

Progressing towards more sustainable soy supply chains in Europe

2022 Collective European retail, manufacturer and food service soy initiative to increase transparency and sustainability in the global soy market

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3keel

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Key Findings



5% of soy volume in assessed supply chains is currently verified from farm to store as being deforestation and conversion free

Progress has been made throughout the sector to increase the volume of physically verified soy, however the amount that is being provided in a fully documented and verified supply chain remains low. This does not mean that the 95% of soy volumes are associated with deforestation and conversion, but simply that the evidence that would be needed to definitively prove that soy has been produced free of these impacts is missing. The continued transparency challenge must be addressed for companies to be able to credibly demonstrate that contaminated soy is not present within their own supply chains.



Upcoming legislative requirements for deforestation free supply are gaining attention within value chains

The majority of companies (81%) have indicated that they are aware of, and following, developments in the European Union, the United Kingdom, and the United States to adopt due diligence requirements for their operations. Many of the transparency challenges that continue to be present in the sector may be addressed through the increased disclosure of actions mandated by these pieces of legislation.



Supply chains have not (yet) altered their sourcing practices based on customer policies

Retail, hospitality and food service supplier requirements have been increasingly focussed on the transition to physical supply chains as evidence of verified deforestation and conversion free (vDCF) sourcing practices. We have seen a slight increase in the uptake of mass balance, however the systems relied upon are largely company, not supply chain, credit systems. These certification types are intended to be on the glide path towards a 2025 vDCF supply chain, but for the moment they remain separate from physical supplies within livestock production systems. With 61% of the soy footprint currently covered by suppliers with a 2025 commitment, non-certification routes to achieving vDCF may need to be developed at pace to ensure these company commitments, as well as legal EUDR requirements, are met.



Progress made by feed mills to increase transparency is being lost through complex, non-integrated supply chains

From the data provided, some feed mills and their customers have made clear progress towards being able to provide greater traceability and transparency by providing better quality information and documentation to pass through the supply chain. However, in the more disaggregated supply chains (such as beef and dairy) this has not translated to much progress in terms of disclosure of soy origin and traders, suggesting this information is not flowing through the supply chain. The complexity of these supply chains means that this information transfer is becoming a significant administrative challenge for supply chain actors to overcome in order to verify soy as sustainably produced.



There is a greater consistency of asks as more companies come to the table, but this has illustrated inconsistency in how policies are implemented

In 2022 several new companies joined the soy data collection process, particularly within the food and drink manufacturing sector, creating stronger signals across the supply chain that transparency and traceability is critical to achieving sustainable soy. However, additional questions on company level policies asked during the reporting process have illustrated that suppliers' response to customer policies remains inconsistent, with different sourcing practices and an inability to track all supply chains.

Background

Soy: A commodity in the spotlight

Context



Challenges soy presents

Soy is thought of as an 'invisible' ingredient in so much that it does not often feature on ingredients lists. This is because over 90% of soy imported into the European Union is used as a protein source within animal feed, particularly for poultry and pork. It is therefore considered 'embedded'.

The soy supply chain is made up of a complex group of actors and long, dynamic value chains making traceability a significant challenge. With only about 3% of global production certified deforestation and conversion free, certification alone will not be enough to drive change within the production system and value chain.

There has been also been an extension in focus, particularly from Civil Society Organisations (CSOs), to wider issues within soy supply chains such as human rights violations and environmental factors such as hazardous pesticide use. In addition to a focus on deforestation, the EU Deforestation Regulation (EUDR) also includes the protection of human rights; with labour rights and internationally-recognised human rights specifically included under the definition of "legal" sourcing of soy.

Greater pressure to meet industry and legislative requirements

The demand for sustainable soy production is no longer considered niche.

The **EUDR** will come into force from 30 December 2024 creating distinct pressure on supply chains to eliminate the risk of deforestation within their operations. Many companies have already gone further than legislative requirements, making voluntary commitments to achieve verified deforestation and conversion free soy supply chains by 2025, for example, as signatories to the **UK Soy Manifesto (UKSM)**.

The latest guidance from the Science Based Targets Initiative on the [Forest, Land and Agriculture \(FLAG\)](#) emissions accounting clarifies how deforestation and land conversion is incorporated into carbon targets and brings deforestation and Land Use Change further into the spotlight as a potential threat to companies achieving their public targets.

Whilst these changes in the soy landscape create additional pressure on companies, they also create an enabling environment, as supply chain actors align behind what is needed to create the scale and pace of change required.

In 2022 the [Responsible Commodities Facility \(RCF\)](#) launched, a joint private-sector led investment that supports the production of Deforestation and Conversion Free soy in the Brazilian Cerrado through the provision of financial incentives to farmers.

However, the unilateral requirement to create a more transparent and traceable supply chain poses a significant administrative challenge, at a cost that the whole supply chain will need to address.

Significance of this report

The aim of this report and the supporting data is to increase the level of transparency on soy use in European supply chains. In turn, this ensures key actors within the supply chain can work in an informed way to accelerate achieving a food system where soy in animal feed is verified deforestation and conversion free.

In order to quantify the risk of deforestation and land conversion, retailers, food service and now manufacturing companies, work with 3Keel Group Ltd to run an annual, standardised, collective reporting process on their soy supply chains. This process has run over the past five years and the consistency in

approach has enabled companies to identify key points of influence in their supply chains, analyse their potential impact and publicly report on progress.

This has given them a greater awareness and visibility of their products' soy supply chain, and enabled them to make informed decisions around policy and strategy to progress towards their targets on reducing the deforestation impact of their products.

The knowledge of the most significant soy traders, feed companies and soy origins within their supply chain can also help to guide wider-scale engagement and actions aimed at supporting the transformation of the soy value chain more widely.

Spotlight on EUDR and its implications for soy supply chain actors

Overview

The European Union's Deforestation Regulation (EUDR) aims to prevent materials that have been linked to deforestation (legal or illegal) being placed on the EU market. Company voluntary commitments currently extend beyond this landmark legislation by also including non-forest landscapes, which the legislation currently excludes from its scope.

The measure entered into force on 29th June 2023 and it will be applicable from 30th December 2024 with a delay of 6 months granted to small and medium enterprises.

Commodities and associated products which are **placed on the EU market** (imported, exported or traded) will be required to be:

- deforestation-free (based on a cut-off date of **31 December 2020**), regardless of legality;
- legal, as defined by legislation in the country of production; and
- covered by a due diligence statement.

What is needed by supply chain actors within scope of the regulation?

Geolocation data for the farms that produced the soy needs to remain with goods across the entire supply chain.

