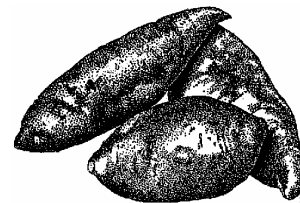




University of California Cooperative Extension

2145 Wardrobe Ave., Merced, CA 95340
(209) 385-7403



SWEETPOTATO TIPS

In this issue:

- Y2K planting intentions
- Hot bed temperatures
- Seed and variety
- Slip cutting & cleanliness
- Research projects
- Registered pesticides



April, 2000

USDA PROSPECTIVE PLANTINGS REPORT

According to the latest prospective plantings report from the USDA (March 2000), prospective plantings for sweetpotatoes for all states this year will be almost the same as 1999, estimated at 93,700 acres. California is projected to increase planted acreage by 2%, to 9,700 acres. The real wildcard this year is North Carolina, which according to USDA may *decrease* planted acreage, though there are rumors in the industry they will increase instead, and possibly by a lot.

Sweetpotatoes: area planted by state and United States.

State	1998	1999	2000	2000/1999
	-----	1,000 acres	-----	%
AL	3.8	3.3	3.1	94
CA	9.7	9.5	9.7	102
GA	0.8	0.7	0.7	100
LA	21.0	24.0	25.0	104
MS	9.8	10.5	11.0	105
NJ	1.1	1.0	0.9	90
NC	33.0	37.0	36.0	97
SC	1.1	1.2	1.0	83
TX	6.4	5.6	5.8	104
VA	0.5	0.5	0.5	100
US	87.2	93.3	93.7	100

Source: Prospective Plantings, March 2000. USDA-NASS.

Cooperative Extension Work in Agriculture, Home Economics and 4-H, U.S. Department of Agriculture, University of California, and county of Merced Cooperating



Clean Equipment:

To limit the spread of Pox and other soil diseases, clean your equipment between planting different fields. This is especially important if you suspect one field is "hot" with disease, or hasn't been fumigated.

WATCH THE TEMPERATURE INSIDE YOUR HOT BEDS

The ideal soil temperature in your hot beds is 70 to 85° F. Much hotter than this and you run the risk of increased seed decay and plant stress. On sunny days, be sure to check the temperature of your hot beds to make sure they aren't getting too hot under the plastic.

SEPARATE VARIETIES IN HOT BEDS

This tip is too late because the beds are already in, but it is a good point to remember because now it may seem very obvious. You should keep your varieties separated if you are using seed that is of different generations. Older seed will invariably harbor more disease and viruses than new seed. If you mix some old Hanna with some clean Beauregard seed in the same bed, for example, aphids and leaf hoppers will quickly transmit virus from the Hanna to the Beauregard. Right now we are trying to determine how quickly sweetpotatoes pick up virus, and at what point they economically affect yield. According to researchers at North Carolina, this occurs as quickly as three years. Also note this occurs even if the seed does not show signs of virus infection like Russet Crack. So if your seed source is older than three years, don't bed it with your new clean seed.

Certain varieties should be planted early for best results. Garnet is one of them. Research done by Bob Scheuerman showed substantial yield increases when Garnets were planted in early May as compared to late May. Also remember that Garnets should be harvested early in the fall so that they don't get chilled—another reason to plant them early in the spring.

CUT SLIPS TO PREVENT DISEASE

You all know this but it bears repeating: to limit the spread of disease such as Scurf and Pox from bed to field, cut your slips about ½" above the soil

line in the bed. You really should do this even if you feel that you have clean seed bedded up in freshly fumigated ground.

Dipping slips in a solution containing a fungicide may help with diseases such as Scurf, Black Rot, *Pythium*, *Phytophthora* (one of the damping off organisms), and Fusarium Wilt (sometimes called Vine Wilt or Stem Rot). Benlate (Benomyl), Mertect (Thiabendazole), and Ridomil Gold (Mefenoxam) are registered for sweetpotatoes and can be used in this way. Solution strengths and dipping times vary with the chemical, so be sure to read the label.

Unfortunately, Pox cannot be controlled by using the fungicides listed above. The best controls for Pox are soil fumigation, good sanitation, field rotation, and maintaining a soil pH below 5.5.

Don't forget to clean the boxes or crates used to transport slips from hot bed to field. If these containers were previously used and not cleaned, they could harbor soil and diseases that will contaminate your slips. Use a mild bleach solution for best results.



