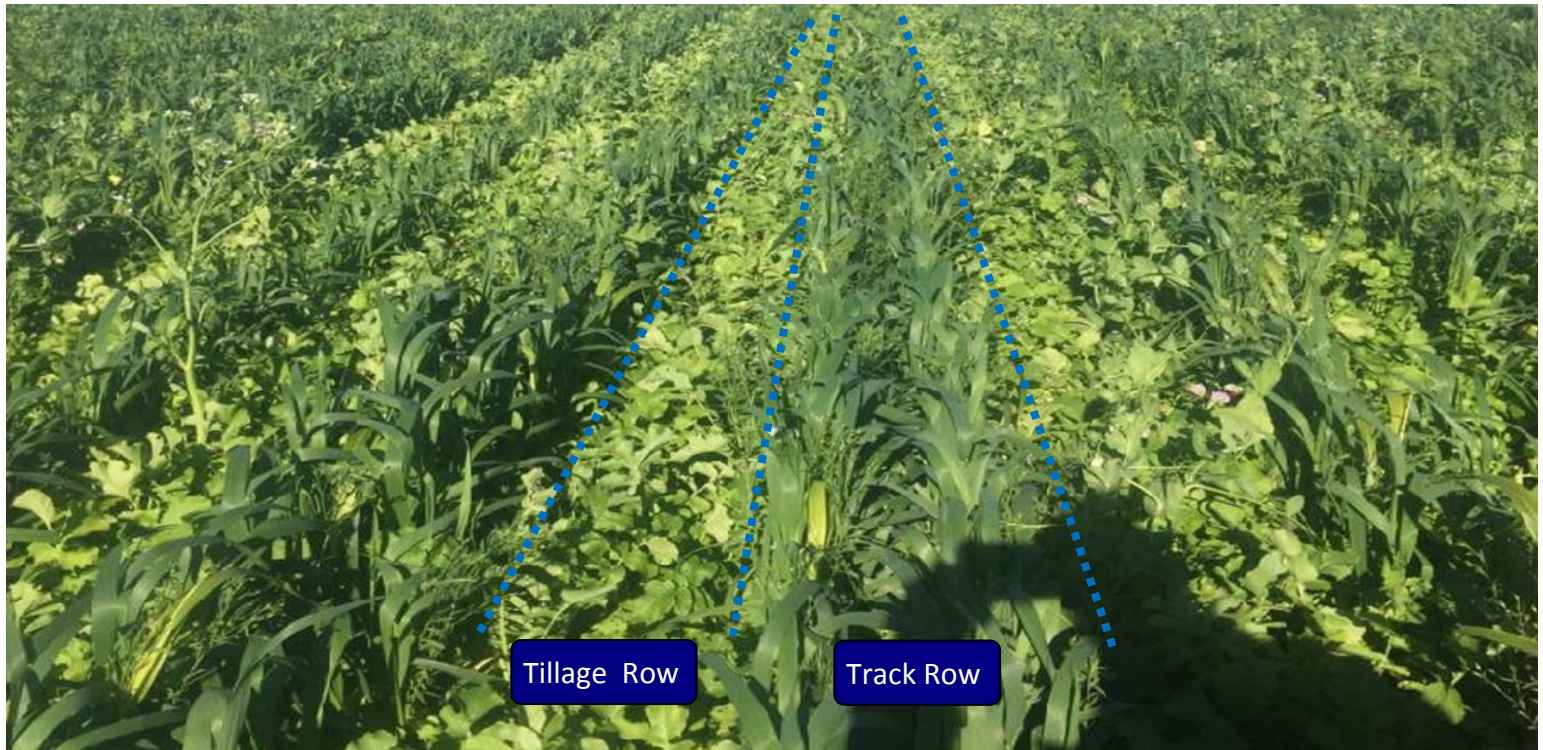


Bio-strip Tillage



What is Bio-Strip Tillage?

Bio-strip tillage is a practice where alternating rows of cover crop mixes are planted to mimic strip tillage, AKA “Biological” strip tillage. The tillage row contains cover crops such as radish, which will root deeply and quickly break down over the winter. The wheel-track row contains higher residue cover crops such as sunflowers, oats and cereal rye, which break down more slowly and provide a wheel track row for planting corn in the Spring.

Planting Process

The bio-strip cover crops were planted after wheat. To plant the covers, One landowner modified a 32-row 1560 John Deere seed drill. The modification involved mounting a Valmar 3255 air seeder onto the back of the drill, which also doubles for fertilizer start use. The air seeder contains the “tillage” row cover crop seeds, which are fed into alternating pairs of 7 ½” rows. The remaining 7 ½” rows are fed through the existing seed box, which contains the higher residue cover crops.

Termination

The tillage row of cover crops should winterkill and break down over the winter, allowing the soil to dry and warm quickly. The wheel-track row cover crops will need to be chemically terminated either in the fall or spring.



Seed Type	lbs/acre	Total Cost
Tillage row		
Nitro Radish	6	\$30/acre
Forage Peas	10	
Berseem Clover	4	
Track row		
Cereal Rye	10	\$30/acre
Oats	15	
Sorghum Sudan grass	2	
Crimson Clover	5	
Hairy Vetch	0.5	
Austrian Winter Pea	3	
Yellow Pea	5	
Short Black Sunflower	1.5	
Flax	2	
Forage Turnip	0.5	



Residue Breakdown

The two pictures side-by-side below demonstrate the residue breakdown that can occur in a few short months. The first picture was taken October 12, while the second picture was taken December 6.

Below is a picture of wheat residue that was managed with the row cleaner unit. This same unit will be used to manage the cover crop residue; if there is any residue left within the tillage row, it will be pushed into the wheel-track row.

Slugs

One of the main challenges of extensive cover cropping is that the residue left behind in the spring provides an ideal habitat for slugs. But slugs are “lazy” and like to attack cash crops that are planted within their residue habitat. By using the row cleaner, it ensures that there is a significant gap between the growing corn plant and the high-residue row.

Thank you to our partners!



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