

Friend of the Farmer

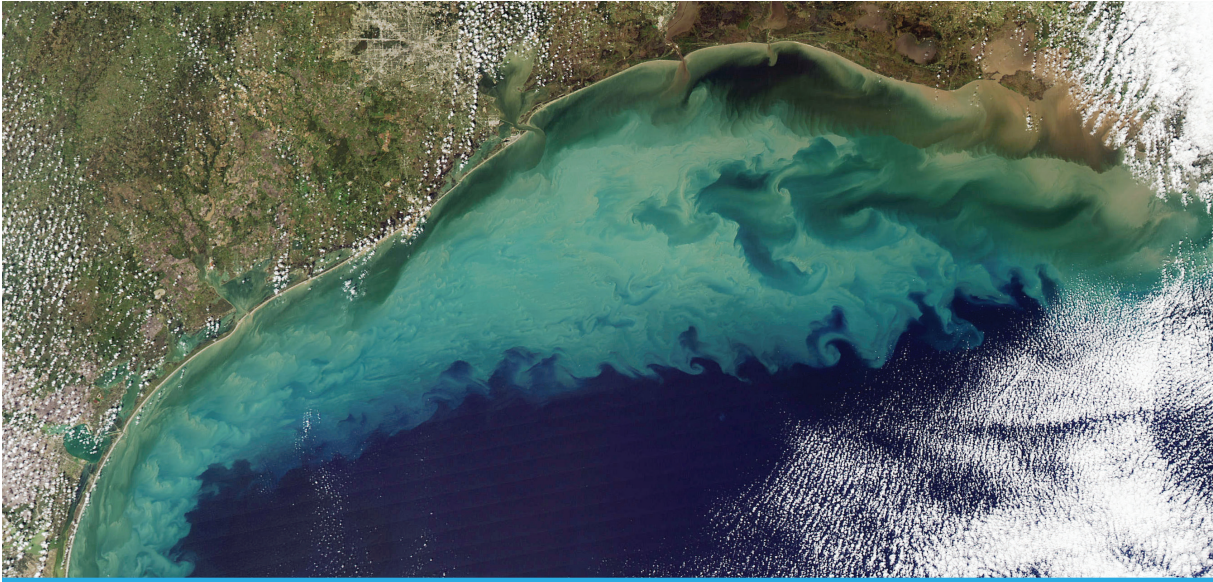
An interview with Suzy Friedman

By Miriam Horn



When she came to EDF in 2001, Suzy Friedman had scarcely set foot on a farm; now she understands the huge and growing challenges farmers steer through every day of every year.

Suzy Friedman is 5'4", barely big enough to reach a tractor's brake. But after 18 years of returning season after season to help farmers achieve more secure livelihoods by protecting their soils and water and climate, she's earned enough trust that, one day, Iowa corn and hog grower Tim Richter suggested she take the wheel of his 570-horsepower two-track scraper, with 18 forward speeds. "It was gargantuan, like a mile on each side," she recalls with glee. (It is in fact almost 20 feet long and 11 feet high.) "I've never felt more empowered in my whole life." We talked with Suzy to find out how she won over a crowd used to seeing environmentalists as the enemy and built with them a comprehensive strategy to meet their goals — and ours.



EDF's new "nitrogen balance" tool is helping farmers fine-tune their fertilizer use to reduce runoff and shrink the Gulf of Mexico dead zone, which in 2019 was the eighth largest ever recorded.

Suzy, why does Environmental Defense Fund work on agriculture?

Because farming has the biggest impacts on land, water and biodiversity of anything humans do. Farmers and ranchers manage 70% of U.S. land and use 80% of our fresh water. They've transformed our native landscapes into some of the most productive croplands in the world, allowing billions of people to flourish. But that's also had unintended consequences. Farms are the leading source of water pollution: This year they'll contribute to a dead zone in the Gulf of Mexico as big as Massachusetts. They're also the biggest threat to biodiversity, displacing habitats critical to the survival of thousands of species. And ag is both hugely affected by and a big contributor to climate change. Farms emit 8% of U.S. greenhouse gases; most of that is nitrous oxide, which is what nitrogen becomes when it's lost to the air and is 300 times more potent than carbon dioxide.

