WASHINGTON STATE UNIVERSITY
WALLA WALLA COUNTY EXTENSION
328 West Poplar Walla Walla, WA 99362
Phone: 509-524-2685 Fax: 509-524-2695
http://wallawalla.wsu.edu/

Newsletter

May 2015

Announcements

MAY

2 Master Gardeners Return to Downtown Farmers' Market, 4th and Main. Market is open through October on Saturdays and Sundays from 9am-1pm. Look for the Master Gardeners' booth on Saturdays to get weekly gardening tips and advice on plant problems.

4-10 Milton-Freewater Jr. Show, Milton-Freewater Posse Grounds. Support local 4-H & FFA members as the display their talents and efforts. www.mfjrshow.com .

20 WSU Columbia County Conservation Tour, Dayton, 9:00 a.m. For more information, contact Paul Carter at 509-382-4741 or visit http://variety.wsu.edu/.

28- June 20 Dog Obedience Clinic, Walla Walla Fair Grounds. Sign-up for a 4 week class to learn tips to a train your canine. Introductory meeting will be May 28th at 6:30 p.m. Classes will be held on May 30th, June 6th,13th & 20th. Registration is due May 21st & the cost is $20 per dog . Contact the Extension Office to sign-up at 524-2685 or email Melanie Owens at mowens@wsu.edu.

JUNE

2 WSU Horse Heaven Hills Variety Tours, Horse Heaven, 8 a.m. For more information, contact Wayne Thompson at 509-240-5018 or http://variety.wsu.edu..

4 WSU Variety Tours, Connell, 5 p.m. For more information, contact Wayne Thompson at 509-240-5018 or http://variety.wsu.edu

13-14 Waitsburg Jr. Show, Waitsburg, Wa**.** Come support local youth as they have the opportunity to compete and show their talents.

23 WSU Walla Walla County Variety Tours (Cereals), Walla Walla, 3:30 pm. For more information, contact Wayne Thompson at 509-240-5018 or http://variety.wsu.edu.

JUNE, continued

24 WSU Columbia County Variety Tour, Dayton, 8:00 a.m. For more information, contact Paul Carter at 509-382-4741 or visit http://variety.wsu.edu/.

25 WSU Walla Walla County Variety Tours (pea, lentil, chickpea), Walla Walla, 3:30 pm. For more information, contact Wayne Thompson at 509-240-5018 or http://variety.wsu.edu.

JULY

17-18 Northwest Junior Sheep Exposition, Moses Lake, WA, Grant County Fairgrounds. Participants learn how to select fast gaining lambs that are heavily muscled and will finish properly. Join us to gain a better understanding of the economics related to producing market lambs. **Entry deadline is May 1 for market lambs and June 15 for breeding and prospect lambs.** Premium books and entry forms available at http://grant-adams.wsu.edu. For more information, contact Sarah M. Smith at 509-754-2011 or smithsm@wsu.edu.

AUGUST

9-11 Whitman Institute for Scholastic Enrichment (WISE) WISE is a free, three day program at Whitman College for middle school students. Find out what college life is all about from the classroom to extracurricular activities. For more information and an application, see website http://www.whitman.edu/offices-and-services/intercultural-center/wise

Updates

GRAIN & HAY GROWERS, SELLERS LINK ON EXTENSION ONLINE BULLETIN BOARD

Washington State University's has a new Organic Grain Sales Bulletin Board that allows farmers and buyers to submit their goods or needs, their location, and contact information onto the board. It's up to buyers and sellers to work out the price, quality, certified organic status and delivery method of any deal. To sign up to for the listserv, send an email to robertsd@wsu.edu. Check out the Organic Grain Sales Bulletin Board at http://smallgrains.wsu.edu/organic-grain-sales-bulletin-board/.

Farming & Livestock

STRIPE RUST FORECAST & UPDATE, MARCH

Xianming Chen

Based on forecast models using the weather conditions from November 2014 to February 2015, stripe rust will be likely severe (40-60% yield loss on susceptible varieties) in 2015. The models resulted in an average yield loss of **60%** with a standard deviation of 31% on highly susceptible varieties. This value, more than the **38%** forecast made in January based on the November-December weather conditions, is similar to the yield losses of highly susceptible varieties observed in 2010.

