FOOD PRODUCT DEVELOPMENT

THE WORLD OF
food ingredients

FOR THE PRACTICING FOOD TECHNOLOGIST

DECEMBER 2024

INGREDIENTS & BEYOND
F&B quality and added value are top of mind for consumers

REDEFINING REST
Holistic wellness drives demand for sleep supplements

OPINION EDGE

2025 TRENDS CENTER ON ETHICAL SOURCING & HEALTH

TOP 10 Trends

US Anti-Dumping Tariffs Restrict Chinese Pea Protein

By Henk Hoogenkamp

a.

Some years ago, China converted several soy processing facilities to produce pea protein concentrates and isolates as well as other high-protein ingredients from pulses. In hindsight, this move can be seen as questionable now that the US market for pea protein has tightened pea protein import tariffs. Then again, the main reason for pea protein production in China is not for the pea protein itself but for the pea starch used for the exceptionally large production of instant noodles, including its use as a functional component in extruded mince to simulate meat.

A few mothballed soy protein facilities in China have been redesigned and commissioned to further increase the production of alternative plant protein ingredients. And it is likely that more of these smaller soy protein manufacturers will be decommissioned, leaving only large soy protein companies like Gushen, Wilmar and Shandong Protein active.

The Protein in Numbers

As of 2023, China supplied about 40,000 metric tons of pea protein isolate per year to the US, and this amount was steadily increasing. These high-protein pea ingredients have 65%–90% analytical protein content, calculated on a dry basis. A significant amount of these pea ingredients was being exported at ultra-low prices, much to the chagrin of major pea protein suppliers such as Puris, Cargill, Ingredion and Roquette.

To manufacture pea protein ingredients, China mainly purchases yellow peas from Canada, Russia, Ukraine and Australia. The amount of yellow peas that China purchases from the US is less than 2% or the equivalent of about US$18 million in trade per year (2023). This low amount of agricultural trade has caused pushback and friction, especially since the Chinese pea protein industry has used the US market as a dumping ground offering prices that are often lower than the manufacturing costs.

From the perspective of US pea protein companies, these price tactics are seen as trading without integrity. As a result of these dumping practices, North American and European pea protein facilities markedly reduced production, some of which to half capacity.

There are valid reports that the Chinese government is actively supporting their pea protein industry by means of export subsidies, and at the same time, throwing up barriers for US origin pea protein isolate ingredients, charging as much as 90% tariffs and 13% VAT, as well as a 50% tariff for pea starch. For reference, the previously mentioned 40,000 metric tons of pea protein ingredients exported from China, would require about 250,000 metric tons of harvested yellow peas as starting material.

The US Department of Commerce (DOC) has now imposed countervailing duties on Chinese-origin pea protein ingredients. This measure resulted in immediate effects and prompted US food companies to return to purchasing US and Canadian manufactured pea protein ingredients. Since tariff implementation in August 2024, China's export of pea protein isolate to the US has fallen signif-

b.

c.

icantly and is expected to decline to around 20,000 metric tons in 2025. Implementing US import tariffs on Chinese-made pea protein will likely increase net US prices, which subsequently may cause a possible shift to soy protein and wheat gluten usage in formulated food and processed plant meat products.

This chain of events has resulted in China becoming more aggressive with price dumping tactics in other world regions such as the EU, Australia, the Philippines and Mexico, to recapture market share that has been lost in the US.

The Way Ahead

Now that the DOC has imposed import duties on Chinese-origin pea protein ingredients, some Chinese companies are actively acquiring pea protein facilities located outside China in countries like Malaysia and Thailand. Not to be outdone, Chinese soy protein companies are also zeroing in and scanning acquisition opportunities of soy and pea protein companies outside their own territory.

As the functional plant protein market moves forward, ingredient provenance will become less of an issue than in the past years and plant proteins will become more driven by price sensitivity and unique health and application properties. Because of the rather weak plant-based meat market the projected growth of pea protein ingredients has stalled, though going into 2025, large inventory levels have returned to normal.

Now that the US anti-dumping tariffs are enforced, it is likely that the price of US-made pea protein isolates will increase. If that happens, also functional soy protein prices might see an upward trend for the domestic US market. On the bonus side, now that the US has become less attractive as a dumping ground for Chinese-origin pea protein, the remainder of the international markets are able to purchase Chinese pea protein isolate at significantly lower price structures.

The leading pea protein manufacturers in China are: Yantai Shuangta Food, Yantai Oriental Protein Tech, Shandong Jianyuan, Shandong Liuliushun Foods, Shandong Jindu Talin Foods and Shuangta Food.

Canada Leads the Pack

North America, as well as the northern region of France, will likely remain the premier region for pea protein manufacturing. To capitalize on the growing demand for plant-based food ingredients for human nutrition, additional manufacturing facilities are required. For pea protein isolate, Canada has claimed the number one spot in 2020 making up around 30% of the total global production. Potentially, Canada has around 4 million hectares of agricultural land available for cultivating pea crops.

Canada is the world's powerhouse of yellow pea production, totaling some 1.6 million hectares in 2020, compared to 0.6 million hectares for the US and about 3.1 million hectares globally. In comparison, the US state of Montana has become the largest producer of crops like peas, fava, lentils and chickpeas with hectares of pulse crops harvested that have more than quadrupled in 2010–2024, making it the largest crop. Both China and India cannot meet their domestic demand, hence, must rely on the import of yellow peas from Canada, Australia, Ukraine and Brazil.

While the pea protein market, compared to the soy protein market remains relatively small, pea protein has become America's poster child as a plant-based favorite ingredient for the health-conscious consumer. The once-lowly yellow pea from the middle classes in ancient China and Middle Eastern countries has evolved to become a serious alternative protein ingredient for companies in search of higher profit margins when compared to the bigger commodity crops such as corn, wheat and soybeans.

Trading Soy for Pea

Besides the technological application properties, probably the most compelling advantage of pea protein is its favorable labeling. Unlike soy protein, pea protein has a significantly higher level of consumer relevance and acceptance.

The jury is still out on how to explain the surge in consumer popularity of pea protein. Perhaps it can be (partly) explained by the anti-soy bias of a considerable number of American consumers, who may link the crop to rainforest deforestation or undesirable effects on health. Other reasons might be the increasing human allergy responses to soy protein and the confusing health claims, such as the ill-fated soy isoflavone marketing, not counting the hexane-processing methods and soy's lack of a "natural or clean" ingredient image.

A list of references is available on request.

Henk Hoogenkamp is an author and protein application scientist with more than 30 years of experience in the F&B industry.

a.

The once-lowly yellow pea from the middle classes in ancient China and the Middle East has evolved to become a serious alternative protein ingredient.

b.

China uses pea protein production not just for exports but to meet high domestic demand for noodle starch.

c.

As tariffs on Chinese pea protein rise in the US, demand may shift back to soy protein and wheat gluten.