



Fitting cover crops into rotation can be challenging depending on what crops are grown. That challenge is further enhanced by a short growing season in this region. If you have a small grain in rotation, it is easy to fit a cover crop post-harvest. Farmers interested in using cover crops should consider small grains in rotation first to create that window of opportunity for cover crops.

Small grains may not be an option in your rotation or you want to fit cover crops in with corn and soybean. So, here are some ideas. With corn, that involves inter-seeding, dropping, broadcasting or flying on cover crops either at side-dress, tasseling or somewhere in between. With soybean, it's having a winter annual cover crop (like cereal rye) established prior to planting soybean or broadcasting cover crops into standing soybean prior to leaf drop.

Cover crops into corn are done by:

- inter-seeding at side-dress (between 6-8 leaf)
- dropping cover crop seed between corn rows at any time
- broadcasting cover crop at side-dress or any time after
- flying on cover crops at tasseling

Inter-seeding cover crops at side-dress is beneficial because you can do two things at once (seed cover crop and apply nitrogen), you get excellent seed to soil contact and you can use lower seeding rates. Getting a seed in the ground is the best way to utilize soil moisture for germination. The smaller the seed, the less moisture you need for germination. That's what makes radish so great for inter-seeding. The negative aspect of this approach are that you have a short window to get this done and poor soil conditions can further limit that window of opportunity.



FITTING COVER CROPS INTO ROTATION

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DISCLAIMER:

Information in this handout is geared towards 30" corn rows. Pictures of equipment shown in this handout are not endorsements of that specific equipment/brand. They are just shown as examples.

Comments about each approach are based on feedback from those using each approach and are only meant to provide information. Farmers are encouraged to pick the best approach and equipment for their operations based on their rotation, equipment on hand and comfort level.

Cover crops in soybean:

There are a couple of opportunities for fitting a cover crop in either before or after soybean.

By establishing cereal rye in corn or after a small grain the previous year, you can “plant green” into the cereal rye. See handout on planting green.



Broadcasting cover crops into soybean before leaf drop is challenging. Choose small seeds so that they can germinate on the surface and be careful with timing. You don't want the cover crop to grow much prior to harvest to avoid any issues with combining.

There is also the option of following the combine with the drill to seed cereal rye post-harvest. If cereal rye gets minimal growth in the fall, it will still over winter and grow in the spring. You wouldn't do this prior to wheat and going to corn can be tricky so get more info before doing that.

Dropping cover crops between corn rows using a high boy can be a great approach because you have greater flexibility with timing of seeding and you are still “placing” the seed where you want it. Clearance is not limiting using this equipment and a lot of ground can be covered pretty quickly. The major limitation is that the seed is placed on the soil surface and not incorporated into the soil. So, lack of moisture can limit germination.



Broadcasting cover crops into corn, again using high clearance equipment, is another approach. Farmers are adding onto and adjusting equipment to be able to do this. It's nice to have an option where you can use equipment already on the farm and just add to it. Again, flexibility in the timing of seeding is good and a lot of ground can be covered fast. But, seeding rates need to be higher to compensate for seeds caught in the whirl and the spread pattern is an issue for even coverage.



Flying on cover crops requires the least amount of effort and can still be effective. This happens at tasseling and hopefully right before a rain event so you need to be watching the weather forecast. Fillers are sometimes needed to achieve desired cover crop seeding rates and rates will need to be higher to compensate for losses. The negative aspects of this approach are that a leaky plane door can create issues for neighboring fields, especially where wheat for seed is grown. If you are flying on cereal rye, you need to be careful in this scenario. Cover crop establishment can be an issue and is often patchy – but this isn't always a bad thing. The seed will establish in wetter areas and maybe that's where you need it most.