TOMATO SOLUTIONS
2027 SEED GUIDE

OFFICE PHONE: 519-354-3039

ADAM DICK cell: (226) 626-3079
JIM DICK cell: (519) 784-2027

E-MAIL: seed@tomatosolutions.ca WEBSITE: www.tomatosolutions.ca



FRESH MARKET EDITION

DESCRIPTION OF TOMATO HYBRIDS FOR SALE

(DAYS TO MATURITY AT 85% RIPE - SUBTRACT 21 DAYS FOR ESTIMATED FIRST RIPE FRUIT)



TSH18 (97 days) is a very early maturing jointless hybrid, ready for harvest about 2 days earlier than TSH04. **The fruit size is larger than TSH04.** Vine size is compact. It is an excellent choice for early season extension. It has resistance to Verticillium and Fusarium wilt, as well as tolerance to bacterial speck. Tolerant to Pinnacle herbicide.

USE FOR MAXIMUM EARLINESS
- "BASKET TRADE"



TSH04 (99 days) is an early jointless hybrid with excellent yield for its maturity classification. Fruit size (57g) is uniform with good external color. For sauce use, TSH04 has medium viscosity and excellent soluble solids. Vine size is moderate. Resistance to blossom end rot is excellent. VF resistant, tolerant to bacterial speck. Tolerant to Pinnacle herbicide.

BEST HYBRID FOR FIRST EARLY
- "BASKET TRADE"



TSH43 (102 days) Maturity is 5 days later than TSH18 but yield is significantly higher than either TSH18 or TSH04. Fruit weight is 30% larger than TSH04, more similar to TSH18. Fruit are plum shaped with a height:width ratio of 1.29 and are jointless (stemless). Colour is outstanding with about 5% more colour than TSH04. Soluble solids and viscosity are excellent resulting in high recovery for sauce. VF resistant and tolerant to Pinnacle herbicide. **FOR MEDIUM EARLY WITH HIGH SAUCE RECOVERY AND LARGER FRUIT SIZE - "BASKET TRADE"**



TSH40 (109 days) is a jointless mid-season hybrid with a medium vine size, excellent peeled color and very firm fruit. Fruit size is about 66 grams. The colour levels of the sauce made from this hybrid is outstanding due to the higher than normal lycopene content. Viscosity (thickness of juice) and soluble solids content is excellent. Fruit hold extremely well for a long harvest window. Shelf life after harvest is extremely good. VF resistant, tolerant to Pinnacle herbicide.

OUTSTANDING SAUCE QUALITY COMBINED WITH EXCELLENT SHELF LIFE



TSH24 (111 days) is a San Marzano type with very elongated fruit, having a height to width ratio of 2.1. Resistance to fruit cracking due to handling is high, with a very low percentage of cracked fruit. Sauce recovery is excellent. Fruit weight is about 58g similar to plum shaped varieties but very elongated. VF resistant, tolerant to bacterial speck. Tolerant to Pinnacle herbicide.
FOR SAN MARZANO STYLE FOR SAUCE
- "BASKET TRADE"



TSH26 (111 days) is a main mid-season hybrid with ovate-pearish shaped fruit and small exposed stem scars. Fruit size (61g) is larger than TSH04. Firmness is outstanding. It is very resistant to blossom end rot. The vine and foliage are vigorous and cover the beds and growing area completely, resulting in good yields. VF resistant, tolerant to bacterial speck. Tolerant to Pinnacle herbicide.
FOR SUPERB COLOR WITH PEARISH SHAPE
- "BASKET TRADE"



TSH52 (105 days) is a San Marzano type with elongated fruit with height: width ratio of 1.95 and cylindrical fruit shape. Fruit weight averages 67 g which is slightly larger than TSH50 **which it is replacing**. Similar to TSH50, resistance to fruit breakdown due to fungal diseases is excellent leading to an extended harvest window. Colour is superb due to the presence of the crimson gene. VF resistant. Tolerant to Pinnacle herbicide. FOR SAN MARZANO STYLE FOR BASKET OR SAUCE TRADE. It is difficult to judge differences in maturity between TSH50 and TSH52, based on 85% ripe. There may not be much difference when hand picking**.**



TSH32 (110 days) is a jointless hybrid with fruit size averaging 69 grams but with 70% of fruit averaging 80 grams, with a height to width ratio of 1.4. Fruit are slightly pear shaped. Firmness is excellent due to the multilocular internal structure, and thick pericarp. VF resistant, tolerant to bacterial speck, and tolerant to Pinnacle herbicide. VF resistant. Tolerant to Pinnacle herbicide. **This has been our most popular hybrid for the roma basket trade**, but we have included the TSH48 hybrid in this year's seed guide because it may have some advantages over TSH32, especially for colour and yield.



