

The Other Crops

From John

Well, last week we were talking about how we irrigate our crops to keep them healthy and vital. Within hours of getting water around to the entire farm the rains came. Go figure, the forecast was really unclear pretty much right until it rained on Sunday night. An extra $\frac{3}{4}$ inch of rain won't hurt anything, it was a nice steady rain that came without the typical high winds we seem to have here. Plus the rains really helped out some other critical crops that we will avoid irrigating at all costs if possible; our cover crops. They are possibly the most important thing that we do on the farm to improve the soils tilth, encourage biological activity, manage/balance nutrients, control weeds, prevent erosion and provide beneficial insect habitat. Over the past few weeks I have drilled in a lot of cover crop seed and they were really wanting for water. This was a very timely rain and we will start to see really them take of now. We use a variety of cover crops for specific reasons which I will profile to give you an idea of how we use this critical farm management tool. We hope to use more and more species, I would like to see 20-30 cover crop species used on the farm. It is important to note that we almost never used just one species alone. You can synergize the benefits of each species by mixing multiple species together. Some common mixes are oats and peas, rye and vetch, annual rye and clover, barley and beans, Sudan grass and clover.

Oats- Ideal for spring and fall seeding, oats can provide 1-4 tons per acre dry organic matter depending on when it is plowed down to feed soil microorganisms. When seeded in the fall it can act as a nutrient catch, by absorbing upwards of 80lbs/acre of nitrogen that could otherwise be lost and become a pollutant. It has allelopathic properties (natural exudates that hinder the germination of weed seeds) that help control weeds throughout the growth cycle and for several weeks after plow down. It germinates and establishes quickly and is a valuable nurse crop for slower growing legumes. That means that it can help provide cover and protection for crops like clovers and peas/beans as they are quite slow in their early growth phases. It can also be used for animal feed and straw.

Barley- Barley is used almost identically to oats. The main differences is that barley doesn't scavenge nutrients quite as effectively as oats but makes better animal fodder and can produce more dry organic matter than oats per acre. It is better used in certain circumstances such as in alkaline soils, where it will establish well and help bring the soil pH down to a normal range.

ON DECK

It's been a long wait but we will finally start getting you garlic next week. The mix won't change up much from this week but we hope to add a few more options in the pepper and tomato department.

Rye- This is probably the most used of all cover crops as it is very versatile, resilient and the seed is cheap. Rye can be used almost any time of the year but is loved mostly because of its cold tolerance. It will germinate with temperatures even down into the low 30's and will survive most winters. Some years it can be seeded as late as early to mid-November following late crops such as broccoli and cauliflower and will grow enough to hold the soil over the winter and grow vigorously again in March-April. It is a great nutrient scavenger and will hold it over the winter and release it in the spring when plowed down. It has good allelopathy and attracts many beneficial insects. It makes a great choice for straw it can be baled in the spring and used that same season rather than storing it for the following year.

Buckwheat- This is a favorite summer cover crop for many reasons. It is the best option for a short window. It can be fit in between spring and fall cash crops or a spring cover crop and a fall cash crop. It can be drilled and plowed down in as little as six weeks. It's a great weed smother crop because of its rapid growth. It also thrives in worn out soils and will help them to recover by scavenging a broad array of nutrients. It also produces tons of nectar rich flowers which supports many pollinators and beneficial insects.

Sorghum-Sudan Grass- This cover crop is an amazing summer workhorse. If left to grow it can easily reach 12 feet tall and produce up to 9 tons/acre of organic biomass. It is one of the best weed suppressors off all the cover crops. Not just because of its rapid and massive growth but because of the allelopathic exudate *sorgoleone* can act as a powerful natural herbicide against many noxious weeds. It is particularly beneficial in suppressing parasitic nematodes and many diseases. If mowed several times throughout the season it will produce a massive root system which can greatly improve soil tilth and aeration and drive roots deep to help mitigate compaction and allow better water infiltration. Like barley it does well in alkaline soils and will help bring the pH down to a healthier level. It also makes fantastic forage for cattle and other ruminants so long as it is 2+ feet tall because smaller plants contain higher concentrations of prussic acid which can be toxic to cattle.

