



HOW TO MAKE **ORGANIC NO-TILL** MORE CONSISTENT AND PROFITABLE

HAVE A 'PLAN B'

Let's Talk

ORGANIC NO-TILL is a practice that has captured the interest of many farmers and Ag researchers. Successful ORGANIC NO-TILL is a reality, but a number of events must happen to produce an outcome satisfactory to the farmer. Yield, weed control, and cost of production are all measurable factors that determine immediate success, or something less than satisfactory results.

ORGANIC NO-TILL is not 100% no tillage. Tillage must be performed to kill vegetation that could compete with the chosen cover crop. Additional tillage might be performed after harvest or the field could be grazed to further add to a true minimum tillage effect. Competing species of grass and weeds will certainly re-grow, so successful continuous NO-TILL ORGANIC is unlikely, and will require additional tillage to establish the next cover crop before "NO TILLAGE".

For ORGANIC NO-TILL to be satisfactory, four events must be successful:

- A. A substantial (dense) cover crop (preferably weed & grass free) must be established; so dense a stand that it might be better to plant first, then crimp to avoid planter plugging.
- B. The crimping of the cover crop must kill or significantly suppress the cover crop.
- C. The cover crop must suppress weeds and grass.
- D. The planted seed must achieve the best possible germination.

If some of the above events are not satisfactory, the resulting harvest may not please the farmer. For many farmers, failure is not an option.

Successful ORGANIC NO-TILL is dependent on many factors, some of which are not under the control of the farmer. Success for the farmer requires an early determination of the probable success or failure of his No-Till effort, and then making a decision.

Prior experience, and a judgement call earlier rather than later, will determine financial success, or something less. 'THROWING IN THE TOWEL', earlier rather than later, invites the possibility of a successful PLAN B.

A PROVEN PLAN B:

Before any tillage takes place, it is highly recommended (actually essential) that a flail shredder is used to shred all residues and plant material into small pieces. A flail shredder creates air turbulence that picks up material laying on the ground (otherwise missed by rotary mowers) and cuts the bio mass into small pieces that will decompose rapidly. Every PLAN B should start with shredding because the next objectives are A.) rapid decomposition, and B.) eliminating long undecomposed residues that interfere with critical weed control operations that will follow.

Essentially, the No-Till effort is abandoned and is replaced with a proven PLAN B - 1 pass precision tillage with a HOWARD ROTAVATOR that fulfills:

1. The killing objective – cover crop, grass, weeds, partially germinated crop.
 2. Creates a much better environment of probable economic success for the farmer.
- The HOWARD ROTAVATOR with 'L' Blades is the best option should the farmer decide that the No-Till plan will not be satisfactory.

One pass with the HOWARD ROTAVATOR equipped with 'L' Blades and rear depth control wheels will kill more and different plants tilling very shallow (possibly as shallow as 2"), than any other tillage tool. When the rotor speed (blade speed) is correct for the forward travel speed of the tractor – nothing is missed – everything is cut loose and thrown to the surface.

After 1 pass with the ROTAVATOR, if the calendar allows or time is required for decomposition, a 2nd pass with a simple field cultivator may be all that is necessary just before planting. If a 2nd pass is not required, row cleaners on the planter will V-plow decomposing plant material out of the way and allow immediate planting into firm moist soil.

After the seed is planted, the following options for improved weed control and plant vigor are then possible:

- A. Blind cultivate (pre-emergence weeding) with the EINBOCK AEROSTAR ROTATION (there is likely too much un-decomposed residue that will prevent use of a tined weeder).
- B. When the crop is up, weed with the EINBOCK AEROSTAR ROTATION (or the EINBOCK Tine Weeder-if possible).
- C. Weed with the EINBOCK ROTARYSTAR Rotary Hoe, or some other Rotary Hoe.
- D. The use of a Propane Burner is now possible for burning weeds in the row and middles.
- E. Row Crop Cultivate with state-of-the-art EINBOCK ROWGUARD Camera Guidance System and EINBOCK CHOPSTAR – Row Crop Cultivator with Finger Weeders or AEROSTAR ROTATION ELEMENT for in-the-row cultivation.

The use of the HOWARD ROTAVATOR and EINBOCK Weed Control implements are well proven in Organic farming and provide an ideal PLAN B when ORGANIC NO-TILL efforts appear to provide less than satisfactory results.

Wilson Brothers Farm of Cuba City, WI has No-Till planted soybeans into cover crops successfully for some years. They also have 2 HOWARD ROTAVATORS, an EINBOCK TINED WEEDER, a Rotary Hoe, an EINBOCK ROWGUARD and CHOPSTAR RCC for implementing PLAN B. They plant on average 300 acres of soybeans per year; 180 is No-Till. They have found the other 220 acres are not suited to No-Till.

A HOWARD ROTAVATOR IS THE MOST VERSATILE SURFACE TILLAGE TOOL ON THE FARM, BECAUSE IT IS THE MOST ADJUSTABLE. THE ADJUSTABILITY OF THE ROTAVATOR ALLOWS FOR CONTROLLED TILLAGE. THE BEST TILLAGE IS THE LEAST TILLAGE; JUST ENOUGH TO MEET THE NEEDS OF THE CROP THAT WILL FOLLOW, DEFINE THE TILLAGE OBJECTIVE, THEN ADJUST THE ROTAVATOR FOR OPTIMUM ONE-PASS PERFORMANCE.

FOR ADDITIONAL INFORMATION OF HOW TO GET THE BEST PERFORMANCE FROM YOUR ROTAVATOR OR HOW ROTARY TILLAGE CAN BEST FIT YOUR NEEDS, CONTACT GUY MACHINERY.

GUY MACHINERY 14213 WASHINGTON ST. WOODSTOCK, IL 60098
PHONE: 815-338-0600 FAX: 815-338-2525 EMAIL: Guymachinery@yahoo.com
WEBSITES: www.youtube.com/guymachinery www.tinedweeder.com