Ohio Fruit ICM News

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Calendar - Newly added in ***Bold***

March 24th The Law and You: An Agricultural Perspective. ODA office, Reynoldsburg. A program for women in agriculture sponsored by Ohio Agri-Women. For more information contact Pat Holmes holmes.86@cfaes.osu.edu or phone 937-456-8174.

April 21, Home Winemaking and Grape Production Workshop, OSU Extension Montgomery County Office, 9:30-12:30. Students will learn how to properly grow grapes including site selection and pest management as well as the "A to Z" process of winemaking. Cost is $30 per person and **Pre-registration is required by April 16th.** For more information or to register contact Tammy Dobbles, Extension Educator, at (937)224-9654 or by email at dobbels.958@osu.edu.

July 26, Beekeeping Workshop, OSU South Centers, Piketon. 3:00-8:00. More information to follow.

August 9, OSU South Centers Horticulture Field Night.

Comments from the Editor

Plants and insects will start to develop rapidly when we warm up again. The warm weather we had early this week pushed some of our ornamental crabapples to silver tip approaching green tip. Bramble growers need to be prepared for you lime sulfur application if you use it.

I have adapted some of the information from the Scaffolds newsletter for Ohio. Hopefuly Dr. Agnello's information will be more timely for southern Ohio Growers. I have not included the GDD accumulations from across Ohio yet. OARDC is in the process of updating weather stations. Currently our own Piketon station is unavailable.

Tree Fruit Program Coordinator Needed

The Ohio State University is pleased to post a job opening for a tree fruit program coordinator. This Administrative and Professional position is full-time, located at OARDC, Wooster. Duties include working closely with the Ohio Tree Fruit Industry and Ohio Fruit Team on applied research needs (Ohio's NC-140 rootstock trials, Ohio's NECC-1009 variety trials, crop load management) and extension programming (information dissemination). Position details are posted at http://jobs.osu.edu/ and on-line applications are required; the position requisition number is **326571**. Applications will be accepted from 3/9/07- 4/08/07. To build a diverse workforce, Ohio State encourages applications from individuals with disabilities, minorities, veterans, and women. EEO/AA employer.

Climate Change and Strawberry Production in the Northeast

by Rebecca Harbut, Department of Horticulture, Cornell University's College of Agriculture and Life Sciences, Ithaca, NY 14853 (Source: New York Berry News Vol 6, #2)

On a global scale, atmospheric temperatures have risen 1.3^{o}F (0.74^{o}C) during the last century and are predicted to increase another 2.0 to 11.5 °F (1.1 to 6.4 °C) by 2100 (Intergovernmental Panel on Climate Change). In the United States, over the last century, the average temperatures have risen 1^{o}F (0.6^{o}C) and precipitation has increased by 5-10%, primarily due to an increase in heavy rainfall events. Although these global and national figures represent a trend, the actual impact in any specific region varies significantly, it is therefore important to pay attention to trends in a specific region in order to determine potential impacts on agriculture.

According to the US Global Change Research Program, the northeastern region of the U.S. has seen average temperature increases of 4^{o}F over the last century, which has resulted in a decrease in days between first and last snow on the ground by 7 days. Precipitation patterns have also changed with a 20% increase in precipitation over most of the region resulting in decreased land area experiencing drought.

According to the prediction models, the northeast has amongst the lowest predicted temperature increases for the next century. Most of the temperature increase is expected to be due to increased winter minimums; forecasted increases in winter minimum range from 5-9^{o}F (3.5^{o}C) by 2100. Perhaps the most significant impact of climate change in the northeast is expected to be due to continued increases in precipitation with increases up to 25% forecasted.

An assessment carried out on the impact of climate change on U.S. agriculture indicates that northern regions of the U.S. will primarily benefit from the climate changes due to

increased winter minimum temperatures and CO_2 concentrations. However, this is dependant on adaptation of practices. While CO_2 concentrations may increase plant growth, it will also increase weed growth, and may have impacts on the efficacy of herbicides. For example, Lewis Ziska (USDA-ARS, Beltsville,MD) found that the efficacy of round-up against control of Canada Thistle grown under 750 ppm CO_2 (ambient ~380ppm) was significantly reduced, suggesting that this and other perennial weeds may become more difficult to control.

The increase in temperatures, can have a positive impact by reducing the amount of winter injury, however, it can also have an impact on insect emergence and migration patterns. Insect life cycles are tightly regulated by temperature and therefore a shift in temperature can change the emergence time, geographic distribution and range, the number of generations observed and the ability to overwinter. It will therefore be important for growers to have excellent monitoring programs in order to track insect populations in order to identify changes in population dynamics as well as allow early detection of new insects that may be introduced.

Increases in precipitation may allow for growers to rely less on irrigation; however the challenges of increased moisture are numerous. As several fungal pathogens favor wet, humid, warm conditions, an increase in fungal pressures may be expected. Curt Petzolt and Abby Seaman of the NY State IPM Program suggest that rainfall can also decrease the efficacy of fungicides by quickly washing off residue and requiring increased number of applications to control disease (more information on Climate and Farming website). As with insects, it will be essential to have excellent monitoring and record keeping practices in place in order to track and anticipate potential challenges. Increased moisture will not only have an impact on disease, but can also affect production practices and harvest schedules. Wet conditions during spring can delay planting, while intense rainfall during harvest can be devastating to the crop.

The ability to adapt to these changes in climate will be crucial for continued successful strawberry production. There are resources that are available to growers to develop a better understanding of possible implications of climate change in order to better anticipate potential challenges. Of particular interest to fruit growers in the northeast is the Pileus Project at Michigan State University and the Climate and Farming websites. Although some of the tools for growers on the Pileus website are still being developed, the site has excellent information about potential effects of climate change on fruit production. The combined efforts of growers, breeders and applied researchers will be necessary to identify emerging issues, develop new cultivars, and devise cultural practices that will allow the strawberry industry of the northeast to meet the challenges of a changing climate.

Resources on Climate Change:

1. *U.S. Global Climate Research Project:*www.usgcrp.gov
2. U.S. National Assessment of Climate Change:www.usgcrp.gov/usgcrp/nacc/default.htm
3. *Pileus Project (Michigan State University):*www.pileus.msu.edu

4. *Northeast Regional Climate Centre:*http://met-www.cit.cornell.edu
5. *Climate and Farming:*http://www.climateandfarming.org

Pest Development - (Based on Scaffolds Fruit Newsletter, Coming Events (D. Kain & A. Agnello), NYSAES, Geneva)

Growing Degree Day Ranges Base Temp.50F (Normal +/- Std Dev)

Pear psylla adults active	0-49
Pear psylla 1st oviposition	1-72
Green fruitworm 1st catch	12-54
McIntosh at silver tip	15-41
McIntosh at green tip	36-62
Green apple aphids present	38-134
Spotted tentiform leafminer 1st catch	39-113
Pear thrips in pear buds	50-98
Rosy apple aphid nymphs present	56-116
Spotted tentiform leafminer 1st oviposition	58-130
Pear psylla 1st egg hatch	60-166

Ohio Poison Control Number

(800) 222-1222
TDD # is (614) 228-2272