

Avoid Soil Compaction When Harvesting Wet Fields

COLUMBIA, MO.

Hurried harvesting of wet corn fields may have a long-term effect on soil compaction, said a University of Missouri Extension agricultural engineer.

"Soil compaction can cause greater surface wetness, longer drying time and more runoff, which increases erosion," said Kent Shannon, extension natural resource engineering specialist.

Heavy loads can cause compaction at depths that tillage can't remedy. Shallow compaction, at depths of 12 inches or less, can be remedied, Shannon said.

The increased use of flotation tires has encouraged farmers to carry out field operations when the soil is too wet to support heavy machines.

Tire inflation pressure is the main factor affecting soil compaction, he said. By selecting the proper tires, a 200-horsepower tractor may cause no more surface compaction than a 50-

horsepower tractor.

Whenever possible, restrict traffic to specific tracks or lanes. The first trip through the field causes the greatest compaction. Additional trips over the same lanes do not significantly increase the amount of compaction. When unloading the combine, try to use the combine's previous wheel tracks.

"Do not travel on wet soil unless it is absolutely necessary," Shannon said. "Try to avoid excessive axle loads, which cause deep compaction."

One way to decrease axle load is by not filling the grain tank as full as the hopper extension allows.

Research on soil types indicates that compaction in silty clay loam affects yields more than in silt loam. Generally, the smaller the soil particles, the more compaction reduces the yield. If compaction occurs this fall, it probably will still be noticeable next spring. Δ



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