

SWINE HEALTH INFORMATION CENTER
FINAL RESEARCH GRANT REPORT FORMAT

Investigation of the risks of organic soy importation and potential means of risk reduction. #20-155 SHIC

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Industry Summary: Soy-based products are known to pose a viable risk to US swine herds because of their ability to harbor and transmit virus. This project aimed to evaluate soy imports into the US as a whole and from foreign animal disease positive (FAD-positive) countries to determine which products are being imported in the highest quantities and observe potential trends in imports from FAD-positive countries. Import data were accessed through the United States International Trade Commission website (USITC DataWeb) and summarized using R (version 4.0.2, R core team, Vienna, Austria). Twenty-one different Harmonized Tariff Schedule (HTS) codes were queried to determine quantities (metric tonnes, MT) and breakdown of different soy product types being imported into the US from 2015 to 2020. A total of 78 different countries exported soy products to the US in 2019 and 2020 with top contributors being Canada (546,467 MT and 481,497 MT, respectively), India (397,858 MT and 430,621 MT, respectively), and Argentina (122,116 MT and 79,471 MT, respectively). Soy oilcake (582,273 MT) was imported in the largest quantities, followed by organic soybeans (270,194 MT) and soy oil (134,436 MT) for 2020. Of the 78 countries, 46 had cases of FAD reported through the World Organization for Animal Health (OIE) World Animal Health Information Database (WAHIS). Top exporters of soy products to the US from FAD-positive countries in 2019 and 2020 were India (397,858 MT and 430,621 MT, respectively), Argentina (122,116 MT in 2019), and Ukraine (40,293 MT and 56,392 MT, respectively). The risk of FAD introduction to the US through soy imports can fluctuate based on where FAD outbreaks are occurring, shipping methods, and end usage of products. A system to monitor these factors could help make future decisions about trade and risk of FAD introduction to US swine herds. Based on information generated from this project the following frequently asked questions (FAQ) and best practices for importation of soy products were compiled below.

FAQ Concerning International Shipping of Soy

In what form is soy shipped into the US?

Imported soy products with the intent to be used in feed are primarily shipped into the US as oilcake, organic soybeans, or soy oil. These products were determined using the Harmonized Tariff System codes in the US International Trade Commission database. The shipper declares these codes and, therefore, may have some variation of the actual product (ex: the byproduct of oil extraction may be declared as oilcake or soy flour and meal). This declaration depends on the properties of the product as well as tariffs on particular product types.

What are the most common ports of origin/loading of oilcake, organic soybeans, or soy oil?

This information is not clearly defined. Shipping information can be found for shipments by HTS code, but they must be collected one by one. For example, only two shipments of organic soybeans in 2020 were identified and were loaded in Jawaharlal Nehru, India. However, it is important to consider both the country of origin for a product and the country of loading because one may be FAD-free while the other is positive. It is not uncommon for soy products to be shipped overland until reaching a port to be loaded for transport overseas (ex: soybean meal from Romania may be transported to Antwerp, Belgium before being loaded onto a ship)

What processes or procedures are common or feasible in ports of origin or countries in order to reduce the risk of contamination?

This information is not entirely clear. Depending on the port's capacity to ship containers vs. dry-bulk, holding may be implemented. Other forms of mitigation are an option; however, their regulatory approval and practical applications in ports are limited. Mitigation measures, whether holding or other, would likely require some form of phytosanitary certification to determine compliance. This would add an extra level of documentation and regulation. Ultimately, implementing risk-reduction measures in the US would be the most reliable.

What are the most common ports of entry for soy into the US?

Most soy products enter through Michigan, New York, Maryland, California, or New Orleans. Organic soybeans were most commonly imported through New Orleans in 2020. An important factor to consider is the number of shipments into a port vs the quantity of product. Many ports have a large number of shipments, but these shipments may be small quantities, like bags. Other ports, like New Orleans, receive relatively few shipments, but these shipments are larger and consist of containers or dry-bulk product.

How long is transport from port of loading to port of entry?

There are several influential factors that influence transportation time. The largest is whether the ingredient is being shipped via container or dry-bulk. Container shipping vessels travel from port to port, loading and unloading containers as appropriate (similar to a city bus route). Dry-bulk shipping is a direct route from loading to destination due to the fact that an entire vessel is hired for one large shipment. Beyond this, the cost of freight and the cost of fuel dictate the speed at which these vessels are traveling because they are more fuel efficient at lower speeds.

Where does the majority of this product go upon arrival to the US?

This is not well understood. Brokers are commonly used for the importation of ingredients which are then distributed once the products arrive in the country. Shipping of products from the port into the interior is proprietary information between customers and the rail and barge companies. The end use of these products could be speculated based on HTS codes, but it is unclear if products like soy oilcake stay in the US or are shipped to other countries from US ports. Other products such as whole soybeans can be used for human consumption, or can be pressed to extract the oil. This crushing leaves soybean meal that can be used for livestock feed. This versatility makes tracking these products even more complex.

Is soy being shipped via dry-bulk or through containers?

Ports in the US are designed to ship agricultural commodities out. Arrival of dry-bulk commodities can be handled, but they typically need to be unloaded straight into a railcar, barge, other vessel, or into a private warehouse. Container shipping is more common, due to the fact that dry-bulk shipping requires an entire vessel to be contracted by a company or a group of companies for a very large shipment.

What challenges do US ports face concerning the import of contaminated soy?

Ports in the US were designed to export agricultural commodities and less emphasis was placed on import. As a result, US ports do not have the capacity to hold grains once they enter the country. If holding times are used to mitigate contamination, it is up to the importer or the end user to facilitate that and provide space for the grains to be held.

Best Practices for Importation of Soy Products

What areas are important to understand when evaluating the use of imported soy?

Understanding where foreign animal disease (FAD) outbreaks are occurring around the world, where the soy products used for animal production originated, and where those products were loaded to be shipped to the US (if applicable) are all important for reducing risk of introducing FAD to US herds via feed. Not all of these areas would be handled by the same set of people in a production system, so collaboration between departments is vital.

Who should be part of discussions involving the use of imported soy?

Facilitating discussions across supply chain managers; between nutritionists, biosecurity leads, procurement teams, and ingredient suppliers is the first step to understanding if any feed products used in the production system are imported.

If soy is imported, what steps should be taken to reduce risk?

The country of origin should be verified for imported ingredients and referenced against countries experiencing known FAD outbreaks. If products are being imported, finding an alternative, domestic ingredient or implementing holding times prior to introduction to a mill will strengthen a biosecurity plan.

When should holding times be in effect?

If holding times are implemented, it is good practice to start the clock, at the earliest, when the product has entered the US. At this point, the processes the product goes through can be more reliably documented and the risk of cross-contamination is reduced. Importers have the opportunity to ensure that potentially contaminated product does not share equipment with products that have completed a holding period, been processed, or were domestically produced.

Is product loaded in a FAD-free country safe?

Even though a product was loaded in a FAD-free country, it may have been produced in a country experiencing an outbreak and then subsequently shipped overland to a port. As a result, the country of origin and the country of loading should be evaluated as well. If a

product is undergoing further processing once it enters the US, it may have a lower risk to domestic livestock. Processes like solvent extraction or extruding have the potential to eliminate infectious virus from the feed product, when done properly.

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