

# Harvest for Better Seedbeds

The astute no-tiller recognizes the success of his next crop starts with the field ‘preparation’ of the previous harvest—getting the straw and chaff spread uniformly across the header width. Wheat straw is obviously a major concern, but so is soybean stubble—particularly if wheat seeding will commence shortly after those soybeans are harvested. The problems of non-uniform or bunched straw behind the combine include hindering opener penetration or performance (hairpinning, depth irregularities, etc.), variations in moisture at the soil surface, variations in temperature, N immobilization (“tie-up”), etc.

The struggle is ongoing, with combine manufacturers improving their offerings, plus many aftermarket kits becoming available. We offer these experiences for those who wish to improve their lot. Note: We won’t cover every combine make and model in existence, but the principles apply to all machines. Also, since chaff spreaders are well-recognized and widely marketed (and widely used), we’ll focus more on straw distribution as it seems to be the most typical and serious shortcoming.

## Case-IH Axial Flow

These machines rely on dual spinners to fling the material outward as it comes off the rotor. Most of the improvements fall into 3 categories: larger diameter discs to hold the material longer as it is gaining momentum from the spinning; taller or more aggressive bats on the disc; and speed-up pulley kits to cause the discs to spin faster. According to Kent Stones of Lebanon, KS, experience has taught that both the speed-up kit and the larger discs are important in getting good residue distribution when running a 30-foot header. Also, various configurations of taller bats—flat or curved—help considerably, according to many producers who have used them. Some



Photo by Matt Hagry.

CIH with more aggressive bats installed.

older models (e.g., 1460) will not have enough space available to make two large-diameter discs fit side-by-side. At least one company makes a kit to drop one disc below the other.

During the 2100-series, a curtain and v-shaped deflector became available from Case-IH to redirect straw or stalks coming off the rotor—the material didn’t fall equally onto the spreader discs due to its momentum coming off the rotor.

## Deere Combines

Straw spread from Deeres with choppers can vary from atrocious to quite good, depending on maintenance and adjustment. Knives must be maintained, or the cutting will be hindered and stalks not thrown as far. Machines



Photo by Keith Thompson.

Farmer-built extensions for the chopper vanes.

such as the 9600 can be retrofitted with Redekop knives (see the Sept. ’02 *Leading Edge* for a pic), which dramatically increase the distance that material can be thrown. Redekop choppers are available from Deere on the newer models.

Often the fins or vanes are set improperly (outside ones not far enough to the outside), or are damaged. The vanes are highly important, as demonstrated by some alterations. Deeper vanes (from JD) improve the throw. Longer vanes (see photo) help even more. Craig Ewy, Hesston, KS built his own longer vanes and reports his chopper now easily throws wheat straw out across the full 30-foot swath. Stones, who has experience with these machines as well, emphasizes the interaction of the chopper components: “Last year we had a custom cutter with four 9750 JDs. They had the older original choppers and they were horrible compared to [machines with] the Redekop choppers with the larger tailboard and large fins.”

Deere machines with the older spinners (the type with floppy belting to do the throwing) generally don’t spread