

The **Investment Advantages** of **Organic Farmland**

This white paper is a joint project between Alex Mackay, Iroquois Valley Farms and the Lewis Institute at Babson College.



Summary

This white paper aims to illuminate the financial, social and environmental advantages of investing in organic farmland.

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IROQUOIS VALLEY FARMS is an organic farmland real estate investment trust that offers investments in a diversified portfolio of organic farms and mortgages. Iroquois Valley Farms is a certified B-corporation. For more information on the company and its investments, visit: www.iroquoisvalleyfarms.com



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ABOUT THE AUTHOR

Alex Mackay is a 2017 MBA candidate at Babson College. With a wide variety of experiences in food, farming and finance, Alex is committed to creating food and agriculture solutions that combine innovation, sustainability and profit. Email Alex at aldomackay@gmail.com

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In every deliberation, we must consider the impact on the seventh generation... even if it requires having skin as thick as the bark of a pine¹.

– *Great Law of the Iroquois*

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Savvy investors are planning for the realities of a changing planet. The climate is shifting, the population is growing, and our resources are becoming more and more finite. Environmental stewardship is becoming increasingly key to our economic vitality. As a result, investors are financing businesses that make a profit *because of* environmental sustainability, rather than in spite of it. The financial returns are real, and the associated impact goes a long way towards creating a path for future generations to enjoy the same prosperity that we do.

Investing in organic farmland offers one such opportunity. Organic farming can grow the world's food today without compromising the environment tomorrow. The crop yields from organic farms are abundant and nutritious, and the organic system naturally regenerates the ecological biodiversity that is so critical to farmland's ongoing success. Nutrient-rich organic soil is less reliant on man-made inputs, and more resilient in times of drought and flood, important advantages in a world where resources will dwindle and weather patterns will become more severe.

At market, organic food enjoys higher prices and faster growth. With costs and yields comparable to their conventional neighbors, organic farmers have the opportunity to sustain a higher profit year after year. The farmland asset class has shown steady, stable growth - a "real asset" that offers tactile value in any future economic climate.

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With awareness of increasing opportunities in the sustainable, responsible and impact investing arenas, investors can take actionable steps toward shifting their investments and building a more positive, resource efficient economy².

- Morgan Stanley 2016 Investor Pulse

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All of these advantages add up to a major opportunity for the impact investor. The following pages help illustrate that opportunity and show that investing in organic farmland is a great way to make an immediate and practical impact while realizing an honest and forward-thinking return.

THE FUNDAMENTAL VALUE OF FARMLAND

There are few assets with an underlying value as fundamentally important to the global population as the farmland that creates our food supply. Regardless of international trade deals, advancements in technology or the election of a new world leader, the people of earth will need to eat, and the value of farmland will reflect that basic reality.

This value becomes quite clear after considering the world's exponentially growing population. The UN estimates that over 11 billion people will inhabit our planet by the year 2100ⁱ. As a result, the ratio of farmland per person has been in steady decline for decadesⁱⁱ.

This situation creates a simple supply and demand scenario: farmland's supply will decline, but the demand for its product will rise steadily. The result will be an increase in price – not only for food itself, but for the underlying asset that produces it as well. A history of farmland's value illustrates this point.

Over the past few years, investors of all shapes and sizes, from large institutions to traditional investment banks to religious organizations, have begun to respond by investing tens of billions of dollars in agriculture and farmland-focused opportunities.

One example is TIAA, the global asset management giant that specializes in the long-term investments of education and health care professionals. At the end of 2015, TIAA held over \$5.1B in agriculture

investments, including 1.5 million acres of globally diversified farmlandⁱⁱⁱ. TIAA's interest was directly related to the finite supply and fundamental necessity of farmland moving forward^{iv}.

