

YIELD AND QUALITY EVALUATIONS  
EARLY MACHINE HARVEST TOMATO HYBRIDS  
TOMATO SOLUTIONS - 2021

Summary

**TSH44 matured slightly earlier than H5108 or H1014 but yielded about 25% more. Fruit size and shape were similar to H5108 or H1014. Firmness was similar before peeling, but better after peeling. Soluble solids were the same. Color was superior to H5108 and equal to H1014. TSH44 offers advantages over current hybrids in the same maturity class. It does not displace the earlier maturing hybrids TSH18, TSH04 and TSH43.**

DATA COLLECTION

Yields were recorded from sections of rows in commercial fields grown at a population of approximately 12,000 plants per acre. There were 7 plots of TSH44 grown side by side with either H5108 (3 plots) or H1014 (4 plots) which is the most accurate way to compare yields. All other data came from our evaluation trial with 3 replicates.

Fruit from our trial were harvested and graded and those without green or rot were peeled. Based on the pictures below, TSH44 visually scored slightly better (0.5) than either H5108 or H1014 (1.5) on a scale of 0-9 where a lower number is better. However, with electronic color sorters, either before or after peeling, product appearance might be similar.

Fruit were tested for firmness using the Agrost 100 tester. A total of 30 readings were taken from each sample.



**AGROSTA 100**

Juice samples were prepared to determine soluble solids, viscosity and color. A Hunter colorimeter was used to measure color and determine the a/b ratio. Lycopene (red pigment) concentration was calculated with a formula using the a\* value generated by the colorimeter.

## RESULTS

YIELD AND FRUIT QUALITY						
HYBRID	TOTAL YIELD TONS/ACRE FROM COMMERCIAL PLOTS @ ~12000 PLANTS PER ACRE	DAYS FROM PLANTING TO HARVEST (NO ETHREL WAS APPLIED)	FRUIT WEIGHT IN GRAMS	FRUIT SHAPE  RATIO OF HEIGHT TO WIDTH	UN-PEELED FRUIT FIRMNESS 0-100 WHERE 100 IS MAXIMUM FIRMNESS	PEELED FRUIT FIRMNESS 0-100 WHERE 100 IS MAXIMUM FIRMNESS
TSH44	55.8	93.2	55	1.32	84	46
H5108	44.9	93.8	56	1.26	85	43
H1014	44.5	94.8	53	1.32	83	37

JUICE QUALITY				
HYBRID	% SOLUBLE SOLIDS	VISCOSITY (SECONDS THROUGH SAUCE TUBE)  HIGHER IS THICKER	COLOR	
			HUNTER a/b RATIO (HIGHER IS VISUALLY REDDER)	LYCOPENE CONCENTRATION  PPM
TSH44	4.9	7.3	2.21	104
H5108	4.9	5.5	2.12	92
H1014	4.9	8.3	2.23	104

## TSH44





# PEELED FRUIT COMPARISONS

TSH44 - REPS 1-3



H5108 - REPS 1-3



H1014 - REPS 1-3

