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LU Horticulture Notes July 2018

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HORTICULTURE PROGRAM
Cooperative Extension & Research
at Lincoln University of Missouri

LU Horticulture Notes

Issue: July 2018

Touria Eaton, Editor

Cooperative Extension and Research

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In this Issue…

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Exciting time at LU Horticulture Program!

By Touria Eaton

LU Horticulture Program started LU Student Farming Enterprise. Five students, Laurel Forbes, Melissa Tyme, Ouekie Wright, Coy Spence and Bradly Fisher were recruited to learn about research and to farm one 10,000 ft^2 plot.

The students are learning by doing all aspects of crop production, protection, harvest and post-harvest handling, and marketing.

Tomatoes, cucumber, bush beans, cantaloupe, leaks and onions are some of the crops the students are growing now to give for donations, to support the enterprise, this year. Next year, the enterprise plans to grow for sale to learn about input, output, and marketing. The students plan on direct marketing through farmers' markets, farm stands, and private customers.

One loyal customer and supporter of the enterprise, Ms. Lana Wegener, a resident of Jefferson City, asked that the enterprise grow tomatoes and cucumbers for her for generous donations.

The students also are exposed to all aspects of research, data collection, and data interpretation. Interested students plan to present at the next Missouri Academy of Science annual meeting.

Crops to Plant now for Fall Harvest

By Joyce Rainwater

The summer months are a time of amble harvest for most of Missouri but also a time to begin planning and planting for fall abundance as well. Some vegetables that could work for fall harvest include:

· Beans (some varieties)
· Broccoli
· Brussel sprouts
· Cabbage
· Carrots
· Cauliflower
· Sweet corn
· Turnips, and
· Potatoes

To find more information on the best varieties to plant follow this link: *https://extension2.missouri.edu/g6201* to the Missouri Planting Calendar or call your nearest area educator.

Crops to Harvest in July/August or Find at your Local Farmers' Market

By Joyce Rainwater

Many crops are ripening in July and August including:

· Tomatoes
· Peppers
· Onions
· Green Beans
· Blackberries
· Raspberries
· Blueberries
· Cherries
·Peaches
·Cantaloupe
·Cucumbers
·Eggplant
·Herbs
·Squash
·Potatoes

Harvest times are dependent on planting dates, maturity times, and weather conditions. Happy harvesting and eating!

Freshly harvested green beans
Photo credit: Mike Crowden

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Pests to Monitor

By Touria Eaton

Tomato Leaf Blights caused by Septoria and Alternaria are predominant in tomato fields at this time of the year and can cause economic crop losses. *Alternaria solani*, the pathogen responsible for early blight can cause darkly colored lesions or yellowing of the leafy tissue. Septoria and Alternaria both survive on infected plant debris and on solanaceous weed hosts, and can be carried on tomato seed. Rotate out of solanaceous crops for at least two years, control susceptible weeds, and incorporate debris after harvest. Clean stakes before re-use. Plant varieties that are resistant to Septoria, These varieties include Iron Lady, Advance, and Jasper cherry. Varieties that are resistant to Alternaria include Gardener's Choice, Mountain Supreme, Sorreto, and Sure Cross. Reduce the length of time that tomato foliage is wet by using trickle irrigation, wider plant spacing, and staking. Keep workers and equipment out of wet fields where possible.

Cabbage Maggot emergence can be determined by indicator weeds (bloom of golden rod). So keep your eye out for flies in the field and for larvae feeding on the roots of your fall planted brassicas.

Cabbage Aphids. Scout now and use insecticidal soaps (M-Pede or another insecticide) to keep your Brussels sprouts from becoming infected. Treat Brussels sprouts, broccoli, cabbage and cauliflower if greater than 10% of the plants are infested with aphids any time after heads or sprouts begin to form.

On information on pesticides registered for these pests and crops, visit the 2018 Midwest vegetable Guide for Commercial Growers at https://ag.purdue.edu/btny/midwest-vegetable-guide/Documents/2018/01_MWVegGuide_2018.pdf

Eat your vegetables!

By Touria Eaton

Greens (Brassica salad mix): Brassica greens for salads can include mizuna and tender mustard, turnip, or collard greens. These greens are also in wilted salads or lightly steamed, just until tender but still bright in color. Greens are rich in beta carotene, vitamin C, folate, fiber, and calcium. They also contain sulfur-containing chemicals, called glucosinolates, which give brassica the distinguished bitter and pungent taste. Indole-3-carbinol and sulforaphane are the most widely known glucosinolates, and have been shown in animal studies to inhibit the growth of cancer in different organs (breast, bladder, colon, lung, liver & stomach).

References:

Antonious GF, Turley E, Antonious A, Trivette T. 2017. Emerging technology for increasing glucosinolates in arugula and mustard greens. Journal of Environmental Science and Health, Part B 29:1-4.

Lin, Long-Ze, and James M Harnly. 2010. Phenolic Component Profiles of Mustard Greens, Yu Choy, and 15 Other Brassica Vegetables. Journal of agricultural and food chemistry 58(11):6850–6857.

Photo courtesy of Mike Crowden

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What Is FSMA? (Food Safety Modernization Act, 2011)

By Lindsey Pender and Touria Eaton

The Food Safety Modernization Act (FSMA) aims to ensure the U.S. food supply is safe by shifting the focus from responding to contamination to preventing it. Included in this Act is the Produce Safety Rule (2015). This rule establishes standards for the safe growing, harvesting and handling, packaging and storing of fruits and vegetables grown for human consumption. All covered growers will need to comply with this federal law.

The rule applies to (covers) growers with at least $25,000 in average annual gross income from produce sales and contains some exemptions. Lincoln University can help you determine if your farm qualifies for an exemption.

Measures contained in the rule include attending a Produce Safety Alliance Grower Training and applying the information learned at the training at the farm.

The date of compliance depends on the average yearly gross income from produce sales. The compliance dates are as follows:

- January 26, 2018 for farmers with more than $500,000 in average yearly gross farm produce income.
- January 28, 2019 for farmers with a farm gross produce income between $250,000 and $500,000.
- January 27, 2020 for farmers with a farm gross produce income between $25,000 and $250,000.

What Is FSMA? (Food Safety Modernization Act, 2011) Continued

Farmers needing to comply with the rule (also referred to as farmers covered by the rule) are supposed to get all the training they need and apply what they learned at their farms before the compliance date when possible.

Routine inspection by the Missouri Department of Agriculture will start after the compliance date. Inspections by the Food and Drug Administration occur if there is a contamination outbreak in the region and the FDA is trying to find the source of the contamination.

Government fines may apply to produce growers that are covered by the rule and elect not to comply.

FSMA differs from GAP (Good Agricultural Practices) in several ways. While compliance with FSMA is federally mandated, GAP is a voluntary audit program through USDA. Compliance with one does not ensure compliance with the other. More information on the FSMA and compliance can be found on the FDA's FSMA website: www.fda.gov/FSMA

Upcoming Events and Deadlines

- August 10 Lincoln University Field Day Jefferson City, MO
- August 17 Deadline for CRP Enrollment at local USDA Service Center
- August 23 PSA Grower Training Doniphan, MO

We thank our sponsors

The events and activities of Lincoln University Horticulture Program are possible because of the collaboration of our colleagues and partners, and because of the generosity of USDA/NRCS; USDA/OAO; USDA/FSA; USDA/ Evans-Allen Research Program; USDA/OREI; MDA; and NC-SARE.

Thank you.

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