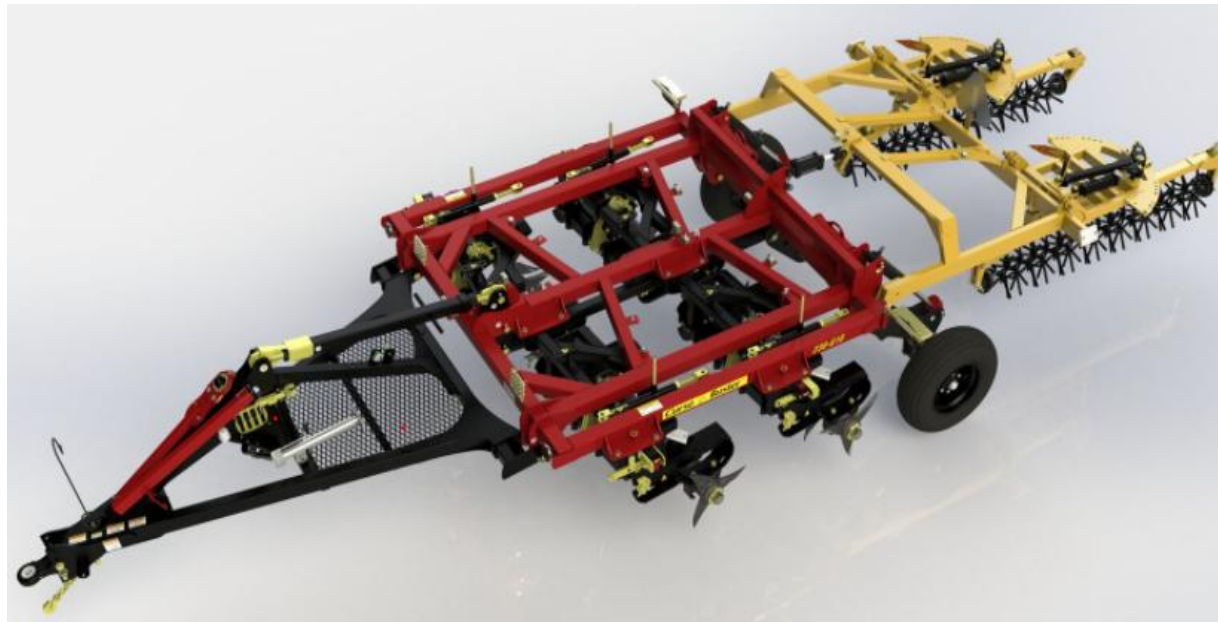


## Who we are:

- Soil Regeneration Unlimited is a family owned business that has been in operation since 1978 under the headship of Jim Martindale. Only a few years after beginning his agronomic consulting business in Northern NY State, he became convinced that tillage of soils plays a major role in the development of soil health when it was still called soil “tilth”.
- With the help of his clients, industry associations, his sons and praying friends the first CurseBuster was brought forth in 2011.
- Soil Regeneration now provides Intellectual Property to farm equipment manufacturers who are bringing forth pioneering tillage technology which had its roots in New Zealand in the 1970’s.
- SRU provides farmer direct sales and service of CurseBuster tillage machines in North America, Europe, the Far East and Australia today.
- Additional agronomic consulting services are available especially tailored to those who have adopted CurseBuster non-invasive, targeted tillage.



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# CurseBuster®

## Tillage Proven to Advance Soil Health



## SOIL REGENERATION UNLIMITED



WWW.SOILCURSEBUSTER.COM



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Which Lentil root system would you prefer growing on your farm? **Left- Three CurseBuster passes in two years verses 20+ years of No-Till**

*“Doing the same thing and expecting different results defines insanity.”*

Does this quote attributed to Albert Einstein fit your relationship with your soils?

**Genesis 2:5 KJV** “...for the Lord God had not caused it to rain on the Earth, and there was no man to till the ground.”

**Genesis 8:21 KJV** “I will never again curse the ground on account of man, for the intent of man’s heart is evil from his youth...”

*“Once we saw how the CurseBuster changed the way our soils handled water, we knew we could try growing lentils again. Our Saskatchewan soils had become so disease-ridden after 24 years of no-till that we didn’t dare try them. Roots confirmed for us that we were getting air back into our soils again and making healthier soils.”*  
Ryan Leibel, Balgonie, SK



## CurseBuster® Applications

### Tillage- Seedbed Preparation/Manure Application



How many field operations do you want to combine into one pass? Dan runs CurseBuster to weed, mulch the surface, fracture soil up to 11 inches deep for large root system development, apply seed and “incorporate” dairy manure (not bury it). Optional rear hitch pulls the grain drill or corn planter when he wants. You can do this while building the fungal population in your soils.

