

## No-Till Sweet Corn and Broccoli Case Study- Part 2

Let's revisit our vegetable farmer located in Southern Lancaster County. Cover crops are beginning to become more apparent on this farm but it hasn't been without some trial and error. And so it goes with cover cropping everywhere- it's a very simple concept but somewhat complex to maximize the potential. It's a constant learning curve no matter your years of experience. The more questions you get answered the more questions come up.

### Last Fall

Cover crops of hairy vetch, radishes, and cereal rye were planted were possible after the vegetable were finished harvested in the fall. This mix both captured left-over nutrients and held them to be used in the subsequent season.

### Spring Cover Crop growth

The extra ordinary warm spell near the end of winter awakened the hairy vetch and cereal rye earlier than normal. But that gain was short lived as the first part of March was unseasonably cold. Some fields were plowed and raised beds with plastic mulch were created. The opportunity of using cover crops in this situation was utilized by broadcasting a bushel and a half of oats over beds after the plastic was laid. The spring rains helped germinate the broadcasted cover crop and now the row middles are protected from soil erosion and the living roots will continue to stimulate the biological components within the soil. The oats will be sprayed out once they reach 2-3 feet in height. For vine crops, the cover crop biomass will provide some wind protection for the young transplants.

### Corn Planting

Both sweet corn and field corn were established into a living cover crop, or "Planting Green" as this practice is now called. Maximizing the cover crop benefits drives this practice in many parts of Pennsylvania and beyond. Reduction in slug damage has also been observed and is currently a part of a 3-year study with Penn State University to quantify the effects and influences of planting green. But any new practice is not without its challenges. The 3-foot-tall cover crop of cereal rye and hairy vetch got tangled up in the drive sprocket of the corn planter and caused the drive chain to come off. This is one of the unanticipated aspects that need to be addressed when attempting a new practice. A shield may have to be install to prevent this from happening again. Planting green has some rules that need to be considered when utilizing this concept-namely, moisture management. When conditions are wet, as they generally have been this spring, allowing the cover crop to grow and soak up soil moisture is a positive aspect. However, if it's dry leading up to the planting window and no rain is in site, it would be strongly advised to terminate the cover crop early in order to preserve moisture for the subsequent cash crop.

### Summer Sunn Hemp Plans

Last years' experience with a cover crop of Sunn Hemp was positive and plans are to plant as soon as the early sweet corn is harvested in Mid-July. Then by the end of August, it will be 4 feet high, provide 40lbs of nitrogen and after it's rolled will help suppress weeds in the succeeding no till transplanted late season broccoli crop. This farmer also has a small flock of sheep and last year allowed them to graze a portion of the sunn hemp cover crop when it was 3 feet tall. As experienced elsewhere, he noticed the

sheep had more shiny hair and an overall better healthy look. Sunn hemp seems to have qualities that lend to improved animal health in a grazing situation.

#### Building on the Foundation

A farmer can attend a dozen winter meetings that discuss cover crops and get some great ideas to adapt on his farm. But it's not until you try cover crops on your own farm that you will be able to establish what works for you. Veteran cover croppers build on the foundation of learned knowledge both in what they hear from others and from what they experience themselves. Only try new things on a manageable scale, fine tune from that knowledge, and go from there!