Market & Investment Insights

Farmland investing in California: Withstanding a historic drought

Tim Hopper, Chief Economist, TIAA-CREF

Biff Ourso, Portfolio Manager – Agriculture, TIAA-CREF

Bruce J Sherrick, Director TIAA-CREF Center for Farmland Research

Article Highlights:

- California, the state with the highest value of agricultural production in the nation, is enduring a prolonged drought and the governor has announced a state of emergency.
- Risks to crop yields from drought, while real, are well-understood and can be planned for by investors and landowners, although long-term droughts can be problematic for all investors.
- There are many ways farmland investors may mitigate the impact of droughts, including by acquiring and banking water, winter transfers of underground water to above ground storage, and ensuring surface water rights.
- Droughts and other short-term weather events should not negatively affect the long-term value of TIAA-CREF's farmland holdings in the region

California, the state with the highest-value of agricultural output in the nation is home to a $35 billion agricultural industry. It is also bone dry. After three consecutive years of below-normal rainfall, California Governor Jerry Brown declared a drought emergency in January. And B. Lynn Ingra, a widely quoted professor of earth and planetary sciences at the University of California, Berkeley, says the state may be on track for the worst drought in 500 years.

Investors with direct or even indirect exposure to the agricultural sector are paying close attention to headlines like these coming out of California and wondering if the drought will affect their portfolios and retirement savings. While long-term agricultural asset values typically remain unaffected during short-term disruptions, like extreme weather, this drought highlights the need for a farmland investment process that incorporates sound risk-management principles to mitigate the potential harm caused by events such as droughts.

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The risks and rewards of farmland investing

Investments in farmland offer significant benefits that make them a solid choice for a well-diversified portfolio, including current cash income, potential appreciation over time and inflation protection. Consider this: From 1970 to 2013, agricultural land values, as measured by the USDA's Economic Research Service database, outperformed both domestic stocks and bonds on an annualized basis, returning 10.68% compared to 6.82% for the S&P 500 and 6.87% for 10-year Treasuries.[1] Note that over shorter time frames performance has varied due to changes in farmland values, and the relative performance of stocks and bonds. Land values also handily outpaced inflation[2], which averaged 4.36% during the period. What's more, farmland potentially diversifies a portfolio in two important ways: Farmland returns have historically had low or often negative correlation with stocks and bonds, and farmland is globally dispersed across continents and both hemispheres, providing geographic diversification.

Looking forward, several powerful, long-term trends bode well for farmland value: a growing global population, changing dietary habits and a shrinking supply of arable land. Keep in mind that the world's population grows by about 25 million people per year; to keep pace, agricultural producers will have to nearly double their output by 2050, when the world is expected to have 9 billion people. Meanwhile, as the world has more mouths to feed, people in the developing world are becoming more prosperous and consuming more meat and higher-quality calories in general, which requires that they buy even more corn and grain to feed their livestock. In addition, alternative fuel production—primarily ethanol and biodiesel—is boosting demand for arable land.

Of course, every asset class has its risks. As investments, real assets such as farmland are subject to fluctuations in property values, as well as higher expenses or lower income than expected. They sometimes do not generate sufficient cash flows and might need additional capital. Other risks include a lack of liquidity (i.e., few potential buyers), and investing in emerging markets can carry higher political and financial risks than in developed markets. However, expertise, local connections, and a long-term investment horizon can significantly reduce these hazards.

Planning for water shortages before a drought

Pests and weather pose risks to crop yields, but a season or even a few seasons of drought should not have a long-term impact on farmland investing. Many farmers have successfully managed droughts, pests and floods. Drought is a well-understood, age-old risk that can be planned for and mitigated, especially in short time horizons. The current drought is an excellent case in point. TIAA-CREF owns multiple properties in California across more than 37,000 planted acres, and as part of the property acquisition process, the stability of the water supply is always a primary focus of due diligence. This review includes research on the following water-related subjects:

- Historical rainfall levels, patterns, and distribution
- Availability and stability of the underground aquifer in the area of the property
- Availability and reliability of surface water from state, federal, or local water districts
- The willingness of water districts to work with land owners to buy, sell, and store water
- Availability of banked water supplies (water stored or "banked" underground)
- Presence of "excess" land with water rights that could be used for the benefit of permanent crops

Where possible, TIAA-CREF seeks to acquire properties with multiple sources of water, such as reliable groundwater wells that are supplemented by the right to receive surface water from water districts. Properties that are not serviced by water districts or other surface water rights are located in areas with historically reliable ground water supplies. Furthermore, advanced planning for those properties that typically receive most of their water from water districts, which are likely to have no supplies available in 2014, is required to ensure access to and availability of banked water. When droughts linger, however, they may cause problems for all farms—no portfolio is immune from a long-term drought. The current drought has demonstrated the value of planning for short-term water shortages.

In addition to acquiring land with fundamentally strong water supplies, actively managing farms may offset, to the extent possible, the impact of drought conditions. Strategies to accomplish this may include the installation of water-conserving technologies such as drip and micro-sprinkler irrigation systems; acquiring and banking water when possible; and winter transfers of underground water to above-ground storage to make the water more readily available to the farm during dry periods.

A long-term view of farmland investing

Looking back at the 2012 drought across the U.S. Midwest, it is important to note that the drought impacts had no material negative impact on farmland values, and similarly we expect minimal long-term impacts for our California investments. This does not mean the danger of droughts, pests and floods are to be ignored; indeed, planning for these hazards is critical to maximizing returns and managing farmland investment risk. The longer a drought persists, the greater the potential for material impacts to any farmland portfolio. TIAA-CREF's long involvement in farmland and deep connections within the agriculture industry provide us with the experience and expertise to properly analyze these risks, which fall outside the traditional realm of financial markets. We believe that farmland is among several private investments in real assets that offer the potential for competitive risk-adjusted returns, a hedge against inflation and improved portfolio diversification.

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[1] These performance figures do not reflect TIAA-CREF performance, but rather index performance. It is not possible to invest in an index. Performance for indices does not reflect investment fees or transactions costs.
[2] Based on the Consumer Price Index.

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