth of stem scar and surface moulds.

Physiological disorders

Cracking of fruit

Cracking of fruit can occur when boron is deficient in the melon fruit. This cracking will occur longitudinally along the melon fruit and will heal leaving a corky scar. This symptom seems to mainly occur in winter. Petiole cracking may occur and leaf symptoms (tip of leaves) may resemble virus infections. Correction is by applications of 2 – 3 kg per hectare of soluble boron at or just before flowering via drippers. Foliar sprays can be used as emergency applications. Fluctuations in irrigation and/or rain close to harvesting time may also result in cracked fruit. Manage irrigation schedule carefully.

Blossom-end Rot (BER)

The affected fruits are misshapen with a brown, leathery, rotten lesion at the blossom end. The disorder is most prevalent during or followed by extended dry periods of days of overcast cool weather. This is caused by insufficient calcium in the fruit, nematode damage and excessive nitrogen and potassium fertilisation. Maintaining a constant soil moisture level by mulching and by monitoring soil moisture carefully, can reduce BER. BER can be minimised by liming the soil with dolomitic lime before planting, timely irrigation to alleviate prolonged drought periods. Calcium-Nitrate side-dressings can also reduce this problem.

Pruning affected fruit will often result in new fruit forming. Foliar sprays of Calcium are not effective for control.

Misshapen fruit

Gourd-necked or bottle-necked fruit are produced due to moisture stress, inadequate pollination, diseases and nutrient deficiencies, especially nitrogen. Manage irrigation carefully, assure enough bees are active for proper pollination and apply a balanced fertiliser programme.

Bursting Fruit

Bursting is mainly caused by uneven growth rate, particularly when there is a heavy rain fall while the fruit is maturing. Manage irrigation schedules carefully.

White heart

White streaks or bands of undesirable flesh in the heart (centre) of the fruit. Excessive moisture and too much nitrogen are the main causes for white heart during fruit maturation. Apply a balanced fertiliser programme and monitor irrigation schedules closely.

Disease resistance definition

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. Two levels of resistance are defined:

High/standard resistance (HR): plant varieties that highly restrict the growth and development of the specified pest or pathogen under normal pest or pathogen pressure when compared to susceptible varieties. These plant varieties may, however, exhibit some symptoms or damage under heavy pest or pathogen pressure.

Moderate/intermediate resistance (IR): plant varieties that restrict the growth and development of the specified pest or pathogen, but may exhibit a greater range of symptoms or damage compared to resistant varieties. Moderately/intermediately resistant plant varieties will still show less severe symptoms or damage than susceptible plant varieties when grown under similar environmental conditions and/or pest or pathogen pressure.

Susceptibility (S): is the inability of a plant variety to restrict the growth and development of a specified pest or pathogen.

Tolerance (T): is the ability of a plant variety to endure **abiotic stress** without serious consequences for growth, appearance and yield. Vegetable companies will continue to use tolerance for abiotic stress.

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