TSH48 (110 days) is a jointless hybrid with fruit size averaging 66 grams but with 70% of fruit averaging 77 grams, with a height to width ratio of 1.5 and without any tendency to a pear shape. So it is very slightly smaller and slightly more elongated than TSH32. It is very firm due to thick walls, and has better internal colour than TSH32 due to the presence of the old gold crimson colour gene. Yield is outstanding. VF resistant. Tolerant to Pinnacle herbicide. It may be worthwhile for growers to grow some of this to compare to TSH32 as it has some advantages for colour and yield. **EXCELLENT FOR THE BASKET TRADE.**



TSH39 (109 days) is a late jointless hybrid with a large vine resistant to late blight. Fruit size is quite large at 75 grams. It has the PH3 gene for late blight resistance in one of the parents. This gene is dominant so the hybrid has good resistance to most strains of late blight(U.S. 11, 17, 22 & 23). It is well suited to organic or conventional production. Juice viscosity is high making sauce production easy. It is resistant to Verticillium race 1, Fusarium races 1 & 2, and has the Pto gene for resistance to race 0 of bacterial speck and is Pinnacle resistant. The seed is not pelletized due to organic standards.



TSH27 - MID-SEASON BEEFSTEAK This is a highly productive mid-season beefsteak hybrid bred in Ontario to tolerate high rainfall conditions and high disease pressure. As a result, it is more resistant to fruit cracking and disease than many other beefsteak types. Yield and fruit size (similar or slightly larger than Florida47) is excellent. Blossom ends are very smooth, without any catfacing. Better adaptability to Ontario than Florida47. TSH27 is resistant to Verticillium and Fusarium wilt, and tolerant to Pinnacle herbicide. (PELLETIZED) **AN EXCELLENT SLICING TOMATO WITH DELICIOUS FLAVOUR AND HIGH PRODUCTIVITY**



SUPER SHEPHERD PEPPER

This is a large fruited, elongated sweet pepper with thick walls and a superior sweet taste. Seed is surface sterilized to prevent seed borne bacterial spot. In addition, the peppers used for seed were selected to maintain the genetic characteristics of the Super Shepherd type. (Raw seed only)

Effectiveness of Chlorine Seed Treatment used by Tomato Solutions



Untreated seed showing fuzzy surface ideal for harbouring bacterial and viral pathogens.

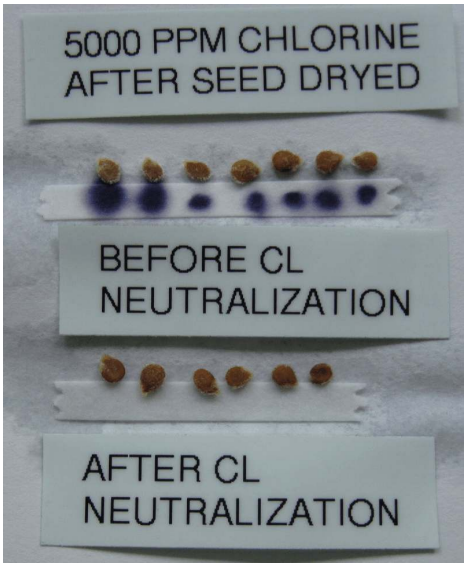


Seed after treatment with 5000 ppm chlorine for 60 minutes, showing removal of fuzz from seed coat. Embryos are visible through bleached, disinfected seed coat.

