Cover Crops—Cost and Management Considerations

A General Overview

Written by Bryon Kirwan (NRCS IL Economist)

Cover crops have garnered a prominent position in discussions recently. Cover crops themselves are not new. They have been used throughout our agricultural history—often referred to in text as a ‘green manure crop’. They are often used extensively in organic rotations as a way to control weeds and fix nutrients for subsequent crops. In parts of the arid and semi-arid regions of the western United States, cover crops are also used as part of a fallow management plan.

Many additional uses for cover crops exist. They include (but are not limited to)

* Improving Soil Health
* Nutrient Cycling
* Increasing Water Infiltration
* Extended Feeding Options for Livestock
* Reduction of Compaction

**Capital Issues in Transitions**

In the adoption of modern crop production, many producers moved away from cover crops. As producers consider bringing cover crops back into use on their farms, there are a number of considerations that need to be recognized. Cover crops are not capital intensive themselves (requiring the purchase of specialized equipment or additional land base) but do have seeding costs like any other crop. Producers will need to decide if they will utilize cover crops that self terminate (die from freezing) or if they will utilize cover crops that will need to be mechanically or chemically terminated. Seeding options range from flying the crop on to application with high clearance equipment prior to harvest; or conventional planting methods post harvest.

**Resource Setting**

Cover crops are able to be utilized across all soil types present in Illinois. There are some resource settings that seem to produce more synergies (livestock production) where additional gains beyond the conservation and soil building components can be realized. With the nutrient cycling capabilities of cover crops, they may be a valuable tool as Illinois producers work to keep nutrients out of drainage ways, lakes, and rivers.

**Management Issues**

Producers will need to carefully study which cover crop, or combination of crops they wish to utilize. Not all cover crops convey the same benefits. For example ryegrass does not fix nitrogen but does produce significant amounts of dry matter.

Fall oats will establish quickly and fairly easily, but will winter kill. There are different tradeoffs and combinations of cover crops that can be used to help producers achieve their goals.

Another important consideration is Risk. There is risk in using cover crops as a part of a cash grain rotation. Producers will need to consider how the cover crop will be terminated and dealt with before planting the subsequent crop. Will the cover crop need to be incorporated or simply planted through? Will the soil profile be wetter or drier? Will cover crops have an effect on soil temperatures? These are just a few of the risk and risk management questions producers will need to address.

An additional item concerning risk deals with the interaction of other Federal programs. Certain cover crops may place participation in Federal or Federally sponsored programs in jeopardy. Producers will need to visit with the Farm Service Agency and the Risk Management Agency (through their crop insurance agent) regarding how the selection and planting of cover crops may affect their farming operation.

The Economics of Cover Crops is an area of active study currently, but with few definitive answers today. It is fairly straightforward to document and calculate the costs of cover crops. This is similar to other crop budgets where the cost of seed and planting are calculated. What is less clear is how to measure and quantify the benefits.

The benefits in regard to the value of cover crops as livestock feed can be calculated as value of forage and extended grazing. The value of nutrient cycling, addition of soil organic matter, and changes in soil structure are much more difficult, and efforts continue to quantify these, and other assets cover crops provide.

Cover crops can provide many benefits to producers, landowners, and the public. As in all contemplated changes, producers will need to determine if cover crops are an appropriate fit for their operation. Additional information on cover crops can be found at the following URL:

[*http://www.mccc.msu.edu/selectorINTRO.html*](http://www.mccc.msu.edu/selectorINTRO.html)