

Carro de Combate

*Fattening with  
deforestation:*

Brazilian soy in the  
Spanish pork industry

**This report is the result of research work by a team analysing and tracking the use of soy by large pork and feed producers in Spain for over six months, including the role of two of the largest importers of soy into the country: Cargill and Bunge. The methodology analysed national and international data on soy imports and exports to Spain from port, customs, logistics and transportation sources, with a special focus on Brazil. Extensive documentation from the pork, animal feed, transport and logistics sectors was consulted. The main soy flows and movements within Spain were traced. Additional data was requested from companies, organisations, trade unions, institutions and ministries (some of the requests were rejected). And field work was carried out, in addition to more than one hundred interviews with professionals in the livestock and feed sector, researchers, experts and specialists.**

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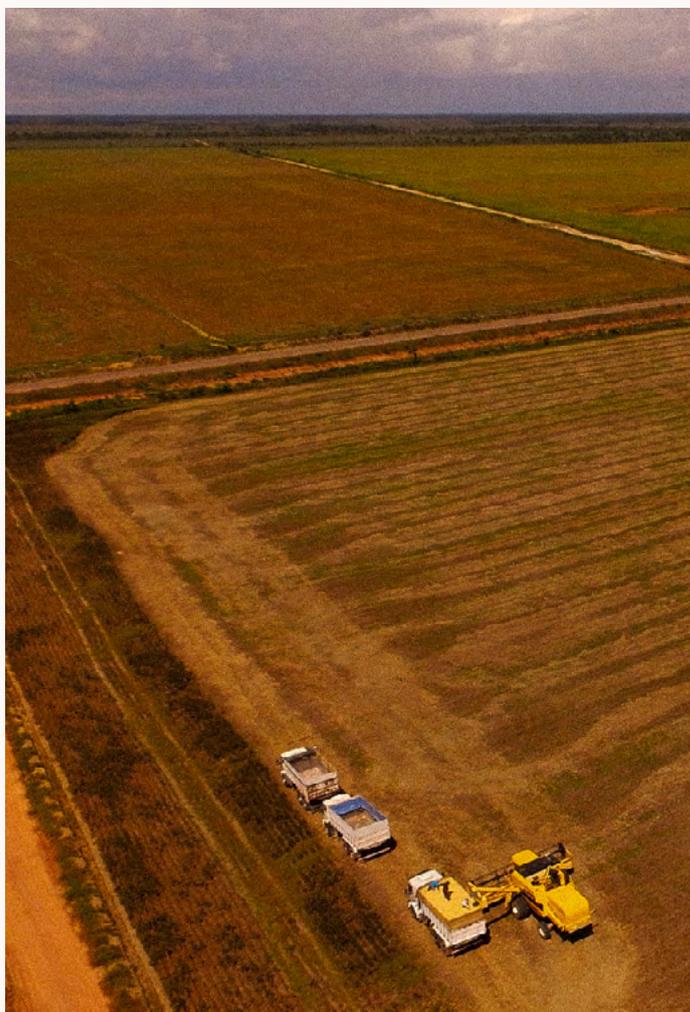
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## INTRODUCTION

# The meat sector, a changing industry

Spain is one of the world's leading pork producers. In 2019, the country was ranked as the world's fourth-largest pork producer, behind China, the United States and Germany, according to the FAO. The prevailing model used in Spain has been the intensive farm model, which relies on industrial feed for livestock.

For this reason, a feed manufacturing industry has developed in parallel—today the largest in Europe<sup>1</sup>—which aims to respond to the growing development of the meat industry in the country. However, the large volume of production means that the raw materials available in Spain are not sufficient to meet demand, resulting in large quantities of cereals and oilseeds being imported to produce animal feed. Soy beans—the production of which is very limited in Europe—are imported mainly from three major American producers: Brazil, the United States and Argentina.



Soybean plantation in the Cerrado area, Brazil.  
© Antonio Stickel / Greenpeace

However, as we will see throughout this report, the origin of these soy beans has been a headache for the industry, due to frequent scandals involving the deforestation of areas of high ecological value for new plantations, especially in Brazil. In this regard, soy to feed livestock (cattle, pork, poultry) has caused more deforestation than any other product imported into the EU between 2005 and 2017, including palm oil.<sup>2</sup> In 2018, about 23% of soy exports from Latin America to the European continent came from Brazil's Cerrado, the largest tropical savanna in South America and home to 5% of the world's biodiversity, including endangered species.

<sup>1</sup> FEFAC (2020). *Feed & food*.

<sup>2</sup> WWF (2021). *Stepping up. The continuing impact of EU consumption on nature worldwide*.

Europe is thus one of the largest drivers of tropical deforestation in the world, second only to China, with 16% of associated tropical deforestation, according to the WWF. Spain is the third country in Europe to import the most ‘deforestation’, with imports associated with the destruction of 32,900 hectares per year. The European Commission has said it wants to tackle this problem. In November 2021, it presented a proposal for a regulation to ban imports of soy, among other raw materials, that could be associated with deforestation. As we will see in this report, this regulation, like others implemented previously, would protect parts of the Amazon rainforest, but would allow large agricultural companies to continue to drive large-scale deforestation in Brazil’s Cerrado savannas and Pantanal wetlands. It would also allow them to continue exporting products made as a result of that destruction to Europe.<sup>3</sup>

For this research project, official international trade data from various agencies (both national and international), and maritime trade data of soy beans and soy cake between Brazil and Spain for the period 2016-2021 (the latter year incomplete), has been analysed. In addition, official data has been requested through six requests for public information, most of the content of which has been denied, in particular that referring to the activity of raw material trading companies and details of their imports. In addition, other sources have been analysed, such as TRASE<sup>4</sup>, which also provides data on the trade flow of commodities at risk of being linked to deforestation, including soy.

Despite scientific recommendations to reduce meat consumption and the need to transform the agri-food system to cope with the climate emergency, the sector is not abandoning its growth aspirations but attempting to deepen its intensive model, using European ‘Next Generation EU’ recovery funds and strategies like ‘Farm to Fork’.

The clearest example of this is the project presented by 21 companies from the meat sector—Campofrío, Vall Companys, Grupo Fuertes (El Pozo), Grupo Jorge, Uvesa, Coren, Covap, Grupo Empresarial Costa, Costa Brava Mediterranean Food, Incarlopsa, Olot Meats Grup, Missa/Faccca, Celevant, Fribin, Famadesa, Osborne/Sánchez Romero, Montesano Extremadura, Grupo Medina, Encinar de Humienta, Moralejo and Grupo Hermi—to transform the meat sector with an investment of 5.07 billion euros, most of which would come from European recovery funds.<sup>5</sup>

The project has mobilised a total of 1,689 companies and farmers from all the Autonomous Communities, with Andalusia and Catalonia being the most represented. It aims to meet the European objectives on sustainability, digitalisation and the gender gap, as well as to the Spanish Government’s Recovery, Transformation and Resilience Plan in April 2021. The original idea came from the meat interprofessionals of white layer pork (Interporc), Iberian pork (Asici), sheep/goat (Interovic), beef cattle (Provacuno), rabbit (Intercun) and poultry (Avianza). In July, it was presented as an agri-food PERTE [Proyecto

<sup>3</sup> RANKIN, J. (2021). “Leaked EU anti-deforestation law omits fragile grasslands and wetlands”. *The Guardian*.

<sup>4</sup> TRASE. (2022). *Tools & Insights*.

<sup>5</sup> TOBAR, S. (2021). “Campofrío y El Pozo lideran un proyecto de 5.000 millones para transformar el sector cárnico con fondos europeos”. *El español*.



Freshly deforested areas in Nova Canaã do Norte, Mato Grosso state, Brazil. © Christian Braga / Greenpeace

estratégico para la recuperación y transformación económica - Strategic project for economic recovery and transformation] to the Ministries of Industry and Agriculture, which considered it “the best private project that has been presented”.

It is proposed that 34% of the investments in the project will be made by 2022, 50% by 2023, with the possibility of extension to 2024. It also comprises four technology partners for the fields of digitalisation, circular economy and renewable energies: Telefónica, Acciona, Fertinagro and Hispasat. Its main objective is “to make the meat sector a world leader”, according to the Llorente y Cuenca consultancy that coordinates it. It plans to create 16,611 jobs: 4,724 in livestock facilities and 11,887 in meat industries, of which around 50% will be for female labourers. It also expects a 6% increase in productivi-

ty. And among its sustainable objectives it foresees reductions of 30% of the carbon footprint, 18% of the water footprint, 38% of the energy consumption in livestock facilities, and 22% of the energy consumption in the meat industries. It also expects 15% less animal feed consumption.

In February 2022, the Spanish government approved the agri-food PERTE, with a public investment of more than 1 billion euros to be spent by the end of 2023. This amount was below the expectations of the industry; however, the government has opened some other lines of financial support, some of them also financed by the European Recovery Funds, that the agri-food industry can apply for. The agri-food PERTE is now in process and it is expected that the recipients of the funds will be confirmed in the second half of 2022.

In addition, among the projects that seek to capture European funds from the 'From Farm to Fork' strategies, it is worth highlighting the proposal 'From Farm to Fork: Challenges and Opportunities in the Agricultural Sector', which was submitted to the Ministry of Industry, Trade and Tourism in April 2021 with an initial investment budget of more than 100 million euros. It involves Campofrío, Santiveri, O. Palomo, Molendum, Agropal, Grupo Tejedor Lázaro, Grupo AN, Kerbest and Uvesa, though it does not rule out including more companies.

The project's stated main challenges include: managing good agricultural practices in primary production, reducing the use of fertilisers and pesticides, modulating external dependence by regulating logistics centres, developing innovative plant-based products to promote healthy eating, and increasing organic production. It also addresses the need to increase the use of vegetable protein from European crops and alternative raw materials in animal feed, and the expansion of the supply of products based on vegetable protein. The sector recognises its weaknesses, such as the biodiversity impacts of cereal production and its dependence on international markets.

Another project, the 'Ebro Food Valley' led by Bayer and coordinated by the National Centre for Food Technology and Safety (CNTA - Centro Nacional de Tecnología y Seguridad Alimentaria), involves more than 60 companies at national level<sup>6</sup> and foresees a private investment of between 700 million euros and 1 billion euros. Development began in 2020 and has the support of the regional government of Navarre, La Rioja and Aragon, and companies such as Palacios Alimentación, Helios, General Mills and Florette Ibérica. Its main objectives include digitalisation (sharing data, automating production processes and incorporating artificial intelligence, among other measures), sustainability (the sector aims to be carbon neutral by 2050<sup>7</sup>) and ensuring the supply of safe, innovative, sustainable and accessible food to a growing population. CNTA is debating a new name: Spain Food Valley.

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<sup>6</sup> RIVERA, M. (2021). "Más de 60 empresas se unen para invertir 1.000 millones en el PERTE que transformará el campo español". *El español*.

<sup>7</sup> Despite the industry's aspirations, it is not clear yet how this is going to be achieved because there is no clear timeline or roadmap regarding solutions, methods and technologies that could be applied. Industrial agriculture is one of the largest greenhouse gas emitters due to its practices, high energy consumption and the use of agrochemicals, such as pesticides, fertilisers and other industrial pollutants. It also uses large amounts of water, creates problems of food sovereignty and job precariousness, among other issues that affect sustainability. The credibility of such statements has been considered as greenwashing by a number of organisations specialising in these topics, such as Oxfam, which published the following report in August 2021: Oxfam Intermon: OXFAM (2021). *Un riesgo neto*.

## SOY IN SPAIN

As in the rest of Europe, there is very little soy production in Spain. According to the latest available data from the Ministry of Agriculture, the country produced less than 5,000 tonnes of the oilseed in the 2019/2020 season, while around 3.5 million tonnes were imported.<sup>8</sup> A large part of the imported beans are processed in Spain to produce soy meal or soy cake—a by-product that is the protein base of most animal feed. 2.4 million tonnes of soy meal and soy cake were produced in the 2019/2020 season, with an additional 2.6 million tonnes of processed soy cake being imported.

In 2020, the main exporters of soy beans to Spain were, in the following order: Brazil, the United States, Canada and Argentina, according to UNComtrade data. In fact, Brazil became the undisputed leading exporter of soy beans to Spain in 2003, after several years competing with the United States for the position. In terms of soy cake, the main importers in 2020 were Argentina, Brazil, the United States and Germany. This shows a trend towards a reduction in soy bean imports and an increase in soy cake.<sup>9</sup>



Soybean plantation in the Cerrado area, Brazil.  
© Otto Ramos / Greenpeace

In Europe, Spain is the third-largest importer of soy beans behind only the Netherlands and Germany, representing 19.5% of the almost 17 million tonnes of soy beans imported by the EU. The country is behind only France as the second-largest importer of soy cake, representing 11% of the 25 million tonnes of soy meal imported.<sup>10</sup>

<sup>8</sup> SUBDIRECCIÓN GENERAL DE CULTIVOS HERBÁCEOS E INDUSTRIALES Y ACEITE DE OLIVA (2021). *Evolución de los balances de oleaginosas en España*.

