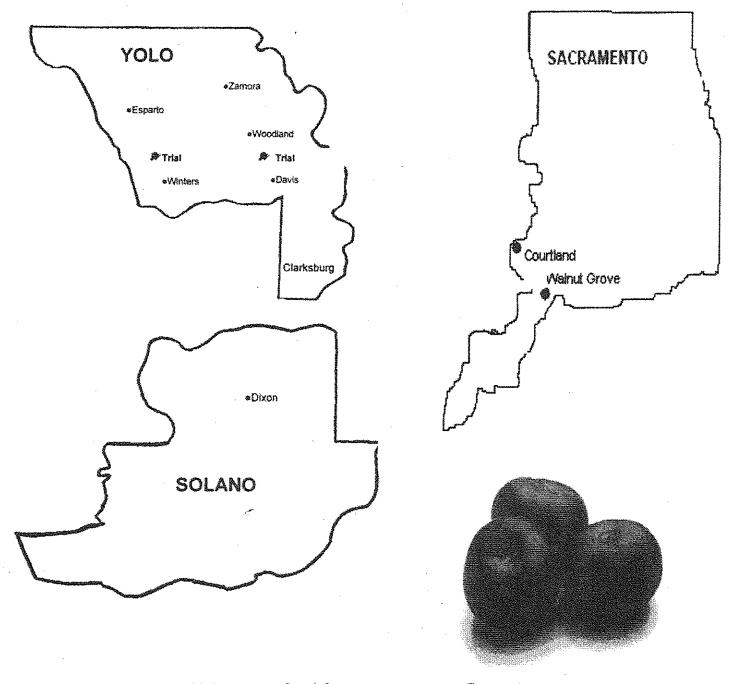
2006 PROCESSING TOMATO VARIETY TRIALS



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Summary of Yolo/Solano/Sacramento Counties 2006 Processing Tomato Wariety Evaluation Trials

by

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Weather conditions for 2006 was a roller coaster. Rain from March through mid April delayed planting by a month or more. While weather was clear for most of February, only a few took advantage of an early opportunity to direct seed. We experienced many temperature spikes along the way. We recorded 5 days at or above 97°F in mid May, 8 days at or above 100°F in June, 14 days at or above 100°F in July (with 6 consecutive days above 105°F coupled with night lows of 70°F or hotter), and then tapering to a mild September and cool October. Fortunately, the cool fall was also relatively dry. Consequently, the weather pattern began with good conditions for fruit set, followed by extreme temperature conditions reducing flower set and ending with cool weather that caused delayed, poor ripening.

Statewide production in 2006 was 10.1 million tons even with the extended, extreme heat in July, which reduced fruit set. We hope 2007 weather will be more moderate.

Variety Evaluation Trials

Evaluation of varieties for local adaptation continued to be a part of the University of California farm advisor program. Our objective was to identify dependable, high yielding and high quality variety releases that can be grown over a wide geographic area under varying environmental conditions. The varieties were compared side-by-side in an experimentally sound designed test within local counties in the Central Valley from Yolo to Kern. Tests were conducted in a uniform fashion to compare local results with tests by UC farm advisors in other locations.

Entries:

Varieties were selected in consultation with processors and seed companies.

The early-maturity trial included 12 replicated varieties (table 1A). Variety standards were Heinz 9280, HyPeel 45 and APT 410. The early varieties were only evaluated in a replicated design. All varieties in the early trial had VFFNP resistance. HMX 5883 and PX 438 also had Fusarium wilt race 3 resistance. Additionally, the standard varieties were evaluated as double plants per plug vs. the conventional singles.

In the mid-maturity trial, 16 replicated and 5 observational varieties were included (table 1B). Mid-maturity standards were AB 2, H 9780 and H 2601. In the trial, all except AB 2 had nematode resistance. DRI 8058 and U 567 were reported as resistant to spotted wilt. Harris Moran's HMX 4802 has resistance to Fusarium wilt race 3. Lipton U 892 is reported as resistant to powdery mildew.

Locations:

The local early trial was northwest of Winters with Don Rominger and Sons. The mid maturity trial was south of Woodland with J.H. Meek and Sons.

Other UC tests were conducted by farm advisors representing San Joaquin, Contra Costa, Stanislaus, Merced, Fresno and Kern counties.

