

Watch out! Here comes Trinity...

Since the outbreak of Tomato curly stunt virus (ToCSV) in South Africa a number of years ago (ToCSV is part of the same family as Tomato yellow leaf curl virus (TYLCV)), the industry has faced serious challenges. South Africa is a country with high bacterial and fungal disease pressures, and the added burden of this virus puts more strain on already embattled growers. Many varieties launched during this period were selected from foreign breeding programmes and had resistance to TYLCV. However, these varieties often lacked resistance to the other bacterial and fungal diseases endemic to the country. The STARKE AYRES tomato breeding programme focused on developing varieties which combine viral, fungal and bacterial resistances.

The English word "trinity" is derived from Latin word trinitas, meaning "the number three, a triad". This is an appropriate name for the new indeterminate round tomato launched by Starke Ayres. Previously known as the experimental variety TF 3393, Trinity possesses resistance to the three most important viral diseases in the South African tomato industry. These are Tobacco mosaic virus (TMV), Tomato spotted wilt virus (TSWV) and TYLCV. A recent trial at the University of Johannesburg where Trinity and susceptible lines were deliberately infected with ToCSV has confirmed Trinity's excellent tolerance not only to TYLCV, but also to the South African ToCSV. Considered to be a breakthrough in genetics, Trinity was bred to include features such



TRINITY
showing its high
uniformity

as high yield, fruit quality and the combination of multi virus with strong bacterial disease resistances. The variety was intensively trialed and tested over four seasons in different segments across the country. Results were astounding and clearly indicate that the variety has huge potential for the future. Trials conducted in the Mooketsi region of the Limpopo province showed an increase in yield of 3 kg per plant over the standard variety (Star 9037). With more and more markets requiring medium sized tomatoes, Trinity falls firmly in this segment and produced an average fruit size of 149gm in the Mooketsi trial. Being highly adaptable to various climatic conditions, Trinity gives growers complete peace of mind. The variety performed exceptionally well in areas with high virus pressure when compared to susceptible varieties. It

TOMATOES: Indeterminate Freshmarket F1 HYBRIDS

General Characteristics	MERYVA	STAR 9037	TRINITY (TF 3393)
Relative Days Transplant to Maturity	80-85	90-95	80-85
Plant Growth Habit	Indeterminate	Indeterminate	Indeterminate
Vigour	Strong	Strong	strong
Fruit Mean Mass (g)	150-170	160-180	140-160
Shape	Deep oblate	Deep oblate to	Oblate to deep
Firmness (1=Good/9=Poor)	2	2	2
Green Shoulder	Absent	Present	Present
Attachment habit	Jointed	Jointed	Jointed
Bearing Period (1=Long/9=Short)	2	2	2
Disease Resistance			
H.R*	Va, Fol 1, Fol 2, MV	Va, Vd, Fol 1, Fol 2, Rs, TMV	Va, Vd, Fol 1, Fol 2, TMV, TYLCV (1/3)
I.R*	Ma, Mi, Mj, TYLCV	Ma, Mi, Mj, Lt, TSWV	Ma, Mi, Mj, Rs, TSWV
Utilization	Fresh market	Freshmarket	Market and Prepack
Comments	An indeterminate large fruit variety with TYLCV resistance for summer production	Very firm fruit strong on compact plants with good leaf disease resistance	Very high yields with excellent quality and need pruning

DISEASE IDENTIFICATION KEY / SIEKTE IDENTIFISERING SLEUTEL:

* H.R - HIGH / STANDARD RESISTANCE / I.R - MODERATE / INTERMEDIATE RESISTANCE

H.B - HOOG / STANDAARD BESTAND / I.B - INTERMIDIEER / GEMATIGDE BESTANDHEID

also proved to have field resistance to black stem, caused by *Pseudomonas syringae* pv. *tomato*. This is the causal agent of bacterial speck and symptoms are normally associated with cooler weather. From the first experimental trials it was clear that Trinity has to be pruned to a single or double stems. This allows the variety to reach its maximum potential with very high and uniform fruit setting.

After an extended and intense product development period, Trinity has finally arrived and will reduce risks for the tomato producer. Seed is commercially available through the Starke Ayres sales network. . 🌱

