What’s new?

• Last Thursday, the House Agriculture Committee Chairman outlined the first steps in developing the 2007 Farm Bill. The current bill was written in 2002, and many of the terms in it will expire in September 2007. The Agriculture Committee is working on the bill this week and will continue in June, following the Memorial Day recess. Lincoln Davis is the TN representative on this committee. The American Farm Bureau released their Farm Bill recommendations in April. The highlights included:
  1) Support for eliminating the fruit and vegetable planting prohibition and $250 million/year in conservation program funding for specialty crops.
  2) Support for a revenue-based counter-cyclical safety program to protect against low prices and yields and provide payments to farmers when they need them most.
  3) Support for a standing catastrophic assistance program, integrated with a re-rated crop insurance program.

• Some agreement has been reached in Washington on immigration reform, but the measure still has to pass the full Senate and House and be signed by President Bush before it becomes law. This Bill was pieced together with parts of earlier AgJOBS bills to create a separate program for illegal immigrant agricultural workers. The proposal would create a 5-year pilot program that would legalize those who have worked in agriculture for at least 150 days during the past 2 years. To gain temporary work status, immigrants would have to pay a $1,000 fine, undergo background checks and obtain a "ZA" visa. But they would not be eligible for many other benefits, such as welfare or sponsoring relatives from abroad. ZA visa holders also would have to work an additional 150 days per year for 3 years in agriculture or 100 days per year for 5 years to be eligible to apply for a green card. fine before they could apply. Read more in 'The Grower’ at: www.growermagazine.com.

• The Organic Trade Association has released a new website “How to Go Organic”, designed as a clearinghouse of U.S. resources for producers and processors considering becoming organic. Visit the site at: www.howtogoorganic.com/.

• Select Max with Inside Technology is now labeled for use on asparagus, bean (succulent shelled, snap beans), herbs, hops, leafy greens (endive), pea (shelled and succulent shelled), safflower and sesame.

• Grafting has long been successful for managing soilborne pests for fruit trees and may soon be used for watermelons. Dr. Richard Hassell, from Clemson University, is leading a 4-state project to adapt a grafted watermelon production system widely used in Asia for use here. Growers in the southeastern states face similar disease problems as growers in Asia, particularly a Fusarium organism that causes vascular wilt. To combat the problem U.S. growers use fumigants under plastic mulch prior to planting their melons. Grafting may provide an alternative. This spring 7,000 grafted transplants will be planted in five test sites in FL, GA, NC and SC. There are two projects; one tests the compatibility of 7 different squash and gourd rootstocks with 2 different watermelons – how easily they graft and how disease resistant they are. The other looks at in-row spacing, using two rootstocks (a gourd and a squash) and a seedless watermelon variety. Right now, each grafted transplant costs about $1.00, compared to $0.25 for a regular transplant. For the full story, visit: www.clemson.edu/pysamedia/2007/watermelongrafts.htm.
On the Farm: No-Till Vegetables

Steve Groff, of Cedar Meadow Farm, was a conventional grower who has converted completely to no-till vegetables & row crops. Here’s his story:

Our farm is a 215-acre no-till operation tucked away in the rural hills of southern Lancaster County, PA. Our average field size is only 4 acres.

I’m the 3rd generation Groff to live and farm these highly-erodible fields, but only the 1st generation to use no-till. We started back in 1980, after I got fed up with soil erosion. We were losing 14 tons of topsoil/acre and the organic matter, by then down to an average 2.7%, was going with it. That year we started seedling corn with a rented no-till planter; 2 years later we bought our own no-till planter. Like a lot of farmers, though, I wasn’t quite confident about making such a radical change, so on some fields I had been plowing or chisel plowing every other year. Not much happened. But in 1986 when I pulled the planter into a field that I hadn’t tilled for 4 years, the frame-mounted outlers sank in up to the hubs. I had assumed that untilled soil would get harder over time, but I was seeing just the opposite. For the first time I knew something major was happening. From that moment on there was no turning back. We have not tilled our corn, wheat, soybeans or alfalfa acres since.

NO-TILL TOMATOES?

But would no-till work for vegetables? I sure didn’t think so. Three factors proved me wrong. First, in 1993, I heard Dr. Aref Abdul-Baki, scientist at the USDA Beltsville Agricultural Research Center, tell about consistently higher yields, delayed early blight and fewer Colorado potato beetles on tomatoes transplanted into a hairy vetch cover crop. Second, in the 80’s, Dr. Ron Morse, a Virginia Tech horticulturist, designed the subsurface-tiller-transplanter for planting cabbage on steep hills. Third, the Soil and Water Conservation Society bought a planter, and made it available. We did a ½-acre trial with tomatoes and saw real potential. The second year we tested it on 5 acres; by 1996 all 80 acres of our vegetables were 100% no-till. Hairy vetch was a success for us right out of the gate.

