

STANDARDS FOR COMPARISON OF GPS RECEIVER PERFORMANCE

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ABSTRACT

There has been much advancement in GPS receiver technology in recent years. GPS accuracy, especially the dynamic (moving) accuracy, is very important in precision agriculture for collecting data and controlling variable rate placement of inputs. Typical applications of GPS receivers in agriculture include yield monitoring, parallel tracking and variable-rate application of fertilizer. Perhaps more important is the relevance of existing tests (primarily static tests), and the inability to directly compare receiver specifications because of a variety of reporting formats. The overall goal of this project was to evaluate current GPS receiver test and reporting standards to determine if they are adequate to describe receiver performance in agricultural situations. Various techniques are employed by manufacturers for reporting performance specifications to highlight the performance of their equipment. This project evaluated different classes of receivers. Results show that different reporting techniques can be used to make a particular receiver appear better than others. Also, the static performance of receivers was not necessarily indicative of dynamic performance.

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