

EBR-4 2011

Combine Harvest Check Points



Taking just a little extra time before harvest to make simple adjustments can significantly increase farm profitability. Proper maintenance is important and will save money and down time during harvest. Start harvesting with all combine settings set according to owner's manual and in the least aggressive part of the range (slowest rotor speed, widest rotor/concave clearance), then make adjustments one at a time and observe the effect of each change. Take an inventory of pre-harvest losses so you can determine what the harvest losses are. Getting out of the combine to check for crop loss is a must! Combine related loss should be 1 bushel/acres or less if crop is standing well. 2 kernels found in 1 square foot represents 1 bushel/acre yield loss.



- ❖ Change concaves for each individual crop
- ❖ Change adjustable vanes in back of the rotor, if combine has that option
- ❖ Adjust stripper plates for stalk and ear size. Adjust plates evenly so they are centered above the stalks rolls. Each year will be different.
- ❖ Correct shoe adjustment for air flow and check for excess tailings
- ❖ Corn head angle should be between 23° - 25° for optimum performance in standing and lodging corn. Put on level surface while lowering row unit frame 2" off the ground surface.
- ❖ Gathering chains must run staggered for standing corn – less aggressive to reduce trash intake
- ❖ Gathering chains must run together for down corn - more aggressive so slow corn head speed. Plastic gathering chain paddles can improve gathering in down corn.
- ❖ Proper gathering chain adjustment must be done, as occasionally tighteners will seize up.
- ❖ Adjust cross auger to 1 3/4" clearance between auger flighting and tray. This significantly reduces cracked kernels in the grain tank.
- ❖ Adjust feeder house drum horizontally as close to feed house chain and rear stripper as possible to reduce ear toss.
- ❖ Concave clearance and threshing speed - the longer the shelled cob the better the adjustment which equals less millings, less cobs in the tank, less cracked corn for a better sample.

Example: High rotor speeds and decreased clearance of concaves result in shorter cobs, increased damaged kernels and increased millings in the tank.

Slower rotor speeds and increased concave clearance result in longer cobs, less millings and less cracked and damaged kernels.

- ❖ Feeder house – slow speed in corn & fast speed in beans and wheat. This prevents kernel damage.
- ❖ Check sharpness of cutter bar knife.
- ❖ Check guards for guard ware on cutter bar.
- ❖ During harvest execute a Kill Stop in order to check for the following losses:
Header loss Sieve loss Separator loss
Adjustment may be needed to each individual area.
- ❖ Start harvesting on the downwind side of the field. This will result in an even disbursement of residue and will reduce divider plugging and bunching.
- ❖ Check draper heads for proper belt tension.
- ❖ Properly calibrate any electronics on combine, such as yield and moisture sensors, etc.



Always practice farm safety when implementing this checklist.

Combine Harvest Checklist (2011)

Authored by: Jennifer Rhodes, Extension Educator, Agriculture and Natural Resources
University of Maryland Extension
505 Railroad Ave., Centreville, MD. 21617, 410-758-0166
jrhodes@umd.edu

J. Richard Nottingham, Extension Educator, Agriculture
University of Maryland Extension
30730 Park Drive, Princess Anne, MD. 21853, 410-651-1350
jnotting@umd.edu

Reviewers: Andy Uhland, CNH
Harvesting & Precision Farming Marketing Specialist
andrew.uhland@cnh.com
Mark Sultenfuss, Program Manager, Field Crops and Soils
Wye Research & Education Center, 211 Farm Lane, Queenstown, MD 21658
msulten@umd.edu

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, University of Maryland, College Park, and local governments. Cheng-i Wei, Director of University of Maryland Extension.

The University of Maryland is equal opportunity. The University's policies, programs, and activities are in conformance with pertinent Federal and State laws and regulations on nondiscrimination regarding race, color, religion, age, national origin, gender, sexual orientation, marital or parental status, or disability. Inquiries regarding compliance with Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Educational Amendments; Section 504 of the Rehabilitation Act of 1973; and the Americans With Disabilities Act of 1990; or related legal requirements should be directed to the Director of Human Resources Management, Office of the Dean, College of Agriculture and Natural Resources, Symons Hall, College Park, MD 20742.

2011