

FOOD SECURITY IS NATIONAL SECURITY

BY TOMMY WALLER

Executive Vice President, Center for Security Policy



Contents

Introduction.....3

America’s Food Consumption & Lack of Preparedness.....4

National Food Infrastructure.....5

Stocking Up.....7

Threats to the Food and Agricultural Sector.....9

Cyber Threats to Food Infrastructure.....9

Physical Threats to Food Infrastructure.....12

State-Sponsored Economic Warfare Threats to Food and Agriculture Sector.....14

Manipulating Markets and Regulations to Threaten Food and Agriculture Sector.....15

Policy Threats to Food Infrastructure.....19

Chinese Bacteria and Failed Remedial Action Decimate Florida Citrus.....19

Squeezing Out Nitrogen-based Fertilizers and Putting Bugs on Your Plate.....20

Creating a Demand Among Children to Eat Insects by Modifying Their Perceptions and Behavior.....21

Foreign Influence on the American Food and Agricultural Sector.....24

Recommendations.....31

Federal Level.....31

State and Local Levels.....32

Individual Level.....33

Endnotes.....34



The author pictured with leaders from the esteemed organization “American Agri-Women.”

Introduction

America is the world’s greatest producer of food. Americans take their food supply for granted, but the dependability of that supply is fragile. The 2020 Covid pandemic made that vulnerability apparent. The US has no national strategic reserve of food. For the average citizen, the pandemic brought home the effects of competitive and hostile foreign actors, supply chain disruptions, centralized distribution systems, technological failures and abuses, flawed central government policies and systems, influence operations, and a public tendency to rely on central authority for the answers.

Food security is national security. The federal government does have a role. Yet food security is one of the few national security issues in which each citizen can take measures to look out for oneself, one’s family, and one’s community. It’s an issue that can elevate existing communities and create new ones without relying on centralized bureaucracies.

This report inaugurates a new Center for Security Policy program to promote awareness and provide solutions for the multiplying threats to America’s food supply. It seeks to kick off a national discussion about food security, the role of the federal government, the role of states and communities, and the role of the individual. Even more than discussing the problem, the Center’s program is designed to help empower citizens to address food security for themselves. This report provides a broad overview of the problem and an **initial** list of recommendations at the federal, state and local, and individual levels. Over time and through collaboration, we intend to grow that list and encourage action at all levels to enhance our nation’s food security.”



Photos from Fort Worth grocery store, February 18, 2021 – MichaelMabee.info

America's Food Consumption & Lack of Preparedness

The average American consumes almost 5.5 pounds of food per day, or 2,000 pounds a year.¹ Most Americans store only a few days' worth of food in their own refrigerators or pantries. In 2019, the average American made 1.6 trips to the grocery store a week.² Online grocery pickup and delivery is increasing in popularity, meaning that less and less food is stored at home.

The concentration of America's population in urban and suburban areas means that the food distribution structure is a constant supply from far-off areas with little space for interim storage or focus on stockpiling.

Products from distant farms are moved through processing and distribution centers by rail and interstate trucking to grocery stores nationwide. For the sake of efficiency and profitability, the grocery

sector uses electronic systems to track and order inventory through just-in-time food distribution systems.

This very sound, successful strategy results in a reduction over time in the amount of food being stored in supermarkets and regional warehouses. However, the just-in-time model presumes stable energy, transportation, and communications infrastructures. This is a significant vulnerability.

The result is that a typical supermarket chain will have only enough food on the shelves of its storefront groceries and local warehouses to support the local population for one to three days. Regional warehouses may be able to store enough food to supply a multi-county area for about one month under normal circumstances, but when circumstances *are not* normal, grocery stores can go empty, and may remain empty for a long time.

The cold weather-induced blackout in Texas in

February 2021 is a case in point. Photos from a Fort Worth grocery store on February 18, 2021, show what can happen within hours of a power outage or panic. The scene, empty shelves on every aisle, was the same throughout the entire region. No milk, no eggs, no bread, no frozen meals – no food, and no bottled water.

Not only does the bulk of the American population live and work a great distance from where their food is produced, but most citizens are culturally far removed from the process of growing and cultivating that food. In 1988, less than two percent of the population worked in agriculture.³ Today, that percentage is even smaller, about 876,900 Americans (including those in the fishing and forestry industries), work in agriculture – which is just over on-half of one percent.⁴

These numbers stand in contrast to when America was being built as a country. In 1820, 72 percent of the population were farmers. In 1920, farmers made up 30 percent of the population. There was a large connection between the people and the production of food.

Large-scale farming operations that feed our population today are heavily reliant on electricity, computers (from South Korean and Taiwanese microchips to distribution algorithms), the internet, open lines of communication, large scale commercial transportation networks, and access to large amounts of fertilizer and fuel. This elaborate system is full of vulnerabilities. Given the prospect of potential disruptions, does America have a reserve or stockpile of food on which it can rely during a major disruption or other national emergency?

National Food Infrastructure

The nation’s food infrastructure is critical to everyday life. “Critical infrastructure” is more than pipelines, transportation, electric grid systems, water systems, and communications networks that power and move the nation’s commodities and goods. It is the vast system that helps to grow and process our food, and move it to the stores and restaurants where we shop and eat. The Food and Agriculture (FA) Sector is one of the 16 critical Infrastructure systems of the United States.

Those sectors are designated as chemical, commercial facilities, communications, critical manufacturing, dams, defense industrial base, emergency services, energy, financial services, food and agricultural, government facilities, healthcare and public health, information technology, nuclear reactors and related areas, transportation systems, and water and wastewater systems.⁵

The Food and Agriculture (FA) Sector, designated in 2003, “is composed of an estimated 2.1 million farms, 935,000 restaurants, and more than 200,000 registered food manufacturing, processing, and storage facilities,” according to the Department of Homeland Security’s Cyber and Infrastructure Security Agency (CISA). The entire FA sector accounts for about 20 percent of America’s economic activity.

The agencies responsible for developing “sector-specific plans” and coordinating with public and private sector partners are the US Department of Agriculture and the Department of Health and Human Services. The last time these agencies published a Food and Agriculture Sector-Specific Plan was in 2015. At the time, the stated mission of the FA sector was “to protect against a disruption anywhere



National Infrastructure Protection Plan (NIPP) [Food and Agriculture Sector-Specific Plan for 2015](#)

in the food system that would pose a serious threat to public health, safety, welfare, and or to the national economy.”⁶

Foreign threats. Policies and conditions in other countries directly affect US food security and infrastructure.

Incidents in recent years show that vulnerabilities in the FA sector are the targets of malicious actors. These dangers include the 2020-2021 Covid-19 pandemic which severely interrupted production and supply chains, the 2022 war in Ukraine which disrupted grain and fertilizer markets, a series of cyberattacks, a major railroad strike, and, some argue, a number of potentially suspicious fires at major food production and distribution facilities across the United States since 2020.

Dire predictions of the worst calamity are now mainstream concerns. *The Economist* predicted a “coming food catastrophe,” underscoring the gravity

with a cover illustration of strands of wheat with kernels replaced with human skulls. The magazine cautioned that the “widely accepted idea of a cost-of-living crisis does not begin to capture the gravity of what may lie ahead,” citing a possible worldwide food shortage that “could last for years.”⁷

The Economist warned that China – the world’s largest wheat producer – was about to have its “worst year ever,” that India – the second largest producer – was also struggling and now cutting off exports, and that northern Africa was being ravaged by its worst drought in 40 years. It isn’t a just a foreign problem. American farmers are struggling. USDA reported that, due to cold weather, only 11 percent of Minnesota’s spring wheat crop was in the ground by mid-May, 2022, down from 100 percent the year before.⁸

Government policies run at cross-purposes. America’s food policy is not geared toward addressing potential disruption from abroad. The United States has no strategic food reserve. At a time when America

needs to be producing as much food as possible for domestic consumption, some US government policies provide incentives *not* to produce food. The federal government subsidizes crop insurance programs that – while helpful to farmers in a financial crunch – can shift the incentive *away* from planting crops and toward filing an insurance claim, because it may have a bigger financial payout.⁹

The federal government has been accelerating a decades-old program to reward farmers not to farm.¹⁰ In a purported effort to combat climate change, the Biden Administration held a White House National Climate Task Force meeting where it unveiled a massive expansion of the Conservation Reserve Program (CRP) with “higher payment rates,” and “new incentives” to enroll up to 4 million new acres of land into the program.

While CRP is a valuable conservation concept which provides for important wildlife habitat (including pollinating birds and insects) and contributes to a preservation in topsoil which also helps improve water quality – paying farmers to take millions of acres of farmland out of production is a man-made contribution to the impending disaster that *The Economist* described. Even so, the administration plans to expand the program by another 3 million acres to keep a total of 27 million acres of farmland out of production by 2023.¹¹

Misguided government programs are not the only barriers to increased food production in the United States. As will be discussed, an ongoing global effort is underway to use revolutionary regulatory changes to how people grow and consume food, regardless of the changes’ effects on immediate and long-term food security.

A growing number of active and potential attacks

on the nation’s Food and Agricultural sector must be recognized, analyzed and investigated, and thwarted to accomplish the FA’s mission “to protect against a disruption anywhere in the food system.”

Before exploring those threats, it is prudent to acknowledge America’s current food needs and the dangers ahead.

Stocking Up

Average Americans are not the only ones whose pantries would be barren in the event of a disruption in the just-in-time food delivery system.

There was a time when the federal government recognized that shelf-stable foods with long term shelf life, devised correctly with enhanced personal preparedness, could both meet the nutritional needs of millions during any crisis and bolster national security. If America faced a major conflict and needed to feed its military (1.4 million active-duty members and 900,000 Guard/reservists), this would equate to more than 42,000 metric tons of food every week just for service personnel.

During the Cold War, the US Strategic National Stockpile (SNS) maintained stores of food and water and worked with USDA to purchase surplus food products, such as dairy, which were distributed to Americans in need via welfare programs. Today, *the US Strategic Stockpile no longer contains food*. While the Federal Emergency Management Agency (FEMA) maintains some food stocks across eight distribution sites nationwide, the agency is far from prepared to respond to major disruptions of the nation’s food supply.¹²

FEMA has been part of the problem. It reinforced complacency in the populace by telling citizens to



Today, the US Strategic Stockpile no longer contains food

Image: [SC National Guard](#)

prepare only 72 hours of emergency food supplies for their households. At best, FEMA – alongside the Red Cross – has promoted maintaining two weeks of food.¹³ This is fitting with FEMA’s focus on short-term, geographically limited, natural disasters where help is on the way.

While the federal government can surge resources, including emergency food supplies, to a relatively small disaster area, for instance after a tornado, it is not prepared – and it is not preparing its citizens – for the prospect of larger and prolonged disruptions which could last weeks, months or longer.

Especially within the FA sector, the production of food is a year-long cyclical process. A significant disruption during one part of the agricultural season, whether from natural causes or the result of human action, malicious or otherwise, could have devastating long-term follow-on effects.

The USDA does maintain an emergency food

program. However, that program is primarily based on reallocating existing food supplies which are already designated for providing federal food support to low-income and non-working citizens and foreigners. It is insufficient for a disruption that affects large portions of the country.

Even if the federal government decided today to begin restocking the SNS with long term food products, it would have an exceptionally hard time doing so. Only four major canneries exist in the United States, soon to be reduced to three under ownership change and consolidation. These canneries are unable to meet the needs of a major food disaster.¹⁴

One cannery experienced a 10-month backlog during the “Y2K” scare, a 5-month backlog after Hurricane Katrina, and nearly a 6-month backlog during the first year of the COVID pandemic. Performance bottlenecks were experienced for all four canneries during those periods. Then, during the periods of time between the real or perceived crises, some of the

canneries struggled to stay in business.

