

A wide-angle photograph of a sugarcane field. The foreground shows a field of harvested sugarcane stalks, while the background is a dense, standing sugarcane field. The sky is filled with heavy, dark, grey clouds, suggesting an approaching storm or late afternoon light.

Bad Neighbors: The Cost of Ethanol Production to Local Communities

Eliane Floriano Silva dos Reis says the sugarcane plantations next to her land “don’t respect the neighbors, the people who want to produce.” It is easy to understand why. Eliane lives in a farming settlement in Mato Grosso, Brazil, where farming families report damaging pesticides, deforestation, infrastructure damage, and other harmful side effects from the plantations. The majority of the 300 families who call the settlement home are farmers whose farms are slowly being surrounded by sugarcane plantations for ethanol production. Brazil is expected to use 336 million metric tons of sugarcane for ethanol production in 2015.¹ Some of that will end up in U.S. fuel tanks, as the U.S. is Brazil’s largest ethanol customer.

For the community in the settlement, the increase in ethanol production is a waste. Many oppose the use of land for energy production when the land is needed to provide food. For these families, land is more than just part of a production and profit equation or a place to build a house; land is the source of their livelihoods, as well as a means of sustenance. Land is their security and their investment to ensure they will be able to provide for their families into the future.

Putting aside concerns of devoting land to sugarcane-for-ethanol plantations, the community has very immediate problems stemming from their neighbors.

¹ USDA Foreign Agriculture Service Global Agriculture Information Network. “Brazil.” July 25, 2014.





PHOTO: FABIO ERDOS/ACTIONAID

Ailton Basílio da Costa can see a sugarcane plantation from the front of his house. The sugarcane plantations started to expand in the area in 2004, but the real damage was about three years ago when the planes started spraying pesticides by his property. His crops started failing. Rice and beans wouldn't grow. His plants started looking diseased, which he thought was tied to the pesticides sprayed by the planes. Eventually, he stopped trying. Investing the money to plant lots of crops that would eventually fail just didn't make sense anymore. "If this [sugarcane expansion] doesn't stop, we are the ones that will have to leave here."

It wasn't always this way. Ailton and his family have lived on this land since 2002. Initially things were good; he was happy to have his own land and the farm was successful. "We used to be more excited about growing food... excited about growing beans, this kind of things." He was able to grow all kinds of crops, including rice, cassava and corn. Most of what he produced went to his family, but they sold some rice, beans and zucchini to market. He and his wife worked hard, and at the end of the day they were tired but happy.

"If [the sugarcane plantations] weren't here, I'd grow again," he insists. Now that he's stopped planting crops, he doesn't know what to do with his time. As a farmer, he worked all day in the fields. Now, he milks his cattle and feels like he lost his identity. The damage done by the pesticides has impacted his whole life. "After I stopped planting, even my temper changed," he acknowledges. When his wife stepped away from the conversation, he admitted she has been handling the stress better than he has. At 59, he has been a farmer his whole life; but are you still a farmer when you can't grow food?

Maria José de Souza Gomes is the Principal at the school on the settlement. Not all settlements have their own schools and she is fiercely proud of her community and what they have accomplished.

She is worried about ethanol demand driving sugarcane farther into the community because, as she explains, "it has a visible effect within the settlement." She worked hard to advocate for the school's ability to buy from smallholder farmers and considered it a major victory when the government program for schools to buy food from smallholder farmers was put into place. She is afraid that demand for biofuels could put that in jeopardy.



She prioritizes buying from the smallholder farmers in the settlement; she knows how much pride and care they take in growing their food and thinks that's the best way to provide for her students. When she needs to, she also buys from other settlements and smallholder farmers.

Schools are required to buy at least some food from smallholders, but Maria usually buys far more from smallholders than the required minimum. She only turns to larger markets when she has no other choice, but that isn't often.

The school buying program is a major success, but what worries Maria is the sugarcane. It seems to be constantly expanding. She spoke of one area where "in two months, it was already deforested. It didn't have anything else there." Some native plants – even native strains of papaya fruit – have disappeared entirely. You can still cultivate some heartier strains of papaya, but the loss of the native plants raises concerns.

What will happen as ethanol demand continues to drive sugarcane expansion, and what will it mean for the school buying program? As proud as she is of the school buying program, she doesn't hesitate to say that sugarcane expansion is "certainly" a threat to what they have built.

FOOD GROWN BY THE FARMERS FROM THE SETTLEMENT IS SOLD LOCALLY AND FEEDS THE CHILDREN AT THE NEARBY SCHOOL

PHOTO: FABIO ERDOS/ACTIONAID

Nerio Gomes de Souza knows these stories and fears well. A community leader, Nerio serves as councilman for Mirassol d'Oeste, the town closest to the settlement. In that role, he also sees the wider impact and costs of having sugarcane-for-ethanol production so close to the community.

