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Agriculture Practice

A hard row to hoe? The US market for agricultural inputs in 2019

US farmers are under increasing economic pressure. A recent McKinsey survey explores how this will affect their spending on agricultural inputs.

by Kyle Becker, Joshua Katz, Ryan McCullough, and Hussain Sharifi

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Just as rain or hot temperatures can determine whether a crop flourishes, economic conditions predictably influence how much farmers spend on seeds, fertilizer, crop protection, and equipment. The best example of this relationship comes from the US farm crisis in the 1980s, when commodity prices plunged and agricultural debt levels soared. Many farmers went bankrupt and others struggled to remain afloat. One secondary result of this misery: a steep decline in purchases of agricultural inputs and equipment.

While the farm crisis of the 1980s is a distant memory to many, some troubling signs suggest that history may repeat itself. A steady decline in commodity prices has eaten into profits, while farmers' debt-to-income ratios have been soaring. With such clouds on the horizon, some analysts worry that the farm sector is poised for another season of decline, including a new wave of bankruptcies. Are we really on the verge of another crisis? Are farmers preparing for tough times by cutting their operational expenses now?

To answer these questions, McKinsey's Agricultural Commodity Research Engine (ACRE) reviewed the current landscape. In addition to examining economic trends, we surveyed some 200 US farmers with 500 or more acres of major row crops (corn, cotton, soybeans, and wheat) about their purchasing plans for this spring.[1] The results painted a mixed picture. Although many economic indicators for agriculture raise concern, the sector does not appear poised for a repeat of the 1980s—at least not as reckoned by farm spending for this spring. Although 51 percent of farmers plan to delay equipment purchases, many expect their expenditures for seed, fertilizer, and crop protection to rise. Here are the main takeaways from our economic research and survey.

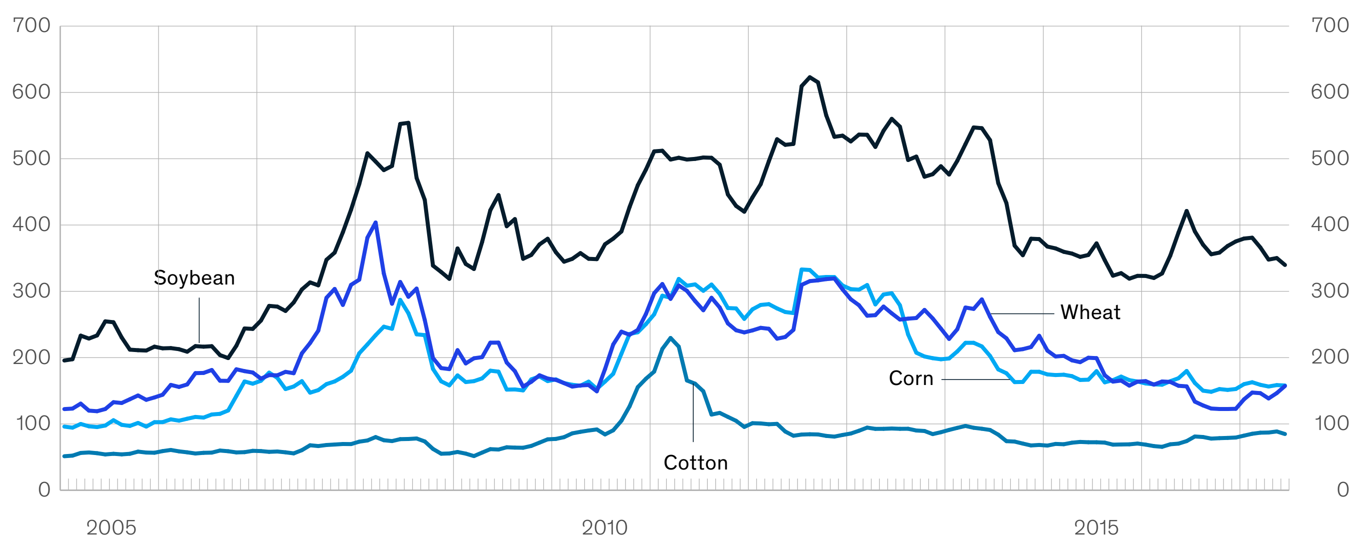
Signs of trouble

The price of major agricultural commodities hit record highs from 2011 to 2014 (Exhibit 1). Since then there's been a steady decline from those heady levels, but the cost of agricultural inputs and

Exhibit 1

Commodity prices have fallen from their recent peaks and continue trending downward.

