



CHAPTER 1

AGRICULTURE



BUSINESS BEATS BASICS

AGRICULTURE

INTRODUCTION

One of the nation's oldest, most-valued industries – agriculture – offers stories virtually anywhere: cranberry operations in Michigan, syrup operations in New England, the Corn Belt of the Midwest, the ranches of Texas and Wyoming, and the vineyards of California. Virtually every state has some kind of active agriculture.

Agriculture may seem like a simple job: Prepare the soil, apply chemicals, plant, harvest, repeat. But in reality, it's a complicated endeavor, even in the best of circumstances. Farming is a bedrock industry that is directly affected by weather, natural disasters, climate change, and market forces that landowners can't control.

Think of the challenges. Today's farmers need to choose from among a dizzying array of seeds, many genetically modified. They buy elaborate machines worth more than many Midwestern homes. They have to decide how much to spend on inputs – fertilizer and chemicals – and how best to keep those essential elements on the field and out of the rivers.

Long before computers became a mainstay of most American households, many farmers relied on [The Old Farmer's Almanac](#) – a long-range weather forecaster dating back to 1792 – in addition to the radio to prepare their crops for the elements.

Grain farmers apply fertilizer, sometimes in the fall and always in the spring, with the hope that Mother Nature won't wash away the nourishment before the hungry seeds can use it to grow. Whether they are successful depends on rainfall.

The skies are a gamble, and climate change threatens to change the usual pattern. The land in Iowa, one of the premier grain-growing states, will become more like that of southern Kansas or northern Arkansas if the climate modelers are correct – That means drier, hotter, and more prone to drought. This adds more financial risk to farming, ranching, and orchard work.

Farmers running largely independent, smaller-scale operations are also business owners. They are a compelling mixture of agriculture scientists, commodity producers, investors, accountants, equipment-repair experts, geneticists, animal husbandry authorities, soil conservationists and risk-takers.

But the grounds could also be flooded more. Rain is expected to come more frequently in deluges, rather than sprinkles, raising the risk of floods that can ruin crops. Pests used to doing their damage in southern climes may move north, forcing seed companies to engineer new traits capable of fighting them.

However, in spite of those challenges, there is promise. For example, scientists are looking for crops that can produce more output with less fertilizer – good for both farmers’ wallets and for the environment. There is talk of corn varieties that could be grown farther north. And grain crops may one day be mainstays in the genetic work needed to create new medicines.

Finally, another complication to consider when covering the agriculture beat is regulations. Though farmers are a politically powerful lobby, they are having a hard time fighting off challenges in Washington, D.C. Taxpayers are rebelling against aid payments to farms and wondering why farms are exempt from so many environmental regulations that apply to virtually every other major industry. Can you imagine if a company like 3M decided to spread a byproduct across the landscape without a permit, as most farmers do with synthetic fertilizers and manure? And what if the firm wasn’t held accountable for direct damage to streams as farmers often aren’t?

Some of those issues are accompanied by the trend of large-scale livestock confinements and feedlots. Large-scale livestock farms, many of which are confined animal feed operations (CAFOs), are prevalent and environmentally **controversial** across the United States due to the poor conditions for animals and the large amounts of pollution they produce. Sometimes the location of these facilities, and the lack of local governmental power to control their sites, sets off spirited political debates akin to when someone tries to find a spot for a new landfill or nuclear plant.

All in all, agriculture is a business that is changing rapidly in ways that offer even more stories. The resources are rich and local. It is fertile journalistic ground, indeed.



HELPFUL RESOURCES

U.S. Department of Agriculture

[usda.gov](https://www.usda.gov)

Runs the main farm support programs, including aid payments and environmental programs such as the Conservation Reserve Program, which pays farmers for planting natural habitat on marginal crop ground.

Agriculture Census

nass.usda.gov/AgCensus

A treasure chest of information from the U.S. Department of Agriculture on how the land is used and what is raised on it.

CropLife International

[croplife.org](https://www.croplife.org)

Industry group that offers information on pesticides and other chemical use, plus developments in biotech and seeds.

Chicago Mercantile Exchange Group

[cmegroup.com](https://www.cmegroup.com)

A leading derivative marketplace, excellent resource for crop prices, grain futures and other agriculture news

WHERE TO BEGIN

MAKE CONNECTIONS

Agriculture stories are everywhere, and it pays to get out of the office. If you are reporting in a rural area, you should stop by a local café where farmers have breakfast or gather. If there's a local co-op, go down and meet some of the members.

Farmers can be a reserved group, but if you can spend some time gaining their trust, they'll be glad to tell you about their business. Farmers follow the environmental conditions that affect their business by the day. Has it rained enough? Too much? How is the soil moisture? Are we in a drought? Will it be a bad year for pests? Too wet to get into the field? All these questions could lead to a story.



