International Trade Plans May Lead to Recession

If the Trump Administration follows through on international trade plans, the United States will see increased unemployment and a recession, according to an agricultural economist at The Ohio State University.

Ian Sheldon, Andersons Chair in Agricultural Marketing, Trade and Policy in the College of Food, Agricultural, and Environmental Sciences’ Department of Agricultural, Environmental, and Development Economics, said if Trump implements a 45 percent tariff against China and a 35 percent tariff against Mexico, “He’s going to put the economy into a recession, if the Chinese and Mexicans retaliate, as I expect them to do.”

Citing the Peterson Institute for International Economics, Sheldon anticipates that within three years of the launch of a trade war, U.S. inflation would increase due to rising import prices, and the Federal Reserve would respond by raising interest rates on top of the expected increases this year. As a result of the increased cost of borrowing, investment would decline, which would push the economy into a recession within three years, leading to the loss of 4.8 to 5 million jobs.

“A trade war would be self-defeating, in my opinion and in the opinion of most economists,” Sheldon said.

Americans with low income already spend a higher percentage of their earnings on necessities like food. Thus, a trade war would “lower the purchasing power of the poorest in society,” Sheldon said.

With increased interest rates and a stronger dollar, the trade deficit would only worsen, leading to a repeating cycle.

Global Supply Chains

There are misconceptions that the move of manufacturing jobs to Mexico, China and other countries was responsible for the loss of 5.8 million jobs in the late 1990s, Sheldon said, but most of those losses were due to technological advances that replaced people. He estimates that 13–17 percent of those job losses could be attributed to international trade, but that 60–80 percent were due to technology that brought increased productivity.

A trade war would hurt the U.S. economy in other ways, Sheldon said, and would be unlikely to bring many jobs back. About 80 percent of world trade now takes place through global supply chains, where higher skill work is completed in one country and lower skill work is done elsewhere.

Cars assembled in Mexico, for example, start out in the United States, with about 40 percent of their value first completed here. Taxing the cars coming back to the United States would hurt our own export market, Sheldon said. If the United States targets China, assembly work could easily be moved to Vietnam and nothing would be gained.

Impact on Agriculture and Food Prices

Accounting for about two-thirds of the world’s imports, China is expected to import nearly 3.2 billion bushels of soybeans during this marketing year (2016–17) according to the U.S. Department of Agriculture.
Some 59 percent of U.S. shipments go to China, so American soybean growers would be hit hard in a trade war.

Mexico represents a large market for corn as well. Representing the third largest agricultural export market for the United States, Mexico imports $2.3 billion worth of our corn.

The United States imports about $4.8 billion worth of vegetables and $4.3 billion worth of fresh fruits from Mexico. Losing those imports would hurt U.S. consumers — especially consumers with low incomes — as fruit and vegetable prices would rise with a trade war, Sheldon said.

Losses from Other Trade Agreements

Failing to ratify the Trans-Pacific Partnership (TPP) would likely cost the United States in terms of potential growth. The Peterson Institute projected a $130 billion increase in U.S. gross domestic product by 2030 from that agreement. The United States would also miss the chance to open up the Japanese agricultural market, which the USDA projected would account for 68 percent of the increase in agricultural imports among TPP countries. Overall, the agreement was expected to increase U.S. agricultural exports by $2.8 billion to the TPP.

The TPP would also have reduced more than 18,000 tariffs, including many on agricultural products, Sheldon said.

“The TPP was the template of how modern, free-trade agreements should be written. We’re throwing away the opportunity to write the rules,” Sheldon said.

“A trade war is unambiguously a bad idea,” Sheldon said. “Hopefully we will see some legal and political checks on trade plans.”

Keeping Corn Strong Despite Weather Extremes

A recent major project hopes to help farmers handle the heat, drought and other weather extremes caused by climate change.

Called “Climate Change, Mitigation and Adaptation in Corn-Based Cropping Systems,” the five-year effort brought together 12 teams totaling more than 100 scientists from nine Corn Belt states, including a team from the College of Food, Agricultural, and Environmental Sciences (CFAES). The goal: to make Midwest corn, a multibillion dollar crop, resilient in the face of climate change.

By using a regionwide network of 35 field sites, testing a range of management practices, and with the assistance of 200 cooperating farmers, the scientists gathered data on the carbon, water and nitrogen footprints of farmlands growing corn.

Based on the findings, a suite of recommended sustainable practices came about — practices that, among other things, keep carbon in the soil, reduce nitrogen losses, and hold up in droughts and flooding better, all while ensuring corn’s productivity. Extended crop rotations, cover crops and tillage management are some of the practices.

Details have been shared with farmers, crop advisers and others.

The U.S. Department of Agriculture’s National Institute of Food and Agriculture funded the project, which ended in February. Iowa State University sociology professor Lois Wright Morton directed the effort. Richard Moore, professor emeritus with CFAES’s School of Environment and Natural Resources (SENR), coordinated the Buckeye team, which included Rattan Lal, Warren Dick and Kristi Lekies, also all with SENR, and Mary Gardiner and Andrew Michel of the college’s Department of Entomology. CFAES’s long-term, no-till plots at the Ohio Agricultural Research and Development Center in Wooster also “played a critical role,” Moore said. The plots are the oldest continuously maintained no-till plots in the United States.

Earth’s 2016 surface temperatures were the warmest in modern history, according to scientists with NASA and the National Oceanic and Atmospheric Administration. It was the third year in a row to set such a record. “We don’t expect record years every year,” Gavin Schmidt, director of NASA’s Goddard Institute for Space Studies, said in a press release, “but the ongoing long-term warming trend is clear.”