The owner of a major food preparedness company gave a stark assessment of the situation, with the parentheses in the original:

“Estimates vary, but we have used this for years: *national cannery production can meet less than 1% of the food storage needs of the nation* (and even this figure is highly dubious) ...we’ve based this on past-capacity (ability to fill orders).”¹⁵

The difficulties in producing, distributing, and preserving refrigerated and frozen foods are understandable.

The combination of a complicated “just-in-time” food distribution network, no national stockpile of food, a woefully underprepared FEMA, and an American people ignorant of where their food comes from creates a perfect storm whereby any potential shock to the stability of the FA sector creates substantial risks for a national food crisis.

Threats to the Food and Agricultural Sector

Threats to America’s food and agricultural sector range from programs that run at cross-purposes to one another, to the malicious, poor (or too much) planning, and nature. In this section, we will discuss: cyber threats, physical threats, state-sponsored economic warfare threats, manipulation of markets and regulations, other policy threats, and foreign influence.

Cyber Threats to Food Infrastructure

In May, 2021 a worldwide cyberattack on the world’s largest meat producer temporarily shuttered many of America’s largest meat processing facilities.¹⁶ Prior to this headline-grabbing incident, few Americans were aware of the vulnerability of the food and agriculture sector to cyberattacks.

More than eight years ago, renowned industrial control system (ICS) cybersecurity expert Joseph Weiss was warning the FA sector about the importance of cybersecurity in its control systems. His presentation at the *2016 Food Industry Cyber Security Summit* sponsored by the Food Protection and Defense Institute – a DHS Center of Excellence housed at the University of Minnesota – was well received by leading FA sector chief information security officers.¹⁷

Weiss’ warnings likely helped inspire the Food Protection and Defense Institute to publish a 2019 report on the cyber risk to food processing and manufacturing. This report warned that the “worst case scenario is if an attack on an ICS (industrial control system) intentionally or unintentionally causes a food product to become unsafe, and it isn’t noticed until the product reaches consumers.”¹⁸

While the University of Minnesota was listening to experts like Weiss, policymakers in Washington appeared not to consider the scenarios in their own policies and strategies. Weiss warned in March 2021 that “the US food supply is neither cybersecure nor safe from control system cyber threats.” He observed that the rules contained in the FDA’s Food Safety Modernization Act (FSMA) published in November 2015 had never been updated to include cyber threats. Weiss explained:¹⁹

“The (FSMA) rule is aimed at

Industry	2019	2020	% Change in Malware Detections
Business services	33,077	42,688	29%
Software & technology	23,648	35,320	49%
Education	37,548	31,315	-17%
Manufacturing	46,137	24,225	-47%
Health & medical	30,884	23,993	-22%
Construction	20,519	20,232	-1%
Food/Agriculture	2,238	15,815	607%
Automotive	18,949	15,605	-18%
Food & beverage	8,839	14,790	67%
Government	11,352	9,388	-17%

Chart data provided from the [2021 State of Malware Report](#)

preventing intentional adulteration from acts intended to cause wide-scale harm to public health, including acts of terrorism targeting the food supply. FSMA requires a vulnerability assessment to identify vulnerabilities and actionable process steps for each type of food manufactured, processed, packed, or held at the food facility. According to FSMA, for each point, step, or procedure in the facility’s process, these elements must be evaluated. Specifically, a vulnerability assessment is to be conducted to determine the degree of physical access to the product with considerations including the presence of such physical barriers as gates, railings, doors, lids, seals and shields. However, **cyber threats are not explicitly addressed by FSMA.**”

The same month that Weiss warned of FDA’s exclusion of cyber threats, the civilian cybersecurity company Malwarebytes LABS published its annual “State of Malware” report warning that the **FA sector had experienced a 607% increase in malware detections.**²⁰ Similarly, cyber criminals conducted debilitating ransomware attacks in the Midwest in 2021, prompting the FBI to publish a Private Industry Notification (PIN) warning that “Cyber Criminal Actors” were “targeting the food and agriculture sector with ransomware attacks.”²¹ This dramatic increase in the frequency and effectiveness of malware and ransomware makes it clear that the sector is the focus of attack by cyber criminals but it also could be an indication that the sector is being targeted by state-sponsored hackers.

Many of the tools of the farming trade that run the systems are also vulnerable to cyberattack. In August, 2021, a group of hackers associated with the online forum “sick.codes” conducted what they called



Screenshot from the FBI's "[Made in Beijing](#)"

“research, also known as ‘ethical hacking,’ which was done for free over the course of 6 months,” to “just have a look at how agriculture companies are implementing ‘tech’ in their respective industries.” The hacker group revealed:

“A group of less than 10 people were able to pretty much get root on John Deere’s Operations Center, which connects to every other third-party connectivity service that they have. You know, you can get every farm’s data, every farm’s water, I’m talking everything. We had like the keys to the kingdom. And that was just a few people in two days.”²²

Hackers can access John Deere’s operations centers and to the tractors themselves by leveraging the very technologies baked into the tractor design by John Deere – technologies such as kill switches.

These tractors can be shut down remotely. In May, 2022, CNN reported that “Russians plunder \$5M farm vehicles from Ukraine -- to find they’ve been remotely disabled.”²³ The report disclosed that John Deere had been able to track stolen farm equipment during their journey of 700 miles to Chechnya and ensure that they would be rendered inoperable.

Many observers applauded John Deere’s actions in denying the Russian thieves use of the machines. However, the fact that Deere installs remotely operated kill switches on its tractors, and utilizes a sophisticated system of sensors and data-mining technologies which gather valuable data to be sold commercially, should be a cause for concern.

If a John Deere employee can remotely disable a tractor in Russia, then a hacker in command of that employee’s systems can do the same. Cyber blogger Cory Doctorow sums up this reality:

“John Deere makes this claim: in its



battles against the right to repair, Deere styles itself as the guardian of the world’s food supply, whose information security is all that stands between us and a Russian (or Chinese, or supervillain) shutdown of the world’s ag-tech. They’re not wrong: John Deere’s decision to build ag-tech that can be remotely controlled, disabled and updated, along with its monopolization of the world’s ag-tech market, means that anyone who compromises its system puts the world’s food-supply at risk.”²⁴

The Food and Agriculture sector is not just a target for cyberattack but also cyber espionage. The FBI produced an excellent video titled “Made in Beijing” that chronicles stories of Chinese cyber espionage, including one involving the attempted theft of seed technology from Bayer Cropscience.²⁵

The short documentary revealed the sophistication and integration of the Chinese government’s cyberespionage, physical espionage, technological theft, and economic warfare.

Physical Threats to Food Infrastructure

On top of remote or cyber threats is the threat of physical sabotage of FA sector infrastructures.

While the FA Sector experienced a sharp increase in cyberattacks, a string of fires and two plane crashes adversely affected food infrastructure facilities. The suspicious frequency of these events, some of which are matters of chance or accident, captured the attention of a popular television personality who asked the relevant question, “what is going on with all these food processing plant disasters?”

Most of these fires remain under investigation. Law enforcement officials noted that several are believed to be the result of faulty equipment, with no linkage



A single rail car of fertilizer can treat 4,500 acres of crops; a railcar of wheat supplies the base for 260,000 loaves of bread

to one another or hidden hand. Members of the bulk storage industry maintain that the number of incidents at food storage facilities is not out of the ordinary.

An analysis of data from the National Fire Incident Reporting System (NFIRS) identified 5,308 fires at all types of manufacturing and processing facilities between 2015 and 2019. The National Fire Prevention Association identified “961 fires at agriculture facilities, 1,115 incidents at grain or livestock storage sites, and 35 blazes at refrigerated storage locations over the same period.”²⁶

Faulty equipment does not confirm an incident was accidental. A cyberattack can easily cause equipment to overheat and safety systems to fail. Recognizing how vulnerable the FA sector is to fire, even more care should be taken to protect critical systems from all forms of sabotage. Whether deliberate or accidental, the impact on the average American to damaged food infrastructure systems is the same.

In addition to vulnerabilities at storage sites, the FA sector is also vulnerable during the transit of key materials, which mostly occurs over rail networks. The transportation of farm products alone represents 7.4 percent of all freight rail revenue. To transport the farm products requires rail transportation of fuel, animal feed, and fertilizers. A single rail car of fertilizer can treat 4,500 acres of crops; a railcar of wheat supplies the base for 260,000 loaves of bread.²⁷ “Rail is especially critical during fall harvests,” according to the Association of American Railroads. “An interruption in rail service during harvests would quickly result in exhausting local grain storage capacity. This, in turn, would cause grain elevators to either refuse deliveries by farmers or resort to on-ground storage, which results in increased spoilage.”²⁸

Deliberate sabotage of railways has been a growing concern for security professionals in recent years, as a growing number of environmentalist and anarchist groups have proposed railway blockades or rail

sabotage as a legitimate protest tactic.²⁹

In 2020, the FBI investigated a series of 41 separate train sabotage incidents in the Washington state area, including the December derailment of a train carrying over 29,000 gallons of crude oil and the resulting fire and evacuation of local residents.³⁰ Eventually, the FBI arrested two eco-activists and charged them with “8 U.S. Code § 1992, ‘Terrorist attacks and other violence against railroad carriers and against mass transportation systems on land, on water, or through the air,’ [which] carries a possible penalty of up to 20 years in prison.”³¹ One terrorist was convicted and sentenced to only one year in prison, while the other pled guilty and was sentenced to only 6 months in prison.³² Foul play was also suspected in a series of derailments of Canadian trains carrying oil earlier that year.³³

In May 2021, a train in Iowa carrying fertilizer derailed, forcing the evacuation of nearby residents. In August of 2021, 30 cars of a 133-car Canadian Pacific train carrying potash, an important agricultural fertilizer product, derailed in Moncton, New Brunswick.³⁴ A year later, another CP train derailed, spilling 44 freight cars filled with potash, outside the town of Macleod, Alberta.³⁵ While investigations in these cases have not revealed foul play, they do point to the vulnerability that transport networks represent in the overall FA sector across North America.

On top of the vulnerability of the rail and other transport networks is the constant vulnerability of the American electrical and communications grids that could slow or stop the nation’s food supply in an instant. [These vulnerabilities will be covered in greater depth in subsequent reports and articles published by the Center for Security Policy.]

State-Sponsored Economic Warfare Threats to Food and Agriculture Sector

Foreign state-sponsored policies, from stockpiling and command economies for domestic purposes to economic warfare for international competitive reasons, place strains on American agriculture and threaten food production for the American citizen. The People’s Republic of China has stockpiled two-thirds of the world’s grain, “available only to the domestic market with no shipments going abroad,” and its stockpiles are increasing.³⁶

The Chinese Communist Party’s 2020 denial, disinformation, and propaganda campaigns surrounding the COVID-19 pandemic, and its manipulation of the global response to it through 2021, caused supply chain disruptions, shipping and delivery backups, and government policies that in turn created shortages and price spikes across the United States. These deliberate policies, whether intended or not, became a form of economic warfare.

