

Bunkers had the capacity John Stevenson needed to make dramatic improvements to harvest logistics at 'Orange Park', Lockhart, NSW.



Photo: John Stevenson

# Boosting on-farm storage with bags and bunkers

With care, bags and bunkers can provide a practical solution to the harvest logistics challenge

By Katherine Hollaway

■ High-quality sealed silos offer top-of-the-range storage, but the boom in demand for on-farm storage means growers are also exploring cheaper options to expand capacity.

Bags and bunkers have become a popular, more affordable choice, but growers need to be on their toes to avoid costly failures with these temporary storage solutions.

Some growers have lost significant quantities of grain using bags. The problems are mostly associated with grain storage over the winter period where rainfall runs down the sides of the silo bag and enters the bag through perforations causing sprouting.

## HARVEST LOGISTICS

Simon McRae introduced bags in 2020 as temporary storage to improve harvest logistics, and he plans to use them again. He grows wheat and canola with some barley and vetch hay on 6500 hectares with his wife Marita and adult daughters at Temora, New South Wales. The bags were used for short-term storage and all emptied before sowing.

“At harvest we run headers 24 hours a day and use every bit of storage we have to keep the headers going after the truck drivers finish for the night. The bags offer real flexibility when paddocks are spread 30 or 40 kilometres apart or for storing on land that we’ve leased. We can unload right there in the paddock.

“We found the protein monitor on the

header really useful to give us a record of the total tonnage and average protein and moisture content for each bag.”

Controlling vermin is a top priority and the family bait extensively as soon as the bags hit the ground. “We want to prevent the mice from finding it – they start chewing the bags, then the foxes arrive and it’s a vicious cycle.

“We had one issue where moisture penetrated along the bottom of the bag, which made it more difficult to unload, demonstrating how important it is to get the location right.”

## BAG A BARGAIN

Veteran bag user Iain Tyack has used up to 50 or 60 bags a year. He says they were a cheap way to store grain on-farm and

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When used with care, grain bags can provide a flexible and affordable option for short-term storage.



Photo: Brad Collis

improve logistics when he started out at Condobolin, NSW, 15 years ago. Iain and his wife Jenny and their adult children, who grow 3000ha of wheat and barley, mostly use the bags over the summer, but on occasion for up to three years.

While their silo capacity has increased, they still use a few grain bags to meet demand in a better season.

Iain’s advice to new users is to find the right site. “A bit of fall end to end is important – about half a bubble on the spirit level. If the bags are laid sideways to the slope they will act as a weir and any tiny pinprick from stubble can be an entry point for moisture. Clear ground is best, but tall stubble is less likely to cause damage than chopped stubble.”

They also site bags at least 15km away from rivers to limit problems with birds and pigs. To protect against birds for longer-term storage, they cover the bag with old tyres with an old bag on top and use a reflective scaring device.

### HANDLING THE VOLUME

In 2020, Warakirri Cropping manager John Stevenson knew he was going to have to make some dramatic

improvements to harvest logistics. A change to stripper fronts that increased harvest capacity by 50 to 60 per cent had combined with a bumper harvest at the 8000ha ‘Orange Park’ at Lockhart, NSW. John says they had been struggling to get grain away in previous seasons with limited local delivery options.

“Bunkers had the capacity we needed, and we were lucky to be able to outsource their management to our grain carrier. We do the groundwork and they take care of the rest. With multiple sites on-farm there are no queues and no delays, plus we’ve improved our carrier’s logistics by reducing the number of trucks they need.”

The bunkers are mainly used for cereals, because they are harvested quickly and have the volume to fill a bunker properly, with a good peak on top for runoff. Canola and pulses are stored in silos to protect quality and because of their smaller volumes and slower harvest times.

John says that a well-laid-out site is vital for good traffic flow and to make sure water runs off.

“We’ve had some issues with mice. There were no problems where the edges of the tarps were sealed with

sand, but the mice were able to dig through when we used crusher dust.”

### FULL CONTROL

Nils Jacobson favours bunkers as cheap and flexible storage that put him in control of grain marketing. The Lawson Grains manager at ‘Uah’ – 10,500ha at Forbes, NSW – stores the entire season’s marketable harvest in on-farm bunkers. Only seed retained for sowing is put into silos.

“We hadn’t planned on storing this much when we started in 2016, but with only one receival option in Forbes, bunkers proved too convenient. Wheat, barley and chickpeas are often held for 11 months, but we usually sell canola by April. We have held chickpeas in bunkers for up to two years when markets were limited,” he says.

“A suitable, well-drained location is more important than a central location.

“The next thing is good access for trucks – we had a real challenge with vehicles getting bogged in 2021 when trying to move grain out.”

Nils’ top tips are getting the dome shape right, using good-quality tarps and sealing them well. “It’s mostly about taking the time and having the people you need to get it set up properly at harvest time. We still get some leakage at the stitches where we join the tarps and we are experimenting with sealing options.

“Every season is different; we continue to learn and evolve. We plan to upgrade to silos for canola and chickpeas and are experimenting with TeleSense monitors to get a better understanding of temperature and moisture in the bunkers.” □

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GCTV Extension Files: Grain Bags – best practice [youtu.be/Ab-A2ll6b1Q](https://youtu.be/Ab-A2ll6b1Q), Considering temporary grain storage? Bunkers are an option [youtu.be/UVhdXBBXaE](https://youtu.be/UVhdXBBXaE)