<sup>9</sup> AFOEX (2021). *Importaciones y exportaciones en España de oleaginosas por año*.

<sup>10</sup> FAO, data for 2019.



Soybean plantation in the Cerrado area, Brazil. © Otto Ramos / Greenpeace

# 1.

## Animal feed composition. Why is soy so important?

Feed composition is a highly sensitive issue, as feed is the single biggest cost in meat production.<sup>11</sup> Producers therefore look for the cheapest formula that meets the nutritional needs of the animals. Due to fluctuating raw material prices, feed compositions are not fixed but adapted to price through computer systems and ‘formulation software’ that help find the most economical composition option.<sup>12</sup>

In pork production, the following factors are taken into account:

- The price of compound feed raw materials.
- The price of water in each Autonomous Community.
- The price of energy sources (diesel oil, oil, electricity, etc.).

With these factors taken into account, production is calculated to not exceed a certain cost per kilogram of pork ‘carcass’, so that the difference in sales compared to production ensures profits. For this purpose, the evolution of the international futures markets of countries from which raw materials are imported—Chicago (USA), Buenos Aires (Argentina), etc.—is observed in order to make year-and-a-half or two-year forecasts of the final cost in these regions, and thus to structure investments accordingly. Throughout, the industry seeks

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<sup>11</sup> It is estimated that the price of the feed can make up to 60% or 70% of the total expenses of an animal breeding facility. Source: ‘Food Safety. The case of feed for pigs’. Nazaret Rodríguez Alonso. Universidad de Barcelona.

<sup>12</sup> According to the information provided by several animal feed producers.

to produce the same number of pigs, or more, by reducing energy, water, etc., and by taking advantage of genetic technology, improving production rates and profitability.

Feed formulas change not only according to the type of animal, but also according to an animal's characteristics: age, productive phase, physiological state, even the environmental conditions of the fattening farm. Of the three production stages, fattening is the most expensive (€74.40/fattened pig), followed by the mother stage (€24.22/fattened pig) and the transition stage (€14.04/fattened pig). Of these, variable costs account for 74.87% (€88.32/fattened pig), and fixed costs for 25.13% (€29.64/fattened pig). Of the variables, feed is always the item with the greatest weight in total production costs, with a cost of €76.84 per fattened pig in 2019 (65.14% of the total).

Although soy is an expensive raw material compared to cereals, it is still the cheapest available source of protein due to its high protein content. As a result, 87% of soy imported by the EU is destined for the production of feed for livestock feeding.<sup>13</sup> According to industry sources, Interporc knows that the industry has a problem with soy feed at the national level, and alternatives are being studied (animal by-product meal, fish, algae).

The specific feed formula, consisting of the percentage of each ingredient, is considered a trade secret. Usually, not even the end customer who buys the feed—the farmer—has access to this information. But the data on raw materials used in the feed industry provided by the Ministry of Agriculture give an idea of composition. Thus, two types of raw materials account for most of the formula: cereals (66.7% of raw materials) and oilseeds (approximately 17.5% of the total, if seeds and meal are added). This data is general since feed manufacturers are obliged to declare the quantity of raw materials used, but are not obliged to differentiate by the species for which the product is intended.<sup>14</sup>

Among the raw materials, three cereals and one oilseed stand out: corn is the most used raw material (24.1%), followed by wheat (16.5%), barley (16.1%) and soy (with 10.7%, or 4,078,942 tonnes, corresponding to soy cake and an additional 1.5% corresponding to soy beans, or 555,586 tonnes). In the specific case of pork, sources consulted in the sector indicate that soy accounts for between 15% and 25% of the feed, depending on the animal's growth stage.

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<sup>13</sup> GREENPEACE (2019). *Enganchados a la carne*.

<sup>14</sup> According to communications with the Ministry of Agriculture.

Group		Tonnes	% of total RM
Cereals and derivatives	Barley	6,173,616	16.1
	Wheat	6,298,162	16.5
	Corn	9,228,553	24.1
	Sorghum	597,973	1.6
	Rye	158,536	0.4
	Oats	246,672	0.6
	Others	160,212	0.4
	Products derived from cereal grains	2,640,085	6.9
	Total cereals	25,503,810	66.7
Oilseeds	Roasted/extruded soy	555,586	1.5
	Sunflower seed	93,919	0.2
	Cottonseed	97,596	0.3
	Canola seed	30,858	0.1
	Others	33,149	0.1
	Total oilseeds	811,109	2.1
Extraction flours	Rapeseed meal (cake)	645,767	1.7
	Soy flour (cake)	4,078,942	10.7
	Sunflower flour (cake)	882,673	2.3
	Palm kernel meal (cake)	172,131	0.5
	Other oilseed meals	118,011	0.3
Total flour and derivatives	5,897,524	15.4	
Other oilseed and oleaginous fruit products	167,462	0.4	
Legumes and by-products	842,467	2.2	
Tubers, roots and derivatives	516,634	1.4	
Other seeds, fruits and derivatives	99,653	0.3	
Forages	936,730	2.4	
Other plants, algae	16,371	0.04	
Dairy and dairy products	157,784	0.4	
Terrestrial animals and derivatives	376,762	1	
Fish and aquatic products	112,914	0.3	
Minerals and derivatives	1,144,190	3	
Products and by-products of fermentation of microorganisms	77,510	0.2	
Oils and fats	811,957	2.12	
Various	762,057	2	

Figure 1. Raw materials used in the manufacture of feed and pre-mixes (2019). Source: Ministry of Agriculture, Fisheries and Food.

## 2.

# Brazilian soy, a problematic trade

Brazil is the main supplier of soy beans to Spain. In 2020, Brazil was the origin of almost two out of every three tonnes of soy beans imported into the country,<sup>15</sup> according to United Nations data. In the case of soy cake, Argentina is the main exporter to Spain, accounting for 45% of total imports, followed closely by Brazil with another 37% of total imports of soy cake. The industry sources consulted confirm that Brazil is one of the main origins of soy purchased for animal feed in Spain, along with Argentina and the United States.

Importing soy from Brazil is a thorny issue because of its high environmental impact. Thus, of the total soy imports from Brazil to the EU, 69% come from two particularly valuable and vulnerable ecosystems: the Amazon rainforest and the Cerrado savanna.<sup>16</sup> At present, the spread of soy monoculture is threatening the Cerrado in particular—it is

estimated that 50% of Brazil's soy production comes from this tropical savanna, while only 10% comes from the Amazon rainforest.<sup>17</sup> In 2006, a moratorium was signed in which the companies in the sector committed not to continue expanding soy cultivation in the Amazon rainforest. The result was remarkable: deforestation of the Amazon rainforest associated with soy expansion fell from 30% to 1% between 2006 and 2008.<sup>18</sup> However, it also had a perverse consequence: it increased the expansion of production in the Cerrado savanna, which—although much less known internationally—plays a major role in sustaining biodiversity and in maintaining the local climate and rainfall regime.<sup>19</sup>

In July 2020, 20% of the 53,000 soy-producing properties in the Cerrado and the Amazon rainforest grew the crop on land that has been deforested since 2008, according to a study published in the journal *Science*.<sup>20</sup> In the article, scientists call the soy that comes from illegal deforestation 'contaminated soy'. Around two million tonnes of contaminated soy could reach European markets each year. Moreover, these figures are growing steadily: soy exports to the EU increased by 75% from January to July 2020, compared to the same period the previous year, according to figures from the Brazilian Association of Vegetable Oil Industries (ABIOVE).<sup>21</sup> Soy cake imports, on the other hand, increased by 2.23%.<sup>22</sup>

<sup>15</sup> In 2020, Spain imported more than 3.3 million tonnes of soy beans, of which 2.1 million tonnes came from Brazil.

<sup>16</sup> SAMOS, C. (2020). "Un quinto de soja y carne de Brasil vendida a la UE procede de la deforestación". *Agencia EFE*.

<sup>17</sup> ROBINSON, A. (2019). "Muerte por soja en El Cerrado de Brasil". *La Vanguardia*.

<sup>18</sup> According to a study from the University of Wisconsin-Madison: ROBINSON, A. (2019). "Muerte por soja en El Cerrado de Brasil". *La Vanguardia*.

<sup>19</sup> El Cerrado is a tropical savanna ecoregion of Brazil with 1.9 million square kilometres (almost four times the area of Spain and around 22% of Brazil's land area) extending into the states of Goiás, Distrito Federal, Mato Grosso, Mato Grosso do Sul, Tocantins, Minas Gerais, Bahia, Maranhão and Piauí, plus small parts of São Paulo and Paraná. It is estimated that it hosts around 5% of the Earth's biodiversity.

<sup>20</sup> See full article in: MULTIPLE AUTHORS. (2020). "The rotten apples of Brazil's agribusiness". *Science*.

<sup>21</sup> ABIOVE (2022). <https://abiove.org.br>.

<sup>22</sup> COMEXSTAT (2022). *ComexVis*. <http://comexstat.mdic.gov.br/pt/comex-vis>.



Hotspot next to a deforested area in Nova Maringá, Mato Grosso state, Brazil. © Christian Braga / Greenpeace

However, in the case of the Cerrado, the major problem is not so much illegal deforestation as legal deforestation. Most of the deforestation of the savanna complies with Brazilian law and is not carried out by petty criminals, as is often the case in the Amazon, but by the multinational companies that control the soy sector in Brazil and the world: Cargill, Bunge, ADM, US-based global financial funds, such as BlackRock, or large landowners like Blairo Maggi, the former governor of Brazilian state of Mato Grosso and known as ‘the Golden Chainsaw’.<sup>23</sup> It is understandable then that these companies and interests have no problem supporting the soy moratorium in the Amazon, but are extremely reluctant to impose a similar moratorium in the Cerrado.

Furthermore, such a moratorium would be more difficult to implement in the Cerrado.

While 60% of the Amazon area is state-owned, the Cerrado is private territory, and soy production has already become a strategic sector for the entire region. As if that were not enough, President Jair Bolsonaro, at the helm of the country since January 2019, has not stopped eroding the environmental policies that had sought to contain deforestation in the country.

The biggest opponents to the protection of critical ecosystems, such as savannas and wetlands, are Bolsonaro and Brazil’s large landowners. The main agribusiness lobby group is ABIOVE, which has the world’s largest soy traders, Cargill and Bunge, among its members, who benefit from the export to Europe of deforestation soy. In August 2021, Cargill recorded the highest earnings in its 156-year history.<sup>24</sup> Cargill and Bunge

<sup>23</sup> BLAS, J. (2021). “Crop giant Cargill reports biggest profit in 156-year history”. *Bloomberg*.

<sup>24</sup> ROBINSON, A. (2019). “Muerte por soja en El Cerrado de Brasil”. *La Vanguardia*.

have a strong position in the three European industrial groups that are most actively lobbying against a stricter European law on deforestation: COCERAL (the EU grains and oilseeds association), FEDIOL (the European vegetable oils and protein meals industry), and FEFAC (the European grains and oilseeds industry, and feed industry), all with an interest in preserving the status quo.<sup>25</sup>

## Soy imports from Brazil

For this research project, Brazilian customs data on maritime cargoes shipped from the Latin American country's ports to Spain, as well as other supplementary data, has been analysed with the aim of understanding the functioning of soy supply chains for the feed industry. However, they could not be compared with Spanish customs data, as access to this has been denied following freedom of information requests.

Brazilian customs records have been used to determine both the volume of raw materials shipped and the companies involved. While in many cases the company exporting from Brazil and the importer in Spain belong to the same international conglomerate, in other cases, the importers buy from other companies, including their main competitors. This is often the case with Cargill and Bunge which, as we will see, are the main intermediaries.

According to customs data, during the period from 2016 to early 2021, at least 733,000 tonnes of soy cake and 2.5 million tonnes of

soy beans were imported from Brazil. In total, 43 companies, both Brazilian and multinationals, exported soy from Brazil to Spain (shippers). Cargill and Bunge, which will be dealt with in a later section, were two of the main multinationals exporting soy from Brazil, but their role was most important as the buyers of soy in Spain, making purchases from a large number of these companies.

