

Tracks Keep Harvests Timely, Without Getting Into a Rut

(Omaha, Neb., February 8, 2000) - Track tractors have been "floating" across farmland throughout the country for the past decade, and by now their benefits are evident to all who use these machines. Recently track technology has found its way into the harvest operation as well, and farmers are finding many of the same benefits in using tracks at harvest as they did during spring planting.

In its second year on the market, the Lexion(r) combine from Caterpillar, which comes in track and wheel versions, is helping farmers keep harvests on schedule, even in wet field conditions. And, as with a track tractor, tracks on a combine help minimize compaction.

weight out, would help on a combine."

Compaction Hinders Yields

A Lexion 465 combine is the most recent weapon Bartlett is using in his battle with compaction. "We quit moldboard plowing years ago and went to chisel plowing and then ripping with the V-rippers, trying to break up compacted soil," he notes. "We weren't able to do much to prevent compaction caused by our machinery until tracks came along, though. We bought a Challenger(tm) tractor with rubber-belted tracks about four years ago and now have a Lexion combine on tracks."

Bartlett had a good opportunity to see the positive effects of tracks on

machines on his farm for the past five years, including a Case Quad-Track for two years and now Challenger tractors for the past three years. "We're seeing

a continuous improvement in the porosity and permeability of the soil," he said. "Track vehicles have been essential in helping us manage compaction. We're also trying to reduce trips over the field and use wider equipment so that we don't have as many wheel passes through fields. As a result, we're seeing steady improvement in the soil structure and productivity." Flotation Assures Timely Harvest

While compaction prevention played a role in why Kent Ott and his father, Charles, from Mulvane, Kan., purchased their Lexion 465 combine, flotation is the number one benefit they see from tracks on a combine.

"We had a record amount of rainfall in Kansas this year, and we weren't able to harvest our wheat with conventional combines," says Kent Ott. "Our Caterpillar dealer let us try a Lexion combine with tracks, and we were able to go. That's why we decided to buy the machine. We also did some custom harvesting for neighbors who weren't able to finish theirs."

Along with the track combine, the Otts now have a track system on their grain cart and use four Challenger

tractors on their wheat, corn and sorghum operation.

The Otts really saw the value of a tracked combine in their operation when they ran their combine side-by-side with a wheeled combine on one field. "Pass by pass, the wheel machine sank down and made deep ruts, while the track machine stayed on top and barely made a footprint," Kent noted. "Without the tracks, our wheat harvest would have dragged out another three weeks or more. We just weren't able to go with our wheel machines, even though we've got rear-wheel assist on them."

Problems With Retrofit Tracks

Seeking to provide customers with the advantages of tracks on combines originally built with wheels, some manufacturers offer the option of retrofitting. However, based on decades of experience in track technology, Caterpillar track experts caution against adding an undercarriage to a combine that wasn't designed to have it.

"Everything about a combine should be built keeping the operations the machine goes through in mind," explains W. Stan Born, manager of the Mobil-trac (systems for Caterpillar). "It's not just the roller frame that's different; there's also a difference in the gear box and the mounting structure. Several

things go upstream into the chassis of the combine that are different, and you can't get it right by taking a wheel off and bolting on a track as a replacement."

Born also points out the challenges of retrofitting when it comes to ride and vibration characteristics. "Here again, the undercarriage needs to be tuned to the combine for a smoother ride and fewer vibration problems," he notes. "Steering, balance and load distribution must work together to provide good handling, because unbalanced loads can cause steering problems. There also can be problems with wear and tear on brakes," Born said.

Spreading Out the Weight

"As long as farmers keep running heavy equipment across their fields, the need to combat compaction will always be around," said Ladlie. "I see nothing but growth for track technology," he said. "If you're familiar with compaction, tracks just make good business sense."

Kent Ott agrees that tracks are the way to go. "They give you the ability to take these large machines and spread the weight out over a large area to reduce compaction, while increasing flotation," he says. "We're convinced there are tremendous benefits of tracks in agriculture, no matter what the application."



"With the combine being the heaviest machine in the field, we know it's a big candidate for compacting the soil," says Jack Bartlett, a corn and soybean grower from Dallas City, Ill. "It stands to reason that tracks, which widen the footprint of the machine and spread the

his yields when he did a test on one of his soybean fields. "We ran the Challenger over half the field and a four-wheel-drive tractor on the other half," he recalls. "We got two bushels per acre better yield on the half where we'd run the Challenger."

Yield statistics like this come as no surprise to Dr. Jim Ladlie, a farmer and president of Agri-Growth(r), an agricultural research and education company based in Hollandale, Minn. "When it comes to harvesting, the top compaction problems out there are the combine and grain cart. You can see a definite pattern of running those heavy machines through the field, especially after a wet fall," he says.

Ladlie has run track



"With the combine being the heaviest machine in the field, we know it's a big candidate for compaction," said Jack Bartlett. He and his son Todd, Dallas City, IL, have witnessed positive effects on yields resulting from track technology. "It stands to reason that widening the footprint of the machine spreads the weight out and minimizes compaction."



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