5 August 2008
(Volume 48-3)

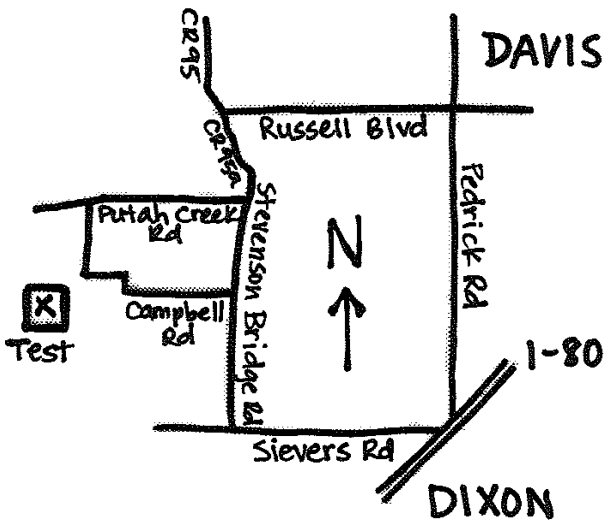
MID-MATURITY, TOMATO VARIETY TRIAL

Field Meeting Notice
Mid Maturity Variety Evaluation Trial
10:30am to noon, **Thursday**, 14 Aug 2008
SW Davis – NW Dixon area
1 mile west on Campbell Rd from Stevenson Bridge Rd, then dirt roads for 1/4 mile south then west.
Caution: Campbell Road is narrow- be prepared to safely move to shoulder for oncoming traffic.
Light lunch will be available for the first 20 attendees.

Major differences in vine size and canopy cover can be seen amongst varieties in our trial. Thirteen replicated and 8 observational, mid-maturity processing tomato varieties were transplanted on 2 lines per bed on April 7 in a commercial field planted to AB 2. Cooperators are Steve Meek and John Pon of J.H. Meek and Sons. Stand establishment was very good. Growth is exceptionally robust as well. Spotted wilt is scattered amongst the planting while Verticillium wilt is abundant.

Double plants per plug vs. singles are compared with varieties AB 2, H 2601 and H 9780. Harvest is anticipated during the week of August 18th.

Directions: From I-80, take Pedrick Road exit and continue westward on Sievers (at Pedrick Produce) for 2.5 miles. Note: do not make curved left turn onto Curry Road). Right turn onto Stevenson Bridge Rd, heading north for 2 miles. Left turn on Campbell Rd, heading west for 1 mile. As Campbell makes a sharp right turn, turn left onto dirt road. Field is southwest about 0.5 mile away. Signs will direct you to plot from dirt road.



LOCAL FIELD OBSERVATIONS

Tomato powdery mildew is more abundant in fields this year. Rally, Quadris, Cabrio, Flint and sulfur are some of the materials registered for disease control. Information is limited on comparative control from these materials, but all are preventives.

Spotted wilt is widespread this year in our area. Many fields have low levels of the disease. I have visited a couple of fields in the general region where incidence in parts of the field exceed 50%. The fields with a high incidence, as well as

surrounding fields, would presumably be at higher risk in the 2009 season, assuming the spread is from weedy hosts in the area.

Off-type plants are more commonly observed this year in our commercial tomato fields. Most of the plants generally appear less productive and delayed in maturity, while others are small fruited, wild-looking species. Some of the wild species can become weedy competition in the future.

Harvest is delayed with slower ripening at least in many of mid-August, harvest-scheduled fields. The prospect of this delay is a concern if harvest of later plantings overlaps with the current temporary slow down.

EARLY MATURITY VARIETY TRIAL

Our local early maturity processing tomato variety evaluation trial was harvested with Joe Rominger near Winters on July 18. H 2206 was the earliest maturity variety in our test, about 9 days earlier than APT 410 (table 1). While H 2206 had sparse cover, fruit tended to hold color well and not sunburn.

BOS 66509 had the highest yield, although statistically grouped with 3 other varieties including Sun 6366, APT 410 and AB 4606 (Table 2).

APT 410 was also compared as single plants per plug vs. double plants. Yields and fruit quality were statistically similar.

Table 1. Vine size, canopy cover and fruit maturity estimate, early maturity processing tomato variety trial evaluation, D.A. Rominger and Sons, Winters, 2008.