Most importantly, ag is maybe our greatest opportunity to collaborate on huge solutions to all these challenges. Plus, it's not a choice, really — we need agriculture to eat, so we need to find ways to feed ourselves that also sustain the resources we depend on.

Did you always know you wanted to work on agriculture?

No, I only discovered my love for ag and farmers when I came to EDF. I'd been working for environmental nonprofits, doing outreach and organizing, so I got hired here to help get conservation money into the 2002 farm bill. Back then EDF had just three people focused on ag, all working on policy; we were in D.C. and didn't ever follow the money out into the world to track its impact. So when the bill passed, my boss said, "Suzy, we need to understand how these farm programs actually work on the ground. Go see what happens." Literally, that was all the instruction he gave me.



"There is no normal crop year anymore, and that makes it incredibly hard for farmers to know how to manage": Suzy on a panel with then-Agriculture Secretary Tom Vilsack.

I said OK and picked up the phone. I called the one guy I could think of, Larry Elworth, who I knew had connections in Lancaster, Pennsylvania, with dairy farmers trying to do a better job applying fertilizer or manure to the corn and soybeans they grow to feed their cows. It's called "nutrient management," because if you put the right amount on at the right time, you get a lot more yield. But if you put on too much — more than the crop can absorb — you've wasted money. And that excess fertilizer does environmental harm — running off into rivers and (in this case) the Chesapeake Bay — which is why the state Department of Environmental Protection required these farmers to have a management plan.

Anyway, Larry put me in touch with two more ag consultants, Chris Sigmund and Mike Brubaker, and all three said, “Sure, come on out.” I didn’t know anything, so for half a day I just asked them question after question, trying to understand what farmers actually do to keep nitrogen from leaving their fields.



Matt Young wasn't sure whether to bring "a shotgun or a lawyer" to his first meeting with Suzy two decades ago, but he and his brother, Dave, have been friends and partners with Suzy ever since.

Chris and Mike told me that a few farmers here were using advanced soil sampling to break each of their fields into zones. Not all areas of a field are equal: Some are wetter or drier or have different soil types, so need more or less fertilizer. With this soil testing, they could fine-tune how much nitrogen they applied. They also told me about farmers in other regions doing strip trials: On one strip of a field, they'd apply their normal rate of fertilizer; on another, they'd apply 25 or even 50 pounds less to see if they got the same yield. If they did, they knew the normal rate was too high.

Through this kind of live science experiment, many were finding they could apply less fertilizer and still get the same yield. Which saves them money and also protects water quality downstream.

That was a lightbulb moment for me: What if EDF could enable these dairy farmers to try similar experiments? If strip trials did help them become more efficient, we could then use that data to push for the U.S. Department of Agriculture (USDA) to fund them broadly. That was the proposal Chris and Mike took to 25 farmers, each with about 300-500 cows and a good number

of corn and soybean acres, which by Lancaster standards is pretty big. They agreed to meet but said, “We’re here because we trust you, Chris and Mike. But we think you’re crazy for asking us to meet with EDF and guarantee we’ll never do any kind of project with them.”

That sounds like a tough beginning.

Well, yes, thinking back on it, I see how incredibly naïve I was walking into a barn conference room to face a group of skeptical farmers, deeply set in their ways. But I’m an optimist. I assume the best of people and go into a meeting thinking, “This is going to be great.” Sometimes that can play out badly, but often it plays out well. And I had genuinely good intentions. Farmers have their antennae up for people trying to deceive them, to hurt them or to get something. But I was just honestly saying, “We’d like to collaborate to see if we can find win-win solutions that both save you money and reduce runoff. How about you just try doing some strip trials and see if you might be able to use less fertilizer? We’re not telling you to use less, just saying, ‘Why not get more information, and then do with the information what you want?’ The data will be yours. TeamAg (Chris’ company) will manage it. I won’t see it, except in aggregate. I don’t need to.”

They got enough of a sense, I think, that I wasn’t trying to trick them that, finally, Matt Young of Red Knob Farm came up to me and said, “You know, I wasn’t sure if I should bring a shotgun or a lawyer to this meeting, but I’m glad I didn’t bring either.” He’s just a big teddy bear of a man, the sweetest guy. And he threw himself into this project.