An externally verified Monitoring, Reporting and Verification (MRV) system is needed to demonstrate negligible risk of non-compliant materials entering the supply chain.

The level of concentrated trading within the soy supply chain means that importers will bear the majority of the responsibility for market-level

compliance. These importers will also need to pass this information down through the supply chain to others who will also need to comply with the regulations (e.g. feed manufacturers). For traders who are the importers of this material into the EU, this will not only mean needing to have this data for their own soy operations, but also for any soy they have sourced from a third party.

Livestock producers and other downstream actors using 'embedded' soy may not have direct obligations under the EUDR and therefore geolocation data will not be required. The exception is for cattle, excluding dairy, which will need to comply with EUDR for the embedded soy in animal feed. If concerns are raised, EU authorities may request geolocation data for the soy in feed. Despite most embedded soy being outside of the scope of the regulation, expectations of businesses beyond minimum legal compliance will likely still follow, including exposure to reputational and supply continuity risks.

Enforcement

Penalties are severe, and could involve:

- Fines up to 4% of EU wide turnover
- Seizure in terms of confiscation of revenues or products
- Exclusion or Prohibition from public procurement/public funding or ability to use simplified Due Diligence

Responsibilities depend upon what is being placed on the market

→ If a company places a product where the Harmonized System (HS) code is included within scope on the EU market, e.g. soybeans or beef, then this company may have direct responsibility, and therefore be required to file a Due Diligence Statement



→ If the named HS code is included as an ingredient within a product that a company is placing on the EU market, for example soy milk, that company may need to undertake due diligence supplier monitoring



→ A commodity within scope that is indirectly embedded within the product supplied to a company, e.g. soy used in the feed for poultry, may be considered an indirect supplier risk



Methodology

An established and consistent approach to soy reporting

For the fifth year running, UK and EU companies have come together to gather information on the soy used within their supply chains. This year saw not only European retailers and Food Service companies taking part in the collective soy reporting process, but also manufacturers (20 companies in total). These companies worked with 3Keel as the facilitator for this standardised process, to answer three questions:



How much soy?

How much soy was used in livestock production, or other direct soy ingredients, for products supplied to their customer



From where?

Where did the soy come from, and who brought it to the consuming market?



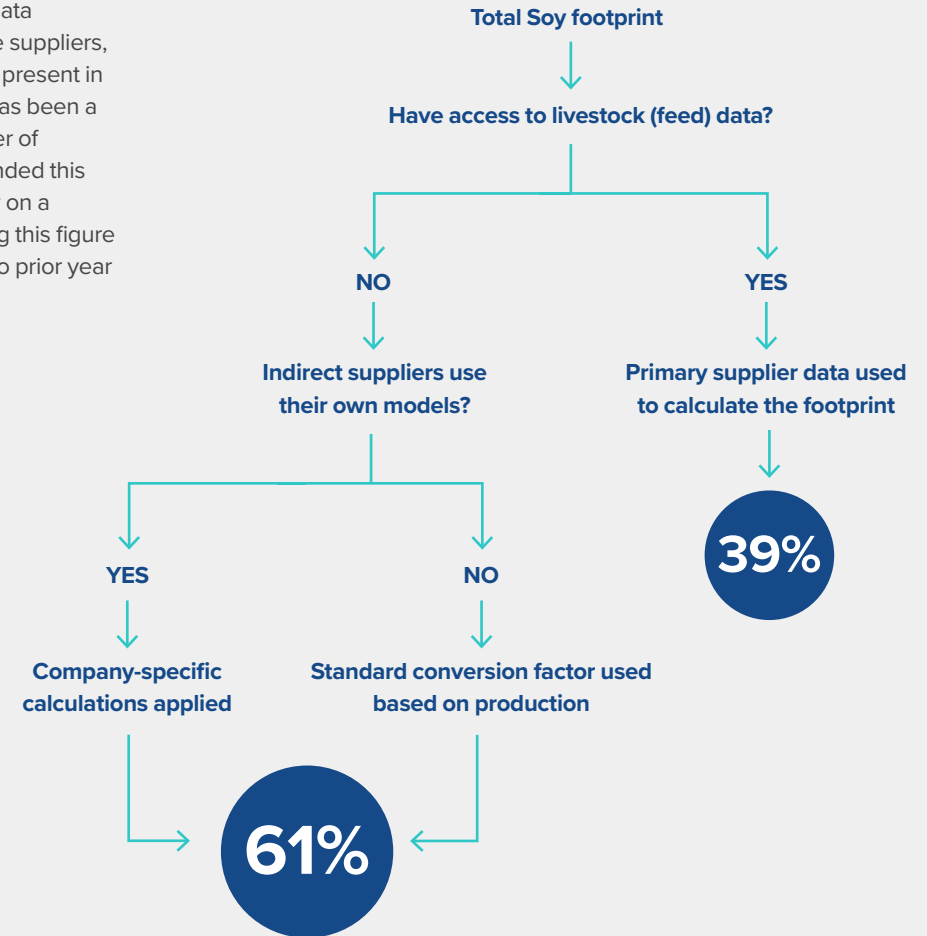
Risk of deforestation and land conversion?

What level of verification has been provided to ensure it was produced on land not connected to deforestation or conversion since 2020?

More than one third of the soy reported has come directly from supplier calculations

This year, a total of 884 companies were engaged in the soy data collection. For 13% of these suppliers, no soy was declared to be present in their supply chain. There has been a 23% increase in the number of suppliers who have responded this year compared to last year on a comparable basis, meaning this figure is not directly comparable to prior year reports.

884 Companies Reported



Determining Verified Deforestation and Conversion Free soy

Many companies have set commitments to achieve verified Deforestation and Conversion Free (vDCF) supply chains. More recently greater clarity and consensus has emerged about what constitutes verified deforestation and conversion free soy. The introduction of the EU Deforestation Regulation (EUDR) adds another lens by which companies are required to demonstrate deforestation free supply chains.

What does Deforestation and Conversion Free (DCF) mean?

