



## OUTSTANDING QUALITIES

- ◆ RESISTANCE TO TOMATO CURLY STUNT, TOMATO SPOTTED WILT AND ROOT-KNOT NEMATODE
- ◆ GOOD FRUIT QUALITY
- ◆ UNIFORM LARGE FRUIT SIZE
- ◆ GOOD LEAF COVER AND VIGOUR

**STM17083\*** is an indeterminate salad tomato from Sakata's local breeding programme. **STM17083\*** has good fruit quality, large uniform fruit size and a very good disease package. **STM17083\*** has high resistance to Verticillium wilt race 1 (Vd: 1), Fusarium wilt races 1 and 2 (Fol: 1 - 2), Tomato mosaic (ToMV), Leaf mold races 1 - 5 (Ff: 1 - 5) (ex Cf) and intermediate resistance to Tomato curly stunt (ToCSV), Tomato yellow leaf curl virus (TYLCV) and Tomato spotted wilt (TSWV). **STM17083\*** performed very well during all production cycles.

## SPECIAL VARIETAL REQUIREMENTS

- Contact your area representative for more information

| CHARACTERISTIC*               | STM17083*   |
|-------------------------------|---|
| KIND                          | Indeterminate F1 hybrid tomato ( <i>Lycopersicon esculentum</i> L.)   |
| PRODUCTION TYPE               | Open field and under protection production systems  |
| FIRMNESS                      | Very good   |
| MATURITY                      | Medium  |
| PLANT VIGOUR                  | Strong  |
| SEASON                        | Year-round production in frost-free areas   |
| FRUIT WEIGHT                  | 140 - 200 g   |
| FRUIT SHAPE                   | Oblate  |
| PEDUNCLE                      | Jointed   |
| ATTACHMENT POINT              | Medium, neat  |
| SHOULDER                      | Smooth  |
| SHOULDER COLOUR               | Uniform   |
| COLOUR                        | Internal: very good<br>External: very good  |
| FLAVOUR                       | Good  |
| 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), <i>Tomato mosaic virus</i> (ToMV), <i>Fulvia fulva</i> races 1-5 (Ff:1-5) and <i>Meloidogyne incognita</i> , <i>Meloidogyne javanica</i> (Mi,Mj)◆<br><b>◆ Nematode resistance can break down when soil temperatures are above 32°C</b><br><b>Intermediate resistance:</b> <i>Tomato curly stunt virus</i> (ToCSV), <i>Tomato yellow leaf curl virus</i> (TYLCV) and <i>Tomato spotted wilt virus</i> (TSWV) |
| MARKETS / END USE             | Fresh market and pre-pack   |
| POPULATION GUIDE              | 10 000 - 16 000 final stand per ha for open field<br>24 000 final stand per ha for net house / protection   |
| SPECIAL FEATURES              | Excellent quality and firmness. Resistant to Tomato curly stunt virus   |

\* 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.

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



## 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  |     |

### 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 (H<sub>2</sub>O) is lower than 5.5, additional lime should be applied. The lime should be added 4 - 6 weeks before planting.

Soil preparation depends on the soil conditions and the climatic conditions under which the crop is to be cultivated. Tomatoes are very seldom direct-seeded. Seedlings are normally produced by commercial seedling growers and then transplanted.

Raised beds are ideal for tomato production. It helps prevent damage from soil compaction and flooding. Raised beds also improve airflow around the plant roots resulting in reduced disease incidence. Before beds are made, the soil should be properly worked to a depth of 40 cm to enhance aeration as well as water penetration and drainage.

### Early blight (*Alternaria solani*)

Vegetables affected by this disease are tomato, potato and eggplant. Uncontrolled, the disease may cause severe defoliation, resulting in reduced fruit number and size.

#### Symptoms

This pathogen affects the plants foliar parts (yellowing that later turns brown and the leaf drops from the plant) as well as the stem and fruit. Brown spots develop on the leaves and fruit close to the calyx attachment and lesions occur on the stems.

#### Conditions favourable for disease development

Mild temperatures between 24 – 29 °C and humid conditions. For the spores to germinate free standing moisture is required, the spores are spread by air, irrigation water and heavy dew. The spores survive in soil, seed and plant material

#### Prevention and control

- Control humidity and wetting of the leaves
- Use pathogen free seed
- Spray with a fungicide at regular intervals

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