

Announcements

JANUARY

4 Soil Acidity Workshop, Banyans on the Ridge – Pavilion, 1260 Palouse Ridge Dr., Pullman, WA. The workshop will feature local experts presenting current research on soil acidity for the Palouse region, a forum for questions. The workshop is approved for 8 CCA credits and includes lunch and refreshments. Visit <http://smallgrains.wsu.edu/event/2018-soil-acidity-workshop/> for more information.

9-10 Cropping Systems Conference, Three Rivers Convention Center, Kennewick, WA. Integration of dryland and irrigated direct seed cropping systems. For information visit: <http://www.directseed.org/events/annual-conference/>.

16 Cereal Grain Seminar, Walla Walla Airport Conference Room. Registration begins at 8:30 a.m.– 3:30 p.m. Offering 5 WSDA pesticide credits (pending) and 5 ODA (pending) credits. **Lunch is included. Register at the WSU Extension office by Wednesday, January 10th or go to <https://www.brownpapertickets.com/event/3214256>** to register online. Fee of \$25 includes lunch. For more information, call Becki at 509-524-2685.



17-18 Hay Expo, Three Rivers Convention Center, Kennewick, WA. For anyone who grows hay for a living or would like to know more about hay production. To register, visit <http://www.wa-hay.org/> or call 509-585-5460 for more information.



23-25 WA/OR Potato Conference 2018, Kennewick, WA, Three Rivers Convention Center. Includes a Spanish language program with pesticide credits for farm workers. For more information or to register, call 509-766-7123 or visit www.potatoconference.com.



31, Feb 1 Pre-License Pesticide & Recertification Training, Yakima, Convention Center, 8:00 a.m. to 4:30 p.m. Visit <http://pep.wsu.edu> for more information.

FEBRUARY

2 WSU Oilseed Production Workshop, Clarkston, WA. One-day workshop includes region-specific topics. Attendees will learn about in-season crop diagnostics for pests, diseases, nutrients, and herbicide damage, fertilizer management for spring and winter oilseeds. Registration is available at <http://css.wsu.edu/biofuels/> and includes lunch and refreshments. To learn more, send an email to ksowers@wsu.edu.



6-8 Washington Association of Wine Grape Growers Annual Convention, Three Rivers Convention Center, Kennewick, WA. The premier educational and networking opportunity for the Northwest grape and wine industry with sessions for everyone including growers, viticulture staff, wineries, enologists, tasting room staff, marketers, and more. For more information visit: <http://wawgg.org>.



7-11 Northwest Flower & Garden Show, Seattle, Washington State Convention Center, 7th & Pike. See designer gardens and attend free hands-on demonstrations and seminars. For more information, visit www.gardenshow.com or call 253-756-2121.



9 Washington State Swine Information Day, Moses Lake. This year's program will feature WSU PORK 200. The program will focus on teaching producers and marketers how to produce and market quality pig and pork products from farm to fork. For more information about the event please contact Sarah M. Smith, Regional Extension Specialist, at smithsm@wsu.edu or 509-754-2011, X4363.



13-14 Recertification Pesticide Credits (6/day) & Pre-License Pesticide Training, Pasco, TRAC, 8:00 a.m. to 4:30 p.m. You must pre-register at least 7 days prior for the courses at pep.wsu.edu. For directions and training agendas, visit pep.wsu.edu; for registration questions call 509-335-2830 or email pest@wsu.edu; license information available at WSDA 877-301-4555.

Updates

SOIL ACIDITY ON THE PALOUSE– DIGGING DEEPER SOILS WORKSHOP



PULLMAN, Wash. – As the pH of the Palouse's soil decreases, the concern of farmers and researchers has increased. Washington State University will host a soil acidity workshop featuring top experts from around the region.

The event, to begin 8 a.m. Thursday, Jan. 4, at Banyans Pavilion, will cover several aspects of liming, the effect of low pH on soil health, managing nitrogen to reduce acidification, the economics of soil acidity, and a panel discussion covering microbes, herbicides and agronomy of low pH soils. Speakers include scientists from WSU, University of Idaho, USDA, and Latah Conservation District.

Continental breakfast, buffet lunch, coffee, snacks and a no-host bar are included with registration for the day. This workshop has been approved for eight Certified Crop Advisor credits.

Registration available on the WSU Small Grains website: <http://extension.wsu.edu/palouse-soil-acidity/>. **Contact:** Carol McFarland, WSU Extension, carol.mcfarland@wsu.edu.