Methods:

Both the early and mid-maturity trials were established from commercially grown greenhouse transplants. Plants were pulled from trays, counted, bundled and bagged ahead of the field planting. The grower's equipment and crew mechanically set the transplants. Skips were filled within a day of the planting. The few transplants that did not survive were replaced over a 2-week period.

Both trials were transplanted on twin lines, a foot apart from each other, centered on a 5' bed. All plots were 100' long. A short alley separated the 4 replicated blocks within rows. Because of the season, both trials were established with older transplants beyond the norm of 6 week-old plants. Plants were taller, but in good condition despite the age.

All cultural practices in these ~1 acre experimental sites were those of the cooperating grower and matched management of the remaining larger area of their commercial tomato field.

Field meetings were held at each trial site as fruit ripened to provide an opportunity to examine the performance of the varieties in side-by-side comparisons.

To measure yield, fruit from the entire plots were harvested into special weigh trailers using the grower's harvesting equipment and crew. A 5-gallon volumetric sample of unsorted fruit was taken from the mechanical harvester to evaluate fruit defects. Fruit is sampled along the length of the plot. These fruit are graded into categories of marketable red, pink, green, sun-damage, mold and blossom end rot and measured by weight.

From the marketable reds, an ~7 pound sample from each plot is bagged and delivered to a local inspection station of the Processing Tomato Advisory Board. Color, °Brix (soluble solids) and pH were determined by PTAB with a procedure consistent with commercial grading. Additionally, similar samples were hand picked by the Diane Barrett Lab of the UC Davis Food Science and Technology Department to evaluate processing quality.

Statistical analysis of variance methods were used to help interpret the data. Conclusions derived from non-replicated data should be viewed with much less confidence

EARLY-MATURITY EVALUATION: WINTERS (TRANSPLANTS)

Early-maturity varieties were evaluated with Joe Rominger in a Don Rominger and Sons field northwest of Winters. We transplanted on April 25 into twin seed lines per bed in a class 1 soil under wet soil conditions (Table 2A). Rain occurred after layby to supply adequate soil moisture. The first irrigation was a couple of weeks after layby. Vines grew well during the season. Fruit set was very good. Vines weakened during fruit

ripening under the extended high temperatures in July. The trial was harvested on August 11th.

Table 4 <u>early replicated—yield, fruit quality and culls</u>: The highest yielding group was led by APT 410 with 52.7 tons per acre, but included 7 other varieties in the top group.

HyPeel 45 led the high solids group with 5.4, but included 6 others, all with at least 5.0 Brix. PX 438 had the best color with 24.3 and included H 5003 with 24.8 as well as 5 others with color of 26.2 or lower. Fruit pH was without much separation amongst varieties.

Level of below-colored fruit was only a few percent for pinks and for green fruit. Sunburn damage was high especially with HyPeel 45 as either a single plant per plug or doubles per plug with 22 and 18%, respectively. U 462 had a high level of sunburn as well with 19%. Mold was low across varieties. H 5003 and BOS 66508 had the smallest fruit as indirectly measured by fruit weight of a batch of 50 fruit.

We compared single plants per plug to double plants per plug across 3 of the varieties (APT 410, HyPeel 45 and H 9280). Yields were comparable between plug plant density as well as fruit quality. When plants per plug were doubles, fruit size was smaller compared to the single plant.

Table 5 <u>early replicated—emergence, vine size, canopy cover and estimated maturity</u>: Plant population on the double row planting was about 9500 plants per acre. Transplant stands were comparable to each other across the trial.

Vine size was difficult to judge with the twin row planting. The smaller-vined varieties in this test were U 462 and U 250 followed by PX 438 and HMX 5883, all below 90% of the row width.

Canopy cover for fruit protection from sun damage ranged from 65 to 88%. The sparsest canopied varieties were U 462 with 65%, and both BOS 7026 & U 250 with 73%. A number of varieties had canopy covers above 80% fruit protection.

Visual rating of days to estimated harvest date was made relative to APT 410. The differences appeared to range from -0.5 to 2.5 days later on average. The later maturing varieties were U 250, PX 438 and U 462.

MID-MATURITY EVALUATION: WOODLAND (TRANSPLANTS)

Our local mid-maturity variety trial evaluation was transplanted with J.H. Meek and Sons south of Woodland on a class 1 soil, predominantly Reiff very fine sandy loam with some Yolo silt loam. Seedling plugs were mechanically transplanted on May 9th in double lines per bed (Table 2B). Plants struggled with high temperatures during transplanting, but grew well thereafter. The field was furrow irrigated. Temperatures were high during flowering and reduced fruit set. Vines weakened from root knot nematode population that overcame plant resistance. Harvest was August 25.

