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## **The supply chain: a new opportunity for business and environmental resilience**

*Suzy Friedman: Environment Defense Fund*

Risk is an amazing motivator. Nobody likes feeling vulnerable – not people and not corporations. Entire industries are built around managing risk – insurance, re-insurance, diverse fields of consulting and more. Despite this fact, many companies are not facing up to a source of growing risk to their own businesses: the risks of not addressing sustainability.

In fact, the theme of this October's [World Food Day](#) is "*Climate is changing. Food and agriculture must too.*" A report by [Accenture](#) in 2015 highlighted that supply chains in many nations, including the US, China, and Italy, are vulnerable to climate change.

Yet the world is relying on food and agriculture supply chains to produce much more food than they are today. The United Nation's Food & Agriculture Organization estimates that agricultural production must rise by about 60% by 2050 in order to feed a larger population. We must meet this production need while addressing the very real problems created by agriculture's environmental footprint. Agriculture already occupies almost 40% of the world's land, consumes 70% of global freshwater for irrigation, and contributes one-third of global greenhouse gas emissions.

We cannot just produce more food – we need to produce more while shrinking the environmental footprint. The good news is there are great opportunities for food and agriculture to address these vulnerabilities, to adapt to and help mitigate not only climate change, but growing pressures on water quality and quantity and other natural resource needs. Key to bringing these opportunities to fruition is collaboration and connections along the supply chain.

Some leaders in the food and agriculture sectors are taking action, setting the stage for others to do so as well:

- Walmart catalyzed action by many when it asked major food companies to develop and implement plans for how they will increase adoption of more efficient use of fertilizer and soil health practices in their corn, wheat, and soybean supply chains. To date, almost 20 major food companies have stepped up to meet this challenge.
- The Environmental Defense Fund (EDF) is working with a number of these companies – Smithfield Foods, Land O'Lakes, Unilever, and Kellogg — to find viable solutions to deploy continuous improvement programs in the sourcing areas for their key commodity ingredients.

The U.S. Sustainability Alliance at [www.thesustainabilityalliance.us](http://www.thesustainabilityalliance.us)

- EDF also is part of the new Midwest Row Crop Collaborative, which brings together Walmart, General Mills, Kellogg, PepsiCo, Cargill, Monsanto, EDF, The Nature Conservancy, and World Wildlife Fund to take sustainability to scale across Iowa, Illinois and Nebraska through a diversity of partnerships and innovations.
- Land O'Lakes' SUSTAIN program is playing a critical role, working through its network of agricultural retailers and cooperatives to help their farmers adopt fertilizer optimization and soil conservation practices and provide a scalable program for sustainable sourcing for a growing number of food companies.
- In 2014, United Suppliers Inc, which worked with EDF to create SUSTAIN and is now part of Land O'Lakes, one of the largest dairy cooperatives in the US, is committed to getting four million hectares (10 million acres) in the program by 2020. More than 800,000 hectares (two million acres) have already been brought in. We hope this success will motivate others in the agricultural retail and service industry to develop and deploy their own programs, taking advantage of this new business opportunity.

But we need much more if we are to move US supply chains out of the “vulnerable” category and have food and agriculture truly adapt to and help address climate change.

### **Enabling solutions**

Meeting the growing demand for food while also adapting to and addressing climate change, improving water quality and addressing other sources of natural resource risk is a tall order. Solving the problem is not just a task for farmers, but for the entire agricultural community, consumers, and the companies that make up the food supply chain.

Agriculture is a critical component of the economy for states in the heart of the Corn Belt and across the country. Different agricultural sectors connect to and rely on each other in ways many do not realize. Food companies that make cereals and snacks count on grain production, but so do the producers and processors of poultry, dairy, hog, and beef that feed some 40% of these commodity grains to their animals. People across these agriculturally-rich areas depend on those landscapes for clean water as well.

To meet these diverse demands of growing more food but in a way that is not environmentally harmful, outcomes are what really matter. We need to work collectively to create solutions that are innovative, flexible, and economically practical. Sustainability cannot be a niche market – it needs to be at scale, a business norm. We need to:

- Minimize the loss of nutrients and soil to air and water while sustaining high yields through precision fertilizer management, cover crops, and innovations in ag technology.
- Use water as efficiently as possible.
- Improve soil health through conservation tillage and more diverse crop rotations.
- Avoid plowing up ecologically important lands.
- Use strategically placed filters like wetlands to capture excess nutrients.

