Of special interest:

- Welcome Back
- Organic Crop Production Workshop Series
- 2009 Project Preview
- Wireworm Control in Potato

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What’s new?

Welcome back to a new year of SPROUTS!

A lot has happened since our last issue of SPROUTS in the fall.

In January, we had the very successful inaugural TN Horticultural Expo—a joint meeting of the TN Fruit and Vegetable Assn. (TFVA), TN Farm Winegrowers Assn. (TFWA), TN Viticultural and Oenological Society (TVOS), American Wine Society (AWS), TN Flower Growers Assn. (TFFA) and TN Farmers Market Assn. (TFMA). This year we are expanding again with the addition of the TN Agritourism Conference. Watch for more Expo details in SPROUTS as they unfold.

We also launched the UT Organic and Sustainable Crop Production website (http://organics.tennessee.edu). This website provides:

- Information about the UT Organic and Sustainable Crop Production Program
- Educational and networking events, like the upcoming UT Organic Field Crops Tour on May 15 (see ‘Upcoming Events’ page 4) and the on-going Organic Crop Production Workshop Series (see below)
- Extension publications, like the ‘Organic Certification in Tennessee’ fact-sheet
- Research findings
- Links to informational websites

With recent foodborne illness outbreaks and pending food safety legislation, we will also launch Food Safety Training sessions later this spring and summer for growers and their workers across the state. Stay tuned for more details for a workshop near you!

UT Organic Crop Production Workshop Series for Growers in Full Swing

The University of Tennessee Organic and Sustainable Crop Production program began a 10-part monthly workshop series in February running through November 2009. The workshop series targets commercial producers and agriculture professionals interested in learning about organic crop production practices. Workshops are scheduled for one Monday afternoon a month. The 3-hour sessions consist of presentations by Extension specialists and growers, accompanied by discussions and hands-on activities.

The workshop series is broadcast using ITV technology to three locations across the state including Knoxville, Nashville and Jackson.

Future dates and topics include:

- May 11- Seed Sources & Transplants
- June 8- Identifying & Managing Weeds
- July 13- Identifying & Managing Pests
- August 10- High Tunnel Production
- September 14- Identifying & Managing Diseases
- October 12- Putting It All Together: Developing an Organic Plan
- November 9- Marketing Organic

Please contact Mary Rogers at 865.974.0710 or mroger30@utk.edu to register for a workshop or visit http://organics.tennessee.edu/workshops.htm for more information. Also, contact Mary if you would like email reminders about the workshop series each month.

This series is made possible through support from the TDA.
2009 UT Vegetable and Organic & Sustainable Crops Project Preview

The 2009 growing season is upon us and we have a lot planned for vegetable research this year. Here is a preview of a few of those projects.

**Sprouts**

We will evaluate the emergence, plant vigor, days to harvest, marketable yield, and pod quality characteristics (sieve size, length, color, curvature, peduncle attachment) of 20 commercially available and experimental snapbean varieties and their adaptability for production in Tennessee. This project that will take place at the Plateau Research and Education Center in Crossville, TN, which is in the heart of Tennessee's 10,000 acre snapbean industry.

**Snapbean Variety Trial**

Last year cucumber beetles were our biggest pest on the organic farm. They can cause direct feeding damage to cucurbits, destroying stems, leaves and marketability of fruit. Adult cucumber beetles also transmit bacterial wilt. Bacterial wilt, as the name implies, can cause the runners of plants to wilt and eventually die, leaving a field of unmarketable fruit. This year we have two projects planned to combat this pest; one involves trap cropping. Trap cropping is the planting of a crop that is sacrificed to protect the main cash crop from particular pests, by luring them into the trap. In our case, we are hoping to attract those cucumber beetles away from the muskmelon and watermelon cash crops and then manage those beetles with organically approved pesticides. In this system, pesticide use is reduced, as the area planted in trap crops is the only area that is treated with the pesticide and it is smaller than the area planted in cash crops. In small plantings, pests can be hand-picked or vacuumed from the trap crop. This project is a collaborative effort with Virginia Tech and Appalachian Sustainable Development (www.asdevelop.org), who received funding from the EPA to develop low-input and organic insect management systems. For more on the trap crops we plan to use, visit: http://organics.tennessee.edu/projects/trapcropping.htm.

**Pumpkin Powdery Mildew Resistance Variety Trial**

This is the second year of this trial with the objective of examining plant habit, yield, and fruit and stem characteristics, as well as postharvest storability of experimental and commercially available jack o' lanterns for production across Tennessee.

The trial will be planted in Jackson, TN at the West Tennessee Research and Education Center and will end with a field day on October 9 (see ‘Upcoming Events’ page 4). This project has the potential to reduce fungicide inputs for growers by providing information on varietal disease resistance and best yield and quality for Tennessee.

**High Tunnel Tomato Production: Evaluating Heirloom and Hybrid Varieties for Early-Season Availability**

High tunnels are unheated, protected structures that allow growers to extend the season earlier in the spring and/or later in the fall. Tomatoes are a high-value crop and early season, locally and organically grown tomatoes are in high demand. This experiment will compare 3 heirloom varieties to 3 conventional hybrid varieties across 3 successional planting dates. The first planting date was in mid-March and the next planting date is slated for this week. We will look at yields, days to harvest, incidence of disease, flavor and nutritional quality, as measured by lycopene content, soluble sugars and titratable acidity, and postharvest storability.

For more information on these and other projects, visit: http://organics.tennessee.edu/projects.htm or come and see them for yourself at the Organic Crops Field Tour on May 15 (see ‘Upcoming Events’ page 4).
**Question of the Week**

**Q:** I have two small potato growers that are having trouble with wireworms and other soil born insects. They have had them for the past several years and want to know if there is anything that they can do (chemically) to control them that is safe?

