

MSU Extension posts video on mixed cover crops

MSU News Service

Summary: Agriculture experts with Montana State University have released a short video about mixed species cover crops potentially replacing summer fallow, presenting MSU's ongoing research.

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The video is posted on YouTube at <http://youtu.be/JWMT-uXyWZM>.

BOZEMAN – Agriculture experts with Montana State University have released a short video about mixed species cover crops potentially replacing summer fallow, presenting MSU's ongoing research.

Producers are increasingly planting cover crops to improve soil quality, help manage weeds or pests and provide livestock forage. Replacing summer fallow with a cover crop can decrease saline seeps, nitrate leaching and erosion, while increasing soil organic matter and microbial activity.

"Until recently, the focus of cover crop research has been on single species legume cover crops as a soil building tool," said Perry Miller, professor in the Department of Land Resources and Environmental Sciences.

By seeding annual legumes, such as pea or lentil early in the spring and terminating them around first bloom, Miller said wheat yield and protein the following year can be comparable to following summer fallow.

Legume cover crops are known to provide nitrogen. Adding fibrous-rooted species such as oat to the plant mix may increase soil organic matter at a greater rate. Tap-rooted species such as turnip and safflower are being included to see if they can help reduce compaction, while brassicas such as canola and radish provide ground cover to reduce weed establishment and evaporation.

"We hope to find out if there are cover crops that perform certain functions better than others," said Clain Jones, Extension soil fertility specialist at MSU.

"A cover crop mix might also stimulate soil biological activity more than a single species crop, though we're not far enough into the project to know this," said Susan Tallman, a graduate student and researcher on this project.

This study, funded by USDA Western Sustainable Agriculture Research and Education, is focused on growers in the golden triangle as an area with high potential for use of cover crops to reduce fallow. Growers have expressed interest in using cover crops to increase soil organic matter to improve water holding capacity, nutrient availability and other potential benefits.

"A goal of this study is to find out what works, and does not work well for our production systems and whether mixed crop cover crops add any benefits beyond those provided by legume monocultures," said Jones.

A potential disadvantage of cover crops is that in the short term they may use precious stored soil water, possibly limiting the following crop's yield. They also take time from a producer's already busy spring season. However, in the long run they will likely be beneficial to the soil and ultimately the farmer's net returns, Jones said.

If you are interested in using cover crops, contact Jones, your local Extension agent, or your local Natural Resources Conservation Service office. The NRCS can provide producers with a list of cover crops that will grow in a given region, as well as information on where to find seed.

The 7-minute video is posted on YouTube at <http://youtu.be/JWMT-uXyWZM>. More information on cover crops and this study is posted on Jones' website at <http://landresources.montana.edu/soilfertility/> under "cover crops."

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This story is also available online: <http://www.montana.edu/news/12516/msu-extension-posts-video-on-mixed-cover-crops>