



SOIL COMPACTION

WHY IT'S IMPORTANT

Soil that is tightly compacted can restrict rainwater from getting to the seed and compound problems such as disease and low nutrient supply — all of which results in decreased yields.

COMMON CAUSES

Rain leads to increased chance of compaction, as wet soils are more easily compacted. The physical impact of heavy rains can also compact the soil.

Crop rotation frequency can affect soil compaction. A lower rotation frequency means fewer new root structures have the opportunity to break up the compacted soil.

Tillage can lead to increased susceptibility to compaction. Tilled soils are more easily compacted than no-till soils.

Vehicle traffic is the number one cause of compaction. It is estimated that 70 to 90 percent of plowed layer compaction occurs on the first pass across the field.





OPERATIONS SOLUTIONS

Minimize passes across the field during wet field conditions, and try to stay on the same tracks as previous passes. Adjust wheel spacing to match on all equipment, if possible.

Rotate frequently with perennial crops such as alfalfa or clover, which don't require tillage, provide deep rooting structures and help dry out the soil without requiring multiple equipment passes throughout the season.

Reduce tillage and/or adjust tillage depth in order to avoid creating a tillage pan of compacted soil.

Properly inflate tires because the lower the air pressure of a tire, the less ground disturbance it will create. Over-inflated tires apply more pounds per-square-inch of pressure to the ground, which increases compaction.

Select the right tires for the job. A variety of new technologies and flotation sizes now exist to help remedy the increased problem of soil compaction as new-model agricultural equipment continues to grow in size and weight.

TIRE SOLUTIONS

Super singles such as the Goodyear® Extreme Flotation™ setup (OPTITERRA 1000/40R32 front and DT930 1100/45R46 rear on MFWD tractors) offers 20 percent greater contact area to the ground, as well as much lower inflation pressures as compared to a traditional factory setup with narrow duals. A reduced overall width compared to duals also makes for easier roading and a dramatically tighter turn radius, and the added benefit of Low Sidewall (LSW) technology improves ride quality, and reduces road lope and power hop.

Increased Flexion (IF) and Very High Flexion (VF) technology allows tires to carry loads at reduced inflation pressures as compared to standard tires. IF technology can carry the load of standard tires at 20 percent lower inflation pressures, while VF technology can carry loads at 40 percent lower inflation pressures. Goodyear Farm Tires offers IF and VF technology options for a wide variety of sprayer, tractor and combine tires.

Field service technicians such as the Titan Grizz Squad can help make adjustments to growers' machines to ensure their setup is optimal for reducing soil compaction while maintaining performance in the field – a service that is free of charge.



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