Potato and Snap Bean Field Day

Field Day was completed on Dickey Farm at 13400 Dickey Road, Parrish, Florida on March 26, 2014 from 10 am to 3 p.m. There were 25 people attending the Field Day, including farmers from Parrish area, and scientists from the University of Florida, staff from South Florida Water Management District, and industry people from chemical company. Crystal Snodgrass, the extension agent in Manatee County, gave a welcome to the attendees and overviewed the agenda for the Field Day. The Field Day was composed of two major parts: 1) scientists from the University of Florida gave small talks about nutrient management, irrigation, weed control, and issues in harvest and storage, answered questions from the attendees, and 2) field trip at Jones Potato Farm to see the irrigation and the on-going trials.

Presentation

Four short talks on the field day included:

Dr. Xiaolin Liao, postdoc: Seepage vs. Central-Pivot Irrigation for Potato Production

Dr. David Liu: CRF Fertilizer vs. N Use Efficiency of Snap Bean Using Center Pivot Irrigation

Dr. Peter Dittmar: Weed Control in Potato and Snap Bean Production

Dr. Steve Sargent: Postharvest Handling of Potatoes

Dr. Liao updated the on-going project of “Exploring the feasibility of converting seepage to central pivot irrigation for commercial potato and snap bean production” funded by the Southwest Florida Water Management District (SFWMD). She focused on comparing potato yields, water usage, freeze tolerance, and nitrogen level between the seepage and central pivot irrigation systems during the 2013-2014 growing season. The main conclusions she made were that 1) the central pivot irrigation can save over 50% water compared to the seepage irrigation; 2) the center-pivot systems provided some freeze protection to potato; 3) a different fertilizer strategy should be adopted by central pivot irrigation since nitrate nitrogen is subjected to be washed away from the root zones under overhead irrigation. The farmers were interested in the
potential freeze protection provided by overhead irrigation and asked the reasons behind it. Alan Jones, the owner of Jones Potato Farm, also expressed his interest in fertigation, which would be a solution for the nutrient problem of center pivot irrigation.

Dr. David Liu showed the results from the trials of snap bean conducted in Live Oak, Florida. They found plots with controlled release fertilizer (CRF) have greater snap bean yields and higher nitrogen use efficiency compared to those with only regular nitrogen fertilizer (e.g., ammonium nitrate). The attendees asked the details about the CRF, such as the specific type of CRF they used, whether other types of CRF can have the same effect, and the releasing time of each type of CRF. Dr. Liu also showed a similar trial set up on Jones Potato Farm where the attendees had a tour later.

Dr. Peter Dittmar addressed the importance of season long weed control for potato and snap bean production. He showed the results from their research that application of Reflex and Dual Magnum is more likely to have better controls on weed spread for both potato and snap bean production compared to the application of only Reflex. The application time was essential for both crops. The attendees asked more details about the application time based on their practice.

Dr. Steve Sargent overviewed the projects he has done and has been doing on postharvest handling of potatoes. He addressed that storage temperature and relative humidity played very important roles in the storage quality of potatoes. High storage temperature and high relative humidity would cause the development of potato lenticels disorder. He also talked about the effects of irrigation method and harvest time on the skin quality of potato tubers at harvest and during postharvest storage. Additionally, he demonstrated a new instrument that can measure potato’s skin strength.

Though topics were mainly focused on potato and snap bean, attendees also expressed interests and asked questions on other crops, such as strawberry and blueberry. For the field day in the near future, related topics should be included.

*Field Trip*
After the talks, attendees followed Alan Jones, the owner of Jones Potato Farm, to see snap bean trials with the CRF fertilizer at Dickey Farm and different irrigation systems for snap bean and potato on Buckeye Front Farm and on Buckeye Back Farm.

Dr. David Liu is talking about the snap bean trial to the audience
Dr. David Liu is explaining the results from a snap bean trial completed in Live Oak, Florida
Dr. Xiaolin Liao is reporting the data from the potato trials on Jones Potato Farm from 2012 to 2015
Dr. Peter Dittmar is introducing new herbicides for potato and snap bean production
Dr. Steve Sargent is talking about Postharvest Handling of Potatoes
Snap bean trial on Jones Potato farm in 2014

Potato trials on Jones Potato farm in 2014
Potato and Snap Bean Field Day

Agenda

Date/Time: Wednesday, March 26, 2014, 1:30 – 3:20 p.m.

Location: 13400 Dickey Road, Parrish, FL 32419

1:30 Registration

1:50 Welcome and overview. Crystal Snodgrass. Extension Faculty in vegetable crops, UF/IFAS-Manatee County, Palmetto, FL

2:00 Update on Potato/Snap Bean Irrigation-Trial at Jones Potato Farm. Xiaolin Liao, Ph.D., Postdoctoral Research Associate, G.D. Liu, L. Zotarelli, C. Snodgrass, A. Jones, Horticultural Sciences Department, UF/IFAS-Gainesville, FL

2:20 Nutrient Management for Snap Bean Production. G. David Liu, Ph.D., Vegetable Nutrition Specialist, Horticultural Sciences Department, UF/IFAS-Gainesville, FL

2:40 Weed Control in Potato and Snap Bean Production. Peter Dittmar, Ph.D., Weed Scientist, Horticultural Sciences Department, UF/IFAS-Gainesville, FL

3:00 Postharvest Handling of Potatoes. Steve Sargent, Ph.D., Postharvest Technology Specialist. Horticultural Sciences Department, UF/IFAS-Gainesville, FL

3:20 See snap bean trials at Dickey Farm

3:50 See potato trials at Buckeye Back Farm

4:20 Adjourn

Please RSVP by phone <Crystal 941-721-4524> or e-mail <crys21@ufl.edu > no later than March 20, 2014.

Driving Directions:
If you are traveling South on Interstate 75, take exit 229 east to US301 North to 13400 Dickey Road (2 miles)

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