However, we know that this overview is incomplete. Firstly, because the data on exports from Brazil collected on the UNComtrade platform reveal that the soy trade to Spain is much larger than the cargoes recorded in the customs databases obtained. This data is also provided by the Brazilian government, so the records obtained are probably incomplete. As mentioned earlier, Brazil was the origin of almost two out of every three tonnes of soy beans imported into Spain in 2020. In addition, Spain was the second-largest destination for Brazilian soy beans in 2019, according to Reuters.<sup>26</sup>

On the other hand, in the shipment data there are also a large number of shipments with unknown importers and a multitude of exporters, including Bunge and Cargill, but also other controversial companies, such as Cofco or Amaggi. Both these latter companies are also listed in shipments with known buyers, including some in which Bunge is listed as the purchasing company. In the case of Cargill, only 2019 shipments are listed.

However, the trends are confirmed. The data analysed correlates with the data on soy exports from Brazil provided by TRASE, in which

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<sup>25</sup> GREENPEACE (2021). *Sabotage. How companies lobby against EU protection of the world's forests.*

<sup>26</sup> REUTERS STAFF. (2020). "Cargill, Bunge lead Brazil grain shipments in 2019 -shipping data". *Reuters.*



Heat sources around the BR-163, in the municipality of Novo Progresso, Brazil. © Lucas Landau / Greenpeace

Bunge and Cargill are positioned as the main soy exporting companies in the country,<sup>27</sup> with a total of 15.7 million tonnes<sup>28</sup> and 12.4 million tonnes<sup>29</sup> in 2018, respectively, going to different countries around the world. However, Spain is the second destination country for soy exports from Brazil managed by Cargill, with 635,605 tonnes in 2018, and the third destination country for Bunge, with 798,447 tonnes in the same year.

Customs records also make it possible to analyse the soy routes from Brazil to Spain, with specialised ports according to the type of raw material sent and received. According to this data, the main Brazilian ports of origin of soy beans during the 2018 period were Itaqui, followed by Vila do Conde and Itabuna. In the case of soy cake, Rio Grande was the main port of departure.

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<sup>27</sup> TRASE SUPPLY CHAINS (2022). *Brazil soy*.

<sup>28</sup> TRASE SUPPLY CHAINS (2022). *BUNGE*

<sup>29</sup> TRASE SUPPLY CHAINS (2022). *CARGILL*

The ports close to the Cerrado savanna are Paranaguá (state of Pará) and, through inter-modal connections, Itabuna and Salvador in the state of Bahia. The ports of Vila do Conde (Pará) and Itaqui (São Luis de Maranhão) are close to the Amazon rainforest.

Although it is difficult to establish absolute certainty about the exact place of origin of the soy imported from Brazil by Spain, several studies confirm that most of the Brazilian soy comes from the Amazon and, above all, from the Cerrado. This data is consistent with the map of Spanish imports in hand. The ports from which most of the soy that arrived in Spanish ports originated are close to the Cerrado and the Amazon.

Port	Quantity (kgs)
Itaqui (BR)	1031505313
Vila do Conde (BR)	607271088.8
Itabuna (BR)	278227134.7
Salvador (BR)	220985341.6
Paranaguá (BR)	89911463.86
Santos (BR)	70802492.2
Santarem (BR)	58305000

**Figure 2.** Main Brazilian ports from which soybeans are exported to Spain (2016-2021)

Port	Quantity (kgs)
Rio Grande (BR)	109500000
Itabuna (BR)	57750000

**Figure 3.** Main Brazilian ports from which soy cake is exported to Spain (2016-2021)

### 3.

## Soy importers. The role of Bunge and Cargill

As we have seen, like many other raw materials, soy is imported by specialised intermediaries that buy the materials at origin, ship them to Spain, and in many cases process them in Spanish ports to sell them to animal feed producers, mostly in the form of soy meal.

According to data from Spain's Ministry of Agriculture, there are 394 registered importers of raw materials of plant origin for use in animal feed. However, the two main importers are Bunge and Cargill, companies established in Spain in the 1960s. By the mid-1970s, these companies were already producing and controlling 90% of the import, milling and manufacturing of animal feed.

Bunge is the largest-known importer of soy beans from Brazil into Spain, with 1.9 million tonnes (almost the totality of beans that we have records of) between 2016 and 2021, according to data provided by Brazilian customs. For Cargill, records for soy cake imports are mostly listed, with 105,425 tonnes in 2019, but records for its soy bean imports are likely missing. The chapter on soy cake also includes Cefetra, another commodity trading company and part of the German conglomerate BayWa Ag, which imported 19,352 tonnes in 2018.

Place	Company	Sales (thousands of euros)	Province
1	Bunge Iberica S. A.	3,046,139	Barcelona
2	Cargill S.L.U	1,312,831	Barcelona
3	Cofco	1,298,120	Madrid
4	Compañía general de compras agropecuarios SL	655,778	Lérida
5	ANSC	622,830	Navarra
6	Gavilon Spain SLU	611,297	Madrid
7	Viterra Agricola España SA	543,645	Madrid
8	Monsanto Agricultura España SL	405,593	Barcelona
9	ADM Agro Ibérica SL	397,070	Madrid
10	Louis Dreyfus Company España SA	387,992	Madrid

**Figure 5** Ranking of companies engaged in wholesale trade of cereals, raw tobacco, seeds and animal feed in 2019 (CNAE 4621). Source: Eleconomista.es



## Bunge

- 1 Bunge A Coruña
- 2 Planta de procesado Bunge (Zierbena, Bizkaia)
- 3 Sede Bunge Iberica SA (Madrid)
- 4 Instalaciones Bunge — Puerto de Tarragona
- 5 Planta de Procesado Bunge (Barcelona)
- 6 Instalaciones Bunge — Puerto de Huelva
- 7 Planta de procesado Bunge (Murcia)

## Cargill

- 1 Oficina comercial Cargill (Zaragoza)
- 2 Nutrición Animal Mequinenza — Cargill (Mequinenza, Zaragoza)
- 3 Cargill GOSCE/CROE (Reus, Tarragona)
- 4 Planta de Almidones y glucosas — Cargill (Martorell, Barcelona)
- 5 Sede de Cargill España (Sant Cugat del Vallès, Barcelona)
- 6 Planta Molturado Cargill España (Barcelona)
- 7 Nutrición Animal Cargill (Colmenar Viejo, Madrid)
- 8 Cereales y oleaginosas La Roda (Albacete)

**Figure 6** Map of Cargill and Bunge presence in Spain. Source: Prepared internally based on official data from Bunge and Cargill and Silum register (Ministry of Agriculture).

## Cargill

The US multinational Cargill operates in Spain through its sole legal entity Cargill S.L.U. It employs 664 people across its headquarters in Sant Cugat del Vallés and production plants in Martorell, Reus, Mequinenza and Barcelona, and handles around 3 million tonnes of raw materials, especially cereals (wheat, corn) and oilseeds (sunflower, soy) in the country. Of this volume, around 50% is processed in its own factories, producing products for the food industry (starches, glucose, fructose, crude, refined and bottled oils) and animal feed (protein meals and pre-mixes for animal feed). That which does not get processed in its own facilities is marketed directly to other manufacturers in the sector.<sup>30</sup>

Cargill's activity generates large maritime logistical activity (with more than one hundred ships per year involved in imports and exports) and land movement (more than one hundred thousand trucks per year). As a result, it has a significant presence in several Spanish ports, especially Barcelona and Tarragona. According to Cargill, its factories "contribute in a decisive way to sustaining the competitiveness of key sectors for the Spanish economy such as the animal feed and meat industry, of which Spain is one of the main European producers and exporters, being recognised for its quality and competitiveness".<sup>31</sup>

The Cargill Animal Nutrition (CAN) business unit, through its NutraSCA® brand, provides highly innovative products and services to thousands of customers: animal producers, feed mills and speciality distributors in companies of all sizes. It provides animal nutrition through its research capabilities, with its products, feed services, pre-mixes, digital modelling and formulation solutions. Among them are its pre-starters for young pigs, such as Pig Net Energy, which maximises formulations to provide weight gain and consistent nutrient intake. These pre-starters are feeds composed of pellets and soft pellets that also help small pigs transition from liquids to solids.

Cargill Animal Nutrition has two production units in Mequinenza (Zaragoza): one for the production of concentrates and early age feeds for all species, especially piglets,<sup>32</sup> and another, inaugurated in October 2018, for the production of pre-mixes. The latter has a production capacity of 100 tonnes per day per shift and 85 silos.<sup>33</sup> It received aid from the Plan Miner (Aragonese Development Institute). Nearly 95% of its production remains in Spain, with the rest exported to countries like France and Italy. Cargill's commitment to Aragon is directly related to its proximity to the bulk of livestock activity, including the pig farms of Lérida, Huesca and Zaragoza, in order to reduce logistics costs.

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<sup>30</sup> CARGILL (2020). *Estado de información no financiera mayo 2020*

<sup>31</sup> *Information from Cargill's Spanish website and its Non-Financial Report (Estado de Información No Financiera) May 2020. CARGILL (2020). Estado de información no financiera mayo 2020*

<sup>32</sup> NUTRALSCA (2022). *Sobre NutraSCA*.

<sup>33</sup> USÁN, M. (2018). "Cargill invierte 20 millones en una nueva planta de nutrición animal en Mequinenza". *Heraldo*.

Cargill also offers a whole catalogue of products for pig breeding: from comprehensive programmes for breeding sows (Livelle), nutrition programmes to “guarantee survival, homogeneity of litters and maximum growth at the end of the phase” of piglets (SCA Lechones), to specific products for Iberian pigs.<sup>34</sup>

## Bunge

Bunge has offices in the main strategic axes in Spain: the Basque Country (in the Port of Bilbao, and facilities for biodiesel), Catalonia (in the Port of Barcelona, offices in Barcelona, and facilities in Tarragona), Murcia (in the Port of Cartagena, Escombreras dock) and Andalusia (with facilities in Huelva). Its corporate purpose in Spain is the manufacture of fertilisers and animal feed, grains and oilseeds, and the production of oil bottles, mayonnaise and margarine. Its business activity in the country is the wholesale trade of cereals, raw tobacco, seeds and animal feed. Bunge Ibérica S.A. exports 48% of its sales, mainly to the EU.

As such, Bunge is one of the largest producers in Spain of flours and oils derived from soy via its three plants in Barcelona, Escombreras (Cartagena) and Ziérbena (Bilbao). It is also one of the world’s leading producers of biodiesel<sup>35</sup> from soy at its Ziérbena plant.<sup>36</sup> Its operations are integrated: it sells numerous products along the food production chain from farm to retail platform.<sup>37</sup>

These large traders do not usually provide logistics services, but in the summer of 2020 Bunge tested the use of the train (Go Transport) to transport 850 tonnes of soy meal between the Port of Barcelona and Zuera (Zaragoza) to supply Aragonese feed mills.<sup>38</sup>

In addition to selling large quantities of soy wholesale, Bunge owns the brands Emulsoy, Soy Fulfat, Enersoy, Soyfay, Mealpass, Cereal, Iberica, Mayores, Oesa and Enersun. Some of these brands, as their name indicates, have soy in their composition.

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<sup>34</sup> NUTRALSCA (2022). *Productos y servicios porcino*.

<sup>35</sup> Even more since their alliance with BP: BP (2019). *BP y Bunge anuncian la creación de una compañía líder en bioenergía a nivel global*.

<sup>36</sup> EUROPA PRESS. (2020). “Alimentación. Bunge dona cerca de 55.000 euros a través de varias organizaciones de Barcelona Bilbao y Cartagena”. *Epagro*.

<sup>37</sup> L.O. (2016). “Bunge ibérica, una firma líder que sigue permanentemente al servicio del agricultor”. *La Opinión de Murcia*.