Domestic over-reaction to COVID caused procedures that shut down meat and poultry processing facilities. Those closures forced the slowdown of the slaughter of cattle, hogs, and poultry.³⁷ Because hogs must be slaughtered at a given weight and on a tight timetable, more than a million healthy hogs had to be euthanized because of the shuttered processing plants. More than 450,000 hogs and hundreds of thousands of turkeys were euthanized in Minnesota alone.³⁸



Mitzi Perdue on the show “Economic War Room with Kevin Freeman”

Government-mandated COVID lockdowns worsened the problem. American Agri-Women former president Mitzi Perdue saw the problem firsthand during the pandemic. A businesswoman and former rice grower, Perdue warned that “there is a massive amount of food that is being destroyed because of a breakdown in the supply chain that are directly caused by the lockdowns.”³⁹

Perdue is the widow of the namesake of Perdue Farms, now an \$8 billion-a-year chicken, turkey, pork, and grain enterprise. She warned that “governors, public health officials, and the media must pay more attention to food insecurity,” that “decisions that farmers are making right now are going to affect the food supply a half a year from now,” and that the economic signals created by the pandemic “will totally distort our food supply.” She said, “The amount of suffering that we will cause if we get this wrong is astonishing.”

During the pandemic, in preparation for the 2021 United Nations Food Summit, the World Economic

Forum renewed its call for large-scale farming of insects for human consumption as food.⁴⁰ The idea is that cattle and other meat farming is inefficient and wasteful, and that central planners must mandate or persuade the cultivation of untraditional commodities for protein consumption.

Manipulating Markets and Regulations to Threaten Food and Agriculture Sector

In 2020, the Rockefeller Foundation issued a report that raised substantive questions about the impact that COVID-19 lockdowns played on food insecurity, and complex food supply chains. The report, “Reset the Table: Meeting the Moment to Transform the U.S. Food System,” recommended building a “resilient nationwide food system that includes reinvigorated regional systems and diverse, agile, local food chains” and other prescriptions that initially sound appealing.⁴¹

The Rockefeller Foundation report promoted an agenda not only to transform the American food system, but an “equity” scheme to favor some



Screenshot from [RockefellerFoundation.org](https://www.rockefellerfoundation.org)

categories of citizens over others. In discussing COVID-19, it failed to acknowledge that the damage to food supply chains was man-made, not the result of the virus itself (let alone the man-made origin of the virus). Food insecurity following the pandemic is in part the result of decisions made by centralized bureaucrats and others with political or cultural transformation agendas, and not efficient supply of food to the public.

Like other large foundations, wealthy individuals, and transnational organizations, the Rockefeller Foundation seems to envision extending central control over more of the world economy and food and agricultural infrastructure for the purposes of social engineering and societal transformation.⁴²

This agenda coincides with the aggressive use of government regulations to fundamentally transform the way Americans grow, transport, and consume food. Radical environmentalist policies are drivers of part of the growing instability of the food supply chain. As seen in Canada, Europe, and parts of Asia, these policies have imposed crushing economic burdens on farmers. In some cases the policies led to mass protests and other civil unrest, further destabilizing supply chains.⁴³

One of the most deleterious impacts has been the regulatory targeting of fertilizer, particularly nitrogen-

based fertilizers. Nitrogen is a vital chemical in fertilizer, especially for the production of cereal crops, as an industry source explains:

“One study looked at the effects of omitting nitrogen fertilizer on cereal yields in the US and estimated that without nitrogen, average yields for corn declined by an astounding 41%, rice by 37%, barley by 19%, and wheat by 16%.”⁴⁴

The most inexpensive and common sources of nitrogen for fertilizer are urea, naturally found in the urine of livestock; and its chemical cousin, ammonia. Both are manufactured for industry via processes involving natural gas.⁴⁵ This means that the production of fertilizer is also highly sensitive to fluctuations in the cost of fuel, and to government policies that control trade in basic fertilizer materials. China by far is the world’s largest ammonia producer, followed by Russia.

A government-imposed fertilizer ban in April of 2021 provoked a man-made food crisis in the island nation of Sri Lanka, which resulted in starvation and rioting.⁴⁶ The exact reason for the fertilizer ban is debated but observers blame the crisis on foreign currency exchange and the skyrocketing cost of fertilizer as a result of COVID-19 lockdown policy supply chain disruptions and Russian and Chinese



Sri Lankan Protestors

This file by AntanO is licensed under the [Creative Commons Attribution-Share Alike 4.0 International license](https://creativecommons.org/licenses/by-sa/4.0/).

export bans.⁴⁷ Roughly \$400 million dollars goes to purchase fertilizer in Sri Lanka every year.⁴⁸

Others blame the Sri Lankan President Gotabaya Rajapaksa's adoption of radical views on the use of chemical fertilizers. Sri Lanka, like many small countries, are easily pushed to pursue trends like Environmental, Social, and Governance (ESG) goals, regardless of the hardship involved, in order to benefit from international aid programs.⁴⁹ Despite the on-going crisis caused by these policies Rajapaksa doubled down, calling on "other countries to follow Sri Lanka's move with the 'bold steps required to sustainably transform the world food system.'"⁵⁰

The focus on targeting nitrogen-based fertilizers predates Rajapaksa. In 2019 Sri Lanka "spearheaded" the United Nations Colombo Declaration (named after the Sri Lankan capital) which called for halving the use of nitrogen by 2030.⁵¹

Did Sri Lanka "jump" into pursuing policies that

have risked starvation and civil disorder, or were they "pushed"?

Sri Lanka's economy was reeling under crushing debts from its part in the Chinese Communist Party's belt and road program of global infrastructure networks.⁵² As Sri Lanka's debt crisis worsened after COVID-19 restrictions on tourism crippled the country's primary source of hard currency, creditors discussed using the South Asian country's insolvency as a way to push for further climate change reforms. As Bloomberg News reported shortly before the collapse,

Sri Lanka is hurtling toward a default of its international debt and needs to restructure. Its government may be surprised to find that a group of its creditors have more than money on their mind.

One of its lenders, Nordea Bank Abp's asset management unit, wants



Dutch farmers protest government policies that could shutter up to 30 percent of their livestock farms. [NOTE: We highly suggest searching social media platforms with the term #DutchFarmers for images and videos of these massive protests]

[kees torn](#) - Flickr - Licensed under [CC BY-SA 2.0](#)

to tie any agreement to climate goals, according to a letter from the asset manager to Sri Lankan authorities last month that was seen by Bloomberg. In the letter, the Helsinki-based manager outlined targets set under the Paris agreement including increasing forest cover, reducing greenhouse gases, achieving 70% renewable energy in electricity generation by 2030 and carbon neutrality by 2050.⁵³

Sri Lanka was already a committed participant in international climate efforts such as the Colombo Declaration. A *Forbes* article noted that the country had maxed out on its ESG score at 98%, one of the highest in the world, even before its creditors demanded more.⁵⁴

Similarly, the Netherlands was once a model for sustainable agriculture and development, famous for producing “twice as much food using half as many resources.” The Netherlands is the world’s

second largest agricultural producer by value, behind only the United States.⁵⁵ Dutch farmers are also the leading exporter of meat in Europe.⁵⁶ “Sustainable” Dutch farming methods were the focus of a *National Geographic* documentary in 2018. The World Economic Forum asked the following year whether the Netherlands’ approach to agriculture didn’t represent “the farms of the future.”⁵⁷

But not everyone was happy with the tiny agricultural giant. Articles like, “The Netherlands Can Feed the World. Here’s Why It Shouldn’t” criticized the Dutch approach.⁵⁸ The European Union continued to apply pressure on the Netherlands to adopt yet still stricter environmental policies and nitrogen cuts.⁵⁹

In order to meet the 2030 Colombo Declaration deadline and European Union mandates, the Dutch government in 2022 implemented a series of nitrogen controls which could shutter up to 30 percent of the country’s livestock farms. The government policy targeted Dutch farmers over nitrogen produced by livestock manure and the use of manure as fertilizer.⁶⁰

The government diktats resulted in an outpouring of civil disobedience by Dutch farmers, and disruptions by farmers in other countries in solidarity with their Dutch brethren. By mid-year the Dutch government was preparing to force farmers to sell their land if they live in areas the government considers “unsuitable zones” for farming.⁶¹ Suitability appears to be determined at least in part by a farm’s proximity to “Natura 2000 zones” which are government-designated protective areas where central planners seek to reduce nitrogen run-off from agricultural properties.

Policy Threats to Food Infrastructure

Bad government policies can be destructive to food infrastructure. Some Covid shutdown policies might have been unavoidable. Other policy threats are long-term and are much more avoidable. The scope is far too broad for discussion in this paper, so we will suffice with a case study of a good idea gone bad: a state government and private sector partnership to find a cure for a bacteria from China that attacked the Florida citrus industry.

There is no cure for huanglongbing (HLB), the bacteria and its effects commonly known as citrus greening.⁶² What was intended as a public-private sector partnership to research a cure became a waste of years of research, a misguided reliance on a foreign multinational to invent a genetic mutation, and funding of a “research-industrial complex” of peer-reviewed academic work with little sense of urgency or application to a real-world crisis, and which ignored existing and inexpensive natural solutions whose field tests show promise. By 2020, HLB/citrus greening had destroyed 90 percent of Florida’s citrus groves, with killer freezes and hurricanes wrecking the crops even more. Florida citrus processors now import fruit from Mexico and Brazil as industry lobbyists petition the

federal government to re-define genetically-modified juice oranges as “natural.”

Chinese Bacteria and Failed Remedial Action Decimate Florida Citrus

Citrus greening or HLB disease has wiped out more than 90 percent of Florida’s citrus fruit production since it came from China in 1998. It has spread to at least 13 states from the Atlantic to California.⁶³

There is no known cure for HLB. The bacteria attacks the citrus tree, destroying the roots, capillary systems that feed the tree and its branches from underground, weakening the tree, the branches, and the leaves, and mutating or destroying the fruit. Citrus greening has been described as an “existential threat” to the American citrus industry.⁶⁴

The nature of the origin of citrus greening in the United States – whether deliberate or accidental – has not been established. Authorities widely presume it to have been an unintended import when an aphid insect, the Asian citrus psyllid, carried the HLB bacteria on food imports from China. No serious investigations of the origins are known to exist.

The state of Florida took action on its own in 2009, passing a law to establish a public-private partnership in a Citrus Research and Development Foundation (CRDF) to find scientific ways to fight citrus greening and other threats to the industry.

As developed in conjunction with University of Florida researchers, CRDF became what critics called part of a “research-industrial complex” whose very nature of peer-reviewed research lost sight of the urgency of finding quick, actionable results needed to save Florida’s endangered citrus crops.



Orange citrus tree infected with HLB

CRDF poured private, state, and federal resources into Monsanto-Bayer to develop genetically-modified citrus strains that could resist HLB, a “solution” that would see Florida’s dwindling crops go extinct before GMO replacements were developed. CRDF came under fire for not sponsoring validation testing of existing, low-tech, low-cost solutions. One company’s field trial results, over five years, showed that its locally-made, organic fertilizer enabled citrus trees to resist the disease and produce better fruit.⁶⁵

The state-sponsored foundation had no real strategy. It had spent an estimated \$180,000,000 without results. Between 2009 and 2021, Florida lost 100,000 acres of citrus groves, down to 351,057 acres, with production of oranges decimated from 133,700,000 boxes to 51,700,000 boxes per year⁶⁶ (only to get worse). It discussed plans to re-define “orange juice” and manipulate public perceptions to gain consumer acceptance of GMO fruit juice.⁶⁷ By early 2022, CRDF COO Rick Dantzler effectively admitted no plan by announcing that, after 13 years, “we wanted to make sure we had a plan in place to address what needs to be done and weren’t simply chasing the latest shiny thing.”⁶⁸

Growers complained that CRDF’s inaction prevented them from making vital decisions as fruit and trees

withered. HLB, compounded by a killer frost, made Florida’s 2022 harvest the worst since the Great Depression.⁶⁹

CRDF all but admitted failure in 2022 when its board voted to cut a source of funding to “force” the staff and grantees “to be laser-focused in directing funds toward research projects that will have near-term results in the fight against HLB.”⁷⁰ As CRDF belatedly started looking at fertilizers, Florida Governor Ron DeSantis clamped down on CRDF and signed a law to focus solutions on organic fertilizers that CRDF had ignored.⁷¹ However, the industry in Florida is so severely damaged that growers agree that it is unlikely to recover as cheaper oranges from Brazil and Mexico filled the gap.

