

Ray Rawson's Bin-Busting Secrets: Do Less, Earn More!

Ray Rawson has devoted 39 years of research and development to the perfection of equipment that helps produce higher yields. He holds 16 patents for zone tillage equipment that deep-tills planting strips through unplowed fields. He's been able to achieve yields three times his county's average, including 118 bushels per acre on soybeans and more than 300 bushels per acre on corn. What's more, he does it with less work and a much higher profit margin.

Rawson farms thousands of acres near Farwell, Mich., and maintains a large test plot program. He is constantly tinkering with his "Zone Till" equipment. In addition, he speaks to groups across the country about his methods.

Rawson recently co-authored a book called "Breaking Barriers: 7 Secrets That Unlock Higher Yields" with well-known agronomist Dr. Jim Ladlie. The book, along with a companion video, is packed with ideas from Rawson and other successful producers. Following are excerpts from the book. To get a copy of the book and/or video, call toll-free 888-875-2425 or go the web site at www.profitproag.com.

Deep zone tillage equipment is available from Brillion Iron Works, Brillion, Wis. (ph 800 409-9749 or 902 756-3720; www.brillionfarmeq.com).

In our farming operation, we have always looked for alternate solutions. I'm not saying we're the world's best at it, but it sure has helped us in the long run. We have looked for solutions that will give us a competitive edge, let us produce that 2, 3, 4 or 10-bushels an acre more every year. We've used every piece of machinery imaginable on the market. We've used every kind of fertilizer, seed and herbicide.

When we weren't satisfied with the equipment that we were using, we invented our own, then changed it to make it better.

The more we did and the more we experimented, the more we realized that higher yields are about three things: soil chemistry, biological activity in the soil, and the physical aspects of soil management - and how these three things work together.

I believe in trying new ideas and evaluating them, perfecting the imperfections, and putting them to use on our farms. This approach, which we have continually strived to improve, has been very successful, and profitable.

Do Less & Earn More!

Many years ago we farmed with a no-till system, and that convinced us that we could make fewer trips across a field and produce as good or better crops than people who made four or more trips to our one or two. We experimented with different types of planters, different ways to create a better seedbed in front of the planters, and different ways to apply nutrients to our crop. After much experimenting, we arrived at a system we called Zone Till Planting. It involved three coulters running in front of the planting unit to create a roto-tilling effect and an ideal seedbed. That system worked well, but we found that compaction below the roots caused moisture to pool there and roots couldn't penetrate the compaction layer.

Deep Zone Tillage

The solution was to put a slot through the bottom of the planting zone, a process we call Deep Zone Tillage.

"We have found that the deep zone tillage system helps allow the surface water to move

quickly into the subsoil rather than running off.

Minimal tillage with the deep slot aerates the soil, allows moisture and roots to penetrate deep, and increases biological activity. Earthworm numbers increase, and that's a sign of healthy soil that supports healthy and productive crops.

"I believe it's easier than most people think to produce more per acre and make money doing it. You have to know what your biggest barriers are, and how to break them down, one by one."

Ray Rawson

On the meeting circuit I am often asked about soil compaction. My answer always has two parts: I believe that most farmers definitely have compaction in their soil, and a lot of farmers have compaction between their ears. The audiences always chuckle at that, but I believe it's true. Look beyond what you're doing now, try other ideas, and I think you'll be pleasantly surprised by the results.

Design, Refine & Improve

Our current tillage system is deep slots in the fall on land that has compaction and aeration problems. On land that already has slots in place, we only put deep slots on end rows or in parts of the field where traffic is high.

Our planting system includes the three fluted coulters running in front of the planting units where starter fertilizer is applied. We can also apply micronutrients or biological enhancements at the same time if we need to.

