Making a Difference for California





Merced & Madera Counties Vol. 1, April 2021

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



IN THIS ISSUE:

- Upcoming field day
- General Notes
- Jan 30 Feb 1, 2022. 60th National Sweet Potato Convention at the Bellagio Hotel in Las Vegas. More info forthcoming.

Special Note:

Recent testing by Dr. Antoon Ploeg at UCR shows our current varieties are still resistant to the Peach Root Knot Nematode Meloidogyne floridensis,

Scott Stoddard,

Farm Advisor

FIELD MEETING APRIL 27, 2021, WITH LSU PLANT BREEDER **DR. DON LaBONTE**

Please join me on Tuesday, April 27 for a brief field day to discuss Southern Blight management in hotbeds and a quick summary of 2020 research projects. Don LaBonte will also be there to talk about 'Vermillion' (L-13-81) and other varieties of interest. Updates from Sean Runyan, Merced County Assistant Agriculture Commissioner on fumigants, and Caddie Bergren with the CDFA Climate Smart program. Other topics of interest: heavy metals in baby food made with sweetpotatoes and possible new regulations, NCPN Clean Seed Survey.

Sweetpotato Spring Hotbed Field Day

Tuesday, April 27, 9:00 - 11:00 am

Field location: Bob Weimer hotbeds. NW corner of Cressey Way and Westside Blvd.

coffee and donuts

Special Guest: Dr. Don LaBonte, LSU

General Notes:

2022 Convention. After the disastrous and forgettable COVID year that saw the annual convention cancelled in 2021, the Sweetpotato Council of California is the next host state and has started making plans for 2022. The annual sweetpotato convention will be held at the Bellagio Hotel in Las Vegas, January 30-Feb 1, 2022. Registration and reservation information will be at the U.S. Sweet Potato Council website at https://sweetpotatousa.org/convention/. Expect registration fees to be around \$490, and room prices to be \$180+.

Heavy metals update. Congressional staff report from the Subcommittee on Economic and Consumer Policy, Committee on Oversight and Reform, U.S. House of Representatives titled "Baby Foods Are Tainted with Dangerous Levels of Arsenic, Lead, Cadmium, and Mercury". The report featured the logos of the following baby food companies on the title page: Organics Happy Baby, Beech Nut, Gerber, Earth's Best Organic, Plum Organics, Parent's Choice, and Sprout Organic Foods. As an ingredient in many of the bottles, sweetpotatoes were mentioned 19 times in connection with levels of arsenic and lead relative to

April, 2021 The University of California, in accordance with applicable Federal and state laws and University policy, does not discriminate on the basis of race, color, national religion, sex, disability, age, medical condition (cancer related), ancestry, marital status, citizenship, sexual orientation, or status as a Vietnam-era veteran or special disabled veteran. Inquiries regarding this policy may be directed to: Affirmative Action Director, University of California, Agriculture and Natural Resources, 1111 Franklin St. 6th Floor, Oakland, CA 94607-4200 (510) 987-0097.

company standards. There are no USD or FDA limits set on baby food products for these metals. 100 parts per billion (ppb) arsenic and 50 ppb lead seem to be the most common thresholds. In the data presented in the report, labels using sweetpotatoes exceeded this value 10 times (53%). There was no mention of the sweetpotatoes tests with the other metals of interest.

As a result of the report, CNN, USA Today, and many other media outlets (including our local Merced Sun Star) picked up and broadcast the report nationally. CNN was first, with an article titled: "Leading baby food manufacturers knowingly sold products with high levels of toxic metals, a congressional investigation found", on Feb 5, 2021. In response, the U.S. Sweet Potato Council hired a media tracking firm Stephen McCauley with the Ginger Network to provide guidance to the industry, through the Council, to help navigate this situation and develop a crisis plan should this be needed.

As part of the response plan, Dr. Arthur Villordan with LSU is coordinating a project for each state (LA, NC, MS, and CA) to take samples of roots for heavy metal analysis. This data will provide information on a statewide basis on heavy metal concentrations in raw, field run sweetpotatoes on a broad, industry basis. Right now, if companies are testing for heavy metals, it is proprietary information. The goal of the project is to show that the sweetpotato industry is being responsive to the Congressional report and consumers.

For this project, I sampled 30 individual roots (all orange-flesh) from 10 growers representing both conventional and organic production. Roots were

taken directly from a #1 storage bin and had not been washed. Average root weight was 350 g (about 12 oz). Roots were sent to Brooks Applied Labs in Bothell Washington for analysis of Arsenic, Cadmium, Lead, and Mercury.

Results are shown in Table 1. In general, California sweetpotatoes are very low in heavy metals. Arsenic exceeded 10 ppb (parts per billion) on 4 samples (13%) and cadmium for 2 samples (6.5%).