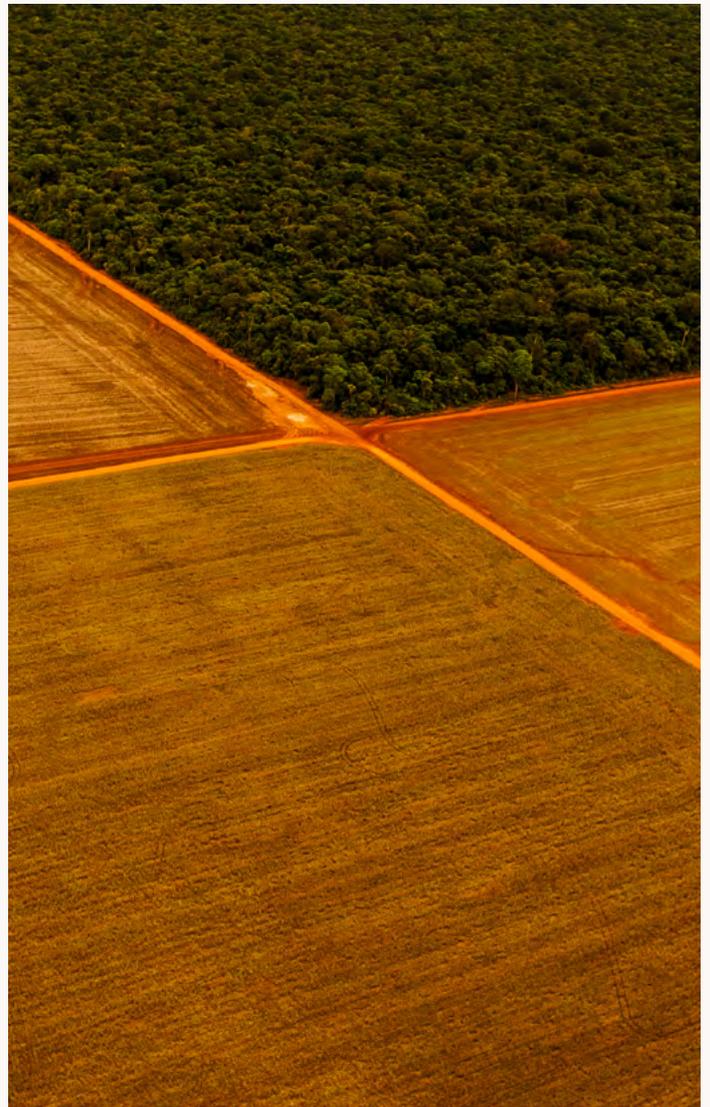
<sup>38</sup> EUROPA PRESS. (2020). “La empresa Bunge inicia las pruebas para transportar entre el Puerto de Barcelona y Aragón”. *Europa Press*.

## 4.

# Arrival and movement of soy in Spain

Soy arrives in Spain through specific ports dotted along much of the country's coastal geography. This is partly because a special permit is required “for the importation of products of non-animal origin intended for animal feed”<sup>39</sup>, but also because of logistical reasons, since the arrival points are usually close to the needs of the industry. The two major importers, Bunge and Cargill, have soy processing facilities in several of these ports.

The Port of Cartagena (Murcia), specifically the Escombreras dock, has the highest soy import activity from Brazil, with at least 772,000 tonnes of soy beans imported by Bunge between 2016 and the beginning of 2021. Of these, 485,000 tonnes were imported in 2019 alone. Bunge's presence in this port is major, and includes a milling plant. After Cartagena, Bunge also has a majority presence in the Port of Bilbao. This port is related to its agri-diesel plant, although part of the soy beans received are also used for animal feed.



Aerial view showing rainforests in Brazil and encroaching industrialisation. © Markus Mauthe / Greenpeace

During the same period (2016 to 2021), soy meal entered Spain mainly through the ports of Huelva and Marín. Cargill predominantly receives this product at these ports, having specialised in importing soy meal from Brazil, according to records. Bunge's imports are mainly of soy beans at the ports of Cartagena, Bilbao and Barcelona. However, since the records are incomplete, it is possible that both companies import both products from Brazil.

<sup>39</sup> The ports authorised for the import of non-animal raw materials for animal feed are: A Coruña, Algeciras, Alicante, Almería, Avilés, Barcelona, Bilbao, Cádiz, Carboneras, Cartagena, Castellón, Ferrol, Gijón, Huelva, Las Palmas de Gran Canaria, Málaga, Marín, Palma de Mallorca, Pasajes, Sagunto, San Sebastián, Santa Cruz de Tenerife, Santander, Sevilla, Tarragona, Tenerife Sur, Valencia, Vigo and Vilagarcía de Arousa. Information provided by the Ministry of Agriculture.

## Catalonia/Aragon node (Barcelona and Tarragona)

Catalonia is the undisputed leader in pig production in Spain.<sup>40</sup> In recent years, the industry has also experienced a period of splendour in neighbouring Aragon, an inland region without its own port. As a result, Catalonia is one of the main receiving points for soy beans in Spain and the European Union, with 13% of the continent's total.<sup>41</sup> Catalonia receives soy bean imports at the ports of Barcelona and Tarragona, with most destined for the feed production industry.

**Port of Barcelona:** Barcelona is one of Europe's soy trade hubs, accounting for 8% of the continent's total imports. 1.5 million tonnes of soy beans were received at the port in 2018 and 1.7 million in 2019, according to port data. In part, this intense activity is due to the presence of Bunge and Cargill processing plants, which receive and process soy beans from the port's solid bulk terminal. The port is also home to Ergransa, a company specialising in the reception and storage of bulk cargo, which handles some 800,000 tonnes of soy beans per year.<sup>42</sup> These beans are sent to the Bunge processor, to which it is directly connected.

Thus, the port of Barcelona is one of the main supply points for the feed industry in Catalonia and Aragon. According to the research carried out for this investigation, com-

panies like Guissona, Vall Companys, Nanta, Mazana, and Sant Antoni Pinsos Compostos are supplied either by Cargill's facilities, by Bunge's facilities, or by both.

Although the Barcelona port has rail connections, at the moment most soy logistics involve road vehicles, with trucks waiting at the gates of the two processors to be filled with processed soy meal for transportation. However, this could change in the future. In the summer of 2020, Bunge tested use of the train (Go Transport) to transport 850 tonnes of soy meal between the Port of Barcelona and Zuera (Zaragoza) to supply Aragonese feed mills. The Port of Barcelona has two inland maritime terminals connected by train: tmZ located in Zaragoza and tmT on the outskirts of Toulouse.

**Port of Tarragona:** The supply of soy to the Catalan-Aragonese feed industry is completed by the Port of Tarragona, which is one of the most important ports on the Mediterranean coast. According to Tarragona's own information, the distribution of imported raw materials includes all of Catalonia, Aragon and a large part of Navarre and eastern Castile "where more than 40% of Spain's total feed production is manufactured". The port information further continues: "the products are imported through the Port of Tarragona and from here they are transported to the areas where animal feed is manufactured, such as the factories in Lleida, Zaragoza, Girona and, to a lesser extent, to industries in Soria and Huesca."<sup>43</sup>

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<sup>40</sup> The locations of the pork industry will be analysed in another section.

<sup>41</sup> GRAIN (2021) *El papel de Catalunya y el Port de Barcelona en la construcción de un sistema alimentario (in)sostenible*.

<sup>42</sup> EL MERCANTIL. (2021). "Ergransa amplía su capacidad de almacenaje para cereales en Barcelona". *El Mercantil*.

<sup>43</sup> PORT TARRAGONA (2022). *Agroalimentarios*.

Data from the port's annual report also shows that 40,000 tonnes of soy beans passed through Tarragona in 2020. The soy meal category is not separated out in this data, but customs records obtained confirm that Cargill used this port to import at least 30,000 tonnes in 2019 from Brazil. Bunge also marks the port as a point of activity of the company, although no shipments from Brazil specifically to Tarragona have been found in the records.

As in Barcelona, raw materials are mainly transported by truck from Tarragona, but efforts are being made to promote the rail transportation of raw materials. In 2020, 720 tonnes of soy meal were sent to Monzón, in Huesca, by train for the first time.<sup>44</sup>

## North node (Bilbao)

**Port of Bilbao:** Spain's Port of Bilbao receives the second-largest volume of soy imports to the country. Approximately 1 million tonnes of soy beans are moved through the port each year<sup>45</sup> from various origins, Brazil being one of the main ones. During the period analysed (2016 to 2021), the port received at least 755,000 tonnes of soy from Brazil, most of which was purchased by Bunge (except for three shipments of which the buyer is unknown). Bunge has an important presence in the Port of Bilbao, in particular through its biodiesel plant in Zierbena, and with the port authority itself acknowledging that most of the soy beans entering the port are purchased



Forest remainders burning in Juara, Mato Grosso state, Brazil. © Christian Braga / Greenpeace

<sup>44</sup> PORT TARRAGONA (2020). *El port de Tarragona envia el primer tren a Montsó carregat íntegrament de farina de soja.*

<sup>45</sup> BILBAO PORT (2021). *The port of Bilbao presents its specialisation for the agri-food sector at enoc.*

by the company.<sup>46</sup> A large part of this soy is also converted into meal to supply feed mills in Castilla y León, Navarre and Aragon. Bilbao also has two dry ports, located inland, one in Burgos and the other in Álava.

### South node (Cartagena and Huelva)

The south of Spain, especially the region of Murcia, has also become one of the country's major centres of pig production and, therefore, of animal feed. In the region, the presence of Grupo Fuertes, the parent company of El Pozo, stands out. The company concentrates its activity in the area near the Port of Cartagena.

**Port of Cartagena/Port of Escombreras:** The main soy supply point in the south of the country is the Port of Cartagena, which includes a Bunge crushing plant. The port is also the main entry point of soy beans from Brazil to Spain, with Bunge as the only one known buyer.

The agri-food plant of the Escombreras Valley of Bunge Ibérica is located in front of Iberdrola (in the Bulk Terminal) on the southeast jetty of the dock. It has silos for the tonnes of soy beans unloaded at the docks and has a factory next to the southeast berth of the Escombreras dock for oilseed milling, extraction and refining of vegetable oils.

Total port traffic at the Port of Cartagena during 2019 was 34,256,352 tonnes, according to the port's annual report. This was

the best year on record since data has been available for solid bulk: a total of 6.83 million tonnes were moved, an increase of more than 4% over the previous year. By groups, the greatest increase in traffic was in agricultural and livestock goods, and in the food sector. Cereals and their meals were up 4% to 2.7 million tonnes in 2019. Most of this volume of goods corresponds to cereal unloadings at the Port of Cartagena from countries such as Ukraine, Russia, Argentina, Brazil or the United States. "This is a new market niche that the Port is taking advantage of to continue to be a useful and competitive tool for companies in the Region of Murcia that demand this product for the manufacture of feed for domestic consumption," the report says.

**Port of Huelva:** There are no soy bean processing plants at the Port of Huelva, meaning it is not a point of entry for this type of raw material. However, it is one of the main entry points for soy cake. Specifically Cargill shipped several cargoes of soy cake here in 2016, although the end customer does not appear in the seaborne trade statistics obtained. In addition, Bunge also marks it on its website in relation to its headquarters in the main commercial strategic points of Spain and Portugal.

As in the case of Tarragona, Huelva takes advantage of its intermodality (maritime, rail and road connections). Its hinterland (the area of land influenced by goods entering or leaving the port and their distribution) is mainly concentrated in the province of Huelva, followed by Badajoz, Madrid and Barcelona.

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<sup>46</sup> MURCIA.J. (2019). "Habas de soja por gasolina: así es el comercio vasco con Estados Unidos". *El Correo*.

## **Galicia node**

Pig production in Galicia is one of the fastest growing in Spain. As in the case of Murcia, one company stands out above the rest here: the Coren cooperative, which has become one of the leading livestock companies in Spain.

**Port of Marin:** This port is used by Cargill to import soy cake from Brazil. It has fewer connections abroad, a railway line to the city of Pontevedra, and road links to nearby regions. However, sources assure that this port is key for the operations of Coren, one of the main meat cooperatives in Spain, with purchases made through intermediaries rather than directly from Cargill.

## **Purchase and sale of raw materials**

According to industry sources consulted for this research, large feed producers have specialised raw material purchasing departments that establish commercial relationships either with intermediaries or directly with a trader. The soy supplier, however, changes continuously depending on availability, quality and price. In the case of small feed producers, contracts to purchase soy with agents like Bunge or Cargill can be for a year or more, as they have less bargaining power than the large producers to establish more flexible and advantageous conditions. However, according to internal company sources, it is becoming less and less common for contracts to be annual, and the norm is to sign for shorter periods of between

three and six months. There are also independent brokers who also negotiate prices and conditions for the purchase and sale of raw materials for these smaller producers.

On the other hand, the large feed or pork companies (such as Guissona, Nanta or Piensos Sol, among others) operate with practically all the suppliers in the market and can buy the number of tonnes of soy they need at any given moment at the lowest cost they can find. Part of their purchasing is also contracted on the basis of futures markets to ensure more stable prices.

## **Fresh Product Markets**

Spain's Ministry of Agriculture defines 'Fresh Product Markets' or 'Origin Markets for Agricultural Products' in terms of: "information and contracting centres established in production areas and whose objectives are to guide farmers and producers on market prices and facilitate their purchases by marketers, and may make available to them a set of facilities and services." Among their price references are those set by the different operational futures markets, such as soy, soy meal, soy oil and pork.

