MFH7032

F1 Hybrid Determinate Salad Tomato

Experimental

OUTSTANDING QUALITIES

- **GOOD QUALITY FRUIT**
- **VERY GOOD SHELF LIFE**
- **MULTIPLE DISEASE RESISTANCE**

MFH7032 is a long life determinate variety for open field production. This variety has an excellent yield potential and good quality fruit. Fruit are deep oblate in shape and the average fruit size is approximately 170 - 190 g. **MFH7032** has high resistance to Verticillium race 1 (Vd: 1), Fusarium wilt races 1 and 2 (Fol: 1 - 2), Tomato spotted wilt (TSWV) and Root-knot (Mi, Mj) as well as intermediate resistance to Bacterial wilt race 1 (Rs: 1).

SPECIAL VARIETAL REQUIREMENTS

- Contact your area representative for more information

CHARACTERISTIC*	GOAL
KIND	Determinate F1 hybrid salad tomato (*Lycopersicon esculentum* L.)
PRODUCTION TYPE	Open field
FIRMNESS	Very good
MATURITY	Early
PLANT VIGOUR	Good
SEASON	Year round culture in frost-free areas
FRUIT WEIGHT	170 - 190 g
FRUIT SHAPE	Deep oblate
PEDUNCLE	Jointed
ATTACHMENT POINT	Neat
SHOULDER	Smooth
SHOULDER COLOUR	Uniform green
BLOSSOM END	Neat
COLOUR	Internal: very good; External: excellent
FLAVOUR	Good
UNIFORMITY	Good
LEAF COVER	Good
DISEASE REACTION (SCIENTIFIC)	***High resistance:*** *Verticillium dahliae race 1 (Vd: 1), Fusarium oxysporum f. sp. lycopersici race 1 and 2 (Fol: 1 - 2), Meloidogyne incognita (Mi), Meloidogyne javanica (Mj) and Tomato spotted wilt virus (TSWV)* ***Intermediate resistance:*** *Ralstonia solanacearum race 1 (Rs: 1)*
MARKETS / END USE	Fresh market
POPULATION GUIDE	12 000 – 14 000 final stand per ha (45 – 50 cm in row, 160 cm between rows)
SPECIAL FEATURES	Uniform green shoulders. Good disease resistance

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

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.

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

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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 insure 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. Ask your representative for a lot specific copy of the range test.

Bacterial canker (*Clavibacter michiganensis* subsp. *michiganensis*)
Bacterial canker is one of the most dreaded and potentially devastating diseases of tomatoes.
Symptoms
The plant wilts and lower (oldest) leaves show symptoms of necrosis on the leaflet margins and progress towards the midrib. Frequently only one side is affected. If the stems are split open vertically, creamy white-yellow streaks turning reddish brown can be seen on the internal tissue. The yellow bacterial cells ooze out of the infected portions of the stem.
Prevention and control
Use disinfected seed only, crop rotation (not more than once every 4 years), soil disinfection and sanitation (burning of infected plant material). Use of resistant varieties and/or rootstocks. No chemical control exists.

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.

Blossom-end rot (BER)
Symptoms
This physiological disorder looks very much like a typical tomato fruit disease. BER generally occurs at the blossom-end of the fruit and begins with light tan, water soaked lesions, which then enlarge, turn black and leathery.
Cause
This disease is usually associated with a localized calcium deficiency in the distal end of the fruit resulting in blossom-end rot. Calcium is not a highly mobile element and deficiency can easily occur with even short periods of water supply fluctuation. Moisture extremes promote the likelihood of BER and rapidly growing plants are more susceptible. Conditions such as with high salt concentrations or the use of ammonium nitrogen might prevent the proper uptake of calcium. High relative humidity might also reduce calcium uptake.
Control
Varieties differ in their tolerance to this disease. Proper water control and fertilisation can prevent blossom-end rot. If blossom-end rot occurs during the growing season, calcium based foliar spray may be helpful. Proper soil analysis should be done beforehand to determine your soils nutrient status and to fertilise accordingly.

Conditions favoring the development of nutrient deficiency in tomato (Macro-elements)

Element	***Conditions***
Nitrogen (N)	
	- Leaching rains
	- Soils with low organic matter
	- Restricted substrate volume
	- Inadequate fertiliser
Phosphorus (P)	
	- Low temperatures
	- Soil compaction
	- Acid or alkaline soils
	- Inadequate fertiliser
Potassium (K)	
	- Light, sandy soils
	- Leaching rains
	- Acid soils
	- Organic soils
	- Inadequate fertiliser
Calcium (Ca)	
	- Acid soils
	- High concentrations of K, NH,
Magnesium (Mg)	
	- Low or fluctuating soil moisture
	- High atmospheric humidity

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