As mentioned above, a growing number of major players in the food and agricultural supply chain have made sustainability a real priority, and not as a new niche. These companies recognize that consumer interest in food transparency is not going away and that failing to ensure they source from areas with sustainability measures in place puts them at real risk of supply disruption from more extreme weather.

Sustainability has long been the practice of US farmers through ongoing improvement, and many companies are making sustainability goals for how they source key ingredients, including major commodity crops like corn, wheat, and soy, and implementing plans to meet those goals.

### **The opportunity for collaboration**

Environmental Defense Fund's (EDF) goal for agriculture is to make the supply chain momentum for sustainability a win-win — for farmers and for the environment. We are an environmental organization dedicated to finding the ways that work, which means putting science, economics, and [partnerships at the forefront](#). We collaborate with farmers and their advisors, major food companies and retailers like Walmart. For over 15 years, we've run farmer networks in the Midwest and Southeast U.S., working with producers and their trusted advisors to increase the adoption of practices that benefit farm business and the environment.

We broke new ground on NGO-corporate engagement 25 years ago, working with McDonald's to reduce packaging waste. Since then, we've partnered with companies such as UPS, FedEx, and Walmart. When Walmart, the US's largest grocery, turned its attention to the sustainability of its food, EDF wanted to make sure this game changer delivered real value for the environment and for the entire agriculture industry.

In 2013, Walmart launched a fertilizer efficiency and soil health initiative to reduce greenhouse gas emissions from its supply chain. Analysis showed the retailer that fertilizer used to produce the corn on its shelves was a major source of greenhouse gas emissions, one that needed to be addressed. So Walmart launched its fertilizer initiative to work with suppliers to implement sustainable sourcing programs focused on improved nutrient and soil management in their own supply chains. So far, nearly 20 suppliers have signed on to the initiative, spawning a trend in which supplier commitments are supporting continuous improvement by American farmers.

### **The market follows**

Action from the consumer facing food companies and retailers is only part of the solution. We need sustainability to be a real business opportunity for farmers and their key advisors, in particular agricultural cooperatives, retailers, and crop consultants.

Leading in this arena to date is Land O'Lakes's [SUSTAIN® platform](#) as mentioned above which provides tools and training to agricultural retailers in effective fertilizer efficiency and soil health, as well as a way to track and report in aggregate on progress in ways that protect farmer confidentiality. Agricultural retail staff then share this knowledge to the farmers they serve.

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In just two years, the program has been applied on more than 800,000 hectares (2 million acres). Smithfield Foods, Unilever, Campbell, and [Kellogg](#) (all part of the Walmart initiative) are using SUSTAIN to help meet their corporate sustainability goals. The program has proven to be a successful model in the Midwest to improve nutrient use efficiency and reduce nutrient loss to water and air.

In animal agriculture, Smithfield has also launched its own [row crop sustainability program](#) for pig feed. The program has been valuable for strengthening their relationship with buyers like Walmart and with feed grain suppliers, reducing risks in feed grain supply chains. It also is improving resilience, mitigating regulatory concerns and improving consumer trust of their brands around sustainability issues.

We need food – and a lot more of it. We need to be really smart about how we grow that food to address today's environmental problems and avoid worsening them in the future. Collaboration, innovation, and willingness to learn from each other are how we will get there.

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**About the author:**



*Suzy Friedman is Senior Director for Agricultural Sustainability at the Environmental Defense Fund, based in Washington DC. Her work at EDF is to collaborate with farmers, grower organizations, agribusinesses, and food company/retail partners to create a U.S. agricultural system that drives climate stability and clean water and supports food security goals. By collaborating with decision makers at every point in the supply chain – from retailers and food companies to agribusiness and farmers – we are strengthening demand for sustainable production and generating supply. Improving sustainability makes good business sense and increases our resiliency to the impacts of climate change. Suzy has been at EDF since January of 2001 and is a graduate of Princeton University with a Masters in environmental science and policy from Johns Hopkins University. Her blog can be viewed [here](#)*

**Note from the editor:**

*The above work was commissioned by the [U.S. Sustainability Alliance](#) and represents the views of the authors only.*

*The U.S. Sustainability Alliance (USSA) comprising American farmers, fishermen and foresters was formed by recognizing that sustainability is not an arbitrary threshold, but rather a commitment to continuous improvement and innovation. A goal of the Alliance is to share U.S. stewardship and sustainability practices with colleagues and counterparts across the world for greater mutual understanding of resource management practices.*

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