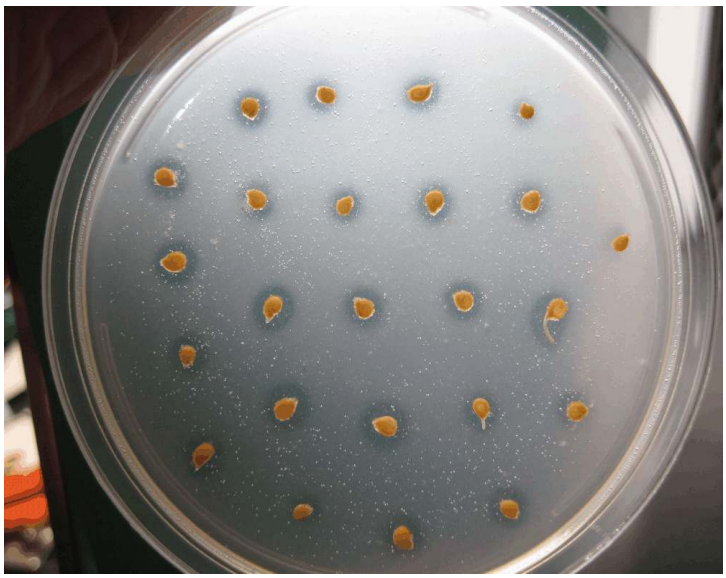
A 42 page report "TOMATO SEED DISINFECTION WITH CHLORINE" is available on our website at www.tomatosolutions.ca

Demonstration of effectiveness of chlorine seed treatment in leaving a chlorine residue

Tomato seed was treated with chlorine using our commercial procedure (soaked for 24 hours at 6°C prior to treatment for 60 minutes in 5000 ppm chlorine at 20°C and pH 9.5). Half of the seed was rinsed twice with sterile water and dried aseptically. The other half of the treated seed was neutralized with sodium thiosulphate (a chlorine neutralizer) and also dried overnight. Portions of the water rinsed and neutralized seed were placed on chlorine test paper (Hydrion Sanitizer Test Paper, Micro Essential Laboratory Inc.) to demonstrate the presence of chlorine residues. These paper strips turn various shades of purple depending on the amount of chlorine present in a liquid solution. When dry treated seed is placed on the strips moistened with water, the purple color indicates a chlorine residue. The dried seed was also placed on PDA seeded with bacterial canker bacteria (C.m.m.) just prior to pouring the plate and incubated to determine the effect of chlorine residues on bacterial growth. As shown below, our seed carries a chlorine residue after treatment and drying which will inhibit the growth of pathogenic bacteria.



Chlorine residue shown to be present on dried seed; not present when chlorine is neutralized.



Effect of chlorine residue on dried seed on growth of canker bacteria. The clear zone around each seed. indicates bacterial growth inhibition.

TOMATO SOLUTIONS
23264 MULL ROAD,
CHATHAM, ONTARIO, CANADA
N7M 5J4

OFFICE PHONE: 519-354-3039
Adam Dick cell (226) 626-3079
Jim Dick cell (519) 784-2027
e-mail: seed@tomatosolutions.ca
WEBSITE: www.tomatosolutions.ca

2027 PRICE per M (1000 seeds) - MINIMUM ORDER 3 M
ORDER MUST BE >2.5M TO BE HST EXEMPT
PRICE BASED ON TOTAL ORDER
PAYMENT BY CHEQUE, OR E-TRANSFER FOR <=$3,000

	3M-24M	25M-99M	100M-149M	150M-199M	= OR>200 M
TOMATO	$124.61	$114.38	$104.15	$93.92	$86.22
PEPPER	$77.92	$77.92	$77.92	$77.92	$77.92

Product Information

Pelletizing is done by Germain's Technology Group (mini-pellet, coloured orange).
Only conventional breeding methods are used to produce our hybrids (no GMO's).
All seed is surface disinfected with chlorine to eliminate bacteria and fungi.
No other chemical seed treatments are applied.

Terms and Conditions of Sale

TERMS: PAYMENT IN ADVANCE OF SHIPPING.
Please e-mail or phone your order to us. Invoices will be e-mailed back to you.
Seed will be sent by expedited parcel post. Price includes shipping and handling.
Payment may be made by cheque (preferred), or e-transfer for amounts = <$3,000

Note: Photo is a representation of the variety. Actual appearance may vary. All variety information presented herein is based on field and laboratory observation. Actual crop yield, quality, and level of claimed pest and pathogen resistances, are dependent upon many factors beyond our control and NO WARRANTY is made for crop yield, quality, and level of claimed pest and pathogen resistances. Since environmental conditions and local practices may affect variety characteristics and performance, we disclaim any legal responsibility for these.

