

# FALL Farm & Ranch





# Fighting Farmland Fatigue

For generations, America's farmers have relied on their land to produce crops, feed livestock and support rural communities.

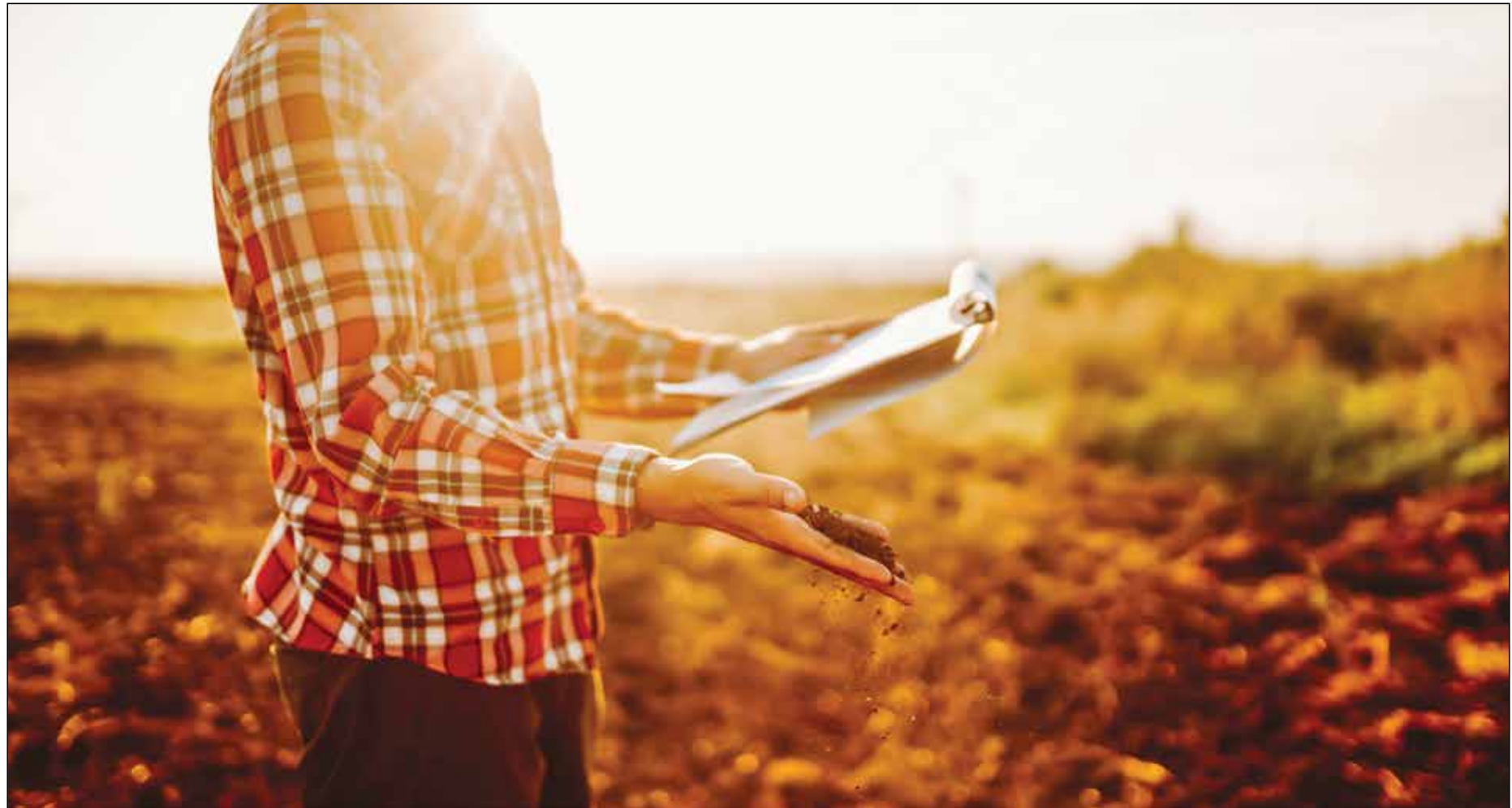
But decades of intensive farming can take a toll. Repeated tillage, erosion, nutrient depletion and soil compaction may gradually reduce productivity, making it more difficult for fields to retain water, cycle nutrients and support healthy crops.

Fortunately, farmers have more tools than ever to restore soil health. By combining time-tested practices with modern research, many are embracing regenerative agriculture to improve productivity while protecting their land for future generations.

