



OUTSTANDING QUALITIES

- ◆ LONG LIFE VARIETY
- ◆ VIGOROUS GROWTH HABIT
- ◆ EXCELLENT YIELD POTENTIAL
- ◆ MULTIPLE DISEASE RESISTANCE, INCLUDING BACTERIAL CANKER

Disco LL is a long life tomato with an excellent track record. **Disco LL** is a semi-determinate medium maturing variety with very strong growth and good fruit colour and flavour. Plants are very vigorous with a very good leaf cover. Yield potential is very high with a very high percentage of first-grade fruit. The variety is aimed at the typical pre-pack market but for outdoor production. **Disco LL** has high resistance to Verticillium wilt race 1 (Vd: 1), Fusarium wilt races 1 and 2 (Fol: 1 - 2) and Root-knot (Mi, Mj). **Disco LL** has intermediate resistance to Bacterial canker (Cmm), Bacterial speck (Pst), Bacterial spot (Xcv) (now Xav) and Bacterial wilt race 1 (Rs: 1).

SPECIAL VARIETAL REQUIREMENTS

- **Disco LL** is sensitive to high applications of nitrogen

CHARACTERISTIC*	DISCO LL
KIND	Semi-determinate F1 hybrid salad tomato (<i>Lycopersicon esculentum</i> L.)
PRODUCTION TYPE	Open field
FIRMNESS	Very good
MATURITY	Medium
PLANT VIGOUR	Very good
SEASON	Year-round culture in frost-free areas
FRUIT WEIGHT	160 - 190 g
FRUIT SHAPE	Oblate
PEDUNCLE	Jointed
ATTACHMENT POINT	Small, neat
SHOULDER	Smooth
SHOULDER COLOUR	Light green
BLOSSOM END	Neat
COLOUR	Internal: very good External: excellent
FLAVOUR	Excellent for Long Life variety
UNIFORMITY	Very good
LEAF COVER	Excellent
DISEASE REACTION (SCIENTIFIC)	<p>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), <i>Meloidogyne incognita</i> (Mi)❖, <i>Meloidogyne javanica</i> (Mj)❖</p> <p>❖ Nematode resistance can break down when soil temperatures are above 32°C</p> <p>Intermediate resistance: <i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i> (Cmm), <i>Pseudomonas syringae</i> pv. <i>tomato</i> (Pst), <i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> (now <i>Xanthomonas axonopodis</i> pv. <i>Vesicatoria</i>) Xcv (now Xav) and <i>Ralstonia solanacearum</i> race 1 (Rs: 1)</p>
MARKETS / END USE	Fresh market
POPULATION GUIDE	10 000 - 14 000 final stand per ha (45 - 50 cm in row, 160 cm between rows)
SPECIAL FEATURES	Intermediate resistance against Bacterial canker

* 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

The range test

This is a vigour test and is designed to give the seedling grower additional information about the lot's potential to perform at a range of temperatures (above and below ideal). As with the germination test, all other factors remain constant, it is only the temperature that varies.

Both the radicle count (at 120 hours) and the final germination count are provided for all 6 test temperatures. In nurseries where germination rooms are not used the range test should be looked at very carefully and temperatures should be monitored to ensure good germination. It can be possible that the radicle count is higher than the final germination count, as some seeds that do produce a radicle, may turn out to be abnormal. If this is the case the lower count between the two should be used.

Crop rotation and nematodes

Crop rotation is important in reducing soil-borne pathogens and nematodes that survive in infected plant residues and have a specific host range. Systems are often designed to include a green-manure crop in order to increase the organic content of a soil. Sweet corn (maize) and legumes are the most suitable green-manure crops for tomatoes. These crops should be ploughed in while they are green and at least 8 weeks before planting. Crop rotation will not eliminate infestations because nematodes can remain in the soil as eggs for at least a year between host crops, and they feed on a wide range of weeds.

Crop rotation can significantly reduce losses when a field is again planted to a susceptible crop. Winter cereals are useful because they are generally poor hosts and little nematode reproduction occurs during the cold winter months. It is more difficult to find summer crops with good resistance to root-knot nematode, but Sorghum x Sudan grass hybrids are useful against most populations of the nematode.

For cover crops to be effective stands must be established quickly and undesirable weeds which can serve as alternative hosts must be controlled. Given that many different weeds serve as alternative plant hosts to nematodes (ie. nutsedges), it may not be possible to manage root-knot nematode with crop rotation unless an integrated program to manage weeds is also considered and implemented within the field.

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.

Zippering

Symptoms

Zippering is thin scars running from the stem scar down the length of the tomato to the blossom end. This longitudinal scar has small transverse scars along it, which resemble a zipper (thus the name). There can be more than one of these scars on one fruit. In severe cases a hole open to the locules in addition to the zipper scar. Zippering should not be confused with spider track.

Cause

Anthers become attached to the ovary wall of the newly forming fruit cause zippers to form. It can occur under most weather conditions but is more pronounced in cooler weather.

Control

Plant tolerant varieties.

Verticillium wilt (*Verticillium dahliae*)

Symptoms

Wilting of the plants with a yellowing V-shape pattern.

Conditions for disease development

The fungus infects the plant through the roots especially when the soil temperatures are $\pm 25^{\circ}\text{C}$.

Prevention and control

Resistant varieties or resistant rootstocks.

Soil sterilisation.

Potassium (K) deficiency

Symptoms

- Older leaves – leaflets scorched, curled margins, inter-veinal chlorosis, small dry spots.
- The middle leaves have inter-veinal chlorosis with small necrotic spots
- Plant growth is restricted and the leaves remain small
- At a later stage, chlorosis and necrosis spread over large area of leaves and also up the plant, leaflets die back
- Fruits are blotchy, with uneven ripening and greenish areas

Remedies

- Foliar spray of 2 % potassium sulphate
- Add or increase potassium sulphate or if no sodium chloride present in water, potassium chloride can be added to nutrient solution.

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