

INSIDE GRUNDY COUNTY
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April 6, 2011

Importance of Planter Preparation

Properly preparing your planter for the corn planting season is an important step in getting the corn crop off to a good start. Terry Basol, ISU Extension Agronomist, provided the following summary about planter preparation. It is important to consider certain specifics regarding the planter and the planting process. As the number of acres continues to increase per grower, so do the pressures to get those acres planted in a timely manner.

Planting speed is one management decision that producers all have to wrestle with each spring. Roger Elmore, Iowa State University Extension corn specialist, conducted a planter speed study to see how it affects plant spacing while he was at the University of Nebraska. There were fifteen sites total, and each site had replicated trials of planter speeds at two, three and six mph. All but two sites were on thirty inch row spacing; the others were thirty-four and thirty-six inch rows. It was an On-Farm study, so each producer involved used his own equipment to plant and harvest the trials. Conclusions of this study, when averaging the data, showed that as planting speed increased to six mph compared to two and four mph, the number of “doubles” or multiples increased by thirty-five percent and skips (missing plants) increased by sixteen percent, causing the plants to have greater variance in spacing from the target or optimum. When looking at the individual results for each planter, some did a better job than others to handle the increased planting speed.

Interestingly, the yield of the corn was not affected by the planting speed. Average yields resulted in 207.1, 205.6, 205.5 bushel/acre for two, four, and six mph respectively. More details about this particular study can be found on the Iowa State Extension Corn Production website at:
<http://www.agronext.iastate.edu/corn/production/management/planting/planter.html>.

In another study, Purdue conducted a trial in 1995 that included twenty-two planters. Planting speeds were four, five, six, and seven mph with average yields of 132.3, 131.1, 128.6, and 128.5 bu /acre respectively. As you can see, the yields decreased as planter speeds increased, but were not significantly (statistically) different. When comparing individual planters, at seven mph, there was enough reduction in yield to show statistical differences in seven of the twenty-two sites.

This information shows the importance of proper planter maintenance and in-field adjustments to optimize the accuracy of the planting process. Make sure that you pay attention to planter set up and adjust as needed (both the metering-system/seed-singulation and soil-engaging components such as seed opener, depth wheels, closing wheels, row cleaners and coulter). Check the operator’s manual for the maximum suggested planter speed for your desired population and row spacing.

Also take into consideration that at the average populations being planted today, a planter traveling at seven mph covers 10.5 feet/second and drops twenty corn seeds and seventy-five to one hundred soybean seeds per second. This is a pretty big expectation from your row units at this speed. For more information, contact the Grundy office of ISU Extension at 319-824-6979.