

Treading Softly

AgriBrink's award-winning tire inflation-deflation technology is fighting soil compaction with the flip of a switch.

For hog producer and cash cropper Jake Kraayenbrink, spreading manure comes with the job. But heavy equipment can compact and damage soil, resulting in poorer yields. Lowering the tire pressure would spread the weight over a larger area and reduce compaction. However, that's simply not feasible when you're hopping on and off roads where high tire pressure is a must.

Then an acquaintance told Kraayenbrink about trucks with built-in technology that can inflate and deflate tires on the fly. Intrigued, he set out to find a system that might work in an agricultural setting.

A promising product from the U.S. ended up being far too slow for a busy farmer's needs. Getting a system from Europe proved too expensive. And an outfit in Edmonton had what they were looking for, but it was tailored for the trucking industry and not easily transferable to farm equipment.

In the end, these challenges were the building blocks for a new company called AgriBrink. A team including an engineer, a mechanic and a farmer all located within 10 km of Drayton, Ontario set out to build a new system.

Several design iterations and a lot of hard work later, they succeeded. "We were able to get the air out of the tires in 30 seconds," says Kraayenbrink. Their Automatic Air Inflation-Deflation Control system lets a farmer automatically inflate or deflate their tires from the comfort of their tractor seat. Capable of increasing the surface footprint by 60% in the field, the system reduces soil compaction, improves fuel efficiency and can be applied to manure spreaders, self-propelled sprayers, large square balers, grain buggies and other implements.

The technology earned AgriBrink a Premier's Award for Agri-Food Innovation Excellence and has generated a lot of buzz amongst farmers. "They recognize the damage that a hard tire does to the soil," says Kraayenbrink. "Everybody seems pretty excited toward the idea."

To breathe life into the fledgling enterprise, Kraayenbrink is now working with Bioenterprise, a leading agri-business accelerator. Bioenterprise helped with patent applications, pricing models and advertising materials and connected him with strategic partners. "I've been really impressed by them," says Kraayenbrink. "Bioenterprise has been a real help."

Kraayenbrink is confident they'll be equally helpful as he tackles the next big challenges: bringing down the cost of the control system and developing a distribution network.