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University of California
Agriculture and Natural Resources
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UCCE

SWEETPOTATO TIPS

Merced & Madera Counties Vol. 1, Jan, 2016

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- ✓ Production notes.

Special Note:

Dominus is a new fumigant that has Federal but not CDPR registration. Nimitz is a new nematicide that has CA registration in some fruiting crops but not sweetpotatoes.

There will be a Metam stewardship class from 1:30 - 3:30 pm on Tuesday, Feb 2 (class required by CAC for growers using metam products)

51st Annual

SWEETPOTATO MEETING

Tuesday, February 9, 2016
8:00 am - noon
UCCE Classroom
2145 Wardrobe Ave., Merced

7:30 am	Signing in, coffee, and Jantz Sweetpotato muffins *Courtesy of Yosemite Farm Credit*
8:00	Scott Stoddard, Farm Advisor. Summary of 2015 pest management trials: Nimitz nematicide, Maxim fungicide, and Dominus fumigation trials.
8:50	Sean Runyon, Deputy Merced County Agriculture Commissioner. Non fumigant VOC regulations and label updates.
9:20	Brian Hegland, Tech Services Rep, Dow AgroScience. Telone fumigant review: what's changed and what's stayed the same.
9:30	Lonnie Slaton, PCA, Simplot. Wireworm and false wireworm symptoms and management.
9:55	Coffee break
10:15	Jason Tucker. The Sweet Potato Council of California marketing update and 2017 convention prep.
10:20	Gabriela Sandoval, Ag Food Safety Solutions. Pesticide records and food safety requirements.
11:00	Dr. Antoon Ploeg, Nematology Specialist, UC Riverside. Management options for root-knot nematodes on sweetpotatoes.
11:50	Summary and questions.
Noon	Lunch (tri-tip & sweetpotatoes by Arnold's Catering) *Courtesy of Lonnie Slaton with Simplot*
1:30 pm	Sweet Potato Council business meeting.

PRODUCTION NOTES

2015 season review. Last winter the Merced area received 7.2 inches of precipitation, more than most thought we'd get considering we experienced the driest January (no measurable precipitation) ever. Following the abysmal 5.2 inches in 2013/14, however, there was no water behind Exchequer Dam, and so for the first time since its inception, MID did not have an irrigation season.

With no ditch water, many thought sweetpotato acres and production would be down in 2015. Instead, everybody figured out a way to stretch well water, wheel well water, and dig more wells. Acreage probably did not decrease, and may have actually increased slightly over 2014 (USDA estimated 19,000 acres in 2014, preliminary estimates for 2015 are 18,500 but this will likely be revised soon).

Unlike 2014, the 2015 season did not enjoy early season price premiums other than for the Sweets category. Rather, we actually went long on Covingtons, and prices to date have been down, an especially bitter pill to swallow considering the extra production costs because of lack of water and sky-high rent. Furthermore, since early digging was minimal this year, yields are up. Last year, USDA estimated 27.5 bins per acre (average), and total CA production of 523 million pounds. My estimate for 2015 is 30 bins per acre from 18,500 acres, for total production of 555 million pounds. This is based on my observations of an excellent Covington crop pulling up our average yield.

So in a classic replay that has occurred hundreds of times in American Agriculture, price is down because production was very high. We are not the only state contributing to the problem however. Production in the last 3 years has increased significantly in the US, mainly from rapid acreage increases in North Carolina (Table 1). Low commodity prices for corn, cotton, peanuts, and soybean are to blame. North Carolina estimates are conservative — they likely were above 100,000 planted acres in 2015.

Table 1. USDA NASS sweetpotato acreage estimates for the major producing states.

	2013	2014	2015
California	19,000	19,000	18,500
North Carolina	53,000	72,000	86,000
Mississippi	19,500	21,500	26,000
Louisiana	7,500	8,800	9,000
TOTAL	**99,000**	**121,300**	**139,500**

Presprouting Seed. Work by Bob Scheuerman in the 1980's showed that pre sprouting seed would produce more plants and about 10 days earlier than non-sprouted seed. Pre sprouting is absolutely essential for cold beds and Bellevue.

Proper pre sprouting conditions are 80 - 85° F with relative humidity of 80 - 90% for 2 - 4 weeks. His results showed better production if the roots were pre-sprouted for at least 3 weeks.

CAUTION: warm seed rooms also need good ventilation. Keep the temp below 85° to avoid either drying out the roots or initiating bacterial soft rot.

Cold beds with pre-sprouted seed can be just as productive as hot beds, and they are considerably quicker to install. Wait to do cold beds until March when they benefit from sunnier and warmer conditions.