*“This is my only tillage tool on my farm today. I don’t foresee the need for any other. I use the CurseBuster before spreading liquid dairy manure. The I follow up using the seeder to establish the next crop. I am controlling erosion near Bear Lake and really cleaning up the lake over the last three years.”* Dan Boerst, WI

### Weed Control / Cultivation / Crimping



This tool is the fit for rolled-down cover-cropping that produces crop root systems that are unmatched. Plant green, then till to 9 inches and improve emergence, never move a seed. You want to try legume living mulch corn, this is the only way to succeed. Watch Active Carbon levels soar because the soil can breathe deeply and plants can build extensive root masses. The way in which the roller speed is controlled by the Eagle Tine design, wrapping is never a problem even in vines. The adjustability of the rotary harrow system permits removal of small weeds and non-disturbance of the cover crop root system thereby preserving the allelopathic and/or synergistic influences of cover and companion crops. *“These food-grade organic soybeans went 59ba. Weeds that survived the rolling action never developed normal roots or seeds.”* James Lengacher, IN

### Soil Air & Water Management- Classic Aeration



Soil Health advancement happens fastest with perennial crops in the rotation. These crops need to regrow roots every year to stay vigorously productive above and below ground. Properly timed “cultivation” that relieves compaction and the macro-pore clogging of silt soil particles is needed.

This process marks the end of frost-heaved alfalfa and winter cereals.



# CurseBuster –



Model Number	Width (feet)	FWA Suggested HP	Add Wings to- (feet)	Number/ Tire size	Rotary Harrow Mods	Hydraulic Roller Control	Hyd. Wing Weight Transfer
230-R10-Lite	10	150	n/a	2-11L X 15	2	Standard	n/a
230-R10-Med.	10	150	20	4-11L X 15	2	Standard	n/a
230-R10-HD	10	150	30	4- 15.5 X 16.5	2	Standard	n/a
245-R15	15	225	n/a	4- 12.5L X 15	3	Standard	n/a
260-R20	20	300	n/a	4- 12.5L X 15	4	Standard	Optional
290-F30	30	450	n/a	4-15.5 X 16.5 & 4- 11L X 15	6	Standard	Standard

Transport width of 20 and 30 foot machines is 13’6” and at legal height in all States

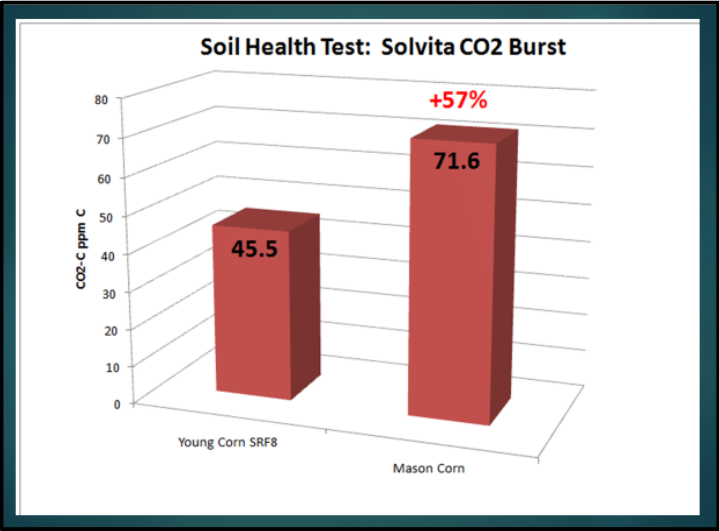
The working speed is flexible. The rotary harrows work better at speeds over 5 mph with no upper limit. Reverse tillage erosion; rotatable hydraulically and reversible for improved weed removal without turning the soil over. Roller/tine assembly down-pressure is adjustable separately front and rear and hydraulically controlled.

The primary tillage Eagle Tine relieves compaction to depths of 11 inches and is unchanged at any speed.