Stripe rust found in Walla Walla, WA

On March 4, we were checking wheat fields in Whitman, Walla Walla, Benton, Franklin, and Adams counties in Washington, winter wheat plants ranged from tillering (Feekes 2) to early jointing (Feekes 5). Differences were observed in crop uniformity resulted from the soil moisture conditions in the last fall, from poor (not uniform) to good (uniform). Many fields in the Horse Heaven Hills region (Benton Co.), Franklin and Adams counties were planted twice, resulting in different stages of plants in the fields. No stripe rust was found in any of the commercial fields checked. Dead low leaves of big plants in fields in Benton, Franklin, and Adams counties, which likely caused by the unusually early cold period in the second week of November, should eliminate rust fungus, if any infection occurred last fall. Thus, rust fungus has unlikely survived in these fields.

However, we found stripe rust on susceptible varieties in our experimental wheat field near Walla Walla, which was planted on October 6, 2014. The plants were at Feekes 4-5 with the first and second leaves still alive, and rust was on low leaves actively producing spores (**Fig. 1**). The observation of several leaves with rust spores in the Walla Walla area is relatively early. For comparison, the first observation of stripe rust in the same location (only one leaf) was on April 23 in 2014, March 7 (heavier infection) in 2013, April 24 (only one leaf) in 2012, February 18 (heavier infection) in 2011, April 29 (similar level of incidence) in 2010. The average temperatures of 19-22°F (-6 to 7°C) and low temperatures of 14-18°F (-8 to -10°C) during the cold period of November 12-19, 2014 did not kill stripe rust fungus.

Recommendations for the Pacific Northwest

Unlike the last year, as stripe rust is predicted to be severe and has been observed in the eastern Pacific Northwest, attention should be paid for control of stripe rust this year. The following lists some general recommendations for the eastern Pacific Northwest:

1) Consider planting resistant spring wheat varieties and avoid susceptible ones. Use the Seed Buyers Guide to choose varieties rated 1 to 4 for stripe rust and avoid those rated 5 or above if possible. If a moderately susceptible or susceptible variety is planted, consider use fungicide at the time of herbicide application if rust can be found in the field.
2) For the Walla Walla area and other areas in southern Washington, southern Idaho, and eastern Oregon, start checking your winter wheat fields. If stripe rust can be found and if the variety is moderately susceptible or susceptible (rate 5 or higher), use fungicide when apply herbicide. For areas further north in Washington and Idaho, start checking winter wheat fields about three to four weeks from now and consider use fungicide at the time of herbicide application if stripe rust is found or a moderately susceptible/susceptible variety is grown. Whether a second application is needed or not depending upon rust situation in the field and in the surrounding areas before heading.
3) For western Oregon, Mike Flower, Chris Mundt, and others have already made recommendations for scouting rust and applying fungicide when needed. For western Washington, as usual, fungicide application is always needed at the time of herbicide application if the field is not planted with a resistant variety.

WASHINGTON STATE UNIVERSITY
WALLA WALLA COUNTY EXTENSION

Washington State University helps people develop leadership skills and use research-based knowledge to improve their economic status and quality of life.

Debbie Moberg-Williams
County Extension Director

Helping You Put Knowledge To Work

STUDY POINTS THE WAY TOWARD PRODUCING RUBBER FROM LETTUCE
By Sylvia Kanton, WSU

PULLMAN, Wash. – Prickly lettuce, a common weed that has long vexed farmers, has potential as a new cash crop providing raw material for rubber production, according to Washington State University scientists.

Writing in the Journal of Agricultural and Food Chemistry, they describe regions in the plant's genetic code linked to rubber production. The findings open the way for breeding for desired traits and developing a new crop source for rubber in the Pacific Northwest.

"I think there's interest in developing a temperate-climate source of natural rubber," said Ian Burke, a weed scientist at WSU and a study author. "It would be really great if prickly lettuce could become one of those crops."

Potential for sustainable source

When the lettuce we eat and grow in our gardens bolts, a milky white sap bleeds from the stem. In prickly lettuce, the wild relative and ancestor of cultivated lettuce, this same substance could prove to be an economically viable source of natural rubber and help alleviate a worldwide threat to rubber production.

