Planning and monitoring the keys to effective grain storage

For growers who weren't satisfied with the way their last harvest went and the price they got for their grain, on-farm storage is something to consider this year.

Richard Guinness, who grows wheat, barley and canola and runs Merinos on 'Kwongan', near Corrigin in Western Australia, has put in ten silos over the past couple of years and hasn't looked back.

However, he says it has to be done correctly or you create problems for yourself – and the industry.

"On-farm storage is great for keeping the harvester moving, because you don't have to take the time to truck the grain into town," Mr Guinness said.

"As I see it, the main benefit is quality control at the time of harvest. You can lose a lot of money if grain falls outside the specifications, and being able to blend it before delivery is worth the extra handling."

Mr Guinness says anyone installing silos before the next harvest should plan carefully, make sure they have the latest aeration and fumigation technology and have a maintenance plan for good hygiene.

He's been to several Regional Crop Updates run by the Grains Research and Development Corporation (GRDC) and Department of Agriculture and Food (DAFWA), and has also hosted a workshop on his farm so local growers can see for themselves the outcomes from GRDC-funded research projects.

"Before you do anything else, work out your objectives - and think long-term," Mr Guinness said.

"You need good access for trucks with room for expansion even if you don't think you'll need it. Think about whether you're aiming at niche markets, value adding to your grain or blending to work out how many silos and what size will suit your operation.

"I have ten smaller silos, for instance, because I need to be able to segregate different crops at harvest, store lupins for stock feed and grain for seeding, and mainly use them for a couple of months rather than for long-term storage."

Mr Guinness says he has learned a lot of things he thought he already knew from Chris Newman at DAFWA, who is the WA coordinator for a national GRDC-funded project on a grain storage and hygiene and ran the workshop on "Kwongan".

"I didn't have aeration to start with, but included it in the latest additions after advice from Chris," Mr Guinness said.

"I quickly realised the advantages and wouldn't buy a silo without it now. Even if you don't think you're going to use it, make sure you buy silos set up with the right equipment.

"Grain can sweat if it's harvested in hot weather and aeration cools it down once it goes in the silo. A lot of insects we have love a hot, moist environment, so using aeration can help keep them at bay," Mr Guinness said.

Chris Newman is one of WA's main proponents of grain hygiene, and says the first priority should be to minimise insect pest carry-over.

“Make sure you thoroughly clean all equipment before you use it, and again once it is emptied, so you’re not providing an attractive breeding location,” Mr Newman said.

“All silos should be sealed and the seals checked every year with a simple pressure test. Fumigation with phosphine in unsealed storages will not control all stages of the insect lifecycle and will contribute to the build up of resistant insects on your property.”

A checklist provided by Mr Newman is one of the most-used pieces of information for Mr Guinness.

“Before every harvest, I go through the checklist to make sure the silos are cleaned and maintained and the fittings and seals work properly,” Mr Guinness said.

“I’m also very careful about quality control, so every load of grain is tested against specifications.

“Most of it does end up going into the pools, because I’ve done the sums and it’s cheaper long-term for them to store it rather than me.

“However, just in case I end up storing it, I record the quality and which paddock it came from so I have all the details I need.

“Once the grain goes into the silos it’s aerated and fumigated, and I go back regularly to check for signs of insects,” Mr Guinness said.

The GRDC has a range of information available to help growers maintain grain quality, whether on-farm silos are used as a short term measure like Mr Guinness or for longer term storage.

A fact sheet on *Stored Grain Pests* referring to the detail needed to make on farm grain storage successful has been produced, while the November 2009 issue of Ground Cover included an article on pressure testing sealed silos. Both are available from the GRDC website at www.grdc.com.au

A new website www.storedgrain.com.au is also in development, which will host resources provided by Mr Newman and his colleague from GRDC-funded projects and others related to grain storage and hygiene. This includes the checklist used by Mr Guinness.