Real prices for select commodities, 2005–17, $ per metric ton



Source: International Monetary Fund

[1] The farmers were randomly selected to serve as a representative sample, all from the main row-crop states: Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, and South Dakota.

equipment has increased or remained stable.[2] This combination of lower income and rising costs is expected to push net farm income (the aggregate total) to a 12-year low in 2018, $66.3 billion[3]—a $9 billion decline from 2017. Net income per farm, a key measure of profitability, was down 15 percent over the same period and more than 40 percent lower than it was during the commodity-price peaks of 2014.

Of course, the economic pressures vary by crop and region. Row crops have been especially hard hit: average income for these products, which account for over 80 percent of US agricultural acreage, is down 30 to 55 percent over the past four years. By contrast, income from specialty crops, including fruit, tree nuts, and vegetables, fell by only 9 percent over the same period. At the regional level, farms in the northern Great Plains have fared better than most. Although net income per farm declined by 25 percent there, that is better than the US average, 40 percent. But while the details may vary, one fact is clear: farmers face hard times everywhere, and no crop or region is exempt.

As incomes fall, farmers rely more on financing to cover their operating expenses. This trend has brought the farm debt-to-income ratio to its highest level since the 1980s (Exhibit 2), when farm bankruptcies rose, agricultural banks failed at alarming rates, and purchases of agricultural inputs and equipment fell dramatically (see sidebar, "The last great US farm crisis," for more on those troubled years).

Although some current economic trends suggest that the sector might be in store for a repeat of the 1980s, this may not be so. Despite rising debt levels, farmers are less vulnerable to economic ruin than they were in the past, thanks largely to shifts in the following areas:

— **Interest rates.** The average majority prime rate that banks charge on short-term loans to businesses is around 5 percent today, much lower than the rates (approximately 20 percent) in the 1980s.[4] As a result, farmers can carry more debt.

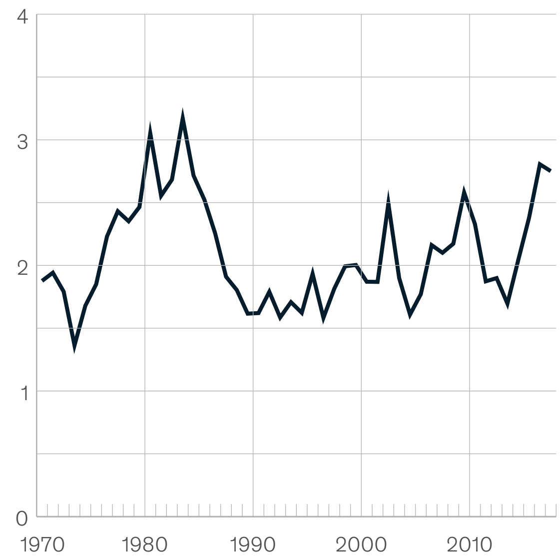
— **Real-estate prices.** Average US farm values have been roughly stable, at $3,000 an acre, since 2014. In the 1980s, prices dropped steeply as the first signs of trouble emerged.

— **Loan conditions.** Stricter lending policies have helped weed out unqualified borrowers, so there are fewer defaults. When banks assess eligibility for a loan, for instance, they now look at cash flows rather than the market value of collateral.

Exhibit 2

The farm debt-to-income ratio is nearing record highs.

Historical US farm debt-to-income ratios, 1970–2017, ratio[1]



[1] Ratio was determined by dividing farm debt by earnings before interest, taxes, and capital consumption.

Source: US Department of Agriculture agricultural census; Economic Research Service farm-Income and wealth statistics

[2] US Department of Agriculture, Economic Research Service, data.ers.usda.gov.
[3] US Department of Agriculture, Economic Research Service, ers.usda.gov. Final figures for 2018 are not yet available.
[4] The average majority prime rate, also called the bank prime loan, reflects the amount charged by banks on short-term loans to businesses.

Interest rates have been slowly trending upward, however, and this may be contributing to an increase in agricultural bankruptcies, especially in regions that depend largely on row crops. In the Midwest, for instance, farm bankruptcies increased by 20 percent from 2017 to 2018. As interest rates continue to rise—or if real-estate prices suddenly fall—farmers could face even greater financial instability. For now, however, they appear less exposed to the extreme pressures that forced many farms to cease operations in the 1980s.