Farming & Livestock



OLYMPIA — The [Washington State Department of Agriculture](#) (WSDA) filed a notice of intent on December 20,

2017 to update rules concerning livestock identification, specifically requiring Radio Frequency Identification, or RFID, in cases where cattle are currently required to be identified with metal tags.

The proposed rule amendments would require official U.S. Department of Agriculture (USDA) RFID tags:

- When female cattle receive brucellosis vaccinations.
- When bulls are sampled for trichomoniasis.
- On all sexually intact cattle and bison over 18 months old presented for sale at a public livestock market.

Current rules already require official identification in these cases, but allow for the use of metal ID tags.

The proposed amendments would swap metal tags for an RFID tag.

"Updating our rules to incorporate RFID devices is an important step in strengthening our state's animal disease traceability system," Washington state Veterinarian Dr. Brian Joseph said. "The livestock industry could be devastated by a disease outbreak if WSDA and the USDA were unable to contain it quickly, something that an effective animal disease traceability program can help us accomplish."

The paperwork WSDA filed today involves two CR 101 documents, the first step in making changes in the Washington Administrative Code. WSDA is proposing to amend [WAC 16-86 Cattle and Bison Diseases](#) and [WAC 16-604 Public Livestock Markets](#) with the language requiring the RFID devices.

USDA has set expectations for all states to show continued progress in implementing a robust animal disease traceability (ADT) program. An effective ADT program allows rapid tracking of an animal's movements during an animal disease outbreak and increases consumer confidence in cattle products. By incorporating the use of RFID, WSDA continues to move forward with its development of a statewide ADT system with the end goal being all cattle identified with RFID before leaving a Washington premise.

An animal disease outbreak can sicken or kill livestock, require animals to be quarantined or euthanized and, in some cases, pose a public health risk. They are also expensive to manage and costly to the livestock industry. A 2003 case of BSE, or bovine spongiform encephalopathy, in Washington closed some foreign markets to Washington beef products until only recently. Prior to market access closure, the U.S. was China's largest supplier of imported beef, providing 70 percent of their total consumption. Beef exports to China must now meet specified requirements under the USDA Export Verification Program which includes traceability to the U.S. birth farm using a unique identifier or, if imported, to the first place of residence or port of entry.

The next step in the rule making process is the filing of a CR 102, which also includes a public comment period. No date for this has yet been set, but it is not expected to occur prior to the end of the 2018 Legislative session.

Anyone can email wsdarulescomments@agr.wa.gov and request to be notified when the CR 102 is filed, or visit agr.wa.gov/lawsrules for the most current information.



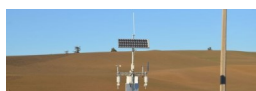
WHEAT AND BARLEY PRODUCTION IN WASHINGTON

In 2016 there were 2.2 million acres of wheat harvested in Washington, yielding more than 157 million bushels, and barley was harvested on 93 thousand acres for a total production of 7.2 million bushels. For decades Washington has been known throughout the world as the home of high quality soft white and club wheat production. Washington farmers also raise superb hard red winter wheat, hard red spring wheat, and barley.

	Winter Wheat	Spring Wheat
Soft White	85%	65%
Hard Red	15%	35%
Total	1.67 million acres (130 million bushels)	530 thousand acres (27 million bushels)

This data was provided by the United States Department of Agriculture [National Agriculture Statistics Service](#).

WEATHER RESOURCES



AgWeatherNet provides access to current and historical weather data from Washington State

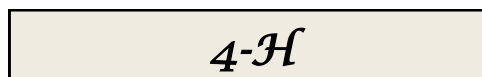
University's automated weather station network along with a range of models and decision aids. The weather data, advisories, customized weather alerts and decision support systems provided by AgWeatherNet and WSU can help improve production and product quality, optimize resource use and reduce environmental impact.

AgWeatherNet includes 176 automated weather stations located mostly in the irrigated regions of eastern Washington state. Since the installation of the first station in 1988, the network has undergone significant expansion in western Washington as well as in the dry land regions of the state. Standard AgWeatherNet weather variables include air temperature, relative humidity, dew point temperature, soil temperature at 8 inches, rainfall, wind speed, wind direction, solar radiation and leaf wetness. Some stations also measure atmospheric pressure. These variables are recorded every 5 seconds and summarized every 15 minutes by a data logger.