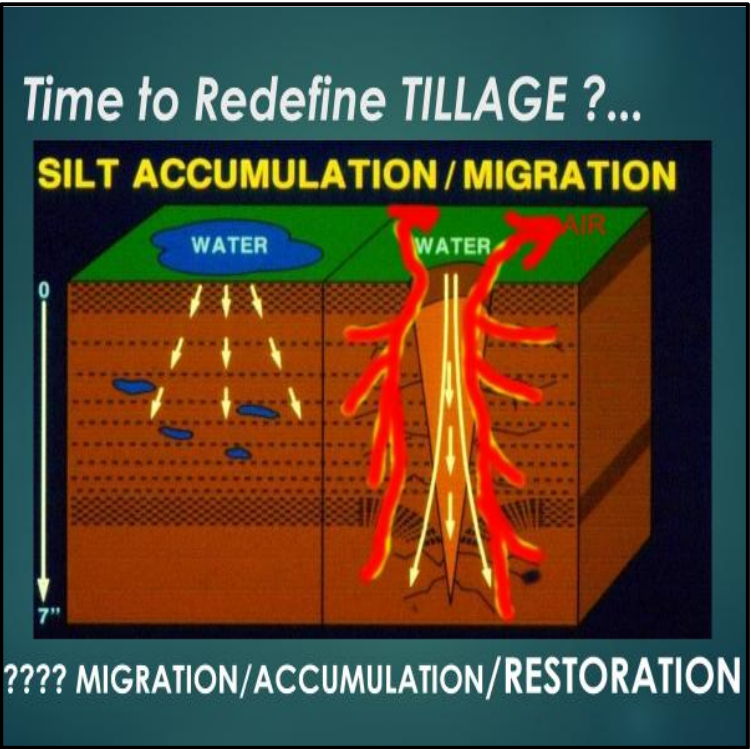
# Introducing Targeted Tillage - The Well-Kept Secret Concept

## A Need to RE-Define Tillage



Tillage has been defined historically by visual changes in appearance of the soil surface such as disappearance of plant materials. Tillage has most recently been rejected because of its it ability to destroy soil health and cause various types of soil loss. CurseBuster sets a new standard which has been proven effective for 30 years with huge increases in soil health ratings by any measure employed.

## Targeted Tillage Makes a POSITIVE Difference



Knowing the target of tillage is the key to avoiding collateral damage. Tillage needs to be effective both first and foremost of all by producing air exchange in soil. Structural changes produced by the movement of water downward through soil is the “Curse” which needs to be addressed. When the curse is properly dealt with, soils can transport water. Then air can be changed regularly. Air is the largest single nutrient of all soils but it has to be changed gently, without destruction of the soil-ecosystem and structure. Sudden influxes of Oxygen are responsible for oxidation of humus compounds. This robs carbon resources from the microbial communities in soil and contributes to the downward spiral of aggregation thereby further hindering normal gas exchange in soil.



# The Crux: “If I Till My Soils?”



Which Ditch Line is Yours?



Fall Moldboard Plowed

Photos Courtesy of Carl Brubacher



Multi species cover following W. Wheat, Fall Manure Injected, then “CurseBusted”

## “If I switch to No-Till?”

**Infiltration of water may improve, percolation does not or gets worse!**



You can't fool gravity. Water that doesn't move efficiently downward into subsoil moves downslope or down-grade. Ever notice how the water that appears in low areas two to three days following a rainfall event with no-tilled soils? Anaerobic soil is the result; denitrification and diseases are next to arrive.

The lack of percolation through the plow-layer is often mistaken for compaction much deeper than where the water is actually “perched”.

Subsoiling and strip-tilling disrupts the zone where the problem is. However, in effect this only creates preferential water flow leading to nutrient flushing like a toilet.

# CurseBuster® Can Be Your Solution You don't have to tear down the house to add a room...



- Keep soil density uniform for maximum growth rate of roots
- Keep soil aggregation intact or undisturbed
- Leave the soil microbiome arranged vertically the way it is trying to develop naturally
- Sequester more soil carbon through the growth of larger root systems that stay where they grew to decompose with oxygen

- Leave crop and covercrop plant materials on the soil surface where they provide protection from raindrop impact
- Shade the soil surface to reduce peak soil temperatures
- Provide food and shelter for beneficial insects or natural predatory insect community development
- Encourage rehabilitation of pollinators and foraging beneficial insects, the #1 nutrient recyclers in the soil ecosystem
- Add plant species to established forbes to enhance microbiome density and diversity



Micro-arthropods will move back into your fields when it is a safe place to have families again. That means no flooding the nursery, plenty of high quality food and a place to sleep that doesn't need an air conditioner in the summer.

*“I am watching alfalfa out-compete weeds, wet spots disappear, crops get more uniform and soils are friendlier every year.”* Stephen Lapp, OH (CurseBuster since 2013)