

## **Impact of Ground Speed and Conveyor Speed on Peanut Digging Losses**

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A study was conducted at Edisto REC to quantify the effects of ground speed and conveyor speed on peanut digging losses using 2-row Amadas and KMC peanut diggers. The study was directed at providing producers with recommendations for peanut digger setup and operation to maximize yield recovery; previous studies at Edisto REC have focused on quantifying digging losses as a function of digging depth. Proper peanut digger setup and operation is critical to profitability—while manufacturers provide recommendations for proper setup and ground speed, there exist few published studies assessing these recommendations. In this study experiments were conducted to compare digging losses for four ground speeds (3.2, 4.8, 6.4, and 8.0 kph) at 100% relative conveyor speed and five relative conveyor speeds (80%, 90%, 100%, 110%, and 120%) at 4.8 kph ground speed; tests were conducted independently for the two diggers using virginia type peanuts. Results from the ground speed study indicate that the KMC digger had significant losses at all four tested ground speeds with an increase in losses as a function of ground speed; whereas the Amadas digger indicated no significant difference in the 3.2 and 4.8 kph treatments but did demonstrate the same trend of losses increasing as a function of ground speed. Results for the conveyor speed tests were not consistent between the two diggers, with the KMC digger showing significantly higher losses at the 120% relative conveyor speed, and the Amadas digger showing no significant differences in losses across tested conveyor speeds. However, the Amadas digger did show a substantial numerical increase in losses when conveyor speed was above 110% of ground speed. From this the results indicated that optimum ground speeds for peanut digging should not exceed 3.2 kph for the KMC digger and 4.8 kph for the Amadas digger; and that a range of conveyor speeds is acceptable, but conveyor speed should not exceed 110% of ground speed.