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University of California
Agriculture and Natural Resources
Making a Difference for California

SWEETPOTATO TIPS

UCCE

Merced & Madera Counties Vol. 1, Jan, 2018

UC Coperative Extension • 2145 Wardrobe Ave. • Merced, CA 95341
(209) 385-7403 FAX (209) 722-8856 • http://cemerced.ucdavis.edu

IN THIS ISSUE:

Special Note:
Nimitz is a new nematicide that has Federal but not CDPR registration in sweetpotatoes. The company continues to pursue full registration in 2018.

There will be a Metam stewardship class from 2:00 - 4:00 pm on Thursday, Feb 8 (class required by CAC for growers using metam products)

53rd Annual

SWEETPOTATO MEETING

Thursday, February 8, 2018
8:00 am - noon
UCCE Classroom
2145 Wardrobe Ave., Merced

7:30 am	Signing in, coffee, and Jantz Sweetpotato muffins *Courtesy of Wayne Luker, Crop Production Services*
8:15	Scott Stoddard, Farm Advisor. Summary of 2017 variety and pest management research: Collaborators trial and ALT, nematicide trials, fumigation alternatives, and IR4 herbicide trials.
9:15	Brian Hegland, Dow-DuPont. Telone availability update.
9:30	Sean Runyon, Assistant Merced County Agriculture Commissioner. DPR regulations update: fumigants, Lorsban, and the school pesticide buffer zone.
10:20	Coffee break
10:45	Jason Tucker. The Sweet Potato Council of California marketing update, nominations, and 2018 U.S. Convention summary.
11:00	Sue Sim, Foundation Plant Service, UC Davis. Virus management and NCPN, new introductions to the FPS sweetpotato team.
11:40	Hicham Etal, Deputy General Manager, MID. Water supply update.
Noon	Lunch (pork loin & sweetpotatoes by Arnold's Catering) *Courtesy of Lonnie Slaton with Simplot*
1:30 pm	Sweet Potato Council business meeting.

PRODUCTION NOTES

Plenty of rain fell in California during the winter of 2016/17, which filled the MID and TID reservoirs for the first time in several years. A cool wet spring was followed by one of the hottest summers in over a decade, as Merced experienced 27 days over 100 F and many nights where the low temperature stayed near 70 F. This combination — cool early and hot late season — stressed plants and resulted in many fields with lower than average yields in 2017. USDA estimates put statewide yield at 31 bins per acre, about 5% below our 5-yr average.

Even though the California sweetpotato industry was still working through high inventory levels from the 2015 and '16 seasons, acreage increased slightly in 2017 according to USDA. This was largely a result of additional area from new growers. The production area was estimated at 21,000 acres, resulting in a 651 million pound crop— 30 million more pounds than 2016.

U.S. sweetpotato consumption is up. According to USDA, consumption is now estimated at 7.65 lbs per person. North Carolina is aggressively pursuing export opportunities to northern Europe. However, total U.S. production also increased in 2017, to 3.56 billion pounds. The result is that inventories are very high and the price is soft — less than $20 per box (#1s) across the U.S., and significantly less than that for many producers.

Nationally, planted acreage was less in 2017, but only about 4,000 acres. Early estimates indicate acreage will decrease by more in 2018, probably 8,000 - 10,000 acres. This reduction will come mostly from North Carolina, but California growers should reduce acreage as well. Whether this is enough to clear out inventories will depend mainly on yield.

Unfortunately, it is very unlikely sweetpotato prices will increase any significant amount this year. Therefore, California growers need to carefully monitor input costs, and if possible try to reduce production costs by 5%. It is important to remember to not reduce those input that might also reduce yield. Soil and compost sampling are two such examples. A composite soil sample will cost $50 and could potentially save you hundreds of dollars in fertilizer costs. Look closely at the phosphorus (P) level of your soil. After many years of compost applications, many of our soils contain high levels of this nutrient. Any value over 25 ppm Olsen-P indicates that a response to fertilizer P is very unlikely. Phosphorus fertilizer could be eliminated from many fields with no impact on yield. Furthermore, there is little need to apply more than 250 lbs of potassium (as K_2O) regardless of the soil test result.

Table 1. USDA-NASS harvested sweetpotato acreage estimates for 2015 - 2017 (USDA-NASS Crop Production 2017 Summary - January 2018).

	2015	2016	2017
California	18,500	20,000	21,000
North Carolina	86,000	95,000	89,500
Mississippi	26,000	29,000	29,000
Louisiana	9,000	9,500	9,500
TOTAL	**139,500**	**153,500**	**149,000**

Table 2. Nutrient guidelines for California sweetpotatoes.

