

## Spring Cover Crops: What should I plant for an extra shot of summer nitrogen?

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**What if you couldn't plant a cover crop in the fall but need a quick crop before a heavy summer nitrogen user like sorghum, sorghum-sudan, sudangrass, millet, brassicas or vegetable transplants?** Many regions have seen cooler weather with spring arriving later, but you may have time to fit in an extra crop. With a little planning and the ability to drive into the field soon enough, you can provide last-minute ground-cover, soil-building benefits, and/or forage.

Our spring annual products can be used as nitrogen scavengers or fixers, break crops, forage, or both forage and cover crop. If you are using the crop in a forage application, use a higher end seeding rate and be sure to harvest just prior to heading or bloom for best quality.

Many producers wonder what they can do for their soil in this short time, and there are a variety of options to choose from. Most oat varieties, spring triticale, spring barley, spring peas, and even winter annual legumes like hairy vetch and crimson clover can do quite well for spring-planted biomass production – and nitrogen fixation, for legumes. You just need to have a free 60-65 day window that leaves you time for the rest of the year's rotation, which will vary greatly by region. A warmer spring or warmer climate of course would condense this growth span and hasten maturity, while a cooler spring/cooler climate prolongs it (and pushes back/condenses the summer annual crop window).

### **Consider the timing in context of the next crop (and the crop after that)**

In either case, in many areas of the Mid-Atlantic and north, it is already too late to get a spring cover crop established and have guaranteed time for a corn crop (again, this all depends on the warmth of the spring and summer). The best fit is to follow with a summer annual grass like sudangrass or millet (approximately two cuttings in 60 days) or a shorter season forage sorghum or sorghum-sudan. If double- and triple-cropping are often easily possible in your region, you may even be able to consider fitting a corn after your spring crop.

The most likely scenario at this point, depending of course on weather conditions in your region, would be an early April planting for a late May – early June forage cutting or cover crop incorporation. This early June planting window leaves time for most summer annual forages (other than corn) or vegetable crops, in most cases. Calculate a conservative estimate to timing of harvest to be sure that you have time for the fall-planted crop (if applicable).

**Spring Champion** is our primary spring cover crop mix – oats, spring peas, and hairy vetch. Peas and vetch fix nitrogen, while the oats produce organic matter. It will greatly enrich soil if turned under as a green manure. For feeding, oats are the fiber and digestible energy, while peas and vetch are the protein.

Most individual species with the same growing window can be mixed and matched into a productive blend.

**Pea-Oat and Vetch-Oats** are two-species versions of this mix, as well.

## Small Grains

- **AC King's Spring Barley** has performed quite well in our plots for both yield and quality when harvested at the flag leaf or boot stage.
- **Oats** are the traditional spring forage before a summer annual. A dense stand of oats will be quite competitive with early weeds, catch leaching nitrogen caused by spring rains and snow melt, and provide aggressive ground cover.

**Legumes** – Pair one or more of these with spring oats or barley, or plant a straight stand. A mixed stand makes an especially good forage.

- **Crimson Clover** is a winter annual, but does grow well when spring planted. It will not be as productive as fall-planted crimson clover, but can produce some nitrogen. Crimson clover is faster growing than hairy vetch and will bloom first.
- **Hairy Vetch**, also a winter annual, is a viney legume that is highly productive, but like crimson clover produces a little less in terms of both biomass and nitrogen when spring planted.
- **Spring Peas** grow quickly and are more productive than many winter annuals, and high in nitrogen and protein for an excellent spring forage or cover crop.

**White mustard** is a brassica that provides excellent spring weed competition and reduces soil disease pressure. If left to bloom, the flowers attract beneficial insects.

### **Q: Can I plant spring oats for weed suppression in no-till pumpkins?**

A: You can in a pinch for a no-till rolled mulch, but use a tall stemmy variety that will produce maximum straw for a thick mat. Many of our oats are developed to be leafier for high quality forage production, rather than for good grain or straw.

They need to be rolled at full head emergence with pollen shed for sufficient kill.

Weed suppression will be compromised if the small grain crop did not produce enough dry matter yield for a thick mat, or if perennial weeds are a problem in the field and have not have been adequately suppressed. The seeding rate should be high for a thick stand, so no bare ground is visible after rolling.

For no-till rolling application, the best cover crop choice remains fall-planted winter rye. It is taller and has more lignin than most other small grains, which means its carbon-to-nitrogen ratio is higher – especially if left to stand until June, when some varieties may reach 6 feet tall. This keeps it from breaking down as readily and provides weed suppression longer into the season. More herbicide control may be needed in rolled down oats that haven't produced as much cover crop biomass.