Conversion is when natural ecosystems are changed from one land use to another state or form. **Deforestation is a type of conversion**, involving the loss of natural forest as well as severe degradation. Regardless of whether this natural forest loss was legal, it is still considered to be deforestation. The EUDR will require commodities placed on the EU market to be deforestation free regardless of legality. Land conversion of non-forest ecosystems – such as savanna and grasslands for soy production - leads to issues around biodiversity, indigenous communities and carbon emissions (as with deforestation) but is often overlooked. Land conversion is currently included in company commitments, but excluded from the EUDR

Verified

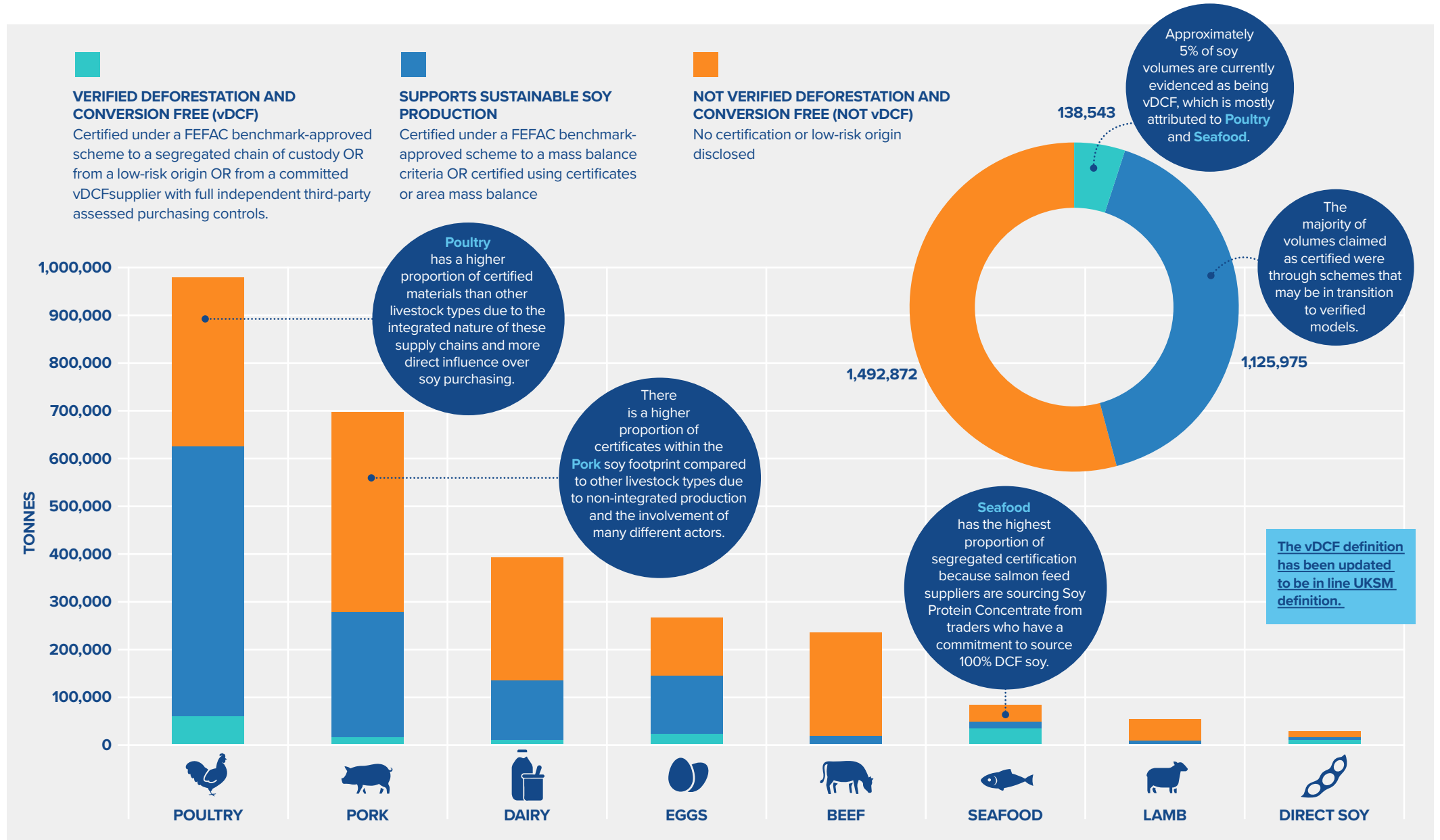
The AFI defines 'verification' as the process of assessing and validating compliance, performance, and/or actions relative to a stated commitment, standard or target.



