



## MANAGE Soil Compaction... and Protect Your Profits *(Part 2)*

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Let's look at a few ways to reduce compaction...

- Avoid working soils when too wet
- Use the smallest equipment vehicle possible for the job
- Reduce axle loads below 10 tons

### Decrease contact pressure by:

- Increasing tire width & height
- Reduce tire pressure
- Reduce trips across the field
- Utilize auto-steer
- Use tillage sparingly:  
(No-till, Strip-till, and Minimize depth of tillage)
- Using duals, triples, or radials
- Use tracks with multiple axles
- Utilize controlled traffic lanes
- Increase swath width

### Pro-active steps include:

- Conservation System: Increase water infiltration, Decrease evaporation, and Sequester more carbon
- Increase Water Storage:
  - Increase soil organic matter and increase soil biology
  - Manage residue more effectively; recycle nutrients
  - Utilize cover crops & crop rotations to improve soil structure
  - Consider surface and subsurface drainage improvements
  - Add manure & humus compost

### Adverse Effects of Deep Tillage

There is a time and place for most corrective measures, and the risks and benefits of each must be evaluated. Research shows that using deep tillage to eliminate compaction can be beneficial under certain conditions... but can also have potential negative effects.

- Loss of plant available moisture
- Reduced soil fertility, due to a degradation of soil structure

### Corrective Actions

Good soil stewardship involves combining wise tillage and managing soil biology to maintain and improve soil health. A biologically active soil will become more resistant to soil compaction.

Experience has shown the following to be beneficial:

- Plant diverse crops and cover crops with various rooting types (fibrous vs. taproot)
- Plant crops with roots that break up compacted soils such as alfalfa or radishes.
- Use "Wise Tillage" as a short-term solution. The soil loosening benefit of tillage can be maintained for longer if roots can be grown to fill the pore spaces soon after tillage.
- Use soluble calcium to increase soil pore space. This can include high calcium lime, gypsum and liquid products such as PractiCal, AgriBoost CA and Caliber.

Use a product that promotes soil biology to help prevent and alleviate compaction problems.

**Myco Seed Treat™** is a dry seed treatment that inoculates your seed with beneficial microbes, getting your plants off to a good start.

**Residue®** supplies microbes that are responsible for the breakdown of crop residues. The graph above demonstrates a lower soil density where **Residue** was used. The reduction of compaction is based on readings taken with a penetrometer.

**MT-17** is a heavy duty blend of microbials designed to take on the toughest soils. **MT-17** is specifically formulated to be applied with green manure, animal manures, and compost... and greatly improves the soil's ability to access the nutrients in manure.

**SP-1™** is a liquid product that helps maintain a vibrant, healthy root system, by supplying a diverse package of microbes. Many growers have used SP-1 to overcome the plant health concerns caused by compacted soil --- click on the button at right to see the video.



**As planting season approaches, put your knowledge about managing compaction into action... and reduce its tendency to limit the profit potential of your farming operation.**



815.872.1190

Give us a call today so we can help you maximize your Total Farm Profitability.

Douglas Plant Health: AgriEnergy Resources

21417 1950 E. Street

Princeton, IL 61356