**A:** Wireworms can be difficult to control, but crop rotation can often help. However, the worst crop to rotate to is wheat! The only thing wireworms like more than potatoes is wheat.

Wheat can be used as a ‘bait’ crop and buried in packets 6-inches deep in the soil. This will draw the wireworms away from the potatoes.

These ‘bait’ traps can also be used to identify the species present. Some species have a six year life-cycle, while others have a one-year life cycle, like the corn wireworm, which is one of the most common species found in TN.

Also, wireworms thrive in areas planted to sod or grasses (i.e., sorghum-sudan), so it’s not a good idea to plant potatoes after either of these.

Plowing or cultivating late in the summer is a good technique to bring the wireworms to the soil surface and expose them to their natural enemies, like birds.

Leaving the land fallow will also help to dry the soil and starve the larvae of food, though this technique is not so good for soil erosion!

Alfalfa can also dry the soil, which will help control the wireworms. Mustards have shown a tendency to reduce wireworm populations, as well. Using these cover crops would be preferable to leaving the land fallow, since they will not only control wireworms, but also provide added soil benefits. In studies in the Pacific Northwest, NITRO alfalfa has been shown to supply 80-100% of the nitrogen required for a subsequent potato crop. Moreover, with its deep root system, alfalfa can break up soil compaction.

Mustards are great for covering the ground quickly and this in turn can help choke out weeds. Mustards, like alfalfa, are also known for their deep roots and can scavenge nutrients from soil depths of 6 feet, making these nutrients available to more shallowly rooted crops. Mustards can also suppress soilborne pathogens, like *Rhizoctonia*, which can be problematic for potatoes.

There are a few recommended chemicals for wireworm control. Ethoprop and fipronil that are used in furrow at planting. Phorate can be used as a row treatment but has been known to contribute to resistance problems with Colorado potato beetle. All of these chemicals have a 90 day minimum interval between last application and harvest.

**Weather Report**

As the old saying goes, April showers bring May flowers. And that is certainly true for April so far!

The rain gave us some reprieve on Saturday and Sunday after those fierce storms on Friday, but today it will be back to the showers, with flooding expected in some places.

In East TN, we will dry out a bit heading into the middle of the week until week’s end with highs in the 70’s and lows reaching 50 degrees. Then back to showers for the weekend.

On the Plateau, highs this week will hit the upper 50’s to mid-60’s; lows will hover in the mid- to upper 40’s.

The Middle TN forecast is much the same as East TN, with sun Wednesday through Friday and back to showers for the weekend.

West TN will be about a day ahead of the rest of us, leaving the showers behind by Tuesday, but resuming those chances for rainy weather by Friday.
Upcoming Events

**UT Organic Crops Field Tour**, May 15, 2009, Knoxville, TN


For more information, visit: [http://highlandrim.tennessee.edu/dynamic/events.asp](http://highlandrim.tennessee.edu/dynamic/events.asp).

**UT Gardens Blooms Days**, June 27-28, 2009, Knoxville, TN
For more information, visit: [http://bloomsdays.tennessee.edu](http://bloomsdays.tennessee.edu).

**UT West TN Research and Education Center Summer Celebration**, July 9, 2009, Jackson, TN For more information, visit: [http://westtennessee.tennessee.edu/events/SummerCeleb.asp](http://westtennessee.tennessee.edu/events/SummerCeleb.asp).

**UT Plateau Research and Education Center Steak and Potatoes Field Day**, August 4, 2009, Crossville, TN For more information, visit: [http://plateau.tennessee.edu/dynamic/events.asp](http://plateau.tennessee.edu/dynamic/events.asp).

**UT West TN Research and Education Center Pumpkin Field Day**, October 9, 2009, Jackson, TN For more information, visit: [http://westtennessee.tennessee.edu/events/](http://westtennessee.tennessee.edu/events/).

**2009 Southeast Greenhouse Conference**, June 18-20, 2009, Greenville, SC
For more information, visit: [www.sgcts.org](http://www.sgcts.org).

**2009 UT Organic Workshop Series**
Workshops will be broadcast using ITV technology to 3 locations across the state:
Knoxville, UT Agriculture Campus, 156/157 Plant Biotech Bldg., 2:00-5:00pm EST
Nashville, Ellington Agriculture Center, Central Region Extension Bldg., 1:00-4:00pm CST
Jackson, West TN Research and Education Center, Ag Extension Meeting Room B, 1:00-4:00pm CST

Dates and topics include:
- **May 11** - Seed Sources & Transplants
- **June 8** - Identifying & Managing Weeds
- **July 13** - Identifying & Managing Pests
- **August 10** - High Tunnel Production
- **September 14** - Identifying & Managing Diseases
- **October 12** - Developing an Organic Plan
- **November 9** - Marketing Organic

There is no fee for participating in the workshops, but registration is required. Please contact Mary Rogers at 865.974.0710 or mroger30@utk.edu to register for a workshop or visit [http://organics.tennessee.edu](http://organics.tennessee.edu) for more information.


Come to THE horticultural meeting in Tennessee. This is a joint meeting between the TN Fruit & Vegetable Association, the TN Viticultural and Oenological Society, the American Wine Society, the TN Farm Wine Association, the TN Flower Growers Association, the TN Farmers’ Market Association and new this year, the TN Agritourism Association. This horticultural extravaganza will have an expanded tradeshow, plus the added camaraderie of the other associations. Mark your calendar! More information coming soon.