

# Safety first during harvest

Harvest season is one of the most hectic and high-pressure periods in agriculture. Staying organized and implementing safety measures are crucial to preventing injuries. Proper preparation also ensures equipment maintenance, reducing the risk of breakdowns and costly delays. Use this sample checklist to effectively plan, organize, and manage all aspects of your harvest.

## Step 1: Get organized

Before harvest begins, take the time to organize and prepare both yourself and your equipment so you can avoid or minimize equipment breakdowns

- Collect owners and operators manuals for all your harvesting equipment

- Review the operational information and maintenance schedules to determine specific calibrations or preventive maintenance needs before harvest

- Make sure regularly scheduled equipment maintenance is being completed throughout harvest season by creating a maintenance/servicing checklist

- Perform operational checks on fans, augers, conveyors and other mechanical equipment before harvest begins

- Find and organize parts, tools and equipment needed to facilitate servicing, maintenance or repairs to all equipment

- Consider the purchase of spare parts or additional maintenance/servicing tools for critical equipment

### Complete a basic safety walk-around of your grain facilities

- Look for slip, trip and fall hazards such as loose ladders, platforms, handrails and steps

- Remove protruding objects that could cause injury in a trip or fall

- Remove debris, weeds or other obstructions that can cause injury or impede work

- Check for loose or missing safety covers and access panels on equipment and structures

- Inspect and test LP or natural gas lines, connections or fittings

- Install warning signs and safety locks, and have a first aid kit at each grain site

### Complete a facilities electric check

- Electrical boxes and connections should be weathertight, watertight and properly grounded

- Make sure there is no open conduit or exposed wiring

- Panels and switches should be operationally checked and repaired or replaced before harvest

- Make sure overhead wiring is part of your pre-harvest electrical inspection and safety program

### Take time to educate or train workers and family members on the safe operation of harvest equipment

- Ensure that they know when to stop doing something to prevent injury or equipment damage

- If new or substitute equipment has been installed, refresh training and operational understanding

- Restrict access to anyone visiting your grain handling and storage location, especially to young children

## Step 2: Save time by being efficient

With the continued increase in per-acre yield, it's more important than ever to get the most efficiency out of your grain handling and storage resources. Here are a few things to consider

### Check the condition of your grain receiving equipment

Ensure that augers are in very good working condition, including the auger flighting; flighting that is “saw-toothed” costs you efficiency while moving grain and can cause kernel damage, exposing crops to mold and micro-organisms while in storage

Inspect the cups, belt and drive pulley on bucket elevators for wear and replace damaged or worn components

Check bucket elevator operation so that the belt runs straight and true within the casing

Make sure the discharge baffle is not worn out or out of adjustment so any grain backflow is prevented

Ensure that the elevator boot section is clean and free of debris

### Maintain the space under your bin aeration floor, another area that requires regular inspection and cleaning

Inspect aeration floors carefully— check for debris in and underneath the floor that can attract pests, reduce airflow, or become a fire hazard in drying bins

Examine floor stands and ensure they have not fallen over, as this can create major issues that are often not noticeable when the bin is empty

Look for rust on top of the floor as this may indicate potential issues with the bin roof

Check your bin roof vents for rust, damage, bird nests, and areas where potential moisture could enter

Check any permanently installed bin reclaim augers or conveying equipment for sound operation and any damage to the flighting

Check the condition of any floor gates and sumps to make sure they are clear of any debris and open easily for the efficient removal of grain

### Service your dryer; any loss of efficiency with your dryer can cost you additional days and weeks of extra time in the field

Make sure the fill and discharge systems are in good condition

Check and clean the burner and igniter, look for plugged or rusted out openings, and repair or replace

Make sure there are no leaks in the gas lines that feed the burner

Run the fan to make sure it operates correctly and fix or replace any internal or external screens that show excessive wear, rust or damage

## Step 3: Know your crop and recognize risks

### Get into your fields early and often to begin identifying the quantity and quality of your crop

Scouting fields helps identify crops that should be harvested earlier or faster than others

Conducting a push/pull test can help detect field concerns related to crop standability, which can significantly impact both grain quality and harvesting

Be aware that stalk and ear diseases can appear earlier or later than anticipated, or develop more rapidly if weather conditions favor the disease

### Stay in touch with the local elevators for early grain marketing opportunities, especially opportunities to move high-moisture (25 to 30 percent) corn to grain terminals — without being discounted

Local grain merchandisers may reduce their discounts when they need grain to fill their own delivery contracts or may be willing to adjust their discounts for early delivery

Remember, waiting too long to shell corn can cause excessive kernel damage and problems during storage

## Stay aware and informed about drying your corn

Do not attempt to dry corn that you are not set up to dry

If you don't have the right equipment, move your high-moisture corn to a grain elevator or consider replacing your dryer

Set realistic expectations for your system's drying capacities and volumes, closely monitor the grain as it enters and exits the dryer, and ensure it is properly cooled

Preventing grain quality deterioration is crucial, as a bin full of moldy corn costs you time, money, and poses a health and safety hazard on your farm

## More tips to help you reduce harvest time risk

Check fields for areas of possible erosion or washouts, and map locations for those who may be operating harvest equipment

Evaluate field loss frequently, properly calibrating combines to keep corn kernel loss to 1% or less per acre

Drive fast enough to load your machine, but not so fast that you reduce separation efficiency

Always refuel your equipment after it has cooled, because fuel vapors can easily ignite on hot engines

Keep and maintain at least two ABC fire extinguishers on each combine, with at least one accessible from the ground

Grease and complete routine maintenance in the morning when you are more focused on the task at hand

Start each day with a clean combine: clean windows, clean warning lights, and clean motor compartment

## Step 4: Stay safe on the roads

Harvest season means more farm vehicles will be sharing the roadways with other vehicles, including combines, other harvesting equipment, and trucks and tractors transporting produce. Help ensure your safety on the roads by following these safety guidelines:

### Display the Slow Moving Vehicle (SMV) emblem on all off-road vehicles

Make sure emblems are in good condition and properly mounted or visibility

### Use proper vehicle lighting

Use flashers anytime you use public roads; the American Society of Agricultural and Biological Engineers (ASABE)<sup>1</sup> recommends two flashing amber lights, mounted at least 42 inches high, in both the front and rear

### Comply with your state laws

Most state laws require using headlights a half-hour before sunset until a half-hour after sunrise

Also use headlights whenever insufficient light or unfavorable weather conditions exist; the ASABE recommends two headlights on the front at the same level, positioned as far apart as possible, one rear left and rear right red taillight mounted as far apart as possible, and two red reflectors visible from the rear

### Inspect hitches to verify that they are sturdy and properly mounted before towing equipment or using wagons

Always use safety chains if equipped

<sup>1</sup> <https://www.govinfo.gov/content/pkg/FR-2016-06-22/pdf/2016-14571.pdf>



**For assistance with risk management services or safety resources, contact us at [RMSolutions@nationwide.com](mailto:RMSolutions@nationwide.com) or 1-800-260-1356.**