

# HISTORY OF EXTENSION

The mission of extension is to "provide non-formal education and learning activities to people throughout the country — to farmers and other residents of rural communities as well as to people living in urban areas. It emphasizes taking knowledge gained through research and education and bringing it directly to the people to create positive changes."

Extension is often referred to as the "bridge between University research and the people of the state. The Cooperative Extension Service System, as a whole, has played a pivotal role in the advancement of our country.

### Morrill act of 1862:

In the heat of the Civil War, this act passed by President Lincoln. It granted each state a certain amount of land to finance and organize a "land-grant" college specializing in agriculture, home economics, and the mechanic arts. Today there is at least one land grant university in each state.

#### Hatch Act of 1887

Each state established an Experiment Station that concentrated on agricultural research. The Experiment Stations were set up to be conjoined with the Land Grant Colleges for the research to be relevant and useful for the changing needs of the community.

#### Smith Lever act of 1914:

In the beginnings of World War I and Babe Ruth, the successes of the land grant colleges and experiment stations were gaining momentum. In response, the Smith Lever act was passed to create The Cooperative Extension Service. This service is a way for the research based information to be disseminated effectively to the public.

### Extension through the decades

### 1920-1930

During the Great Depression, Extension lost funding for major programs, but had the opportunity to develop the need of relationships with volunteers. The economic shortcomings of the nation also gave the opportunity for Extension to develop programs that focused on developing healthy sustainable living.

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Summer 2017 Volume 1, Issue 2

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### ASK THE WEED DISTRICT

Spotted knapweed is native to eastern Europe, and was first introduced into the United States in the late 1800's. Spotted knapweed is widely distributed across Montana, occurring in all 56 counties. It is a biennial or short-lived perennial, and establishes quickly in areas where the soil has been disturbed.

Spotted knapweed has a stout taproot as well as lateral, branching roots. The roots produce a chemical that inhibits the growth of surrounding plants. Tiny hairs cover the stems and linear leaves of spotted knapweed, giving the plant a silver-gray appearance. Pink to purple flowers bloom from June to September. Bracts at the base of the flower have fringed, black tips that resemble spots. A single spotted knapweed plant can produce over 100,000 tiny seeds that remain viable for up to 5 years.

Spotted knapweed can be controlled using herbicides or by hand-pulling or digging. Additionally, there are six insect species that are commonly used for controlling spotted knapweed in Montana. If you have questions about managing spotted knapweed on your property, contact the Gallatin County Weed District at: 406-582-3265.

### ASK THE PLANT CLINIC

What are sources of material for composting?

Carbon:

Dead Leaves

Tree bark

Paper

Garden debris

Nitrogen:

Grass Clippings (if not treated with herbicide)

Vegetable Scraps

Horse, cow, chicken manure

Don't Add:

Oil/grease/fat

Meat/fish

Dog/cat waste

Sawdust from treated wood

## GALLATIN COUNTY WEED DISTRICT



Spring is finally here in Montana. People are sprucing up lawns and planting gardens. Spring is also the time for controlling noxious weeds. Noxious weeds displace desirable vegetation and spread rapidly. Ignoring noxious weeds will jeopardize all of the work you have put towards maintaining healthy lawns, gardens, pastures or other open spaces. Noxious weeds can spread to your neighbor's property and jeopardize their hard work as well. Each noxious weed species has a different biology and set of weaknesses to exploit, and certain control measures may work better on certain species. Therefore, developing an effective management plan is dependent upon the correct identification of

the species present.

The seeds of noxious weeds can remain dormant in the soil for years (for example, up to 39 years for oxeye daisy), so skipping a single year of control can significantly set back your efforts. Control should take place before seeds set, which is typically around mid-June in Gallatin County. Effective control of species with extensive creeping root systems, such as Canada thistle, leafy spurge, and whitetop, may also depend on depleting the root reserves, which will likely take years. This should be taken into account when developing a management plan for these types of species.