Findings

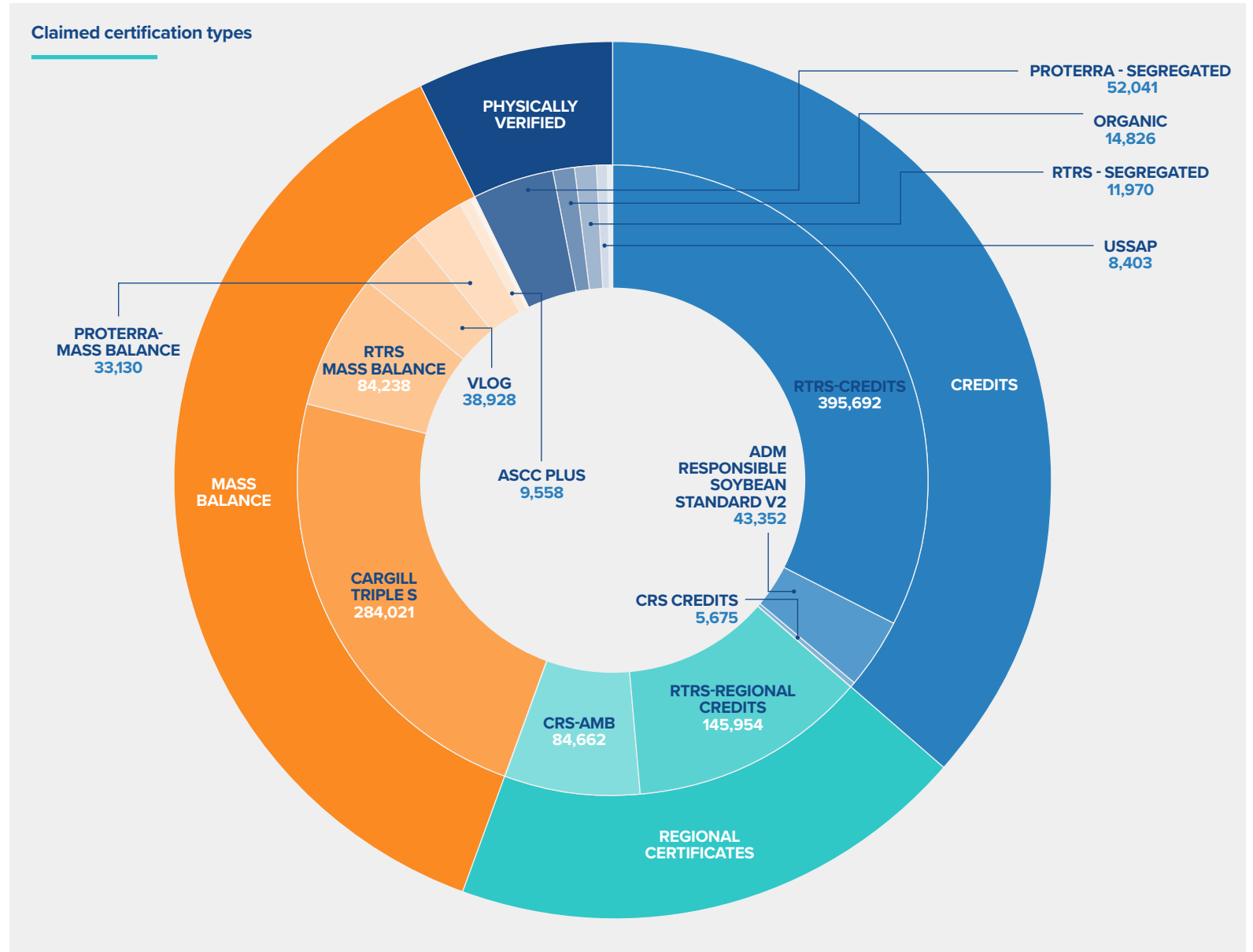
Methodology, categorisation and scope

2022 Soy Footprint



The transition to physical chain of custody models remains limited

- Certified volumes represent 46% of the total reported soy footprint in 2022.
- Book and Claim remains the most significant form of certification overall, together Credits and Regional Certificates represent 25% of the total soy footprint.
- Mass balance has risen from 11% of overall soy volumes in 2021 to 16% in 2022. Cargill Triple S represents 63% of mass balance volumes and 23% of all certified soy disclosed.
- Physically segregated soy is the only form of certification aligned to vDCF criteria but represents just 5% of overall soy volumes reported. There has been very minimal growth year on year, leaving many companies a fair way from achieving their vDCF targets through certification alone.
- Proterra Segregated remains the most reported physically verified scheme, and is mainly being seen adopted within the seafood supply chain. This is in part due to commitments made by several major traders/feed merchants to the salmon industry to achieve a goal of a 100% externally assured deforestation and conversion free supply chain.

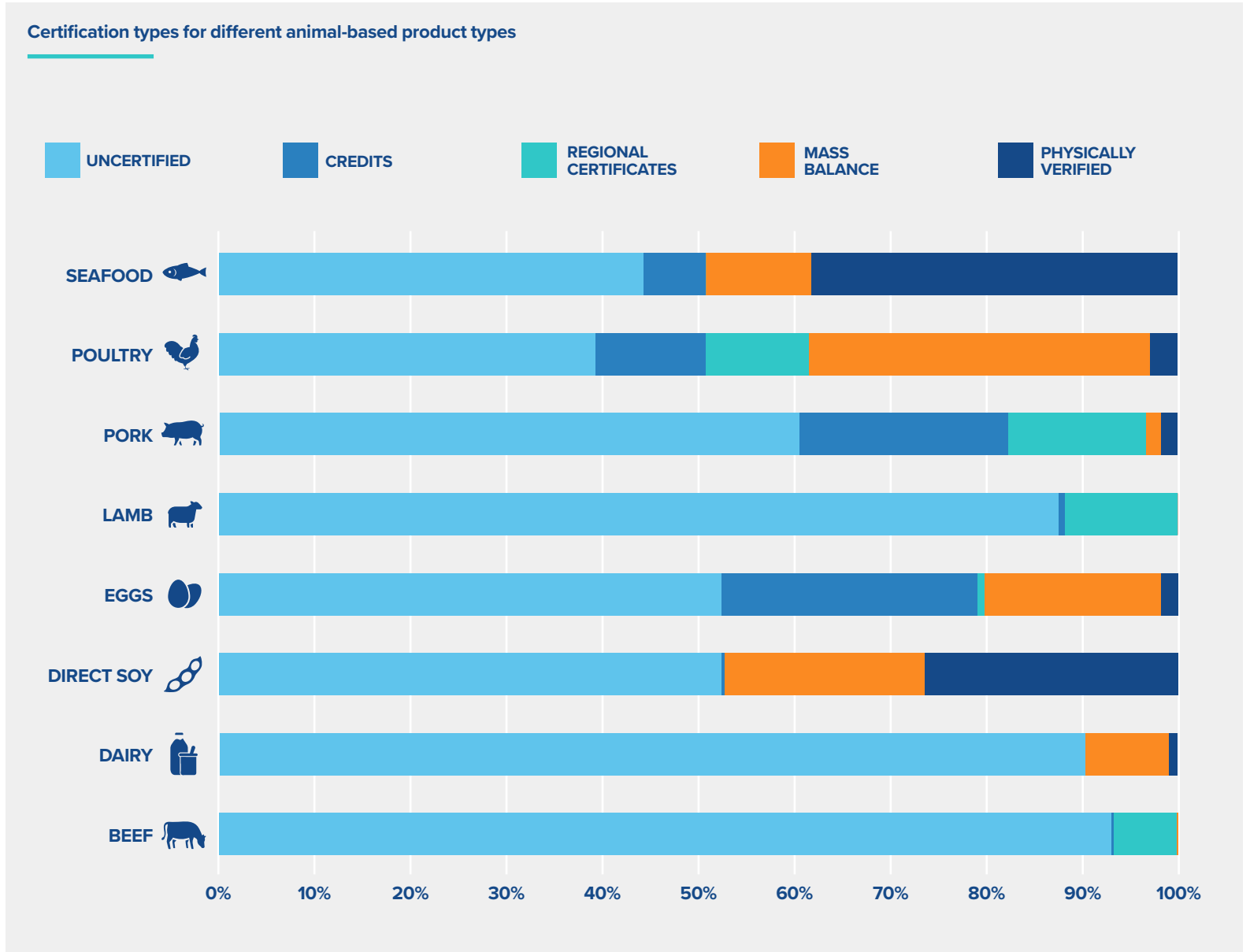


Certification types remain inconsistent between different livestock types

→ Mass balance has the highest prevalence within Poultry. This is because many poultry suppliers are vertically integrated, buying soy to mix their own feed, or with feed manufacturers as part of their overall group structure. They have a greater ability to dictate exact sourcing requirements than those in more non-integrated supply chains.

→ Credits and regional certificates continue to dominate certain supply chains' overall certification; in particular Pork (91%), Dairy (75%) and Eggs (57%).