The weather network is administered and managed by the AgWeatherNet team located at the WSU Irrigated Agriculture Research and Extension Center in Prosser, WA. However, AgWeatherNet is programmatically linked to the research, extension and instruction efforts conducted by all departments and research and extension centers of the College of

Agriculture, Human, and Natural Resource Sciences of WSU.

AgWeatherNet data may be accessed and retrieved free of charge. Although membership is not a requirement, access to data for Guest Users is limited to the publicly available tools on the web page. Registered Users who login have the privilege of accessing the entire AgWeatherNet data set through the web based tools that are provided upon login. Registration information is confidential and used by AgWeatherNet staff for statistical reports and to provide better services. Therefore, we encourage all users to [register](#) for an AgWeatherNet account and login.



ACHIEVEMENT NIGHT

On November 12, 4-H youth and adult volunteers were honored at the 2017 annual 4-H Achievement Night. Approximately 185 awards were presented to 4-H members, clubs, and volunteers in recognition of their 4-H accomplishments during the past year.

Will Mackin received recognition as the Outstanding 4-H Volunteer Leader of the Year for over 20 years of exceptional leadership and service to the young people of the Walla Walla County 4-H program. Will is greatly appreciated for his dedicated service to 4-H as a volunteer.

Audrey Bennett received the Inspirational Leader of the Year award and has been a 4-H leader for 8 years.

Tallman's Pharmacy received the 4-H Appreciation Award for their continuing support of the 4-H program and its members.

Two outstanding 4-H Members from Walla Walla County were selected in each age division based on the quality and growth of their 4-H project, leadership skills, and their active involvement in the county 4-H program. The junior division outstanding members were Celina Thelander and Jasper Morrow; the intermediate division recipients were Leah Chapin and Bodie Holderman; and the senior division winners were Alicia Newcomb and Garrett Green. Receiving honorable mention awards were Sarah Hong, William Hong, Rosetta Renwick, Annaka Roland, Mateo Caso, Miriam Bennett, Rebekah Longmire, and Timothy Daves.

POSTMASTER send address changes to:
WSU EXTENSION
328 WEST POPLAR
WALLA WALLA, WA 99362

WSU EXTENSION NEWSLETTER
PUBLISHED 4-6 TIMES ANNUALLY

VOLUME 2018, NO. 1
WSU EXTENSION
WALLA WALLA COUNTY
328 WEST POPLAR
WALLA WALLA, WA 99362

Home & Garden

CARBON MONOXIDE DETECTORS SHOULD BE REPLACED EVERY FIVE YEARS

Adapted from Eileen Yager, University of Missouri



Homeowners may be surprised to learn that they need to replace the carbon monoxide detector they bought just a few years ago.

"Carbon monoxide detectors are only good for about five years," said

Michael Goldschmidt, a housing and environmental design specialist with University of Missouri Extension.

The arrival of cooler weather brings increased risk for carbon monoxide poisoning as people kick on natural gas and propane furnaces. "One of the most common areas where carbon monoxide occurs is the furnace and the flue," Goldschmidt said. Detectors use an electrochemical element to measure the carbon monoxide levels in the air, he said.

"After five years, the carbon monoxide detector can function improperly," he said. "It could ring when there isn't a high level of carbon monoxide or not ring when carbon monoxide levels are high."

Carbon monoxide poisoning symptoms include headaches, tightness of chest, dizziness, fatigue, confusion and breathing difficulties. Severe exposure to carbon monoxide can cause brain damage and death, Goldschmidt said.

Unintentional carbon dioxide poisoning results in about 2,100 deaths per year, according to researchers at the U.S. Centers for Disease Control, who believe more than half of those deaths could be prevented with carbon monoxide detectors. Gas furnaces, as well as gas-powered water heaters, stoves and other appliances, generate small amounts of carbon monoxide as a byproduct of combustion.

"If they are not working properly, they will produce large amounts" of the odorless, colorless gas, he said. "We recommend that you get the furnace checked every year."

Homeowners should install carbon monoxide detectors, which will sound an alarm when carbon monoxide levels are high, on each level of their house. Detectors should be placed outside of bedrooms, Goldschmidt said.

"The room could have dangerous levels of carbon

monoxide, and you would be exposed to dangerous levels before the detector rings," he said.

Carbon monoxide detectors should have a battery back up and be tested monthly. Detectors also should be tested after power outages. Those with a number read out should be reset before testing.

If a carbon monoxide detector goes off, get out immediately and then call the fire department. "Even the time you take to open a window is enough to be exposed to dangerous levels," warns Goldschmidt.