A proposed Baby Food Safety Act of 2021 (see <u>full</u> <u>text here</u>; <u>H.R. 2229</u>, <u>S. 1019</u>) would set certain requirements for infant and toddler foods (i.e., foods for children up to 36 months in age). Some notable aspects of the draft legislation:

Would set initial maximum levels for arsenic, cadmium, lead and mercury, above which the food would be deemed adulterated as of 1 year after enactment:

- Inorganic arsenic: 10 ppb for infant and toddler food (except cereal) and 15 ppb for infant and toddler food that is cereal
- Cadmium: 5 ppb for infant and toddler food (except cereal) and 10 ppb for infant and toddler food that is cereal
- Lead: 5 ppb for infant and toddler food (except cereal) and 10 ppb for infant and toddler food that is cereal
- Mercury: 2 ppb

Note that the U.S. Sweet Potato Council has negotiated a reduced cost for heavy metal analysis for sweetpotato growers to submit samples on their own of \$90 per sample. This is a substantial discount compared to the normal \$125 rate. To receive the discount rate, please contact me for required chain-of-custody form.

lable 1.	Sweetpotato	sampling t	or neavy	/ metals,	Merced	County	March 202	.]

	Units= ppb				
Variety avg	n	Arsenic	Cadmium	Lead	Mercury*
Bellevue	7	10.3	1.8	2.0	1.8
Covington	8	3.7	3.8	0.9	1.7
Diane	11	4.2	1.5	1.1	1.8
13-81	3	1.6	1.1	0.9	1.7
Production	n				1
Conventional	19	5.2	3.2	1.3	1.8
Organic	11	5.4	1.2	1.1	1.7
Detection limits (ppb):		<1.5	<0.8	< 0.5	<1.8

ASOLUMBER DE STATE DE

Sweetpotato Tips April 2021 page 2

^{*} All Mercury values below detection limit.



The CleanSEED Project. Win a \$500, \$300, or \$200 Visa gift card from Helena Agri-Enterprises, LLC by taking the survey below!

Do you use virus-tested seed? If so, do you know the generation (the age) of your various seed lots? The CleanSEED Project is conducting a survey to learn more about sweetpotato industry challenges, barriers, and strategies to improve virus-tested seed roots and plants for farming operations. The project is headed by Dr. Mark Shankle at Mississippi State University, but involves producers from all states. Feedback from the survey will be used to guide a multi-state workshop for creating a research action plan that will best meet the needs of the sweetpotato industry.

In general, virus-tested seed has been shown to increase yield and improve shape and skin color. But there are other reasons to use virus-tested seed. The purpose of the survey is to determine these reasons. as well as determine the adoption rate by growers around the country. This information will in turn be used to develop a USDA research proposal on a meeting that is being planned for July 21 - 22 in Mississippi.

You can access the survey here: 2021 Sweet Potato CleanSEED Survey

Production. USDA revised estimate for sweetpotato harvested acreage is listed below. Acreage for both Louisiana and Arkansas were not reported in 2020, and are my estimates.

	acres, 2018	acres, 2019	acres, 2020
California	21,000	21,500	22,000
North Carolina	78,500	97,700	105,300
Mississippi	26,000	27,500	29,500
Louisiana	9500	8300	7800*
Arkansas	4800	5000	5000*
TOTAL	139800	160000	169,600

USDA estimated total 2020 production for California at 792 million pounds, or 36.0 bins/A, and total value of \sim \$229 million (includes processing), which if correct, works out to be about \$11.56 per box (grower receipts). In 2019, production was reported at 817 million pounds. Considering how short the crop was last summer, I think their guess was way off the mark. I estimated 2019 production at 688 million pounds in January of last year.

Variety Trial Results

Results of the Collaborators Trial in Livingston are shown in the graph below. L-13-81, the new doubleskin red from LSU, has been named 'Vermillion' and has received patent protection. Based on 13 trial-year locations since 2016, the average yield potential is about 85% of Diane. Note that this line does not have

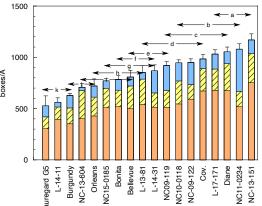


root knot nematode resistance and will perform much better on fumigated soil. Vermillion stores much better than Diane, but has much darker, purple-red skin. It also shows scratches less, and has lower plant production in the hotbeds. My advice is to grow both Diane and Vermillion on fumigated ground. Sell Diane early and Vermillion late.

Also note the impact of old seed in the graph below: 6 year old Beauregard had half the yield of new Covington (I did not have new Beauregard seed in this trial in 2020). As part of the clean seed project, I am making a new versus old seed comparison for Covington and Beauregard in 2021.



National Sweetpotato Collaborators Trial





April 2021 Sweetpotato Tips page 3