REPLICATED ENTRIES (WOODLAND)

Table 6A mid replicated— yield, fruit quality and culls: Ten of the 18 varieties were in the top-yielding group, led by PS 345 and AB 2 with 40.1 and 39.7 tons per acre, respectively.

The standout superior Brix variety was Sun 6374 with 6.2°.

The best-colored varieties were led by H 2005 with 21.8 and DRI 4610 with 22.0, but included 7 other varieties, all with 23.3 or less.

Fruit pH was lowest with H 9780 at 4.31, but the best group included 9 others with values less than 4.38. Fruit pH tended to be elevated with several varieties with levels above 4.48.

Cull levels of pink, green, and mold tended to be low to moderately low. PS 345 had 9% pink fruit plus 3% greens. There was no blossom end rot in the trial.

Sunburn level was high. Red Spring and H 2601 had the highest levels at 28 and 25% respectively, as vine collapse was severe for these varieties in this trial. The low sun damage group was led by DRI 4610, BOS 67374 and Sun 6368 with less than 8% sun damaged fruit but included AB 2, DRI 8058, PX 384 and U 567, all with 10% damage.

In addition, double plants were compared to single plants per plug using varieties AB 2 and H 9780. There was no statistically significant advantage in yield or fruit quality with 2 plants per plug over the single plants in this test.

Table 6B mid replicated—vine size, canopy cover and estimated maturity: The larger-vine varieties were AB 2 and H 9780 as double plants per plug with full row width cover. U 567 and HMX 4802 were the smaller vine varieties at 73% row width cover.

Canopy cover was evaluated shortly before harvest. Canopy cover at time of harvest of 80% or more is desirable, while levels below 50% are usually problematic for fruit protection from sun damage. Canopy was extremely poor with Red Spring at 45%, H 2601 with 48% and H 2005 with 55%. Canopy cover was 80% or better with DRI 4610, PX 384, BOS 67374, AB 2, PS 345 and U 567.

A visual estimate of days to harvest was assessed and compared to the standard AB 2. In this test, H 2601 and Red Spring appeared to be the earliest maturing varieties. The later varieties in our test appeared to be DRI 4610, PS 345, H 9780, BOS 67374, U 567, PX 384 and U 886, which appeared 3 to 5 days later maturing than AB 2.

With the double plants per plug compared to singles, the vine size was larger with the double plants. Maturity and canopy cover appeared uninfluenced.

NON-REPLICATED ENTRIES (WOODLAND)

Table 7A: mid observational—Woodland: The highest yielding non-replicated varieties were HMX 5893 and BOS 212 with 36.7 and 35.4 tons per acre, respectively. Both varieties had substantially less sunburn damage than the other varieties in this block.

The Brix average was 5.2. BOS 212 had the highest Brix with 5.5°. Color level was best with U 898 with 22 and highest with HMX 5893 at 29. Fruit pH levels averaged 4.45 with no varieties below 4.40.

Sunburn level was lowest with BOS 212 at 6%. U 898 had the highest sun damage with 40%.

Pink, green and mold percent were relatively low. No blossom end rot was observed.

Table 7B mid observational—vine size, canopy, and estimated maturity: All vines covered 90% or more of the row width, except for NDM 4464 which was only 70%.

Canopy cover near the time of harvest was best with HMX 5893 and BOS 212, both with 70%. U 898 collapsed with only 40% cover.

A visual assessment of maturity ranged from 3 days earlier than AB 2 to 3 days later.

<u>UC STATEWIDE VARIETY REPORT</u>: Statewide compiled variety report with other UC advisor tests is posted at UC Vegetable Research and Information Center at:

http://vric.ucdavis.edu/

The information is also posted at the UC Coop Extension, Yolo County website:

http://ceyolo.ucdavis.edu/Vegetable Crops/PROCESSING TOMATO VARIETY _TRIALS.htm

Table 1A. Early Maturity Entries, 2006 Statewide UC Processing Tomato Variety Trial, D.A. Rominger and Sons, Winters.

