

This Disease Is Battering Us yet Nobody's Listening

Analysis by [Dr. Joseph Mercola](#)

October 25, 2023

STORY AT-A-GLANCE

- › The documentary “Farmer’s Footprint / Regeneration: The Beginning” highlights the failure of chemical-dependent agriculture, and how through regenerative farming, America’s farmers can build healthy soil, restore ecosystems and promote human health
- › The film features Allen Williams, Ph.D., a sixth-generation family farmer who has consulted with more than 4,200 farmers and ranchers in the U.S. on soil health, cover-cropping, livestock integration, grazing management and other regenerative agriculture practices
- › “Farmer’s Footprint” shows the story of the Breitzkreutz family and how they kicked chemicals to the curb and transitioned from conventional farming to regenerative agriculture in Redwood Falls, Minnesota
- › The film features Dr. Zach Bush, a triple board-certified physician with expertise in internal medicine, endocrinology and metabolism and hospice/palliative care, who believes industrial farming is one of the main drivers of cancer and chronic disease
- › An explosion of cancer incidence in the U.S. correlates with the introduction of glyphosate, the active ingredient in Monsanto’s Roundup weedkiller, on food crops

Editor’s Note: This article is a reprint. It was originally published June 1, 2019.

The featured film, "Farmer's Footprint / Regeneration: The Beginning," highlights the failure of our chemical-dependent food and farming system, and how it degrades our

soils, pollutes our air and water, and is the main driver of soaring cancer rates and chronic disease in America.

The film, however, offers a solution: **regenerative agriculture**, a return to what organic was originally all about, namely the protection and rebuilding of topsoil and ecological biodiversity.

The documentary features renowned soil health and holistic grazing consultant Allen Williams, Ph.D., of Soil Health Consultants LLC, and Dr. Zach Bush, a triple board-certified physician with expertise in internal medicine, endocrinology and metabolism and hospice/palliative care.¹

Both are pioneers in the field of regenerative agriculture practices, which aim to rebuild soil health, restore ecosystems and promote human health through the growing of nutrient-dense food, and that provide farmers with economic and financial stability.

In the film, Bush names glyphosate, the key active ingredient in Monsanto's Roundup weedkiller, as the culprit in an explosion of cancer cases that sprouted up in the U.S. in a single decade. Bush says the epidemic of cancer and chronic disease is so severe, it's comparable to the environmental nuclear catastrophe that occurred at Chernobyl.

Grass Fed Beef Champion Teaches Farmers How to Go Regenerative

The film begins with Williams recounting how when he was growing up, 90% of what they ate came from the farm. Over time, with pressure from conventional agriculture, his family began to change the way they farmed. They found themselves needing things they never needed before, such as an increase in agrochemicals, synthetic fertilizers and pharmaceutical drugs for livestock, including antibiotics and feed supplements.

"I was convinced I had to keep up with the times," says Williams. But as things progressed, he realized his farm was having more and more problems. In spite of all the research, the implementation of new crop chemicals, fertilizers and livestock drugs,

things on the farm were degenerating, he says. Instead of solving their problems, Williams realized industrial farming practices were constantly putting a tiny bandage on a gushing wound.

Williams is a sixth-generation farmer turned regenerative agriculture consultant. He holds a bachelor's and master's degree in animal science from Clemson University and a Ph.D. in livestock genetics from Louisiana State University.

Williams has written more than 400 scientific articles as well as consulted with more than 4,200 farmers and ranchers in the U.S. on topics such as soil health, cover-cropping, livestock integration, adaptive forage, grazing management and pasture-based meat production.²

A champion of **grass fed beef**, Williams helps farmers implement grazing techniques that build healthy soil for better water retention, reduced runoff, increased productivity, healthier food and enhanced plant and wildlife biodiversity. He also developed many of the original techniques now adapted by the grass fed sector.³

Suicide Rates Soar Among American Farmers

The featured film touches on the hardships of farming, noting unusually high suicide rates within the occupation. An article published by The Guardian in December 2018 reported that the suicide rate for farmers is more than double that of veterans.⁴

The U.S. Centers for Disease Control and Prevention, which published the data, has since retracted the information, stating their numbers "might be inaccurate" as a result of coding errors.⁵ Still, it remains certain that farmer suicide is a burgeoning issue not only in the U.S. but around the world. The Guardian reports:

"The U.S. farmer suicide crisis echoes a much larger farmer suicide crisis happening globally: an Australian farmer dies by suicide every four days; in the U.K., one farmer a week takes his or her own life; in France, one farmer dies by suicide every two days; in India, more than 270,000 farmers have died by suicide since 1995."