Annual Ryegrass- This is a preferred nurse crop for clovers and other slow germinating crops. The seed is cheap and can be easily killed by mowing or frost after providing the necessary cover for clover to get up and going. It can also be used effectively for under sowing under cash crops such as broccoli, kale, cauliflower or peppers. It will establish, hold the soil together and die off in the frost but leave the soil covered and protected after the cash crops die and allow you to avoid late season tillage.

White, Red and Yellow Sweet Clovers - For brevity sake I will combine these 3 amazing legumes. What makes all legumes unique is that they are nitrogen fixers. This means that they take in atmospheric nitrogen and store it. With legumes you literally grow your own nitrogen fertilizer. Depending on the clover it can be anywhere from 50-150 pounds/acre. Clovers are also renowned for their ability to send roots deep through the hardpan to open up channels for water and nutrients into the deeper soil layers. These clovers are all winter hardy allowing them to survive the winter after a late summer or early fall sowing and begin to grow again early in the spring making them valuable for soil conservation. The nutrient rich leaves are a favorite of our pastured chicken.

Vetch- This legume has very similar properties to the clovers with a few distinct differences. It doesn't fix nearly as much nitrogen but makes up for it with an amazing ability as a soil conditioner. It is unmatched in its ability to stabilize soil aggregation and help build soil organic matter. It is also a better nutrient scavenger than other legumes as well as having better weed suppression, particularly in the spring.

Peas and Soybeans- These crops are used very similarly with peas doing better in the spring and soybeans in the summer. They have been found to fix up to 300#/acre nitrogen though 100-150#/acre is much more likely. They produce 2-3 tons/acre dry organic matter. They have few benefits as weed suppressors or nutrient scavengers though they do provide good nectar grounds for pollinators.



Sorghum-Sudan grass on Left, White clover lane in Middle and Oats, barley and soybeans on Right.

Featured Item

What other choice could there be? It has to be sweet corn. With the scrapped the early seedings because of poor April weather it has been a long hard wait but its finally in! The ears are a little small this week but will get larger in subsequent weeks. Plus the flavor will improve when we get into even tastier varieties. What else can we say!?

Recipe of the Week

Ingredients

- 1 1/2 cups Green Beans (root end trimmed)
- 2 Corn Cobs (cut into 1/2-inch wheels)
- 1 1/2 cups small Potatoes (cut in half)
- 1 cup Broccoli (florets cut into bite size pieces)
- 1 Yellow Squash (cut in half lengthwise then sliced into 1/4-inch thick half-moons)
- 5 Scallions (cut into 1-inch lengths)
- 1 1/2 cups American Country Ham (cut into 1/2-inch cubes)
- 1 Hot pepper (sliced)
- 2 Garlic cloves (thinly sliced)
- 6 Parsley sprigs (roughly chopped)
- 6 Thyme sprigs
- 1 Lemon (zest and juice)
- 1/3 cup White Wine
- 1/2 cup Basil (chopped)
- Olive Oil
- Salt and Pepper
- Warm Crusty Bread (for serving)

Instructions

- Preheat the oven to 475 degrees F. Toss the first 11 ingredients in a bowl and dress lightly with olive oil, lemon zest and juice, and salt and pepper.
- Spread five 24" by 12" rectangular sheets of parchment paper on the counter. Divide the vegetables in a low pile centered on half of the paper and top with the herbs. Drizzle with the wine. Fold the other half of the paper over and fold and crumple the edges together to form a tight seal. Drizzle the packets with olive oil.
- Place the packet on a cookie sheet and bake until the vegetables are just tender, about 15 minutes.
- Remove from the oven and serve the vegetables in their baking paper, cutting an "X" in the top at the table. Garnish with a bit of basil and drizzle with olive oil. Serve with the bread.