



Your local link to MU for ag extension and research information

<http://aqebb.missouri.edu/aqconnection>

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MU's On-Farm Research: Insect Pest Monitoring

The MU statewide insect trapping and reporting system (Missouri Pest Monitoring Network) uses traps baited with pheromones to monitor migratory and invasive insect species that have unreliable emergence/arrival/degree day predictors. Six traps are set at each monitoring location and data is collected weekly and uploaded to MU's integrated pest management website by the local Extension agronomist. When a threshold is met for a particular pest, an alert is released on the MU Integrated Pest Management (IPM) website and is also sent to producers who subscribe for pest alerts on the same website.

This system is to alert growers that the pest species are active, and fields should be scouted. The alert system is not designed to replace actual field scouting or make management decisions. The thresholds for alerts are different than spray thresholds. Fields should still be scouted, and spray decisions made based upon IPM thresholds set for each species and the actual crop they are infesting. It should be noted, IPM comprises of more control options than just spraying, and all management options for a certain pest's control should be investigated and may aid in the effectiveness of insecticidal sprays and seed treatments. Integrated Pest Management tactics include regulatory, biological, cultural, physical, genetic, and chemical control.

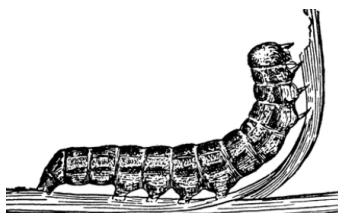
The traps are deployed along the edge of any agricultural field, with special attention paid to trap spacing. Traps are spaced a minimum of 55 yards from one another. The traps are spaced evenly at certain distances to prevent interference between trap pheromone scent baits, which can lead to poor trapping and thus ineffective monitoring efforts. The reach of the pheromone plume emitted from impregnated rubber baits is only a few yards. There is no long-distance draw from the pheromones due to the relative effective range of the pheromone plume, so insects will already have to be in the area, i.e., trapping activities will not increase insect pressure observed in adjacent crop fields.

To access and subscribe to online pest monitoring alerts, please visit the following website <https://ipm.missouri.edu/pestMonitoring/>. Many traps share a somewhat similar appearance to fishing hoop nets, if encountered, please leave them in place as they are mounted to poles intentionally in agricultural areas to aid producers. There are plastic traps that resemble small white birdhouses and traps that resemble buckets with a funnel top, both of which will be seen hanging from an above ground elevated position. Sticky sheet traps are also placed in the environment and baited with pheromones. Traps and pheromones are matched to a particular insect species to more effectively trap the pest that is baited for.

Information about identification, scouting thresholds and control options can be found for each species on the MU IPM website. The species actively being monitored include black cutworm, brown marmorated stinkbug, corn earworm, fall armyworm, Japanese beetle,



and true armyworm. Monitoring begins for Japanese beetle and brown marmorated stinkbug in summer, and for other species around planting time in the spring. Additional information can be found on the website regarding European and southwestern corn borers, tobacco budworm, and spotted wing drosophila. Please subscribe to the Mizzou Crop and Pest alert system by visiting <https://ipm.missouri.edu/cropPest/textAlert.cfm> or scanning the barcode below.



(Note to scan the barcode, use a smartphone and turn on the camera and point it over the barcode and a message should appear to tap the screen to get to the website.)

Source: *Nick Wesslak, agronomy specialist*

Update on Farm Labor Compensation

The new 2023 numbers for farm labor compensation were released by USDA National Ag Statistics Service (NASS) on May 24, 2023. Farm wages are up four to five percent from a year ago, with variations depending on the type of work. During the busy seasons many farm operations need some extra help. Farm compensation depends on many things including: responsibilities, capabilities, reliability and experience.

The NASS report is released each spring covering farm labor over the past year including rates paid by region. NASS collects data periodically (typically quarterly) throughout the year. Missouri and Iowa make up the region called Cornbelt II. Each report is over 20 pages in length and includes many tables and

charts that can be skimmed quickly. The content includes some information which may be helpful in trying to determine fair wages.

The data in the report is broken down in various weeks, with the most recent week of April 9-15, 2023. The NASS survey showed gross wages in the Cornbelt II region averaged \$17.31 per hour for field work and \$17.70 per hour for livestock work. The report includes a harvest time period of October 9-15, 2022 showing gross average wages were \$17.25 per hour for field work and \$17.53 per hour for livestock work.

Another interesting feature of the report is the wages paid based on gross value of sales. For example, farms with gross sales between \$100,000 and \$249,000 averaged wages of \$15.85, while farms with sales of \$500,000 to \$999,000 averaged \$17.08 and farms with sales in excess of \$1 million averaged \$18.71.

The next report is scheduled to be released on November 22, 2023. The reports are free to browse or download at <https://tinyurl.com/USDA-NASS-farmlabor>.

New Custom Rates Released

An updated custom rates guidesheet for 2023 was released by University of Missouri Extension. The rates are updated every three years by survey. Custom rates cover the cost of the equipment, fuel and labor, and in a few cases additional products such as bale wrap.