| | Company | Replicated (12) | | |
|---|---------------|-----------------|-----------|--|
| 1 | Harris Moran | HMX 5883 | \$VFFF₃NP | |
| 2 | Heinz | H 5003 | \$VFFNP | |
| | | H 9280 | \$VFFNP | |
| 3 | Lipton | U 250 | \$VFFNP | |
| | | U 462 | \$VFFNP | |
| 4 | Nunhems | SUN 6366 | \$VFFNP | |
| 5 | Orsetti Seeds | BOS 66508 | \$VFFNP | |
| | | BOS 66509 | \$VFFNP | |
| | | BOS 7026 | \$VFFNP | |
| 6 | Seminis | APT 410 | \$VFFNP | |
| | | HyPeel 45 | \$VFFNP | |
| | | PX 438 | \$VFFF₃NP | |

BOLD LETTERS = trial standards

Code: Disease Resistance and Hybrid Status*

| | | ode. Disease Resistance and Tryond Status |
|-----|----|---|
| ¢ | = | OPEN POLLINATED |
| \$ | = | HYBRID |
| V | = | VERTICILLIUM WILT RESISTANT |
| F | = | RACE 1 FUSARIUM WILT RESISTANT |
| FF | = | RACE 1 AND 2 FUSARIUM WILT RESISTANT |
| FFF | 3= | RACE 1, 2 AND 3 FUSARIUM WILT RESISTANT |
| N | = | ROOT KNOT NEMATODE RESISTANT (SOME SPECIES) |
| P | = | BACTERIAL SPECK RESISTANT (RACE 0) |
| D | = | DODDER TOLERANCE |
| TM | V= | TOBACCO MOSAIC VIRUS |
| Lv | æ | POWDERY MILDEW |
| Sw | | SPOTTED WILT VIRUS |

^{*} Check with seed company to confirm disease resistance.

Table 1B. Mid-Maturity Varieties, 2006 UC Processing Tomato Variety Trial, JH Meek and Sons.

| | | 16 | | 5 | |
|---|------------------|--------------------------------------|---|----------------|---------------------|
| | Company | Replicated | *************************************** | Observational | |
| 1 | DeRuiter | AB 2 DRI 4610 DRI 8058 | \$VFFP \$VFFN \$VFFN Sw | | |
| 2 | Harris Moran | HMX 4802 | \$VFFF ₃ NP | HMX 5893 | \$VFFNP |
| 3 | Heinz | H 2005 H 2601 H 8004 H 9780 | \$VFFNP \$VFFNP \$VFFNP | | |
| 4 | Lipton | U 567 U 886 | \$VFFNP Sw \$VFFN | U 892 U 898 | \$VFFN Lv \$VFFN |
| 5 | Nippon Del Monte | | | NDM 4464 | \$VFFNP |
| 6 | Orsetti | BOS 67374 | \$VFFNP | BOS 212 | \$VFFNP |
| 7 | Seminis | PS 345 PX 384 | \$VFFNP \$VFFN | | |
| 8 | Sunseeds | SUN 6368 SUN 6374 Red Spring | \$VFFNP \$VFFNP \$VFFNP | | |

BOLD LETTERS = trial standards

^{*} Check with seed company to confirm disease resistance.

Table 2A. Plot Specifications, Early-Maturity, Winters, 2006

Cooperator:

Joe Rominger,

D.A. Rominger and Sons, Winters

Location:

NW of Winters. ~1 mile west of CR 89 at SE intersection of Winters

Canal x Chickahominy Slough.

NW 1/4 of NW 1/4, Section 4, T8N, R1W, MDM. SCS sheet #66.

Field Variety:

APT 410, double lines on 5'-centered beds.

Plot Design:

Randomized complete block, 4 reps. Individual plots were 500 square

feet, 100' x 5'.

Planting Date:

25 April as transplants, #338 tray from Westside Transplants

82-day old transplants (held due to rain delayed start).

Population:

~9500 plants per acre

Field Meeting:

10 August

Fruit Quality Sample: 10 August, UCD Food Science Project

11 August, PTAB

Harvest:

11 August (108 days from planting)

Soil type:

Brentwood silty clay loam, Class 1, Storie Index 81.

Soil Sample

28 April 2006

| O-1 foot depth | Rep 1-2 | Rep 3-4 |
|-----------------------------|---------|---------|
| рН | 6.6 | 6.5 |
| EC | 0.31 | 0.28 |
| NO ₃ -N (ppm) | 7 | 6 |
| P (ppm) | 19 | 17 |
| K exchangeable (ppm) | 180 | 184 |
| Ca exchangeable (meq/100 g) | 12 | 13 |
| Mg exchangeable (meq/100 g) | 8 | 8 |
| Zn (DPTA) (ppm) | 0.8 | 0.7 |

Previous Crop:

2005 sunflower

Irrigation method:

furrow

General:

Rainy spring weather with delayed planting into wet soil condition.

