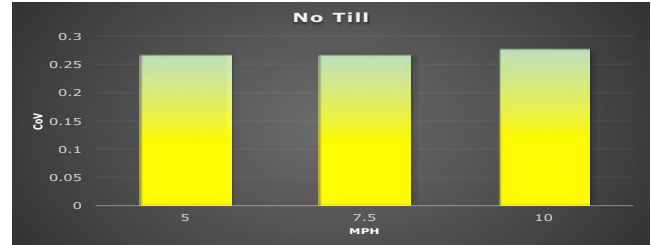
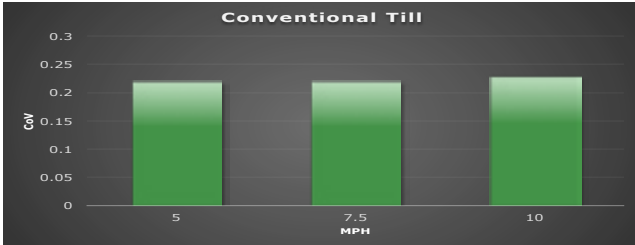
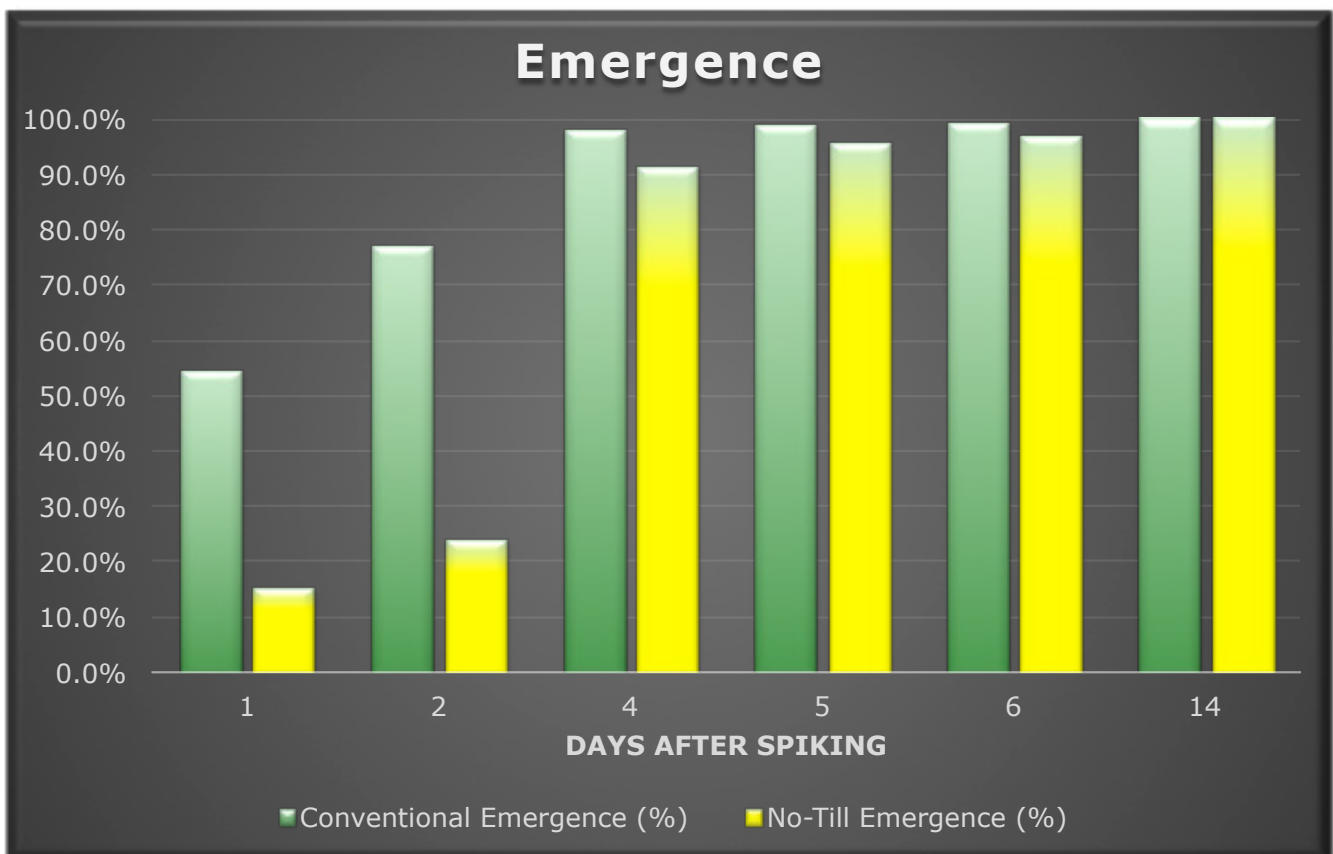


Effects of Planter Speed and Technology on Spacing and Emergence

John Deere partnered with a land grant university in the Midwest on a one-year study. We provided the equipment, including an ExactEmerge planter, in order to test the effects of planting speed and planter technology on spacing and emergence.



In the first test, we looked at the effect of planter speed on spacing by measuring Coefficient of Variable, or CoV. The Coefficient of Variable is simply the spacing from seed to another. University research suggests that .3 Coefficient of Variable is the threshold from a yield impact perspective; if you get above .3, you're going to start seeing yield impacts. Note that John Deere ExactEmerge was well under this threshold, even at planting speeds of 10 mph, and in fields using both conventional tillage and no-till practices.



For another test, we revisited the two fields and looked at the time from seeding to emergence. In the chart above, the green bar represents the field with conventional tillage and the yellow bar is the no-till plot we planted. With ExactEmerge, nearly 60% of all plants emerged on Day 1 of spiking and 98% within the first 72 hours. It's important to note that we had excellent moisture, which improved emergence, but even in a year with sub-optimal moisture, proper spacing (low CoV) and consistent depth (putting seeds precisely in the trench) can significantly improve emergence.