VegNet

The Ohio State University Extension Vegetable Crops

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Insect News – *Celeste Welty, Dept. of Entomology*

European corn borer activity this summer has been unusually late. Pheromone trap monitoring of the adult moths at various sites indicates that the population of the overwintering generation emerged about 2 weeks later than usual. In Columbus, we set up two traps on 15 May and did not catch the first moths until 10 June. In north central Ohio, we have three sites where traps were set up in mid-June, and these showed low to moderate activity of borer moths in mid- to late-June, followed by a large spike in activity in early July, which is now tapering off. For peppers and sweet corn, we need to know when is the start of second generation activity, which is typically in the last week of July. This year the second generation will likely be later than usual. However, any early-planted peppers that already have fruit could be attacked by the lingering first generation borers.

Corn earworm activity remains the same as it has for the past month; this pest is active at most of our trapping locations, but at low density. The number of moths caught in per trap in the past week ranged from 0 to 10.

The western bean cutworm is now active, mostly in northwestern Ohio. Pheromone traps last week caught 0 to 13 moths. At sites where the target moth is trapped, sweet corn should be scouted for evidence of eggs or larvae of this pest.

There have been several reports of heavy aphid infestations in sweet corn, and questions about which insecticides to use. The pyrethroids (Warrior, Mustang Max, etc.) generally control aphids only if the infestation is light, but do not control heavy infestations. A better bet is Thionex, which is still allowed for use on sweet corn until 2015, with a 1-days pre-harvest interval. Any growers who have machine-pick sweet corn have the option of Penncap-M which has a 12-day pre-harvest interval.

In cucurbit vine crops, the squash vine borer remains active, with large catches of moths in pheromone traps (48 moths in one week) at Columbus and Springfield. Squash bug eggs are now abundant in many fields.

The brown marmorated stink bug is showing an increase in activity at our one known hot-spot in Columbus. The number of stink bugs in our blacklight trap just broke a new Ohio record for this site: there were 101 bugs in our blacklight trap in a single night, on 15 July. This is the time of year when any sweet corn plantings should be scouted for this pest. The adult and nymphs of this species feed on the developing ear, through the husks. Last year we saw as many as 10 stink bugs feeding on a single ear.

Air Assisted Sprayer Demonstration & Sprayer Calibration Field Day – *Jim Jasinski, OSU Extension IPM Program; Erdal Ozkan & Mike Sword, Dept. of Food, Agricultural, and Biological Engineering*

There will be a field day from 5-7 PM on August 8th at the Western Agricultural Research Station highlighting research on the use of a custom built Jacto air assisted sprayer to increase efficacy of fungicides applied to large canopy crops, such as pumpkin. The use of air assisted technology helps spray droplets penetrate deeper into the canopy and increase deposition on the lower leaf surface, which greatly improves

efficacy against diseases like powdery mildew, especially for contact materials. This technology can also be useful in increasing efficacy when applying insecticides.

The field day will cover the following topics:
- Review 2012 air assist sprayer results on pumpkin
- Have custom designed air assist Jacto sprayer conduct demonstrations in the field using different nozzle types (flat fan, twin fan, hollow cone) with and without air assist. Water sensitive cards attached to poles in crop canopy will be used to show spray penetration into the canopy. Target crop is pumpkin but concept may apply to other crops with large complex canopy.
- Following air assist discussion and demonstration, a clinic will be held reviewing the proper techniques to perform sprayer calibration.
- Jacto Sprayer company representatives will be on hand for growers to interact with during the field day.

Directions to the Western Ag Research Station, 7721 S. Charleston Pike, South Charleston, can be found here on the right hand side of the page (http://oardc.osu.edu/branches/branchinfo.asp?id=9).

There is no cost to attend, but please pre-register by calling 937-484-1526 and ask to be put on the air assisted sprayer field day list. For more details, contact Jim Jasinski at Jasinski.4@osu.edu or 937-462-8016.