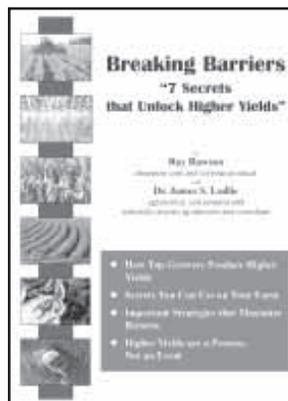
Equipment is only a tool that helps us accomplish a plan. Understanding the soil, balancing fertility, managing residue, supporting the biological life and reducing compaction are major elements in our system. We have also found that high yields are a process, not an event.

Producing more is like picking apples. We can walk around the tree and pick the apples

on the bottom fairly easily. That's what the average farmer does and he gets average yields. Getting to the apples in the middle of the tree is more difficult, and that's comparable to what a few farmers will do to achieve higher yields. But reaching the top apples takes a lot of effort, it takes a step ladder where you have to climb several steps to reach the top of the tree. You have to take several steps to achieve high yields, too, and you can't skip any of those steps in the middle to get to the top.



Ray Rawson, left, and Dr. Jim Ladlie, of Profit Pro, Albert Lea, Minn., speak to groups all over the country about methods that boost yields and improve the soil.



A just-published 172-page book explains Rawson's ideas in detail.



The 1 1/4-in. shanks on Rawson's deep zone tillage tool create a slot for moisture and oxygen to penetrate. Fluted coulters behind the shanks roll loose soil over the slot and a rolling basket levels the soil into a "berm" where the seed is planted.

How Rawson Boosts Soybean Yields

A lot of farmers treat soybeans as an afterthought to corn. If you plow them in the ground after corn, don't give them any fertility attention, they'll just give you a modest yield. And that's not going to make you much money, even if the modest yield is in the 40-50 bushels per acre range.

My experience with soybeans is that they respond tremendously to management. We plant our soybeans in the deep root zones that we've put into the previous year's corn. We always inoculate and we feel that step gives them a good jump-start. Depending on the field or soil conditions they're going in, we may also use a pop-up fertilizer. We always place nutrients with the beans when we plant them with the Y-Not-Split-It attachment. This gets the plants off to a good start with robust roots that go deep into the soil.

Faster Weed Kill

We recently used a new product called Herbolyte™. It is mixed with glyphosate (Roundup) and it replaces the ammonium sulfate. In our experience, it doesn't slow the soybeans down like glyphosate with AMS. We noticed that when we used the AMS, the soybeans would go into a stall for a few days after we sprayed, and they didn't do that with the Herbolyte. This is our opinion, and we don't have scientific data to support it. Another benefit is that we didn't see any yellowing when the Herbolyte™ was mixed with the glyphosate.

Foliar Feeding

We found several years ago that foliar feeding soybeans makes a tremendous difference in plant health, pod counts, seeds per pod, seed size, and yield. We now feed soybeans

three times during the growing season. We do this because in our experience we know that a soybean plant has a built-in governing system. If it has the energy, the moisture, available nutrients, and the oxygen, it will blossom, hold more pods, and produce a higher yield.

The first application of foliar feed is early, at blossom set. This gives the plants a boost and tells them to hold those blossoms, not drop them off. If they don't have the nutrients at this time, those blossoms will start dropping off, and there's no way to replace them once they're gone.

A few weeks later, we give them a second foliar shot at pod set. This boost tells the plants to hold the pods, that there are nutrients and energy to fill them with soybeans. Again, if the plants don't have the nutrients or energy at this point, those pods will start dropping. We've had some instances where plants are holding nine to 12 pods per node. That may sound far-fetched to people who usually see three or maybe four pods per node, but that's the way we get more yield: more nodes per plant, more pods per node, and bigger seeds.

Finally, we feed them a third time when the beans are beginning to fill seed. This in our experience gives the plants extra nutrients and energy to fill those pods, which means beans with good test weight.

Each trip across the field pays for itself two or three times over. That includes labor, material costs, machinery wear, everything.

To make sure we're not compacting a field, we follow the same tracks for every trip we make. If we go four times, like we normally do, it's always in the same tracks.



Rawson works closely with Brillion, which produces the Zone Commander deep tillage tool. This 6-row unit is deep tilling and placing dry fertilizer between rows of cornstalks.