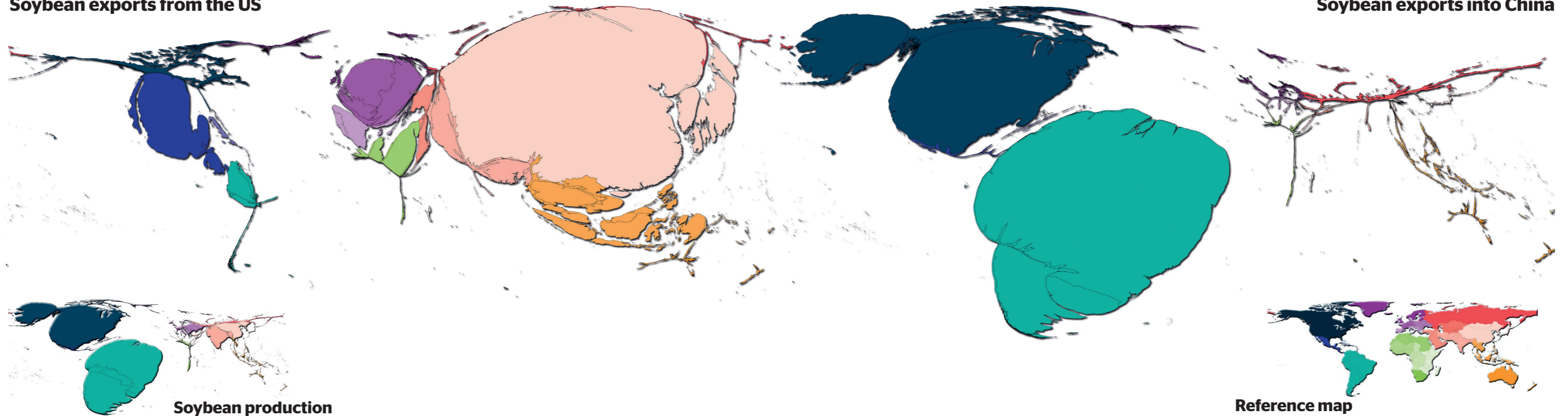
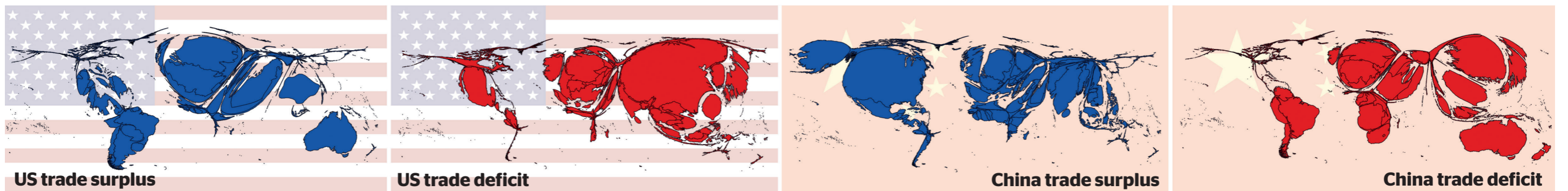


Soybean exports from the US



Soybean exports into China



SOY WARS

by Benjamin Hennig and Tina Gotthardt

Soybeans have been unexpectedly thrown into the centre of the emerging trade war between the United States and China. After US president Donald Trump announced new tariffs, targeting Chinese exports into the US, China reacted swiftly with the announcement of its own tariffs on US imports into China. Soybeans were among the products that the Chinese

used in their retaliation response. A closer look at the soybean industry helps to reveal why this crop found itself in the global headlines. Of the \$133billion worth of food, beverage and feed industry exports that left the US in 2017, soybeans were the single largest product, with sales of \$22billion. This exceeded exports of meat and poultry by \$4billion. The main producers globally are the US and Brazil, as well as (at a distant third place) Argentina. Paraguay, Canada and Ukraine grow soybeans

but play a minor role in global trade. China and India are producers in their own right but only grow around ten per cent of the quantity produced in the US. Used extensively to make cooking oil and animal feed, the domestic demand for soybeans within these countries far exceeds production. Historically, China has relied on the US for soybeans and they account for about 60 per cent of the US's total agricultural exports to China. In the two large cartograms above, all countries are proportional according to the total soybean exports from the US

(left) and imports into China (right), accompanied by a smaller cartogram of soybean production (left). This shows that the major global producers in the Americas are also the major suppliers for the Chinese market. Exports of soybeans from the US are spread geographically, but concentrate on a few regions. China has been the major importer, followed in much smaller import quantities by Mexico and then the Southeast Asian and European markets (which are channeled through the Dutch and German shipping ports). This picture of global soybean trade makes it clear that Brazil and Argentina will not be able to meet China's demand alone, even if they now have a competitive advantage over the US producers. When considering the position of soybeans it is important to note that the agricultural sector is one of the

few sectors in the US that runs a trade surplus with the rest of the world. Donald Trump's decision to announce new tariffs targeting China was largely designed to combat the trade deficit between the two countries in most other sectors. In responding with tariffs against soybeans, China is weakening his ability to do so. Globally, the US has been running a growing trade deficit (up by 25 per cent since 2010), while China has a considerable (yet shrinking) surplus. These wider patterns are reflected in the trade relationship between the two countries in which China is a major contributor to the US deficit and increases its own surplus as a result. This reality is shown in the small series of cartograms that visualise both countries' surplus and deficit in trade with other countries of the world. The blue cartograms show countries

and regions proportional to the total surplus in trade with these areas, while the red cartograms show the proportional deficits. The interconnected nature of US and Chinese trade becomes very visible in these maps and helps to shine a light on the current conflict. Soybeans are now a symbol of the complexity of global trade relations, manifested in the cobwebbed and shifting flows of goods across the planet. ■ Benjamin Hennig (@geoviews) is associate professor of geography at the University of Iceland and honorary research associate in the School of Geography and the Environment at the University of Oxford. Tina Gotthardt is adjunct lecturer at the University of Iceland. Both are involved in the Worldmapper project (worldmapper.org).