Wind Whipped Pumpkin Vines – *Jim Jasinski, OSU Extension IPM Program, Rory Lewandowski, OSU Extension*

Following last week's high winds that rampaged across the state causing damage to field corn, sweet corn and other crops, reports began filtering in of pumpkin stems splitting longitudinally (up and down the stem, not across). After talking with a few Extension Educators, State Specialists, and Crop Consultants, we ruled out the possibility of insect damage (squash vine borer) and settled on rapid growth of both bushy and vining types that were "whipped" side to side in the high winds. While some of the splitting was severe enough to cause the plants to wilt and ultimately die, the majority appear to be recovering, albeit set back developmentally. There were a few

plants actually snapped off at the soil line, but that was observed in only a few plants at the research station. Below are some pictures of this damage.

Southern Ohio Veg Net Report - *Brad Bergefurd, OSU Extension & South Centers at Piketon*

High tunnel tomato harvest is beginning to wind down with field tomato harvest beginning to ramp up. Sweet corn harvest continues with good yields and quality. Harvest of sweet onions, potatoes, summer squash, basil, cucumbers, pickles, zucchini and cabbage continues. Cantaloupe harvest has begun with good size and yields. Black raspberry harvest is winding down and blackberry harvest is beginning. Blackberry harvest on Rotatable trellis systems continues.

Vegetable planting of most all crops is winding down with transplanting of cauliflower, broccoli and cabbage continuing and direct seeding of fall greens. Sweet corn and bean planting continues. Peas for a fall harvest are being

planted. Strong storms rolled through the area beginning the 4th of July and continued through last Wednesday 7/11. Some areas received over 8 inches of rain with some areas in fields experiencing flood damage. Some isolated areas reported crop damage from pea sized hail. Pumpkin and winter squash planting wrapped up last week. With the recent rains weed control has been a top priority as well as fungicide applications. Cultivation and side dressing of Nitrogen continues on sweet corn.

Production issues have included: herbicide drift injury continues from neighboring grain farms, thrips and aphids on high tunnel tomatoes, flooding in low lying fields under thunderstorms and downpours, White Mold / Timber rot is still causing extensive damage and plant loss in high tunnel tomatoes, deer damage is causing extensive economic losses to many vegetable growers especially on cabbage.

Information to Guide In-season Vegetable Fertility Analysis and Adjustment - *Dr. Matt Kleinhenz, Extension Vegetable Specialist*

Excess rainfall is undesirable for many reasons. Among other effects, consistently waterlogged soils hinder root growth and function and promote nutrient leaching and runoff. The best nutrient management plans and fertilizer application regimens are rarely designed for the amount and frequency of rainfall that many Ohio vegetable growers have experienced so far in 2013. In fact, more and more, nutrients are delivered to vegetable crops via drip and other types of irrigation. So, fertilizer applications that were planned for some farms have either not been made or have not had their intended effects.

It is true that the need for irrigation in most places has been minimal and that flooded crops generally are not starved for nutrients – that is, fertilizer application during periods of excess soil moisture is rarely useful or advisable. It is also true that the high amounts of rainfall received throughout Ohio have been less problematic for some growers than others because vegetable production on well-drained soils tends to require more water. Finally, it is also true that the need for nutrients hinges on many factors (e.g., crop, crop stage, soil type) and that nutrient sufficiency ranges for many crops are available in extension and other resources. Two of these resources include the

2013 Midwest Vegetable Production Guide (http://www.btny.purdue.edu/pubs/id/id-56/ID-56.pdf) and a comprehensive reference developed by a large consortium of experts operating in the Southeast U.S. (http://www.clemson.edu/sera6/scsb394notoc.pdf). These and other related documents provide vegetable growers with guidance in assessing the nutrient status of their crops and in adjusting fertilizer applications, if needed. As you consider information in the SE and other documents from well outside Ohio, keep in mind that the numbers should be used as a general guide – they may not transfer directly to each Ohio vegetable farm. Additional information on this topic will be included in future VegNet articles and posted at http://hcs.osu.edu/vpslab/.