Since the previous custom rate survey three years ago, USDA reports that the value of equipment has increased by 23 percent, labor costs have increased by 18 percent and diesel prices have increased 38 percent.

The custom rates guidesheet is available at county extension centers and online at <https://tinyurl.com/customrate23>. The rates available in the guidesheet are limited. If a rate is needed and not in the guidesheet, contact the local extension ag business specialist.

To participate in future custom rate surveys, contact the local ag business specialist or county extension center.

Source: *Mary Sobba, ag business specialist*



Drought Resources

MU Extension has a variety of resources related to drought available on the website

<https://tinyurl.com/MU-drought>

There are many topics on this website including:

- Ammoniation of low-quality roughages
- Cost of drought-stressed soybeans as baleage
- Tough culling decisions come with drought, forages shortages
- Water deeply and wisely during drought
- Managing heat stress in cattle
- Water systems for livestock
- Drought effects on corn yield
- Finding pasture in drought

July Gardening Tips

Ornamentals

- Provide water in the garden for the birds, especially during dry weather.
- Remove infected leaves from roses. Pick up fallen leaves. Continue fungicidal sprays as needed.
- While spraying roses with fungicides, mix extra, and spray hardy phlox to prevent powdery mildew.
- Newly planted trees and shrubs should continue to be watered thoroughly, once a week.
- Fertilize container plants every 2 weeks with a water-soluble solution.
- Keep weeds from making seeds now. This will mean less weeding next year.
- Keep deadheading spent annual flowers for continued bloom.
- Perennials that have finished blooming should be deadheaded. Cut back the foliage some to encourage tidier appearance.
- Plant zinnia seed by July 4th for late bloom in annual border.
- Spray hollies for leaf miner control.
- Prune climbing roses and rambler roses after bloom.
- Apply final treatment for borers on hardwood trees.
- Apply no fertilizers to trees and shrubs after July 4th. Fertilizing late may cause lush growth that is apt to winter kill.
- Hot, dry weather is ideal for spider mite development. With spider mite damage, leaves may be speckled above and yellowed below. Evergreen needles appear dull gray-green to

yellow or brown. Damage may be present even before webs are noticed.

- Fall webworms begin nest building near the ends of branches of infested trees. Prune off webs. Spray with Bt if defoliation becomes severe.
- Divide and reset oriental poppies after flowering as the foliage dies.
- Semi-hardwood cuttings of spring flowering shrubs can be made now.
- Summer pruning of shade trees can be done now.
- Powdery mildew is unsightly on lilacs, but rarely harmful. Shrubs grown in full sun are less prone to this disease.
- Divide bearded iris now.
- Don't pinch mums after mid-July or you may delay flowering.

Lawns

- Water frequently enough to prevent wilting. Early morning irrigation allows turf to dry before nightfall and will reduce the chance of disease.
- Monitor lawns for newly hatched white grubs. If damage is occurring, apply appropriate controls, following product label directions.

Vegetables

- Blossom-end rot of tomato and peppers occurs when soil moisture is uneven. Water when soils begin to dry; maintain a 2-3 inch layer of mulch.
- To minimize insect damage to squash and cucumber plants, try covering them with lightweight floating row covers. Remove covers once plants flower.
- Dig potatoes when the tops die. Plant fall potatoes by the 15th.
- For the fall garden, sow seeds of collards, kale, sweet corn and summer squash as earlier crops are harvested.
- Set out broccoli, cabbage, and cauliflower transplants for the fall garden.
- Sweet corn is ripe when the silks turn brown.
- Keep cucumbers well-watered. Drought conditions will cause bitter fruit.
- Harvest onions and garlic when the tops turn brown.
- Sow seeds of carrots, beets, turnips, and winter radish for fall harvest.
- Cover grape clusters loosely with paper sacks to provide some protection from marauding birds.
- Prune out and destroy old fruiting canes of raspberries after harvest is complete.
- Blackberries are ripening now.

- Apply second spray to trunks of peach trees for peach borers.
- Early peach varieties ripen now.
- Thornless blackberries ripen now.

Source: Missouri Botanical Garden



Welcome New State Specialists

Mandy Bish - State extension specialist for field and forage crop pathology in the Division of Plant Science & Technology. She will continue to serve as MU's Integrated Pest Management coordinator. In her new role, she will develop a research and extension program to address challenges with disease management in Missouri crops. One of her goals is to improve the efficacy of fungicide applications in corn and soybean.

Andrew Reis, state soybean specialist, joined the Division of Plant Science and Technology. He previously served as a soybean and sugarcane specialist at Louisiana State University, and will be responsible for conducting research and extending extension efforts to soybean producers across Missouri.

Adauto Rocha Jr. is an assistant Extension professor of agricultural economics. He will be responsible for developing an extension and applied research program focused on livestock economics and natural resources management.

Juo-Han Tsay is an assistant Extension professor of agricultural economics. She will support Missouri agricultural producers through applied research, policy analysis and decision-making tools that improve on-farm profitability.