Often it is the large companies and/or cooperatives themselves that draw up their own prices for their transactions at origin, becoming benchmarks for other operators in the sector and/or area. In many other cases, Spanish agri-food operators also take price references from European or world fresh

product markets, as well as the EU reference prices for many agricultural products, according to a report by Prodescon.<sup>47</sup> This is the case for pork in France (MPB), Germany (Hamburg Wholesale Market or Frankfurt Futures Market), Holland (Monfort and NVV), Denmark (D. Slagterier), in Portugal (Bolsa do Porco), the United Kingdom (MLC), Italy (Modena and Verona) and Russia (Belgorod Market).

There are 39 fresh product markets spread throughout most of Spain. In regard to the white layer pork sector, there are 20 agricultural and livestock markets that provide different information and assistance services to the sector's operators, the most important being Mercolleida. Other important markets are those of Zamora, Segovia, Vic and Ebro.

In the cereal sector, there are 19 origin markets that also provide price information and assistance, although none of these reach national reference levels due to the wide variety of product types used in each area. According to the Prodescon report<sup>48</sup>, the most important markets are those of Mercolleida, Barcelona, Ebro, Extremadura, Cordoba, Valencia, Girona, Segovia and Zamora.

The information on prices and markets provided by the agricultural commodities exchanges for each of the different cereals is supplemented with information from the futures markets operating in the sector, and the price references provided by the large multinational operators. Other sectors have a smaller number of specific markets, such as Iberian pork (Extremadura and Salamanca markets), fodder (L.A. Ebro and Mercolleida), and pork cutting (Extremadura, Salamanca and Barcelona).

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<sup>47</sup> PRODESCON, S.A. (2013). *Informe sobre las lonjas de productos agropecuarios*.

<sup>48</sup> PRODESCON, S.A. (2013). *Informe sobre las lonjas de productos agropecuarios*.

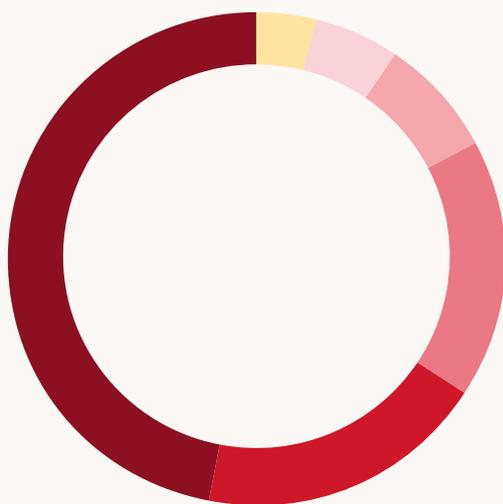
# 5.

## Is the soy imported into Spain sustainable?

As we have explained, soy is one of the main causes of deforestation in valuable ecosystems in Latin America, such as the Cerrado or the Amazon itself. In this regard, the industry is rushing to establish tools and arguments to claim that the soy it uses is of sustainable origin. However, these declarations are often more theoretical than real, and the mechanisms used do not ensure the origin and traceability of the soy in question.

An example of this is the report published by CESFAC<sup>49</sup> in July 2021 in which it conducted an analysis of the sustainability of soy used in the feed supply chain in Spain. According to this report, 71% of the soy purchased from Brazil is low deforestation risk, as is 91% from Argentina. These two countries are the origin of most soy imports: Brazil accounts for 40%, according to the report.

More specifically, 2.4 million tonnes of soy for animal feed were purchased in 2018 from Brazil, of which 41% came from the Cerrado region, 31% from the Amazon, 10% from the Mata Atlântica, with the rest originating from various Brazilian areas. The report mentions six main exporting companies without specifying names. According to the standards considered for the CESFAC report, soy of Argentine origin from outside the Gran Chaco area and soy originating in Brazil in compliance with the Soy Moratorium are considered low deforestation risk soy—however, this is without conducting a real analysis of the origin of the soy or its relationship with deforestation.



**Estimate of sustainable soy used for feed manufacturing**

3,77%	0%.
5,66%	Between 25 and 50%.
7,55%	Between 50 and 75%.
16,98%	Between 75 and 100%.
18,87%	Between 0 and 25%.
47,17%	No information available.

**Figure 6** Estimate of sustainable soy used for feed manufacturing in Spain by producers, according to CESFAC

<sup>49</sup> CESFAC (2021). *Soja sostenible para un suministro responsable de piensos compuestos.*

We know that tools like the moratorium are not sufficient to determine that soy is deforestation-free, as was recently seen, for example, in the investigation on Cargill, Bunge and Cofco.<sup>50</sup> However, the CESFAC report considers that being a signatory to the moratorium is actually sufficient for soy to be considered deforestation-free. In addition, as noted above, soy from the Cerrado is associated with deforestation that is considered legal.

Half of the Cerrado—an area like France, Germany, Belgium and the Netherlands combined—is dedicated to soy and cattle.

Annually, about 140,000 hectares of native vegetation of the Cerrado are converted to soy.<sup>51</sup> There are no signs of a change in trend: deforestation there in the first eight months of 2021 was 25% higher than in 2020.<sup>52</sup>

Moreover, the CESFAC report uses the TRASE international trade data tool to establish soy traceability. However, TRASE does not differentiate the final destination of the soy being traded, so in reality it provides only general data on soy imported into Spain, and is not specific to the feed industry.

### Quantity of soy imported from Brazil by year

	2016		2017		2018		
Total assimilable to sustainable	1,607,245	88.94%	1,588,925	79.53%	1,726,933	84.06%	
Soy produced according to a sustainability programme that includes criteria or policies focused on the fight against deforestation	Under compliance with the Soy Moratorium	708,894	39.23%	773,291	38.71%	606,129	29.51%
	According to a sustainability programme other than the importing company's own, such as RTRS	1844	0.10%	0	0.00%	155,308	7.56%
Soy with no information regarding any certification or programme and not produced in the Cerrado	44,722	2.48%	264,031	13.22%	294,384	14.34%	
Soy with no information regarding any certification or programme and which are produced in the Cerrado, and are therefore linked to deforestation risk	28,163	1.56%	135,585	6.79%	23,704	1.15%	
Soy not in line with sustainability programmes or certifications	126,860	7.02%	9255	0.46%	9,298	0.45%	
Total imports to Spain (tonnes)	1,806,990	100%	1,997,796	100%	2,054,319	100%	

**Figura 6** Sustainable soy for feed manufacturing in Spain. Source: CESFAC.

<sup>50</sup> MULTIPLE AUTHORS (2021). "Global food giants sourced soya linked to illegal Amazon deforestation." *Unearthed*.

<sup>51</sup> MULTIPLE AUTHORS (2019). "Expanding the soy moratorium to Brazil's Cerrado". *Science*.

<sup>52</sup> WWF(2021) *Dia do Cerrado: desmatamento acumulado em 2021 aumentou 25% em relação a 2020*

One of the most interesting data points in the report, which demonstrates the lack of traceability on the part of feed producers in Spain, refers to one of the answers to the questionnaire sent to feed manufacturers, where almost half say that they have no information on the sustainability of the soy they use and only 17% say that most of their soy is sustainable. In addition, more than a quarter of producers (28.3%) claim that less than 50% of their soy is sustainably sourced.



Live heat spots in areas with Prodes 2019 and Deter warnings, in Colniza, Mato Grosso state, Brazil. © Christian Braga / Greenpeace

## THE PORK INDUSTRY IN SPAIN

Its importance is due especially to the strength of the pork sector, which accounts for 66.5% of total meat production in Spain. According to data from the pork sector employers' association, Interporc<sup>54</sup>, the industry has a turnover of more than 15 billion euros, represents 36.4% of the Spanish Final Live-stock Production, and is 17.4% of the Final Agricultural Production, second only to fruits and vegetables. It also accounts for 1.4% of the national GDP and 14% of the Industrial Gross Domestic Product.<sup>55</sup>

The meat industry in Spain is a key sector in the economy: it is the fourth-largest industrial sector in the country, behind only the automobile industry, the oil and fuel industry, and the production and distribution of electrical energy.<sup>53</sup>

Much of the meat is destined for export. In 2020, more than 2 million tonnes of pork worth 5.65 billion euros were exported.<sup>56</sup> This amounts to almost half of the pork produced in Spain, which reached 5 million tonnes that year.<sup>57</sup>

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<sup>53</sup> ASOCIACIÓN NACIONAL DE INDUSTRIAS DE LA CARNE DE ESPAÑA (2022). *El sector cárnico español*.

<sup>54</sup> INTERPORC (2019). *La consolidación del sector porcino como motor de la agroalimentación española*.

<sup>55</sup> INTERPORC (2019). *El papel del sector porcino en la economía de España*.

<sup>56</sup> ASOCIACIÓN NACIONAL DE INDUSTRIAS DE LA CARNE DE ESPAÑA (2022). *El sector cárnico exporta 8.680 millones de euros*.

<sup>57</sup> ASOCIACIÓN NACIONAL DE INDUSTRIAS DE LA CARNE DE ESPAÑA (2022). *El sector cárnico español*.

In order to respond to its export demand, Spain rapidly increased its production capacity with the opening of large fattening and slaughtering facilities. As a consequence, the pig population has grown rapidly in the country, especially since the 1960s when the sector began to intensify.<sup>58</sup> the number of pigs increased from 2.6 million in 1950 to 22.4 million in 1999. 2019 saw a new production record with nearly 53 million pigs slaughtered, resulting in 4.6 million tonnes of meat.<sup>59</sup> This

production is distributed among 86,190 livestock farms (in 2019), of which 70,100 were intensive and 16,090 were intensive or mixed farms.<sup>60</sup> There are also some 2,865 business or related structures related to the different stages of pork production.<sup>61</sup> Production has centred mainly in Catalonia, Aragon and Castilla y León,<sup>62</sup> although it is growing rapidly in regions like Galicia.<sup>63</sup>

Order	Animals	Province	Order	Animals	Province
1	63.658	Toledo	11	28.589	Granada
2	42.601	Huesca	12	27.979	Badajoz
3	39.082	Toledo	13	26.885	Coruña, A
4	35.953	Toledo	14	26.768	Granada
5	32.457	Granada	15	26.365	Albacete
6	31.249	Albacete	16	24.300	Palencia
7	31.024	Albacete	17	23.765	Cuenca
8	30.985	Cuenca	18	23.147	Burgos
9	29.892	Zaragoza	19	23.060	Toledo
10	29.122	Murcia	20	22.750	Palencia

**Figure 8** Main pig farms in Spain and number of heads. Data provided by the Ministry of Agriculture.

<sup>58</sup> MULTIPLE AUTHORS. *Análisis de la evolución de los censos y sistemas de producción del cerdo ibérico*.

<sup>59</sup> VALVERDE. C. (2020). *Spanish livestock and poultry sector update*.

<sup>60</sup> INTERPORC (2019) *Memoria anual 2019*.

<sup>61</sup> INTERPORC (2020) *Estructura socioeconómica del sector porcino español*.

<sup>62</sup> MINISTERIO DE AGRICULTURA (2016) *Resultados de la encuesta nacional de ganado porcino. Informe a 1 de noviembre de 2016*.

<sup>63</sup> MINISTERIO DE AGRICULTURA (2020) *El sector de la carne de cerdo en cifras 2020*.

# 1.

## Main pig producers

The pork industry in Spain operates mainly through the vertical integration model whereby the same company controls most of the links in the production chain through direct management, or through contracts with other producers who must follow its production strategy.

This implies that companies that generally started out as feed manufacturers or slaughterhouses have expanded their activities<sup>64</sup> to the point of not only producing meat, but also processing and marketing it (in some cases even with their own supermarkets—for example, Guissona). This model is unique to Spain. Meat production is often carried out under agreements with farmers who provide the facilities and assume the direct production costs, but the animals are the property of the integrator, which also requires certain fattening conditions, such as animal feed (often this will be feed produced by the integrator itself).



Soy fields in Brazil. Rainforest destruction through soya plantation in the state of Mato Grosso. © Markus Mauthe / Greenpeace

However, the level of integration varies from company to company, ranging from the almost full integration of Guissona—a conglomerate that has supermarkets for distribution, to companies that focus on one part of the chain and maintain agreements with other companies to supply what is not integrated.

Companies in the meat sector can be divided into the following categories, according to their level of integration and specialisation.

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<sup>64</sup> GARCÍA.C. (2020) “Un sistema muy español en el que el ganadero no tiene ganado”.*Heraldo*.

## Large conglomerates

These are the companies with the highest level of integration. Most produce both fresh and processed pork, and generally have their own feed production, farm integration agreements and slaughterhouses.

