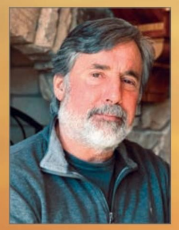
PLOUGH to PANTRY



Eat Your View

Electric Vehicles May Drive Corn Farmers Out of Business

By Robert Turner

Can a corn farmer learn something from a tobacco farmer?

General Motors' recent announcement that it will sell only electric vehicles by 2035, which came on the heels of President Joe Biden's executive order to transition federal vehicles to electric, foreshadows considerable disruption ahead for farmers in the Corn Belt.

Forty percent of the US corn crop goes into our gas tanks—in the form of ethanol. By federal mandate, gasoline must contain 10 percent ethanol, and that comes from corn. Electric vehicles represent a significant drop in demand for corn, and that could cripple an already hurting agriculture sector.

But we've seen that kind of mass disruption in agriculture right here in Western North Carolina with the demise of tobacco, and perhaps an Appalachian tobacco farmer has something to teach a Midwestern corn farmer. Disruption can become an important opportunity to retool agriculture toward a more sustainable system that can improve soil health and mitigate climate change.

A SEA OF CORN

To get an idea of the scale of things, you must drive through it. Plan on spending a couple days in the corn at 70 miles per hour.

Crossing the Midwest, you drive through a sea of corn that stretches for a thousand miles. It's bigger than the Black Sea and the Caspian Sea. It's nearly one and a half times the size of California, and it's more than two and a half times the size of all of the Great Lakes combined.

The Corn Belt is roughly 1,000 miles wide, from Pittsburgh to Grand Island, Nebraska. North to south, it reaches from Minneapolis down to St. Louis, about 500 miles. Its total estimated area is 250,000 square miles of corn. It's a massive thing.

More than 300,000 corn farmers produce roughly 350 million tons of corn every year, roughly one ton per person living in the US, or 2,000 pounds per person. The average person eats only about 1 percent of that, or 20 pounds, and much of that in the form of high-fructose corn syrup. Most of the rest goes into our gas tanks and into cows and chickens. Roughly 36 percent of the US corn crop goes toward livestock feed.

No one really knows what will happen to such a vast area of farmland when electric vehicles finally take over, but not many industries can handle a 40 percent drop in demand without turmoil.

Should we continue to prop up the corn industry with taxpayer subsidies as it begins to fail? Perhaps large chunks of the Midwest will turn back into prairie grasslands, like before we started tilling it under for corn, while rural America sinks further into decline. Perhaps we'll find another use for corn in the form of biofuels for trucks and airplanes.

IS INCREASING EXPORTS THE SOLUTION FOR ALL OF THAT CORN?

To save the Midwestern Corn Belt, we could try to increase exports of corn, but many argue that might not be a great idea for a couple of reasons.

We currently export about 13 percent of the US corn crop. And, yes, we can and should help to feed the world. But all countries, like many in Africa, need to increase their own agricultural output and infrastructure through better seeds and sustainable, regenerative technology. All countries need to work toward feeding themselves as a matter of food sovereignty and national security. And many countries are on their way to doing that; yields in many developing nations are increasing.

If we dump cheap, subsidized corn on these developing countries, like we've been doing to Mexico, it harms their farmers and hinders their ability to grow their markets and production capacity at home. And we're damaging our own natural ecosystems and environment in the process.

A BETTER WAY

Much of the fertilizer that we use to grow all of this corn, along with chemical pesticides and herbicides, and vast amounts of soil from over-tilling, washes into the nation's lakes, rivers and coastal oceans, polluting waters and damaging ecosystems. The massive dead zone in the Gulf of Mexico is the clearest example of this.

Weeds and pests are developing resistance to glyphosate and other chemicals. New "superweeds" are showing signs of cracks in the system.

American farmers must transition away from the current monocropping system and become diverse growers again, with varied crops and animals in a more sustainable and environmentally friendly system. Any new agricultural system that we support with taxpayer subsidies should include crop rotation, no-till and limited-till methods, and regenerative and sustainable farming practices that improve soil health. We must focus on increasing living microorganisms and organic matter, which reduces the need for chemicals and increases the soil's water-holding capacity—making farmland much more resilient to floods, droughts and climate change.

LESSONS FROM THE FALL OF TOBACCO

In the mountains of WNC, where I live and farm, the mid-1990s marked the beginning of the end for tobacco grown here. After more than 70 years as the dominant cash crop for farmers, in what was known as the "burley belt," production of burley tobacco entered a period of sharp decline.

The drop in demand was devastating to farmers in the region. From 1997 to 2012, the number of burley belt tobacco farms declined by 97 percent. Tobacco acreage saw a 95 percent decline. Revenue decreased by 96 percent. This is what market disruption looks like when you're dependent on a single crop.

Anticipating the impact that the loss of tobacco could have on the region, a group of farmers and community stakeholders met in 1995 to look for solutions to the challenges facing farmers. What came out of it was the Appalachian Sustainable Agriculture Project (ASAP). ASAP launched a local food campaign in 2000 to build a market alternative for farmers. They focused on connecting people to farms and food, and they began building consumer demand for locally and regionally grown farm products. Thank you, ASAP.

The result was that over a 15-year period agriculture shifted from monocropping tobacco to fruits, vegetables, grass-fed beef and free-range chicken eggs. Much of that food was grown using organic and regenerative practices that improved soil health and biodiversity, and it was driven by consumer demand for healthier food without all of the chemicals. From 2002 to 2012, the former burley-dependent counties saw a 98 percent increase in the number of farms growing vegetables, melons, potatoes and sweet potatoes.

And while the size and scale of the problem facing the Midwest is significantly greater, including new markets, labor, food storage and transportation networks, with enough time solutions can be found.

The Corn Belt solution can and should benefit the health and biodiversity of the environment as much as the farmer. Regenerative agriculture may be the most cost-effective tool that we have to sequester carbon from the atmosphere, and with better land management, the Corn Belt could become a giant carbon sink while providing a broader range of food products.

Disruption, like the fall of tobacco, can bring positive change.

Robert Turner is the director of the Creekside Farm Education Center and the author of Carrots Don't Grow on Trees: Building Sustainable and Resilient Communities. *To learn more, visit EatYourView.com.*