Spain's alternative protein market offers export opportunities

Market Report

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Prepared by the New Zealand Embassy in Madrid

Summary

- The Spanish plant-based food sector has seen strong growth in recent years. With sales of €448 million in 2020, it represents 12% of the €3.6 billion European market (including the UK). The top three categories dairy alternatives (€318m), vegan meat (€87m), dairy-free yoghurt (€42m) all recorded double-digit growth figures.
- Domestic demand for dairy substitutes is expected to remain strong in near future. Plant-based meats are
 the fastest-growing category and the segment generating the greatest interest in terms of public-private
 initiatives.
- The Spanish agri-tech landscape is vibrant and varied. Numerous startups and established companies are developing successful initiatives in the plant-based meat and cell-based meat space. These range from large producers (Foods for Tomorrow) to firms that combine the distribution of international brands and their own production (Zyrcular Foods), traditional meat businesses positioning themselves as important producers (Noel Alimentaria), creators of whole fibrous cuts of beef, pork and chicken about to launch their products on the market (Novameat), designers of machines for mass 'printing' of vegetable meat (Cocuus), or projects capable of generating cultured meat awaiting authorisation for marketing in Europe (BioTech Foods).
- There are promising opportunities, including potentially for New Zealand exporters of plant-based alternatives, across multiple categories in Spain. Bigger cities like Madrid, Barcelona or Valencia already have strong plant-based consumer bases, but a gradual shift towards increasing plant-based protein consumption is expected to spread to other parts of the country in coming years. While the plant-based milk market is comparatively more developed than others, dairy alternatives like cheese, ice cream, yoghurt or butter/margarine are under-served market segments with considerable scope for growth.

Report

The Spanish plant-based food sector has experienced considerable growth in recent years. A <u>study</u> conducted by the EU-funded *Smart Protein* project found that the plant-based market grew by nearly 50% between 2018 and 2020, and was worth €448 million last year. This represents roughly 12% of the €3.6 billion European market (including the UK). The increasing shift towards plant-based diets has been accelerated by Covid-19, driven mainly by heightened consumer concerns over health, wellbeing and animal welfare. The number of self-declared vegans, vegetarians or flexitarians continues to rise, with 5m Spaniards − 12% of the total population − currently falling into one of these categories.

Plant-based dairy

Dairy alternatives are the largest segment in the domestic plant-based industry. Overall sales hit €318m in 2020, up 13% from 2019, led by oat milk (€125m), soy (€91m) and almond (€57m) milk. Dairy-free yoghurt also performed well (€42m). In fact, Spain led Europe in annual per capita consumption of plant milks, at 5.2 litres per person (246m L).

Spanish consumers are highly familiar with plant-based beverages, which are considered mainstream and widely available in most convenience stores and supermarkets. They are mostly consumed as a complement to milk and yoghurt, rarely as a substitute. Key players in this space include major Spanish dairies like Pascual (which sells oat, soy, almond and rice beverages under its *Vivasoy* label) or CAPSA Food, whose main brand Central Lechera Asturiana

markets *Alpro*. Catalan family-run business Liquats Vegetals, the first local manufacturer of milk substitutes and owner of the high-quality *Yosoy* brand, is rapidly gaining market share on the back of its strong commitment to clean labels and additive- and sugar-free offer.

Domestic demand is expected to remain strong going forward, in line with encouraging global market <u>forecasts</u>. Early estimates suggest that the plant-based dairy category will rise to €513m by 2023. According to a survey carried out by international awareness organisation ProVeg, the categories with the highest growth potential are cheese substitutes, vegan butter/non-dairy margarine and dairy-free ice cream, given their lower market penetration compared to other plant-based segments like milk, meat or yoghurt, all of which have significantly higher consumption rates.

Plant-based meat

Meat analogues are steadily gaining popularity in Spain. Vegan meat retail sales reached €87m in 2020, a 31% increase over the previous year. Nearly 90% came from plant-based refrigerated meat (€80m), followed by plant-based frozen (€3.4m) and ambient meat (€3.1m). Despite accounting for only a small fraction (3%) of Spain's €28bn traditional meat industry (the fourth largest manufacturing sector in the country), it is the fastest-growing category. Producers claim that sales would likely have been even stronger in the absence of pandemic-induced production constraints. Supply chain disruptions reportedly hit producers hard, given many businesses' heavy reliance on soy and pea imports from markets like Brazil, Argentina, the U.S., China and India. Domestic demand is expected to increase significantly over coming years, mirroring global trends.