Source: Michael Goldschmidt,
goldschmidtm@missouri.edu

ARE DUST MITES A PROBLEM IN YOUR HOME?

Adapted from Marsha Alexander, University of Missouri



It may be surprising to learn that dust mites are part of everyday life and can be found in virtually every household. High humidity increases the presence of dust mites. Often they are most prevalent during the summer months when the humidity and heat are increased. "However, dust mites can also be problematic in the winter months," says University of Missouri housing and environmental design specialist Marsha Alexander.

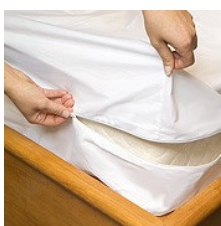
Although mites live in many homes, only people who are allergic to them will know they are there. Dust mites are second only to pollen in creating allergic reactions. When dust mites grow, they shed their skin and feces causing allergic reactions. Allergic reactions range from sneezing, itchy noses and watery eyes to severe asthma attacks.

The humidity level in a home can have a significant impact on dust mite populations. Immature mites can be dormant during long periods of low humidity, maturing when environmental conditions are more favorable. The presence of dust mites increases when the relative humidity reaches 55 percent and rises as the humidity level goes up.

Indoor relative humidity of a home should be maintained within a range of 30 percent to 50 percent. When kept within these ranges, the problem of dust mites will be minimized. If your home does not have a relative humidity gauge to monitor inside humidity levels, purchase one. Having one on each level of the home can be very helpful.

The pinhead-sized mites live in carpets, bedding and upholstery. They can be found particularly in

textured upholstered furniture and long pile carpet and area rugs. Bedding is also a location where they can often be found. Combining high relative humidity levels with the moisture from a sleeping person can be enough to support the mites. In fact, a typical used mattress may have 100,000 to 10 million mites



inside, depending on the age of the unit.

To control dust mites enclose mattresses, box springs and pillows in zippered allergen and dust-proof covers. Wash bedding materials, including pillow cases

and sheets, weekly in hot water at 130 degrees. It is also suggested that blankets and mattress pads be laundered frequently in hot water. Avoid using curtains, drapes or fabric blinds on windows. Use plastic shades instead. Remove carpeting from the bedroom of the allergic person and replace it with tile or wooden floors. Vacuum often with a vacuum cleaner that has a high efficiency purifying air (HEPA) filtration system. Replace vacuum bags frequently because dust mites can leave the bag.

For more information on controlling dust mites contact your local University of Missouri Extension Center or visit <http://extension.missouri.edu/>.

Consumer Science

DRYING PACKAGING AND STORING DRIED FOODS



Dried foods are susceptible to insect contamination and moisture reabsorption and must be properly

packaged and stored immediately. First, cool completely. Warm food causes sweating which could provide enough moisture for mold to grow. Pack foods into clean, dry, insect-proof containers as tightly as possible without crushing.

Store dried foods in clean, dry home canning jars, plastic freezer containers with tight-fitting lids or in plastic freezer bags. Vacuum packaging is also a good option. Pack foods in amounts that can be used all at once. Each time a package is re-opened, the food is exposed to air and moisture that can lower the quality of the food and result in spoilage.

Pack food in amounts that will be used in a recipe. Every time a package is re-opened, the food is exposed to air and moisture that lower the quality of

the food.

Fruit that has been sulfured should not touch metal. Place the fruit in a plastic bag before storing it in a metal can. Sulfur fumes will react with the metal and cause color changes in the fruit.

Dried foods should be stored in cool, dry, dark areas. Recommended storage times for dried foods range from 4 months to 1 year. Because food quality is affected by heat, the storage temperature helps determine the length of storage; the higher the temperature, the shorter the storage time. Most dried fruits can be stored for 1 year at 60°F, 6 months at 80°F. Vegetables have about half the shelf-life of fruits.



Foods that are packaged seemingly "bone dry" can spoil if moisture is reabsorbed during storage. Check dried foods frequently during storage to see if they are still dry. Glass containers are excellent for storage because any moisture that collects on the inside can be seen easily. Foods affected by moisture, but not spoiled, should be used immediately or redried and repackaged. Moldy foods should be discarded.

Conditioning Fruits

The moisture content of home dried fruit should be about 20 percent. When the fruit is taken from the dehydrator, the remaining moisture may not be distributed equally among the pieces because of their size or their location in the dehydrator.