Some of the main companies in this category include:

- **Grupo Fuertes**, A Spanish business conglomerate with an international presence and brands including **El Pozo** and **Profusa**. The Group also owns Procavi, another meat integrator. CEFUSA is its main integrating company, a producer of feed and pork and beef. It has more than 400 farms in the regions of Castilla-La Mancha, Andalusia, Murcia and Valencia. It presents an integrative model composed of large factories. It produces more than 550,000 tonnes of meat per year, with pork production particularly standing out. The patriarch of the Fuertes family, Tomás Fuertes Fernández, has one of the largest fortunes in the country. The Group owns companies in the agri-food sector (Cefusa, Agrifusa, Fripozo, Aquadeus), but also investments in hotels, real estate, petrochemicals and even theme parks.

**GRUPO FUERTES: Feed producer + cattle breeding and fattening: Cefusa.**

**Transformation + trademark: El Pozo**

- **Cooperativa agropecuaria Guissona:** An integrated pig, poultry and cattle breeding and feed producer belonging to **bonÀrea Agrupa**. This groups more than

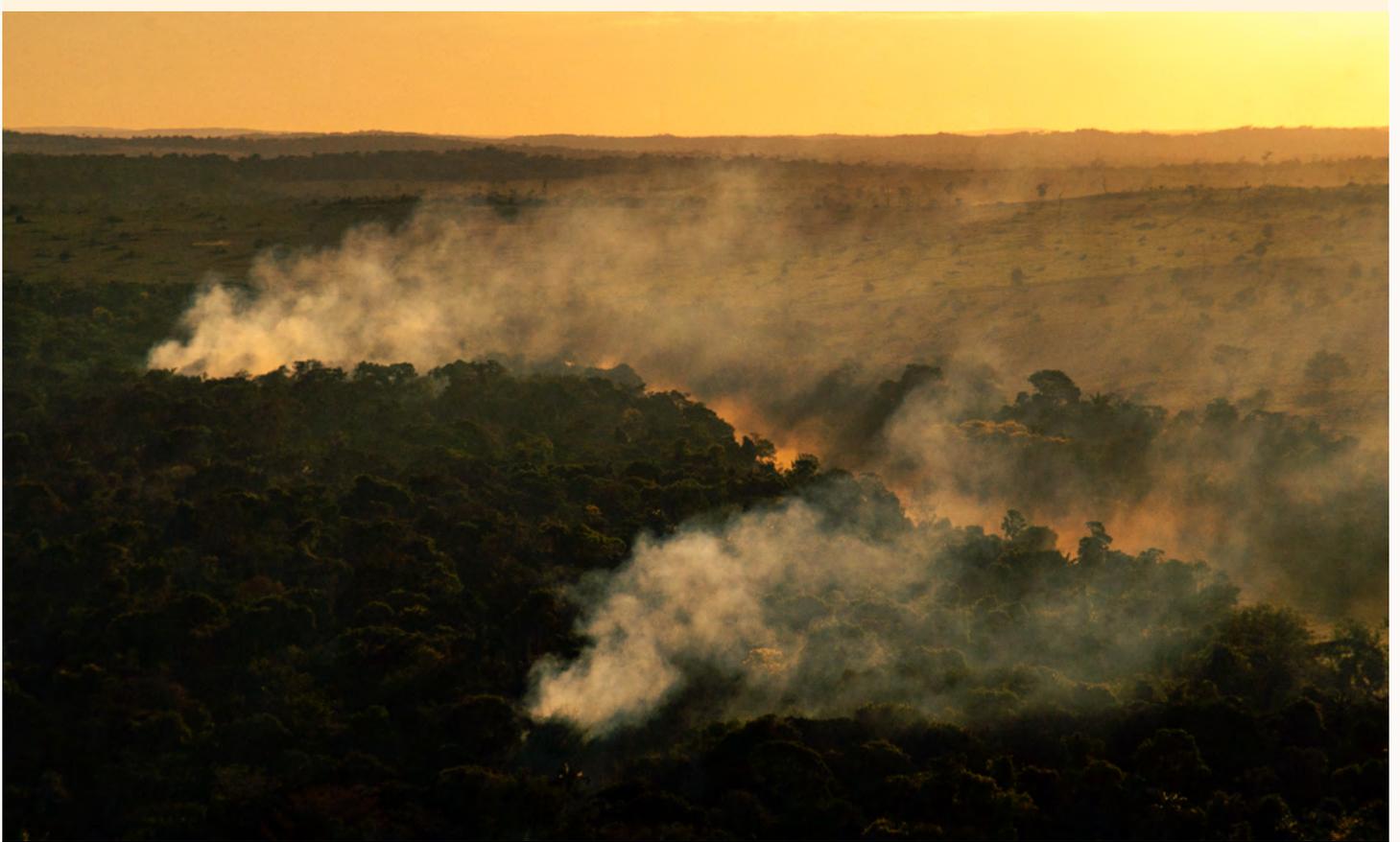
4,500 farmers and ranchers and, in 2019, produced some 26 million chickens and 800,000 fattening pigs. The group covers the chain from start to finish, up to the bonÀrea stores, which already have 500 points of sale throughout Spain. It is called the 'Catalan Mercadona'.<sup>65</sup>

**Feed + breeding and fattening + processing + brand name: bonÀrea**

- **Coren Group:** One of the main agri-food cooperatives in Spain, organised as a second-tier cooperative—i.e. a cooperative of cooperatives. It is made up of 3,200 members (farmers) involved in poultry, pork and cattle production and is among the 100 cooperatives with the highest turnover in the world. It processes meat in its own facilities and markets it through its own brand, Coren, which is sold in supermarkets and within its own stores. Among the many services offered to its members is the production of feed for their activities. It is also a supplier of inputs (producing more than 1 million tonnes of feed per year) and R&D to the companies of the Coren Group. The integrated model that it reproduces has

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65 LÓPEZ, D. (2020) "Guissona, el pueblo con trabajadores de 40 países que no paró para dar de comer a los catalanes". *El español*.



Hotspot directly in the forest, next to a freshly deforested area, Mato Grosso state, Brazil. © Christian Braga / Greenpeace

enabled it to avoid taking responsibility for the environmental impacts of the waste generated by its integrated factories, since it is not a direct owner of these.

**Feed + breeding and fattening + processing + brand name: Coren**

- **Campofrío Food Group:** A multinational food company and subsidiary of Sigma Foods—Europe’s leading meat processing company. Better known simply as Campofrío, it is one of the world’s five largest companies in the sector. However, Campofrío has a lower level of integration than the other companies mentioned, as it does

not produce feed and it supplies its meat through agreements with other companies, including Uvesa. It owns the popular brands **Campofrío, Navidul** and **Revilla**.

**Slaughter + processing + trademarks: Campofrío, Navidul and Revilla**

- **Costa Brava Foods:** A company that manufactures fresh and processed pork, beef and sheep products. It has 15 processing plants and produces 3 million pigs per year.<sup>66</sup> **Cañigüeral** is one of its star brands. It is also one of Mercadona’s suppliers.<sup>67</sup>

**Breeding and fattening + processing + trademark: Cañigüerall**

<sup>66</sup> COSTA BRAVA FOODS. (2022). *Sobre el grupo Cañigüeral*.

<sup>67</sup> ORIHUEL. J. (2021) “Cañigüeral, proveedor cárnico de Mercadona, supera los 1.000 millones de ventas”. *Expansión*.

## Companies specialising in fresh meat

Companies specialising in fresh meat have grown significantly in recent years due to demand for this type of meat from China. The main companies of this type also operate on an integration model, working with livestock facilities that they supply with pig herds, feed and veterinary care. They also often have their own slaughterhouses

- **Vall-Companys:** A company dedicated to the production of feed for more than 2,100 pig factories or farms associated with the group. It produces around 2 million tonnes of meat annually, which it markets under brands like **Agroturia**, **Frimancha** and **Fripor**, which reach the whole of Spain. It is one of the largest meat conglomerates in Europe: 4.5 million pigs and 65 million chickens pass through its slaughterhouses every year. It has integrated more than 2,000 farms throughout the country. Half of its production is destined for export. **Patel** is its commercial brand for pork, with three slaughterhouses and four cutting plants generating more than 300,000 tonnes of fresh pork meat per year. It sells its products to the **Campofrío** brand through subsidiaries, such as the integrating company **Agrocesa**.<sup>68</sup> It is owned by the Vall family who have several investment capital companies, referred to by their Spanish acronym SICAV (Sociedad de Inversión de Capital Variable), which benefit from low corporate tax rates.
- **Costa Food Group:** The second national pork producer in Spain, as defined on its website, with more than 850 integrated companies that generate 1,800 jobs. It fattens 3.6 million pigs per year and raises 150,000 breeding sows annually. Its origin is linked to Piensos Costa, founded in 1966 in Fraga (Huesca), a business unit that still produces the group's feed. It supplies meat, poultry and poultry products to the Mercadona supermarket chain, through the **Avinatur** brand. It also supplies other large supermarkets through its own brands like **Casademont** and **Costa Food Meat**, although its exports account for more than half of the group's turnover.

**COSTA FOOD GROUP: Feed + cattle breeding and fattening: Piensos Costa and Aviserrano. Transformers: Costa Food Meat, Aviserrano, Casademont and Villar. Brands: Casademont, Villar and Aviserrano (Avinatur)**

**VALL COMPANYS: Feed producer: Vall Companys. Cattle breeding and fattening: Vall Companys, Agroturia, Agrocesa, Patel, Pondex and integrated farms. Absorbed companies: Duyríber, Jamcal, Naturiber, Flor Sierra del Jabugo, etc.**

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68 RIBERA. (2019). "Aranda autoriza una granja con 2.000 cerdos en las afueras". *El Correo de Burgos*.

- **Jorge Group:** One of the main meat companies in Spain, covering the entire production chain from genetic selection to feed production, breeding, fattening, slaughter, cutting and the manufacture of processed products. According to the company's figures, it is the world's leading exporter. Grupo Jorge represents 14% of pork exports nationwide

**Genetics + feed + breeding and fattening + processing + trademark: Primacarne, Rivasam, Campodulce and Mafresa**

- **Carniques de Julià:** Part of the Olot Meats Group, together with Càrniques Celrà and Olot Meats, the Carniques de Julià company focuses on pork slaughtering. According to Interporc, it is one of the leading companies in fresh and refrigerated pork. It processes 7,800 pigs per day (5 days a week)<sup>69</sup>, while the production of the entire Olot Meats group is 14,000 pigs per day

### Main Companies of fresh, refrigerated or frozen meat

	Total traded volume (Thousands of tonnes)	% Total production
<b>First 5</b>		
Jorge Group		
Valls Companys		
Carniques Juia /Olot Meat Group	1790.2	41.70%
Cañigueral		
El Pozo Alimentación		
<b>Next 10</b>		
Campofrío		
IC Lorient Piqueras		
G. Famadesa		
Friselva		
C. Batallé		
Faccca	1136.9	26.50%
C. Toni-Josep		
Frigolouro		
Mafriges		
M.F. Avinyo		
<b>Total top 15 companies</b>	<b>2927.1</b>	<b>68.20%</b>

**Figure 9** Main companies in the pork sector by volume traded (2018). Source: Prepared internally with data from Interporc.Sinfoporc Annual report 2018

<sup>69</sup> CÀRNIQUES DE JULIÀ. (2022). *Quiénes Somos*.

## Companies specialising only in pork processed products

Companies of this type are usually smaller than those in the two previous groups because they do not normally have integration processes and rely on other companies to obtain raw materials. However, among them are some of the names best known to the general public.