Irrigation initiated later than normal due to late spring rainy conditions. Good vine growth during the season. High tonnage. Vine weakening at harvest with sunburn from high temperature near

harvest.

Table 2B. Plot Specifications, Transplant, Mid-Maturity, Woodland, 2006

Cooperator:

Steve Meek and John Pon, J.H. Meek and Sons, Woodland

Location: -

1/2 mile west of State Highway 113, adjacent to south side of CR

27, south of Woodland.

NE 1/4 of NE 1/4 section 20, T9N, R2E, MDM SCS map #60.

Field Variety:

AB 2

Plot Design:

Randomized complete block with 4 reps

Non-replicated plots adjacent to 1st rep. All individual plots 500 square feet (100' x 5')

Greenhouse:

Westside Transplants, Firebaugh in #338 trays for replicated and

#392 trays in observational

62-day old plants (backlogged due to rain delayed start of season)

Planting Date:

9 May

Field Meeting:

23 August

Fruit Quality Sample: 22 August, Food Science

25 August, PTAB

Harvest

25 August (108 days after transplanting)

Soil type:

predominantly Reiff very fine sandy loam, with some Yolo silt loam,

both class 1, Storie Index 100

Soil Sample

19 May 2006

| O-1 foot depth | Rep 1-2 | Rep 3-4 |
|-----------------------------|---------|---------|
| NO ₃ -N (ppm) | 13 | 11 |
| P (ppm) | 27 | 26 |
| K exchangeable (ppm) | 106 | 102 |
| Ca exchangeable (meq/100 g) | 5.9 | 6.2 |
| Mg exchangeable (meq/100 g) | 7.4 | 7.8 |
| Zn (DPTA) (ppm) | 1.4 | 1.5 |

Previous Crop:

2005 wheat

Irrigation method:

furrow

General:

Transplants established and grew very well after initial high temperature set back at planting. Vines grew well during the season. High temperature conditions during fruit set and fruit sizing. Vines declined during fruit sizing resulting in sunburn and loss in yield. Resistance breaking root knot nematode population was prevalent in the trial area. AB 2, a non-resistant variety,

performed better than most other varieties.

Table 3. Fruit Quality Factor Definitions

SOLUBLE SOLIDS OR "BRIX" A measure of mostly fruit sugars. Soluble solids are directly related

to finished processed product yield of pastes and sauces. Soluble

solids are estimated with a refractometer, and measured as °Brix.

PH A measure of acidity. A level below 4.35 is desirable to prevent

bacterial spoilage of finished product. pH rises as fruit matures.

COLOR Measured with a Processing Tomato Advisory Board LED

instrument simulating Agtron. Lower numbers correspond to better

red fruit color.

FIELD SAMPLING PROCEDURE

Fruit quality determinations were obtained by collecting ~7 pound sample of ripe, non-defect fruit from each plot. A local grade station of the Processing Tomato Advisory Board evaluated our fruit samples for soluble solids (Brix), color and pH.

To determine finished product thickness, additional samples were collected by Sam Matoba and crew and evaluated in the Diane Barrett lab at the UC Davis Food Science and Technology Department as part of a California League of Food Processors-funded project. Two blocks of replicated varieties and all non-replicated plots were evaluated. 'Brix, pH, titratable acidity (reported as percent citric acid), and juice Bostwick were the factors measured. The results of the Food Science project are in a separate report.

Fruit defects in the field were estimated by collecting ~5 gallons of unsorted fruit from the mechanical harvester. Fruit were separated into marketable red, pink, green, sun-damaged, mold and blossom end rot categories. Measurements were on a weight basis and reported as percent.