## LOOKING BELOW THE SURFACE

Healthy soil is much more than dirt. It is a living ecosystem filled with microorganisms, fungi, insects and earthworms that work together to break down organic matter and make nutrients available to plants.

Over time, however, heavy equipment, repeated tillage and limited crop diversity can disrupt that ecosystem. Soil may become compacted, reducing water infiltration and limiting root growth. Organic matter can decline, making



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fields more vulnerable to drought and erosion.

The effects are often gradual. A field may continue producing crops for years while requiring increasing amounts of fertilizer or irrigation to maintain yields. Recognizing these early signs allows farmers to take steps before soil degradation becomes a larger problem.

## REGENERATIVE PRACTICES REBUILD RESILIENCE

Regenerative agriculture focuses on improving soil health while maintaining profitable farming operations. Rather

than relying on a single practice, many producers combine several strategies that fit their crops, climate and management goals.

Cover crops such as rye, clover or radishes help protect bare soil between growing seasons while adding organic matter and reducing erosion. Crop rotation introduces greater diversity into the field, helping break pest cycles and improve soil structure.

Many farmers are also reducing tillage or adopting no-till practices where appropriate. Leaving crop residue on the soil surface helps conserve moisture, reduce erosion

and create habitat for beneficial organisms.

Livestock can play a role. Managed grazing systems distribute manure naturally while encouraging healthy plant growth, creating another opportunity to build soil organic matter.

## INVESTING IN THE FUTURE

Improving soil health rarely happens overnight. Building organic matter and restoring biological activity can take years, requiring patience and careful management. However, many producers find the long-term benefits

worthwhile.

Healthier soils often improve water infiltration, helping fields better withstand both heavy rains and dry periods. Stronger soil structure can reduce erosion while supporting more consistent crop growth. Over time, some farmers find opportunities to reduce certain input costs as soil health improves.

Every farm is different, and no single approach works everywhere. Working with local conservation districts, university extension offices and agricultural professionals can help producers identify practices that fit their operations.



# Beyond the Harvest

Volatile commodity prices, rising equipment costs and increasing input expenses are creating financial challenges for many agricultural producers.

For some farmers, especially those with marginal land or acreage near electrical transmission infrastructure, leasing land for renewable energy projects has become one way to diversify income while continuing traditional farming operations.

Interest in solar and wind development has grown as producers look for ways to strengthen their financial resilience during uncertain economic times.

## LEASING LAND INSTEAD OF SELLING IT

Most renewable energy projects are built on leased land rather than property purchased outright. Long-term lease agreements can provide annual payments over 20 to 40 years, creating a predictable source of income that is less affected by weather, commodity prices or fluctuating markets.

AES lists several benefits to farmers for leasing land including a new source of revenue, upfront payments during property assessments, long-term reliable payments, preserving land for future generations, and supporting sustainability in the community.

Wind projects typically use a relatively small footprint for each turbine, allowing many farmers to continue growing crops or grazing livestock around the structures. Solar projects generally require more acreage, although some developers are exploring agrivoltaics, in which crops, pollinator



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habitat or livestock share the land with solar panels.

According to U.S. Light Energy, solar farms need at least 10 acres and farmers are paid by the acre. Wind farm leases typically pay farmers with a base amount per megawatt of turbine capacity with production royalties.

Before signing a lease, landowners need to carefully review contract terms, including payment schedules, maintenance responsibilities, decommissioning requirements and how the property will be restored if the project ends.

## WEIGHING THE OPPORTUNITIES AND CHALLENGES

Renewable energy development offers potential benefits beyond lease income. Construction projects can cre-

ate local jobs, expand the property tax base and provide additional revenue that may help support family farms through periods of lower agricultural returns.

However, these projects also raise important questions. Farmers should consider how a lease could affect future land use, property values, drainage systems, neighboring farms and family succession plans. Community opinions about large renewable energy projects vary widely, making communication with neighbors and local officials an important part of the process.

Legal and tax advice is particularly important because lease agreements often remain in effect for decades.

Some key clauses to negotiate in a lease include ensuring the developer posts a decommissioning bond in

which they are required to restore the land to its original agricultural state at the leases end; a requirement that developers repair damaged drain tiles and provide an agricultural impact mitigation clause, and a requirement that the developer cover any increased property taxes resulting from the installation. The developer should carry comprehensive liability insurance.

