Jasper County SWCD Cover Crop Report 2011

Do cover crops work in Jasper County?

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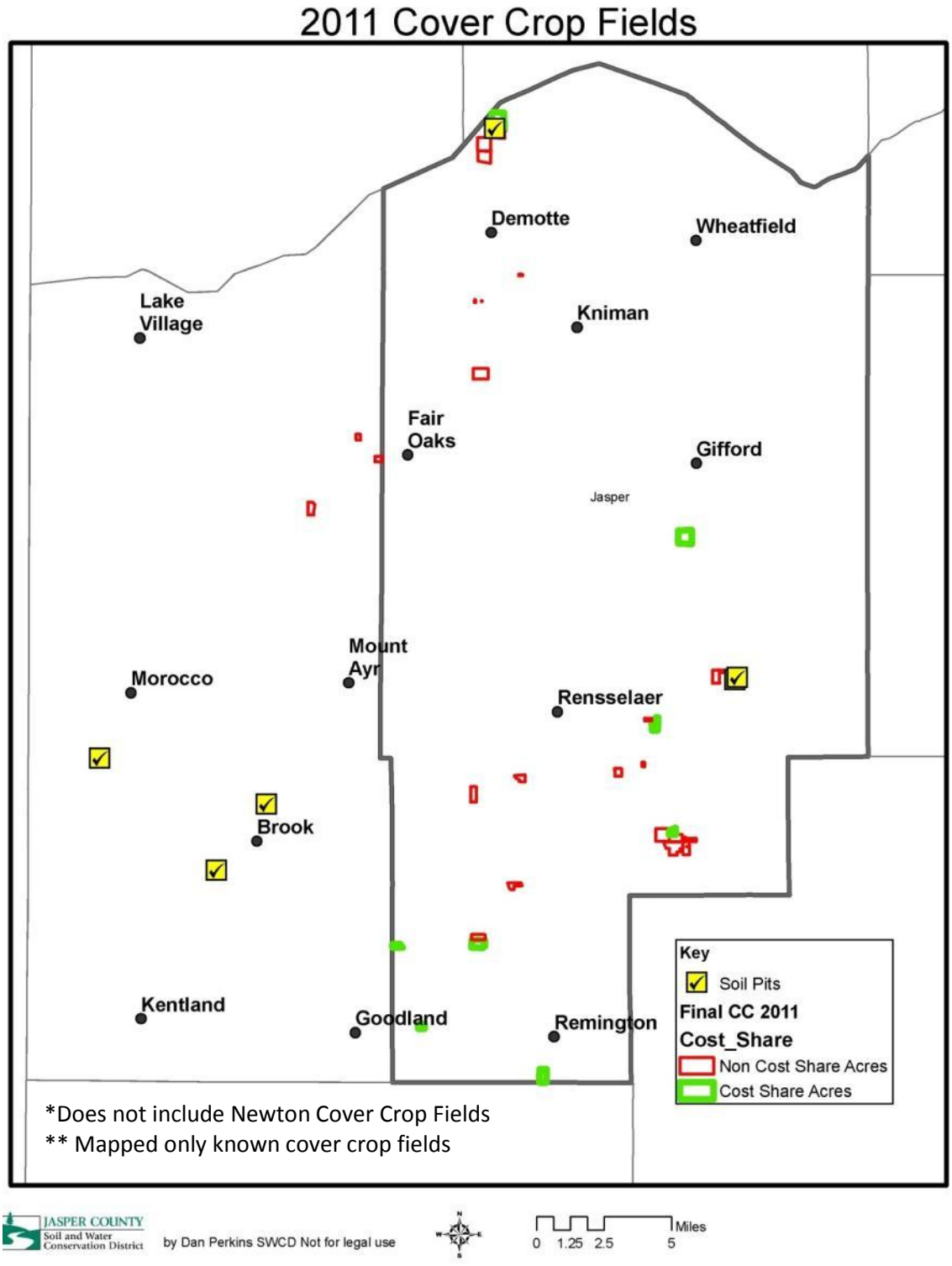

Jasper SWCD Cover Crop Report Fall 2011

In general, cover crops for Jasper and Newton Counties were planted in September and even into mid-October in 2011. I have observed and advised on over 2,200 acres of cover crops in this area, with 10 different farmers. A lot of different cover crop stories are happening and we can say with confidence that cover crops do work in Jasper County! All the information in this report is from cover crops grown in Jasper and Newton Counties.

