

# Fall Farm & Ranch





# Prepare for Unexpected Weather

From sudden floods to early frosts and lingering droughts, extreme weather has become an increasingly common challenge for farmers.

The unpredictability of the season can wreak havoc on harvest schedules, soil quality and livestock health. As climate patterns shift, many producers are reassessing how they prepare for and respond to fall's volatile weather.

Data from NASA in 2025 revealed that extreme weather events such as droughts and floods experienced a dramatic increase over the past five years with the events becoming more frequent, longer-lasting and severe.

NASA and the World Meteorological Organization have predicted that 2025 will be one of the hottest years on record globally. They've said there are likely to be such events as heatwaves, heavy rainfall, droughts, wildfires and tropical cyclones, with some regions experiencing compound events. Most of these are linked to human-caused climate change.

## RECENT EXTREMES SPARK URGENCY

In recent years, farms across the country have experienced unusually early snowfalls, damaging windstorms and devastating flash floods — sometimes within the same



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region or even the same week. In some areas, fall drought has left pasturelands dry and forage yields lower than expected, while in others, unseasonal downpours have prevented timely harvests or caused erosion.

These extremes are no longer outliers but part of a growing trend that affects planting windows, pest cycles and input timing. For many farmers, the challenge is no longer just predicting the first frost, but preparing for a range of potential threats that can shift quickly with little warning.

## PLANNING AND PREVENTION

Protecting your farm starts

with building flexibility into your seasonal planning. Diversifying crops, staggering harvests and investing in drainage or irrigation systems can help buffer against both dry and wet extremes. Keeping accurate, field-level records of weather events and how they affect your yields can help guide future decisions and identify patterns over time.

For livestock operations, having a contingency plan for shelter, feed and water access is crucial. A sudden cold snap or flood can quickly endanger animals if housing, fencing or backup feed supplies aren't ready. Portable fencing, weatherproof shelters and alternative water sources can

offer vital support during extreme conditions.

Backup power sources — such as generators — ensure that fans, heaters, freezers and electric fences remain operational when grid outages occur. Checking and servicing equipment before the cold sets in can prevent costly breakdowns during a weather emergency.

## BUILDING FARM RESILIENCE

Financial tools also play a role. Crop insurance, disaster assistance programs and USDA emergency loans can help farmers recover from weather-related losses, but paperwork and eligibility

requirements can be complex. Preparing documentation and knowing in advance what programs you qualify for can speed up the recovery process.

Some producers are taking longer-term steps, such as planting windbreaks, building retention ponds or shifting to no-till practices that improve soil structure and water retention.

The bottom line: unpredictable weather is becoming part of the fall farming equation. By learning from recent seasons, investing in risk mitigation and building resilience into everyday operations, farmers can better protect their livelihoods against what Mother Nature brings next.



# Carbon Credits and Your Land

As climate concerns reshape agricultural policy and practices, more farmers are exploring carbon credit programs to earn income while promoting soil health and sustainability.

Though the concept may seem complex, carbon markets are becoming an increasingly important part of the agricultural landscape — and fall is a good time to assess your land's potential.

The global carbon market in 2024 was valued at around \$1.4 billion in U.S. dollars, according to Morgan Stanley Capital International. They predict that the market could reach between \$7 billion and \$35 billion by 2030. In 2025, according to Farmonaut, farming carbon credits are becoming more effective, inclusive and useful because of advances in technology (remote sensing, blockchain and AI) and growing market demand.

## WHAT ARE CARBON CREDITS?

Carbon credits are part of a market-based system aimed at reducing greenhouse gas emissions. When farmers adopt practices that trap carbon dioxide in the soil — such as no-till farming, cover cropping or improved grazing techniques



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— they can generate credits that are sold to companies looking to offset their own emissions.

The most commonly used farming practices that generate carbon credits, according to Climate Farmers, are regenerative livestock grazing, agroforestry, cover crops, residue management, organic matter application, reduced or no-synthetic fertilizer, no-till and the reduction of fossil fuel usage.

Each credit represents one metric ton of carbon dioxide removed from or prevented

from entering the atmosphere. Companies purchase these credits to meet regulatory or voluntary sustainability goals, and the money goes to the farmer or landowner.

