

## Cover Crops on Prevent Plant, Now What?

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The 2013 planting season was a struggle not only to get crops in the ground but also to understand the rapidly developing crop insurance and cover crop policies. Farmers and ranchers had numerous questions regarding the use of cover crops on acres qualifying for prevented planting provisions under crop insurance policies. Many farmers did go ahead and plant a cover crop on those acres that were unfit for cash crop planting. Throughout the Upper Mississippi and Great Lakes region cover crops used included: soybeans, crimson clover, hairy vetch, cowpea, Austrian winter pea, cover crop radish, turnips, sorghum-sudangrass, teff, annual ryegrass, winter wheat, winter rye, spring wheat, oats and others.

### Why Cover Crops on Prevent Plant?

A big reason farmers have been covering up their soil this summer on prevented planting acres was to not only take advantage of an opportunity to build soil, replenish nutrients and super charge microbes but also to avoid future yield decreases from fallow syndrome. We rarely hear about fallow syndrome. However the potential for a yield decrease the following year due to fallow syndrome can be worth the cost of planting a cover crop. A 1998 publication from Dupont Pioneer by Wiersma and Carter showed a 12 bu decrease in corn yield where a fallow period had preceded corn planting. They confirmed that fungi populations responsible for converting phosphorus into a plant available form had significantly decreased in colonization numbers. Vesicular arbuscular mycorrhizae (VAM) are important soil microbes and without a living plant feeding their populations, their numbers can dramatically decrease. From four locations across Iowa and Missouri, the Dupont Pioneer publication showed that decreases in the colonies were correlated to a resulting decrease in the following years corn yield (Table 1).

**Table 1.** VAM colonization and grain yield of corn in 1994 following flooding during 1993. Data are an average of four sites in Iowa and Missouri. Adapted from Ellis (1998).

	VAM Colonization (%)		Grain Yield (Bu/ac)
	May	July	
<b>Flooded</b>	17	31	179
<b>Nonflooded</b>	49	60	191

## **Now that farmers have covered up their soil with a cover crop many are asking, now what?**

For cover crops planted early in the summer season, farmers are encouraged not to till or incorporate plants that have seed heads. Leave soil undisturbed and covered all winter long to provide protection from harsh weather.

- An oat cover crop producing seed can be allowed to re-seed itself without causing a management issue.
- Any winter small grain cover crop such as rye, wheat or triticale need to vernalize to produce a seed head. Cover crops planted mid-summer will likely die from old age this fall with a high incidence of winter-kill.
- Farmers are encouraged not to work the ground and instead leave the cover crop residue covering the fields all winter.
- Annual ryegrass cover crops planted mid-summer will likely over-winter in the majority of this region. For best results plan to manage it in the spring.
- Farmers who used soybeans has a cover crop may find it advantageous to drill or plant 1.5-2bu/A of oats into the stand prior to mid-September. The oats will help capture nitrogen that may leach this fall or next spring ahead of the following cash crop. Without this additional cover, nitrogen losses can be significant. For a normal soybean crop 45lbs-nitrogen/acre can be leached following that crop. Oats ensure not only protected soil but also capture nitrogen.
- Farmers using a brassica cover crop like cover crop radish, turnips or mustards NOT mixed with a grass species, like oats, are encouraged to also drill, plant or broadcast a grass with a brassica. Brassicas are excellent at scavenging nutrients. However, brassicas decompose quickly the next spring, releasing scavenged fertilizer ahead of the cash crop. To slow down this process a grass species planted with brassicas can better synchronize nutrient release with the demands of the subsequent cash crop.

### **Didn't plant a cover crop yet?**

What if you haven't planted a cover crop yet? Now is the time. To maintain any soil moisture that is present do not work the ground. Drill or broadcast and lightly incorporate cover crops today.

### **Next Steps**

If you have questions about which cover crop options fit your farm's situation either on prevented planting acres or for regular cover crop use contact Sarah Carlson at Practical Farmers of Iowa at 515-232-5661 or [sarah@practicalfarmers.org](mailto:sarah@practicalfarmers.org) to be connected with farmers and cover crop experts in your state.