	Replicated Variety	plants per 100'	% bed cover	% fruit canopy cover	estimated harvest days (to APT 410)
1	AB 4606	109	85	83	2.5
2	APT 410	110	90	83	0.0
3	BOS 66509	109	90	88	2.0
4	CXD 274	110	83	73	4.8
5	Gem 89	108	78	85	2.5
6	H 2206	108	73	55	-9.0
7	H 9280	109	70	63	-1.5
8	HED 1058	109	88	55	-3.8
9	SUN 6366	110	90	78	1.8
11	APT 410=Dbls	110	90	85	0.8
	LSD .05	NS	7	9	2.1
	% CV	1	6	9	6

Table 2. Yield, fruit quality and cull evaluation from early maturity variety trial, D.A. Rominger and Sons, Winters,

CORRECTED VALUES for Brix, color and pH

	Variety	Yield tons/A		Brix	PTAB color	pH	% pink	% green	% sun burn	% mold	% BER	lbs./ 50 fruit
1	BOS 66509	50.3	a	4.9	26	4.49	3	2	3	1	0	7.0
2	SUN 6366	47.1	ab	5.2	27	4.46	1	2	4	1	1	7.1
3	APT 410	47.0	abc	4.8	26	4.49	3	1	6	1	1	6.8
4	APT 410=Dbls	45.3	abcd	5.0	24	4.45	1	2	4	1	2	6.4
5	AB 4606	43.8	abcd	5.4	27	4.41	9	4	1	1	1	8.1
6	Gem 89	43.0	bcd	5.0	24	4.51	1	1	6	0	0	6.8
7	CXD 274	40.5	cde	5.2	25	4.49	5	3	7	1	2	6.3
8	HED 1058	40.0	de	4.4	26	4.45	0	1	11	4	1	6.2
9	H 2206	35.5	e	5.5	25	4.51	0	1	4	1	1	4.5
10	H 9280	34.7	e	4.5	25	4.50	2	1	7	4	0	7.0
	LSD 0.05	6.5		0.3	1.5	0.05	3.0	1.3	NS	1.1	NS	0.7
	CV	11		4	4	1	89	53	83	54	139	7
	Average	42.7		5.0	25.2	4.48	2.5	1.7	5.3	1.5	0.8	6.6

2008

FIELD BINDWEED by Sara Pearson

The following is an article by summer student assistant Sara Pearson, a sophomore ag student enrolled at Modesto Junior College. In the late spring, she weeded a field test plot multiple times to reduce bindweed competition in young tomato transplants. To further her experience, she was assigned to write a brief on bindweed. The article was reviewed by UC Weed Ecologist Tom Lanini.

Over the past view months I have seen numerous local tomato fields with vigorous patches of field bindweed. Field bindweed (*Convolvulus arvensis)* sometimes referred to as morning glory, grows not only from seed but also from an extensive root system. This perennial weed begins its life cycle in early spring with two cotyledons (seed leaves) shaped like arrowheads. Plant growth originating from rhizomes (underground stems) lacks seed leaves. As the plant matures in early to mid-summer, it produces white-pink trumpet shaped flowers. Each plant can produce about 550 seeds. These seeds can survive 30-60 years in the soil. Field bindweed seed collected near Davis in 1939 was still found to be viable in a 2008 study conducted at UCD.

Field bindweed grows vigorously, creeping along the ground, unless supported by a vertical crop, in which case it entwines itself onto the plant. It is deep-rooted, extending 20 feet or more, and competes vigorously with crops for water and nutrients.

Once established, field bindweed is one of the most persistent weeds. The extensive root system acts like an underground vacuum system sucking water and nutrients away from other plants. Cultivation can remove top growth, but new growth often arises from the extensive root system. When tillage is used for control of established field bindweed, implements should be set to cut 3-5 inches below the soil surface. This process kills the top growth and the root system must use some of the stored carbohydrates to grow another top. If tillage is repeated at 2-3 week intervals during the growing season, eventually the root system will be starved of carbohydrates and will die. Longer time intervals between tillage operations allow the field bindweed plants to start storing carbohydrates and thus reduce the effectiveness of this control

Controlling field bindweed can become quite a nuisance if not controlled at the first sight of new leaves. The best control of field bindweed is achieved with a combination of cultivation, selective herbicides, and competitive crops. Glyphosate has been shown to reduce the amount of bindweed in

an area. By using Roundup Ready (RR) crops such as RR corn, one can see improvements in the control of field bindweed. Other herbicides often used for control of field bindweed are 2,4-D and dicamba. Crop rotation with shade producing plants such as pumpkins, alfalfa, legumes and corn has also been shown to reduce field bindweed growth. Mulches and black plastic can prevent the growth of field bindweed seedlings by reducing the amount of light available to the weed.

Control of field bindweed with materials like glyphosate is suggested in the fall. A local grower indicated their springtime applications were superior to their fall timing. Weed Specialist Tom Lanini rationalized that control would be greatly compromised in the fall IF plants were stressed due to low soil moisture or pest pressure. Additionally, with Roundup, dusty plant leaves would tie up the herbicide. Otherwise, fall is the proper time for chemical control of bindweed when plants are actively growing, flowering and translocating more food to the root system.

Submitted by,

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TOMATO INFO NEWSLETTER
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