If you can, attend your local Farm Bureau convention where delegates decide policy. These can be controversial and attract opposition, but they show what is on farmers' minds and how they would like to see the agricultural world run. Scan the newsletters and websites of key members of Congress – those on the agriculture committee, for example – to see what is brewing.

You can also check in with the local office of the [Farm Service Agency](#) or the [Natural Resources Conservation Service](#). The people at those offices know the local farmers and know what's going on, from soil conservation and tillage trends to projects intended to cut

erosion and protect waterways from siltation – which, by the way, raises the cost of treating drinking water, which in turn affects anyone with a tap.

In addition to farmers and politicians, you can connect with farm groups, environmental groups, university researchers – especially when they release new peer-reviewed studies – and economists. You should be chatting with a mix of these groups regularly.

THINK LOCAL

It's also good to think about topics that hit home. When you shop for groceries, pay attention to the fluctuation in produce and meat prices. When grain prices start rising, that's good news for the farmers who grow those crops. But high-priced grain often means price hikes at the meat market, which directly affects many of your readers. It can put pressure on biofuel plants, too. And there can be weirdness in the produce markets, brought on by everything from frost and freeze problems to droughts across the land.

For example, tomatoes were selling in Des Moines for more per pound than the top sirloin steak at one point. That's a story consumers will read, even if it's not necessarily good news.



You should always be combing through key websites such as the Farm Bureau and the U.S. Department of Agriculture. It's a good idea to

check environmental sites, such as the Environmental Working Group or any sort of local council or Sierra Club that your community may have. The environmental effects of agriculture are big news and have won Pulitzer Prizes.

Get to know the local bankers who lend farmers money, and watch for signs of trouble. Here's a sure one: a long list of farm sales in the classifieds.

Additionally, anytime the Farm Bill is up for a rewrite – about every five years – there is potential for all kinds of news. Will lawmakers make this the year that they dredge up the money to pay for more soil conservation? Will farmers be required to use sound conservation

techniques in exchange for federal assistance? Will there be any action to stem the flow of nitrogen from the Corn Belt to the Gulf of Mexico, where the fertilizer causes oxygen depletion in an area commonly called the Dead Zone?

As with many beats, it's best to look for ways agriculture affects lives on and off the farm. Farming can be dangerous, and sometimes we don't pay enough attention to the loss of limbs – or lives. Reporter Tom Knudson of the Sacramento Bee won a Pulitzer while he was at the Des Moines Register reporting on those very issues. Look for patterns that might suggest a manufacturer's equipment has safety problems. You won't have to look far for the impact on the community.

BOOKS TO READ

The Fault Lines of Farm Policy: A Legislative and Political History of the Farm Bill

By Jonathan Coppess (2018)

Parsnips in the Snow

By Mary Swander (1990)

Long Deep Furrow: 3 Centuries of Farming in New England

By Howard S. Russell and Mark Lapping (1976)

Bet the Farm

By Beth Hoffman (2021)

The Meat You Eat: How Corporate Farming Has Endangered America's Food Supply

By Ken Midkiff (2004)

Food Fray

By Lisa Weasel (2009)

Grassland

By Richard Manning (1995)

Love for the Land: Lessons from Farmers who Persist in Place

By Brooks Lamb (2023)

Cadillac Desert

By Marc Reisner (1993)

CAFO (Concentrated Animal Feeding Operations): The Tragedy of Industrial Animal Factories

Edited by Daniel Imhoff
Watershed Media (2010)

Three Farms

By Mark Kramer (1980)

Foodfight: The Citizen's Guide to a Food and Farm Bill

By Daniel Imhoff (2007)

The Digital Age in Agriculture

By Mehmet Ozguven (2023)

Raising a Stink: The Struggle over Factory Hog Farms in Nebraska

By Carolyn Johnson (2003)

Against the Grain

By Richard Manning (2004)

FARM (and other F words): The Rise and Fall of the Small Family Farm

By Sarah Mock (2021)

Fateful Harvest

By Duff Wilson (2001)

The Economics of Food: How Feeding and Fueling the Planet

Affects Food Prices
By Patrick Westoff (2009)

Hole in the Sky

By Bill Kittredge (1992)

CHALLENGES AND PITFALLS

Here are a few common mistakes, challenges, and hurdles to watch out for while covering the agriculture beat.

UNDERSTAND THE TERMINOLOGY

Make sure you know what the source is talking about, and don't worry about asking what something means. If you don't know what CRP means (Conservation Reserve Program, a key voluntary U.S. program to provide habitat and soil conservation), ask. If you think heifers are a specific breed of cattle, go to the dictionary to check. Some of the most common terms are explained at the end of this chapter, but you'll likely come across many more throughout your reporting.