(Photo by Jared Bell, WSU)

The milky sap, or latex, of the plant could be used to produce rubber. Natural rubber is the main ingredient for many everyday products, from boots to condoms to surgical gloves. Roughly 70 percent of the global supply of rubber is used in tires.

But more than half of rubber products are made from synthetic rubber derived from petrochemical sources. And the largest source of natural rubber, the Brazilian rubber tree, is threatened by disease. Burke has reviewed many studies of prickly lettuce and its cultivated cousins, but one in particular gave him an idea. A study published in 2006 found that the latex in prickly lettuce was very similar to the polymers found in natural rubber.

"It occurred to me that we could grow the heck out of prickly lettuce in eastern Washington," he said.

He knew that to develop a viable new crop for rubber production, he had to start by understanding the genetics of rubber production in the plant. Burke, doctoral student Jared Bell and molecular plant scientist Michael Neff began their studies with two distinct samples of prickly lettuce collected from eastern Washington. These differed in their rubber content, leaf shape and tendency to bolt. The scientists were able to identify genetic markers not only for rubber content but for the way the plants grow, including the number of stems produced and bolting.

Sought-after traits in cultivated lettuce – like abundant leaves, a single stem and delayed bolting – are the exact opposite of traits desired for rubber production. Early bolting plants with multiple stems would allow for multiple harvests over the season and potentially maximize rubber yields.

Closeup of prickly lettuce shows spines along the midrib of the leaf. (Photo by Flickr u ser Jim Kennedy)

Burke said that selecting for other traits, like water use efficiency, could allow prickly lettuce to be grown with minimal rainfall, meaning it could be grown in rotation with other crops.

Source: Ian Burke, Department of Crop and Soil Sciences 509-339-5718, icburke@wsu.edu.

4-H

The annual 4-H Super Saturday was held on March 21st in Saint Patrick's Community Building. Many local volunteers presented workshops on a variety of topics.

April's presentation contest was a great success. Over eighty youth participated in the April 4-H contest. 4-H members will have the opportunity to return for a contest in May to improve their presentations.

Come support the accomplishments of our 4-H youth! On May 4-10, 4-H members will be participating in the Milton Freewater Junior Show and on June 13-14 they will be exhibiting at the Waitsburg Junior Show.

Financial Fitness

PROTECTING YOUR IDENTITY PROTECTS FINANCIAL FUTURE

"In our modern world, with click-of-a-mouse speed, identity theft is a growing threat to you personally and financially," says Doug Scotten, family financial education specialist with University of Missouri Extension.

The United States Bureau of Justice Statistics includes three types of incidents that are considered identity theft. The incidents include the unauthorized use or attempted use of an existing account, the unauthorized use or attempted use of personal information to open a new account, and misuse of personal information for fraudulent purposes. BJS statistics indicate in 2012, 16.6 million people reported being victims of identity theft in the United States. The number of identity thefts rose 33 percent from 2005 to 2010.

The top five things identity thieves are looking for are as follows:

- Social Security Number
- Date of birth
- Your full legal name
- Account numbers (bank and credit card account numbers)
- Online passwords

Once an identity thief has stolen your information, the threat to your personal life and personal finances begins. The U.S. Federal Trade Commission *Identity Theft Survey Report* indicates the following uses of stolen information:

50 percent to access credit card accounts
19 percent to access bank accounts
10 percent to access telephone accounts
4 percent to make loans on items like cars and real estate
4 percent to access Internet accounts
2 percent to access insurance accounts
1 percent other

In 20 percent of the identity theft cases, the information stolen from the victim was used to open up new accounts in the victim's name. Imagine the damage this can do to you both personally and financially.

If you believe your identity has been stolen or compromised, take the following steps:

Immediately request a fraud alert from the three major credit bureaus: TransUnion, Equifax and Experian. The fraud alert will be placed on your credit line and will stay on your credit report for 90 days.

- Request your credit report from the credit bureaus. You can obtain this by visiting annualcreditreport.com or telephoning 877-322-8228. This will give you the opportunity to review your report to see if your accounts have been tampered with or new accounts have been opened.
- Create an Identity Theft Report. To create this report, submit a report to the U.S. Federal Trade Commission. Document details of the theft and print the document, which will serve as an Identity Theft Affidavit. Take the Identity Theft Affidavit to your local law enforcement agency and file a police report. Obtain a copy of the police report or police report number. The Identity Theft Affidavit and police report make up the Identity Theft Report. Once complete, submit the Identity Theft Report to the U.S. Federal Trade Commission.

