



OUTSTANDING QUALITIES

- ◆ BACTERIAL WILT RESISTANCE
- ◆ VERY GOOD DISEASE RESISTANCE
- ◆ VIGOROUS GROWTH HABIT
- ◆ HIGH YIELD POTENTIAL
- ◆ MEDIUM FRUIT SIZE

Kwando is an adaptable saladette variety with strong vigour and very good leaf cover. Yield potential is good and medium fruit size for Bacterial wilt resistant varieties. **Kwando** has high resistance to *Verticillium* wilt race 1 (Vd: 1), *Fusarium* wilt races 1 and 2 (Fol: 1 - 2) and intermediate resistance to Bacterial wilt.

SPECIAL VARIETAL REQUIREMENTS

- Contact your area representative for more information

CHARACTERISTIC*	KWANDO
KIND	F1 hybrid saladette tomato (<i>Lycopersicon esculentum</i> L.)
TYPE	Determinate
FIRMNESS	Good to very good
MATURITY	Medium
SEASON	Year-round culture in frost-free areas
FRUIT WEIGHT	110 - 140 g
FRUIT SHAPE	Elongated blocky
ATTACHMENT POINT	Small, neat
FRUIT COLOUR	Excellent internal and external colour
UNIFORMITY	Very good
LEAF COVER	Very good
DISEASE REACTION (SCIENTIFIC)	High resistance: <i>Verticillium dahliae</i> race 1 (Vd: 1), <i>Fusarium oxysporum</i> f. sp. <i>lycopersici</i> races 1 and 2 (Fol: 1 - 2) Intermediate resistance: <i>Ralstonia solanacearum</i> (Rs)
MARKETS / END USE	Saladette market
POPULATION GUIDE	16 000 - 20 000 final stand per ha
SPECIAL FEATURES	Outstanding disease package, top quality, firm fruit.

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

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).

* **Experimental:** This variety does not appear on the current South African Variety list, but has been submitted for registration.

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GENERAL TIPS FOR TOMATO PRODUCTION

Drying of tomatoes

KWANDO is one of the varieties that are very well suited for drying, it has a high solid content and also has an intense red colour (Higher lycopene) that produces a very nice end product.

Lycopene

When the fruit reaches the mature green stage rapid changes occur in the fruit. Chlorophyll gradually disappears and at the same time other pigments are created in the fruit, especially lycopene and b carotene. Temperature affect the development of the tomato fruit colour, lycopene which gives the tomato its red colour is not produced at temperatures over 30°C. Productions of b carotene however continue up to 40°C and this pigment gives the tomato its yellow colour. The best colour development of tomatoes is at the optimum temperature of between 20 - 24°C.

Red fruit are less damaged by sunlight, however when green fruit are exposed to sunlight, the damage can be severe and is visible on the green fruit and also when the fruit are ripening and will not develop the intense red colour.

Soil Requirements

In South Africa tomatoes are cultivated on different soil types, from heavy clay to light sandy soil and sandy peat. Tomatoes seem to prefer well-drained sandy soils. Good moisture holding capacity with good drainage is important. Tomatoes grow well at a wide pH range from 5.5 - 7.5 but are sensitive to acid soils and if the pH (H₂O) is lower than 5.5, additional lime should be applied. The lime should be added 4 - 6 weeks before planting.

Bacterial wilt; (*Ralstonia solanacearum*)

Symptoms

The plant wilt as a green plant without foliar yellowing, the disease develops at high soil moisture and temperatures between 29 - 35°C and can spread through irrigation water.

Prevention and control

Use disease free seedlings, apply crop rotation, weed control, soil fumigation and use resistant varieties.

Mechanical harvest

KWANDO can be harvested by mechanical equipment when it is intended for processing and has a very good firmness and concentrated fruit set with a very good adaptability and high yield potential of uniform fruit.

Irrigation requirements

Tomatoes require frequent irrigation, as the plants remove a large amount of water, especially under warm conditions. Tomato roots can penetrate the soil up to 1.5 m but seldom more than 60 cm deep. Care should be taken to water the soil thoroughly to a depth of about 60 cm. Soil type does not affect the amount of total water needed, but does dictate frequency of water application. Lighter soils need more frequent water applications, but less water applied per application.

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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