

Reaping the benefits of precision farming

Harnage Estates in western England has been utilising precision technology within their farming operations longer than most. Two experienced farm managers share their experiences and successes.

BY PAUL ROSE, AG LEADER

Harnage Estates, which is split into the two sites; Harnage Grange and Woodlands Farm, covers an area of roughly 1350 hectares in Shropshire, England. Together, Doug McCowan of Woodlands Farm and James Dyball of Harnage Grange have managed the farms for over 20 years. They have both been convinced of the advantages and necessity of precision farming since they started exploring it over a decade ago. Ag Leader Europe and Ag Leader distributor, Precise Solutions, have proven to be solid partners on their path to reaping the benefits of precision farming. Based on a broad range of applications and technology, McCowan and Dyball have been able to better capture, process, analyse and use their farm data for a noticeable improvement in efficiency.

Variable nitrogen application

Woodlands Farm is in a nitrate vulnerable zone (NVZ). As the use of

nitrogen fertilisers and organic manure is restricted, this means specific attention has to be paid to nitrogen management. The solutions of Ag Leader, who manufactures and markets precision farming technology designed to help growers make smart, profitable business decisions, came just at the right time. Eventually with the help of an N-Sensor and nowadays with OptRx Crop Sensors and yield monitor, nitrogen application has become much more precise. After 10 years of utilising variable nitrogen application, the duo are completely sold on the idea and agree that you would be a fool not to take part in this practice. They do however, forewarn farmers to not always expect to save money on nitrogen, as this is not always the case. But, they do reap the benefits of efficiency that leads to more uniform crops, less lodging and eventually a higher yield and profit.

Crop protection

Over the years the farm managers have experienced the increasing pressure on the use of chemicals. Dyball points out, "farmers do not



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The farm managers can look quickly at the yield map on their iPad and make sure everything is okay.



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Doug McCowan and James Dyball have extensive knowledge of precision farming due to their experiences on Harnage Estates.

into a CTF system at this time. We do have some arrangements, such as straw for muck with one or two local farmers which works well, but is it scalable?"

A farmer benefits from an equal emergence of the seeds throughout the entire growing season, as a uniform crop leads to uniform operations like spraying, fertilising and harvesting. If the crop emergence is not uniform, any chance of achieving it later in the season is gone, along with a significant loss in efficiency and profit. The farm managers are therefore aware and enthusiastic about the possibilities and benefits of precision seeding for cereal crops.

Anytime, anywhere solutions

One of the challenges encountered throughout the years is the compatibility of equipment between manufacturers. For example, when manufacturers update software, it might no longer be compatible with the equipment. The farm managers at Harnage estates have learned to appreciate the solutions of Ag Leader as no other manufacturer offers as many possibilities with ISOBUS. Up to eight products/machines can be controlled at the same time.

"Having to go back to the office to check data you need in the field is not efficient at all with a farm covering 1350 hectares," said McCowan. The accessibility of data was also a challenge Harnage Estate faced. Nowadays McCowan and Dyball can take a quick look at the yield map on their iPad which has AgFiniti Mobile installed, and make sure everything is okay. "I can bring up any map at anytime, anywhere. It means I do not have to worry about transferring information with a USB, which is useful when things are busy."

Based on their experiences, McCowan and Dyball foresee that the current and future challenges that farmers face will be aided with the use of precision farming technology, to assist in soil and environmental management. According to them, Harnage Estate has already reaped the benefits and will continue to do so.

apply chemicals unnecessarily. Aside from the obvious environmental impacts, it is also expensive. Farmers are the custodians of the countryside and therefore have a responsibility to look after it properly." Precision farming increases stewardship capabilities through detailed record keeping and features that minimise overlaps, unnecessary over application of chemicals and untreated spots. McCowan and Dyball use Crop Sensors and SteerCommand RTK among other things to improve precision. On their wish list are NxN-control for sprayers and variable rate application.

Soil improvement and precision seeding

Controlled traffic farming (CTF) has not escaped the attention of Harnage Estates, because of the proven benefits it brings to soil quality, but it cannot be achieved overnight. "Aside from the large investments in equipment for CTF, there are also other financial considerations we have to look at," said McCowan. "Selling straw is a large part of our income. Baling straw and collecting the bales does not fit too well