GET YOUR SHOES MUDDY

You can't really get to know farming unless you get out and get some dirt on your shoes. Visit a hog confinement (you'll be asked to shower before and after your visit, so be prepared), get out in the field, ride along in a combine, and don't forget to stop by the local café for some eggs and current events.

KNOW THE PLAYERS, AND HOLD THEM ALL ACCOUNTABLE

Some farm groups want to vilify environmentalists for raising questions about farm pollution. Some environmental groups fail to give credit to the large number of farmers who work hard and spend plenty of cash to save soil and reduce pollution, in many cases voluntarily. Be fair, listen to all sides of agriculture issues, and keep asking the central questions: So what? How does this affect my readers? What is the impact of this story?

DIG INTO THE POLITICS

Don't divorce your stories from the underlying political scene. You should always follow the money in the stories, but don't forget the political capital.

Farmers are one of the most powerful lobbies out there. Iowa's caucuses have historically begun every presidential election cycle, and although that is beginning to change, you should still pay attention and read campaign finance disclosure forms for your local elected officials and members of Congress.

DON'T OVERSIMPLIFY

Agriculture stories can be complicated. Think about how the news you are covering affects different sectors of the industry and, of course, various consumers. A rise in grain prices may mean higher meat prices. Grain exports from Brazil could affect U.S. markets. A mad cow scare in Britain could affect beef markets in the U.S.

KEEP DEBATES ON YOUR RADAR

Agriculture might seem like a straightforward business. In some ways, it is. But don't miss the news of the many controversies that surround this industry. Should farmers avoid the pollution controls applied to so many other industries? Should Americans subsidize grain prices when they have risen sharply? Should farmers who take federal aid face aggressively enforced requirements that they follow soil conservation practices? Should large-scale livestock confinements face sewage regulations similar to factories? These debates come up over and over, and you should be regularly covering them.

TERMS TO KNOW

Understanding the basic terms associated with agriculture-related topics will give you the knowledge base to conduct solid interviews and identify key trends. Here are a few to get you started:

Agricultural Adjustment Act of 1933

A federal law that was introduced as part of the New Deal era to boost agricultural prices by reducing surpluses. The government bought livestock for slaughter and paid farmers subsidies to not plant on part of their land.

Agronomy

The science of growing crops and managing soil.

Alternative farming

Basically anything but growing one crop with conventional fertilizer. Can mean using only manure for fertilizer, growing organic crops, integrated pest control, sustainable agriculture, or agroforestry.

American Farm Bureau Federation

Mainstay farm organization that pushes for policies that benefit agriculture.

Animal unit (AU)

A unit of measurement that converts animals of different species or sizes into equivalent units to determine the capacity of a facility. The animal unit capacity and type of operation determine which state and federal regulators apply to that operation. For example, a 1,000-pound beef cow equals one animal unit.

Aquaculture

Also known as aquafarming – breeding, raising, and harvesting aquatic animals or plants in ponds, tanks or other controlled environments. Example: raising catfish.

Artificial insemination (AI)

The injection of semen into a female animal with a syringe.

Biological control of pests

The use of living organisms that are considered natural enemies of insects to control the pest population. One example of classical biological control is using flies that decapitate red imported fire ants.

Biologics

Serums, vaccines and other living or inactive organisms used to prevent disease.

Biotechnology

A technology that utilizes biological systems or living organisms – or parts of them – to develop or create different products. This includes gene manipulation and transfer and plant regeneration and has created advances such as insulin and growth hormones.

Bovine somatotropin (bST)

Also known as the bovine growth hormone – an FDA-approved drug that increases milk production in dairy cows.

Brucellosis

A contagious bacterial disease mainly found in beef and dairy cattle, swine, and goats. Humans can contract this disease through direct contact with an infected animal or contaminated animal products.

MAKE CONNECTIONS

National Cotton Council

cotton.org

A one-stop shop for news of the cotton industry.

Environmental Working Group

ewg.org

A nonprofit organization that has analyzed federal payments to farmers, showing that a small share gets the bulk of the aid.

North American Agricultural Journalists

naaj.net

An association of farm editors and writers, which also runs an annual contest and an annual conference.

Society of Environmental Journalists

sej.org

Resources for staff journalists and freelancers, including a huge topical index of sources, a member listserv offering advice on deadline, an elaborate website with resources even for nonmembers, and an annual conference that often examines agricultural issues.

Combine

Machine used to harvest grain.

Commodities

A tangible basic good or material that is widely bought, sold, or traded and is not meaningfully differentiated from other types of the same good such as grain, livestock, butter, milk, etc.

