

DON'T LOSE HARD-EARNED BUSHEL YOU WORKED SO HARD TO GROW.

Identify the equipment and operation adjustments that can help limit harvest loss.

“Most attention is focused on the combine when it comes to reducing yield loss, but university research* has shown that 60% of harvest loss comes at the corn head – before corn even gets to the combine.

And while adjustments to control yield loss at the corn head may seem limited, Fenton, Iowa, farmer and Dragotec USA president Denny Bollig says there are many things producers can do that can make a difference.

“Yield monitors on the combine are only as good as their calibration and tell only 40% of the story,” he notes. “Farmers aren’t likely to stop and scratch around the stubble and measure yield loss at the corn head. And I understand that,” he adds. “There’s only so much time to harvest each day, and you wouldn’t get anything done if you stopped every round to check.”

“But you do, at least, need to be aware of the conditions that result in lost yield so you can minimize the loss that occurs.”

IDENTIFY THE LOSS

First thing, he says, is to identify how grain is being lost.

“There isn’t any one place on a corn head where yield loss, consistently, is more likely to occur than another,” Bollig says. “Differences in harvest conditions, combine operation and corn head design each play a role in yield loss.” The level of corn moisture at harvest plays a significant



role in potential yield loss, Bollig says. “The tremendous energy generated by stalks being pulled down to deck plates is transferred to the ear,” he points out. “When corn moisture levels are high, as it can be early in the season, the transfer of energy will result in more ear bounce and ejection. And as ears dry, the result is greater butt shelling and excessive kernel loss.

Combine speed during harvest can exacerbate the yield loss, Bollig says. “The faster you drive, the faster the knife rollers must run to keep up, transferring even more energy to the ear. One of the benefits of running a wider corn head is that you don’t have to run as fast, allowing the corn head and combine more time to process corn and reduce potential loss.”

“Your goal should be to get an entire intact ear into the combine with a minimal amount of plant material and shelling loss to the butt of the ear.”

CONSISTENT VARIABILITY

Misadjusted deck plates – or those set with wider openings than stalk widths – can lose kernels or even have nubbins pulled through. While deck plates set too tight break off stalks and increase the amount of plant material moving into the separator, which can lead to yield loss out the back of the combine.

What many producers don't realize is the amount of stalk variability there is and the role it plays in yield loss, Bollig notes. "We've conducted multiyear harvest studies showing that there is significant variability in stalk size entering every row of the corn head at any given time. "One of the more surprising things we've learned is that the stalk size variability actually increases with yield – taking a significant jump at 200+ bu./acre, which is contrary to what most producers believe."



DECK PLATE GAPS

"Our harvest studies indicate that producers with corn heads having fixed or hydraulic deck plates should check to make sure gap settings are no wider than 3/4 inch," Bollig says. "Gap settings wider than 3/4 inch are likely to result in unnecessary yield loss."

University research has shown deck plate gap as little as 1/4 inch more than necessary can result in a 4 bu./acre loss."

"Not having to worry about gaps from row to row is one of the advantages of automatic self-adjusting deck plates versus hydraulically controlled settings," he says. "There's just no way with today's high plant populations, larger corn heads and faster field speeds, that operators can truly see what is happening within each row unit.

**Graeme Quick, Iowa State University

"It's why, periodically, you do need to get out and look to see how you are doing."

LODGED CORN

Bollig notes that one of the more extreme causes of yield loss, as growers are aware, is due to leaning or lodged stalks – when the corn head fails to pick up stalks and the ear doesn't get into the row unit.

"Yield loss in these conditions can be extreme and will vary among corn head brands," he says. It's beneficial with most corn heads to drive into corn leaning toward the head so ears drop into the row unit when falling. "Drago gathering chains are placed farther in front of knife rollers and positioned so they overlap, grab and help pull in leaning stalks."

"Chopping systems found on major corn head brands may also contribute to yield loss in less-than-ideal harvest conditions," according to Bollig.

"Systems with extremely forward-placed blades that strike and chop stalks before they are secured by knife rollers run the risk of ears dropping before reaching the row unit," according to Bollig. "The ear drop may be worsened when harvesting lodged corn."

DON'T ACCEPT YIELD LOSS

Moisture levels, soil types, hybrids, plant populations, stalk size and ear size can change dramatically within the same field. Your corn head must be able to compensate for all of them," he says.

Many farmers believe that the best corn head for their operation is the same make as their combine, and this simply isn't true, Bollig says. "Just as producers are choosing different brand planters for their unique features, you have to look at a corn head's unique features for reducing harvest loss."

"Our goal is to make every hybrid yield better," Bollig says. "Harvesting corn under ideal circumstances is tough enough. As a farmer, you plan for the worst and hope for the best. Your corn head should cover you through all of it."

Learn more at Dragotec.com.