If you fall victim to identity theft or believe your identity has been compromised, act fast. It takes time and diligence to resolve the problem. Continue to monitor your credit report and accounts and change all of your passwords. Keep in contact with involved agencies and your creditors until the situation is resolved.

Source: Missouri Families Newsletter

Home &Garden

PESTICIDE INGREDIENT: ACETIC ACID/ VINEGAR

WSU Publication FS161E

Acetic acid is one of the *simplest organic acids. Here,*"organic" means a compound having carbon molecules. It is a naturally occurring substance found in all plants, animals, and humans in tiny amounts.

Acetic acid is one of the few chemicals with two common names. Both depend upon its concentration. "Vinegar" means concentrations up to 8%. "Acetic acid" means concentrations higher than 8%. When the concentration is low enough to be called vinegar, it is a food product. Most household (food) vinegar is sold at a 5%

concentration. The U.S. Food and Drug Agency (FDA) regulates food products.

When the concentration is high enough to be called acetic acid, and it is used to kill weeds, it is a pesticide. The U.S. Environmental Protection Agency (EPA) regulates pesticides. When the concentration is low enough to be called vinegar, but is sold as an herbicide, the Washington State Dept. of Agriculture regulates it as a pesticide.

This chemical is made through bacterial fermentation (for example, turning apple cider into vinegar) or industrial reactions (for example, turning methanol into acetic acid). If you are looking for a product that is "certified organic," things get a bit more complicated. Here, "certified organic" means a substance or product that has been certified through the USDA National Organic Program's (NOP) third-party agents. Examples of nearby agents include: the Organic Materials Review Institute (OMRI), Oregon Tilth Certified Organic (OTCO), and the WSDA Organic Food Program (OFP). Organic certification rules are partly built on the source of starting material. Take organically produced apple cider for example. If it is made into vinegar using natural processes, then it is acceptable under organic standards. If it is made into vinegar using synthetic processes, it is not acceptable. If methanol is used to make acetic acid, which is then diluted to 8%, that vinegar is not acceptable under organic standards.

How it works as a pesticide:
Acetic acid is applied as a liquid spray or drench to weeds after they emerge from the soil. It is a contact herbicide, meaning it only affects plant tissue it touches. The acid breaks up cell membranes and makes them leak, causing the plant to dry out and die. Depending on plant age, air temperature, humidity, and direct sunlight levels, this may take from a few hours to several days. **The drying effect is not limited to just certain plants; any new plant tissue can be affected. Avoid getting drops of spray onto plants you do not want damaged.**

Young seedlings and new growth have a thinner leaf cuticle than older plants or woody parts, making it easier for acetic acid to break down cell membranes. For example, in one study acetic acid sprayed at 5%–20% concentration killed 80%–100% of weed seedlings that were from 3 inches–9 inches tall. However, when 10% acetic acid was sprayed on mature blackberry plants, only 5% of leaves were burned back. Thick, waxy cuticles and woody plant tissue are more resistant to liquid entering, thus harder to kill. To overcome this, trim perennial weeds so they regrow tender new growth. Follow this with a spray application to the new growth to deplete the weed's energy stores. Many cycles of trim-and-spray are likely needed to effectively treat stubborn perennial weeds such as Canada thistle (Figure 1).

Acetic acid is sometimes mixed with citric or other acids. It can also be listed as an inert ingredient on some herbicide labels. The point to remember with acetic acid is that high concentrations are more effective on woody perennial weeds, while low concentrations will work effectively only on very young weed seedlings.

Only apply pesticides to crops or sites listed on the label. Always store pesticides out of the reach of children and pets, preferably in locked cabinets. Keep pesticides in their original containers so instructions on personal protective gear and other precautions are easy to find. Dispose of pesticides by contacting your local Hazardous Waste facility.

Potential drawbacks
Eye damage or irritation is possible, so it is important to wear goggles or face masks when applying products containing acetic acid. Sprayers with tin, aluminum, or iron parts exposed to the acetic acid solution will be damaged. So will any lawn furniture touched by the spray.