Landowners should think of noxious weed control as an annual event. Keeping an eye on plant growth and proper timing of control measures are critical for obtaining success in the long run.

# TIPS FOR KEEPING YOUR COMPOST PILE STEAMING

The key to a productive compost pile is the right combination of oxygen, moisture, materials, and microorganisms. All these things work together to activate heat within the pile. Size is a key factor in achieving the right conditions; ideally you want a pile roughly 3'x3'x3'. To ensure proper oxygen levels make sure and turn your pile as the internal temperature cools, this rotation will allow undecomposed materials to reach the inside of the pile and regenerate the heat necessary for decomposition (110-150 degrees is optimal). Moisture is trickier as too much water can cause a foul-smelling mess, too little water and you lose key bacteria. The proper moisture content will produce material much like that of a damp sponge, moist but not sopping wet. See the side bar for examples of brown materials (carbon) and green materials (nitrogen). They should be added to your compost at a ratio of 30 parts brown material to 1 part green material.

Montana State University Extension offers a MontGuide on Home Composting (MT199203AG) for more information.

# NATURAL RESOURCE CORNER

After a period of cool, wet weather this spring, it seems that summer has finally arrived in Gallatin County. Summer not only brings with it thoughts of wildflowers and sunshine, but also a focus on water for irrigation and recreation. We are continuing to publish a monthly Drought Resilience Index for Gallatin County that provides information on remaining snowpack conditions, streamflow, and reservoir levels. The Gallatin County Drought Resilience Index can be found online at <u>http://msuextension.org/gallatin/NaturalResourcesDroughtIndex.html</u>.

We are also working with the Greater Gallatin Watershed Council to develop a series of educational drought forums for the Lower Gallatin region. These meetings are intended to provide drought related information to the public as well as help us understand how the Lower Gallatin is vulnerable to drought and how participants have experienced and addressed drought. If you would like to participate in a drought vulnerability survey, please go to <u>https://goo.gl/forms/etf4mRKcJBr4huU93</u> to complete the survey.

The MSU Extension Climate Science Team has been hard at work this spring helping to host educational events and participating in collaborative projects focused on climate research, communications, and policy. We are currently in the process of developing and publishing a series of climate-related MontGuides, with one focused on climate resilience in Montana agriculture and another focused on public health and climate change.

# 4-H AT THE FAIR

With summer comes the fair season. All cross Montana 4-H members will exhibit their projects for the community to come see. In Gallatin County more than 400 4-H members will have a project on exhibit at the Big Sky Country State Fair from July 17-23. As a community member there are opportunities for you to get involved with the variety of 4-H projects at the fair.

The first way to get involved, is to just come to the fair and look at all the exhibits the youth have worked hard on. While you are there don't be afraid to ask the youth about their project. They are more than willing to share their knowledge and experience, and you are helping the youth develop their communication skills.

The purpose of 4-H is teaching youth life skills. Communication is a skill that is very important to members future success. At the start of the fair every youth that exhibits a project must complete a record book and complete an interview with a judge. Judges are community members that have knowledge and experience in fields related to 4-H projects. The interview provides 4-H members the chance to practice their interviewing skills as well as share what they learned throughout the year.

On Friday night on July 21st the Market Sale and Silent Auction takes place. The Market Sale provides anyone the opportunity to come and purchase an animal that was raised by 4-H members. The Silent auction is fairly new to the fair. Here you can bid on items (projects) that youth made in the indoor projects. Items from pictures, woodworking, sewing, baking and art are just some of the items you can find.

If you would like more information about been a judge for the 4-H interviews or how you could purchase something from the Market Sale or Silent Auction, please contact the Extension Office at 582-3280.

### WETLAND ENVIRONMENT TEAM

Wetlands are a small part of this larger ecosystem that are sometimes forgotten to views of mountains and agriculture fields. Although only 1-3% of Montana is a wetland area, over 90% of wildlife rely on wetlands for a food source or habitat. Wetlands don't only provide habitat for wildlife, they also help to improve water quality through passive remediation, reduce flooding, and are a place of recreation.