American farmers are struggling to make a living. They are struggling to maintain equity and have a viable business that they can pass down to their children and grandchildren, says Williams. Annual operating loans keep many farmers in an endless cycle of debt, and the Farm Bill is largely to blame. It forces farmers to grow crops the government will insure. This took diversity out of farming, he says.

Data from the Chicago Federal Reserve found that 7% of farm borrowers in the Chicago Fed district, which consists of all of Iowa and most of Illinois, Indiana, Michigan and Wisconsin, were struggling to repay operating loans that help buy seed, pay rent and fund equipment.⁶

One of the biggest fears among farmers is that they will be the generation who failed and lost the farm, says Williams, adding that at one time his own family farm, a multigenerational tradition, was at risk of collapse.

Fortunately, there's a solution in regenerative agriculture, and the best part is that farmers can start implementing practices at no cost that offer big benefits, such as relieving financial burdens, particularly in the form of chemical inputs, and will increase productivity within the first year, explains Williams.

Cover Cropping: The Road to Regeneration

The Breitskreutzers are one of many examples of family farms that are leading the way in the transition to regenerative agriculture. "Farmer's Footprint" highlights the journey of how they kicked chemicals to the curb and transitioned from conventional farming to regenerative agriculture.

Together, Grant, Dawn and their daughter Carly farm their land in Redwood Falls, Minnesota. "We basically went back to the way my dad's grandfather used to farm," says Carly. The family provides a clear example of how to escape the burdens of annual operating loans.

One of the first steps they took to transition to regenerative agriculture was to convert a monoculture cover crop into a highly complex and diverse cover crop. It was a game-

changer. Almost overnight, the family went from having cover crop failures to cover crop success.

Cover crops and other regenerative practices, such as no-till and purposeful livestock grazing, help build healthy soil. Planting cover crops is an important first step, as the average conventional farmer is losing between 3 and 4 tons of topsoil per acre each year, notes the film.

Gail Fuller, a regenerative farmer from Kansas, found that from 1981 to 2003, his farmland experienced 5 tons of soil erosion each year — or a loss of 145,000 tons of topsoil, according to data from the state's Natural Resources Conservation Service. He estimates the loss to have cost him \$2.9 million.⁷

The rule of thumb for cover crops is to have no bare ground. Keeping the soil covered promotes soil microorganisms, such as nematodes, protozoa and mycorrhizal fungi, and leads to fewer inputs and more productive soils.

Healthy Soil Equals Healthy People

Healthy soil means healthy food, and that translates to healthy people. When the soil is full of life, we are full of life. This is due to a highly diverse and complex ecosystem known as the soil microbiome. Did you know there are more microorganisms in a teaspoon of healthy soil than there are people on this planet?⁸

That's a lot of microbes, many of which and their functions are not yet fully understood. But what we do know is that the human microbiome, made up of trillions of microbes such as bacteria, fungi and protozoa, is often referred to as our "second brain," as it regulates a number of important bodily processes including digestion, immune system function and brain function.⁹

The [human microbiome](#) and the soil microbiome function similarly. As organic farming pioneer Patrick Holden of the Sustainable Food Trust puts it, soil is essentially the stomach of the plant. He wrote in a blog in 2015:¹⁰

"The layer of healthy topsoil, thriving with microorganisms, which covers much of the land's surface, is in effect a vast digestive system – the collective stomach of all plants, breaking down soil nutrients into bio-available forms that plants can absorb.

The rhizosphere, or root ball, is the gut of the plant and the zone where plant roots and soil organisms interact in a whole variety of biotic, symbiotic and pathogenic relationships to enable these organisms to do their work. Without the presence of microorganisms, the mechanics of the digestive system can still function to a certain degree.

Purging our intestines of microorganisms through antibiotic use will not stop us from digesting food, just as bypassing the soil ecosystem through using chemical fertilisers or hydroponics will still stimulate plant growth. However, the long-term vitality and health of plants, animals and people is centrally dependent on the presence and diversity of microorganisms, in the soil and gut respectively."

Glyphosate and GMOs: The Smoking Gun

The featured film introduces Bush, who left behind a career of treating patients in clinics to go into the field and provide education and raise awareness about our degenerative food and farming system, which he says is the root cause of soaring rates of cancer and chronic disease in the U.S.

