# Management the key to good results

## REAPING THE BENEFITS OF ON-FARM STORAGE REQUIRES CAREFUL MANAGEMENT WRITES JOHN CAMERON*

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THE NEED FOR quality on-farm storage of grain is being driven by changes in the supply chain, changing grain demand patterns, a desire to improve price and harvest risk management and the need for efficient harvest logistics.

There used to be a time when almost all crop produced was delivered to a single receival point, with the proceeds paid from a pool fund. Now, there is an increasing volume of grain used and traded domestically (at least in the eastern states) as stockfeed or in milling markets. And on the export front, grade segregations are increasing as markets become more specific in their quality demands.

These changing demand factors are creating opportunities for growers and second-tier marketing organisations to value-add through storage and are coming from many and varied sources. Some grain customers are demanding full trace-back, quality-assured grain. Other customers require nil or minimal residues, the ability for regular delivery schedules, specific varieties or qualities or production methods, such as organic. On-farm storage assists the entrepreneurial grower to capitalise on these opportunities when and as they arise.

From an efficiency standpoint, storing grain at or near the paddock can result in lower transport and handling costs. It can also be used to manage price risk, by selling grain at a premium some time after most grain has entered the receival system. Storing on-farm is a form of book payment a grower can make to themselves, instead of to others for contract storage.

For the bulk handling system more quality on-farm storage also has benefits. If properly incorporated into their internal QA management system, it could serve as a vehicle to increase regional storage volume and segregations, thus reducing the need for additional expenditure on centralised receival infrastructure.

More on-farm storage would buffer the peak demands placed on both growers and receival points during the peak of harvest. At harvest, growers are faced with an increasing logistical bottleneck as harvester capacity increases beyond their capacity to move grain off-farm. There is also a growing realisation that earlier harvesting and aeration-drying of grain could lead to higher profit through improvements in yield and quality, as well as better harvest risk management, compared to letting the crop dry in the paddock.

The end result is that there is a significant increase in the volume of on-farm storage.

To fully capitalise on the potential benefits the two main issues to be addressed are the maintenance of grain quality in on-farm storage and the management of resistance to phosphine. Here the solutions are not rocket science, but they will need to be carefully managed. The main threat resulting from more on-farm storage is poor management that leads to a loss of grain quality and/or survival of insects. The key solutions are aeration for cooling grain and only using phosphine at full rates in sealed storage for fumigation.

**KEY ISSUES:**

- If we persist in using phosphine in unsealed storages or at sub-lethal dose rates, this will speed the development of resistance and threaten our long-term access to this very effective and residue-free product. How valuable is it? Phosphine is used on an estimated 80 per cent of Australia's grain products and viable alternatives are estimated to cost 10 to 15 times more than phosphine per tonne of grain treated.
- Low flow-rate aeration to cool grain is highly effective in maintaining grain quality and suppressing insect population growth.
- Growers supplying markets requiring quality, high-value grain and seed crops will increasingly respect the positive impacts that aeration has on maintaining harvest quality.
- Slowing insect population growth has the potential to reduce the frequency at which grain fumigations or protectants are required. This in turn reduces the selection pressure for resistance to phosphine and other products.

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