Twelve other citrus-producing states, with California in the lead, are seeking solutions as HLB/citrus greening strikes them, though California appears to have replicated Florida’s unproductive research-industrial complex.

Squeezing Out Nitrogen-based Fertilizers and Putting Bugs on Your Plate

The Florida citrus example is one where well-intended but poorly executed government policy damaged the state’s food production and thus its food security. Some

contend that the push by transnational organizations and governments to curtail the use of nitrogen-based fertilizers is also well-meaning – to help the environment. However, these policies may severely hamper existing food production. So, if the European Union and other trans-national organizations intend to force the agricultural sector to raise less livestock, and without the use of nitrogen fertilizers, what does it plan to do instead?

In 2021, the WEF joined with the Netherlands to open the “Global Coordinating Secretariat” in Wageningen. The purpose of the Global Coordinating Secretariat is to coordinate the activities of WEF Food Innovation Hubs around the globe. It is hosted by FoodValleyNL, which describes itself as “an independent international organization” which seeks to “break barriers to accelerate the transition” in the manner in which food is grown and consumed.⁷²

Transition to what? If the work advertised by FoodValleyNL is any indication, then it includes working towards a “protein shift.” This shift is intended to reduce the amount of animal protein consumed by promoting “plant-based protein” and

the consumption of insects.⁷³ Farming insects for animal feed and human food has been on the World Economic Forum agenda for several years.⁷⁴

Creating a Demand Among Children to Eat Insects by Modifying Their Perceptions and Behavior

By 2022, scientists began an experimental program to feed crickets and beetle larvae known as mealworms to children in Wales.⁷⁵ Actual implementation began months later to feed 10- and 12-year-olds at public schools in the Netherlands.⁷⁶ The programs include perceptions modification to break children’s psychological resistance to eating insects, and behavioral modification to cause children to want to eat them, shifting command-consumption to one of demand over the long term.

We are not against plant or insect-based protein consumption but are extremely concerned with a forced transition that makes traditional crops and animal-based proteins scarce, leading to food insecurity. We are therefore concerned that the squeeze on nitrogen-based fertilizer goes still further and could



catastrophically affect other areas connected to food security, such as fuel availability for food production and transportation.

The squeeze on nitrogen-based fertilizer goes still further. Urea, a primary resource for use in nitrogen-based fertilizer, is also the primary ingredient in the creation of “AdBlue,” a diesel-fuel additive known in the United States as Diesel Exhaust Fluid (DEF). The US Environmental Protection Agency (EPA) in 2007 and then again 2010 mandated increasingly stringent emission standards for levels of nitrogen oxide. To meet these new standards, diesel engine makers turned to DEF, a fluid derived in part from urea which helps to reduce nitrogen emissions. DEF is now required in nearly all modern commercial diesel engines, both for trucking and agricultural vehicles.

This means that the agricultural and transportation sectors are increasingly competing for the same must-have product (urea) to continue their operations, costs which in turn are passed on to the consumer. Export bans on urea from China and Russia have put tremendous stress on transportation networks in Australia and other countries.⁷⁷ Biden administration policies which have reduced domestic production of natural gas are also having an impact on the availability of this vital product.

America’s largest producer of ammonia is CF Industries in Donaldsonville, Louisiana. CF Industries was told in April of 2022 by Union Pacific Railroad that the company must cut nitrogen fertilizer shipments by 20 percent. CF Industries is only one of 30 shippers to face this restriction, which was put into place during the spring planting season when farmers needed fertilizer. CF Industries president Tony Will warned:

“The timing of this action by Union

Pacific could not come at a worse time for farmers,” said Tony Will, president and chief executive officer, CF Industries Holdings, Inc. “Not only will fertilizer be delayed by these shipping restrictions, but additional fertilizer needed to complete spring applications may be unable to reach farmers at all. By placing this arbitrary restriction on just a handful of shippers, Union Pacific is jeopardizing farmers’ harvests and increasing the cost of food for consumers.”⁷⁸

Union Pacific’s justification for this decree is the need to reduce congestion along its tracks, a result of supply chain disruptions stemming from the COVID-19 lockdowns by cutting down on privately owned rail cars (like those of CF Industries). Most privately-owned railcars are involved in the production of chemicals, agricultural products, or energy according to a 2012 list by Railserve.com.

Union Pacific is not alone. In a March 2022 letter to the Surface Transportation Board, the National Grain and Feed Association (NGFA) warned of “significant complaints” regarding rail service disruption on the Union Pacific, BNSF (Burlington-Northern Santa Fe), and Norfolk Southern railways. NGFA CEO Michael Seyfert noted the effect the disruptions were having on food producers:

... at rail origins, NGFA members are unable to purchase grain from farmers because they are full while awaiting loaded trains to be moved out by the railroad. Conversely, at rail destinations, NGFA members have run out of grain and have been forced to shut down

CF Industries: Union Pacific Curtails Fertilizer Shipments, Delaying Deliveries and Preventing New Rail Orders from Being Taken

Screenshot of [CF Industries News Release](#), April 14, 2022.

flour mills and feed mills and cut off sales to customers while awaiting grain deliveries. In some instances, it has left NGFA members unable to deliver feed to livestock producers that may not have alternative feed sources. In an effort to continue service for customers during the rail service disruptions, NGFA members have done as much as possible to keep animals fed, but the ability to stretch resources is exhausted and growing more tenuous with each additional day of service delays.⁷⁹

On top of this is the fertilizer shortage created by the Russian government as a weapon of war. Days before its February 2022 invasion of Ukraine, Russia banned ammonium nitrate exports for domestic agricultural purposes until April, just before the northern hemisphere's planting season. That disrupted a fertilizer market that had seen ammonia gas spike up 500 percent in 16 months.⁸⁰ In April, Moscow publicly discussed weaponizing its fertilizer exports and went ahead to stop shipments, many of which had been through Ukraine.⁸¹ By autumn, it had become a global

crisis.

The confluence of events raise questions about whether it is a coincidence that some of these railroad actions, which harmed the ability to get fertilizer and grain to livestock, came at the same time as a major crackdown globally on the use of nitrogen in fertilizers and from livestock in the name of climate change.

American railroads are subject to United Nations mandates. Union Pacific and other members of the Association of American Railroads (AAR) publicly present themselves as fervent devotees of ESG policies. Union Pacific notes that its ESG policies are directly tied to the United Nations Sustainable Development Goals (UNSDG), best, and sometimes critically, known under the name "Agenda 2030."⁸² The UNSDGs are "the leading ESG framework for large companies," according to a memo published at the Harvard Law School Forum on Corporate Governance.⁸³ Sri Lanka's adherence to them makes the small country look like a canary in the international coal mine.

The Sustainable Development Goals, which the UN Development Program (UNDP) calls "a radical plan



Administrator Samantha Power at the swearing-in ceremony for Gabriel “Gabe” Grau, the incoming Mission Director for USAID Sri Lanka and Maldives

[USAID U.S. Agency for International Development CC BY-NC 2.0 License](#)

for humanity,”⁸⁴ is a list of 17 global development objectives which include such unlikely achievements as “end poverty, in all its forms, everywhere.”⁸⁵ The UNSDG has driven government and private sector policy changes, especially on climate change, across the globe. UNDP noted in 2020 that the COVID-19 pandemic represented “an opportunity” for countries to “change consumption and production patterns” in order to meet the agenda.⁸⁶

The combination of railroad, federal government, and United Nations policies represent a threat to food production in the United States and worldwide. Political leaders are exploiting the situation for their own transformational goals. In May, 2022, **USAID Administrator Samantha Power said a “crisis should not go to waste”** in using ongoing fertilizer shortages, which are themselves mainly a result of government policies and the Russian invasion of Ukraine, **to force farmers to adopt “green” energy policies.**⁸⁷ Power was President Obama’s

ambassador to the United Nations and remains a key driver of these global transformational changes. USAID is responsible for managing the aid, including food aid and strategic food production architecture, that the US provides internationally, and would play a major role in heading off an international food crisis.

Foreign Influence on the American Food and Agricultural Sector

Foreign influence on the nation’s food and agricultural sector is widespread. The United Nations and foreign regimes have all had an impact that remains unaddressed. Such manipulation is a normal part of statecraft that Americans should expect and defend against, but apart from an FBI effort to combat foreign influence as a criminal or counterintelligence matter, the US has left itself defenseless.

While the US government defines the Food and Agricultural sector as one of 16 critical infrastructure sectors, it does not appear to take seriously the risk of

foreign influence or manipulation of that sector.

Federal agencies carefully investigate the risk of a potential hostile power inserting itself into, for example, the supply chain for computer chips for military jets. But foreign companies are permitted to control significant swathes of the American food and agricultural sector, with minimal oversight. Foreign regimes run influence operations against various critical infrastructure sectors with little notice or concern in Washington.

States and private organizations are left to fill the gap. The non-profit watchdog Investigate Midwest has documented that foreign ownership of American farmland has tripled in the last decade. Foreign entities owned nearly 37.6 million acres of American agricultural land in 2020.⁸⁸ That is larger than the land area of the states of Florida, Georgia, or Wisconsin. Of that acreage, 10.9 million are cropland, most of which house windmills for producing energy.

The USDA is required to track the foreign ownership of agricultural land through the Agricultural Foreign Investment Disclosure Act, but its records are spotty. Investigate Midwest found that:

The database has significant gaps. There are more than 3.1 million acres without an owner listed. Spot checks show that many parcels listed are no longer controlled by the owner in the database. It is unclear if land is removed from the database after it is sold or a lease is terminated.⁸⁹

Foreign ownership could be even higher than 38 million acres, given the ease with which American laws permit foreign entities to own real estate anonymously through domestic shell companies or cutouts, or through subsidiaries that appear to be “majority”

American-owned.

Chinese buy up American agriculture.

Communist China is buying American farms so aggressively that bipartisan pressure is building to take action. “[B]y the start of 2020, Chinese owners controlled about 192,000 agricultural acres in the U.S., worth \$1.9 billion, including land used for farming, ranching and forestry,” *Politico* reported.⁹⁰ These foreign purchases have worried some lawmakers. Congressman Dan Newhouse (R-WA) proposed an amendment to an agriculture appropriations bill in 2022 which “would block any new agricultural purchases by companies that are wholly or partly controlled by the Chinese government and would ban existing Chinese-owned farms in the U.S. from drawing from federal agricultural support programs.”⁹¹ The bill never became law.

The Chinese Communist Party has been waging highly unconventional conflict against the United States for decades in a campaign to win with little or no military confrontation. Its creators in the People’s Liberation Army call it “unrestricted warfare.”⁹² Such conflict, as refined over the years, stresses strategic acquisitions that will enable the Party to be a leader in food science and production. State-backed Chinese companies, and Communist Party members, have been able to pay top dollar to bring the regime to the top in this area.

Part of CCP land acquisition in the US involves not only valuable farm land, but massive tracts in strategically sensitive areas. A case in point is the Party-controlled Fufeng Group’s 2021 purchase of a 370-acre parcel in Grand Forks, North Dakota. The company announced the proposed acquisition through its American subsidiary, Fufeng USA.