Table 4. Winters, Replicated, Early-Maturity: Yield, quality and cull-out from tomato variety evaluation, D.A. Rominger & Sons, 2006.

| | | Yield | | PTAB | | % | % | % sun | % | lbs./ |
|----|---------------|--------|------|-------|------|------|-------|------------|------|----------|
| | Variety | tons/A | Brix | color | pН | pink | green | burn | mold | 50 fruit |
| 1 | APT 410 | 52.7 | 5.1 | 25.5 | 4.42 | 1 | 1 | 11 | 2 | 7.85 |
| 2 | BOS 66509 | 52.6 | 4.7 | 27.0 | 4.46 | 1 | 1 | 12 | 2 | 7.06 |
| 3 | H 5003 | 52.4 | 5.2 | 24.8 | 4.47 | 1 | 3 | 7 | 1 | 6.28 |
| 4 | APT 410 Dbl | 50.6 | 5.1 | 26.5 | 4.44 | 1 | 1 | 9 | 3 | 7.73 |
| 5 | BOS 66508 | 50.3 | 5.0 | 25.3 | 4.43 | 2 | 3 | 13 | 1 | 6.91 |
| 6 | H 9280 Dbl | 49.3 | 4.6 | 27.0 | 4.42 | 1 | 1 | 10 | 0 | 7.21 |
| 7 | H 9280 | 48.9 | 4.4 | 28.0 | 4.40 | 2 | 1 | 10 | 1 | 7.73 |
| 8 | HMX 5883 | 48.5 | 4.7 | 29.5 | 4.46 | 1 | 1 | 13 | 1 | 8.81 |
| 9 | SUN 6366 | 48.0 | 5.2 | 27.3 | 4.44 | 2 | 2 | 15 | 2 | 7.21 |
| 10 | BOS 7026 | 47.8 | 5.3 | 25.8 | 4.45 | 1 | 1 | 1 2 | 2 | 8.89 |
| 11 | PX 438 | 46.0 | 5.2 | 24.3 | 4.54 | 2 | 2 | 12 | 2 | 9.03 |
| 12 | U 250 | 45.8 | 5.0 | 29.3 | 4.44 | 0 | 5 | 13 | 3 | 9.61 |
| 13 | HyPeel 45 Dbl | 43.4 | 5.3 | 25.8 | 4.41 | 2 | 2 | 18 | 4 | 8.28 |
| 14 | U 462 | 43.2 | 4.7 | 27.0 | 4.48 | 3 | 2 | 19 | 3 | 8.56 |
| 15 | HyPeel 45 | 41.5 | 5.4 | 26.0 | 4.42 | 0 | 2 | 22 | 1 | 8.55 |
| | LSD .05 | 4.20 | 0.38 | 2.0 | 0.06 | 1.5 | 1.6 | 7.4 | NS | 0.96 |
| | % CV | 6 | 5 | 5 | 1 | 72 | 59 | 40 | 131 | 8 |
| | | | | | | | | | | |
| | Single vs. | 47.7 | 4.96 | 26.5 | 4.41 | 0.9 | 1.3 | 14.4 | 1.4 | 8.04 |
| | 2 plants/plug | 47.8 | 4.99 | 26.4 | 4.42 | 1.0 | 1.2 | 12.7 | 2.4 | 7.74 |
| | LSD 5% | NS | NS | NS | NS | NS | NS | NS | NS | 0.07 |

Table 5. Winters, Replicated, Early-Maturity: Stand, vine size, canopy and maturity (twin-row per bed), D.A. Rominger and Sons, 2006.

| • | • | | | | estimated |
|----|-------------------|------------|-------|---------|--------------|
| | | Stand | | % fruit | harvest |
| | Replicated | plants per | % bed | canopy | Days |
| | Variety | 100 feet | cover | cover | (to APT 410) |
| 1 | APT 410 | 110 | 100 | 83 | 0.0 |
| 2 | BOS 66508 | 111 | 95 | 80 | 1.3 |
| 3 | BOS 66509 | 111 | 100 | 85 | 0.0 |
| 4 | BOS 7026 | 112 | 98 | 73 | 0.5 |
| 5 | H 5003 | 111 | 100 | 80 | 1.0 |
| 6 | H 9280 | 111 | 90 | 83 | 0.5 |
| 7 | HMX 5883 | 110 | 88 | 88 | 1.0 |
| 8 | HyPeel 45 | 111 | 100 | 80 | 0.0 |
| 9 | PX 438 | 111 | 85 | 80 | 2.3 |
| 10 | SUN 6366 | 110 | 100 | 83 | 1.5 |
| 11 | U 250 | 111 | 75 | 73 | 2.5 |
| 12 | U 462 | 111 | 70 | 65 | 1.8 |
| 13 | APT 410 Dbl | 111 | 100 | 83 | -0.5 |
| 14 | H 9280 Dbl | 111 | 90 | 88 | -0.5 |
| 15 | HyPeel 45 dbl | 110 | 98 | 78 | 0.3 |
| | LSD .05 | NS | 18.6 | 9.8 | 1.5 |
| | % CV | 1 | 14 | 9 | 8 |
| | | | | | |
| | Single vs. | 111 | 97 | 82 | 0.2 |
| | 2 plants per plug | 111 | 96 | 83 | -0.4 |
| | LSD 5% | NS | NS | NS | NS |