Those relationships have continued to this day. In fact, some years later, and this broke my heart, Matt called me almost in tears. One of the groups that go after any big farm had tried to get him cited for a violation. It was unfounded and dismissed, but Matt was so personally hurt. He’d gone above and beyond on conservation, been a real pillar of the community. I was upset too but also touched that when he needed someone to call and share how upset he was, he called me.

That first meeting was an amazing experience for me. A big part of it was luck — finding the right people, this group of guys that just jumped into it. They became my first great farmer friends, taught me so much, and were very kind.

How has EDF's ag work evolved in the years since?

Well after that Lancaster project, as one conversation and connection led to another, we started building new partnerships. Then in 2006, I remember so clearly, I had an email exchange with Fred Krupp, who wanted to know how many acres we'd moved into efficient nutrient use. And I was excited because we were up to 30,000 acres and thought, This is huge! He's going to be so impressed. He was not impressed. He asked, "How many acres of corn are there in the nation?" I said "Um, about 85 million?" And he said, "Huh." And that was when it dawned on me. This one-by-one approach is not going to add up. This is not transformative. We need a strategy here, tackling the whole system. So piece by piece, we started building that out.



With input from EDF's farmer-advisers like Tim Richter, Walmart has in the last two years avoided 93 million tons of greenhouse gas emissions, on track to meet its goal of avoiding a billion tons by 2030.

EDF relies on markets, science, partnerships and policy. Is that what guided you?

Yes, we started with a market strategy, focused on the food supply chain; where do grocery stores buy the products they sell? EDF had just opened its Bentonville, Arkansas, office to dive into our new sustainability partnership with Walmart. Walmart had committed to cut 20 million metric tons of greenhouse gases from its supply chain, and we were doing the analytics to find the best opportunities. They have a lot of food on their shelves, lots of

products with corn. And fertilizer used to grow corn popped up as a hot spot for greenhouse gas emissions.

So we jumped on that, went and spent a whole day with them sketching out how they could work through their key suppliers to cut those emissions. We asked, “What are the key points of leverage? Who would they need to engage to get farmers to change their behaviors? What could be counted, and how? How would they track performance? What would be a good group to start with?”



Among the new technologies EDF is developing with partners like NASA is a web-based meter giving farmers real-time data on how much water each crop is using — enabling far more efficient use and freeing up water for strapped cities.

We helped them create a framework to take to suppliers. “If you want to participate in this fertilizer initiative, here’s what we want you to ask of your farmers, and here are the metrics you can track.” Before long, more than 15 big companies had signed on, including General Mills, Campbell and Kellogg.

How did science come in?

Making this all work required much better ways of measuring results, which led to the amazing work on nitrogen balance by EDF senior scientist Eileen McLellan. Her aim was to give farmers an easy way to measure nitrogen loss that wouldn’t require a ton of data or work and could be embedded in tech platforms they already use. (Almost all farmers use computers and

smartphones to keep track of input costs, weather, yield and more. Farming is very data intensive!) For the system EDF developed, farmers need to track just three things: How much nitrogen (fertilizer or manure) they put on their crops; how much leaves the system as yield (that is, is absorbed by the crops that are harvested); and how they manage their fields. For instance, do they rotate crops every planting? Do they till their soil? All of that affects how much fertilizer is used and how much is lost. This new simple but sophisticated way of measuring has been really well received: Iowa and Indiana growers — even Tyson Foods — are now partnering with EDF to use it.

“ I seldom hear farmers say anymore, ‘It’s what my dad did, so it’s fine.’ There’s a general sense that things have changed, and we need new ways of coping or we’re in big trouble. ”

We’ve also been helping farmers try out new technologies. We started with aerial imagery — which lets them see the color of their corn when it’s too tall to see from the ground. Bright green corn is well-fertilized and will yield more; yellow means nitrogen deficiency. Seeing is believing, and showing that variability to farmers is a great way to persuade them that varying rates of fertilizer within their fields will work.

