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SWEETPOTATO TIPS

UCCE

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IN THIS ISSUE:

The Sweet Potato Council of California's new marketing campaign will establish a new website and emphasize the word "sweetpotato". No more yams!

FIELD MEETING OCTOBER 18, 2013, WITH LSU PLANT BREEDER DR. DON LaBONTE

Please join me on October 18 for a brief field day and lunch to see examples of the Advanced Line Trial (ALT). This is the variety trial I have conducted with Dave Souza, Don LaBonte, LSU Plant Breeder and Craig Yencho, NCSU Plant Breeder. The main emphasis of the trial is to evaluate new red yam varieties, but there are also sweets and Oriental types, and perhaps even a couple purple/ purples. This year includes 12 lines from NCSU. Don will also be there to discuss the licensing program and answer your questions. Box lunch provided.

Sweetpotato ALT Harvest Field Day

Friday, Oct 18, noon - 1:30 pm

D&S Seed Storage Shed, corner of Bell and Hull Rds

Lunch: Boxed sandwich and drinks + BBQ sweetpotatoes (come taste the new entries hot off the grill)

Special Guest: Dr. Don LaBonte, LSU

Other:

As part of the Specialty Crops Research Initiative with LSU, I will also be discussing food safety and distributing the "Crisis Communications Workbook".

CDFA FREP. Managing Agriculture Nutrients. October 29-30, 2013. Modesto Double Tree Hotel. $80 per day. www.healthyplants.org

GENERAL NOTES

Merced received 1.1 inches of rain in 2011 from a storm that came through October 3 - 5. Concurrently, the soil temperature at 6" dropped about 5° F, to 64° F. We had a similar storm on October 24, 2010, which also resulted in 5° drop in soil temperature. In both years, we experienced higher than normal losses in storage for fields harvested after these storms, especially Diane. It is the

temperature drop, more than the actual rain, which increases the chances for problems in stored roots. Chilled seed also does poorly in the hotbeds, and can result in reduced stands from weak transplants.

If we do not get any fall rains this year, there is no reason to expect increased problems in storage or in the beds next spring. But as a general reminder, Diane should be harvested before the end of the month. And especially if any rain is forecasted.

175 and LSU-52 Update.

It is still early for me to summarize the performance of these two lines this year, but in general LSU-52 seems to be doing better than 175. I've always been concerned about 175's tendency to jumbo and get bally, and in general that seems to be the consensus this season. It's also setting deep. Luckily, there are many other promising new red yams that are being evaluated in the ALT.

As far as screening for new varieties, the red yam category has proven to be especially difficult. What looks great this year will be completely different in the next. Odd things happen, like inconsistent skin color, too much latex, developing pimples in storage, shape changes, etc., that take a promising line out of consideration. Why this seems to happen more with red skinned sweetpotatoes no doubt has something to do with their genetics, but helps explain why there have been so few successful reds in the past 50 years. With our current fumigation situation, it makes little sense to release a line that doesn't have root knot nematode and *Fusarium* resistance. The goal remains a red yam that stores well, has good nematode and disease resistance, and can deliver yield comparable to Diane.

So I think 175 may by done after this year, but LSU-52 (a Beauregard replacement) looks like it has excellent potential. So far it's main problem is plant production in the hotbeds. On the other hand, long-term storage has been very good. Mother plants are already at UC Davis.

Fall soil fumigation.

Fall is the best time to sample for nematodes, as this is the time of the year when populations are at their peak. There are no published thresholds for nematode counts (the number at which control measures are warranted), but in general counts above 100 RKN per pint of soil would be high enough to cause problems in subsequent years, especially in susceptible varieties like Beauregard and O'Henry. The main nematode species to look for is Root Knot Nematode (RKN), *Meloidogyne incognita*.

LSU-52 can jumbo up, but in general retains good shape with very smooth skin color that is less rosy than Beauregard or Covington.

While it might be difficult to find the time, in general a fall fumigation will be more effective than a spring application, because soil temperatures are warmer.

To maximize the effectiveness of your fumigation:

✓Soil temps at 6" should be above 50 F.

✓Soil moisture above 75% of field capacity.

✓Soil should be free of trash/previous crop residue.

✓Apply the correct rate.

(You may be tempted to reduce Telone rates to stretch the number of acres under the cap, but anything less than 9 gpa has not been effective in my trials).

- ✓ Soil surface must be sealed immediately after injection by ring rolling, dragging, or harrowing.

Remember that any fumigation is typically effective for only one year. However, I am often asked about not fumigating if fall nematode counts are very low (0 - 10 per pint of soil or per 500 g) and the following season will be the last for the field before rotating out.

Nematode counts are notoriously variable. Telone was not registered based on nematode counts, but rather on crop response. A zero nematode count from a fall sampling does not mean there are no nematodes in the field. Furthermore, I have always gotten a yield response in my trials from fumigants even when there was no obvious nematode damage to the roots.

So can you skip fumigating under these conditions? The answer to this question is "maybe", but only for the nematode resistant varieties like Covington and Bonita. If there are no Telone cap restrictions for the field, the answer is "probably not". The cost of fumigating is about 1 bin of No. 1's — easily paid by the yield increase that should occur. Furthermore, fumigation also helps reduce wireworm and grub damage.

Telone is a good nematicide, will suppress some diseases (Scurf, Stem Rot) and soil insects, but offers very little weed suppression at the rates typically used for sweetpotatoes (10 - 14 gallons per acre). Where it cannot be used because of township caps or buffers, metam is an acceptable alternative. Metam is not as good as Telone on nematodes, but does offer some control of these soil pests plus suppression of diseases and weeds. Shanked applications of 55 - 75 gpa (depending on formulation as metam potassium or metam sodium) work well.

RESEARCH UPDATE

Scurf Trial with Bob Weimer

Not really a trial, but an evaluation of LSU-52 under under non-fumigated conditions where there was a lot of Scurf last year. Trial won't be dug until late October.

Irrigation trial with Bob Weimer

Forth year for this trial, with additional soil moisture sensors and a change in the treatments to 3 irrigation levels (75%, 100%, and 125% of ET) and 2 N rates (50 lbs or 90 lbs N/A through the drip line).

LSU-52 plant spacing trial with Aaron Silva

LSU-52 evaluated at 9, 12, and 18" for impacts on root size distribution; Beauregard and Covington are also in the trial for comparison. This trial also has soil moisture monitors.

Dual Magnum herbicide trial with Nathan Mininger

A trial to evaluate the effect of Dual Magnum (metalochlor) on root set. Dual Magnum is registered in sweetpotatoes in California — its strong point is the ability to suppress nutsedge. It is an integral part of the weed management program in Louisiana and Mississippi. But it can also cause root damage to the target crops, especially in sandy soils. Losing just 1 good root per plant could reduce yield by 13,000 lbs, though actual yield loss would probably be less as the plants tend to compensate.

Variety Trials (National Sweetpotato Collaborators Group Trial, Adam Shaner; ALT and Red Yam Trial, Dave Souza)

The emphasis remains finding a new red that will be a good complement or replacement for Diane. This has been a daunting task — all of the new red yam lines that I have evaluated do not have the year-to-year performance and attributes to make them commercially acceptable. They look great one season, then lose color, shape, or yield the next.

NSPCG Trial and ALT will be later this month. The red yam trial included LSU-52 and was dug in late September. None of the reds performed that well this year in this location. LSU-52 did fairly well.

Scott Stoddard,
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