Deforestation is a major concern. Nerio says local forests and native foliage have disappeared as the sugarcane has expanded. Animals that lived in those forests now have to find other sources of food – likely from someone's farm. He's also concerned about the decrease in fish in the river that runs through the community and near a plantation. Then there are the roads. The machines traveling to and from the sugarcane plantation rip up the dirt roads, leaving damaging potholes behind. There have been repairs, but it seems like an endless cycle. "They [the government] come and fix it, but it gets the holes all over again, broken bridges." Fixing the roads is a waste of resources and effort when they just get ripped up again.

The promise of jobs on the plantation has not delivered benefits to the community. Working on a sugarcane plantation is punishing, and many of the potential jobs have recently been converted to machines. Nerio thinks around 40 people from the community worked for the plantation at one time or another, but not anymore. Today most of the plantation workers are migrants, and ten former sugarcane workers from the settlement are now on disability.

Due to his stubborn commitment, Nerio was able to include a provision in a municipal council environmental law that curtails pesticide spraying near roads, water sources and houses. This at least makes the spreading of pesticides more limited near roads at the edge of a plantation and should provide some protection. But it hasn't stopped the planes. "They are not respecting the law."



Eliane was being literal when she called the sugarcane plantation her neighbor. Her land borders a plantation that, at the fence dividing the two properties, seems to go on forever. There are plenty of problems that come from living next to an industrial sugarcane production. The noise from the machinery, even at night, is loud and intrusive. Planes spraying pesticides on the sugarcane plantation pass over her house. The smell used to be terrible, and she would keep her kids inside and try to close up the house. Lately, since the community began pressuring the company, the smell when the plane passes overhead has decreased, but she still worries about the impact on her family's health, and what the wind is carrying onto her land.

However, her biggest concern is more straightforward. "We can't grow food here."

The community created an association of farmers to sell their food to schools and to low-income families through a government program. Eliane has not lived in the community as long as Ailton, and she has never been able to grow much food on her land. Tomatoes, beans, and papayas grown in her area never seem to produce enough, and papaya that is native to the region won't grow at all. She is able to cultivate a little bit of corn (mostly feed for her animals) and some vegetables, but not nearly enough to feed her family.

Even if she was somehow able to produce enough surplus to sell, it is unlikely she could join the association. Members must grow their food organically, a requirement that allows them to sell at a better price. The pesticides used on the sugarcane plantation drift onto her garden, blown onto her land by the breeze. There are so many pesticides in her environment that nothing she grows could qualify as organic.

Eliane says that her land rights are secure. But she cannot use her land the way she thinks is best for her family — to have a farm and grow food through the local association. Her "neighbors" may be on the other side of the fence, but they are still in the way.



Policy Recommendations

The Renewable Fuel Standard (RFS) is the U.S. mandate to blend biofuels into the transportation fuel supply. Many of the goals behind the RFS, including cutting greenhouse gas emissions, are good ones. However, the RFS has not achieved these goals and there have been unintended consequences on food and land rights. Agriculture has expanded in response to the increased demand for biofuel feedstocks. This land conversion creates greenhouse gas emissions, undermining any environmental benefits biofuels might have provided. The demand for biofuels has also undermined food security, as the new and inflexible demand created by mandates has made food prices more unstable. Also alarming, smallholder farmers, like Eliane and Ailton, have been kicked off their land to make way for biofuel production.

The RFS requires the consumption of increasing amounts of biofuels until 2022. Much of the remaining growth in the RFS is in what are called “advanced” biofuels, including sugarcane ethanol. Much of this mandate is supposed to be filled with cellulosic biofuels (biofuels that are produced from grass, algae or inedible plants). These biofuels are supposed to have a lower impact on food security and land tenure, but cellulosic

biofuels have not developed as quickly as anticipated. There is a risk that other “advanced” biofuels – such as sugarcane ethanol – could be used to make up the missing gallons.

Increasing food-based and land-intensive biofuels would be a mistake. Many of the “advanced” biofuels are imported, from places such as Brazil, Guatemala and Argentina. Demand from the U.S., as Brazil’s biggest biofuels customer, drives stories like those in this report. Dramatically increasing U.S. imports of food-based biofuels puts food security and smallholder farmers around the world at risk, exacerbating inequality and instability. Clearly carbon emission cuts are needed, but it should not come at the expense of food security and land rights.

ActionAid USA makes the following policy recommendations:

- Ensure that food-based fuels, such as sugarcane ethanol, are not used to make up for a lack of cellulosic biofuel production
- Reform the RFS to move away from mandates for food-based and land intensive biofuels such as corn and sugarcane ethanol

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