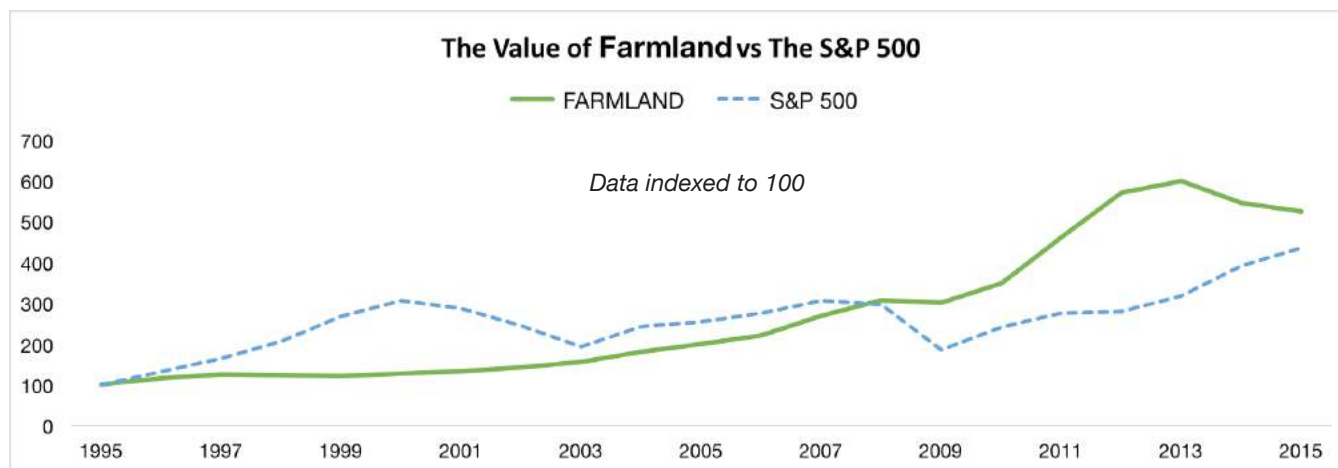
A "REAL ASSET"

Farmland's role in feeding the world's population is representative of its characteristic as an asset – physical, stable, and uncorrelated to the market.

Investors categorize farmland as a "real asset" – a tangible entity with physical characteristics and a finite supply. Oil, fresh water, precious metals and real estate are other examples of real assets. Real assets are generally more illiquid than other financial assets, but they also offer a great source of stability against economic realities like market volatility, inflation, and changes in the value of currency. As a result, farmland sees very little correlation to the value of stocks and bonds, making it a stable long-term investment and a great diversification play.

The physical and finite nature of the farmland asset class, the history of low risk with steady returns, and the opportunity for investors to receive scheduled payments in the form of rents and dividends all make farmland an attractive asset for investment – some even call it "gold with a coupon".

Unlike traditional real estate investments, farmland should not depreciate over time. An acre of land usually retains its productivity from one generation to the next given the availability of basic inputs like





healthy soil, clean water and the warm energy of the sun. This is why sustainable farming methods have become so important.

THE ENVIRONMENTAL IMPACT OF FARMING

As a result of modern agriculture practices, the durable productivity of farmland is becoming less guaranteed in the future. Conventional farmers are relying almost exclusively on industrial techniques that use chemicals for insect and pest control, petroleum-based fertilizers for soil regeneration and monoculture for revenue maximization^v.

These practices, encouraged by large multinational corporations selling farmers their inputs, are having a significantly negative impact on the long term viability of the very resource all farms rely on to create a productive and profitable yield: healthy and abundant topsoil.

Study after study indicates that the once plentiful and seemingly endless supply of topsoil in places like America's heartland is being eroded more quickly than is safe for the long-term health of our agriculture system and food supply^{vi}.

Compounding this problem, conventional farmers' only defense in the face of nutrient deficiency, insect infestation and soil erosion is to use more and more of the chemicals that caused these problems in the first place - a negative feedback loop that is costly, shortsighted and potentially toxic.

Recent research has argued that insects and weeds are becoming more and more resistant to these chemicals, bringing the long-term cost-effectiveness of these farming solutions into question. One study, entitled "The Rise of Superweeds," highlights how widespread herbicide immunity at conventional farms is causing infestations that affect over 60 million acres of conventional farmland^{vii}.

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Every meal on our plates contains ingredients grown on a farm. We all need farms to survive...We need land to grow the food, healthy soils to nourish the crops and livestock, clean water on farms, and farmers to make it all happen. But the land, soil, water and people we need to grow our food are at risk³.

