

Workshop Title: Following Fortier: My experience adopting a minimum-till, raised bed system

Speaker & their title: David Greenberg, Abundant Acres (NS)

Executive Summary:

Prior knowledge of Jean-Martin Fortier's systems as written about in his recent book *The Market Gardener* is helpful (but not essential) in understanding the content of this workshop where David discusses his successful experiments in incorporating some of Fortier's methods.

Detailed Notes:

David focused his presentation on his experience bringing new land into production. Fall rye had been planted last year, and in the spring he mowed down the 3-foot-high rye using a BCS flail mower. It did an amazing job taking tall rye and shredding it so that it can break down easily. There was no tangling, and the top of the stalk was abraded.

The action of the flail mower to abrade the top is important because the next step is to cover the field with black silage tarp. If the top wasn't abraded then the plastic would have been ripped to shreds. The tarp was 8mm thickness and he bought 40x100 foot pieces and cut them into two 20x100 foot pieces. The tarp was left on for 2-4 weeks. When the tarp was pulled up the debris was all gone, incorporated by (and into) the life of the soil.

He did some shallow tillage with the BCS, and then used a BCS mounted rotary plow to throw soil to make walkways and raised beds. It took six minutes to make one 300-foot bed that was 30 inches wide.

The BCS mounted power-harrow did an amazing job flattening the bed. It has a bulldozer blade, smoothing the ground, and you can control the depth the soil is worked. David aimed for 1-2 inches. Apparently you can get a cheaper power-harrow from Quebec...

David used a 5-torch model flameweeder from flameweeder.com. It works; it did an amazing job, but the construction isn't very solid. You can do half the bed and the whole pathway with one pass, and then you can turn around and do the other bed and the other pathway on the return trip.

For row cover, David uses 36-foot wide with hoops every 6-8 feet. You can get the hoops from Scotian Gold. He finds that holding down row cover with dirt is difficult, so he likes to use row-bags from Dubois. He fills them with crushed shale, not dirt, zip-ties them shut, and put one bag every 8-10 feet. They should last 20-30 years.

**2014 ACORN Conference
Halifax Harbourfront Marriott Hotel, NS**

David loves his BCS. He was impressed that he could put the BCS on beds without the fear of soil compaction, and he recommends getting the 29-inch wide implements, not the 23-inch implements. He recommends buying the biggest tires you can put on the machine. Stock-tires are pathetic. You need bigger tires for better traction & easier clearance. The machine is not designed for rough ground; it is good for established soil.

Maintain the machine. Clean everything and spray with fluid-film whenever you use the “quick-hitch” to swap implements. David uses two cans of “fluid film” – a food-grade lubricant – each year everywhere things can rust.

On well-drained soil, David noticed lower yield on the edges of raised beds. He also did an experiment to find out the ideal number of beds of carrots on a 30-inch bed. He found that it made no difference to the yield if there were 4 or 5 rows of carrots, but yield dropped on 6 rows per bed. This matches with Fortier’s recommendation to grow 5 rows per bed. Nevertheless, next year he will go with 4 rows, as he builds fertility. You need to have a well-balanced soil to be able to pack in everything as densely as Fortier recommends. It is worth noting that Fortier doesn’t grow storage crops – he cherry-picks high-value crops. At present, David only uses Fortier’s system on 1/3 of his crop.

All-in-all, this system gives a good chance for success. Success is the biggest asset on the farm. Farming needs to be enjoyable to keep going.