- **Argal alimentación S. A:** Founded in 1914, this is one of the oldest meat companies. It specialises in sausages and other processed meats and has several well-known brands, such as **Bonnatur** and **Argal**.
- **Casa Tarradellas:** Another company specialising in sausages and other processed products, plus the creator of the famous ‘espetec’, a type of fuet. Since the late 1990s, it has also marketed pre-cooked pizzas, which is now one of its star products. It is also a supplier of Mercadona.<sup>70</sup>

### Main companies of pork products

	Total traded volume (Thousands of tonnes)	% Total production
<b>First 5</b>		
Casa Tarradellas		
Campofrío		
ElPozo Alimentación	526	32%
C.Argal		
I.C. Loriente Piqueras		
<b>Next 10</b>		
Noel Alimentaria		
Comapa		
Guissona		
Cañigueral		
Tello	794.1	48.50%
Embutidos Collell		
C.Serrano		
J. Arroyo		
Joaquín Alberto		
Casademont		
<b>Total top 15 companies</b>	<b>1320.1</b>	<b>81%</b>

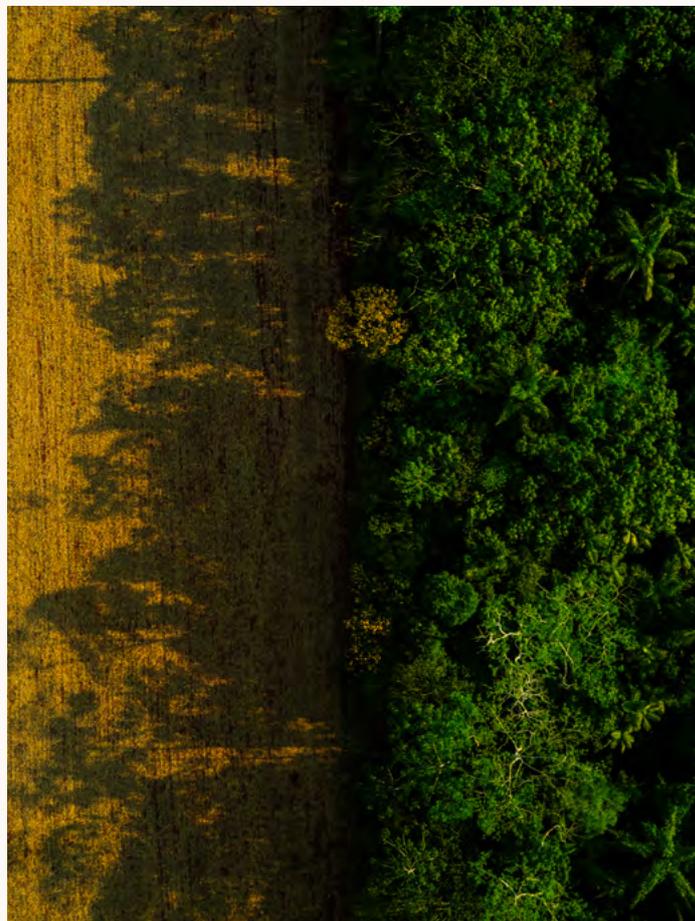
**Figure 10** Main companies in the pork sector by volume traded (2018). Source: Prepared internally with data from Interporc.Sinfoporc Annual report 2018

<sup>70</sup> ARRANZ, A. (2021) “Estos son los productos que Casa Tarradellas comercializa bajo Hacendado en Mercadona (más allá de las pizzas)”. *El Economista*.

## 2. Sectoral organisations of pork producers

As one of Spain's main economic sectors, the pork industry has several sectoral organisations that represent its interests. The most important is **Interporc**, where all sectors of the white layer pork value chain are represented, including production, processing and marketing. It is the most important interprofessional organisation in the meat sector due to the volume of pork production in the country.

There are also other organisations, such as **ANPS** (Asociación Nacional de Criadores de Ganado Porcino Selecto), **ANAPORC** (Asociación Nacional de Porcina Cultura Científica), **ADESPOLORCA** (Agrupación de Defensa Sanitaria del Ganado Porcino), **ANPROGADOR** (Asociación Nacional de Productores de Ganado Porcino).



Overflowed by the state of Pará, Brazil, in 2019.  
© Fábio Nascimento / Greenpeace

### Main companies in the meat sector by turnover.

Company	Millions €
Valls Companys	2,188
Guissona	1984
Costa Food	1500
Jorge Group	1,400
El Pozo Alimentación	1392
Cañigueral	1023
Campofrío	1021
Loriente Piqueras (Incarlopsa)	883
Carniques Juia /Olot Meat Group	716
Argal	337.5

**Figure 11** Top companies in the pork sector by turnover (2020).  
Source: Prepared internally with data from each company. Turnover includes all business areas of each company, not only pork.

## THE FEED PRODUCTION INDUSTRY IN SPAIN

Like the pork industry, the feed manufacturing industry has undergone a process of concentration during the last decades as the meat sector has become more industrialised. Currently, the main producers of animal feed are large companies, many of which are also meat producers that manufacture feed for in-house consumption and sale to other farms. The integration model already mentioned, in which companies control all, or almost all, of the production chain, has spread throughout Spain to the point that there are few large meat companies that do not have their own feed production.

According to data from Spain's Ministry of Agriculture, total Spanish feed production exceeded 37.4 million tonnes in 2019, an increase of 1.1% since 2018. A total of 97% of this feed was used for livestock, the remaining 3% was feed for pets and fur.

In 2018, Spain became the leading European animal feed producer, surpassing<sup>71</sup> Germany for the first time. In 2019, Spain increased the difference, but then lost its prime position in 2020 due to the Covid-19 pandemic.<sup>72</sup> However, pig feed production specifically was not affected by the pandemic and Spain remained the European leader in this sector.

Due to the importance of the pork industry in Spain, most of the feed produced in the country is destined for this sector, accounting for 47.9% of the total. Manufacturing is concentrated mainly in areas where farms are located. Therefore, as in the case of pig production, Catalonia also leads the ranking in feed production, followed by Aragon and Castilla y León. Furthermore, most of the pig feed produced is destined to serve the fattening period (71.6% of the total in 2019), distantly followed by feed for breeders, piglets and others.

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<sup>71</sup> According to Fefac: FEFAC (2020) *Compound Feed Production 1989-2019*

<sup>72</sup> EFEAGRO (2020) "La covid-19 cambiará el rumbo ascendente de producción de pienso". *Efeagro*.



Soybean plantation in the Cerrado area, Brazil. © Otto Ramos / Greenpeace

# 1.

## Feed producers

As with the calculation of the commercial volume of pork, the integrated nature of feed producing companies makes it difficult to deduce exactly what part of operations corresponds to feed production. According to CESFAC, the main companies in the sector in order of size are as follows:<sup>73</sup>

- **Guissona S.A:** Guissona produces more than 1.4 million tonnes of feed per year in its 11 plants, according to data provided by the company and contained in its own reports. In 2020, turnover in this area was 396 million euros, 6% more than in 2019.<sup>74</sup> It has about 25 standard feeds (three for reproduction, three for lactation, one for peripartum (prior to calving), two replacement feeds (postpartum, for recovery), plus feed for studs (boars), including pre-starter from 5 kg to 15 kg, starter up to 20 kg, and fattening feeds, etc.). Guissona also has 35 other formulas that are more specific. In total it has 300 feed references for all types of livestock, which increases to 1,000 references when including basic raw materials and everything sold to producers. Production

<sup>73</sup> CESFAC (2019) *Mercados estadística 2018*

<sup>74</sup> EUROPA PRESS (2020) "BonÀrea Corporación cierra 2020 con inversión récord de 101,2 millones de euros". *Europa Press*.

is directed mainly to its integrated farms, but some of it is marketed to independent farmers through its 75 agro-centres.<sup>75</sup>

- **Coren Agroindustrial:** Coren Agroindustrial is the feed production subsidiary of the Coren Group. Like the rest of the integrators, Coren focuses feed production on supply for the producers that are part of the cooperative. It has six feed mills located in Polígono San Cibrao das Viñas, Ourense (two plants), Bronxe and Bretoña (in the province of Lugo), and in Benégiles (Zamora), with a production capacity of more than 1 million tonnes of feed per year.

- **NANTA Group:** Nanta is the leading feed producer in Spain when analysing production volume, with 2.8 million tonnes of feed per year (2014 data). It belongs to the **Nutreco Group**, a leading multinational company in animal nutrition, which in turn is part of SHV Holdings (to which Makro belongs). According to a company source, the company has 200 feed references, among which pork references are the most significant. Soy 47 is frequently used in its formulas for piglet feed (with a percentage of 20% of the formula) and in fattening feed (15%) in addition to 70% cereal (barley and wheat). Nanta Group owns companies engaged in the produc-

tion and industrial processing of meat (SADA, Copaga, Inga Food), which it markets under brands like **CUK** and **Pimpollo**. Inga Food is engaged in the production and marketing of fattened pigs. According to its website, it is a world leader in the production of Iberian pork and operates in Aragon, Levante, Murcia, Extremadura, Madrid, Castilla la Mancha, Portugal, Castilla y León and Catalonia. It does not operate with large agents (pork producers or large supermarkets, such as Mercadona) but with small- and medium-sized butchers and supermarket chains.

- **AN Group (Piensos Caceco):** AN Group is one of Spain's leading meat companies, with operations (and also feed production) focused on the poultry sector. It is the fourth-largest poultry operator in Spain, marketing 750,000 chickens and 25,000 turkeys per week. In the pork sector, it has a single farm in Navarre that produces 800 pigs per week.<sup>76</sup>
- **Jorge Group:** Jorge Group consists of two companies dedicated to the manufacture of animal feed: Cuarte and Tapesa. According to the group's latest sustainability report<sup>77</sup>, it consumed 346,872 tonnes of feed, but no data is given on how much it produces itself.

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<sup>75</sup> BONAREA (2022) *Presentació*.

<sup>76</sup> GRUPO AN (2022) *Cárnicas*

<sup>77</sup> GRUPO JORGE (2020). *Memoria de sostenibilidad 2020. Grupo Jorge*.

CESFAC's ranking of the main companies in the sector, however, does not include some of the most important producers, especially some of those that are part of the large integrators or that support them. Two of these stand out:

- **CEFUSA:** As mentioned in the previous section, Grupo Fuertes also produces its own feed through Cefusa, which is then used by the farms that are integrated in its model.
- **Piensos Costa:** Acts as the feed producer of the Costa Food Group and is the origin of the conglomerate. According to data provided by the company, it produces more than 4 million kilograms of feed per day, which would amount to about 1.5 million tonnes per year.

In most cases, there is no data on the amount of feed produced by each of these companies, despite the fact that it is mandatory to report it to the autonomous communities. However, regional governments consider it confidential data and do not make it public. Most companies also fail to publish official data, which we have only been able to obtain for Valls Companys and Guissona. However, we have made an estimate of the volume of feed produced by each of the large companies based on information they provide, plus other data found in reports and the press. For Nanta, only one piece of old information was found in a press report. For Coren and Cefusa, we have calculated the total production capacity of their plants by extracting the individual data for each factory.

### Main animal feed producers (quantity produced)

Company	Quantity (tonnes/year)
Nanta	2800000*
Valls Companys	2060000*
Guissona	1320000*
Coren	1020000**
Cefusa	204280**

**Figure 12** Main animal feed producers (quantity produced)

\* Data for Nanta corresponds to 2014, Valls Companys to 2020, and Guissona to 2019.

\*\* For Coren and Cefusa we have only been able to obtain the annual production capacity of their plants or the amount that their factories have the capacity to produce



Hotspot next to a deforested area in Nova Maringá, Mato Grosso state, Brazil. © Christian Braga / Greenpeace

## 2. Sectoral organisations of feed producers

As in the case of pork, several business organisations have also been formed to defend the interests of the feed producing sector in each territory, nationally and internationally:

- **CESFAC (Spanish Confederation of Compound Food Manufacturers):** The sole representative of the sector within the European Federation of Compound Food Manufacturers (FEFAC), the Spanish Federation of Food and Beverage Industries (FIAB), and the Spanish Interprofessional Federation of Animal Feedstuffs Association. It is made up of fourteen territorial associations, such as **AGAFAC** (Galician Association of Compound Feed Manufacturers, including Cargill and Bunge), **AFACA** (Andalusian Feed Manufacturers Association), **ASFACYL** (Castilla y León Compound Feed Manufacturers Association), **ASFAVAC** (Interregional Association of Compound Feed Manufacturers of Valencia, Castellón, Albacete and Teruel), among others.

- **ASFAC (Associació Catalana de Fabricants d'Aliments Compostos):** Originating in the unions of provincial associations of manufacturers in the 1970s and 1980s, the Catalan Association of Animal Feed Manufacturers (ASFAC) was created with the territorial organisation of Spain into autonomous communities—its territorial scope coinciding with that of Catalonia. It then changed its name from Compound Feed Manufacturers to Feed Manufacturers.
- **APICOSE (Association of Compound Feed Manufacturers of Southeastern Spain):** A non-profit professional association that integrates most of the production of compound feed for animals in the region of Murcia and neighbouring provinces. Among its (currently 22) members, there are manufacturers of compound feed for livestock farmers and distributors, manufacturers for self-consumption, and manufacturers of mineral-vitamin pre-mixes for livestock feed. In addition to defending the interests of producers, directly or through CESFAC, it provides services to its members, including legal advice, training, information, etc.<sup>78</sup>
- **AEVE (Association of Companies of the Escombreras Valley):** Created in November 2004, AEVE is formed by 23 companies<sup>79</sup> that, due to their geographical location in the Escombreras Valley as well as their activity, share common interests, problems and objectives. Bunge is one of the companies making up the association. AEVE members represent 1% of the GDP and 20% of Murcia's industrial sales. When refinery expansion takes place, its membership will reach 2.8% of GDP.<sup>80</sup>

<sup>78</sup> Created under Law 19/1977 on the right to business association: INDISA (2017). *La asociación de fabricantes de piensos compuestos del sureste de España cumple 40 años.*

<sup>79</sup> Companies that are part of the association are: Aceites Especiales del Mediterráneo, AES, Befesa, Bunge Ibérica, Cementos Colcacem, Cemex España, Compañías Logística de Hidrocarburos, Ecocarburantes Españoles, Enagas, Excavaciones Voladuras y Obras, Fosfatos Cartagena, Fomento y Desarrollo Agrícola, Grupo Tracemar, Iberdrola generación, Parque Industrial Valle de Escombreras, Química del Estroncio, Repsol Butano, Repsol Lubricantes y Especialidades, Repsol Petróleo, Saras Energía, Terliq, Triturados La Miguelotas y Zetagas.

