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Integrating Livestock Grazing into a Cropping System

by Jack Kyle, CCA-ON

A cropping system can be complimentary to a livestock grazing system. Grazing livestock can effectively utilize a number of crop residues, cover crops, and areas that are not ideal for row crop production while keeping the nutrients on the field.

The benefits are considerable – crop residues can make good forage – corn stalks/stover is a good example. Cows eating the stover will convert the fibrous plant material into a more available nutrient form for the soil microbes and the following crop. A rough guideline is that there is enough feed on an acre of corn stover to feed a beef cow for one month. During the fall and early winter the cows may punch up the soil a little but the frost action during the winter will remediate any soil structure issues. In the spring, there could be more soil structure impact. The forage quality is going to be the highest after the grain harvest and will decline as the time from harvest increases.

As a crop producer you may not want to own the livestock, but by offering custom grazing, you do not have the risk of livestock ownership and have control over when the livestock are on your property.

The second option where livestock are a good fit with cropping is in the grazing of cover crops. The interest in cover crops for soil health, reduced erosion, and nutrient capture is a positive practice. These cover crops can provide the added benefit of fall pasture for cattle and sheep. The ruminant animal will convert the plant material into a readily available nutrient form for the soil microbes and for plant growth. Many of the cover crop species are suitable for grazing. An oat based mix is the preferred choice for fall grazing, while a cover crop of cereal rye could be grazed the following spring, prior to planting soybeans or edible beans or an early maturing corn variety. Although there will be a wide range in forage yield of the cover crop, a starting point would be 2-3 weeks feed per acre for a beef cow. Your experience will dictate how much more feed will be available.

The advantage of grazing is that the nutrients stay in the field. Harvesting this fall growth or corn stover will also provide livestock feed but you have the cost of harvest, storage, feed and manure hauling. By grazing, these costs are not incurred and the crop nutrients remain in the field.

There are two challenges with grazing in these situations – fence and water.

Over the years many fences have been removed on farms, now we can see the opportunity that fences provide. Fencing technology has improved and changed significantly in the last 30 years. With an electric fence energizer, temporary fences can be quickly erected that let you manage the livestock on cover crops or crop residues. An electric fence energizer that is battery powered (with solar to keep the battery charged) or plugged into an electrical outlet, if available, makes for an effective versatile system. Four corner posts in a large field or farm provide the basis for a fence. Electric fences are a psychological barrier. Livestock trained to electric fences that have adequate feed should be easy to contain. Polywire on a reel is a quick and easy fence with step in posts every 10-20 metres.

Grazing livestock need access to water, but a non-lactating cow grazing cover crops during cool temperatures, will not drink a lot of water. If there is access to water at some point in the system, they can walk to it. Piping water with black plastic pipe on the soil surface is another option if grazing prior to freeze up. A third option is to use a water wagon to take water to the field. If you have a water tank to supply a sprayer, it can be repurposed to a water supply for the livestock – add a trough and float and you have a water system.

Fencing and water complete the equation, add the livestock and you have a system that contributes to soil quality and improved crop yield along with a very low cost feed source for livestock. The crop residues are converted to a more readily available nutrient form, a win win opportunity!

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