PERMANENT COVER CROP

For the rest of the 90’s we experimented, winding up with a permanent cover cropping system. We’ve had great success with tomatoes and pumpkins. No-till alone is not a “magic bullet”. To achieve our objectives- higher profits, enhanced soil quality and less dependence on pesticides- we depend equally on no-till, cover crops and rotations.

On the dollar side, it’s a simple equation: less cost makes us more money. We save $675/acre transplanting no-till tomatoes. Nearly $500 of that comes from materials, labor and time saved by eliminating plastic mulch. Yields have increased 10%. The other savings is from erosion control, improved soil quality and increased organic matter. That 2.7% organic matter we started with in 1980 is up to 4.8%, and soil loss dropped from that whopping 14 tons per acre to almost zero. The other savings is from erosion control, improved soil quality and increased organic matter. That 2.7% organic matter we started with in 1980 is up to 4.8%, and soil loss dropped from that whopping 14 tons per acre to almost zero.

We’ve learned we must create a thick cover crop mulch to make the system work. Overall, we’re using only half as much pesticide. Fungicide and insecticide cost for tomatoes dropped from $200 to $75/acre. I’ve planted 150 acres of no-till tomatoes the past 8 years and have yet to spray for Colorado potato beetle, partly due to a big increase in beneficials and the mulch cover on the ground that the beetles don’t like. The cover crops give a nutrient boost, too- we credit 50 lbs N/acre from rye/vetch and 75 lbs from vetch alone.

ROLL IT DOWN

My favorite crop mix for transplanting vegetables is 25 lbs/acre of hairy vetch and 30 lbs of rye. The hairy vetch/rye mix is the fall, 7-10 days before the first killing frost. Usually it follows wheat or sweet corn. When the rye is about 4 feet tall, we roll the mixture with a 10-feet Buffalo rolling stalk chopper. It’s designed to flatten and chop cornstalks, on a scale between a flail mower and a disk. It has four rollers in front and back, with eight 23-inch blades per roller. We modified this rig with parallel linkage to give it more flexibility in our rocky soils. We added bearing protectors to prevent wrapping. It’s been thoroughly tested; during the past 7 years, we’ve rolled about 1000 cover crop acres. We’ve occasionally eliminated all herbicides whenever we have a good thick mulch cover that is fully matured when rolled. If we need to go in before the cover crop is 2-ft tall, we spray with Roundup 3 days before planting. What it really boils down to is letting nature have its way. If you leave the soil alone, it will work for you. I didn’t really understand that 15 years ago; I do now.

Adapted from ‘What I’ve Learned from No-Tilling’ on the Cedar Meadow Farm website. For more information, visit: www.cedarmeadowfarm.com.
Question of the Week
Q: What can I do to control Colorado potato beetles? -G.S.

A: Colorado potato beetles can be tricky to control, if you rely only on chemicals, as insecticide resistance problems rapidly develop. It is important to have several good management techniques in your control plan:

1) Adjust your planting date. If potatoes are planted very early, so plants bloom before the major beetle infestation, beetle damage will occur too late to affect yield. If potatoes are planted late, most beetles will have left the area before plants emerge. In both cases, it is important to choose an early maturing variety.

2) Choose a variety that is well-suited for your site. Larger, healthy plants are better able to handle bug damage.

3) Use row covers as a barrier to prevent adult beetles from munching.

4) Minimize volunteer potatoes by avoiding fall plowing, planting a fall legume cover crop to out compete the potatoes, or using a post-bloom sprout inhibitor.

5) Encourage natural enemies. The spined soldier bug and the two-spotted stink bug both prey on potato beetle eggs and larvae. Ladybugs also feed on the eggs, and on pollen, so they can be attracted by planting a border of beneficial habitat. These enemies can also be protected by using microbial insecticides that are toxic to the beetles but not to the beneficial insects.

6) Apply microbial insecticides. Insecticides made from the naturally-occurring bacteria Bacillus thuringiensis (Bt), varieties san diego and tenebrionis, have been developed for potato beetle larvae control. These sprays are slower at killing the larvae than conventional insecticides, but larvae are too sick to feed even before they die. To be most effective, spray Bt just as the eggs are hatching.

