

Cocktail Cover Crops: Something to Consider

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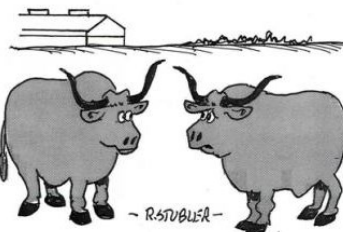
FORAGE

If an image of a mixture of grasses and plants in a field popped into your mind when you read 'Cocktail Cover Crop,' your train of thought is similar to mine. A cover crop is a crop seeded with the purpose of improving soil fertility and quality, based on the concept that soil is more productive when it has plants in it year-round, as opposed to leaving fields fallow or bare during the fall and winter months. Some cover crops are a mixture of different plants, a cocktail; some can be harvested as grain and others can be used for livestock forage. Jim Hoorman, of Ohio State University, has been studying cover crops for many years and notes, "Soil is a living, breathing system that requires energy and that energy comes from the sun through the plant and into the soil through the roots." Keeping plants in the soil on a year-round basis offers many benefits, including increased soil organic matter, reduced fertilizer costs, less compaction, and nitrogen fixation. Cover crops can also be a method of weed control, and can result in a reduction in insect and disease damage, as weeds will be out-competed and conditions will be less ideal for disease and bugs. Moisture retention and management are achieved with cover crops, and this in turn will help to protect water quality as there will be less run off, including a reduction in nutrient leaching. This makes it an attractive practice for producers with both cropping and livestock enterprises, as it offers another source of grazing at ideal times of the year.

Cover crops were popular in the mid-80s, but when low cost nitrogen fertilizers became available, the practice of putting in a cover crop diminished. Many operations in Western Canada and across the United States would routinely seed sweet clover after they harvested their main crop and then would till it under sometime during the following summer. The clover nitrifies the soil, holds it down after harvest, and nutrients are stored in the plants, which prevents any nutrient leaching. Recently, with the rise in fertilizer and fuel costs, there has been more interest in cover crops. For cropping operations, cover crops are seen by some as another practice that can improve on the great benefits we've seen with the adoption of no-till practices. In a cropping situation, the cover crop can offer more fertility for a field and nitrogen costs can be greatly reduced; soil phosphorous levels have also been seen to increase. For livestock producers, there are many great benefits to be found with cover crops. In Manitoba, producers have been trying it recently with success, especially where the soil is sandy and subject to erosion; a legume cocktail has been a successful mixture. The University of Manitoba has also been actively researching cover crops. Researcher Yvonne Lawley says, "Some forage crops provide permanent cover and some cover crops can provide early and late-season grazing or even opportunistic grazing."

Cocktail cover crops are often used to increase the benefits of a one-species cover crop. Cocktail cover crops offer more diversity and allow more goals to be achieved with one crop. For example, tillage radishes could be added to a mix to reduce compaction, a legume seeded to fix nitrogen and barley added to the mix because it has an extensive root system and will increase the organic matter. In the end, the soil condition is improved and there would be forage available for grazing. There are many options based on a farm's needs, and to implement a cover-crop program many things must be considered, including the economics, as many of the benefits will be seen over the long-term, not immediately.

There are many questions surrounding the concept of cover crops, especially if it would be viable in the Peace Country. There has been some local interest as of late, and PCBFA, along with the North Peace Applied Research Association is pleased to announce that we will be hosting Gabe Brown, of Brown's Ranch in North Dakota, a veteran of cover cropping, on a week-long speaking tour across the Peace. Brown's Ranch is located in northern North Dakota and experiences climate similar to ours, though likely a bit less harsh with a longer growing season. In addition to the cows, Gabe's family also grows cash crops and keeps a flock of pasture-raised chickens around.



"They've got good working conditions here but they have a lousy retirement plan"

EVENTS

Keep an Eye Out For:

**Triticale Swath
Grazing Field Day:**
Oct 5, 2013
Weevil site and triticale for swath grazing with guest speakers on triticale and Power-flex portable fencing.

