

Corn Drying and Storage Tips

Key Points

- While earlier harvests are better for avoiding field losses, combining and handling corn with higher moisture levels increases the risk of damage and drying expenses.
- You need to make sure your corn is safe and dry before it ever sees the bin. Ideal harvest timing moisture is 20 to 25%. Ideal storage moisture is 15% or less.
- Properly storing corn through the winter safeguards kernel quality and protects it from losses associated with spoilage.

Tips for drying and storing your corn

- 1. Collect a representative sample from each load.** Fill your sample container from the start, middle and end. Avoid filling your sample container all at once to make sure you're getting good overall representation.
- 2. Dry corn thoroughly:** Test kernel moisture to determine how much drying is required and continually check samples as they go through the dryer to make sure you stay on track. Stored corn needs to be 15% moisture or less.
- 3. Allow ample time for cooling:** Putting warm kernels in a cold bin can be a recipe for disaster. Condensation and moisture migration can create areas of high moisture and potential spoilage. Ensure kernels are allowed enough time to cool before the bin.
- 4. Handle with care:** Moving grain from the combine to the truck, conveyors to dryers, dryers to bins and everything in between can take its toll. Handle grain as gently as possible to avoid unnecessary damage and consider the use of cushion boxes and other methods to cushion as it is being moved.
- 5. Start with clean bins:** One of the best ways to prevent spoilage is to ensure you start with freshly cleaned bins that are free of potential contaminants. Harvest residue, dust and other debris that becomes hard packed under flooring, vents and other surface areas can restrict the airflow necessary for maintaining cooler temperatures. Additionally, this foreign material can also host insects and potential diseases which could damage your harvest during storage.
- 6. Maximize aeration:** Using aeration fans to move fresh air into the bin is a great way to gradually decrease moisture levels (provided it is not overly humid or raining). As a general rule, airflow inside the bin tends to follow the path of least resistance and is greatest around outer bin walls. As a result, fines tend to congregate towards the upper middle of the bin and can sometimes impede airflow.
- 7. Core the bin:** Not only does this remove the highest concentration of fines and damaged kernels in the center of the bin, it also creates a uniform grain depth throughout the bin (center and sidewalls) and a flow-funnel to naturally increase airflow and reduce the risk of spoilage. The removed (core) contents can then be cleaned and replaced.
- 8. Watch bin temperatures:** Throughout longer-term winter storage, it's important to make sure the internal temperature of your stored corn gradually mirrors the changes to outdoor temperatures. When they are misaligned, unregulated airflow within the bin can hyper-concentrate moisture into certain areas which can become problematic.
- 9. Ongoing system monitoring and improvements:** Taking samples at various stages (before drying, after drying, just prior to storage and in-storage), is a great way to detect and address problems in your grain handling systems and protect the overall quality of your harvest.
- 10. Be prepared to take action:** Drastic temperature increases in relatively short periods of time, like prairie chinooks, can drastically affect bin temperatures. Careful monitoring and physical checks are recommended at these times. If temperatures within the bin increase dramatically over short periods, immediate cooling (either by aeration or coring) is essential.