

MANAGING CORN RESIDUE AT HARVEST

LOCATION, TILLAGE PRACTICES AND CROP ROTATIONS PLAY A ROLE IN RESIDUE MANAGEMENT NEEDS

Higher corn plant populations, tougher stalks and an increase in stover yields can result in an overabundance of plant material, adding residue management to producers' harvest-time activities.

According to Dustin Bollig, farmer and vice president of sales and marketing for Dragotec, USA, the residue management decisions producers make in the fall can help set the stage for planting season.

"The more residue is broken down, the darker your soil will be in the spring, which helps increase soil temperature and may allow you to get in the field sooner," says Bollig. "Smaller residue sizing helps bacteria break down tough stalks – especially in northern areas of the Corn Belt where temps are cooler and microbes have less time to work.

"Reducing excess residue also decreases your risk of yield-robbing diseases and pests that can overwinter there."

Additionally, proper residue management can improve seed placement, emergence and uniformity across the field.

HANDLING RESIDUE AT HARVEST

During harvest, the corn head functions as the front line for controlling residue by processing stalks and limiting the amount of stover entering the combine. The combine plays a key role in the distribution of residue. It's just as important to limit residue entering the combine as to limit the piles of residue left behind.

"In the past, fields that needed to be chopped required an operator, a tractor, a flail shedder and an additional pass across the field," says Bollig. "Using a chopping head to shred and size stalks during harvest saves fuel, labor and time of an additional pass, as well as the depreciation, maintenance and cost of an additional machine."

However, Bollig clarifies a chopping corn head isn't for everyone. He says it's an investment that requires careful consideration of climate and tillage practices.



"Many no-tillers shy away from this option. If residue isn't mixed in with tillage it can blow away, or the residue can act like a mat and prevent soil from drying out in the spring," he explains.

"Secondly, if you are in a warmer climate, chopping may be less needed because higher temperatures accelerate the breakdown of stalks compared to cooler climates."

CORN HEAD RESIDUE MANAGEMENT

According to Bollig, the key factor to consider when comparing chopping heads is the design of the unit.

"The most important job of any corn head is to harvest everything in the field no matter the condition, and the reality is we run into a lot of different conditions such as poor ear retention, leaning stalks or worse – downed corn," he says.

"At Drago, our motto is 'yield first.' That's why we use a controlled, up-front chopping design with chopping blades placed just behind the knife rollers. This placement ensures that rollers have a firm hold of the plant before it comes in

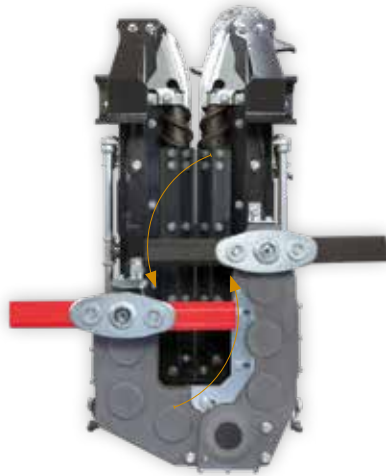
contact with the blades,” says Bollig. “Other designs place choppers in front of the rollers, striking and cutting the plant and potentially dropping ears before they can be processed.

“This can leave large amounts of yield on the ground, especially in poor field conditions.”

For example, in a 30-inch row operation, one average-sized ear found along 174 feet of the row is the equivalent of 1 to 1.5 bushels of corn. If this is occurring in every row behind a 12-row corn head, that could equal a 12- to 18-bushel loss.

“This potential for yield loss is the biggest reason our chopping heads do not start the chopping process until the stalk is well into the stalk roller,” Bollig says.

Currently, Drago offers two chopping options. The Twin Chop+ is a patented industry first, featuring two counter rotating blades that split and size residue lengthwise for better breakdown. Using this configuration, the blades provide maximum chop quality while allowing the knife rollers to run slower, reducing the amount of shelling that can occur compared to other heads with excessive stalk roller speed.



For producers who desire more flexibility depending on the field or crop rotation, Drago offers the Single Chop option which performs quality chopping using the least amount of horsepower and can be disengaged in areas that don't require residue management.

Although some producers are hesitant of the horsepower needed to run the Twin Chop+, Bollig says the assumption it requires double the horsepower is a common misconception. The arrangement of gears driving the choppers reduce Drago's horsepower needs.

“Instead of using two separate gearboxes that would require two gear splines, the Twin Chop+ has one gearbox driving power off a single spline while using spur gears to bring the power forward on both sides,” he says. “This efficient drive design dramatically reduces the horsepower needed to run counter rotating blades.”

“We pride ourselves in offering more flexibility in residue sizing than the competition,” he adds. “In addition to offering two chopping options, we also offer a nonchopping option that can be modified into a Single Chop, Twin Chop+ and vice versa – without trading corn heads.”

WHAT'S BEST FOR YOUR FARM?

Bollig says residue management needs are unique to each farm. “In many cases, the knife rollers themselves may provide enough stalk breakdown to meet a producer's needs. And residue still attached to the roots can help reduce wind erosion and capture snow.”

Producers must evaluate residue management needs based on their soils, tillage practices, crop rotations, insect pressures, climate and location.

“Chopping and burying residue, for example, may help reduce the number of overwintering insects, but the practice can create erosion issues,” he says. “Check with your area extension or crop scouting services to determine what's best for your farm.”