Fufeng is not believed to be a regime-controlled



Vice President Pence gives a speech next to a RQ-4 Global Hawk drone, thanking Air Force personnel aboard Grand Forks Air Force Base on July 25, 2018 for the critical role they play in conducting global intelligence, surveillance, and reconnaissance (ISR). Communist China’s recent land purchases put at risk significant national security capabilities at this base and others in North Dakota.

[U.S. Air Force photo by Airman 1st Class Elora J. Martinez](#)

company, but its CEO, Li Xuechun, is reported to be a regional Communist Party functionary with official Party recognition as a “model laborer.”⁹³ So the distinction is academic if the CEO answers to Xi Jinping.

The relatively small property in itself, farmland on which Fufeng says it says it will invest \$700 million in a corn mill, worries local agriculture interests due to Fufeng’s positioning in industry consolidation, “particularly when it corners off a critical market through a foreign company with ties to the CCP,” according to the US-China Security and Economic Review Commission.⁹⁴

A 370-acre parcel in middle America in itself is nothing extraordinary. **However, Fufeng’s 370 acres are a severe worry. They sit just 13 miles from Grand Forks Air Force Base, a critical military installation that conducts a range of sensitive military training exercises for the U.S. Department of Defense.** Grand Forks is home to

the 319th Reconnaissance Wing that operates the Air Force’s Global Hawk drones worldwide. “Our mission is to provide a decisional advantage to our warfighters and national leaders through support of our Nation’s Global Hawk High-Altitude ISR mission, ensure strategic command and control through operation of the Nation’s High Frequency Global Communication System, afford Combatant Commanders mission-ready Airmen anytime, anywhere,” according to the 319th.⁹⁵ The wing is the only base in Air Mobility Command to receive remotely piloted aircraft systems.

Grand Forks Air Force Base was also selected in 2021 as the new home of the Space Networking Center. The Center is part of the Department of Defense’s Space Development Agency’s new low-Earth orbit mission, **which will serve as the backbone for all U.S. military communications.**⁹⁶

That CCP-owned 370-acre piece of farmland is also about 67 miles from Cavalier Space

Force Station. Cavalier Space Force Station operates and maintains the Perimeter Acquisition Radar Attack Characterization System (PARCS), a phased-array radar system that tracks over half of all earth-orbiting objects; provides critical missile warning and space surveillance data to North American Aerospace Defense Command (NORAD), United States Space Command (USSPACECOM), and regional combatant commanders; and provides attack characterization data to the Secretary of Defense and the President for real time war plan execution decisions.⁹⁷

“Some of the most sensitive elements of Grand Forks exist with the digital uplinks and downlinks inherent with unmanned air systems and their interaction with space-based assets,” a concerned Air Force major wrote in an internal memo. **“Passive collection of those signals would be undetectable,** as the requirements to do so would merely require ordinary antennas tuned to the right collecting frequencies,” he said. **“This introduces a grave vulnerability to our Department of Defense installations and is incredibly compromising to U.S. national security.”**⁹⁸

Thus the Chinese Communist Party has a potential intelligence collection and unconventional warfare outpost near two of the nation’s most strategically significant military facilities, which for decades had been safe in remote and sparsely populated areas in North Dakota.

When tracking CCP land acquisitions, a pattern emerges. The Guanghai Energy Company, a CCP-controlled entity, used a shell company to purchase 140,000 acres of land 70 miles from Laughlin Air Force Base in Texas. Laughlin is the largest pilot

training facility in the Air Force.

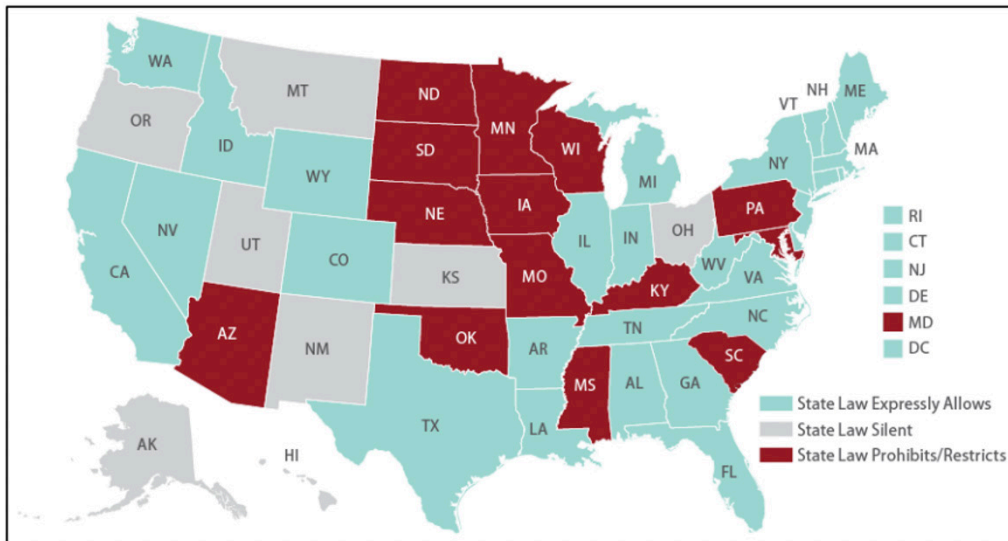
Hostile ownership of farmland simply for agricultural production also poses a threat to American food security, as Gordon Chang wrote in *Newsweek*:

“If the People’s Republic of China allowed US agricultural lands it acquired to cease production, the country’s capability as a producer of food surpluses would be lost,” Gregory Copley, the president of the International Strategic Studies Association, told *Newsweek*. “No power can remain great if it cannot produce food surpluses, and this has always been the biggest strategic asset of the U.S., and the key to wealth.”⁹⁹

No federal laws ban the foreign acquisition of US farmland. Some state laws restrict foreign agricultural land purchases in a variety of ways. A Congressional Research Service report from November 2021 explains that:

“several states have imposed certain prohibitions or restrictions on foreign ownership, while most states expressly allow foreign ownership (Figure 1). Several states require reporting or registration (Arkansas, Illinois, Iowa, Kansas, Maine, Minnesota, Missouri, Nebraska, North Carolina, North Dakota, Ohio, and Wisconsin). There is no single uniform approach under state law to addressing foreign ownership. Some general categories include restrictions on the amount of land that can be owned or the duration of ownership; distinctions involving

Figure I. Overview of Selected State Laws Related to Foreign Ownership of U.S. Private Agricultural Land



Source: CRS using data from the National Agricultural Law Center, <https://nationalaglawcenter.org/state-compilations/aglandownership/>.

private versus public land or how agricultural land is defined; distinctions involving resident/nonresident aliens; inheritance considerations involving land ownership; restrictions on ownership of foreign corporations (e.g., corporate farming laws or requirements corporations are subject to in order to obtain license or register); and differences related to enforcement and penalties.”¹⁰⁰

Apart from foreign ownership of land, another food security vulnerability is foreign ownership of food processing companies. Two of the largest corporate meat processing firms in the United States, Smithfield Foods, and JBS S.A., are owned by foreign companies (from China and Brazil respectively). Leading producers of seeds and agrochemicals like Monsanto (now a subsidiary of Bayer), BASF, and Syngenta are also foreign owned by German and Chinese firms.¹⁰¹

In 2013 China acquired Smithfield Foods for just over \$7 billion.¹⁰² In 2017 China executed its largest foreign business takeover to date with a \$44 billion purchase of Syngenta – a Swiss seed and pesticide company.¹⁰³ During the ten-year period of 2010 to 2020 the Chinese spent more than \$90 billion to purchase almost 300 foreign food, agriculture, and chemical companies.

Control of these massive agricultural companies may seem to be good free enterprise investments and the reality of the increasingly globalized business world. That, of course, presumes stability and reliability of production and supply chains, and good will of regimes such as the Chinese Communist Party.

The COVID-19 pandemic validated those concerns. In June 2020, the *New York Times* reported that while consumers shared social media posts of meatless grocery stores around the country, Smithfield and other meat processors had increased pork exports to China to their highest levels ever.¹⁰⁴ Publicly,



Sundry Photography - stock.adobe.com

Smithfield insisted that pork intended for the Chinese market did not detract from American tables, but even some of the company’s own employees have indicated that may not be whole story.

Before the pandemic, Reuters quoted Smithfield’s director of raw materials procurement as saying, “Down the road, if this [policy of emphasizing exports] continues and we ship a lot of product to China, certainly I think we could see shortages, particularly on hams and bellies” in the American market.¹⁰⁵

Smithfield had shifted its focus to China in 2013, when it was purchased by Shuanghui International Holdings, now known as WH Group, following an African Swine Flu epidemic which decimated China’s domestic pork production market. Putting meat on Chinese tables became a primary focus for the company. In addition to the massive scale of the Chinese market, Chinese sales are often preferred as most exports are done as carcasses, often cut into thirds, which are cheaper than labor-intensive meat

preparation for the American market.¹⁰⁶ At the same time the sale was going forward, the Missouri state legislature passed a law softening its rules on foreign ownership of agricultural land – just in time for sale was to go through. Smithfield was, unsurprisingly, a major campaign donor to significant political figures in the state that made the legislation possible.¹⁰⁷

During a 2018-2020 crackdown on Chinese Communist Party espionage and influence operations in the United States, Secretary of State Mike Pompeo took the unusual step of briefing all 50 state governors about how the CCP has mapped out the political human terrain in each of their states. The mapping included profiles of each state lawmaker, elected official (including governor), and other politically influential people and interests for the purposes of manipulating state laws and policies.¹⁰⁸ The State Department has since deleted any reference to Pompeo’s speech.

In some cases, foreign influence may be more subtle. Bill and Melinda Gates were reported, prior to their



[The Global Development Outlook: William H. Gates III speaks - World Economic Forum - Licensed under CC BY-NC-SA 2.0](#)

divorce, to be the largest single owners of farmland in the United States, with over 242,000 acres.¹⁰⁹ The announcement made worldwide news, in part because of the Gates’ philanthropic involvement in the promotion of climate change policies and promoting alternative protein consumption.

It appears the CCP is taking advantage of Gates’ wealth, power, and influence. The technology titan has close ties to a Chinese Communist Party front organization involved in wooing U.S. agricultural leaders. Gates reportedly has links to the Chinese People’s Association for Friendship with Foreign Countries (CPAFFC), which U.S. officials called the “public face” of the CCP’s United Front Work Department responsible for perpetuating CCP influence abroad.¹¹⁰ The CPAFFC co-hosted an agricultural event with the United States Heartland China Association (USHCA). USHCA CEO Bob Holden, “said during the roundtable’s opening ceremony that U.S.-Sino cooperation was ‘essential’ to overcome global challenges, including ‘producing enough nutritious food to feed the growing population

on the planet’ and ‘preventing future pandemics of human, animal, and plant diseases.’”¹¹¹ Officials from Kansas, Iowa, Missouri, Oklahoma, and other agricultural states were present for the event.

With the centralization of agricultural land into very few hands, CCP influence becomes more powerful and more of a danger to American food security. This has become increasingly true as investors have begun to look at American farmland not as an opportunity to participate in the agricultural sector and grow food for their communities, but as a mere “asset class” for large-scale investing. Institutional investors owned 14 percent of U.S. farmland in 2021.¹¹²

Senator Chuck Grassley of Iowa, author of the Food Security is National Security bill, said institutional control of American farmland into just a few hands is problematic, both from a security standpoint and because it allows fewer and fewer young would-be farmers to participate in the business at a time when there are more American farmers over the retirement age of 65 than under 35.¹¹³

Recommendations

Given the wide range of challenges, both foreign and domestic, to America's food security, we recognize that it is beyond the scope of this interim report to address all those challenges.

