

# Agriculture and Natural Resources



Montana State University Extension Agriculture & Natural Resource faculty and staff work in cooperation with the College of Agriculture and Montana Agricultural Experiment Station to serve Montanans. MSU Extension provides support for homeowners, small acreage landowners, and farmers and ranchers, addressing all topics relevant to Montana agricultural and natural resources.

## THE MONTANA IPM PROGRAM

The Integrated Pest Management faculty produced 45 publications in 2022. Media contacts and televised appearances on Montana AgLive, published alerts, and in-person (68) and online video (20) presentations reached more than 407,000 people with IPM-related education.



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information.

In an “IPM Workshop on Soil Health” with specialist Uta McKelvy, a 25% and 46% increase in knowledge of participants for day 1 and 2, respectively, was documented for understanding soil health and IPM. This increased knowledge saves participants money and helps reduce environmental soil impacts.

During two IPM-related workshops in 2021, “Turf to Trees” with specialist Eva Grimme, all respondents found

increased confidence in presenting IPM strategies and practices to customers and all attendees reported increased knowledge of pests and plant diseases in the urban landscape.

## WELL EDUCATED WATER QUALITY PROGRAM

The Well Educated program provides education about water quality to private well owners, and has reached more than 900 participants in 2021-2022.

Ninety percent of well owners said they found program materials informative and 94 percent of participants said they would participate again. Participants who found safety issues with wellheads took action to address them, including: well disinfection, installation of a treatment system, well cap replacement, contaminant source removal, and ground surface reshaping to route runoff away from the well.

**More than 60% of participating private well owners inspected their wellhead** because of participation in the water quality program and **15% of those inspections revealed safety issues** that were addressed.

## SCHUTTER DIAGNOSTIC LAB (SDL)

A vital part of the Schutter Diagnostic Lab is to detect new and invasive pests that pose a risk to Montana and the U.S. to prevent significant limitations to agricultural production and international trade. In 2021 and 2022, the brown marmorated stink bug (*Halyomorpha halys*), the spotted lanternfly (*Lycorma delicatula*), and waterhemp (*Amaranthus tuberculatus*) were new invasive species confirmed by SDL diagnosticians.

In 2021, the SDL team processed 1,230 samples submitted from 53 of 56 counties in Montana.



Diagnostic services and management recommendations from the SDL in 2021 had a direct **economic impact of \$1.8 million USD on approximately 810,672 acres.**

- **89% felt that the services provided by the Schutter laboratory were “very useful” to “extremely useful”** in solving plant- or arthropod-related problems.
- **66% felt that recommendations from the SDL influenced** their pest management decisions.
- **44% learned they did not need to apply any control measures** because of what they learned from management recommendations of SDL personnel.

*“The diagnostic lab reassured us that our no-treatment decision was scientifically justifiable and probably a best management practice for that situation.”*

– SDL client

## DROUGHT RESPONSE

In response to severe drought in 2021 and 2022, MSU Extension summarized drought and wildfire resources ([www.montana.edu/extension/aboutus/wildfiredrought/WildfireDroughtDrought.html](http://www.montana.edu/extension/aboutus/wildfiredrought/WildfireDroughtDrought.html)) to provide Montanans information for critical decision making. Crop and livestock producers have dealt with low yields and significant herd reductions, and face continued challenges without above-average precipitation.

MSU Extension provided **55 teaching seminars that informed 1,532 people** on drought response.

## WOOL POOL, SHEARING SCHOOL AND THE MONTANA WOOL LAB

To ensure the quality of wool produced in Montana, MSU helps producers through research and education on many levels. MSU Extension faculty have provided training to 39 students in Texas, 74 students from various academic levels in Montana, and over 100 members of Montana Hutterite communities. Additionally, the Montana Wool Lab at MSU is one of only two wool research and service laboratories in the U.S. By helping producers build and sustain profitable sheep operations, the lab contributes to sustainable rangelands throughout Montana and the region.



The Montana Wool Lab **analyzed 15,000 fiber samples** for producers and researchers in 2021.

## MASTER GARDENER

The Montana Master Gardener program provides education and volunteer service opportunities in consumer horticulture. The program has 34 active county associations and more than 325 active members, including 189 new members in 2022. In total, **more than 2,600 participants engaged in Master Gardener activities in 2022.**



In 2022, Master Gardener volunteers donated more than **3,900 volunteer hours,** valued at approximately

**\$100,000**

and more than

**800 pounds of food.**