Table 6A. Woodland, Replicated, Mid-Maturity: Yield, fruit quality and defects from processing tomato variety trial (transplant), JH Meek and Sons, 2006

| | | Yield | | | PTAB | | % | % | % | % | lbs per |
|----|-----------------|--------|------|-------|-------|------|------|-------|-----|------|----------|
| | Variety · | tons/A | | Color | °Brix | pН | Pink | Green | Sun | Mold | 50 fruit |
| 1 | PS 345 | 40.1 | A | 27.5 | 4.6 | 4.36 | 9 | 3 | 11 | 1 | 7.66 |
| 2 | AB 2 | 39.7 | AB | 24.0 | 5.1 | 4.35 | 1 | 4 | 10 | 1 | 7.31 |
| 3 | DRI 8058 | 39.4 | AB | 23.0 | 4.6 | 4.47 | 3 | 2 | 10 | 1 | 6.95 |
| 4 | AB 2 double* | 38.3 | ABC | 22.8 | 5.2 | 4.34 | 0 | 4 | 11 | 1 | 7.18 |
| 5 | BOS 67374 | 37.3 | ABC | 24.0 | 5.1 | 4.36 | 1 | 7 | 5 | 1 | 6.63 |
| 6 | Н 9780 | 36.9 | ABC | 23.3 | 5.6 | 4.31 | 1 | 2 | 15 | 1 | 6.58 |
| 7 | DRI 4610 | 36.8 | ABC | 22.0 | 5.4 | 4.38 | 1 | 5 | 3 | 1 | 7.03 |
| 8 | Sun 6368 | 36.7 | ABCD | 23.5 | 5.4 | 4.42 | 2 | 3 | 7 | 1 | 6.30 |
| 9 | U 886 | 36.6 | ABCD | 23.0 | 5.1 | 4.43 | 1 | 5 | 15 | 1 | 6.59 |
| 10 | H 8004 | 35.8 | ABCD | 23.8 | 5.3 | 4.37 | 1 | 1 | 15 | 1 | 6.11 |
| 11 | PX 384 | 35.3 | BCD | 26.3 | 5.5 | 4.36 | 2 | 3 | 10 | 3 | 6.70 |
| 12 | H 9780 dbl* | 34.6 | CDE | 23.3 | 5.2 | 4.34 | 2 | 4 | 12 | 1 | 6.45 |
| 13 | U 567 | 32.2 | DEF | 23.8 | 4.8 | 4.41 | 0 | 5 | 10 | 1 | 7.61 |
| 14 | Sun 6374 | 30.2 | EF | 23.8 | 6.2 | 4.38 | 0 | 4 | 11 | 1 | 5.84 |
| 15 | HMX 4802 | 29.7 | F | 23.0 | 5.2 | 4.50 | 1 | 3 | 11 | 1 | 5.93 |
| 16 | H 2005 | 29.2 | FG | 21.8 | 5.5 | 4.45 | 1 | 2 | 18 | 1 | 5.76 |
| 17 | Red Spring | 28.4 | FG | 23.3 | 4.9 | 4.55 | 0 | 1 | 28 | 0 | 5.83 |
| 18 | H 2601 | 25.0 | G | 24.3 | 5.2 | 4.48 | 0 | 1 | 25 | 1 | 5.75 |
| | LSD (5%) | 4.6 | | 1.5 | 0.3 | 0.07 | 2.0 | 2.2 | 7.1 | NS | 0.8 |
| | % C.V. | 9 | | 4 | 4 | 1 | 97 | 48 | 39 | 105 | 8 |
| | Plants per plug | | | | | | | | | | |
| | Single | 38.3 | | 23.6 | 5.4 | 4.33 | 1 | 3 | 12 | 1 | 6.94 |
| | Double* | 36.4 | | 23.0 | 5.2 | 4.34 | 1 | 4 | 12 | 1 | 6.81 |
| | Probability | NS | | NS | 0.07 | NS | NS | NS | NS | NS | NS |

