

Mississippi Sweetpotato News

Winter 2014

Mississippi Sweetpotato Crop Report (2-26-2014)

Benny Graves, Executive Director, Mississippi Sweet Potato Council

During January and February, Mississippi saw some of the coldest temperatures in a long time. Growers were busy adding heat to storage houses to keep sweet potatoes above 50°F. Despite the cold temperature and a snow-bound northeast, sweet potato movement was strong. Nationwide sweet potato supplies are tight and demand remains good. North Carolina buyers have been sourcing more sweet potatoes from our state than normal to fill orders. It will be interesting to see what supplies will be in July and August.

Mississippi growers attended the National Sweet Potato Convention in record numbers this year. Fifty-three of our state growers and spouses traveled to New Orleans for the 52nd Annual Convention. Planting intentions reported at the convention by other sweet potato-producing states indicated we are headed for a rather large acreage increase for 2014. Of course, weather during the season will have a lot to do with the final outcome.

I would like to remind everyone that Mississippi will be hosting the National Sweet Potato Convention next year at the the Opryland Hotel in Nashville, Tennessee. The convention dates will be January 25th – 27th, 2015. To help finance the convention and our Mississippi Sweet Potato Council promotional activities, the Board of Directors voted to ask all Mississippi growers to give \$2 per acre this year to support these vital activities. This will be collected in June and July when the sweet potato weevil trapping fee is due. Thank you in advance for your support.

It will soon be time to bed out seed potatoes. I look forward to seeing you in the field.

Updates from Pontotoc

Stephen L. Meyers

Regional Sweet Potato Extension Specialist, Mississippi State University- Extension Service

Much has happened since the last newsletter....

On February 13th MSU hosted its **Winter Sweetpotato Production Meeting**. Topics ranged from pest management (nematodes, weeds, disease, and hogs) to sorghum production and sweetpotato packing line ergonomics. Some of the presentations are available on the MSUCares sweetpotato website. Wild hog information can be found at wildpiginfo.msstate.edu.



On February 20th MSU hosted its annual **Producer Advisory Council Meeting** at the Lee County Agri-Center and North Mississippi Research and Extension Center in Verona, MS. Six sweetpotato grower-packers were on hand to provide input on behalf of Mississippi sweetpotato stakeholders. Personnel from MSU, USDA-ARS, and MDAC were on-hand to answer grower questions and participate in the conversation. Ultimately the grower requested points of emphasis for research and extension in 2014 were:

- * Nutgrass Control Research.
- * Tip Rot Research.
- * Need of a Breeder to Age of Existing Breeders.
- * Insect Research to Include Pre-Plant Insecticides.

The Sweetpotato Research & Extension Group at MSU has started to revise the current **Commercial Sweetpotato Production in Mississippi** publication. The publication was last revised in 2002 and much of the information is outdated. If you have input regarding what the new publication should include or look like, please contact me (smeyers@ext.msstate.edu).

In February, the MSU-Extension Service published its newest sweetpotato publication- **Sweet Potato Storage Root Initiation**. The publication includes tips on improving storage root set. The information will be a reminder for most, but could be very useful to some of our growers. Please take a look at it when you get a chance and let me know if it is useful or not.

On-farm research continues to be a priority for the Sweetpotato Research & Extension Group. As we move into the production season, grower-partners will play a key role in pest management and production research.

As the 2014 season gets underway, I encourage you to visit the **Mississippi Crop Situation Blog** for answers to real-time questions. The Crop Situation Blog provides current production-related information for row-crop stakeholders. Visit the blog at: Mississippi-crops.com. There you can also sign up to receive a weekly email with a list of each week's posts.

Sweet Potato Storage Root Initiation

Sweet potato yields are ultimately determined by the number of storage roots per plant, the number of storage roots per plant, and the size of each storage root at harvest. Other important production objectives, such as optimal plant density, that remain in the field for the entire life may have differently different yields. The correct storage root initiation and development are key factors in sweet potato yields.

Under the "staple" of sweet potato storage roots in the late stages of the growing season, sweet potato root number is determined early in the production cycle. Current research has found that temperature and soil conditions during the first 2 weeks to 30 days after transplanting are critical in determining the number of storage roots initiated per plant. In the production environment, every source is different and unique. This publication provides a brief introduction to sweet potato storage root initiation.

