Interseeding cover crop into growing corn shows promise for grazing and soil cover

**AT A GLANCE**

Interseeding cover crops into the growing cash crop during the summer allows the cover crop to establish and have significant growth at harvest allowing a good soil cover for winter or for fall grazing forage.

**The Situation**

Cover crops have value as winter soil cover and fall/winter feed for livestock. Establishing cover crops after cash crops are harvested in mid-September or later can be a real challenge due to short days, cooler weather and lack of irrigation. Growers are looking for methods to establish cover crops earlier in the season with minimal disturbance to the cash crop.

In other parts of the country, growers have had success planting covers at the same time as the primary crop and during mid-season. To accomplish this, many have successfully used aerial applications. However, the question remains, when is the best time to plant cover crops into a cash crop to reap the benefits of the cover crop without negatively affecting the cash crop?

**Our Response**

A team of Extension educators working with a dairy producer in Cassia County designed a study comparing four different planting dates of cover crop mix into corn for silage. The corn field used was a half-pivot. The replicated study was set up on opposite ends of the pivot to make 18.5' x ~325' plots even length within the pivot tracks. The cover crop mix was planted on the day of corn planting and then approximately every 30 days after with target dates of June 15, July 15 and Aug. 15. Planting was done using EarthWay© 2750 hand spreaders to simulate aerial seeding. Harvest was to take place approximately the third week of September. The study was conducted two years on the same field.

**Program Outcomes**

Even though the team experienced some challenges, the program was a success. It showed that aerial application of a cover crop mix into standing corn is a viable practice when the proper planting dates are chosen and care is given to the cover crop after harvest. The corn variety used was glyphosate tolerant so planting cover crop seed with the corn seed made little sense as the herbicide application would kill the cover crop and
not control the weeds. In 2017, those plots produced silage that was mostly lamb’s quarters and of no value as a livestock feed. That treatment was not replicated in 2018 because producing low quality feed and encouraging increased weed production in a producer’s field were not acceptable outcomes.

A visual observation of the cover crop growth after the corn was harvested in both 2017 and 2018 indicated the June and July planting dates were most successful. The June date had the best chance of establishing cover before the corn leaf canopy closed over the rows, thereby producing the most cover crop growth over the growing season. The later plantings (July and August) did not receive enough sunlight to become established. The study data will be analyzed statistically and reported in another publication.

Large and heavy harvest equipment can cause considerable damage to the plants in the cover crop mix and caution needs to be taken to reduce field traffic as much as possible. Also, once the corn is harvested, grower attention must be focused on the cover crop which is still growing and needs to be irrigated to ensure the best success.

The producer in this study believed that planting cover crops into standing corn was a workable practice and planted other pivots on his farm while this research was in process. Other growers throughout the Magic Valley are also implementing this practice in corn, beans and potatoes with the latter two being planted just prior to harvest.

Planting cover crops mid-season into growing corn is a viable practice to ensure the soil is covered during the winter or to produce fall forage for livestock grazing.

The Future

There are many questions still unanswered about cover crops and their use and applications. One question that has come out of this project is whether cover crop species can become weed issues for producers in the future. More research needs to be conducted to answer that question and identify species that should not be used as well as control options if they are included in the mix.

Another question that needs to be answered is what species should be included to make up the ideal cover crop mix that can compete in the low light conditions of a standing corn crop. Certainly, some plants are more shade tolerant than others and some species should not be included at all due to seed size or other restrictions. These are all areas that need further study.

FOR MORE INFORMATION

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