Table 6B. Woodland, Replicated, Mid-Maturity: Stand, vine size, canopy cover and fruit maturity notes (transplant), JH Meek and Sons, 2006.

| | Replicated Variety | stand # per 100' | % bed cover | % fruit Canopy Cover | estimated harvest days (to AB 2) |
|----|------------------------------|---------------------|-------------|----------------------------|---|
| 1 | AB 2 | 100 | 93 | 83 | 0.0 |
| 2 | DRI 4610 | 101 | 95 | 88 | 5.5 |
| 3 | DRI 8058 | 100 | 98 | 68 | 0.5 |
| 4 | HMX 4802 | 98 | 73 | 68 | 0.5 |
| 5 | H 2005 | 100 | 98 | 55 | -0.3 |
| 6 | H 2601 | 100 | 88 | 48 | -4.3 |
| 7 | H 8004 | 100 | 90 | 68 | -0.5 |
| 8 | H 9780 | 100 | 95 | 73 | 4.5 |
| 9 | U 567 | 101 | 73 | 80 | 3.5 |
| 10 | U 886 | 99 | 93 | 73 | 3.0 |
| 11 | Red Spring | 101 | 88 | 45 | -3.8 |
| 12 | Sun 6368 | 102 | 88 | 78 | 2.0 |
| 13 | Sun 6374 | 101 | 95 | 70 | 1.0 |
| 14 | BOS 67374 | 100 | 95 | 85 | 4.0 |
| 15 | PS 345 | 99 | 93 | 80 | 5.0 |
| 16 | PX 384 | 99 | 88 | 85 | 3.3 |
| 17 | AB 2 double* | 100 | 100 | 83 | -0.3 |
| 18 | H 9780 double* | 101 | 100 | 75 | 5.0 |
| | LSD (5%) | NS | 7.6 | 10.5 | 2.3 |
| | % CV | 2 | 6 | 10 | 5 |
| | *Plants per plug | | | | |
| | Single | 100 | 94 | 78 | 2.3 |
| | Double | 100 | 100 | 79 | 2.4 |
| | Probability | NS | * | NS | NS |
| | | | | | |

Table 7A. Woodland, Non-Replicated, Mid-Maturity: Yield, fruit quality and defects, JH Meek and Sons, 2006.

| | Non Rep | Yield | | PTAB | | % | % | % | % | % | lbs per |
|---|-----------|--------|-------|-------|------|------|-------|-----|------|-----|----------|
| | Variety - | tons/A | Color | °Brix | pН | Pink | Green | Sun | Mold | BER | 50 fruit |
| 1 | U 898 | 26.6 | 22 | 5.3 | 4.51 | 1 | 1 | 40 | 1 | 0.0 | 5.40 |
| 2 | HMX 5893 | 36.7 | 29 | 5.0 | 4.43 | 1 | 3 | 13 | 1 | 0.0 | 6.50 |
| 3 | NDM 4464 | 29.1 | 24 | 5.2 | 4.40 | 0 | 3 | 26 | 0 | 0.0 | 5.60 |
| 4 | U 892 | 29.1 | 23 | 5.0 | 4.47 | 0 | 1 | 24 | 0 | 0.0 | 6.40 |
| 5 | BOS 212 | 35.4 | 23 | 5.5 | 4.44 | 2 | 3 | 6 | 4 | 0.0 | 5.90 |
| | Average | 31.4 | 24.2 | 5.2 | 4.45 | 1 | 2 | 22 | 1 | 0.0 | 5.96 |

Data is non-replicated and should be viewed with much less confidence than replicated tests.

Table 7B <u>Woodland, Non-Replicated, Mid-Maturity</u>: Stand, vine size, canopy cover, and fruit maturity notes, transplants, JH Meek and Sons, 2006.

| | Observational Variety | stand # per 100' | % bed cover | % fruit canopy cover | estimated harvest days (to AB 2) |
|---|--------------------------|---------------------|----------------|----------------------------|--|
| 1 | U 898 | 99 | 90 | 40 | -3.3 |
| 2 | HMX 5893 | 102 | 100 | 70 | 0.7 |
| 3 | NDM 4464 | 100 | 70 | 60 | 2.7 |
| 4 | U 892 | 100 | 90 | 60 | -1.3 |
| 5 | BOS 212 | 103 | 100 | 70 | 0.7 |
| | Average | 101 | 90 | 60 | 0 |

Data is non-replicated and should be viewed with much less confidence than replicated tests.

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