Sweet Potato Roots

Each root of a sweet potato is composed of 10-15 (preferred) roots (tuberous) (Figure 1) that have the potential to form additional roots (Figure 2). These additional roots, along with those produced from callus tissue on the end of a sweet potato slip, form the entire root system of the sweet potato plant. Additional roots may begin to grow in as little as 24 hours after transplanting if soil moisture and temperature conditions are adequate.



Figure 1. Sweet potato root begins to proliferate naturally, and begins to form roots along the base of the sweet potato.



Figure 2. Older and younger, tubers begin to grow in as little as 24 hours after transplanting sweet potato slips.



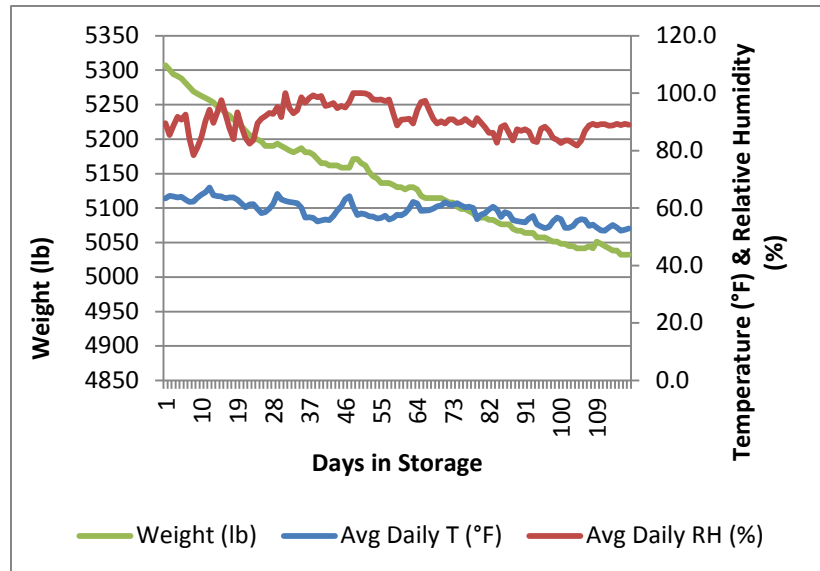
Initial Platform Scale Data

Stephen L. Meyers

Regional Sweet Potato Extension Specialist, Mississippi State University- Extension Service



In October of 2013, faculty with the MSU-Extension Service placed two platform scales on-farm in sweetpotato storage facilities- one scale each in Chickasaw and Calhoun Counties. The scales were loaded with four 20-bushel bins full of recently harvested sweetpotatoes (see photo at left). In addition to weight, each scale was paired with a sensor that logged temperature and relative humidity once every hour. On February 13, 2014 the first four months of data was downloaded. A graph from one of the scales is below.



Throughout the first 118 days, the storage facility maintained adequate humidity (greater than 80%) and had relatively few dramatic fluctuations in temperature. Based on previous research, the initial steep drop in weight from day 1 to day 26 was attributed to

water lost from drying soil. Weight lost from day 27 to day 118 was attributed to sweetpotato respiration. Despite good storage conditions, each bin of sweetpotatoes lost 0.45 lb/day. While that does not sound like much, over time 0.45 lb/bin/day can really add up. For example, if a grower produced 200 acres of sweetpotatoes, yielding 300 bu/A, storing potatoes for an average of 6 months, with a value of \$0.30/lb, and pack-out of 60%, the total gross loss in revenue for No. 1 would be \$43,740/year. It is important to note that storage conditions in MS facilities vary widely and that these data are preliminary and represent one location in one year. It is my hope that this extension effort will establish a baseline of storage conditions in MS and provide growers with needed information to compare the cost of potential losses against the cost of storage facility upgrades.

Make Time Now for Fumigant and Sprayer Maintenance

Jason Ward, Assistant Extension Professor, MSU- Ag. and Bio. Engineering

Water soluble fumigants have become important tools for sweet potato growers looking for control of nut grasses and nematodes. These products are not cheap; therefore it is important that your application equipment is ready to go to the field and ready to perform as needed. Take the time now to make sure that you are getting your money's worth by performing thorough maintenance and by calibrating your fumigant applicator.

