

University of Idaho Extension helps answer cover crop questions for producers

AT A GLANCE

Cover crop use is expanding and University of Idaho Extension has partnered with other agencies to help producers select and grow the correct species for their intended purposes.

The Situation

Cover crops have been used in United States agriculture from the very beginning. The practice of planting cover crops has been documented to 1st Century Rome. The Green Revolution from the 1930's–1960's moved US agriculture away from reliance on cultural practices, such as cover crops, and in to what today is considered conventional agriculture using high yielding varieties, manufactured fertilizers and chemicals to control weed, insect and fungal pests. While such practices greatly increased yields, they can be hard on the soil if the producer does not take steps to preserve and maintain soil quality parameters.

The USDA-Natural Resources Conservation Service (NRCS) took particular concern that producers participating in Farm Bill conservation programs were not following conservation plans properly and the result was high soil erosion by both water and wind. The NRCS made soil health funding a priority through it's Conservation Innovation Grants (CIG) program. The purpose of the CIG grant is to encourage public/private partnerships to find solutions to a variety of conservation issues. In 2013 the focus was on soil health.

Our Response

University of Idaho Extension in the Magic Valley was asked by the Twin Falls Soil and Water Conservation District (TFSWCD) if it would partner with



Multi-species cover crops of triticale, peas, vetch and radish growing on a cooperating producer's field in Jerome County.

them to obtain a CIG grant and design a project to help producers learn to adapt cover crops in the Magic Valley, as wind erosion is a major concern.

UI Extension and the TFSWCD wrote for and obtained a two-year CIG for \$74,500. It was determined that cover crops would be demonstrated throughout the Magic Valley on several farms on both sides of the Snake River. The project consisted of demonstrating that cover crops can be grown under a wide range of climate conditions and crop rotations. Additionally, the project sought to demonstrate that cover crops can be grown to provide additional income beyond just benefitting the soil. On-farm demonstrations were used to compare fallow, green cover crop, grazed cover crop and no-till cover crop seeding on a side-by-side basis.

In 2013 and 2014 cover crop sites were established in Twin Falls, Jerome, Cassia, Minidoka and Lincoln counties. Cooperating producers were asked to plant

up to 10 acres of the provided seed mix and to manage the crop as they would any other. One goal was to show that cover crops could be grown under a variety of situations without special treatment provided in research plots. The cover crop mixes were planted following wheat or barley harvest in early August. Some were grown under sprinkler irrigation and others under furrow irrigation. The seed mix contained cereal grasses, legumes and brassica's. All sites were successful in growing cover crops and those that were grown for forage provided extra feed for cattle or sheep later into the fall and winter and in some cases in the spring after the cover crops came out of winter dormancy.

Program Outcomes

Producers in the Magic Valley are integrating cover crops into the cultural practices of their farms as a result of the demonstration project. The immediate result is more soil covered in the winter, reducing wind and water erosion. The TFSWCD used this project to provide as evidence and support for their own grant which they used to purchase a no-till drill for producers to rent, and seed to be cost shared so producers could try cover crops in their own rotations without excessive cash outlay.

UI Extension educators now receive several inquires a year about which species to include, how and when to plant, how to calibrate drills and applications for grazing. UI Extension educators are currently working with NRCS staff to develop Best Management Practices so that both agencies are making similar recommendations.

The USDA-National Agricultural Statistical Service (NASS) does not keep records of acres planted to cover crops. By observation, the number of acres planted to cover crops in the Magic Valley have increased to several thousand in the past few years. Cover crops were once a rare sight but now are common. While University of Idaho Extension can not claim all the credit for that expansion, our partnering with other agencies such as NRCS and TFSWCD has allowed all of us to reach many more producers than any of us alone.

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