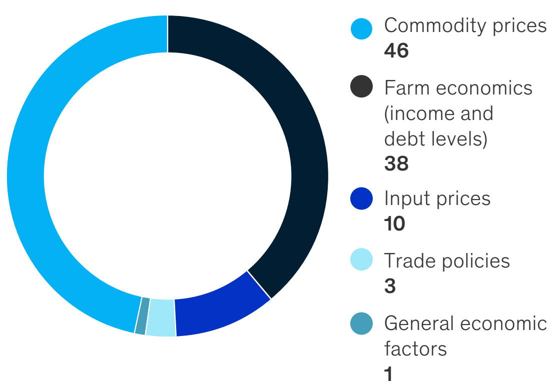
Signs of hope? US farm-survey results

Farmers may not be doomed to repeat the past, but that doesn't diminish the acute financial pressures they face today. When we asked survey respondents about the top factor that influenced their purchasing decisions, 46 percent cited commodity prices (Exhibit 3). Some of the other factors listed in the survey, such as trade policies, may affect commodity prices, but their impact is difficult to quantify.

Exhibit 3

Commodity prices and farm economics are the top factors influencing farmers' purchasing decisions.

Top factors influencing farmers purchasing decisions this year, % of respondents (n = 191)



Source: McKinsey analysis

Although farmers may be concerned about commodity prices and their own financial well-being, this has not translated into lower spending. Our survey showed that, on average, farmers plan to increase expenditures for fertilizer by 7 percent and for crop protection by 3 percent, while spending on seeds will remain flat (Exhibit 4). Although some farmers plan to decrease spending in each of these categories, far more planned either to increase it or to hold the line. Thirty-six percent of farmers, for example, planned to spend less on seeds, but 20 percent expected to maintain their current spending levels, and 44 percent predicted an increase. These findings suggest that farmers have already cut spending on agricultural inputs to the greatest extent possible. They may hold off further reductions, believing that such measures could jeopardize top-line revenues by decreasing yields and production.

These findings are encouraging but do not necessarily signal that farmers are bullish about their prospects, particularly for spending on fertilizers: they may expect to spend more on them simply because prices rose by a projected 9 percent in 2018 and are predicted to increase by 2 percent in 2019.[5] Further, our survey suggests that 28 percent of farmers plan to spend more on generic products this year—another indication that farmers are feeling a financial pinch.

For capital purchases, such as tractors, the picture was a bit less optimistic. Only 2 percent of survey respondents planned to accelerate their spending and 47 percent anticipated no change in the timing of their purchases (Exhibit 5). More than half—51 percent—indicated that they planned to postpone expenditures. (The survey did not ask questions about how much farmers expected to spend, only the timing of equipment purchases.)

Where do we go from here?

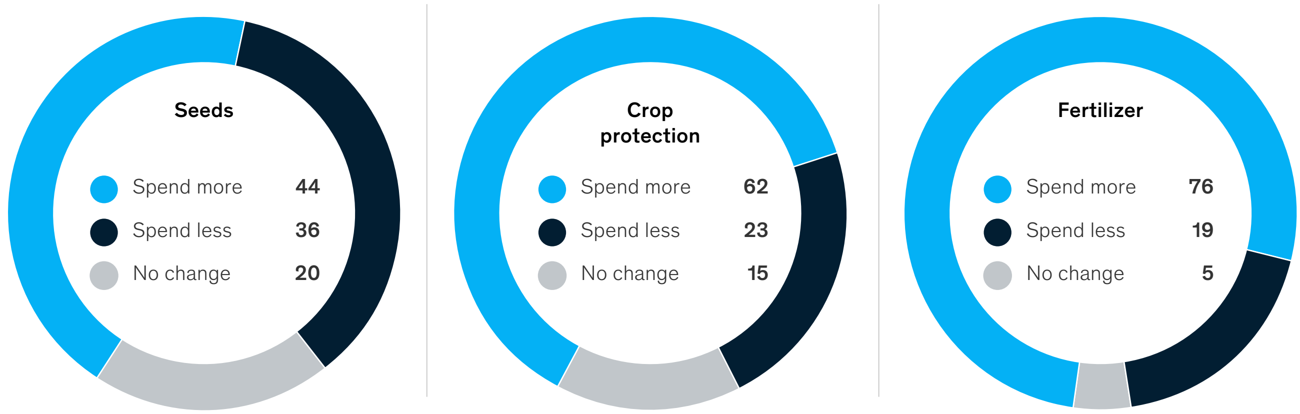
The survey findings are interesting but a bit contradictory. Economic indicators are troubling,

[5] *Let's Talk Development*, "Fertilizer prices to rise in 2019 on supportive fundamentals," blog entry by John Baffes and Wee Chian Koh, November 30, 2018, worldbank.org.

