Retaliatory tariffs could cost billions in reduced US soybean exports

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Researchers at the University of Tennessee Institute of Agriculture estimate billions would be lost in export dollars should China impose a tariff on US soybeans.? Credit: T. Johnson, courtesy UTIA.

In an ongoing tug-of-war over threatened tariffs between the United

States and the Chinese government, researchers at the University of Tennessee Institute of Agriculture have examined potential impacts to U.S. soybean exports at three hypothetical tariff rates. The research indicates that exports are projected to drop by $4.5 billion to $7.7 billion if a 25 percent tariff is imposed, with even greater losses should a higher tariff be levied.

China plays a vital role in U.S. agricultural exports. In 2017, China accounted for 57.3 percent of U.S. exports including nearly $22 billion in U.S. soybeans. From 2000-2016, Chinese soybean imports increased from $2.3 billion to a high of $40 billion—an increase of more than 1,600 percent. This marked growth is largely attributed to China's growing demand for livestock and feed products, as soybean imports are primarily used to produce soybean meal, a high-protein ingredient in animal feed.

However, U.S. soybeans face significant competition, particularly from Brazil. The U.S. was the leading supplier of soybeans to China for many years until being surpassed by Brazil in 2013. Brazil's increased production and long-term growth potential coupled with infrastructure investment in partnership with numerous Chinese companies have facilitated gradual transition from the U.S. to Brazil as the largest source of China's soybean imports. Tariff projections indicate that for every 1 percent increase in the price of U.S. soybeans, Chinese imports of U.S. soybeans decrease by 1.3 percent, while imports of Brazilian soybeans increase by 1 percent.

Soybean acreage has increased in the U.S. from 76.8 million acres in 2013 to 90.1 million acres in 2017. Likewise, U.S. soybean exports have also increased, with the exception of the 2017/2018 marketing year, and consistently account for about half of total U.S. production. In the past five years, farm-level production has been estimated at $40 billion annually.

U.S. soybean producers are reliant on foreign markets as a source of demand for their production. "China is responsible for nearly two-thirds of global soybean imports," says UTIA professor and Blasingame Chair of Excellence Andrew Muhammad. "As such, if China places retaliatory tariffs on U.S. soybeans, there could be profound implications for U.S. soybean exports and farm-level losses for U.S. soybean producers."

The UTIA study, which was authored by Muhammad and his colleague Aaron Smith, considered trade projections based on three hypothetical tariff rates on soybeans, as follows: a 10 percent tariff is projected to reduce U.S. exports by $1.8 billion but could fall as much as $3.1 billion; at 25 percent, projected reductions are $4.5 billion to $7.7 billion; and at 50 percent, projected reductions are $9 billion to $15.3 billion.

Average annual farm-gate prices for soybeans have ranged from a high of $13 per bushel in 2013 to a low of $8.95 per bushel in 2015. If a 25 percent tariff is applied to U.S. soybean exports to China, UTIA researchers estimate potential farm-level losses could reach $0.33 to $1.76 per bushel. With higher tariffs, the losses would be even greater. However, projected losses for U.S. producers due to lower soybean exports to China could be partly offset by an increase in exports to other countries.

More information: Read the full report: UT Extension publication W 532, Evaluating the Impact of Retaliatory Tariffs on U.S. Soybeans in China, Muhammad and Smith, April 2018.

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