Master Gardeners

PLANT CLINICS & FARMER'S MARKET

Visit the Walla Walla Extension office on Tuesdays and Thursdays from 9:00 to11:00 a.m. and 2:00 to 4:00 p.m. Bring in your home garden or lawn questions or problems and speak to a Master Gardener. Problem plant samples may be left at any time during office hours and a Master Gardener will look at the specimen during clinic hours and contact the home owner with recommendations.

Master Gardeners will also have a booth at the Downtown Farmer's Market on Saturdays beginning on May 2. Visit with our Master Gardeners and pick up free tip sheets on a variety of gardening topics.

10 VEGETABLES TO GROW IN THE SHADE

It's a common misconception that the only site to grow vegetables is one that's in full sun. For some vegetables, such as tomatoes, peppers, and squash, this is entirely true. But those of us who have shade are not doomed to a life without homegrown produce.

Basically, a good rule to remember is that if you grow a plant for the fruit or the root, it needs full sun. If you grow it for the leaves, stems, or buds, shade is just fine.

Keep in mind, no vegetable will grow in full shade. The following crops will produce with three to six hours of sun per day.

1. Salad Greens, such as leaf lettuce, arugula, endive, cress, and radicchio
2. Broccoli
3. Cauliflower
4. Peas
5. Beets
6. Brussels Sprouts
7. Radishes
8. Swiss Chard
9. Leafy Greens, such as collards, mustard greens, spinach, and kale
10. Beans

The best thing about knowing that these crops will successfully grow in some shade is that you'll be able to get more produce from your garden. Suppose, like most home gardeners, you've sited the vegetable garden in the one area of your yard that gets full sun. Use that space to grow the sun-lovers: the peppers, tomatoes, eggplants, corn, and squashes. The other crops, those that do well in the shade, can be tucked in anywhere. Grow some beets or swiss chard in your part-sun perennial border. Grow some lettuce or radishes in a container or window box.

Make use of the space you have, in both sun and shade, can easily double the amount of vegetables you usually get. And homegrown produce, whether it's a fresh, juicy beefsteak tomato or a crisp, spicy radish, will spoil you forever against the bland, boring produce at your local grocer. Being able to step out into your own yard to gather ingredients for an impromptu salad or side dish is a joy, and if you make the most of your space, you'll be harvesting the fruits of your labor from spring through fall, and quite possibly beyond.

Family Living

GARDENING IS HEALTHY FOR ALL AGES

When most people think about their garden, they think about the fresh vegetables they will be eating all summer. The vegetables are packed with good nutrients, but the garden provides many other benefits as well. Growing a garden provides your body with a good physical workout. Make gardening a family affair and all will harvest the benefits.

"Digging in the dirt is just plain fun for little children. Why not give them some seeds to put in that dirt to see what they can produce?" said Tammy Roberts, nutrition and health education specialist with MU Extension. If a child has grown and harvested their own food, they are much more likely to eat it. Also, learning to use small garden tools can be good for the development of gross and fine motor skills for children.

When we think about planning and caring for the garden, we are usually thinking about the healthful benefits of the food. Make no mistake; while you are paying attention to the chore at hand, your body is benefitting from a good workout as well.

"Did you know you are actually doing some strength training exercises while you work in the garden? Next time you are carrying a watering bucket or large flower pot just think about how that can help your muscles," said Roberts. Maintaining muscle mass is an important part of assuring good flexibility and balance. And when you are bone tired from getting up and down, know that you have actually helped your bones. The slow movement of getting from a sitting to a standing position is good for maintaining your muscles and bones.

Gardening is also very good for the mind. Children can learn many science lessons in the garden from the benefits of some bugs to how compost is made and helps the garden grow. Adults exercise their brain power in many ways, such as researching new plants they want to grow, finding the best method to manage pests and learning how to irrigate the garden.

Source: Missouri Families Newsletter

WSU EXTENSION NEWSLETTER
PUBLISHED 4-6 TIMES ANNUALLY
VOLUME 2015, NO. 3
WSU EXTENSION
WALLA WALLA COUNTY
328 WEST POPLAR
WALLA WALLA, WA 99362

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