Recent tractors and combines typically use GNSS Antennas primarily for a Machine Guidance System. Antennas have traditionally come packaged with the GNSS receiver so it has not been focused on the effectiveness of the antenna more on the quality of the positioning system as a whole. The PI analyzed the antennas provided by AGCO and recorded all performance-related data. Measurement of the provided antennas was performed using a Vector Network Analyzer, handheld RF & microwave analyzer, an antenna rotator system, power amplifier, absorbers, and commercial horn antennas to obtain the ideal performance data for each antenna. The final report was delivered with detailed and comprehensive comparison among measured results for all antennas provided by AGCO. The performance of the GNSS antennas currently in use vs. leading competitors were assessed.

Figure 3. Modern tractors with various communication systems