Commodity Credit Corporation (CCC)

Also referred to as "the Corporation." The CCC was set up in 1948 under the U.S. Department of Agriculture to stabilize, support, and protect farm income and prices. The CCC includes loans to farmers and helps maintain the balanced and adequate supply of agricultural commodities while aiding in their orderly distribution.

Confined animal feeding operations (CAFOs)

The Environmental Protection Agency defines CAFOs as livestock operations where the animals are confined for at least 45 days in a 12-month period and don't have access to grass or other vegetation during the normal growing season. Also called confinements.

Conservation compliance

When agricultural producers follow Highly Erodible Land Conservation (HELC) and Wetland Conservation (WC) provisions, which aim to reduce soil loss on erosion-prone lands and to protect wetlands, respectively. Some federal aid requires that farmers working on this type of land follow such provisions, unless they are granted an exemption.

Conservation district

A unit of local government formed to carry out a local soil and water conservation program. There are nearly 3,000 conservation districts across the U.S. They may also be called "soil and water conservation districts," "resource conservation districts," "natural resource districts," and "land conservation committees."

Conservation Reserve Program (CRP)

Created in 1985, this voluntary program through the U.S. Department of Agriculture offers rental payments to farmers who agree to use practices to save soil, which in turn provides wildlife habitat and can improve water quality.

Contour farming

Planting across a slope at the right angles to follow the natural elevation contour lines. This practice helps reduce soil erosion and conserve rainwater.

Contract feeder

An independent contractor who raises and feeds livestock which are owned by someone else, often a corporation.

Cooperatives (Co-ops)

Organizations owned and run by farmers, who share the responsibilities and profits. Many early ethanol plants were set up this way, as were long-standing grain elevator operations and some local power utilities.

Cooperative Extension System (CES)

A network that links land-grant universities with the U.S. Department of Agriculture to provide non-credit and non-formal higher education and learning to farmers, ranchers, and communities. CES can be a good source of information for tips on a wide range of agricultural topics.

Crop rotation

Changing crops on the same land from year to year to keep the soil healthy, prevent soil diseases, and reduce pest and weed problems. For example, farmers often plant soybeans after a corn crop because soybeans are a legume that fixes nitrogen in the soil, while corn is a crop that consumes nitrogen.

Disaster payments

Federal payments made to farmers when a natural disaster prevents planting or hurts yields.

Fertilizer

Any organic or inorganic material used to feed a crop. Includes nitrogen, phosphorus, and potassium from synthetic sources and manure.

Fungicide

A chemical used to kill fungi on crops.

General Agreement on Tariffs and Trade (GATT)

Set up after World War II, this agreement's purpose is to promote international trade by reducing trade barriers, including tariffs and quotas.

Genetic engineering

Genetic modification or manipulation of organisms, usually to transfer or alter traits.

Green manure

A crop specifically cultivated to be incorporated into the soil while it is still green with the goal of adding organic matter to the soil for its nutritional benefits.

Herbicide

Chemicals that kill weeds.

Hydroponics

The growing of plants without soil by using a water-based nutrient system.

Leaching

The loss of fertilizer when rain washes it from the soil.

Natural Resources Conservation Service (NRCS)

Part of the USDA that focuses on conservation and related work. Originally established as the U.S. Soil Conservation Service, its programs promote conservation on the 70 percent of the nation's land that is privately owned.

No till

Technique in which crop stubble is left on the field to hold soil in place.

Nonpoint source pollution

Water or air pollution that comes from many sources and is difficult to trace back to a single point. Caused by rainfall or snowmelt moving over ground that picks up soil, pesticides, and chemicals from farms.

Organic farming

A system that avoids using synthetic fertilizers, pesticides, and growth regulators in feed.

Pesticides

Chemicals that kill crop pests such as root worms.

Public Law 480 (P.L. 480)

Common name for the Agricultural Trade Development and Assistance Act of 1954, aimed at expanding foreign markets for U.S. agricultural products.

Rangeland

Grassy areas used for livestock grazing.

Riparian rights

Legal water rights of a person owning land bordering a river or lake.

Silage

Fermented and chopped up grass, legumes, or corn stalks used as animal feed.

Sustainable agriculture

Systems that seek to manage crops and livestock while protecting the environment and using resources efficiently.

Tillage

How the land is prepared for planting.

Yield

A standard measurement of the amount a crop is harvested per unit of land. For example, grain is typically expressed in bushels per acre.

Zoonotic diseases

Diseases that can be spread from animals to humans.



This chapter is based on the "Beats Basics" Agriculture section, originally published in 2012 and written by Perry Beeman who was the senior environmental and agriculture reporter at The Des Moines Register.