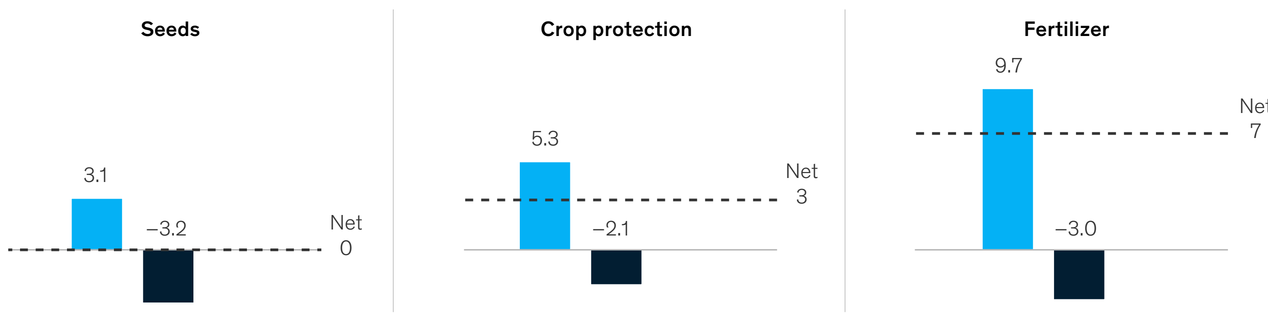
Exhibit 4

Farmers expect to spend more on crop protection and fertilizer this year, while holding seed purchases flat.

Farmers' expectation of spending this year, % of respondents



Farmers' weighted average[1] of spending this year, % change



[1] Based on farmers who answered "spending less" and their production acres.
Source: McKinsey analysis

but farmers appear committed to investing in a successful season, at least given their current spending plans. What do these findings mean for suppliers? Long-term predictions are difficult to make, but a few messages resonate for this spring:

— With capital spending in decline, equipment manufacturers cannot be complacent. It may be time to develop new pricing or sales strategies to maintain revenues in competitive markets. Additionally, demand for equipment maintenance and parts may increase, requiring a strong focus on high service levels in dealer networks. Companies that build customer loyalty through this strategy may have an advantage in future purchases.

— For agricultural inputs—especially fertilizers and crop protection—input players should focus on strong execution and demonstrate the value of their products. To succeed, they will need a detailed, micromarket view of their growth opportunities, especially in areas where greater market penetration is possible. Suppliers must also maintain discipline in pricing and promotions to capture full value.

Sidebar

The last great US farm crisis

During the farm crisis of the 1980s, economic indicators were bad on all fronts. Farm debt-to-income levels rose dramatically, contributing to a tenfold increase in bankruptcies during that decade. Agricultural banks also suffered, accounting for 30 to 50 percent of total bank failures from 1984 through 1987.

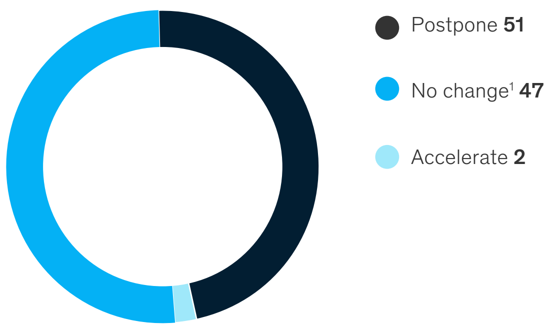
With agricultural income falling, the number of small farms (under 200 acres) plummeted by 51 percent from 1980 through 1987. Many of these small operations were consolidated into larger farms. With the sector in turmoil, the value of farmland dropped by almost 25 percent from 1984 through 1987 alone.

Suppliers of agricultural inputs and equipment also suffered during the 1980s: spending on agricultural inputs decreased by 16 percent from 1980 to 1983, for instance. Capital purchases fell by 13 percent from 1980 to 1987 as farmers increasingly relied on older or refurbished equipment.

Exhibit 5

Only 2 percent of farmers plan to accelerate equipment purchases this year, while more than half plan to postpone them.

Equipment purchasing plans, % of respondents



[1] Stay on normal purchasing schedule.
Source: McKinsey analysis

— With the market uncertain, undervalued assets might be ripe for acquisition at bargain prices. This situation could create opportunities both for large investors and individual land owners to expand production and gain scale, which would lower operating costs.

Over the short term, financial troubles in the farm community will have a limited impact. The sales of equipment players might begin to decline this spring as farmers postpone purchases, but spending for agricultural inputs will be stable or higher.

Kyle Becker is a manager with the ACRE group in McKinsey's Denver office, where **Hussain Sharifi** is a specialist and **Ryan McCullough** is an associate partner. **Joshua Katz** is a partner in the Stamford office.

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