Between 1996 and 2007, there was a complete reversal of the U.S. cancer map, says Bush. "To see an entire population respond in a single decade to a sudden explosion of cancer suggests that we did something similar to Chernobyl – that some massive environmental injury is likely to have led to this explosive rise in cancer," he says.

Upon taking a closer look, Bush and his team identified the introduction of Monsanto's Roundup weedkiller on food crops as the event that may have triggered the rise in cancer rates.

He first compared the glyphosate spraying maps to the cancer death maps, but they didn't superimpose. However, once he added in the tributaries of the Mississippi River, and saw that up to 85% of all the glyphosate sprayed in the U.S. was draining into a single water system, a lightbulb went off.

"If this is the most prevalent antibiotic in our environment that's decimating the microbiome in our soils, then maybe we had a smoking gun, maybe this is the event that really transformed public health," he says.

Glyphosate and the Destruction of the Family Farm

It wasn't until 1996, when genetically modified crops were first introduced, that glyphosate became a commodity in agriculture. Prior to that, the weedkiller was used by farmers and homeowners alike, but much more sparingly due to the fact that it kills everything it touches.

Things changed with the release of Roundup Ready crops, which led to the use of glyphosate as a crop treatment, says Bush. Since then, glyphosate use has risen almost fifteenfold. According to the Detox Project:¹¹

"Enough glyphosate was applied in 2014 to spray over three-quarters of a pound of glyphosate active ingredient on every harvested acre of cropland in the U.S., and remarkably, almost one-half pound per acre on all cropland worldwide (0.53 kilogram/hectare)."

The more chemicals that are used, the more degraded our soil becomes. This is bad news for farmers. The inability to produce healthy food that also brings a profit, is putting immense pressure on our nation's farmers. According to Bush:

"We're looking at the end of this family farm tradition. As they collapse, we open ourselves up to vulnerability because it's these multinational organizations that move in with money from China, South America or Russia."

They're coming in to buy up massive swaths of the most fertile areas and they're owning our own land, which means it's no longer owned by Americans, let alone the farmers themselves.

It makes absolutely no sense from any stance of homeland security or national safety. And if we look at this ever-expanding dependence and machine of mega-farming scale, we become very prone to catastrophic failures of the delivery system."

'It Takes a Mega Industry to Screw Up That Big'

Bush points to the 12 million pounds of beef that were recalled in 2018 due to Salmonella contamination.¹² "These invasive bacteria are a symptom of the collapse of the greater microbiome in cows," says Bush, adding:

"It takes a mega industry to screw up that big, to make us that vulnerable. As the scale grows of the farm, we should not be deluded that [it] means safety. It means danger. It means an extreme dependence on an extremely tenuous situation."

The good news is that through regenerative agriculture, which is growing in popularity, we can turn all of this around. Farmers have an opportunity to overcome the fear, transform their soils, and reclaim their right to grow healthy food, says Bush.¹³

Nobody knows better than a good farmer that we are simply the tip of the iceberg of biology when it comes to life on this planet, he says. A farmer knows that their cattle, their livestock and their plants have an interdependence that stems deep within the soil.

It is for this reason that farmers hold the key to restoring public health and eliminating our epidemic of cancer and chronic disease. If we destroy our soils, then we destroy ourselves. Bush said it best in a post on his Facebook page:

"Regenerative agriculture is not just a soil issue, it is a human health issue. With the loss of our soil ecosystems, our food lacks nutrients that our bodies need

for healthy function. Every consumer, family, farm, and business need to reorient priorities to consider the soil first. It's our health that is at stake."

"Farmer's Footprint" is aiming to regenerate 5 million acres of farmland by 2025. Check out their [Facebook page](#) to learn more.

Sources and References

- ¹ Zach Bush MD 2019
- ² Understanding Ag, LLC 2019
- ³ Joyce Farms 2019
- ⁴ The Guardian December 11, 2018
- ⁵ Mother Jones July 3, 2018
- ⁶ Des Moines Register April 12, 2019
- ⁷ High Plains/Midwest Ag Journal May 22, 2018
- ⁸ Open Access Government. Deteriorating Soil Health: 'A Teaspoon of Soil Contains More Life Than There Are Humans on Earth'
- ⁹ Organic Consumers Association February 28, 2018
- ¹⁰ Sustainable Food Trust April 17, 2015
- ¹¹ Detox Project February 2, 2016
- ¹² CBS News December 4, 2018
- ¹³ Dr. Zach Bush Facebook Page April 24, 2019