



Best Practise on Storing Grain: 10 Top Tips to Help Keep Your Grain in Good Condition
According to Einstein, all time is relative. This certainly holds true for the physiological age of grain which can speed up or slow down depending on how they are stored. All grain ages over time and the countdown starts as soon as the grain is harvested. The best that can be done is to understand what is happening and to try to slow the ageing processes down as much as possible.

If you're saving grain from harvest and storing it for future drilling, keeping the grain in the best condition until it is needed is crucial. Whatever else you are dealing with at sowing time, be it the weather or preparing a suitable seed bed, the quality of the grain will be key to how well your crop germinates and establishes so ultimately, the quality of your straw will depend on it.

Below are some simple practical measures and the underlying biology of what's going on that might help you get the best out of your precious seed stocks.

- **Make sure your grain is well dried before it goes into store.** As grains mature and dry out the seed is very active biochemically as it completes the laying down of storage compounds and drying down. Both are active processes and use energy. When the seed is fully mature and dry the embryo is said to be quiescent (resting state) and is suitable for storage. If the drying process is not complete, the grain will remain more active and this uses up energy and ages the seed physiologically.
- **Do a visual check on the quality of your grain.** Basically, the better the grain quality the longer your grain will last. Every harvest and sample is different and you know the history of your crop. Checking the quality after harvest or threshing can be a good guide as to how well it is likely to store. The presence of shrivelled, discoloured or light grains are indications of potential problems. Also check for cracked and broken grain as these might indicate over drying.
- **Grain is best stored in a place which is both cool and dry.** While this should be obvious to all growers, what are the key points you need to remember? The higher the temperature the more active the seeds become and the more energy they burn. Aim to keep the samples as cool as possible so away from direct sun and as low down as possible. Grain will also absorb moisture from the air which again increases biochemical activity and aging. Remember also that warmth and moisture will also increase fungal and pest activity.
- **Keep the storage environment as stable as possible.** It's important that the storage conditions are as stable as possible as fluctuations in temperature and humidity accelerate the physiological aging of seeds resulting in lower germination rates and loss of seedling vigour.
- **Store grain in breathable containers.** Unless your grain sample is extremely dry you run the risk of moisture given off by the grain condensing on colder surfaces which might allow fungal spores to germinate and start to spread through the sample.
- **Keep samples off the floor and away from cold surfaces.** By effectively insulating your samples you reduce the risk of wicking through porous floors or water vapour condensing onto cold surfaces and being absorbed by the grain.
- **Keep seeds in the dark.** Keep away from direct sunlight as the solar gain will make the seeds more biochemically active and speed up the aging process.
- **Subdivide grain samples where possible.** More a question of risk management and probabilities than biology. If for any reason a problem develops during storage there is a good chance it will be confined to one specific batch so you do not risk your entire stock.
- **Do regular quick and easy spot checks on your seed.** Out of sight should not be out of mind. A quick visual inspection of the surface of your grain or probe samples will soon tell you whether anything is amiss. Try the sniff test as well as you will soon be able to detect the presence of moulds if they are starting to develop.
- **Check grain vigour by doing periodic germination tests**