→ For products such as Dairy and Beef, the presence of multiple, smaller supply chain actors makes documentation flows more challenging and dilutes the demand and ability to influence upstream supply chain actors.



Trader disclosure shows no signs of improvement

30% of the soy footprint can be traced back to a trader and has declined since last year on a comparable basis. This poor visibility is illustrative of a continuing lack of documentation flow through the supply chain. Suppliers frequently cite confidentiality as the major barrier to disclosure.

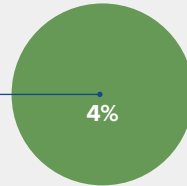
The most significant traders specifically identified include Cargill, Cefetra and ADM, together representing 58% of imports where a trader was disclosed.

The level of concentrated soy trading means that these importers, who are the first companies placing soy onto the EU market, will carry the most responsibility for ensuring market level compliance to pending legislative changes. Retailers, manufacturers and hospitality companies, operating within the EU, will need their suppliers to identify soy importers present in their supply chain and provide those importers' due diligence reference numbers in order to show they have fulfilled their obligations.

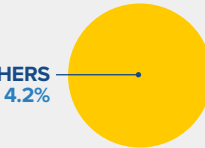
Traders declared by soy volume

CEFETRA

→ 4% of volumes were linked to Cefetra; with most of this volume (87%) claimed to be certified by their own Area Mass Balance scheme. However, the country of origin is not clear, with a combination of South American countries listed. No physically segregated volumes were reported to be present. The disclosure of these Cefetra volumes was made by a concentrated number of suppliers.



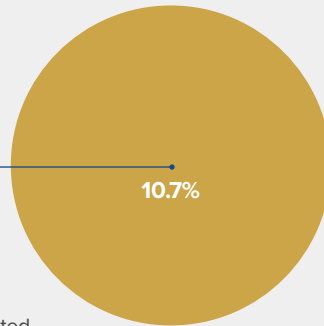
OTHERS



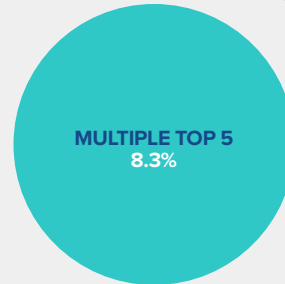
CARGILL

→ Cargill is linked to 11% of the soy footprint, with 97% of this declared as being supplied under their mass balance scheme, Cargill Triple S, which is most prominent in Poultry supply chains. No physically segregated volumes were reported to be present.

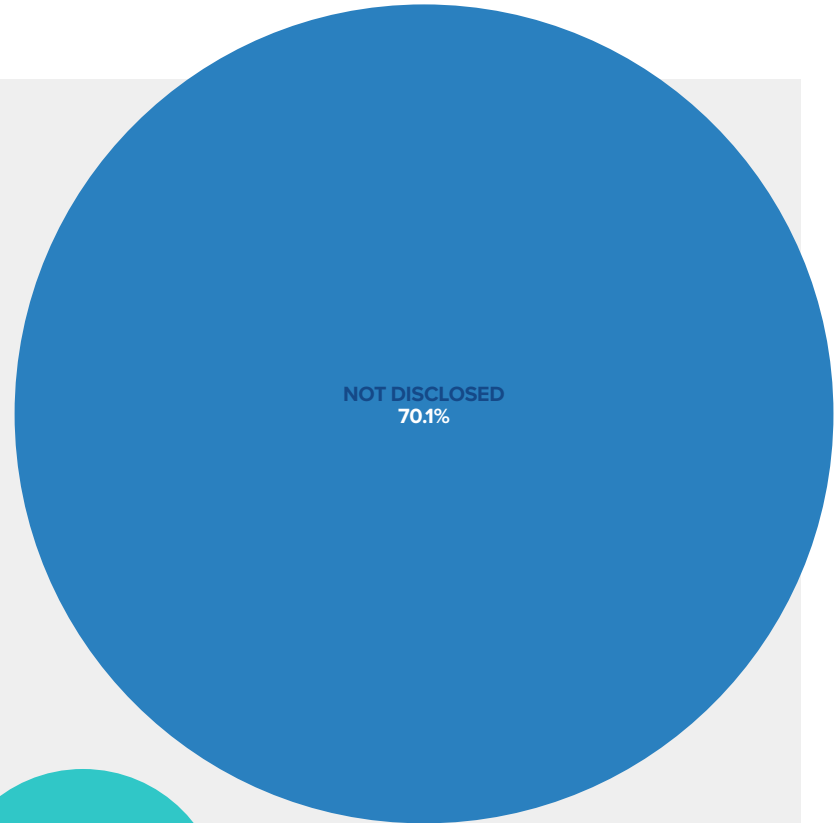
→ 70% of Cargill's volume disclosed was sourced from Brazil with the remainder classified as multi-origin South America.



MULTIPLE TOP 5



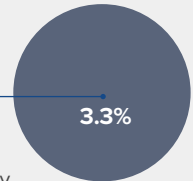
NOT DISCLOSED



ADM

→ Volumes disclosed as being imported by ADM account for 3% of declared soy volumes. The majority (99%) of volumes were declared to be certified to varying schemes; 64% of these volumes were reported to be RTRS mass balance. A very small proportion of volumes (1%) were disclosed as physically segregated, which was attributed to USA sourcing.

→ The majority of volumes (87%) were disclosed as being produced in Brazil.