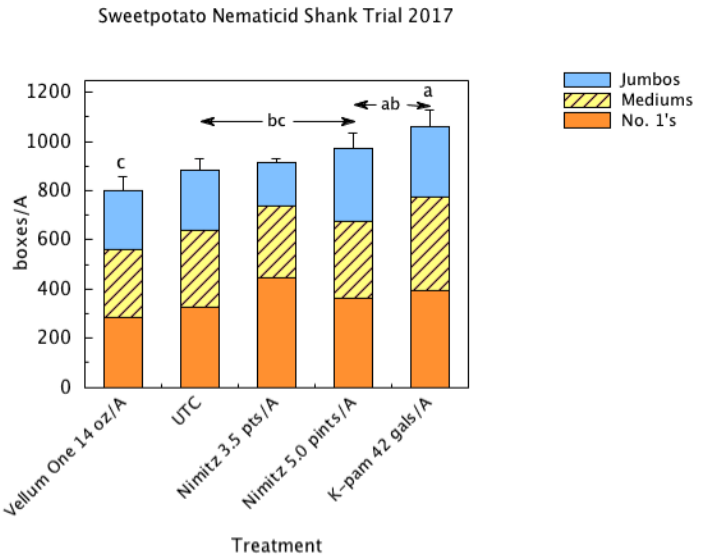
Nutrient	Soil test	recommendation
Nitrogen (N)	soil test results are not used for this nutrient	125 lbs N/A for Murasaki or fields < 30 bins/A 175 lbs N/A for all others.
Potassium (K)	<100 ppm low > 180 ppm hi	no responses have been seen in rate trials; apply 5 lbs K_2O per harvested bin but less than 250 lbs/A total
Phosphorus (P)	Use Olsen P < 12 ppm low > 25 ppm hi	for fields testing below 25 ppm, apply 60 - 75 lbs P_2O_5 per acre or 1.3 lbs per harvested bin
Boron (B)	< 0.5 ppm low > 5 toxic	if below 5 ppm, apply 2 - 3 lbs B per acre

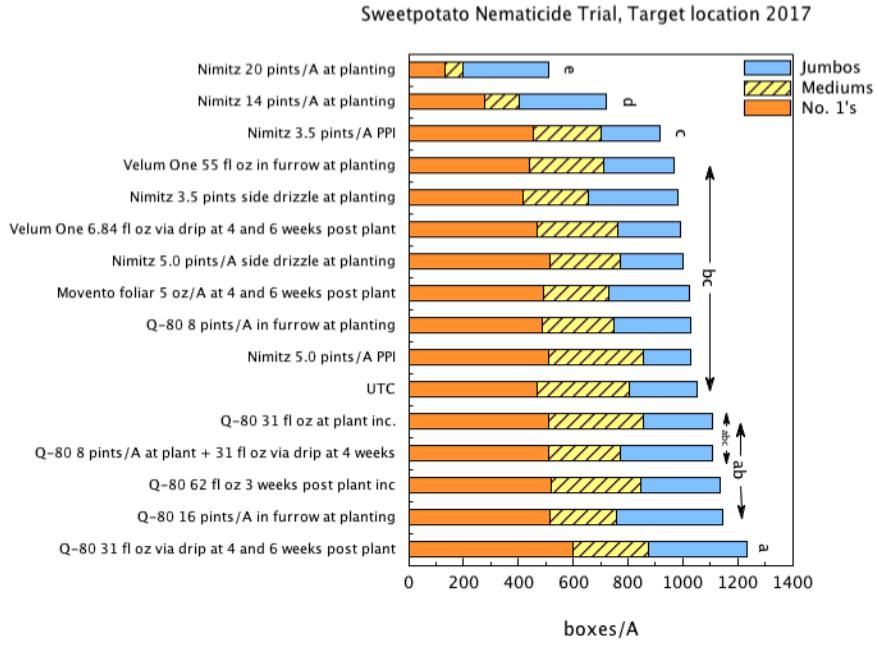
NEMATICIDE TRIAL RESULTS

Trials were conducted in 2017 in commercial sweetpotato fields in Merced County as well as the UC South Coast Research and Extension Center in Irvine, CA, evaluating Nimitz (fluensulfone, Adama), Velum (fluopyram, Bayer Crop Science) and Salibro (fluazaindolizine, duPont) nematicides. Metam K and untreated control plots were used for comparison. Nimitz, Velum, and Salibro were evaluated at different treatment timings (pre-plant, at-plant, 3 – 6 weeks post plant), rates, and methods of application (with transplant water, in-furrow, and drip). Application rates were typically 3.5 and 5 pints/a for Nimitz, 32 and 64 oz/A for Salibro, and 6.84 to 13.6 oz/A for Velum. Due to application error, the transplant water application rate of Nimitz and Salibro was 4x the label rate (14 and 20 pints/A). In Merced County, Nimitz was also tested at 3.5 and 5 pints/A with a shank application to a depth of 9" on 9" centers 10 days before planting.

In Merced County, shanked applications of Nimitz slightly improved total yield compared to the untreated control; the 5.0 pints/A rate was similar to the standard metam potassium treatment. Nimitz applied at high rates in the transplant water caused significant crop injury and decreased yield compared to all other treatments and the untreated control, whereas both Velum and Salibro were safe at all rates evaluated. Most of the Salibro treatments improved yield over the UTC, and Salibro applied via drip had best overall yield at 1236 boxes per acre. Regardless of treatment or location, RKN counts in the spring and fall were highly variable and were not affected by nematicide treatment.

Results with these new nematicides have shown significantly increased root yield and quality with pre-plant applications in multiple test sites, however, the method and timing of application was very important. Nimitz needs time (7-14 days) and incorporation to work safely and effectively. Velum One has very low water solubility and must be tilled into the soil. Salibro has very high solubility and excellent crop safety and has the potential for drip applications, but more evaluation is needed.





Scott Stoddard, Farm Advisor