- *The American Farmland Trust*

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The problems we face with respect to soil fertility, biodiversity, food quality, and local economies are not primarily problems of technology. They are problem of finance⁴.

– Woody Tasch in *Inquiries Into the Nature of Slow Money*

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USDA APPROVES TRANSITIONING PRICING: JANUARY 2017

In a move aimed at closing the significant gap between American demand for organic food and the domestic supply of organic products, the USDA approved a new transitional certification program at the beginning of 2017. “This will help ease the transition process to organic, allow farmers to sell their products as certified transitional at a premium price and help encourage more organic production.” Transitional prices mean farmers will be able to create additional revenue before the three-year organic transition period is complete. This should provide more cash flow to the farmer and ultimately result in higher returns for the organic farmland investor.

This new system is a result of a partnership with the Organic Trade Association, and an acknowledgment by the USDA that farmers face significant challenges when choosing to go organic – challenges that should be met with creative and enthusiastic support given the long-term economic and environmental benefits of organic agriculture.

A SUSTAINABLE ALTERNATIVE

Organic farming offers an alternative - for the investor, the farmer and the public at large. Combining traditional techniques that have worked for centuries with modern innovation and heartfelt ingenuity, organic farmers produce a comparative crop yield without threatening the land on which they are reliant. This fact is key: not only does organic farming compete with conventional farming on yield, it does so in a way that keeps the farmland productive and valuable for generations to come. This is a clear advantage for the organic farmland investor.

Crucial to the future value of organic farmland is the dark, rich magic of organic soil. Organic soil is naturally suited to produce a healthy and abundant crop. Full of nutrients, stable for seeds, resilient to erosion and better suited for volatile events like droughts and floods, this soil makes organic farmland a valuable

asset today, while offering up an environmentally sustainable path to value in the future.

The USDA defines organic as “integrating cultural, biological and mechanical practices that foster cycles of resources, promote ecological balance and conserve biological diversity.”^{viii} On the farm, this means an increased dependence on natural inputs like animal manure, oftentimes sourced from partner farms within the region. It also means that farmers use strategic management techniques such as crop rotation to regenerate the fertility of their fields. And instead of planning operations around industrialized machines, organic farms more often rely on local labor forces to plant, manage and harvest their crop. This all amounts to a system that the USDA itself calls “a tactful approach to successfully carrying out common agriculture activities.”^{ix}

FARMING COMPARISON: ORGANIC VS CONVENTIONAL

Since 1981, the non-profit Rodale Institute has been conducting America's longest running, side-by-side comparison of organic and conventional agriculture at their experimental farm outside Allentown, Pennsylvania. Focusing primarily on corn and soybeans, the Institute's research provides a clear illustration to investors of the productivity, resilience, and long-term value of the organic farmland asset class.

Here are some highlights of the study's findings, taken directly from the institute's publications and website:

- Following an initial decline in productivity during the three-year transition from conventional, the yields of organically managed crops have consistently matched or surpassed conventional.
- Comparing cost and price, organic systems were nearly three times more profitable than the conventional systems. Even without the organic price premium, organic systems proved to be competitive with their conventional counterparts.
- After considering all the various steps to bring crops to harvest, from seed to fuel to inputs to labor, organic systems used 45% less energy than conventional systems.
- Organic soil performed better in times of stress like droughts and floods – a feature attributed to the greater water content and season-long availability of nutrients in organic soil.

**For more information about the Farming System Trial® and the Rodale Institute, visit:
www.rodaleinstitute.org**





THE FAST GROWING ORGANIC MARKET

At market, organic food usually enjoys a price premium, an advantage for both the farmers working to cover costs and the investors looking for a healthy return. Over the past several years, organic prices ranged from two to three times higher for commodities like corn and 30-90% higher for various vegetables, fruits, dairy items and meat products^x. The year-over-year growth of organic food prices is also outpacing conventional food. In 2015, organic sales grew almost 11% compared to just over 3% for the food market as a whole^{xi}.