Ventilate the plant beds when air temperatures are more than 90° F when measured by a thermometer hanging from the top of the hoop at the end of the bed.

Black Rot. Black rot was at one time a common storage disease on sweetpotatoes, but for various reasons has been only a minor problem for the industry for the last 30 years. However, according to reports from Dr. Chris Clark, Plant Pathologist at LSU, Black Rot has showed up again in storage houses in Alabama, Missouri, Mississippi, and Virginia that have not had it before.

Black rot is caused by the fungus *Ceratocystis fimbriata*. It is mainly a storage disease that causes nearly black, slightly sunken circular spots on the surface of the roots. These spots usually do not extend very far into the flesh, and are typically firm and dry.

Black rot is a disease that can be transferred to the beds, where it can cause cankers on the stems, and then moved to the fields where it can reduce the stand and ultimately yield. It is important to know if

this particular rot is again in California. Those most at risk are growers who have received seed shipments from out of state.

Black rot grows in storage, so now is the time it will start showing up. If you notice higher than normal amount of circular rots, either on the packing line or on seed, please don't hesitate to call me for verification. Samples will be sent to the UC Davis pathology lab. This disease is manageable through a diligent clean seed program, and it is better to act now before bedding.

RESEARCH SUMMARY (PARTIAL)

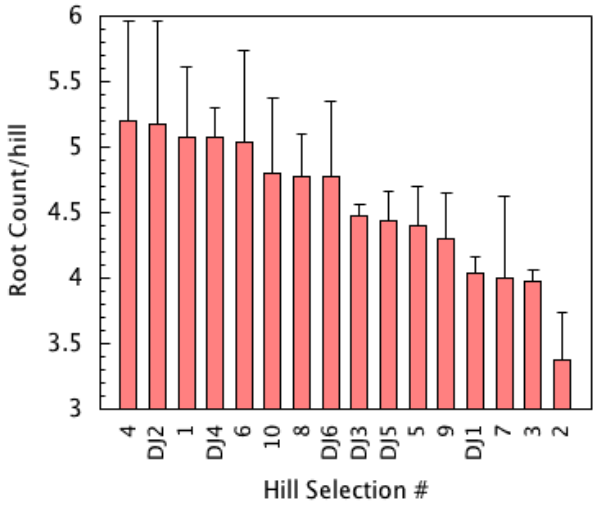
National Collaborators Trial. Covington excelled this year in the trial, with 47 bins/A and 69% #1's. Bellevue yielded 42 bins at 63% #1's, while Beauregard was 37 bins but with 26% culls using G2 seed. Bonita did not yield as well this year at this location, with 36 bins/A, but shape and color were superior to NC-87-847.

Advanced Line Trial. The ALT was very large in 2015, with 63 entries from LSU and NCSU. While the emphasis of the ALT is the evaluation of new varieties in the red category, sweets, Japanese, and several purple skin/ purple flesh lines were also grown. Results for the replicated lines are shown in Table 2. L-09-149 did not impress at this location — it looked better in the Collaborators Trial — and will likely be dropped. Unfortunately, there are no other new reds far enough along in the screening process to offer any hope of a Diane replacement soon.

Diane (top) and L-09-149 (bottom) after 4 months storage.

Burgundy Hill Selection Trial. In 2014 several outstanding hill selections were made from commercial fields to see if root set could be improved over the clone currently available at UC Davis. With help from Dave Souza, runner cuttings were made last spring from these selections and planted into replicated small plots. Hill count results are shown below. Hill counts below 5 are unacceptable, and most of the lines did not meet this threshold.

Burgundy hill trial 2015 Graph



Scott Stoddard
Farm Advisor

Table 2. Replicated variety yield results in the 2015 ALT.

Var	Var Name	TMY lbs/A	40.0 lb box/A No. 1's	Meds	Jumbos	adjusted TMY box/A	bins/A	No. 1's #1%	Culls cull%	harvest comments	market class
1	NC-05-198	33834	373	194	279	846	31.1	44.3%	0.0%	light red	orange
2	NC 08-553	45864	503	407	236	1147	42.2	43.9%	0.0%	good color, excessive latex	sweet
3	Burgundy	28935	298	209	217	723	26.6	41.5%	0.0%	poor set	red
4	L-09-149	41092	322	256	450	1028	37.8	31.3%	0.0%	deep purple skin	red
	Average	37431	374	266	295	936	34.4	40.3%	0.0%		
	LSD 0.05	---	125	67.7	158	313	12.5	7.2	---		
	CV,%	---	20.9	15.9	33.5	20.9	20.9	11.2	---		

TMY = Total marketable yield (sum of #1s, mediums, and jumbos).