NOTICE TO BUYER: WARRANTY AND CONDITIONS OF SALE: TOMATO SOLUTIONS warrants that the seed sold has been labelled as required by law. TOMATO SOLUTIONS limits its warranty to the full amount of the purchase price of the seed. TOMATO SOLUTIONS makes no other express or implied warranty of merchantability, fitness for a particular purpose or otherwise of its seed or the crops grown from the seed. TOMATO SOLUTIONS makes no representation regarding freedom from seed borne diseases and disclaims any liability relating to such diseases whether previously known to exist or not identified until this seed is grown. Any recommendations for use of the seed are based upon TOMATO SOLUTIONS' best judgement, but there is no warranty of results to be obtained in connection therewith. As a condition to any liability, claims for defects in the seed must be presented to TOMATO SOLUTIONS as soon as practicable and, in any event, WITHIN THIRTY DAYS AFTER DISCOVERY. By acceptance of the seed, the Purchaser acknowledges that this limited warranty and disclaimer herein before described, are conditions of sale and that they constitute the entire agreement between the Vendor and the Purchaser regarding warranty and/or any other liability or conditions. IF THIS LIMITED WARRANTY AND GUARANTEE IS NOT ACCEPTABLE TO THE PURCHASER AS A CONDITION OF SALE - THEN THE PURCHASER MUST NOT PLANT THE SEED AND MUST RETURN THE SEED IN ITS ORIGINAL UNOPENED PACKAGE, AND THE PURCHASE FUNDS SHALL BE REFUNDED.

QUALITY ASSURANCE PROCEDURES

1.) All seed is pelletized with a split coat pellet from Germain's in California to allow easy seeding and quick uptake of water for fast germination.

2.) All seed is treated with chlorine to eliminate surface borne pathogens: bacterial spot, speck, and canker, tobacco and tomato mosaic viruses, pospiviroids, and Tomato Brown Rugose Fruit Virus (ToBRFV). An extensive report describing tomato seed treatment with chlorine is available on our website. This treatment also enhances uniformity and speed of germination. Seed treated in this way can be stored almost indefinitely (pelletized or raw) if refrigerated under dry conditions in sealed plastic bags or containers.

3.) After treatment and drying, seed is vacuum separated to clean out any light weight particulate matter and to remove any poorly developed seeds. Subsequently, seed is passed over a vibratory grading screen in a single layer to remove small seeds, and is visually inspected to remove anything that is not a tomato seed.

4.) Seed is germination tested at every stage of production and germinations are done every year on all seed lots offered for sale.

5.) Seed is inspected by the Canadian Food Inspection Agency (CFIA) prior to shipping to the U.S.

6.) Every seed lot is tested for the presence of Tobacco and Tomato Mosiac virus using an ELISA test done by the Pest Diagnostic Laboratory at the University of Guelph. Seed that is not acceptable is discarded. All seed is tested for pospiviroids and ToBRFV and any positive seed lots are discarded. All seed has a phytosanitary certificate attesting to freedom from 6 pospiviroids and ToBRFV.

7.) We have done extensive testing by the Pest Diagnostic Laboratory for the presence of Xanthomonas campestris vesicatoria, the causal agent of bacterial spot on over 100 commercial seed samples using the latest PCR technology. Due to our seed treatment, we have never had a positive test for this pathogen on our treated seed.

8.) All seed lots are grown out and visually inspected for purity.

9.) All hybrids are produced using breeding lines developed and tested here in Canada by a qualified plant breeder and plant pathologist. This ensures that hybrids are adapted to our environment and climatic conditions.

10.) Hybrid seed is produced in India in small plots under strictly controlled conditions. Any off-type plants are removed prior to making the crosses. Plants are regularly inspected for any viral symptoms and if any are found they are carefully removed to prevent any contamination of remaining plants. A strict protocol is followed to prevent the introduction of viral diseases. Seed extraction is done using a short treatment time with pectic enzyme to ensure high germination and seed vigour. A high level of communication between India and Canada is maintained.