7) Rotate insecticide classes for successive beetle generations. Insecticides are most effective when applied in the early larval stage, as small larvae are the easiest, large larvae more difficult and adults the hardest to kill. In areas of potato production where insecticides have been intensively used, beetles are resistant to nearly all of them. If using insecticides, be sure to use one class during May and June for the first generation, then switch to a different class during July and August for the second generation. In addition, to rotating between generations in a season, it is also a good idea to rotate chemicals from season to season. If an insecticide does not seem to work, do NOT apply it a second time at the same or a higher rate. You could be making your problem worse, instead of better! If necessary, apply a chemical from a different insecticide class. These classes include carbamates, organophosphates, chlorinated hydrocarbons, chloronicotinoids & pyrethroids. Beetle populations in different fields may differ in insecticide resistance.

8) Harvest as soon as the crop is mature. Prompt harvesting reduces food availability for late-season beetles and weakens their overwintering abilities.

For more information on potato beetle control, see the UT Extension Publication PB 1282 ‘Commercial Vegetable Disease, Insect and Weed Control’.

Crop Report
Last week, I got the chance to go to several farms in Wilson, Dickson, Robertson, Putnam, Montgomery, and Cheatham Counties, as well as the TSU Demonstration Farm. There are some good vegetables growing in Tennessee! The greenhouse tomato harvests are rolling along with some of the biggest tomatoes I’ve ever seen. A few folks are experimenting with other crops in their greenhouses, like cucs for example. Cucumbers are ready for harvest from the field, too, in Cheatham Co., along with yellow squash and tomatoes. In Dickson county, there are peas ready for picking, as well as lettuce and collard greens. There’s a lot going on at the TSU farm, too, but you’ll have to attend the Small Farm Expo there in August to see for yourself. Remember, as Dr. Hale mentions in this week’s ‘Fruit Pest News’, watch for black cutworms and armyworms on sweet corn and cucumber beetles on cucurbits.
Upcoming Events

Tennessee Agritourism Association Meeting, June 11, 2007, Amazin’ Acres, Sparta, TN
Contact Vera Ann Myers for more information at verann@xtn.net.

20th Missouri Agribusiness Academy Tour, June 11-15, 2007, Various locations across MO
For more information, call 573.751.4561.

Southeast Greenhouse Conference, June 20-23, 2007, Greenville, SC
For more information, call 1.800.453.3070, or visit www.sgcts.org or email smolnar@asginfo.net.

Blooms Days Garden Festival and Marketplace, June 23-24, 2007, East Tennessee Research and Education Center, Knoxville, TN
For more information, visit http://bloomsdays.tennessee.edu.

Tobacco, Beef and More, June 28, 2007, Highland Rim Research and Education Center, Springfield, TN
For details, visit http://agriculture.tennessee.edu/news/releases/0705-HREC%20Field%20Day.htm.

Sunbelt Ag Expo Field Day, July 10, 2007, Moultrie, GA
For more information visit www.sunbeltexpo.com or call 229.985.1968.

Summer Celebration, July 12, 2007, West Tennessee Research and Education Center, Jackson, TN

National Association of County Agriculture Agents Annual Meeting/Professional Improvement Conference, July 15-19, 2007, Grand Rapids, MI

Building and Sustaining Effective Community Food Projects- A Training Facilitated by Southern SAWG, July 25-26, 2007, Nashville, TN
For more information, contact Keith Richards at keith@sawg.org or 479-587-0888.

2007 Annual Small Farm Expo/Small farmer Recognition Program, August 2, 2007, TSU Research and Demonstration Farm, Ashland City, TN
For more information and registration, contact Hilda Gooch at 615.963.5530 or agooch@tnstate.edu.

Steak and Potatoes Field Day, August 7, 2007, Plateau Research and Education Center, Crossville, TN

Potato Association of America 91st Annual Meeting, August 12-16, 2007, Idaho Falls, ID
For details visit www.conferences.uidaho.edu/PAA.

Sunbelt Ag Expo—30th Anniversary Show, October 16-18, 2007, Moultrie, GA
For more information visit www.sunbeltexpo.com or call 229.985.1968.

International Irrigation Show, December 9-11, 2007, San Diego, CA
For details, call 703.536.7080 or visit http://www.irrigation.org.

Tennessee Fruit and Vegetable Association Convention, December 9-11, 2007

Weather Report

More sun, no rain for the next week. The first chance for rain across the state looks like next Thursday. Temperatures will remain in the low to mid-80’s for high’s and low’s right around 60.

I can’t stress enough the importance of irrigating your vegetable crops. If a drought occurs early in crop development, it can delay maturity and reduce yields. If later in the growing season, quality can be reduced though total yields are not usually affected. Vegetables are 85-90% water. Watering throughout the season will ensure higher quality and higher yields. Water now = $$$ later.