



## **WHAT IS OUT THERE?**

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Trying to figure out what is available and how to use precision farming tools can be a daunting task. As I write this in early December there are several systems I can discuss, the only problem with doing this is the major manufacturers usually introduce the new line up in the middle of January.

So when January 20th rolls around I will develop my presentation, but what I can do here is give a few pointers that are useful when shopping for GPS equipment.

One of the first things you must decide is what are you going to use the GPS for? There are different accuracies and speeds of GPS receivers. Some of the most common things you will hear are the Hertz (Hz) capabilities and accuracy of the unit. GPS units range in speed from 1 Hz to 10 Hz. The 1 Hz receivers are good for scouting, mapping, yield monitoring and finding that favourite fishing spot. When you need a GPS receiver for parallel tracking then you need to move up to a 5Hz or better receiver. These higher end receivers then are adaptable to AutoSteering and can also be used for the previously mentioned uses. These higher end receivers will give you what is called sub meter accuracies (within 3 feet). Now a person needs to know that a GPS's ability to give pass-to-pass accuracy is about 8 to 9 times better than it's ability to tell exactly where you are on the face of the earth. Having said this then one can assume that a sub meter receiver can give you pass to pass accuracy of about 4 to 5 inches. So at this point I like to differentiate the two terms; accuracy - the ability to return to the same spot over and over again. Precision – the ability to follow along the previous path at a set distance within 15 minutes of the last pass.

So the next question is, do you need a receiver that gives you accuracy or one that gives you precision? This is a question only you can answer. If you need better accuracy than sub meter then you can move up to dual frequency receivers and Real Time Kinematic (RTK) receivers. The Dual frequency receivers have the ability to send signals both directions to increase it's timing which increases it's accuracy. RTK systems use a base station located usually within 6 miles and a radio link to increase it's accuracy ability. These higher end receivers are great for row crop type work but may be overkill in a broad acre farming application, such as spraying with 80 feet of boom.

So as one can see there are many things that come into play when deciding what and how when it comes to Precision farming. I will try to answer as many of these questions and whatever questions come up during the presentation.