More recently, we’ve been helping farmers get access to so-called precision application technologies. Instead of applying the same amount of fertilizer across a field, they can collect data on, say, a one-meter grid and apply exactly what each little square of the field needs. With these precision tools, they can be sure not to under-apply in one area and lose yield or over-apply in another, wasting money on fertilizer that just escapes into the water or air, harming our environment.

And what about partnerships? Beyond expanding our alliances with Walmart and its suppliers, did we add others?

Yes, we knew we needed more direct on-the-ground knowledge and guidance from farmers, so we built relationships with a group of advisers — successful, innovative farmers from Texas, the Corn Belt and Great Plains, all the way

up to Montana and Idaho — who for close to a decade now have been providing us insight on how this all works in the real world. Brent Bible, for instance, grows popcorn and seed corn in Indiana and helped us organize a meeting so Walmart could hear directly from producers how the company's fertilizer efficiency initiatives would impact them. Len Corzine, who farms in Illinois, and Tim Richter, who farms in Iowa and Missouri, spoke to Walmart executives and key corporate suppliers. We also began collaborating with state and national grower associations. And we formed our biggest partnership yet with the National Corn Growers Association (NCGA).

That partnership surprised a lot of people. Greg Horstmeier, editor in chief of a major farming publication, marveled in print that “one of the most conservative, large-scale farm organizations in the U.S. and an environmental group some might think of as an adversary to modern agriculture” were working together. How did that come about?

Well, it took a decade. In 2007, a few of us from EDF and Walmart met with the then-president of NCGA. It didn't lead anywhere, but we didn't give up on the idea. Then in 2014, Chris Novak came in as CEO, and some months later I was asked to speak to their state directors and spend 30 minutes with Chris. It was a fabulous meeting. I shared our interest in collaborating to see farmers succeed while achieving environmental outcomes that would sustain them as well as the rest of us. Chris shared his interest in seeing corn growers prioritize sustainability more. We agreed our teams should spend time together looking at opportunities, so we met that summer in St. Louis and a couple more times over the next two years.

It was a good relationship. But we'd come up with great ideas, then go off, and the focus would dissipate. That's why a year and a half ago I reached out and said, “Let's formalize our partnership so we can keep the attention and write down all we want to do together and dedicate the energy needed to make a great partnership.” And right away they said yes. That commitment even survived a complete change in leadership at NCGA: When Jon Doggett stepped in as CEO and Nathan Fields came in as VP for sustainability, they didn't miss a beat in signing the partnership agreement with EDF and getting to work. We've focused on advancing shared priorities, including creating ways to communicate to farmers that the ag community increasingly admires

and values sustainability as much as it values yield. It's no longer just about who can grow the most corn or soy, but about who can be a leader in water quality and creating habitat for monarch butterflies. (See summer 2019 Special Report.) When I met Jon Doggett last summer just as he was coming into the job, I asked, "What are you most excited about with this partnership?" And he said, "I'm most excited about the things we don't even know about yet."

And I love that because we're already doing things that we didn't foresee, and we're not even a year in. Lots of partnership agreements are just pieces of paper, but this one has done exactly what I had hoped it would: given us the license to push each other to do even more. We almost don't even look back at the partnership agreement anymore because we're already way past it.

You started out working on policy; is that still one of the building blocks?

Yes, we're still working in Washington on Capitol Hill to advance three big strategic priorities: implementing the conservation provisions in the farm bill; advancing work on agriculture as a solution to climate change; and helping farmers get better rates on crop insurance when they reduce their risks by adopting conservation practices. I'm especially motivated by the last one and the opportunity it provides. We're even building on it by doing something similar with private lenders. We know that conservation practices pay off in the longrun — by stabilizing and diversifying yields and by reducing costs for fertilizer, labor and fuel. But that return can take several years. And meanwhile, farmers bear the economic risk alone.

So my colleague Maggie Monast produced a report quantifying those returns, which we've been using to educate lenders. Our message is, "Look, these farmers are reducing their risk through good stewardship, making them better candidates for a loan. If you want better long-term returns, you should value these practices in your lending policies and share in the risk." She's getting a great response; she already has projects going with a couple of lenders, developing products that will encourage conservation practices.