## PARTICIPATION REQUIREMENTS AND OPPORTUNITIES

To participate in a carbon credit program, farmers must generally provide detailed records of their land management practices. Many programs require multi-year commitments and verification by third-party auditors. Com-

mon eligibility criteria include:

- Transitioning to no-till or reduced-till practices
- Planting cover crops
- Rotational or managed grazing
- Reducing synthetic fertilizer use
- Increasing organic matter in the soil

Technology plays a key role in verification. Satellite imagery, soil sampling and digital tracking tools are often used to document progress and ensure credibility in the marketplace.

Several organizations and private companies now work

directly with farmers to help them enter the carbon market. Some offer upfront payments, while others pay annually based on performance. It's important to research program terms carefully — including payment structures, data ownership and exit clauses — before signing on.

## BENEFITS AND CONSIDERATIONS

For farmers already moving toward regenerative practices, carbon credits can provide an additional revenue stream while reinforcing long-term soil health. The added income may help offset the cost of conservation efforts or provide resources to invest in infrastructure upgrades.

However, carbon markets are still evolving. Prices per credit can vary widely, and regulatory frameworks are not yet standardized. Some farmers express concern about market volatility or the challenge of navigating legal and contractual obligations without clear guidance.

Agricultural extension services, conservation districts and commodity groups can offer advice on reputable programs and help assess whether your land is a good fit.

As fall planning gives way to winter preparation, now is a smart time to review your conservation practices and consider how they align with carbon market opportunities. With thoughtful participation, carbon credits may offer both environmental and economic rewards.



# The Labor Behind the Harvest

Farms across the country rely on skilled hands to bring in the harvest. For many agricultural operations — large and small — that labor comes from seasonal and migrant workers.

These workers play a critical role in picking produce, tending livestock and preparing farms for winter. Without them, many fall harvests simply wouldn't happen.

Farming is a labor-intensive industry with an estimated 2.9 million workers in the U.S. alone. Farmworker Justice released an estimate in 2021 that about 70 percent of farmworkers are immigrants and 40 percent of those are undocumented.

## AN ESSENTIAL WORKFORCE

Migrant farmworkers, many of whom travel from Latin America and the southern United States, form the backbone of the agricultural labor force during peak seasons. In the fall, their work is vital to harvesting crops like apples, grapes, squash and pumpkins, as well as maintaining livestock operations during seasonal transitions.

Despite their importance, these workers often operate behind the scenes, with little public recognition and limited



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protections. Many perform physically demanding labor in tough conditions, often working long hours with few benefits. For family farms especially, their presence can mean the difference between bringing a crop to market or leaving it to rot in the field.

## CRACKDOWNS CREATE UNCERTAINTY

In recent years, especially in 2025, increased immigration enforcement and policy uncertainty have left many farmers worried about labor shortages. Heightened crackdowns, visa delays and fears of deportation

have discouraged some migrant workers from traveling to agricultural regions or even showing up to work in places where they have already traveled.

Farmers who once depended on a regular workforce are now struggling to find enough hands to pick crops before they spoil. Some have turned to mechanical solutions, but not all crops can be harvested by machine. Others are reducing their acreage or shifting away from labor-intensive crops — decisions that can ripple through rural economies and reduce fresh food availability.

## A NEED FOR REFORM AND RECOGNITION

Advocacy groups and industry leaders have long called for immigration reform that supports a stable, legal agricultural workforce. Programs like the H-2A guest worker visa provide a legal pathway for seasonal farm labor, but the system is often seen as too slow, expensive and cumbersome — particularly for smaller farms. According to Farm Labor, H-2A workers make up about ten percent of the agricultural work force.

In the meantime, community-

based organizations and farmworker alliances continue to push for better wages, safer working conditions and access to health care for these essential workers. Some farms have taken steps to offer improved housing, language support and on-site services to attract and retain labor.

The future of fall harvests depends on the people who make the work possible. As debates over immigration continue, the agricultural sector faces a growing need to support, protect and acknowledge the laborers who power every season.



# Managing Pasture Rotation

When it comes to keeping livestock and the land healthy, fall pasture management is the tool for building long-term sustainability.

Rotating pastures effectively in the fall helps ensure animals get adequate nutrition while giving fields time to recover before winter dormancy. A well-executed rotation strategy can set the stage for a more productive spring.

## WHY ROTATION STILL MATTERS IN FALL

Even as grass growth slows with cooler temperatures, overgrazing can still damage root systems and reduce regrowth. Fall is when pastures are storing energy for the winter, and grazing too hard during this period can weaken stands and contribute to erosion and weed invasion.