However, we believe that an immediate and general approach should be adopted to de-centralize American food production and distribution - pushing as much down from the centralized level to the state, local, and individual levels, to focus policies on ensuring reliably-sourced food and agriculture supply chains for American citizens at all times, and to enhance preparedness at all levels. Since food security is national security, people from the food and agriculture sectors should be included in national security discussions and vice-versa.

What follows are broad, initial recommendation for public consideration and collaboration.

Federal Level

- Immediately withdraw from any United Nations or other transnational resolutions or agreements that adversely impact the American food and agricultural sector, and work with other countries to help them do the same.
- Orient diplomatic strategy, defense strategy, national security strategy, and trade policy toward ensuring uninterrupted supply of foreign and domestically produced food, fertilizer, and agricultural products for the well-being of American citizens.
- Rapidly roll-back federal programs that financially incentivize farmers to not plant/grow food, and

immediately reduce bureaucracy and regulations that hamstringing domestic food production and distribution.

- Reassess and lift regulations that handicap domestic natural gas and chemical production crucial to manufacturing of fertilizers and other vital food/pharmaceutical precursors (such as vitamins and amino acids). [Create financial incentives to bring these industries back to the United States to reduce dependency on foreign-produced food/pharmaceutical precursors.]
- Investigate corporate policies that hamper the storage and transportation of fertilizer and fuel precursors and create legal barriers/penalties to these types of policies.
- Outlaw Communist Chinese and other hostile foreign ownership of American farmland, agriculture, food processing, and food distribution.
- Focus counterintelligence, cyber security, biodefense, and other resources toward protection of American agriculture, food supplies, and related infrastructure.
- Task federal agencies involved in national security and environmental policy to conduct routine outreach and coordination with the food and agriculture industry to ensure they have a "seat at the table" during planning/coordination of federal policymaking.
- Provide federal tax and regulatory incentives to improve America's long-term food preservation industry to increase the number of canneries and storage facilities capable of producing long-term shelf-stable food.

- Work with America’s long-term food preservation industry to purchase food products during periods of low commercial demand to build food provisions in the Strategic National Stockpile. (Similar to previous presidential administrations’ purchases of oil at historically low prices to re-stock the Strategic Petroleum Reserve)
- Task FEMA with updating public messaging to warn Americans of the need to stock up on food supplies for a minimum of 90 days with the recommendation that Americans store as much long-term shelf stable food as they can.
- Rapidly identify supporting infrastructures (such as electricity and water) to the nation’s most critical food production and storage facilities and protect those infrastructures from all hazards.
- Update the 7-year-old “Food and Agriculture Sector Specific Plan” to make the above changes/ actions programmatic and lasting.
- Task state and local emergency management agencies with exploring food storage options to reduce dependency on the federal government/ FEMA.
- Work within the state and local governments as well as across borders with other states to avoid onerous or counterproductive regulations or mandates that hamper food production and distribution.
- Pass laws that require disclosure of foreign-owned agricultural land and critical infrastructures so that state and local governments are aware of potentially problematic influence or disruption of these infrastructures. [See Louisiana Senator Barry Milligan’s original [Senate Bill 472](#) - the “*Transparency in Ownership of Critical Infrastructure Law.*”]
- Reduce state and local regulations that make it difficult for small agricultural businesses to bring their products to market.

State and Local Levels

- Rapidly identify supporting infrastructures (such as electricity and water) to the most critical state and local food production and storage facilities, and apply state and local resources and/or economic incentives to private industry for the protection of those infrastructures from all hazards.
- Update public messaging to warn state/local residents of the need to stock up on food supplies for a minimum of 90 days with the recommendation that they store as much long-term shelf stable food as possible.
- Promote locally grown, community agriculture, and farm-to-table policies that strengthen local farming and food processing, such as economic incentives for Community Supported Agriculture (CSA) and for restaurants and grocers to choose food products from local farmers.
- Incentivize state colleges and private academic institutions to rapidly establish programs to draw from established disciplines of natural science (such as permaculture, regenerative agriculture, ecology, and biology) to promote “perennial food forests” that are suitable for urban, suburban, and rural environments.

- Incentivize the use of state- and locally-owned land into perennial food forests to increase local production of food and medicinal plants.
- Ensure that state governments and academic institutions funding food security-related studies are not funding a “research-industrial complex” but instead fund relevant, rapid, and actionable solutions to their states’ pressing food problems.

Individual Level

- **Attitude: Apply food security to what we already do.** Most individuals keep 30-day or more supplies of medicine and vitamins and save money for that ‘rainy day,’ illness, and retirement. We buy insurance to cover an event that’s unlikely to happen. Why not keep an extra supply of food? We must adjust our attitudes toward food security and encourage our families, neighbors, and communities to do the same.
- **Determine caloric and dietary needs and gradually stock up.** Not all at once, but a little at a time, buy a few extra items on each grocery trip until building an adequate supply of 90-days or longer.
- **Increase self-sufficiency.** This isn’t for everybody, but it’s possible even in cities for people to grow their own fruits, herbs, and vegetables, either individually or in groups, for their own consumption and trade. Revive the concept of the World War II Victory Gardens and explore creating your own perennial food forest for your own family or neighborhood.
- **Community awareness.** Any individual can spread awareness in his community about food security and how all can ensure plentiful supplies for themselves and others.
- **Create a movement.** Self-sufficiency for local food is not a political issue and has tremendous economic and cultural appeal. There is room for a movement to promote locally grown food production and commerce.
- **Buy local.** Buying local supports local growers and food processors to ensure direct farm-to-table supply chains to you. It’s usually more expensive than supermarkets, but those who can afford it should make the effort to strengthen local food growers and producers.
- **Avoid buying Communist Chinese products.** Create a demand for products not made in, or owned by, Communist China. Compile lists of American companies owned by Communist Chinese individuals or entities and boycott them. This will include many popular American brands.

For more, see
CenterforSecurityPolicy.org/foodsecurity
and
www.FoodSecurity.Solutions

Endnotes

- 1 [How Much Do Humans Eat? A Scientific Scientific Breakdown By the Numbers \(inverse.com\)](https://www.inverse.com/news/technology/2021/08/29/usda-farmers-conservation-program-507028)
- 2 <https://www.statista.com/statistics/251728/weekly-number-of-us-grocery-shopping-trips-per-household/>
- 3 Associated Press, “Farm population lowest since 1850s,” *New York Times*, July 20, 1988; <https://www.nytimes.com/1988/07/20/us/farm-population-lowest-since-1850-s.html>
- 4 US Bureau of Labor Statistics, “Agricultural Workers,” 2022. <https://www.bls.gov/ooh/Farming-Fishing-and-Forestry/Agricultural-workers.htm>. The percentage is extrapolated from the number of employed in the civilian labor force, or 158,732,000 as of August 2022. US Bureau of Labor Statistics, “The Employment Situation – August 2022,” September 2, 2022. <https://www.bls.gov/news.release/pdf/empsit.pdf>.
- 5 “Critical Infrastructure Sectors,” Cybersecurity and Infrastructure Security Agency, updated October 21, 2020, <https://www.cisa.gov/critical-infrastructure-sectors>.
- 6 “Food and Agriculture Sector-Specific Plan” Cybersecurity and Infrastructure Security Agency, 2015, <https://www.cisa.gov/sites/default/files/publications/nipp-ssp-food-ag-2015-508.pdf>
- 7 “The coming food catastrophe,” *The Economist*, May 19, 2022, <https://www.economist.com/leaders/2022/05/19/the-coming-food-catastrophe>
- 8 “The coming food catastrophe,” *The Economist*, May 19, 2022, <https://www.economist.com/leaders/2022/05/19/the-coming-food-catastrophe>
- 9 Adam Minter, “The Food Crisis Is Bad. US Crop Insurance Makes It Worse,” *Bloomberg*, May 25, 2022, <https://www.bloomberg.com/opinion/articles/2022-05-25/the-global-food-crisis-is-bad-us-crop-insurance-program-makes-it-worse>
- 10 Tatyana Monnay, “A program that pays farmers not to farm isn’t saving the planet,” *Polit-*

ico, August 29, 2021. <https://www.politico.com/news/2021/08/29/usda-farmers-conservation-program-507028>

- 11 “USDA Expands and Renews Conservation Reserve Program in Effort to Boost Enrollment and Address Climate Change” United States Department of Agriculture, April 21, 2021, <https://www.usda.gov/media/press-releases/2021/04/21/usda-expands-and-renews-conservation-reserve-program-effort-boost>
- 12 Council on Foreign Relations, “Background-er: The State of U.S. Strategic Stockpiles” Council on Foreign Relations, April 20, 2022, <https://www.cfr.org/backgrounder/state-us-strategic-stockpiles>
- 13 Food and Water in an Emergency <https://www.fema.gov/pdf/library/f&web.pdf>
- 14 Food Assets, Advisory Letters on US Strategic Stockpile & National Food Preparations, <https://foodassets.com/info/about-us.html>
- 15 Food Assets, Advisory Letters on US Strategic Stockpile & National Food Preparations, <https://foodassets.com/info/about-us.html>
- 16 Tommy Waller, “Situation Report: Cyber-attack on world’s largest meat processor highlights food system vulnerabilities,” Center for Security Policy, June 2, 2021, <https://centerforsecuritypolicy.org/situation-report-cyberattack-on-worlds-largest-meat-processor-highlights-food-system-vulnerabilities/>
- 17 Joe Weiss, “Some CISOs are starting to get the importance of ICS cyber security – and they are in the food industry,” Control Global, March 18, 2016, <https://www.controlglobal.com/home/blog/11320534/some-cisos-are-starting-to-get-the-importance-of-ics-cyber-security-and-they-are-in-the-food-industry>
- 18 “Adulterating more than food: The cyber risk to food processing and manufacturing,” Food Protection and Defense Institute, Homeland Security Center of Excellence, University of Minnesota, 2019. <https://conservancy.umn.edu/bitstream/handle/11299/217703/FPDI-Food-ICS-Cybersecurity-White-Paper.pdf>

19 Joe Weiss, “The US food supply is neither cybersecure not safe from control system cyber threats,” Control Global, March 14, 2021, <https://www.controlglobal.com/home/blog/11292777/information-technology>

20 David Ruiz, “The Malwarebytes 2021 State of Malware report: Lock and Code S02E04,” Malwarebytes.com, March 15, 2021, <https://www.malwarebytes.com/blog/podcast/2021/03/the-malwarebytes-2021-state-of-malware-report-lock-and-code-s02e04>

21 “Cyber criminal actors targeting the food and agricultural sector with ransomware attacks,” Private Industry Notification, Federal Bureau of Investigation, September 1, 2021, https://www.cisa.gov/sites/default/files/publications/PIN_20210901.pdf

22 “Hackers, tractors, and a few delayed actors. How hacker Sick Codes learned too much about John Deere,” Malwarebytes.com, August 30, 2021, <https://www.malwarebytes.com/blog/podcast/2021/08/hackers-tractors-and-a-few-delayed-actors-how-hacker-sick-codes-learned-too-much-about-john-deere-lock-and-code-s02e16>

23 Oleksandr Fylyppov and Tim Lister, “Russians plunder \$5M farm vehicles from Ukraine – to find they’ve been remotely disabled,” CNN, May 1, 2022, <https://www.cnn.com/2022/05/01/europe/russia-farm-vehicles-ukraine-disabled-melito-pol-intl/index.html>

24 Cory Doctorow, “About those kill-switched Ukrainian tractors: What John Deere did to Russian looters, anyone can do to farmers, anywhere,” Medium.com, May 8, 2022, <https://doctorow.medium.com/about-those-kill-switched-ukrainian-tractors-bc93f471b9c8>

25 “Made in Beijing: The plan for global market domination,” Federal Bureau of Investigation, March 7, 2022, <https://www.fbi.gov/video-repository/made-in-beijing-030722.mp4/view>.