## EXPLORING THE OPTIONS

Developers generally look for suitable acreage, access to transmission lines and favorable local zoning and permitting conditions.

Farmers interested in learning more should consult their local extension office, state department of agriculture, attorney and financial adviser before entering negotiations.



# Cold-Weather Calving Tips

Late-fall and early-winter calving can expose cows and newborn calves to cold temperatures, wind, moisture and rapidly changing weather.

A healthy calf can lose body heat quickly after birth, especially if its coat remains wet or it is born on muddy or frozen ground.

Producers can reduce risks by preparing facilities, supplies and response plans before calving begins. Close observation remains essential because early action can make the difference between a calf that recovers quickly and one that develops life-threatening hypothermia.

## **PREPARE A CLEAN, SHELTERED AREA**

Calving areas should offer protection from wind while remaining dry, clean and well ventilated. Windbreaks, barns or portable shelters can provide relief during storms, but crowded or poorly ventilated spaces may increase disease risks.

Deep, clean bedding helps separate cows and calves from cold or wet ground. Mud and moisture flatten the calf's hair coat and reduce its ability to provide insulation, leaving newborns especially vulnerable to hypothermia, according to the University of Nebraska-Lincoln. Before the season begins,



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check gates, lighting, pens and handling equipment. Assemble towels, gloves, disinfectant, feeding equipment and other supplies in one accessible loca-

tion. Keep your veterinarian's contact information readily available and discuss when assistance may be needed during a difficult delivery.

## **DRY, WARM AND FEED THE CALF**

After birth, make sure the calf is breathing and begins showing normal signs of alert-

ness. Allow the cow to lick the calf when conditions permit, but help dry it with clean towels in cold, wet or windy weather.

A chilled calf may shiver, appear weak, have difficulty standing or show a reduced suckling response. Calves with mild hypothermia may benefit from drying, warm air and appropriately warmed colostrum. More severe cases require prompt intervention and guidance from a veterinarian.

Colostrum provides energy as well as antibodies that help protect the calf from disease. Ideally, a calf should receive clean, high-quality colostrum within the first two hours after birth because its ability to absorb protective antibodies declines over time, according to the University of Minnesota Extension. Producers should have stored colostrum or a commercial replacer available in case the calf cannot nurse adequately.

## **SUPPORT THE COW, TOO**

Cold-weather care does not end with the calf. Cows need adequate energy, protein, minerals and access to unfrozen water during late gestation and early lactation. Their nutritional requirements rise as calving approaches and milk production begins.

Continue monitoring the pair after they leave the calving area. Confirm that the calf nurses regularly, remains dry and stays active. Watch the cow for poor appetite, weakness, abnormal discharge or other signs of complications.



# Grants for Beginners

Starting a farm has never been inexpensive, but rising land prices, equipment costs and operating expenses have made entering agriculture even more challenging for many aspiring producers.

Fortunately, a growing network of federal, state and nonprofit programs is helping young and beginning farmers overcome financial barriers while building successful operations.

Although grants and low-interest loans are not available for every need, producers who research opportunities early and work with local agricultural organizations may find resources that support everything from business planning to conservation projects.

## FEDERAL PROGRAMS PROVIDE A STRONG FOUNDATION

The U.S. Department of Agriculture offers several programs designed specifically to assist beginning farmers and ranchers. The USDA generally defines a beginning farmer or rancher as someone who has operated a farm or ranch for no more than 10 years.

One of the most widely used resources is the Farm



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Service Agency's Beginning Farmer and Rancher Loan Program. The program offers direct and guaranteed loans that can help finance farmland purchases, equipment, livestock, annual operating expenses and improvements to existing operations.

The USDA also supports education and technical assistance through the Be-

ginning Farmer and Rancher Development Program, which funds organizations that provide training in business planning, financial management, production practices and marketing. Many beginning farmers access these services through universities, nonprofit organizations and cooperative extension programs.

## CONSERVATION PROGRAMS CAN OFFSET COSTS

Farmers interested in improving soil health, water quality or wildlife habitat may qualify for conservation assistance through USDA Natural Resources Conservation Service programs.

For example, the Environmental Quality Incentives

Program, or EQIP, helps producers implement conservation practices such as cover crops, fencing, irrigation improvements and grazing management. Beginning farmers may qualify for higher payment rates on certain approved practices.