Rotational grazing — moving animals between pastures based on forage availability — helps preserve plant vigor and soil integrity. In the fall, the goal is to give each paddock as much recovery time as possible before the first frost sets in.

Cool-season grasses, such as fescue and orchardgrass, can provide strong forage through much of the fall if managed carefully. Adjust stocking rates and grazing



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duration to match slower regrowth.

## FEEDING AND FORAGE BALANCE

As pasture quality naturally declines later in the season, producers commit to monitoring livestock body condition closely and considering supplementation with hay or mineral blocks as needed.

Fall forage may be lower in protein and energy, particularly after a dry summer, and young or lactating animals

may require additional feed.

Strip grazing — using temporary fencing to allocate smaller sections of pasture — can help control intake and reduce waste.

This method allows animals to graze more efficiently while protecting the remaining forage.

Avoid grazing forage crops too short, especially if you are planning to use the same fields for spring turnout. Leaving a 3- to 4-inch stubble height helps protect the plant crown and

improves winter survival.

## PLANNING AHEAD FOR SPRING

Fall is a good time to evaluate pasture performance and identify areas that may need reseeding, lime or fertilizer. Soil testing before the ground freezes can guide decisions and ensure early spring productivity.

Some farmers also plant cool-season cover crops, like winter rye or wheat, to provide additional forage and

protect bare soil. These crops can offer early spring grazing or be incorporated back into the soil to boost organic matter.

Managing pasture rotation isn't just about finishing the grazing season strong — it's about protecting the investment you've made in your land. By balancing livestock needs with smart pasture stewardship, producers can keep animals healthy and pastures thriving into the next season.



# Pest Pressure After the Heat

As farms recover from summer's intense heat and drought, a new challenge emerges: shifting pest pressure.

High temperatures and dry conditions don't just stress crops — they also change the behavior, movement and reproduction cycles of pests. For farmers, that means keeping a close eye on unexpected infestations and adapting strategies accordingly.

## HEAT BRINGS OUT THE RESILIENT

Many pests thrive in warm, dry conditions. Insects such as grasshoppers, spider mites and aphids tend to multiply faster when water is scarce and temperatures are high. Heat can drive pests to migrate from scorched fields and pastures to better-irrigated areas — including carefully managed cropland.

Some pests that typically show up in late summer may linger well into the fall if conditions stay warm. Others, like army worms and cutworms, may appear earlier or in greater numbers than usual, catching farmers off guard. Drought-stressed plants are often more vulnerable, lacking the moisture and nutrients needed to mount natural defenses.

## WATCH THE WEATHER — AND THE WEEDS

Fall pest pressure is closely



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tied to environmental conditions. Weeds left unchecked can harbor pests like flea beetles or stink bugs, providing food and shelter long after harvest. Dry soil can lead to cracks where insects burrow and overwinter, creating more issues in the spring.

In orchards and vineyards, heat and drought can encourage fungal outbreaks and sap-sucking insects. For row crops, farmers should watch for shifts in pest patterns

— especially when transitioning fields to cover crops or winter crops. Monitoring is key.

## ADAPTING PEST MANAGEMENT PLANS

Integrated pest management (IPM) becomes even more critical after a hot, dry season. Scouting frequently, using pheromone traps and evaluating damage thresholds can help farmers make informed decisions about treatment.

Some are turning to beneficial insects and other biological controls to reduce pesticide use. These methods are often more effective when pest populations spike unpredictably due to weather extremes. Other strategies include rotating crops to disrupt pest life cycles and choosing pest-resistant plant varieties for fall planting.

Extension offices and ag researchers are urging farmers to document what they're seeing this fall — both to manage

their own land and to contribute to broader pest forecasting models. Understanding how climate-driven changes affect pest dynamics can help the entire agricultural community prepare more effectively.

As weather becomes less predictable, staying one step ahead of pests will require flexibility, observation and collaboration. The pressure may be on, but with the right tools, farmers can meet it head-on.



# Retrofitting Buildings

As fall sets in, many farmers turn their attention to infrastructure — particularly barns and outbuildings that will need to withstand the coming winter.

Retrofitting existing structures can improve efficiency, protect equipment and livestock, and make daily operations safer and more cost-effective. For many, a few key upgrades can extend the life of a building and increase its long-term value. Retrofitting is more sustainable than installing new buildings and adding modern features can increase the overall property value of the farm.