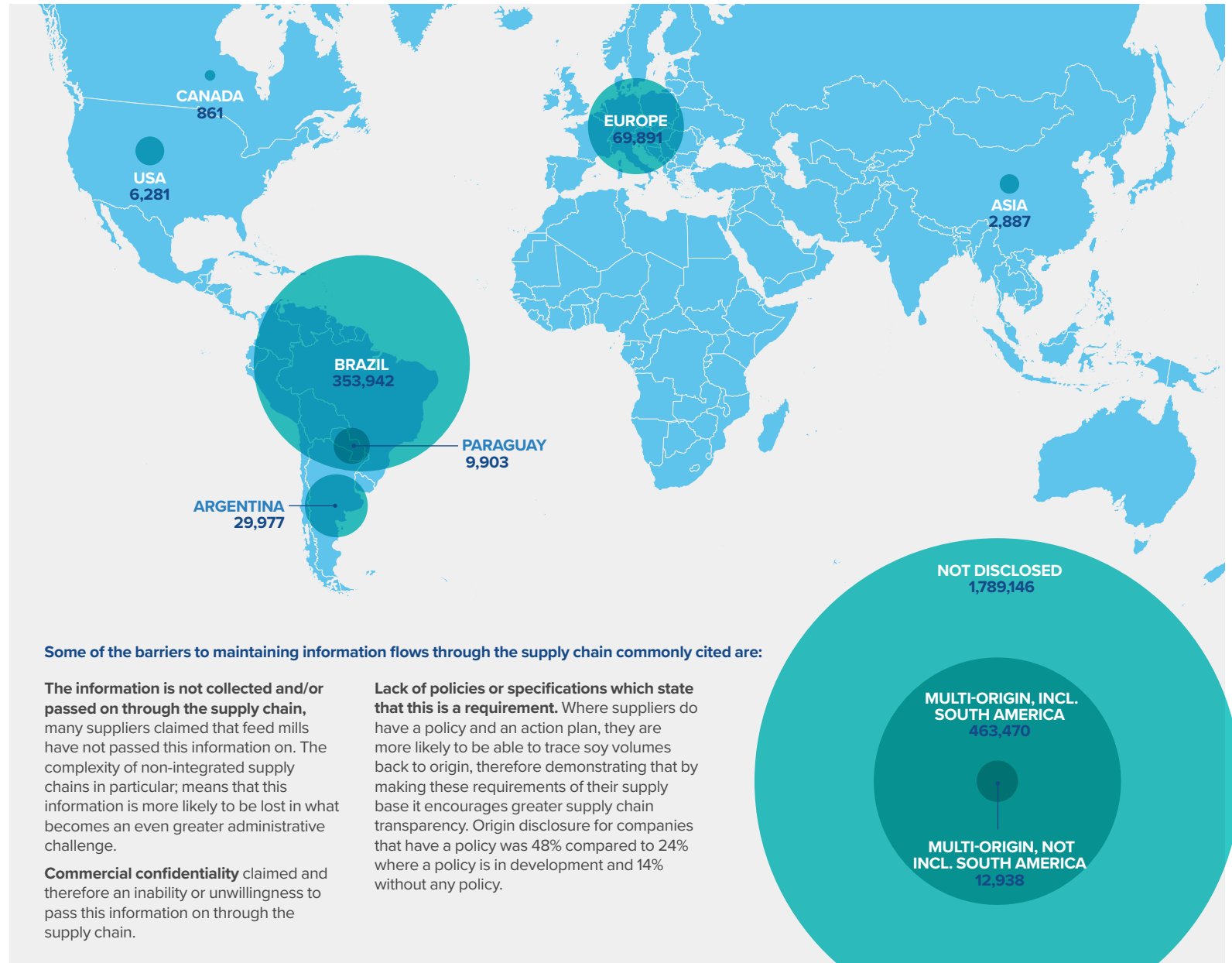


Sourcing traceability has improved but not beyond country of origin

Transparency and traceability is paramount to verify supply chains as deforestation and conversion free. The upcoming EU Deforestation Regulation requires traceability back to farm level, with this information needing to flow with goods to enable due diligence by actors along the supply chain. The information disclosed through this reporting process suggests that these information flows are currently inadequate to meet these requirements.

Country of origin disclosure reported through this data collection process was possible for 35% of all volumes disclosed. This has shown signs of improvement, as on a like for like basis this has increased from 26% in 2021 to 34% in 2022.

However, for regional level disclosure, this picture diminishes significantly, with only 5% of disclosed volumes able to be traced back to a sub-national region.



Integrated supply chains have higher disclosure and traceability



INTEGRATED SUPPLY CHAINS

Poultry / Eggs

Due to the integrated nature of poultry supply chains many producers have connections with and influence with traders, enabling better supply chain traceability and transparency.

Poultry is the livestock product with the highest origin disclosure, with 73% of all volumes able to be disclosed to a country of origin or region. However, the granularity of origin disclosure is still lacking, with half of this disclosure reported to be from multi-origin South America rather than linked to a specific country. Where the identification of a specific country was possible, Brazil dominated, accounting for 44% of disclosed country of origin, second to which was Europe, but only representing 5% of

disclosed volumes. Within Brazil, a third of volumes were claimed to have been sourced from Matopiba, the area with the greatest risk of deforestation in Brazil. Volumes disclosed as being sourced from Matopiba (This comprises the states of Maranhão, Tocantins, Piauí, and Bahia, and is the area with the greatest risk of deforestation in Brazil) accounted for the majority of all sub-national disclosure.

Eggs have the third highest livestock product origin disclosure, with 36% of volumes being attributed to a country of origin or region. Whilst multi-origin South America represented a large proportion (40%) of disclosed soy origin for egg production, Brazil (22%), Argentina (18%) and Slovenia (17%) were also significant identified countries.



NON-INTEGRATED SUPPLY CHAINS

Pork

The pork supply chain is typically not-integrated with many different owners, livestock producers, and actors involved in production system, with producers relying on compound feed mixers.

Origin disclosure for non-integrated supply chains, including pork, beef and lamb, ranged from 4% to 7%, and have not made much progress compared to last year; demonstrating that these supply chains are faced with a greater traceability and transparency challenge, and it is still unclear how they will overcome these.

Upstream engagement required to encourage transition to vDCF supply chains

Many companies have implemented robust soy policies and sourcing requirements over the last five years, with the intention that these requirements cascade through their supply chains creating a transition towards deforestation and conversion free supply chains. There are three factors that suggest engagement with actors further up the supply chain, the feed sector in particular, is required to enable better quality of information to flow through the complex soy supply chain as well as greater clarity in the demand for sustainable soy.

- 1.** There is inconsistency in first tier suppliers' approach to sourcing sustainable soy, despite having company-wide commitments.
- 2.** There has been an improvement in the quality of information we have seen from larger suppliers with regards to soy content within feed and evidence documentation.
- 3.** In conducting reviews of origin and certification evidence it was clear that the feed sector has made headway with better quality of information being captured, however this is being lost where there is not a close relationship with feed manufacturers, i.e. in more non-integrated supply chains.