So, having put together all these different puzzle pieces — and finding the big levers — what would be your answer to Fred's question today?

Well, this time I think he really would be impressed. We're up to 5.3 million acres in good nutrient management and soil health practices, with commitments by companies to add 44 million more acres by 2025. Innovative, forward-looking companies are even sharing their data, anonymized and aggregated, so we can track what's actually getting done and pass that information along to farmers. That creates a virtuous circle, putting pressure on others to share their data too.



This year's unprecedented rains and floods kept farmers from planting 19 million acres, drowned out many crops before harvest, and shut down critical grain trade on the Mississippi River. "These are people who like to keep busy," says Suzy, "and they're sitting inside. That's painful."

And have farmers been enduring this really tough year better thanks to this comprehensive approach?

This has been one of those years when you really admire the dedication and commitment of these folks to keep growing our food. Between the trade wars, bad prices and flooding, it just blows your mind how they carry on. It's been tough on the environment too. Nitrogen is very soluble, so when there's too much water, a lot gets carried off the land. Soil too, if isn't held by the roots of a crop or a cover crop, or by crop residues, which are the leftover stalks and leaves from previous crops some farmers don't plow under but leave on the field to protect and feed the soil.

In Nebraska and the Dakotas and Iowa, some low-lying areas not only got heavy rain but also river flooding; farmers never even got their crops planted or got them in so late they'll have very low yields. When I was driving around the region in July, I saw fields with massive puddles and corn just ankle high.

But barring those hardest-hit places, it's in these bad weather years when practices like conservation tillage (plowing minimally to leave soil undisturbed) and cover crops (planted not for harvest but to shelter and nourish the soil between commercial plantings) do make the biggest difference, because they increase the amount of water that can permeate the soil and slow runoff from fields. I've heard that from every one of our farmer advisers. Brent Bible, who uses both no-till and cover crops, told me that in drought or flood, he'll take a 30% hit in yield, but a lot of his neighbors won't have a crop at all.

Has this extreme weather changed the conversation about climate?

Yes. I seldom hear farmers say anymore, "It's what my dad did, so it's fine." There's a general sense across the landscape that things have changed, and we need new ways of coping or we're in big trouble. That doesn't mean everyone believes in climate change or thinks that humans are the cause of it. Trying to make it about that doesn't work very well. But you can have a conversation that begins, "All right, weather is more extreme, so how can we make the landscape and agriculture more resilient so we can all survive and your communities and livelihoods can endure?" That's a big change and opens doors that were closed before.

That's true particularly within the ag associations, which tend to move faster than the rest of the community. They're on top of the news and just see everything — public perception, where policy is heading — so are more on the leading edge. They're saying, "We've got to move. We're in trouble."

Among the farmers, a certain percentage say, "OK we need to change, and I'm ready to change, so what do I do?" Another chunk says, "I see that everything is changing, and I know I need to do things differently, but I'm so scared I'm paralyzed." They need a lot of help because they're kind of frozen. And then there's going to be some that feel, "I've only got a few more years, and I'm just too tired." And they're kind of riding it out.

So our goal is to reach the first two groups?

Yes, and I don't think we do that through traditional public routes.

We need to be more creative and ask, “OK, who do farmers already listen to and trust?” For most, it’s a private adviser or the guy that sells them their seed or technology and has often worked with them for decades. Why not train those “ag retailers” to advise farmers on conservation practices, as a new business opportunity, a service they can sell to help farmers do better in extreme weather? That’s the kind of thing we’re doing with nitrogen balance: embedding it right in the software platforms farmers already use, bringing it to them instead of depending on them coming to us.

What have we learned from working with partners like big Midwestern commodity crop growers?

Well we absolutely can’t let the perfect be the enemy of the good. At EDF negotiating is not considered a weakness. We are given the freedom to ask, “What’s our ultimate goal? And what are the steps we can take to get there?” We don’t want to do anything that blocks our own path, but we can form nontraditional partnerships to make things happen we otherwise wouldn’t be able to do.