Why make these changes in the fall? Experts list several reasons. First, fall's moderate temperatures make it easier to do constructions and insulation work. It is typically an off-peak season for contractors, which can increase the potential for availability and lower costs. Soil conditions are ideal for digging and setting foundations. Lower demand can lead to quicker processing of building permits.

## VENTILATION AND AIR QUALITY

One of the most important aspects of any barn or outbuilding is airflow. Poor ventilation can lead to moisture buildup, mold growth and dangerous air quality for both animals and humans. In livestock barns, fall is an ideal time to inspect and upgrade fans, vents and louvers before freezing temperatures hit.

Adding or updating ridge vents, side-wall openings and exhaust fans can improve air circulation and reduce respiratory issues among livestock. In colder climates, farmers often balance the need for ventilation with heat



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retention — using adjustable systems that prevent condensation without sacrificing warmth.

For storage buildings, proper ventilation helps protect seed, feed and equipment from rust, rot and other damage caused by damp conditions.

## EFFICIENCY THROUGH INSULATION AND LIGHTING

Insulating outbuildings — especially those used for milking, veterinary care or machinery repair — can help control temperature, reduce energy use and create a more comfortable workspace. Spray foam, rigid board and batt insulation each offer different benefits depending on the building's size and function.

Upgrading lighting is another efficient retrofit. Switching to LED fixtures can lower utility costs while providing brighter, safer conditions for fall and winter chores. Motion-sensor lights or solar-powered options are particularly useful in remote or infrequently accessed buildings.

## STRENGTHENING FOR WEATHER RESILIENCE

Fall storms and winter snow loads can take a toll on aging structures. Now is the time to reinforce roofs, check for leaks, secure doors and inspect the integrity of load-bearing walls and support beams. Retrofitting with steel bracing, treated lumber or weather-resistant siding can help barns and sheds

hold up to wind, moisture and heavy snow.

Adding storm doors, reinforced windows or roll-down shutters can prevent damage from high winds. For buildings used in feeding or calving, weather-proofing ensures a safe environment when conditions outside turn harsh.

Many retrofits qualify for cost-share programs or energy efficiency grants, especially when tied to livestock welfare or environmental impact.

Whether you're housing animals, protecting equipment or storing feed, a few smart upgrades now can mean fewer headaches — and lower costs — when winter arrives. Investing in your outbuildings keeps your operation running strong, no matter the season.



# The Fertilizer Squeeze

Fertilizer costs have surged in recent years, hitting farmers hard just as they prepare for critical fall and winter soil management.

For many, this “fertilizer squeeze” is forcing tough decisions about crop planning, field maintenance and long-term sustainability. As prices remain volatile, producers are turning to creative and more sustainable alternatives to keep operations viable.

## PRICES ON THE RISE

Global fertilizer prices have skyrocketed due to a mix of supply chain disruptions, rising energy costs and international trade issues. Nitrogen-based fertilizers in particular, which rely heavily on natural gas in their production, have seen significant spikes. Add to that export restrictions, war-related shipping delays and domestic inflation, and the result is a cost burden that many producers find unsustainable.

For small and mid-size farms, this can mean choosing between cutting back on acreage or investing in less fertilizer and risking lower yields. Larger operations may be able to absorb some of the shock, but few are unaffected.

## RETHINKING SOIL MANAGEMENT

In response, many farmers are shifting their approach to



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soil health. Instead of relying solely on synthetic fertilizers, they're turning to methods like cover cropping, composting, crop rotation and no-till practices. These techniques help build organic matter in the soil, retain nutrients and improve moisture retention — all while reducing dependency on expensive inputs.

Some are also using precision agriculture tools to apply fertilizer more strategically.

GPS-guided systems, soil sensors and data mapping allow farmers to deliver nutrients only where needed, reducing waste and cost.

For livestock producers, integrating manure more effectively into crop systems is another way to close the nutrient loop and minimize outside fertilizer use.

## LOOKING AHEAD

Government programs and cooperative extension

services are beginning to offer more support for farmers seeking alternatives.

Cost-sharing programs, grants and technical assistance can ease the transition to more sustainable practices. However, widespread adoption takes time, education and resources that not every farm has access to.

As fall gives way to winter and farms prepare their fields for spring, the pressure remains high. Decisions made

now — about soil treatment, cover crops or input purchases — will shape next year's harvest.

While the fertilizer squeeze poses a significant challenge, it also offers an opportunity to rethink traditional models and explore practices that are cost-effective and environmentally resilient. For many farmers, the key to long-term success may lie not in finding cheaper fertilizer, but in needing less of it.