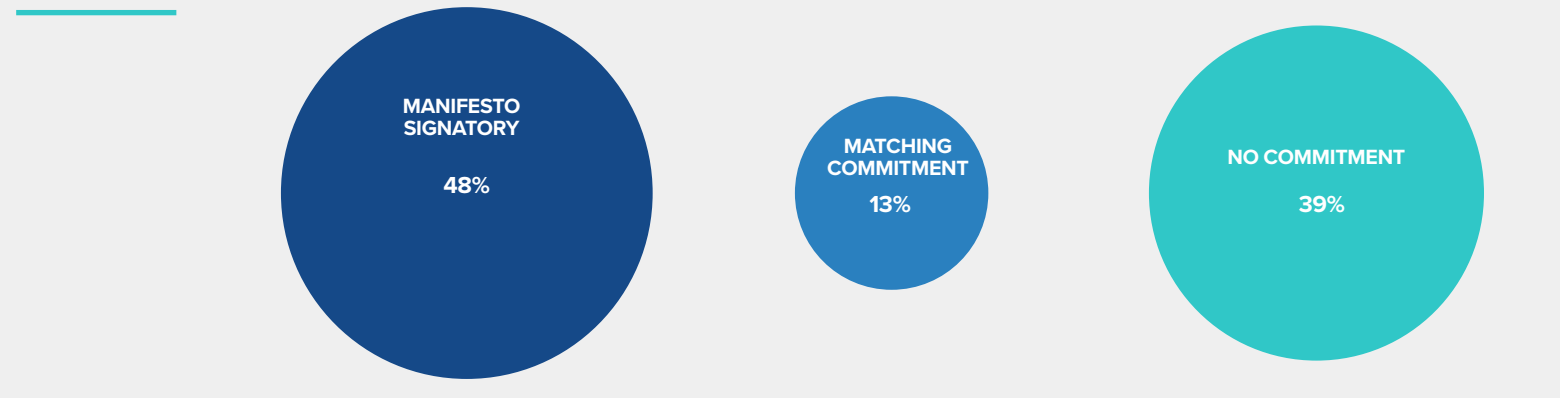
There is still a long way to go to realise company commitments to becoming vDCF by 2025

The majority (61%) of suppliers reporting through this collective process have made a public commitment, either as a UK Soy Manifesto signatory or through their own commitment, to have a deforestation and conversion free supply chain by 2025, thereby creating public accountability for implementation and delivery.

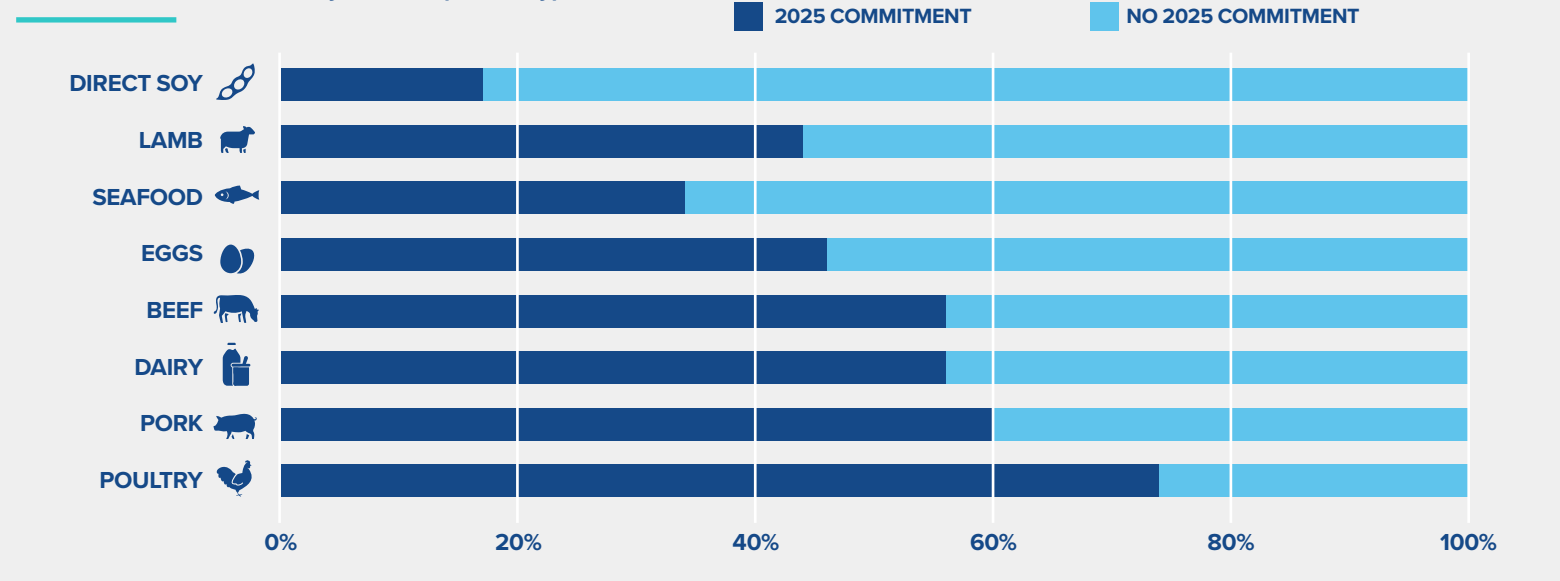
Poultry suppliers are leading with their commitments, with 71% of Poultry's soy footprint committed to be vDCF by 2025. Encouragingly, other prominent livestock products, pork, beef and dairy; all have greater than 50% of soy footprint supplied by suppliers with a 2025 commitment despite their current level of vDCF volumes being much less than Poultry.

A large proportion of overall soy volumes disclosed (39%) do not have any form of commitments to become vDCF by 2025, therefore posing a risk for retailers, hospitality and manufacturers and pressure on their ability to deliver their own commitments. However, 42% of these suppliers do have a zero deforestation and conversion soy policy in place already or are developing one suggesting there is some progress being made to address deforestation risk within these supply chains, albeit potentially on a different timeframe.

Proportion of suppliers that have commitments to achieve vDCF by 2025



Prevalence of commitments by livestock product type



Supply chain not ready for pending legislative changes

At the time the data was collected in January 2022, there was high awareness of pending legislative changes at the time of companies completing their report; with 81% of soy volumes supplied by companies that were aware of the upcoming EU, UK or both regulatory changes. Full details on what suppliers need to do to comply with the EUDR was yet to be published when companies completed their report, 56% of suppliers had not yet completed an assessment on their exposure.