Many states offer grant programs for specialty crops, local food systems, agricultural innovation and conservation. Eligibility requirements and application deadlines vary, making it worthwhile to check with state departments of agriculture and local conservation districts each year.

## PLANNING IMPROVES SUCCESS

Competition for grants can be strong, and many programs require applicants to submit business plans, financial information or conservation goals. Preparing these materials before applications open can improve the likelihood of success.

It is helpful for beginning farmers to build relationships with extension educators, Farm Service Agency staff and experienced producers who can help identify funding opportunities and navigate applications.

While grants rarely cover every startup expense, they can reduce financial barriers and provide valuable technical support. Combined with careful planning and sound business management, these programs are helping young and beginning farmers establish operations.



# Precision Agriculture

Modern agriculture has always relied on innovation.

Precision agriculture combines GPS guidance, sensors, drones, satellite imagery and data analytics to help farmers make more informed decisions about planting, fertilizing, irrigating and harvesting.

As precision agriculture becomes increasingly accessible, producers of all sizes are finding ways to use data to make better decisions. By improving efficiency, reducing unnecessary inputs and supporting more sustainable management practices, these technologies are helping farmers remain productive and competitive in an increasingly challenging agricultural economy.

The McKinsey Center for Agricultural Transformation estimates that the advanced connectivity present in precision agriculture could make agricultural GDP increase to \$500 billion by 2030 and boost productivity by up to 9%. Farms that want to stay competitive can benefit, they say, from investing in farm management software and connected systems.

## MANAGING EVERY ACRE DIFFERENTLY

Traditional farming often treats an entire field the same way, even though soil types, moisture levels and nutrient availability can vary signifi-



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cantly within a few hundred feet. Precision agriculture uses data to identify those differences, allowing producers to manage specific areas according to their needs.

GPS-guided equipment reduces overlap when planting, spraying and fertilizing, helping save seed, fuel and crop protection products. Variable-rate technology takes the process a step further by automatically adjusting the amount of seed, fertilizer or other inputs applied as equipment moves across the field.

Yield monitors installed on combines collect harvest data that farmers can compare with soil tests, weather information and planting records.

Over time, those records help identify trends and guide future management decisions.

## TECHNOLOGY CONTINUES TO EVOLVE

While GPS guidance has become common on many farms, newer technologies continue to expand precision agriculture's capabilities.

Unmanned aerial vehicles, commonly known as drones, can quickly survey fields to identify drainage problems, pest damage or nutrient deficiencies before they become visible from the ground. Satellite imagery provides another way to monitor crop health throughout the growing season.

Artificial intelligence is beginning to play a larger role. New software can analyze large amounts of field data to identify patterns, predict potential problems and help farmers prioritize management decisions. Some equipment manufacturers are introducing automated systems capable of identifying individual weeds and applying herbicides only where needed.

Although these technologies continue to improve, experts emphasize that they complement, rather than replace, a farmer's experience and judgment.

## FINDING THE RIGHT FIT

Not every operation needs

every precision agriculture tool. Many producers begin with relatively affordable technologies such as GPS guidance or soil mapping before investing in more advanced systems.

The greatest return often comes from selecting technologies that address a farm's specific challenges rather than adopting new equipment simply because it is available.

University extension services, equipment dealers and crop consultants can help producers evaluate available options and estimate potential returns on investment. Cost-share opportunities and grants may help offset some implementation expenses.



# Tax Season Jump Start

Tax season may feel distant during the fall harvest, but year-end preparation can help farmers avoid a frantic search for receipts and records later.

It can also give producers time to discuss major purchases, income changes and other planning decisions with a qualified tax professional before Dec. 31.

Federal tax rules for agricultural businesses can differ from those for other taxpayers. The IRS' Farmer's Tax Guide, Publication 225, covers farm income, deductible expenses, depreciation, livestock, casualty losses and other issues affecting producers.



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## BRING THE RECORDS UP TO DATE

Start by making sure the farm's books reflect all income and expenses received or paid during the year. Compare accounting records with bank statements, credit card statements, loan documents and receipts.

The IRS allows businesses to use any recordkeeping system that clearly shows income and expenses. Records should support the amounts reported as income, deductions and credits on the tax return.

Separate business and personal expenses, and gather documentation for commonly

overlooked costs such as fuel, repairs, veterinary services, insurance, utilities, professional fees and business travel. Farmers who use vehicles or equipment for both business and personal purposes should maintain records showing the business use.