LEARN MORE: SustainableCorn.org
Ohio State researchers are working to determine how multi-hybrid planting technology can help farmers maximize profit potential by planting the right hybrids at the right rate to maximize yields.

Planting is the most critical operation of crop farming, said Andrew Klopfenstein, project coordinator in CFAES’s Department of Food, Agricultural and Biological Engineering. The department is researching multi-hybrid corn and soybean planting.

“As the costs of fertilizer, seed, fuel and other inputs increase and grain prices drop, the best way to gain a yield benefit is in the planting technology you use,” he said. “If you don’t start out with a good seedbed or if you place the seed incorrectly, you’re already behind.

“You could lose up to half of your yield potential by placing the seed incorrectly at planting.”

Klopfenstein and project team members are working with three farmers in and around central Ohio, as well as at CFAES’s Farm Science Review site in London, Ohio, to test multi-hybrid planting, including 326 acres of corn and 256 acres of soybeans.

“By using data on a field’s terrain, past yields, soil organic matter, remote-sensed imagery and soil productivity, farmers can use software available on today’s precision planters to plant the right hybrid at the right rate to maximize yields,” he said.

As a way to draw attention to Ohio State’s research of multi-hybrid planting technology, the team used prescription planting in the London field site last spring with two hybrids with different maturity dates to create the image of Brutus Buckeye.

The goal of the image was to demonstrate to farmers how far the technology has come, and how to utilize the technology to maximum potential, Klopfenstein said.

“The planter can change the type and rate of seed being metered into the furrow, all depending on the seeding prescription uploaded to the controller to optimize the soil productivity at that location,” he said.

Klopfenstein said the research project includes using a test protocol the team developed using AirScout remote-sensing imagery and working with Beck’s Hybrids to develop a procedure for placing seed in a specific field based on the data layers the farmer may have available. A prescription is then generated to look at ways of placing seed according to those data layers, he said.

Researchers are examining both multi-hybrid and high-speed planting technologies to determine what’s best for what type of field, Klopfenstein said.

“WE WANT TO BE CERTAIN THAT FARMERS ARE MAKING THE RIGHT INVESTMENT FOR THEIR OPERATION WHETHER IT’S HIGH-SPEED, VARIABLE-RATE, MULTI-HYBRID OR SOME COMBINATION.”

In northwest Ohio, you might have one single soil type in the entire field,” he said. “In that case, it may be more advantageous to adopt high-speed planting technology versus multi-hybrid.”

High-speed planting can speed up planting by 40 to 60 percent, Klopfenstein said.

“We want to be certain that farmers are making the right investment for their operation, whether it’s high-speed, variable-rate, multi-hybrid or some combination,” he said.

In addition to the farmers involved in the project, partners include Precision Planting, Beck’s Hybrids, Case-New Holland, AirScout, The Climate Corporation, 3D Aerial, and the Ohio/Indiana UAS Center.
Ohio State Research Shows Phosphorus Levels in Ohio Soils Trending Downward

Agricultural soil phosphorus levels held steady or trended downward in at least 80 percent of Ohio counties from 1993 through 2015, according to recent findings from CFAES. The findings, part of the college’s Field to Faucet initiative, represent good news for Ohioans concerned about protecting surface water quality while maintaining agricultural production, according to college researchers Elizabeth Dayton, Steve Culman and Anthony Fulford.

“Soil phosphorus levels are strongly related to runoff water phosphorus levels. Less phosphorus in the soil should result in reduced phosphorus runoff risk,” Dayton said. “These findings show that Ohio farmers are doing a good job of managing soil phosphorus levels.

“While there is still room for improvement where soil phosphorus levels are higher than crop needs, the fact that so many counties show soil phosphorus levels trending down indicates Ohio farmers are moving in the right direction.”

For this study, data for more than 2 million phosphorus soil tests from 1993 to 2015 were provided through the cooperation of the three biggest soil-testing laboratories serving Ohio agriculture: A&L Great Lakes of Fort Wayne, Indiana; Brookside Laboratories of New Bremen, Ohio; and Spectrum Analytic of Washington Court House, Ohio.

In 2015, the median soil phosphorus level was within the appropriate agronomic range in 87 of 88 Ohio counties, assuming nutrition needs for a typical Ohio crop rotation.

DEADLINE: Fertilizer Certification Training

Anyone applying fertilizer to 50 or more acres: You must be certified by Sept. 30! Now is the time to register for training classes that will lead to that certification from the Ohio Department of Agriculture.

Go to nutrieneducation.osu.edu/trainingopportunities to find one near you.

Sweet Science

Ohio’s maple syrup season is usually in full swing in March. But the work to improve it continues year-round. CFAES’s Ohio Maple Program, among its efforts, explores current and new markets for producers. It offers workshops on topics that sweeten their business, like boosting maple forest health and making the best syrup possible.

go.osu.edu/mapleprogram
go.osu.edu/syrupmanual

SAVE THE DATE: Farm Science Review Is Sept. 19–21

The 2017 Farm Science Review will be even easier for visitors to navigate. Visitors to this year’s show, Sept. 19–21, at the Molly Caren Agricultural Center in London, Ohio, can use new “Map Your Show” event management software to find exhibitors they are most interested in visiting. The online directory includes keyword and categorical searches as well as an interactive map of the FSR site. The software will be accessible beginning July 15 through the FSR website at fsr.osu.edu. The 2017 FSR mobile app will also be generated from the digital directory.