<sup>80</sup> AEVE (2022). <https://aeve.org/index.php>

## AN OPAQUE INDUSTRY

Due to its high opacity, the present investigation has encountered numerous difficulties in gaining insight into the functioning of the pork industry in Spain. The regional concentration of companies in the industry means that, in many cases, they become giants with long tentacles within the areas they operate, which in turn allows them a broad social control that keeps information safe. On numerous occasions, the people we contacted showed fear of reprisals against them or against people in their family and environment. As such, we have kept the names of all informants hidden. This hesitation was especially noticeable in the case of the largest corporations, such as Coren (Galicia), Guissona (Catalonia), Campofrío (Castilla y León) or El Pozo (Murcia). In particular, by controlling much of the labour market in specific regions, many workers, ex-workers or people related to these companies for multiple reasons, fear not only losing their jobs but being put on ‘blacklists’ that make it difficult for them to find a new job for themselves or their family members.

Spanish administrations have also been reluctant to provide relevant information, despite the fact that the animal feed industry is heavily regulated, especially after the



Forest fire in a deforested area in an undesignated public forest in Altamira, Pará state, Brazil. © Christian Braga / Greenpeace

BSE crisis in the late 1990s and early 2000s. Thus, the European Union obliges importers of raw materials to be used for animal feed to be registered and to pass controls, and also obliges animal feed manufacturers to provide information on their activities: specifically, to provide “data on the quantities of products manufactured as well as the quantity of raw materials, additives, pre-mixes, veterinary drugs and products used, referring to the previous year”.<sup>81</sup> However, only part of this data is made public in the annual Production Data report prepared by the Subdirectorato General of Livestock Production Means of the

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<sup>81</sup> Royal Decree 629/2019, of October 31st, regulates the general registration of establishments in the sector of animal feed, the conditions for authorisation or registration of those establishments and the national points of entry, the activity of the feed operators and the National Commission for the Coordination of the animal feed sector

Ministry of Agriculture, Fisheries and Food. Other data, such as the production of feed by each manufacturer, was classified as 'confidential' when requested. Besides this, a list of the main pig farms in the country, including number of heads, was provided, but only by province and not by company or precise location which would allow it to be identified.

Similar arguments have been used to deny data on imports of raw materials for use in animal feed. Specifically, the General Directorate of Agricultural Production Health of the Ministry of Agriculture denied a request for transparency to know the type of products imported and the quantity and the port of entry of companies "with import licenses for products of non-animal origin intended for animal feed". The resolution assured that "such data belong to the economic and commercial interests of the companies" and that "providing this information implies a risk to the rights of third parties, in this case the economic and commercial interests of the aforementioned companies whose information is requested, given that there is no public interest in the disclosure of the data". The Ministry of Agriculture's resolution added that "it is clear that information would be provided that could affect the companies and their situation in the market with respect to possible competitors, being information that the companies do not provide, logically, on a voluntary basis, but obliged by a European Union regulation on the import of animal feed".

However, other countries, such as the United States, make this data available to the public without request. Transporters in the Port of Barcelona, where both Bunge and Cargill are present, also confirmed that both companies reach agreements to supply the lack of raw material from their competitor, and that on many occasions they pick up soy meal in a different processing plant from that which it has supposedly been acquired.

However, this lack of transparency will have an increasingly difficult coexistence with the European Commission's new legislative proposals to prevent deforestation and to promote human rights due diligence in production chains. These new regulations seek, in addition to avoiding the well-documented negative impacts of certain industries, to reduce the opacity of products imported and manufactured in Europe.



Soybean plantation in the Cerrado area, Brazil. © Antonio Stickel / Greenpeace

## CONCLUSION

# An industry dependent on Brazilian soy

For months, this research has followed and analysed the supply chain of the Spanish feed industry especially in relation to the country's pork industry, which is one of Spain's main international industries. As pointed out in the first sections of this report, **Spain was the fourth-largest pork producer**

**in the world in 2019**, behind China, the United States and Germany. The Spanish model of operations is also characterised by having been built on the basis of a **very intensive industry, which has grown rapidly in a few years**, and whose impacts are visible in a large part of the national territory.

As we have seen throughout this report, some of the main conclusions that can be drawn about the functioning of this industry are as follows:

### Soy in the feed industry

- Although it is not the main raw material for animal feed, **soy is essential in the formulation of animal nutrition preparations**, as it is the cheapest source of protein available. In Spain, soy accounts for approximately 12% of the total raw materials used in the feed industry of all

types. However, according to the sources consulted for this report, in the composition of pig feed, the percentage is higher and usually varies between 15% and 20%, in some cases reaching 25%.

- The Spanish feed industry is **heavily dependent on foreign suppliers of soy**. Thus, domestic production of this oilseed did not reach 5,000 tonnes in the 2019/2020 season<sup>82</sup>, while nearly 3.5 million tonnes of soy beans were imported in that 2019/2020 period.<sup>83</sup> A large part of these imported soy beans are processed in Spain to produce soy meal, a by-product that is the protein base of most animal feed, of which 2.4 million tonnes were produced that year. An additional 2.6 million tonnes of processed soy meal were imported.
- **Most of this soy comes from Brazil**. According to UNComtrade data, in 2020, the main exporters of soy beans to Spain were, in the following order: Brazil, the United States, Canada and Argentina. In fact, Brazil became the undisputed leading exporter of soy beans to Spain in 2003, after several years competing with the United States for this primary position. In 2020, **Brazil was the origin of almost two out of every three tonnes of soy beans imported into Spain**.<sup>84</sup>

## Brazilian soy and deforestation

- **Soy supply has become a headache** for the Spanish feed industry **because of its relationship with the deforestation of areas of high ecological value**, especially in Brazil. In this regard, soy to feed livestock (cattle, pork, poultry) has caused more deforestation than any other product imported into the EU between 2005 and 2017, including palm oil, according to WWF.
- **Deforestation caused by the soy industry has shifted from the Amazon rainforest to the Cerrado**, after the Brazilian government imposed a moratorium on the expansion of soy cultivation in the Amazon rainforest in 2006. However, although much less known internationally, the Cerrado is also an ecosystem of high biodiversity value and plays a key role in maintaining the local climate and rainfall regime.
- This research has found that **much of the soy coming to Spain from Brazil could be related to deforestation**, through the analysis of the ports of origin that have been traced thanks to maritime trade data between the two countries. Although it is difficult to establish absolute certainty about the exact place from which soy originates using only the port of origin of shipments,

<sup>82</sup> According to data from the Ministry of Agriculture, Fisheries and Food

<sup>83</sup> MINISTERIO DE AGRICULTURA (2021). *Evolución de los balances de oleaginosas en España*.

<sup>84</sup> In 2020, Spain imported more than 3.3 million tonnes of soy beans, of which 2.1 million tonnes came from Brazil.

there are known routes used by the industry for the shipment of raw materials. Thus, two of the Brazilian ports identified—Vila do Conde (Pará) and Itaqui (São Luis de Maranhão)—are close to the Amazon rainforest, while Paranaguá (state of Paraná) and, through intermodal connections, Itabuna and Salvador in the state of Bahia, usually handle soy from the Cerrado.

- CESFAC, the feed industry association, confirms this origin and assures in a report that **41% of the soy imported from Brazil comes from the Cerrado, while 31% comes from the Amazon.** CESFAC considers this soy to be of “low deforestation risk” because it comes from areas covered by the moratorium, or regions like the Cerrado where deforestation is not considered illegal.
- However, several investigations and studies mentioned in this report have found that the moratorium does not ensure that soy is completely free of deforestation in the Amazon. Meanwhile, in the Cerrado, some 140,000 hectares of native vegetation are converted to soy every year<sup>85</sup>, in many cases legally. There are no signs of a change in trend: deforestation in the Cerrado in the first eight months of 2021 was 25% higher than in 2020.<sup>86</sup>
- Moreover, the same CESFAC data confirms that **sustainability is not yet a priority for the feed industry.** Thus, half of the produc-

ers state that they have no information on the sustainability of the soy they use and only 17% state that most of their soy is sustainable.<sup>87</sup> In addition, more than a quarter of producers (28.3%) claim that less than 50% of their soy is sustainably sourced.

### Soy marketing in Spain

- The **two main traders of soy from Brazil** in Spain are **Cargill and Bunge.** According to data from the TRASE project, Spain was the second destination country for soy exports from Brazil managed by Cargill in 2018, falling behind only China, with 601,305 tonnes. In the case of Bunge, Spain was the third destination behind China and Thailand, with 798,447 tonnes, according to data from the TRASE project.
- This research has also analysed data on maritime trade between Brazil and Spain which, although incomplete, also confirms these two companies as the main intermediaries. Specifically, according to TRASE data, **Cargill specialised in soy meal imports** (with 105,425 tonnes between 2016 and 2021) and **Bunge in soy beans**, with 1.9 million tonnes in the same period (almost all of the beans imported from Brazil for which records have been obtained).
- This research has also been able to document that **the main Spanish feed manufacturers buy directly from both**

<sup>85</sup> MULTIPLE AUTHORS (2019). “Expanding the soy moratorium to Brazil’s Cerrado”. *Science*.

<sup>86</sup> WWF (2021). *Dia do Cerrado: Desmatamento acumulado em 2021 aumentou 25% em relação a 2020*.

<sup>87</sup> According to the same standards proposed by CESFAC that have been analysed and put into question by research and reports.



Degraded area burning in a recently deforested area, in Aripuanã, Mato Grosso state, Brazil. © Christian Braga / Greenpeace

**Cargill and Bunge**, as well as from other minority suppliers, within a model in which supply contracts are continuously adapted to the price and availability of soy by each trading company. According to the investigations carried out, companies like Guissona, Vall Companys, Nanta, Mazana, and Sant Antoni Pinsos Compostos are supplied either by Cargill's facilities, by Bunge's facilities, or by both, at the Port of Barcelona. In addition, other large companies in the sector, such as El Pozo or Campofrío, are located in areas influenced by these large raw material traders.

- In order to meet the demand of the feed industry and the logistical needs of soy

imports, both Cargill and Bunge have presence in several of the main Spanish ports. Specifically, **Bunge is present in Barcelona, Cartagena and Bilbao**, with processing plants. **Cargill focuses its bean processing in Barcelona**, although it also imports to other ports, such as **Marín, Huelva or Tarragona**.

### Deforestation on our plates?

- One of the main conclusions of this report is that, despite the fact that European regulation obliges the different actors involved in the feed production chain to report their activities to the authorities, **none of the parties concerned is willing to provide the necessary transparency** in the sector to improve its sustainability. Thus, **most of our requests for public information have been denied** on commercial competition grounds, while the companies concerned have also been reluctant to provide information.
- In many cases, **this lack of transparency affects actors within the industry itself**. Thus, in this research we have found owners of livestock facilities who did not have access to the exact composition of the feed provided to them, as it constantly changes according to the availability and price of raw materials, as well as the needs of each farm—but also because it is considered a trade secret.
- During the investigation, we also found numerous people reluctant to speak out for fear of reprisals of a labour or economic nature by this industry, which has wide rang-

ing power in several regions of Spain, such as Catalonia, Aragon, Murcia or Galicia.

- Due to this opacity, **it is impossible to know the exact provenance of every tonne of soy entering the feed industry supply chain** and its relationship to deforestation. However, the industry has not demonstrated that it has adequate tools to ensure that its supply chain is free of deforestation, as it relies on instruments that are known to be ineffective, or that directly allow the deforestation of areas that are unjustly undervalued ecologically, such as the Cerrado.

- Therefore, although we know that the main Spanish pork brands have commercial relations with Cargill and Bunge, the largest soy importers from Brazil, and that soy associated with deforestation has probably been the protein base for the production of some of the most popular pork products in Spain, this lack of transparency **denies civil society crucial information about the sustainability of what it is consuming.**



Aerial image of a forest fire in Altamira, state of Pará, Brazil. © Victor Moriyama / Greenpeace