Meat substitutes can increasingly be found in virtually all supermarkets, with French retail giant Carrefour and German discount grocers Lidl and Aldi leading the way. Carrefour has the largest selection of organic, vegan and vegetarian options in Spain. In addition to its *Veggie* line, it sells numerous meat-free products like meatballs or salami under the Spanish organic *Eco Cesta* brand. Lidl launched a *Next Level* vegan meat range in its stores across Spain last year featuring hamburgers, sausages, ground beef and chicken-style fillets made from pea, soy and wheat protein. More recently, it has broadened its offer to include over 140 carbon-neutral vegan and vegetarian products under its own *Vemondo* brand. Aldi introduced its own vegan soy protein *Wonder Burger* in Spain last year and provides a wide range of 130 plant-based products including vegan mince, sausages and tofu cutlets under its organic *GutBio* private label.

Mercadona, Spain's largest supermarket chain by market share, retailers like El Corte Inglés, Eroski and Sánchez Romero, or leading frozen food specialist La Sirena, all offer private-label vegan meat or distribute well-known international brands including Nestlé's *Garden Gourmet* range, *Gardein, Frys, Quorn, Linda McCartney* and *The Vegetarian Butcher*.

Traditional meat businesses are also making inroads into the plant-based meat market. Spanish meat processing giant Noel Alimentaria, the first in the sector to add plant-based options to its product lines in 2016, has since included mince, beef and vegan pork products like chorizo and sausages in its portfolio. Campofrío, another major industry player, currently offers vegan-certified soy and pea protein hamburgers, mince, and cooked/smoked sausages under its existing *Vegalia* range. Other recent additions include El Pozo´s *King Revolution* 100% vegetable gluten and dairy-free patties, and charcuterie producer Espuña´s allergen-free *Bistro Veggie Burger*.

Likewise, there are various relevant initiatives underway in the alternative meat industry which reflect the strength of the Spanish agri-food sector. Barcelona-based startup <u>Foods for Tomorrow</u> has created a full range of 100% plant-based meats in different formats which replicate the texture, flavour and functionalities of real chicken, pork and beef. The company claims this is produced "with a fraction of the environmental impact" in terms of water/land requirements and generation of greenhouse gases. [Comment: the claim is made in relation to Spanish beef, we assume traditionally extensively farmed. The company offers statistics of 94% less water, 94% less crop area, 97.5% less CO2 and 97.5% fewer kg of pulses/legumes to produce an equivalent amount of their plant-based protein compared to beef. Considered the fastest-growing European plant-based startup, the company received a €250,000 grant from the government-backed NEOTEC technology fund in 2020 and secured €16m in equity investment earlier this year to continue strengthening its team and portfolio. Its products can be found at 4,000 sales points throughout Spain and the company is rapidly expanding its global footprint, with a presence in 17 countries across four continents.

Another noteworthy example is Catalan startup **Zyrcular Foods**. Founded by traditional meat producer Valls

Companys in 2019, the firm started distributing popular international plant-based brands across multiple categories but is also seeking to establish itself as a leading producer. It has built a factory – the first in Spain exclusively dedicated to alternative protein manufacturing – which has been operational since last year and is capable of annually producing 1million kg of plant-based protein. The company has already launched its own line of vegan burgers and mince, which is initially only targeting the B2B segment (e.g. grocery chains, the hotels, restaurant and institutional sector, other manufacturers). If the project is successful, production will be scaled up and possibly extended to the B2C market. A member of both the Dutch Foodvalley NL cluster and the international non-profit Good Food Institute, the company plans to offer its facilities to other Spanish and international foodtech startups and business so that production can take place on the ground.

Cell-based meat

Several disruptive Spanish startups are making a name for themselves in the cultured meat space. Basque firm Biotech Foods (BF) has developed technology to produce cultivated meat and created its own brand, Ethicameat. The company has focused on pork, but its technology can be used with any animal. BF currently leads a cultured meat research programme called Meat4All that was awarded a €2.7m grant under the EU's Horizon 2020 R&D framework. It also leads a consortium of Spanish foodtech companies, universities and meat producers which are working on a project to grow cultured meat, healthy fats, and functional ingredients with the aim of producing meat products that are healthier than traditional red meat. The government has provided €3.7m in funding for the initiative, one of whose main goals is to reduce the incidence of colorectal cancer and hypercholesterolemia, two important public health issues in Spain.