Review accounts receivable and unpaid bills, as well. An accurate picture of expected income, available cash and outstanding obligations can help guide year-end decisions.

## REVIEW PURCHASES BEFORE YEAR'S END

Ordinary and necessary

costs of operating a farm for profit are generally deductible business expenses, although the timing and treatment of individual expenses can vary.

Before buying machinery, equipment or supplies solely for a tax deduction, consider whether the purchase serves a genuine business need and fits the farm's cash flow. Some equipment costs may be depreciated over several years, while other provisions may permit faster deductions. The best choice depends on the farm's circumstances and current tax rules.

Producers need to discuss

prepaid expenses, repairs, breeding livestock, conservation work, crop insurance proceeds and sales of equipment or livestock with their tax advisers. Decisions that reduce taxes this year may create different consequences later.

## KNOW THE FARM FILING RULES

Farmers may qualify for special estimated-tax provisions. In general, producers who receive at least two-thirds of their gross income from farming or fishing may avoid quarterly estimated payments

by meeting special payment or filing deadlines.

Because filing requirements depend on income sources, business structure and accounting method, farmers should confirm their deadlines rather than assume the standard schedule applies.

A year-end meeting with a tax professional can turn tax preparation into planning rather than cleanup. Arriving with complete records, a list of major transactions and questions about the coming year can help producers file accurately and make better-informed financial decisions.



# Mental Health Resources

Fall is often one of the busiest and most rewarding seasons on the farm. It's also one of the most demanding.

Long workdays, unpredictable weather, fluctuating commodity prices and the pressure to bring in a successful harvest can create significant stress for farmers, ranchers and their families.

While agriculture has always required resilience, mental health experts say it's just as important to recognize when stress becomes overwhelming. Seeking support is a sign of strength, and a growing number of rural organizations are working to ensure help is available close to home.

The stats are bleak. According to Ruralminds.org, people living in rural areas are 50% more likely to die by suicide than those in urban areas. Farmers, specifically, are 3.5 times more likely to die by suicide compared to the general population. An American Farm Bureau Federation survey found that more than 60% of U.S. farmers and farm workers reported increased stress and mental health challenges.

## RECOGNIZING THE SIGNS OF STRESS

Stress affects everyone differently. Some farmers may



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notice difficulty sleeping, increased irritability or trouble concentrating. Others may feel overwhelmed, anxious or lose interest in activities they once enjoyed.

Harvest season can bring physical symptoms, including headaches, fatigue and changes in appetite. Because many agricultural producers work independently and spend long hours alone, these warning signs may go unnoticed by others.

Family members, friends and neighbors can play an important role by checking in regularly, offering practical

assistance and encouraging conversations about mental health without judgment.

## BUILDING RESILIENCE DURING BUSY SEASONS

Managing stress begins with recognizing that no one can do everything alone. Even small changes can make a difference during harvest.

Taking short breaks, staying hydrated, eating regular meals and getting adequate sleep whenever possible can help improve focus and decision-making. Sharing responsibilities among family members or neighbors may

reduce the burden during especially demanding periods.

Many farm organizations encourage producers to create contingency plans before harvest begins. Having backup equipment contacts, emergency plans and realistic schedules can reduce uncertainty when unexpected challenges arise.

Just as importantly, maintaining social connections can help combat isolation. Community events, local agricultural organizations and faith communities often provide opportunities to connect with others who understand

the unique challenges of farming.

## FINDING HELP CLOSE TO HOME

Mental health resources have become increasingly available in rural communities. Primary care providers, local health departments, university extension programs and agricultural organizations can often connect farmers with counseling services and crisis resources.

Many states offer telehealth appointments, allowing individuals to speak with licensed mental health professionals without traveling long distances.

If someone appears to be in crisis or talks about hopelessness or self-harm, take those concerns seriously. Immediate help is available through local emergency services and the following resources:

**AgriStress HelpLine:** Call or text 833-897-AGRI (2474). It is a free, confidential helpline available 24/7 with interpretation services in 160 languages.

**Farm Aid Hotline:** 1-800-FARM-AID (327-6243). Available Monday through Friday, 9 a.m. to 9 p.m. EST, it offers confidential assistance and resources

**988 Suicide & Crisis Lifeline:** Call or text 988 for 24/7 free and confidential support.

**Farm State of Mind Directory:** The American Farm Bureau Federation has local, state-specific resources, counseling directories and stress-management tools.