26 John S. Forrester, “Fire Safety Stakeholders Respond to Food Plant Fires Rumor,” Powder and Bulk Solids, May 2, 2022

27 “The Economic Impact of a Railroad Shutdown,” Association of American Railroads, September 2022. <https://www.aar.org/wp-content/uploads/2022/09/AAR-Rail-Shutdown-Report-September-2022.pdf>

28 Ibid.

29 Hilary Beaumont, “The activists sabotaging railways in solidarity with indigenous people,” *The Guardian*, July 29, 2021, <https://www.theguardian.com/environment/2021/jul/29/activists-sabotaging-railways-indigenous-people>

30 Hilary Beaumont, “The activists sabotaging railways in solidarity with indigenous people,” *The Guardian*, July 29, 2021, <https://www.theguardian.com/environment/2021/jul/29/activists-sabotaging-railways-indigenous-people>

31 Kyle Shideler, “Situation Report: 2 Suspected Anarchists Arrested for Terror Attempt on Washington Railway,” Center for Security Policy, <https://centerforsecuritypolicy.org/situation-report-2-suspected-anarchists-arrested-for-terror-attempt-on-washington-railway/>

32 Grace McCarthy, “Bellingham woman sentenced for railway sabotage,” *The Northern Light*, <https://www.thenorthernlight.com/stories/bellingham-woman-sentenced-for-railway-sabotage,18661>

33 Chris Tomlinson, “Foul Play Suspected as Third Train Derails in a Month After Far-Left Call for Sabotage,” Breitbart, February 21, 2020, <https://www.breitbart.com/europe/2020/02/21/foul-play-suspected-third-train-derails-month-far-left-call-sabotage/>

34 Shane Magee, “Investigation, cleanup continue after train carrying potash derailed Saturday,” CBC News, August 25, 2021, <https://www.cbc.ca/news/canada/new-brunswick/cn-derailment-potash-update-1.6153071>

35 Barb Glen, “Potash train derails,” Producer.com, May 22, 2022, <https://www.producer.com/news/potash-train-derails/>

36 Christian Bickert, “Grain reserves: In the hands of just a few countries,” *DLG Mitteilungen* (Frankfurt), 2022. <https://www.dlg.org/en/agri->

[culture/topics/dlg-agrifuture-magazine/knowledge-skills/grain-reserves-in-the-hands-of-just-a-few-countries](#)

37 James Minert, “COVID-19 impacts on pork and beef,” Center for Commercial Agriculture, Purdue University, April 28, 2020, <https://ag.purdue.edu/commercialag/home/resource/2020/04/covid-19-impacts-on-pork-and-beef/>.

38 Walker Orenstein, “After COVID-related livestock kills, a move to diversify meat processing in Minnesota,” *Minneapolis Post-Tribune*, January 25, 2021, <https://www.minnpost.com/great-er-minnesota/2021/01/after-covid-related-live-stock-kills-a-push-to-diversify-meat-processing-in-minnesota/>

39 Mitzi Perdue, interview with Kevin Freeman, “Covid 19 is causing major US food supply disruption – Is a food crisis next?” Economic War Room, April 29, 2020. https://www.youtube.com/watch?v=S-XEh_GLFc4

40 “Why we need to give insects the role they deserve in our food systems,” World Economic Forum, July 12, 2021, <https://www.weforum.org/agenda/2021/07/why-we-need-to-give-insects-the-role-they-deserve-in-our-food-systems/>

41 “Reset the Table: Meeting the Moment to Transform the U.S. Food System,” Rockefeller Foundation, July 28, 2020, https://www.rockefellerfoundation.org/wp-content/uploads/2020/07/RF_Reset-the-Table_SUMMARY_July-28_FINAL.pdf

42 See for example, Monica Lozano, “Did Rockefeller Foundation Predict The Future?” *Verve Times*, June 29, 2022, <https://vervetimes.com/did-rockefeller-foundation-predict-the-future/>

43 Sofia Barbarani, “Dutch farmers protest against green reforms,” *The Independent* (London), July 4, 2022, <https://news.yahoo.com/dutch-farmers-protest-against-green-115829921.html>; and Anthony Furey, “Here’s why we might soon see more farmer protests across Canada,” *Toronto Sun*, July 25, 2022, <https://torontosun.com/opinion/columnists/furey-heres-why-we-might-soon-see-more-farmer-protests-across-canada>.

44 Carrie Carlson and Shane LeCapitaine, “US

Nitrogen Fertilizer Market On The Rise, FEECO International, N.D., <https://feeco.com/us-nitrogen-fertilizer-market-on-the-rise/>

45 Cai Chen and Eduardo Tinti, “China’s fertilizer exports ban raises worries from global markets”, *Fast Markets*, October 5, 2021

46 Zaheena Rasheed and Rathindra Kuruwita, “Sri Lanka faces ‘man-made’ food crisis as farmers stop planting,” *Al Jazeera*, May 18, 2022, <https://www.aljazeera.com/news/2022/5/18/a-food-crisis-looms-in-sri-lanka-as-farmers-give-up-on-planting>.

47 Bill Tomson, “Russian halt to fertilizer exports expected to boost prices, spur shortfalls,” *Agri-Pulse*, March 4th, 2022, <https://www.agri-pulse.com/articles/17312-russian-halt-to-fertilizer-exports-expected-to-boost-prices-spur-shortfalls>

48 R. Ramakumar, “Rajapaksa’s Eco-extremism Spells Doom for Sri Lankan Agriculture and Rural Livelihoods,” *Foundation for Agrarian Studies*, September 6, 2021, <https://fas.org.in/rajapak-sas-eco-extremism-spells-doom-for-sri-lankan-agriculture-and-rural-livelihoods/>

49 Micaela Burrow, “‘Complete Collapse’: Here’s How ESG Destroyed One Nation’s Economy,” *Daily Caller*, July 6, 2022, <https://dailycaller.com/2022/07/06/complete-collapse-esg-destroyed-nations-economy/>

50 “Organic food revolution in Sri Lanka threatens its tea industry,” *Al Jazeera*, 1 September 2021, <https://www.aljazeera.com/news/2021/9/1/organic-food-revolution-sri-lanka-tea-industry>

51 “Colombo Declaration calls for tackling global nitrogen challenge,” *United Nations Environmental Program*, October 24, 2019, <https://www.unep.org/news-and-stories/press-release/colombo-declaration-calls-tackling-global-nitrogen-challenge>

52 In 2018, the Center for Security Policy proposed a solution to relieve poor countries of debts to Communist China, while punishing the Chinese Communist Party and its oligarchs by promoting a global default on debts owed to CCP entities. See J. Michael Waller, “Strategic default: How to roll back

China's weaponization of capital investment," *Washington Examiner*, December 17, 2018, <https://www.washingtonexaminer.com/opinion/op-eds/strategic-default-how-to-roll-back-chinas-weaponization-of-capital-investment>

53 Loukia Gyftopoulou, "To Avoid Default, Sri Lanka Might Need to Get Tougher on Climate Change," *Bloomberg News*, April 29, 2022, accessible at: <https://archive.ph/awou1#selection-3367.0-3367.71>

54 David Blackmon, "Rising Social Unrest Over Energy, Food Shortages Threatens Global Stability," *Bloomberg News*, July 10, 2022, <https://www.forbes.com/sites/davidblackmon/2022/07/10/rising-social-unrest-over-energy-food-shortages-threatens-global-stability/?sh=417f35b6568b>

55 Jesse Rintoul, "Farming for the future: why the Netherlands is the 2nd largest food exporter in the world," *Dutch Review*, August 20, 2020, <https://dutchreview.com/culture/innovation/second-largest-agriculture-exporter/>

56 "The Netherlands is the EU's largest meat exporter" *Statistics Netherlands (CBS)*, May 23rd, 2021, <https://www.cbs.nl/en-gb/news/2021/25/the-netherlands-is-the-eu-s-largest-meat-exporter>

57 World Economic Forum, "Farmers in the Netherlands are growing more food using less resources," *Youtube.com* November 27, 2019, <https://www.youtube.com/watch?v=5cLOYWsNhhk>

58 Olga Mecking, "The Netherlands Can Feed the World. Here's Why It Shouldn't," *Yes magazine*, January 11, 2018, <https://www.yesmagazine.org/health-happiness/2018/01/11/the-netherlands-can-feed-the-world-heres-why-it-shouldnt>

59 "EU to deal new blow to Dutch farmers by tightening fertilizer rules; Nitrogen protests continue," *NL Times*, July 8, 2022, <https://nltimes.nl/2022/07/08/eu-deal-new-blow-dutch-farmers-tightening-fertilizer-rules-nitrogen-protests-continue>

60 "Dutch farmers block food distribution centers over new environmental rules," *Deutsche Welle*, July 4, 2022, <https://www.dw.com/en/dutch-farmers-block-food-distribution-centers-over-new-environmental-rules/a-62356217>

61 Barry Murphy, "Dutch government moves to 'buy out' farmers," *Irish Farmers Journal*, July 1, 2022, <https://www.farmersjournal.ie/dutch-government-moves-to-buy-out-farmers-707601>

62 "Citrus Greening," *Animal and Plant Health Inspection Service, US Department of Agriculture*, May 20, 2021. <https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/citrus/citrus-greening>

63 J. Michael Waller, "What's killing Florida citrus? An insect from China. A cure may be at hand," *South Florida Sun-Sentinel*, March 26, 2020. <https://www.sun-sentinel.com/opinion/commentary/fl-op-com-waller-florida-citrus-china-insect-20200326-ifmwocfoafhtbfza75fm2dhuui-story.html>

64 Steven Savage, "Florida Citrus Industry is Facing an Existential Threat from Bacteria, but a Virus Offers Hope," *Forbes*, April 30, 2019, <https://www.forbes.com/sites/stevensavage/2019/04/30/can-the-florida-citrus-industry-be-saved/?sh=69087252ecfd>; "California Citrus Growers Face Existential Threat in HLB," *AgNet West*, April 1, 2019. <https://agnetwest.com/california-citrus-growers-face-existential-threat-in-hlb/>

65 The product, trademarked CitrusSaver Fertilizer, published five years of field trials on its website at <https://www.citrusaver.com/>.

