



## OUTSTANDING QUALITIES

- ◆ WIDELY ADAPTED
- ◆ EXCELLENT YIELD POTENTIAL
- ◆ RESISTANCE AGAINST TOMATO SPOTTED WILT AND BACTERIAL WILT
- ◆ GOOD LEAF COVER AND VIGOUR

**MFH9343** is a widely adapted medium maturing, indeterminate hybrid with good vigour. The plants have a medium dense leaf canopy with good fruit set ability. Yield potential is excellent and fruit quality is very good. **MFH9343** has very good shelf life and a good tomato flavour. This variety has proven to be a dependable choice for the main season for shade net productions and open field. **MFH9343** has high resistance against Verticillium wilt race 1 (Vd: 1), Fusarium wilt races 1 and 2 (Fol: 1 - 2) and Tomato spotted wilt (TSWV) and intermediate resistance to Bacterial wilt race 1 (Rs: 1).

## SPECIAL VARIETAL REQUIREMENTS

- Do not over fertilise during the first four weeks and we suggest a high K:N ratio (2:1)

CHARACTERISTIC*	MFH9343
KIND	Indeterminate F1 hybrid tomato ( <i>Lycopersicon esculentum</i> L.)
PRODUCTION TYPE	Under protection and open field
SHELF LIFE	Very good
MATURITY	Medium
PLANT VIGOUR	Good
SEASON	Year-round culture in frost-free areas
FRUIT WEIGHT	160 - 210 g
FRUIT SHAPE	Deep oblate
PEDUNCLE	Jointed
ATTACHMENT POINT	Standard
SHOULDER	Slightly ribbed
SHOULDER COLOUR	Uniform
BLOSSOM END	Small, neat
COLOUR	Internal: good External: good
FLAVOUR	Good tomato flavour with sweetness
UNIFORMITY	Excellent
LEAF COVER	Medium dense
DISEASE REACTION (SCIENTIFIC)	<b>High resistance:</b> <i>Verticillium dahliae</i> race 1 (Vd: 1), <i>Fusarium oxysporum</i> f. sp. <i>lycopersici</i> races 1 and 2 (Fol: 1 - 2) and <i>Tomato spotted wilt virus</i> (TSWV) <b>Intermediate resistance:</b> <i>Ralstonia solanacearum</i> race 1 (Rs: 1)
MARKETS / END USE	Fresh market, pre-packing
POPULATION GUIDE	24 000 - 28 000 final stand per ha for protected production 10 000 - 14 000 final stand per ha for open field
SPECIAL FEATURES	Vigorous plants

\* 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).

\* **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

### Climatic requirements

Tomatoes can grow at a wide range of temperatures but for optimum growth, tomatoes prefer temperatures between 10°C (minimum) and 30°C (maximum). The temperature requirements for the different growth stages are given in the table below. Tomatoes do not tolerate frost or waterlogged conditions and these should be avoided at all costs. The most sensitive stages for water and temperature stress are directly after transplanting, during the flowering stage and during the fruit development stages. Water stress during these stages of tomato development will reduce yield and quality.

Developmental stage	Temperature (°C)		
	Min	Opt	Max
Germination	11	16-29	34
Vegetative growth	18	21-24	32
Fruit set (night)	10	14-17	20
Fruit set (day)	18	19-24	30
Red colour development	10	20-24	30
Yellow colour development	10	21-32	40
Chilling damage		< 6	
Frost damage		< 1	
Lethal temperature		< -2	

### Bacterial wilt (*Ralstonia solanacearum*)

This disease is also known as brown rot or blight. More than 60 host plants are known but tomato, potato and tobacco are most severely affected.

#### Symptoms

Wilting occurs as plants are still green, without foliar yellowing. Grey liquid oozes from the cut stem when it is placed into water, there will be a grey-pink discolouration inside the stem. The Bacteria survives in the soil and infects the plants through wounds, and can also be transferred through the irrigation water. High soil moisture and temperature (29 - 35°C).

#### Prevention and control

Use disease-free seedlings, crop rotation and weed control. Soil fumigation.

Use resistant varieties or graft onto rootstocks varieties with resistance.

### Tomato spotted wilt virus (TSWV)

TSWV is a very important virus on tomatoes and has the widest host range of any virus (vegetables, ornamentals and weeds). The virus is spread by thrips.

#### Symptoms

First symptoms are visible on the older leaves showing round necrotic spots, with a bronze discolouration. Similar spots or streaks can occur on the stems and petioles, the entire plant becomes dwarfed. Symptoms resembling wilt can be observed on the plant. Chlorotic ring spots can occur on the fruit.

#### Prevention

Thrip control and strict weed host control.

Good sanitation by removing any infected plant material to reduce the amount of inoculum and the use of resistant varieties.

### Irrigation requirements

Tomatoes require frequent irrigation, as the plants use a large amount of water, especially under warm conditions. Tomato roots can penetrate the soil up to 1.5m but seldom deeper than 60 cm. Water the soil thoroughly to a depth of about 60cm. 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. Indeterminate growers need more water than determinate ones.

### Potassium (K) deficiency

#### Symptoms

- Older leaves; leaflets scorched, curled margins, interveinal chlorosis, small dry spots
- The middle leaves have interveinal 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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### 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.

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