**Calling all You
Young Farmers!**
Join us at our
**Financial Advice
panels:**

Clardale
Oct 1, 5:30 pm
Clardale School

Debolt
Oct 10, 5:30 pm
Debolt Community
Center

High Prairie
Oct 17, 5:30 pm
Big Meadow Hall

**Cocktail Cover Crops
with Gabe Brown**
Oct 29th– Valleyview
Oct 29th– High Prairie
Oct 30th– Manning
Oct 31st– Rycroft

RSVP to Monika
@ (780) 523-4033

Check out our new
Website !!
www.peacecountrybeef.ca

The Browns manage all enterprises to work together and complement each other to create an overall efficient operation. The cropping system is very diverse and the Browns grow everything from spring wheat and winter triticale to canola, soybeans, lentils, sugarbeets and alfalfa. Their use of cocktail cover crops allows them to integrate their cropping and livestock operations in order to optimize production in each. For example, they will seed a winter triticale and hairy vetch crop and then in the spring, they will plant a warm season cover crop cocktail of hybrid pearl millet, sorghum/sudangrass, soybeans, cowpeas, sunflowers, sunn hemp, as well as radishes and turnips. This cocktail is grazed over the winter, between October and January, depending on their needs for the winter. The cattle do very well on this mix and the organic matter of the soil increases as a result. The Browns also grow companion crops along with their cash crops; for example, fields of corn with hairy vetch were sown, and fields of corn/subclover/sweetclover were seeded together. A canopy is created by the companion crop which protects the soil surface, prevents evaporation and helps to feed the corn crop through mycorrhizal activity; the livestock are then grazed on the field after the corn is harvested. The Browns have tried many different things over the years and are still constantly making changes to find a more efficient system for their farm. Check out their website: brownsranch.us for some interesting reading!

Pasture Cropping: Another Concept to Ponder...

The term 'pasture cropping' is definitely a foreign one to the agronomic practices of our Peace Country agriculture region. Pasture cropping can be defined as "zero till sowing of crops into perennial pasture," according to www.pasturecropping.com. Pasture cropping is a practice that began in Australia and is becoming more widely adopted in that country and other more tropical regions of the world each year. Pasture cropping is practiced in Australia for a variety of reasons, including topsoil conservation, which is a major concern in this country, due to their low topsoil reserves. Since Australia has a year-round growing season in most regions, fields are often left empty in between crops which leads to issues such as salinity, erosion and acidity in the soil. Pasture cropping requires there to be 100% living ground cover all year round, and usually involves livestock, as intense grazing of the forage and the disturbance caused by their hooves are both important elements of the process. The forage is usually grazed twice before a crop is sowed into it. The crop is then harvested in the fall like a regular grain crop. The benefit to being able to graze a field and harvest a crop in the same growing season is quite mind boggling, and the benefits would indeed be great!

Gabe Brown has also had some experience with pasture cropping, including touring to Australia to observe and study the practice. He has tried it on his own operation, but to date, hasn't found it successful due to the shorter growing season. This is not to say it won't work, but the exact process for non-tropical regions hasn't quite been perfected.

During Gabe's visit, we will be working with him to design a project to carry out here in the Peace Country to determine the viability and options for implementing cover cropping and/or pasture cropping practices in our region. Watch for details in the coming months!

Please join us for Gabe Brown's visit Oct 29th-31st in the following locations:

Valleyview: Oct 29th, 11 am at the Valleyview Ag Society Hall
High Prairie: Oct 29th, 5 pm at the High Prairie Ag Society Grounds (in the top floor of the arena)
Manning: Oct 30th, 5:30 pm at the Battle River Ag Grounds
Rycroft: Oct 31st, noon at the Rycroft Ag Society Hall

Cost to attend will be:
\$15/member, \$25/farm pair
\$25/non-member, \$40/farm pair

Lunch or supper will be served

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