

March 27, 2020

An industry update from

## Update on silo bag use for malting barley



### Key Messages:

1. Maintaining barley germination is paramount for the malting process.
2. Barley Australia recommends that barley for malting and brewing purposes be stored in permanent high-quality storage facilities wherever possible.
3. Silo bags are best used as a short-term storage option only, as long-term storage may increase the potential for loss of germination capacity and vigour.
4. In some cases, barley for malting must be held for up to 15 months in storage.

In 2017 Barley Australia posted an update on malting barley storage (see link below). As maltsters begin to process their new season stocks of Australian barley it's worth revisiting some of the concerns around malting barley storage, in particular the use of silo bags stored on farm.

Retaining end use quality in malting barley (for all storage types) is highly dependent on the condition of the grain at intake as well as the temperature profile throughout the storage period. A lower grain moisture will significantly reduce the risk of grain quality deterioration over time.

Silo bags are best used as a short-term storage option to assist growers with their grain harvest logistics. Where silo bags are used, grain would generally be stored in the bags for a period of around 3 to 4 months following harvest, before delivery to the customer or transfer to more permanent forms of storage. Maintaining end use quality for malting barley is paramount, especially in terms of the grain retaining its germination capacity in the malthouse. The increased surface area to volume ratio in silo bags under hot conditions makes their use more challenging than some other forms of grain storage. The process of making malt is dependent on live barley grain capable of vigorous germination. Barley that is destined for export markets needs to meet the minimum 98% germination standard.

Malting companies operate their plants all year around and so rely on some grain being stored for long periods of time (up to around 15 months in some cases). This requires careful planning around optimum storage conditions. There is a potential risk with silo bags that germination decline will not be evident at transfer from the bags after 3 to 4 months storage on farm. The germination loss may only become evident during subsequent storage over the next 6 to 12 months. Research is currently being done on the management of silo bags for barley storage under Australian conditions, and on-farm training is available to growers. However, it should be noted that there have been issues with malting barley germination in the past as a direct result of storage in silo bags. Barley Australia welcomes further silo bag research that may assist growers, but it is important for growers to fully understand the risks.

Barley Australia recommends, based on past experience, that barley for malting and brewing purposes be stored in permanent high-quality storage facilities wherever possible. If silo bags need to be used, the moisture levels of the barley must be carefully monitored and short periods of storage in bags only be applied. Silo bags are not recommended for the storage of barley grown for malting accreditation trials, as the risk of dead grains could compromise the accreditation process or potentially delay it.

<https://www.barleyaustralia.com.au/silo-bag-update-july-2017/>