I have advised on cover crops for use ahead of corn and beans, prevented planting acres, seed corn, after wheat, corn silage, manure situations, irrigated fields, and sub-irrigated fields. We dug 5 soil pits this fall in a variety of crop rotations, soil types, and cover crop mixes. Each field and farm is different and therefore the "right" cover crop can vary a lot.

We had ideal rains for cover crop establishment in 2011. Rainfall total average was 7.5 inches from Aug 15 to Sept 30 (CoCoRaHS network data), compared to just 2.75 inches of rain in 2010 during the same time period. This is the critical establishment window for getting good stands and early growth. Although, many growers seeded well past Sept 30 and are having good stands.

Many growers I talk to mention that their cover crops are not very advanced in their growth and it is mid-November. Does this mean that they are useless or worthless? On Nov 15 and 16 we dug 5 soil pits on a variety soil types and cover crops and this is what we found:

- 21" deep roots on four inch tall Annual Ryegrass
- 15″ deep radish roots that had 2″ tall tops and a "pencil" sized tuber
- 12″ deep crimson clover roots under a 2″ tall top (with many nodules)
- 35″ deep roots on oats that had 20-25″ tall top growth (prevented planting situation planted in early September)
- 30″ deep roots on radishes that had 20-25″ tall top growth and 2-3″ diameter tubers (prevented planting situation planted in early September)
- 20″ deep cereal rye roots with 6″ tall top growth (planted in late August after wheat)

While it would be nice to have more top growth, what's below the soil surface is impressive. As Dr. Eileen Kladivko from Purdue University says…it's what is below the surface that really counts for most farmers.

Earthworms were abundant in the cover crop soils, but not so much in the non-cover cropped fields. Another factor that was impressive was the amount of roots…or the density of the root mass in the soil, even on the short cover crops, this is feeding the soil all winter, building soil health and holding the ground.

So why does this matter? If we are to have better soil structure we need living roots year round, not just during the cropping season. If we are to have better erosion control we need living roots year round. If we are to scavenge nutrients, we need scavenging roots when nutrients are most vulnerable to leaching and loss that is in fall, winter, and early spring. In fact, the roots are what give us the vast majority of the positive benefits most producers find with their cover crops.

A soil pit in your cover crops will really enable you to see the benefits of cover crops. Call you local SWCD and we have professional staff that can point out key features in the pit.

It's hard to believe it, but this short crimson clover had roots over 12" deep. The roots had many nodules on them as well. It will be interesting to see how deep the roots next spring!

Very little top growth does not mean very little root growth. This aerial seeded radish into soybeans had well over 12" of root depth.

These cover crops were flown into a seed corn field in northern Jasper on September2. Both the radish and annual ryegrass had roots over 20" deep.

Top 12 Observations from 2010-2011

1) Aerial applicators seem to be doing a much better job in 2011 than in years past.

2) Correct timing of aerial application into cash crops is vital (that the crops are mature enough for cover crop success). This is going to change year to year based on maturity dates and weather, but in general it seems the first week in Sept is good for seeding into soybeans. Corn is too variable to predict at this point.

3) Corn and soybean variety maturity differences can change "success" rates. If you can plan to use a shorter season corn or bean without sacrificing yield it may be well worth the effort for making the most of a cover crop.

4) It appears that row spacing in soybeans makes a big difference, especially in establishing crimson clover.

5) Rainfall amounts clearly effect stand establishment and early growth with aerial seeding.

6) Plan early for using cover crops and be willing to change the plan as conditions require.

7) Place seed order early (by May), just to get the mixes and varieties needed (varieties do matter!). You can always change or cancel the order.

8) Start small, 20-40 acre field. Oats and radish is a good mix for a first time use of cover crops. They winter kill and establish well in a variety of conditions.

9) Read, talk with other farmers, call your local SWCD office, as they have a list of cover crop users in your area, and plan for success.

10) If you have prevented planting acres, practice good stewardship and try a cover crop!

11) A variety of cost share programs are available! But, the technical advising is probably the most valuable.

12) Please make sure to visit a soil pit in a cover crop field in spring 2012. Mark your calendars for April 3 and 4th for Jasper and Newton Counties.

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