Crop insurance is a good example; it touches nearly every farmer so, if used to advance conservation, can have a huge impact. That’s led a lot of environmental groups to call for a mandate: Let’s make any farmer who wants access to crop insurance comply with conservation requirements. But that can be a threatening approach that ends the conversation before it gets started — which gets you zero environmental progress. Instead, we’re bringing data to the USDA that shows which conservation practices actually reduce yield risk and arguing that insurance should recognize and reward those practices. It’ll still be a farmer’s choice, but they’ll get a benefit if they adopt these practices. With that approach, we actually got ag groups working with us.

Suzy, how did you ever get started on this path as an environmentalist?

Well I grew up roaming around in nature. I was in suburban Connecticut but surrounded by woods. In summer, I’d disappear after breakfast — playing in streams, climbing trees, traipsing across neighbors’ yards — and not get

home until dinner. You couldn't do that now; I go back and everybody has massive fences and gated driveways.

It's like your habitat got fragmented.

Yes. I'd be one of those ocelots that get separated or trapped by all those fences.



Twins Annabel and Jonah love biking, basketball, soccer, flag football, softball and their mom's work to protect butterflies.

When did you know you wanted to work on environmental issues?

Earth Day, 1990, when I was in high school, woke me up to the impacts we were having on the world and to the connections between the environment and poverty. By the time I got to college, I knew that's what I wanted to work on. I majored in history because my father said, "Your undergraduate years are for doing what you won't be able to give time to the rest of your life," but I did a minor in environmental science. And studying history was valuable for my work today: It taught me how to see things from many perspectives, through different people's eyes. And my senior thesis was on the Dust Bowl, focused on poverty more than ag but anticipating my work now on farmers' financial well-being.

After college I got a job at Union of Concerned Scientists and then American Rivers, earning a master's degree at night at Johns Hopkins in environmental science and policy. That's when I met my husband, Todd, who teaches third grade. We went for a bike ride that turned into a nine-hour date, and the rest is history. We live in Arlington, Virginia, with our two 14-year-old twins, Annabel and Jonah, and a basset-lab mix named Dizzie.

After all that moving around, why did EDF become your home?

Because I got to work with farmers and discover what amazing people they are. Here's a story that might get across what I mean. I've talked about Tim Richter, who's very fun but unpredictable; you never know quite what's going to come out of Tim's mouth. He farms in Iowa and Missouri, two of our priority states for monarch habitat, so I called him up and said, "Hey, Tim. We're looking to reach more farmers in both of your states and would love to talk to you about doing some habitat." And he said, "Suzy, since you're asking, I'll do it." Then he heard our presentation at our annual farm adviser meeting, in D.C. in February 2019, and it just lit a fire in this man. He was ready to go evangelize for the monarch.

The next morning, we had a meeting with a USDA undersecretary and the chief of the Natural Resource Conservation Service, which because of a snowstorm, we had to do by phone. When it came time to talk about our monarch work, I thought, All right, I'm going to roll the dice and turn it over to Mr.-No-Filter Tim. And it was like he'd been practicing for months. He made every point I could have wished for, with so much passion.

Then a month later he sent an email about a gathering with his producers' co-op.

Suzy,

Last night, Saratoga Partnership held its annual spring social for landowners and local neighbors (45 in attendance).

My talk was a run through of the slides shown at the EDF

spring meeting. SP is committed to establishing monarch habitat on three hog sites this year.

As a group, farmers are responsible for habitat destruction and we need to step up and do the right thing.

The response was overwhelmingly positive. Many compliments, but also many offers to do a plot on their farms. A waitress even asked about converting a patch of grass to habitat. I told everyone to give me a year to figure out how to accomplish a plot, but after that, away we go.

On a grassroots level, sustainability really hits a high note.

Thanks, for without knowing you, I would be pretty clueless.

Tim

I was almost in tears. What moved me was not only how excited he was, but that he was so thankful to us for enabling him to do this good thing and share it with his neighbors. We're so indebted to him for helping us in this great way. And he's thanking us. That's what makes all the work we're doing worth it — these breakthroughs, these relationships. I believe building trust is essential to delivering meaningful change. And that's why we're here.

For more information, please contact EDF Member Services at 800-684-3322 or email members@edf.org.

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