<u>Cubiq Foods</u> is a leading producer of healthy cell-based fats for the food industry. The Catalan startup grows cell-based fat cultures and related ingredients that improve the taste and nutritional values of plant-based meats. Its portfolio includes a vegetable oil and water emulsion formula that replaces animal fats in processed meat products and dairy derivatives, and saturated vegetable fats such as palm or coconut oil in vegan food products. It has also created a new generation of microencapsulated Omega-3-enriched algae oil, and is finalising development of the first cell culture-based platform for to manufacture high quality Omega-3 in a sustainable and scalable manner.

Novameat uses patented micro-extrusion technology and 3D printing to develop realistic plant-based beef steaks and pork skewers. The startup received €250,000 in government funding through the NEOTEC technology fund earlier this year. It is working to integrate its technology into industrial printers to allow for higher output (thousands of kg of whole plant-based meat cuts per hour), and has a partnership agreement with two-star Michelin Barcelona restaurant Disfrutar, which is reportedly experimenting with various plant-based prototypes for future inclusion in its menu.

Navarre-based foodtech startup <u>Cocuus</u> offers a broad range of foods made from plant- or cell-based animal proteins using 2D/3D printing, bioprinting or robotics. Thanks to 3D printing and from cultured meat, Cocuus can reproduce T-bone steaks or ribs with a texture and taste very similar to conventional meat. And through their Softmimic technology, they can transform purees into dishes practically identical to the real food. Although the company still lacks the capacity to produce on an industrial scale, it has already signed various collaboration agreements with the National Centre for Technology and Food Safety (CNTA).

Insect-based protein

Though still a nascent category in Spain, whose legislation does not yet allow the processing of insects into flour for human consumption, various businesses are active in this space. The most relevant is biotech startup <u>Tebrio</u>, formerly known as MealFood Europe, which has become one of the leading European firms in the farming and transformation of mealworms into premium ingredients for animal feed, plant nutrition, aquaculture, and other bio-industrial uses. The company secured €50m in funding earlier this year from Spanish bank Caixabank's venture capital fund, Caixa Capital Risc, and the government's Centre for the Development of Industrial Technology (CDTI), the main public funding organisation for R&D in Spain, to build a 70,000 m² industrial plant in the northwestern Salamanca province. The facility should be fully operational by mid-2024 and will have an initial annual production capacity of 100,000 tons of insect-derived products.

Comment

The Spanish plant-based industry follows the general growth trend observed in the European Union, driven by soaring demand across the bloc. What makes Spain different from many of its neighbours, where plant-based dairy is generally the fastest-growing category, is the quicker growth of the alternative meat segment. Although Germany (€817m) currently has the biggest plant-based market in the EU, Spain (€448m) fares well compared to other leading EU economies like Italy (€425m) France (€355m), The Netherlands (€291m) or Belgium (€134m).

There are promising opportunities, including potentially for New Zealand exporters of plant-based alternatives, across multiple categories in Spain. Bigger cities like Madrid, Barcelona or Valencia already have strong plant-based consumer bases, but a gradual shift towards increasing plant-based protein consumption is expected to spread to other parts of the country in coming years. While the plant-based milk market is comparatively more developed than others, dairy alternatives like cheese, ice cream, yoghurt or butter/margarine are under-served market segments with considerable scope for growth.

Growing the meat-analogue segment is also becoming a priority for environmental and health reasons. Current meat consumption is specifically highlighted as "unsustainable" in the Government's "Spain 2050" development plan; Spain's per capita meat consumption (1kg per week) is well above the WHO's or the Spanish Food Safety Agency's recommended weekly limits (200-500g). The government is firmly committed to achieving carbon neutrality by 2050 and has repeatedly warned that Spain must substantially reduce its meat consumption if the target is to be reached. Despite pushback from small-scale livestock farmers, which characterise this change as an attack on their way of life, big industry players are increasingly taking an "if you can't beat them, join them" approach, competing with plant-based food companies and progressively including meat-free options in their portfolios. This may have the impact of dampening the Spanish market's appetite for imported meat, and traditional New Zealand meat exporters may want to consider offering meat-free options or targeting overseas markets where demand may be greater.

Though still in its infancy, vegan fish/seafood will be another category to watch in Spain and one with strong development potential, given the importance of fish in the Spanish diet: Spain ranks fourth globally per capita annual consumption of fish – 46.5kg - behind Portugal, Norway and Japan according to recent FAO data. A decline in seafood consumption may lead to increasing competition with local fish/seafood producers and a smaller market share for New Zealand seafood exporters (e.g. two of New Zealand's top three exports to Spain in 2020 were molluscs and frozen fish.)

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