What's exciting for farmers and investors is that the price premium has done little to slow the growth of the organic food industry. What began as a fringe movement has turned into a full-fledged cultural shift, with organics approaching \$50 billion in sales in 2016. This growth is fueled by millennials, who now make up over 50% of the shoppers buying organic^{xii}. These younger consumers prioritize their own health

and are quite cognizant of the environmental and social impact of industrialized agriculture. Research shows that they are feeding their young families organic as well, one of a series of reasons why forecasts are predicting that the organic food industry's growth will continue to outpace its conventional competitors.^{xiii}

Even with all of this excitement around organic food, domestic supply to the American market is dwarfed by consumer demand. As a result, a huge percentage of all the organic staples like corn, soy and wheat are imported from around the world. With consumers asking more and more questions about where their food comes from and how it was grown, there is a great opportunity for American farms to capitalize.

Compounding this point, only about 1% of all farmland in the US is currently certified organic. Even with higher prices, unmet demand and impressive cultural awareness, the overwhelming majority of farmers are missing out on a significant opportunity in the organic market.

FINANCING ORGANIC FARMS

If organic farming seems like such a no-brainer, why don't we see more farmers making the switch? The answers to this question give clues into why organic farmland investment is such an effective way to make a positive impact on farmers, their communities and the world at large.

Farmers crave stability, and for many, transitioning to organic can add confusion to an already murky picture of what the future might hold. Converting a farm to organic takes a USDA mandated transition period, a three-year interval to rid the soil of any chemicals and fertilizers that are prohibited on organic farms.

This means farmers must wait three years to label their food as organic and enjoy the price premium that organic cultivation affords. Patience has never been a problem for farmers, but many of them do not own their own land. In this case, the farm could literally be sold out from under them while the transition to organic is taking place, forfeiting any possible future profits and making the added costs of transition a complete loss.

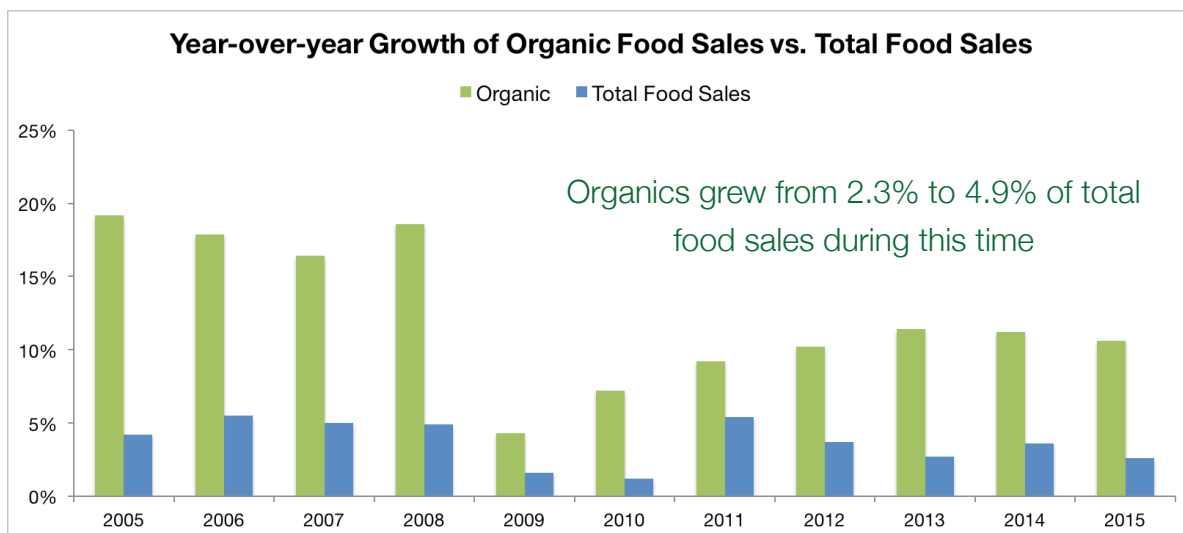
Of course almost all farmers would love to own their own land, but that option also faces significant hurdles. First and foremost, available farmland is hard to come by. Recent studies by the USDA approximate that

only 10% or less of farmland will become available for purchase in the next five years^{xv}. Farmland is more often passed down through families, farmer-to-farmer or landlord-to-landlord, making land acquisition by the busy and cost-conscious farmer a difficult path.