Cutting slips for research trials.

RESEARCH PROJECTS

We are planning to repeat many of the trials that we did last year, plus add a few new ones. Here is what is on the schedule so far:

- Fertilizer trial. The nitrogen and potassium trial will be done again, but in a different location.
- Virus tested trial. Like last year, we will compare the yield and quality from “old” seed to virus tested slips.
- World virus decline survey. Six varieties will be placed in different locations to see what viruses they pick up over the course of the growing season and how they react to our viruses.
- Collaborator’s trial. Lots of entries from South Carolina this year. Also, this will be the final evaluation for L94-96, a potato much like Beauregard but with better nematode resistance.
- Cover crop and fumigation trial. Evaluation of cabbage for control of nematodes.
- Herbicide trials. The herbicide Goal will be evaluated at two locations.
- Foliar micronutrient evaluation. Same as last year, with the application of soluble micronutrients onto the foliage during the growing season.
- Development of a model of sweetpotato development based on degree days. A good model can help with determining planting and harvest dates, but this has not been done with sweetpotatoes.

JEWEL PLANT SPACING:

Thinking of planting more of the variety Jewel this year? You could benefit by adjusting your transplanter. According to a recent study by NCSU, best in-row plant spacing for Beauregard is 6 – 9 inches, but for Jewel it is 9 – 12 inches.

REGISTERED PESTICIDES

When it comes to registered pesticides on sweetpotatoes, “not many” seems to sum up the general feeling among producers. Actually, there are 276 labels currently registered for sweetpotatoes in California with DPR, though many of these are different names for the same material. Below is the complete list by category, with the common name first and trade name second (materials current as of February, 2000). Always read the label for proper use of these chemicals.

INSECTICIDES/NEMATICIDES

Aldicarb	(Temik)
Azadactin	(Azatin)
Bt’s	(Dipel, Javelin)
Carbaryl	(Sevin)
Chlorpyrifos	(Dursban, Lorsban)
Cinnamaldehyde	(Cinnacure)
Diazinon	
Endosulfan	(Thiodan, Phaser)
Ethroprop	(Mocap)
Garlic	(Enviropel)
Insecticidal Soap	(Safer Soap, M-pede)
Malathion	
Metaldehyde	slug bait
Methomyl	(Lannate)
Methyl parathion	(PennCap-M)
Mycotrol	(Botanigard, Mycotrol)
Oil, Neem oil	(Triology)
Piperonyl butoxide	(Prentox)
Pyrethrins	(Spectricide)
Zn phosphide	poison grain

HERBICIDES

Chlorthal-dimethyl*	(Dacthal)
Fluazifop-butyl	(Fusilade)
Glyphosate**	(Roundup)
Herbicidal soap	
Napropamide	(Devrinol)
Sethoxydim	(Poast)

* Dacthal label is current, but the product can no longer be purchased.

** Roundup can be used for pre-plant burndown only.

FUNGICIDES

<i>Ampelomyces</i>	(AQ 10)
Benomyl	(Benlate)
Ca hypochlorite*	bleach
Chlorine gas*	
Dichloran	(Botran)
Hydrogen peroxide*	
Mefenoxam	(Ridomil Gold)
Ortho phenylphenol*	(Freshguard)
Thiabendazole	(Mertect)

* These fungicides are registered for cleaning of machines and equipment only.

FUMIGANTS

1,3-dichloropropene	(Telone II)
Chloropicrin	(Pic-chlor)
Chloropicrin + dichloropropene	(Telone C17, C35)
Metam-sodium	(Vapam)
Methyl bromide	

BEETLE AND WIREWORM CONTROL

Variety: Jewel, Regal, and Resisto have more tolerance to wireworms and grubs than Beauregard.

Field: Fields with a history of wireworm damage, or those that have not been fumigated may have higher pressure than others.

Chemical: Chloripyrifos (Lorsban) has a 125 day PHI (pre harvest interval) and is limited to one application per season. Preplant broadcast and incorporate into the soil 4 – 6 inches. Lorsban is not as effective on June Beetles that come in during the summer and leave the large wandering tracks on the surface of the potato. Partial control may be obtained by making foliar sprays of endosulfan (Thiodan, Phaser) or Sevin in June and July, when adult beetles are present. Do not exceed three applications per season.

Bill Weir, Farm Advisor