Always make sure that there is no chemical left in the tank or the lines of the applicator before you begin maintenance. Follow label instructions for full cleanout so that you are only handling clean water. Clean out any screens or filters and don't forget about the inline screens that are typically installed at the check valves. Visually inspect the orifice disks that are an important part of controlling application rate. The hole in the center of the disk should be smooth and circular. If the hole appears ragged or is out of round, then replace the orifice disks. Put clean water in the tank and turn on the applicator to check for leaks. Check around the pump seals, look for damaged hoses or connections, check that the pressure gauge is accurate, and make sure that the check or anti-siphon valves are working properly. If the pump is hydraulic make sure that there are no leaks in the hydraulic hoses but do not handle the hoses while they are pressurized. All of these maintenance items are the same as a sprayer, so this would be a good time to check on that important piece of equipment as well.

Just as with a sprayer, it is important that the fumigant applicator is calibrated regularly so that you know exactly what you are putting out. The same method is used for calibrating a sprayer or fumigant applicator. Remember that when estimating application rate for fumigants, we use a broadcast equivalent. There are a number of factors that can determine how the fumigant will travel through the soil, therefore it is easier to set the application rate assuming complete broadcast coverage. Maintenance and calibration can be challenging and will require a little time and doing some calculations. In the end, the effort you put in now to getting it right can make your season easier, better, and more profitable.



We are working on some guides and tools to make fumigation maintenance and calibration easier and hope to have them available soon.

GAPs Training

Juan Silva, MSU-Food Scientist, will be providing a Good Agricultural Practices (GAPs) training session **March 19th** from 9:00 a.m. to 12:00 noon at the MS Sweetpotato Council Office in Vardaman, MS. If you have never received GAPs training or need the most current GAPs-related information, please plan to attend. A registration form is included with this newsletter. If attendance exceeds 20 participants, we may have to move the location of the training. I will inform you if that happens.

Good Agricultural and Handling Practices for Producers of Fresh Fruits and Vegetables and Nuts Training- A certificate program

When: March 19, 2014

Time: 9:00 am-12:00 pm

Where: MS SP Council Office, 117 E. Sweet Potato St., Vardaman, MS 38878

The Good Agricultural (GAPs) and Handling (GHPs) Practices Training is a four hour workshop designed to teach the basics of GAPs for growing and handling safe foods in Mississippi. The training will be offered on March 19 from 9:00 am to 12:00 pm. The meeting will be held at the SP Council office in Vardaman, MS. This training is a requisite for you to have your farm/packing facility certified by USDA-AMS GAPs. For preregistration and further info/directions contact Dr. Stephen Meyers, Office: (662)489-4621, Fax: (662)489-6011 or smeyers@ext.msstate.edu

This training is supported by a grant from the Mississippi Department of Agriculture and Commerce, Specialty Crop Block Grant Program (SCBGP) from the USDA. In addition, the Mississippi Department of Agriculture and Commerce is now offering a cost-share program for Mississippi farmers to provide financial assistance to cover the cost of certification. More information on this at:

http://www.mdac.state.ms.us/departments/marketing/gap_ghp.htm

Agenda:

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| 9:00 am | Registration |
| 9:10 am | Introduction- What are GAPs/GHPs/Pre-evaluation |
| 9:20 am | Good Agricultural Practices <ul style="list-style-type: none">▪ Water quality▪ Soil amendments▪ Animal intrusion▪ Worker health and hygiene▪ Other possible sources |
| 10:15 am | Good Handling Practices: Harvest and Post-harvest <ul style="list-style-type: none">▪ Worker health and hygiene▪ Equipment, tools▪ Transportation▪ Temperature management |
| 10:45 am | Ins and Outs of the USDA GAPs Certification Program
New Food Safety Rule/FSMA- will it affect me and how? |
| 11:00 am | MDAC's Role and Support |
| 11:30 am | Developing a Food Safety Plan/Post evaluation |

Instructors:

Dr. Juan L. Silva, Professor
Department of Food Science, Nutrition
and Health Promotion
Mississippi State University
Fax: 662-325-8728
Email: jls46@msstate.edu
Mr. Kevin Riffin
Mississippi Department of Agriculture &
Commerce

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REGISTRATION FORM

No Registration fee but pre-registration is encouraged up to **2 days prior to training (by March 17th)**. Walk-ins are welcomed.

Name:

Company:

Address:

City:

State:

Zip:

Phone:

Fax:

Email:

Crops:

*** Send completed registration form to**

Mail: Stephen Meyers

8320 Hwy 15 S. Pontotoc, MS 38863

FAX: (662)489-6011

Email to: smeyers@ext.msstate.edu

Subject: GAPs course