66 "Brutal Honesty on HLB," *Citrus Industry*, June 11, 2021. <https://citrusindustry.net/2021/06/11/brutal-honesty-on-hlb/>

67 "CRDF discussed waging campaign to convince people to accept GMO frankenfruit," *Save Citrus*, May 12, 2020. <https://savecitrus.com/2020/05/12/crdf-discussed-waging-propaganda-campaign-to-convince-people-to-accept-bayer-gmo-frankenfruit/>

68 Rick Dantzler, "Moving Forward in a New Year," *Grower Research Report*, Citrus Research and Development Foundation, January 2022. <https://citrusrdf.org/wp-content/uploads/2022/01/January-2022-CRDF-Grower-Report.pdf>

69 Minutes of the Board of Directors Meet-

ing, Citrus Research and Development Foundation (Florida), April 26, 2022. <https://citrusrdf.org/wp-content/uploads/2022/05/April-26-2022-BoD-Meeting-Minutes-approved.pdf>

70 “Florida Citrus Industry Conference Draws Record Crowd,” *Citrus Industry*, June 21, 2022. <https://citrusindustry.net/2022/06/21/florida-citrus-industry-conference-draws-record-crowd/>

71 “CS/CS/SB 1000: Nutrient Application Rates,” Florida Senate, July 1, 2022. <https://www.flsenate.gov/Session/Bill/2022/1000>; “Governor Ron DeSantis Signs Eight Bills & Vetoes One,” Office of the Governor news release, June 8, 2022. <https://www.flgov.com/2022/06/08/governor-ron-desantis-signs-eight-bills-vetoes-one-2/>

72 “FoodValleyNL, “About Us”, Food Valley NL n.d., <https://www.foodvalley.nl/about-us/>

73 Ibid.

74 See Sean Fleming, “Good grub: Why we might be eating insects soon,” World Economic Forum, July 6, 2018, <https://www.weforum.org/agenda/2018/07/good-grub-why-we-might-be-eating-insects-soon/>; and Amrou Awaysheh and Christine J. Picard, “5 reasons why eating insects could reduce climate change,” The Davos Agenda, World Economic Forum, Geneva, February 9, 2022, <https://www.weforum.org/agenda/2022/02/how-insects-positively-impact-climate-change/>.

75 Fiona Jackson, “Primary school children in Wales could be offered edible insects including mealworms and crickets as scientists urge the next generation to embrace eco-friendly meat substitutes,” *Daily Mail* (UK), May 30, 2022, <https://www.dailymail.co.uk/sciencetech/article-10867737/Scientists-plan-feed-primary-school-children-crickets-mealworms-make-UK-greener.html>

76 “Meelworm op het menu in lespakket hondred basis-scholen in Overijssel,” RTV Oost (Netherlands), October 14, 2022, <https://www.rtvoost.nl/nieuws/2152164/meelworm-op-het-menu-in-lespakket-honderd-basis-scholen-in-overijssel>

77 David Sparkes, “Shortage of urea, used to make diesel anti-pollution additive AdBlue, threatens to grind Australia to a halt, transport

industry warns,” ABC News (Australia), December 3, 2021, <https://www.abc.net.au/news/2021-12-03/diesel-crisis-adblue-shortage-supply-china/100673482>

78 Staff Report, “CF Industries says Union Pacific reductions will shrink fertilizer supply, Donaldsonville Chief, April 15, 2022, <https://www.donaldsonvillechief.com/story/news/2022/04/15/cf-industries-says-union-pacific-reductions-shrink-u-s-fertilizer-supply/7335084001/>

79 Letter to Surface Transportation Board, National Grain and Feed Association, March 24th, 2022 <https://www.stb.gov/wp-content/uploads/NGFA-Letter-to-STB-Chairman-Oberman-on-Rail-Service-and-Precision-Scheduled-Railroading-March-24-2022.pdf>

80 Aled Thomas, William Bland, and Alexandre Bobylov, “Russia bans ammonium nitrate exports until April to support domestic farmers,” S&P Global Commodity Insights, February 2, 2022, <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/agriculture/020222-russia-bans-ammonium-nitrate-exports-until-april-to-support-domestic-farmers>

81 Alistair MacDonald, “Russian ministry recommends suspending fertilizer exports,” *Wall Street Journal*, March 4, 2022, <https://www.wsj.com/live-coverage/russia-ukraine-latest-news-2022-03-04/card/russian-ministry-recommends-suspending-fertilizer-exports-8gJNAaRR7PBi6HvV4T3o>; Mike Wilson, “Russia is weaponizing fertilizer: The country wants to re-structure the world order through food supply,” *Farm Futures*, September 22, 2022, <https://www.farmprogress.com/commentary/russia-weaponizing-fertilizer>

82 “About UP: ESG” Union Pacific homepage, n.d., <https://www.up.com/aboutup/esg/index.htm>

83 Betty Moy Huber, Michael Comstock and Hilary Smith, Davis Polk & Wardwell LLP, “UN Sustainable Development Goals—The Leading ESG Framework for Large Companies” Harvard Law School Forum on Corporate Governance, October 4, 2018, <https://corpgov.law.harvard.edu/2018/10/04/un-sustainable-development->

[goals-the-leading-esg-framework-for-large-companies/](#)

84 United Nations Development Program, “5 things you need to know about the 2030 Agenda for Sustainable Development, December 3, 2018, <https://undp.medium.com/5-things-you-need-to-know-about-the-2030-agenda-for-sustainable-development-380405b44e3c>

85 Progress towards the Sustainable Development Goals Report of the Secretary-General, High-level political forum on sustainable development, convened under the auspices of the Economic and Social Council (E/2020/57), 28 April 2020, <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=E/2020/57&Lang=E>

86 Progress towards the Sustainable Development Goals Report of the Secretary-General, High-level political forum on sustainable development, convened under the auspices of the Economic and Social Council (E/2020/57), 28 April 2020, <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=E/2020/57&Lang=E>

87 Kristine Parks, “Biden official says food shortages will push farmers to green energy: ‘Never let a crisis go to waste’” Fox News, May 1, 2022, <https://www.foxnews.com/media/biden-official-says-food-shortages-will-push-farmers-green-energy-never-let-crisis-go-waste>

88 Johnathan Hettinger, “Foreign investment in US cropland nearly triples in past decade, USDA data shows,” Investigate Midwest, April 19, 2022, <https://investigatemitwest.org/2022/04/19/foreign-investment-in-us-cropland-nearly-triples-in-past-decade-usda-data-shows/>

89 Johnathan Hettinger, “Foreign investment in US cropland nearly triples in past decade, USDA data shows,” Investigate Midwest, April 19, 2022, <https://investigatemitwest.org/2022/04/19/foreign-investment-in-us-cropland-nearly-triples-in-past-decade-usda-data-shows/>

90 Ryan McCrimmon, “China is buying up American farms. Washington wants to crack down,” *Politico*, July 19, 2021. <https://www.politico.com/news/2021/07/19/china-buying-us-farms-foreign->

[purchase-499893](#)

91 H.R. 4356, “Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2022,” <https://www.congress.gov/bill/117th-congress/house-bill/4356/actions?q=%7B%22search%22%3A%5B%22H.R.+4356%22%5D%7D&r=1&s=1>

92 Qiao Liang and Wang Xiangsui, *Unrestricted Warfare* (Beijing: People’s Liberation Army Literature and Arts Publishing House), February 1999. <https://www.oodaloo.com/documents/unrestricted.pdf>

93 Lauren Greenwood, “China’s interests in US agriculture: Augmenting food security through investment abroad,” US-China Economic and Security Review Commission, Staff Research Report, May 26, 2022, p. 11, [https://www.uscc.gov/sites/default/files/2022-05/Chinas Interests in U.S. Agriculture.pdf](https://www.uscc.gov/sites/default/files/2022-05/Chinas%20Interests%20in%20U.S.%20Agriculture.pdf)

94 Greenwood, pp. 11-12.

95 “319th Reconnaissance Wing Mission, Vision, and Priorities,” Grand Forks Air Force Base website. <https://www.grandforks.af.mil/About-Us/Units/>

96 “Grand Forks Air Base selected for new satellite mission,” Associated Press, September 17, 2021, <https://www.usnews.com/news/best-states/north-dakota/articles/2021-09-17/grand-forks-air-base-selected-for-new-satellite-mission>

97 “Cavalier AFS renamed as US Space Force installation,” United States Space Force, July 30, 2021, <https://www.buckley.spaceforce.mil/News/Article-Display/Article/2715043/cavalier-afs-renamed-as-us-space-force-installation/>

98 Eamon Javers, “Chinese company’s purchase of North Dakota farmland raises national security concerns in Washington,” CNBC, July 1, 2022, <https://www.cnbc.com/2022/07/01/chinese-purchase-of-north-dakota-farmland-raises-national-security-concerns-in-washington.html>

99 Gordon Chang, “Expropriate China-Owned Farmland in America,” *Newsweek*, July, 26, 2022, <https://www.newsweek.com/expropriate-china-owned-farmland-america-opinion-1727453>

100 “Foreign Farmland Ownership in the United States,” Congressional Research Service, November 18, 2021, <https://crsreports.congress.gov/product/pdf/IF/IF11977>

101 Johnathan Hettinger, “Foreign investment in US cropland nearly triples in past decade, USDA data shows,” Investigate Midwest, April 19, 2022, <https://investigatemitwest.org/2022/04/19/foreign-investment-in-us-cropland-nearly-triples-in-past-decade-usda-data-shows/>

102 Stephen Gandel, “The biggest American companies now owned by the Chinese,” *Fortune*, March 18, 2016, <https://finance.yahoo.com/news/biggest-american-companies-now-owned-211004728.html>

103 Alanna Petroff, “Why is China buying the world’s seeds?” CNN, July 13, 2017, <https://money.cnn.com/2017/07/13/news/china-food-seeds-agriculture/index.html>

104 Tom Polansek, “At Smithfield Foods’ slaughterhouse, China brings home US bacon,” Reuters, November 5, 2019, <https://www.reuters.com/article/us-china-swinefever-smithfield-foods-foc/at-smithfield-foods-slaughterhouse-china-brings-home-u-s-bacon-idUSKBN1XF0XC>

105 Polansek.

106 Polansek.

107 Lisa Baertlein and P.J. Huffstutter, “Missouri legislation may help Chinese Smithfield buy,” June 10, 2013, <https://www.reuters.com/article/us-shuanghui-smithfield-missouri/missouri-legislation-may-help-chinese-smithfield-buy-idUSBRE95913F20130610>

108 Anna Gronewold, “Pompeo to governors: China is watching you,” *Politico*, February 9, 2020, <https://www.politico.com/states/new-york/city-hall/story/2020/02/09/pompeo-to-governors-china-is-watching-you-1259814>. See Center for Security Policy coverage at: “Pompeo’s warning to governors puts White House China policy in context,” Center for Security Policy, April 1, 2020, <https://centerforsecuritypolicy.org/pompeos-warning-to-governors-put-white-house-anti-ccp-position-in-context/>

109 Eric O’keefe, “Bill Gates: America’s Top Farmland Owner,” LandReport.com, January 11, 2021, <https://landreport.com/2021/01/farmer-bill/>

110 Frank Fang, “Beijing’s Influence Group Seeks Partnership With US Agricultural Officials, After Teaming Up With Bill Gates for Years,” April 25th, 2022, <https://www.ntd.com/beijings-influence-group-seeks-partnership-with-us-agricultural-officials-after-teaming-up-with-bill-gates-for-years-770726.html>

111 Frank Fang, “Beijing’s Influence Group Seeks Partnership With US Agricultural Officials, After Teaming Up With Bill Gates for Years,” April 25th, 2022, <https://www.ntd.com/beijings-influence-group-seeks-partnership-with-us-agricultural-officials-after-teaming-up-with-bill-gates-for-years-770726.html>

112 Nav Athwal, “Why You Should Invest In Farmland,” *Forbes*, August 2nd, 2021, <https://www.forbes.com/sites/navathwal/2021/08/02/why-you-should-invest-in-farmland/?sh=4f5232c9fd42>

113 “Q&A: Foreign Ownership Of U.S. Farmland,” Senator Chuck Grassley website, February 4th, 2022, <https://www.grassley.senate.gov/news/news-releases/qanda-foreign-ownership-of-us-farmland>



This report was produced by the Center for Security Policy, a nonprofit, nonpartisan 501(c)(3) institution focusing on national security policy issues.

It was made possible by generous contributions from the Center for Security Policy's supporters. All views, positions, and conclusions expressed in this publication should be understood to be solely those of the author(s).

© 2022 by the Center for Security Policy. All rights reserved