For farmers that do have the opportunity to buy land, financing organic farmland purchases through traditional lenders also proves difficult. Traditional sources of capital remain skeptical about the financial structure of organic farms and don't understand the added costs and time commitments required to transition a farm to organic. This leaves investors who see the advantages of organic farmland investment with a major opportunity: support progressive farmers, prioritize the long-term health of our environment and realize a healthy, stable return.

MAKING A PROFIT AND MAKING AN IMPACT

Over the past decade, asset management companies have begun to offer individual investors the opportunity to directly invest in organic farmland by purchasing equity in a diversified portfolio of farms. This relationship between investor, financier and farmer allows all three parties to financially benefit while supporting an environmentally sustainable and culturally advantageous method of financing American small business.



Source: Organic Trade Association 2015 Survey

SPOTLIGHT ON IROQUOIS VALLEY FARMS



Iroquois Valley Farms is an organic farmland investment company that gives socially responsible investors the opportunity to directly impact the growth of organic farmland. The company uses private investment capital to acquire farm properties that are leased to mid-size sustainable family farmers. Investors are able to purchase equity and debt positions in the company through private offerings, thereby taking an ownership stake in a diversified portfolio of organic farms.

Most importantly, Iroquois Valley Farms prioritizes symbiotic, long-term relationships with the farmers working the land. This creates a financially supportive structure for the farmer to transition successfully to organic practices. The Iroquois Valley Farms investment model provides a profitable return for the farmer, the company and its shareholders. Here are some highlights from Iroquois Valley Farms:

FARMER FIRST INVESTMENT MODEL

The company only purchases farmland after establishing a relationship with farmers who are looking to expand their existing operation or start farming on their own. Oftentimes referred to one another through the tight-knit organic community, this personal connection between lender and farmer allows both parties to make a practical plan for purchasing the right land and structuring a fair mortgage that allows for the intricacies associated with transitioning land to organic.

LONG TERM STABILITY

Iroquois Valley Farms guarantees farmers that they will never sell the farm out from under them. Moreover, the farmer is given the opportunity to purchase the land at fair market value at the end of seven-year vesting period. These terms offer that farmer an invaluable resource – a future they can plan on. As a result, the time and costs associated with transitioning a farm become less intimidating, and the farmer can develop a management program that prioritizes long-term gains. The result is a sustainable ecosystem, productive soil and a steady, profitable return – for the investor, the lender and the farmer themselves.



UNDERSTANDING THE TRANSITION PERIOD

Unlike traditional farm lenders who don't understand the financial realities of transitioning to organic, Iroquois Valley Farms structures their mortgages in a way that requires less rents from the farmer during the transition period and then capitalizes on the increased value of the crop after the farm has established itself. This is important contrast to the difficulty many organic farmers face applying for loans in communities that have little or no organic activity or understanding. Iroquois Valley Farms sees value where other capital lenders do not – in the long-term benefit of organic practices.

DIVERSIFIED PORTFOLIO

Iroquois Valley Farms' portfolio of 32 farms offers diversity in almost every category: size, crop selection, geographic location, management, and phase of organic development. As a result, investors enjoy returns that reflect the overall profitability of the entire portfolio. Potential risks like drought, flood, and the market volatility for a specific crop are mitigated. Additionally, revenues from more established farm operations offer a balance to the lower rents from newer farms that are in the process of transitioning to organic.

TRIPLE BOTTOM LINE

The company is focused on creating public benefit alongside investor returns. In 2012 the company was certified as a B Corporation, awarded to companies that meet rigorous standards of social and environmental performance, accountability, and transparency. The company focuses on creating social, environmental and financial value for all stakeholders, and also feels strongly that organic farmland is an investment offers a sustainable path forward without compromising financial returns.

HISTORY OF RESULTS

Since its founding in 2007, Iroquois Valley Farms has grown from one family farm in Iroquois County, Illinois to 32 farms in 8 states across the country. New farm acquisitions and increasing farm rental incomes have generated an average year-over-year revenue increase of fifty-percent since 2010, and equity investors have seen double digit returns since inception.



