



Gaining more from grain

Farmers are improving their profits by optimising the harvest and segregating grain according to market demands. A handy new on-farm grain analyser gives them the reliable measurements they need.

A combine harvester working a field in the central wheat belt of Western Australia may appear to be a long way from the bustle of international grain markets, but in fact, farmers here are more integrated into the supply chain than anywhere in grain producing world.

The reason is a new on-farm grain analyser that can produce reliable measurements in-line with the results given by payment analysis at the receiving station, or for that matter, wherever grain is tested in its journey from the field to finished product. Called Infratec™ Sofia, the analyser was introduced to the Australian grain industry in 2008 and one of the first farmers to exploit its possibilities is Robert Sewell who farms 4,000 hectares about 220 km North East of Perth.

Sewell had been using basic moisture meters for many years and had tried four different types without being satisfied with the accuracy of the test results.

The new Infratec Sofia proved to be fifth time lucky. “Because the accuracy of the Infratec Sofia is very close to the testing equipment at the receival depot, we can have confidence that if we transport a 60 tonne load some 70 km to the receival point, it will not be rejected due to high moisture,” he says.

Matching grain quality demands

Apart from the ability to accurately test moisture, Sewell has also used the analyser to test protein content of grain in the field. This ensured that loads transported to the silo were in fact the quality he wanted to deliver. “In a year such as the 2008 harvest, where the difference of 0.1% in protein can cause grain such as malting (manufacturing) barley to be downgraded to feed grade at a financial penalty of over Aus \$100 per tonne, it is clear to see that the capital cost of the equipment can quickly be recouped,” says Sewell.

The knowledge afforded by the new instrument can help to tackle the many variables in the business of growing grain, such as the effect of climate change on growing conditions. Not that any amount of technology can avoid difficult seasons, but varying conditions will affect the final quality of the grain and on-farm analysis can give farmers a vital edge by allowing them to meet certain protein standards and claim the associated financial rewards.

Another recent change in grain farming is market deregulation. “With a deregulated market, I believe there will be the opportunity to better meet the demands of a more diverse buyer base for different specifications of grain quality,” says Sewell.

Accuracy via the internet

Key to the potential of the instrument is its accuracy in relation to measurements made at the receiving station. The accu-



◀ *On farm grain analysis on the move: it takes around three minutes to get a reliable measurement.*

Robert Sewell

In addition to farming, Robert Sewell has worked with grain marketing for many years giving him a broad understanding of the requirements of the world grain market and its demands. He has received the Member in the Order of Australia (AM), for his exceptional contribution to the Australian grains industry.

Infratec™ Sofia

The Infratec™ Sofia is a compact, easy-to-use analyser designed for on-farm use, for instance, in the harvester, in the tractor or in a car.

The measurement technology is based on near infrared (NIR) spectroscopy, a field in which FOSS has decades of experience and knowledge. Infratec Sofia measurements are based on the same data used to calibrate the well known Infratec 1241 instrument used throughout the grain industry.

Farmers can accurately determine crop moisture in the field allowing them to start the harvest earlier and to continue longer into the day with confidence. Harvesting is completed in the shortest possible time, reducing costs and potential risks. By also providing a fast, easy way to check the quality of grain before or during harvest, the instrument allows farmers to make their own grain handling decisions instead of waiting for the receiving station to give a verdict. The grain can be categorised on-farm for optimum profit, for example, with just the right protein content for malt or feed use.

“We can have confidence that if we transport a 60 tonne load some 70 km to the receival point, it will not be rejected due to high moisture.”

racy can be relied on because the Infratec Sofia is a continuation of the Infratec family of near infrared (NIR) instruments, of which the Infratec 1241 grain analyser is extremely popular, approved for trade purposes and used for payment by bulk grain handlers around the world.

Infratec Sofia measurements are based on the same data used to calibrate Infratec 1241 instruments. As new calibrations are released, they are simply downloaded via the internet and transferred to the Infratec Sofia unit ensuring that results are always accurate and reliable.

Backup from Denmark

Sewell has no hesitation in recommending the Sofia to other farmers and in fact, has already allowed other growers to try out the analyser. “Because the machine has the ability to link directly to the FOSS head office via the internet, and receive and transmit data, I have confidence of

ongoing back-up support for the machine,” he concludes.

Initially programmed for the measurement of protein and moisture in wheat and barley, Infratec Sofia will be upgraded as new commodity calibrations become available. As more options become available, farmers like Robert Sewell will be able to simply download the new test via the internet and transfer it to their analyser at the click of a button. Then it will be a case of loading the instrument in the truck and heading out to the fields for another profitable harvest.

More information about Infratec Sofia at: www.foss.dk/sofia

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