

Precision Guidance –How Do I Choose?

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Summary: The popularity of guidance systems, especially autoguidance, has grown rapidly in recent years. Producers around the US have identified many benefits of guidance systems which include improved field efficiency, extended operational hours, reduced overlap or skips, minimize driver fatigue, the adoption of new and innovative management practices to name a few. Two types of guidance systems exist: lightbars or parallel tracking and autoguidance. In the case of autoguidance, the equipment navigates itself using the specified AB line with the driver only having to turn on the headlands or navigate around obstacles. One important aspect of guidance systems is to ensure the use of terrain compensation technology to compensate for rolling terrain. The type of differential correction used for the GPS receiver is one of the largest factors influencing the performance of guidance systems. Widely used correction services across the US include WAAS, Omnistar, John Deere Starfire, the Coast Guard beacon, and real-time kinematic (RTK). Some of these services are free while others require a yearly subscription fee. RTK is the only service which provides inch level accuracy and repeatability from year-to-year with the other services being susceptible to GPS drift. This aspect of RTK is important if trying to implement controlled traffic, wanting to follow the exact same paths over the growing seasons (i.e. strip till followed by planting), and remains the best alternative if wanting to use autoguidance for planting. In the future, look for the costs of guidance to decline and accuracy to improve with advancements in technology. Also, implement guidance will be available to help keep implements running the desired path since lateral loads and operating on side slopes can cause implements to deviate from the tractor path.