Combine Harvesting Tips for 2008 Harvest

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Abstract
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Combine Harvesting Tips for 2008 Harvest

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Proper combine settings will maximize grain quality while minimizing machine field losses. Taking time to achieve proper combine settings and harvest safety will benefit producers in the long run. Following are a few general tips, and some that relate directly to soybeans and corn,

- To minimize seed coat damage, start with the lowest recommended rotor or cylinder speed and use only enough speed to adequately thresh grain while keeping loss to acceptable levels.
- Cleaning fan airflow is normally set at a high level, and then reduced just below the point where grain is blown out the rear of the cleaning shoe.
- Adjust one setting at a time, and then evaluate the change.
- If different planting dates have caused maturity differences in the same field, consider harvesting by maturity and dry-down rather than by field. Areas with lodging should be moved earlier in the harvest schedule.
- Four soybeans or two kernels of corn per square foot equals one bushel per acre grain loss. Machine-related losses should be about one bushel per acre or less if the crop is standing well.

Safety related tips

Although most operators are familiar with traumatic injuries associated with the limits of human reaction time around falling grain heads or spinning corn stalk rolls, many more chronic injuries are associated with falls from combines.

Check fire extinguishers and clean debris from the combine periodically to avoid both fire danger and slips on residue, mud, or (later in the season) ice/snow.

Soybeans

Delayed plantings and slower than normal canopy closure in soybeans will present unique harvesting challenges this fall. Research suggests that 90 percent of machine losses are at the head, with the majority of those occurring at the cutterbar.

Lower pod set from slow canopy closure in 30-inch rows makes condition and operation of the flexible cutterbar and header height control potentially more important than usual. Combine operators should periodically stop the combine and measure losses, particularly early in the season as conditions change and time may be more available. Each one inch of uncut stubble can result in a one bushel per acre yield loss.

If soybeans are small, cleaning fan speed may need to be reduced to avoid blowing soybeans out of the combine. Similarly, if sieve openings have been reduced slightly for small soybeans, airflow should be reduced a bit to
compensate as greater air velocity is created at a given flow when the sieve opening is narrowed.

**Corn**
Deck plates over snapping rolls should be adjusted for predominant ear size to avoid shelling of kernels on the butt of the ears. Spacing between plates is about 1.25 inches in normal crop. Maintain ear savers on the corn head. Each 0.75 pound dropped ear in 0.01 acre (436 square feet) equals a one bushel per acre yield loss.

If stalks are lodged, keep gathering snouts low. Keep the ear above the leading edge of gathering chains and snapping rolls. Drive a bit slower or consider using a corn reel. Consider harvesting against the grain of lodged stalks. Check machine field losses to evaluate effectiveness of various strategies.

Sieve openings may need to be adjusted for smaller seeds.

*Mark Hanna is an extension agricultural engineer in agricultural and biosystems engineering with responsibilities in field machinery.*