Conditioning is the process used to equalize the moisture. It reduces the risk of mold growth. To condition the fruit, take the dried fruit that has cooled and pack it loosely in plastic or glass jars. Seal the containers and let them stand for 7 to 10 days. The excess moisture in some pieces will be absorbed by the drier pieces. Shake the jars daily to separate the pieces and check the moisture condensation. If condensation develops in the jar, return the fruit to the dehydrator for more drying. After conditioning, package and store the fruit as described above.

Determining Dryness of Vegetables

Vegetables should be dried until they are brittle or "crisp." Some vegetables actually shatter if hit with a hammer. At this stage, they should contain about 10 percent moisture. Because they are so dry, they do not need conditioning like fruits.

Extracted from "So Easy to Preserve", 5th ed. 2006. Bulletin 989, Cooperative Extension Service, The University of Georgia, Athens. Revised by Elizabeth L. Address. Ph.D. and Judy A. Harrison, Ph.D., Extension Foods Specialists.

RASPBERRIES HEALTH BENEFITS

Adapted from Gail Wells



Eating the equivalent of one serving of red raspberries every day curbed weight gain in laboratory mice even when they ate an unhealthy, high-fat diet, researchers at Oregon State University found.

The mice also had lower indicators of metabolic problems like diabetes and fatty liver—conditions that afflict an increasing number of people in the United States.

It's not news that raspberries are good for you, said coauthor Neil Shay, a researcher in OSU's College of Agricultural Sciences. The surprise, he said, was that even a small amount—the equivalent of sprinkling a cup over your daily breakfast cereal—can pack big benefits.

Raspberries are particularly powerful, said Shay. Rich in fiber, they also contain tannins, flavor and color compounds and other plant chemicals that, when ingested and metabolized, appear to reduce intracellular damage within cells, which may help cells repair themselves, as well as stimulating the body's processing of fats and sugars.

The raspberry-fed mice had significantly less fat in their livers at the end of the ten-week study, and their blood glucose measure was statistically equivalent to that of a control group of mice fed a normal low-fat diet.

What's more, the raspberry-fed mice were visibly slimmer than their counterparts that ate the same high-fat diet but didn't get the raspberries. "You didn't need to be a scientist to see the difference at the end of the study," said Shay.

Its findings confirm and extend what Shay and his colleagues found in [a similar experiment two years ago](#), in which they fed mice the equivalent of four servings of red raspberries a day.

"Which is a pretty high amount," Shay said. "As good as a fruit may taste to you, if you eat it in quantity every day, you're going to get tired of it. We wanted to see how much we could lower the amount and still see the beneficial effects."

In the recent study, he and his colleagues fed the mice a high-fat diet that resembled a human's fatty, sugary, 2,000-calorie-a-day junk-food diet. Some mice also ate red raspberries in the form of either juice concentrate or puree concentrate.

The raspberry products accounted for about 2.5 percent of the mice's daily calorie intake—the

equivalent of about 1 cup of berries daily (50 calories) for a person. The rest of their diet was adjusted to account for the carbs and calories in the raspberries, so that all the study mice ate the same number of calories per day. A third group of control mice was fed a normal low-fat mouse diet.

All the study mice gained weight over the course of the study, but the ones that ate the raspberry products gained significantly less. At week 10, they weighed between 15 and 17 percent less than the mice that didn't eat the raspberries.

Similarly, both groups developed fat in their liver tissue, but the raspberry-fed mice ended up with between 42 and 47 percent less liver fat than their raspberry-deprived counterparts.

Finally, the raspberries seemed to help the high-fat-fed mice regulate their blood glucose and blood insulin better. High levels of glucose and insulin in the blood are associated with diabetes and other metabolic disorders.

Blood glucose increased in the mice that ate the high-fat diet without the raspberries, but it stayed low in the high-fat-fed mice that got the raspberries; their blood glucose levels were "statistically indistinguishable" from those in the low-fat-fed control mice.

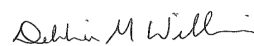
As for insulin, mice fed the raspberry juice concentrate had blood insulin levels that were statistically equivalent to those of the low-fat-fed control mice. Mice that got the raspberry puree also had lower levels of insulin, although not so low as those that got the juice concentrate.

"Yet it's becoming clear that, if people include these foods in their diet—cherries, raspberries, walnuts, green tea—in reasonable amounts, it's going to benefit them. And there's not a lot of downside associated with the consumption of these foods."



WASHINGTON STATE UNIVERSITY
WALLA WALLA COUNTY EXTENSION

Celebrating 100 Years of Extending Knowledge
and Changing Lives.



Debbie M. Williams
County Extension Director

Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local Extension office.