Volunteer this summer with the Wetland Environment Team and help monitor the health of our wetlands . Our Volunteer Kickoff event will be held at the extension office on June 7th, from 5:30-6:30PM. Come learn about what we are doing and more about what your commitment would be as a volunteer. Learn more: http://www.msuextension.org/ gallatin/ NaturalResourcesWetlandsWET.html

### ASK THE 4-H AGENT

Does 4-H just have livestock projects at the fair?

The livestock shows are some of the highlight events for 4-H during the fair. But there is more to see and more to 4-H. The Horse project kicks off fair with two days of events on July 17 & 18. Exhibit building 3 at the Fairgrounds is all 4-H projects. You will find photography, educational posters, leather crafts, art and much more.

Some projects have times where they demonstrate their projects. Look for the robotics and fashion revue events to get a deeper look at those projects.

Stop by the 4-H/Extension booth in Exhibit building 3 with any questions and some giveaway's.



# CALENDAR OF EVENTS

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Market

#### June

- June 1-Sept 7: Gallatin County Plant Clinic. Tuesdays & Thursdays 1-4pm.
- June 10: Gallatin Weed Pull
- June 10: Gallatin Beef Producer's Summer Tour
- June 10: Watershed Festival, 9am-2pm @ Fish Hatchery
- June 12, June19: W.E.T. Team Training, 9am-12pm, 1pm-4pm RVSP day prior to Edward
- June 13: Ft. Ellis Ag Field Day
- June 13-16: 4-H Summer Camp
- June 17: W.E.T. Team Training, 9am-12pm RVSP day prior to Edward
- June 17-Sept 9: Master Gardener Booth at Gallatin Valley Farmers Market
- June 20: GVLT Hike, 5:30pm

### **July** July 6-Sept 7: Gallatin County Plant

Clinic. Tuesdays & Thursdays 1-4pm.

July 12-15: Montana 4-H Congress

July 17-23: Big Sky Country State

July 22: Gallatin County 4-H Centen-

nial Celebration Dance (All past and

present 4-H Members invited!)

June 17-Sept 9: Master Gardener

Booth at Gallatin Valley Farmers

Fair-4-H Exhibits

### August

- August 1-Sept 7: Gallatin County Plant Clinic. Tuesdays & Thursdays 1-4pm.
- August 8: Big Sky Wetland Hike, 10– 11 am
- August 15: Manhattan Drought Planning 6-8pm

### Gallatin County MSU Extension Office

903 North Black Ave. Bozeman, MT 59715

Phone: 406-582-3280

Website: GallatinExtension.com





## HISTORY OF EXTENSION, CONTINUED

#### 1940-1960

During World War II, Extension played a vital role in the involvement with Victory Gardens. The initiation of Food Science Extension program came about in the 60's, and 4-H became co-ed, biracial, and independent from public school functions.

### 1970-1990

In the 70's the Master Gardener program was developed in response to a high demand for urban horticulture and gardening advice. Increased Community Development programming also began to emerge during this time, in efforts for Extension to relate to urban citizens. Cooperative Extension Service strengthened the unity of the four program areas we see today; Agriculture and Natural Resources, Family and Consumer Sciences, Community Development and, 4-H/ Youth Development.

### 2000- present

Today, the Cooperative Extension Service is a product of its own history. It is built upon foundation of un-biased University research, and the relationship between agents distributing the information throughout their county and learning what the public's needs are. The modifications and adaptions in the system have only improved the connection of the public to research based information.

Each program area is thriving with many different educational resources available.

Montana Extension has recently developed a user-friendly way to provide on hand knowledge to Montanans state wide through MontGuides. These one page fact sheets are on topics ranging from fertilizer to community planning. MontGuides provide information of all program areas in Extension. They are available to download online from the Montana Extension website or hard copies are available at the Extension office.