THE FINANCIAL BENEFITS OF ORGANIC FARMS

The financial rewards for investing in organic farmland go beyond investor returns. In May 2016, Penn State Associate Professor of Agricultural Economics Edward C. Jaenicke published a study for the Organic Trade Association entitled *US Organic Hotspots and Their Benefit to Local Economies*. Jaenicke and his colleagues identified 225 organic hotspots around the US, “counties with high levels of organic agricultural activity that have neighboring counties with high organic activity.” In sum, the paper concluded that:

- Organic hotspots have lower poverty rates
- Organic hotspots have higher median annual household incomes
- Organic agriculture can be used as a tool for economic development
- Outreach and knowledge transfer are critical to creating organic hotspots

Whereas conventional farming relies on heavy machinery and synthetic inputs manufactured all over the world, organic standards ensure that farmers rely on local labor forces and natural inputs like animal manure sourced from regional partner farms. The money associated with these costs is much more likely to stay local, a boom to the small, rural farming communities that are so critical to the future of our food supply. Investing in organic farmland has an immediate impact that accelerates the productivity, sustainability and profit of organic farms.

For more information, visit: www.ota.com/hotspots

For the investor, the diversification of the portfolio is key. It means owning a small part of several farm operations that vary in size, location, and crop selection. As opposed to investing directly in one farm, a portfolio limits the risk of unforeseen challenges that may occur as a result of drought, disease, infestation or fluctuations in the price of crops at market. Additionally, the investor has the added benefit of a partnership with an investment operation that understands the nuances of financing and managing an organic farm.

An honest relationship with the asset manager is equally important for the farmer, who is looking for a partner that understands the money and time required to properly transition land into an organic farm. By helping the farmer locate available land, purchase it at a fair market price, and establish

terms that take the organic transition into account, asset managers provide farmers with the enlightened capital to accomplish their goals: make a reasonable living, support their families and do something they love.

Food has taken a prominent and celebrated role in the lives of many Americans. From television networks to social media shares to entrepreneurial endeavors promising to change the way the world eats, food has risen to the level of celebrity, becoming far more than sustenance in our everyday lives.

With all of the excitement and energy around food has come increased scrutiny, and that's a good thing. Consumers are asking questions they had never before considered – about where their food comes from, how it is grown, and the impact it has on our



ORGANIC FARMLAND IN A SELF DIRECTED IRA

Farmland's characteristics as an asset – physical, finite and relatively illiquid – make it an attractive long-term investment option. As a result, it is a natural fit for an Individual Retirement Account (IRA).

Farmland's low volatility and steady growth offer a counterweight to other IRA assets, like traditional stocks. There is the added benefit of a cash dividend in years where organic farms realize financial success. Unfortunately most IRA custodians only allow for publicly traded securities, but a small group of custodians focus on self-directed IRAs, allowing investors to own a variety of non-traditional assets including organic farmland or private enterprising investing in organic farmland.

IRAs are designed for long-term investments where the investor might not pull money from the account for decades. As such, organic farmland offers a great diversification - the natural productivity of the asset increases year-by-year and the normal cyclicalities seen in other investment options does not factor.

society, our economy and our environment as it makes its way from soil, pasture and ocean to plate. The organic food movement is a reflection of this demand for quality, transparency and sustainability. Billions of dollars a year are being spent by people who are literally choosing to put their money where their mouth is. The impact investor can play an equally important role in making these trends more widespread and permanent.

Investing in organic farmland makes a direct impact in the sustainable food marketplace. By supporting the capital needs of farmers who are looking to transition to organic, investors facilitate an increase in the domestic supply of organic food, which currently lags far behind demand. At the same time, these investors will be gaining equity in an asset class that has a bright long-term future, driven by that same

growing demand, and buoyed by premium prices and an underlying asset value that should remain comparatively healthy, productive, and regenerative in an uncertain environmental future.

More than anything else, however, investing in organic farmland is an acknowledgement that profit and sustainability are inexorably linked. For investors looking to be part of the solution, organic farmland offers the opportunity to positively impact one of our most precious assets, while still realizing a healthy and stable return.

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We believe that the consideration of environmental, social and governance factors can produce competitive, long-term financial returns for our clients while also contributing to positive societal outcomes, broader economic development and a health environment for healthy generations⁵.

– TIAA CREF Investing in Agriculture

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