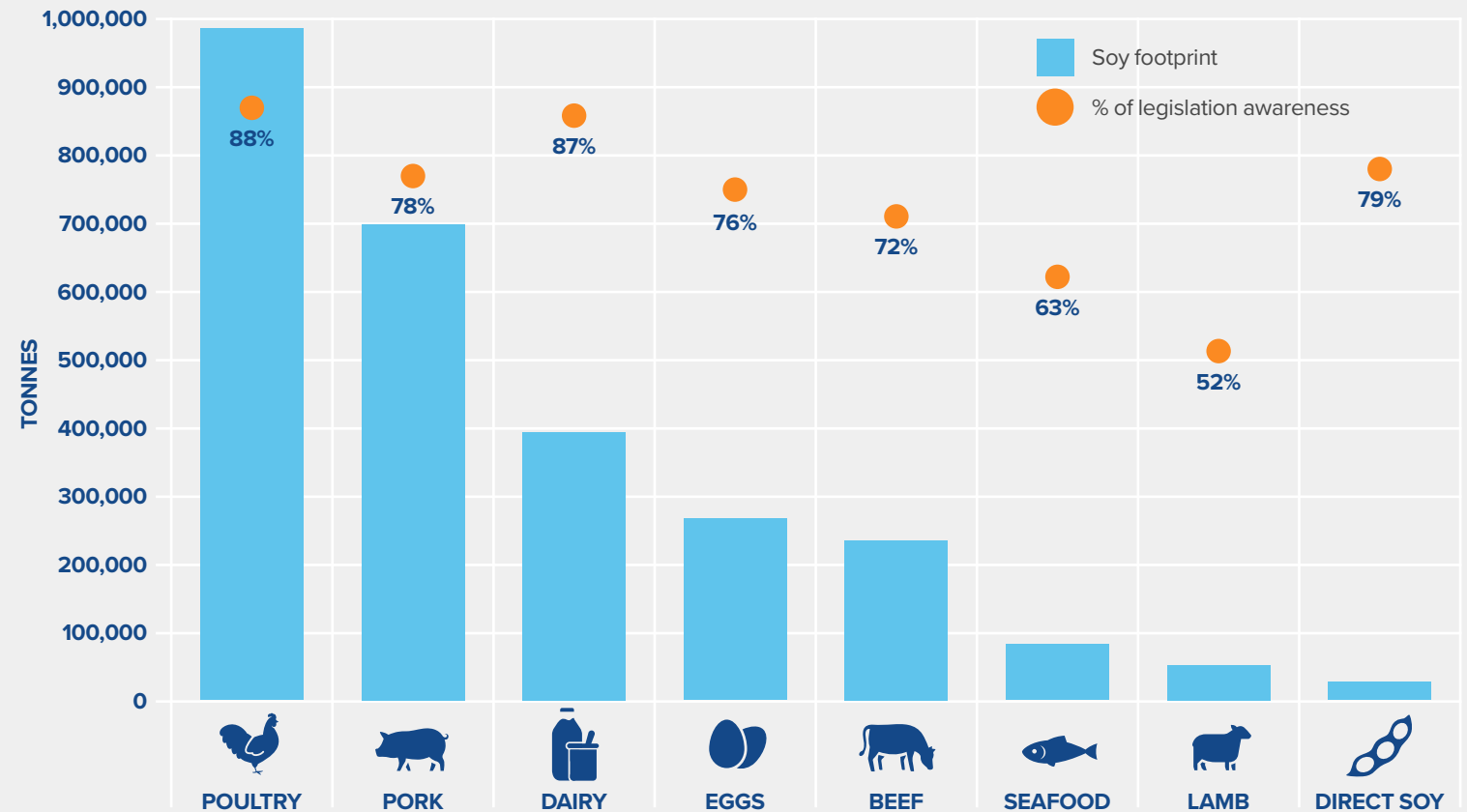
Poultry and Dairy suppliers have the highest level of awareness, with pork disproportionately lower. Engagement with pork suppliers should be a priority for retailers, manufacturers and hospitality companies as a large proportion of pork supply chains operate within Europe.

Reporting Companies' awareness of the upcoming legislative changes

AWARE OF EU AND/OR UK LEGISLATION
81%

NO
19%

Comparing proportion of soy footprint to level of EUDR awareness



Other areas of progress

A broadening of focus beyond deforestation and land conversion

There has been an extension in focus, particularly from CSO's on wider issues within soy supply chains, including human rights violations and environmental factors such as pesticide misuse. There have been an increasing number of CSO campaigns focused on such issues, for example '[Stop Poison Poultry](#)' 2022 report published by Soil Association and a report by Global Witness '[Toxic Takeaways](#)' linking human rights violations to soy production feeding into the supply chains of named European meat processors and retailers.

This year, suppliers were asked whether their policies referenced these wider supply chain factors. Almost half of the soy footprint is covered by supplier policies that include additional environmental considerations, such as water use and carbon emissions from agricultural operations. A higher proportion, 59% also address social issues such as indigenous and human rights. This demonstrates that this broadening of focus is starting to cascade through supply chains.

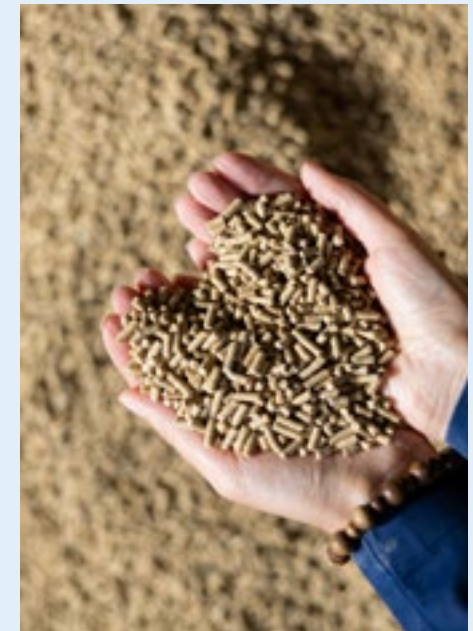


Soy content in feed reduction continues to be a focus for companies

10% of companies (representing 39% of the disclosed soy footprint) said that they have actively reduced the soy content in feed. Suppliers from all livestock product types are exploring soy reduction in feed, however a greater number of egg, poultry and dairy suppliers are investigating this. When asked what the % inclusion target rate was, the responses were limited illustrating that supplier aims aren't always backed up with measurable targets.

Within Dairy, some suppliers have set targets to reduce soy content in feed, with some already removed completely and others aiming to remove in the next few years.

In October 2022, [Arla](#) publicly disclosed that they are offering farmers financial sustainability incentives to help them achieve their 2030 emission reduction target, with a points based system in place that includes multiple environmental aspects including reduction of soy content in feed or sourcing deforestation free soy.



The same challenges were cited this year as last year in incorporating these alternatives. These include the commercial and technical viability, the availability of alternatives and the legality of use. It is also important to consider the environmental impacts of these alternatives in order to prevent unintended consequences.

Recommendations

For key stakeholders in the downstream soy value chain

Supplier Recommendations

Ensure vDCF 2025 commitments are supported by publicly available, aligned policies

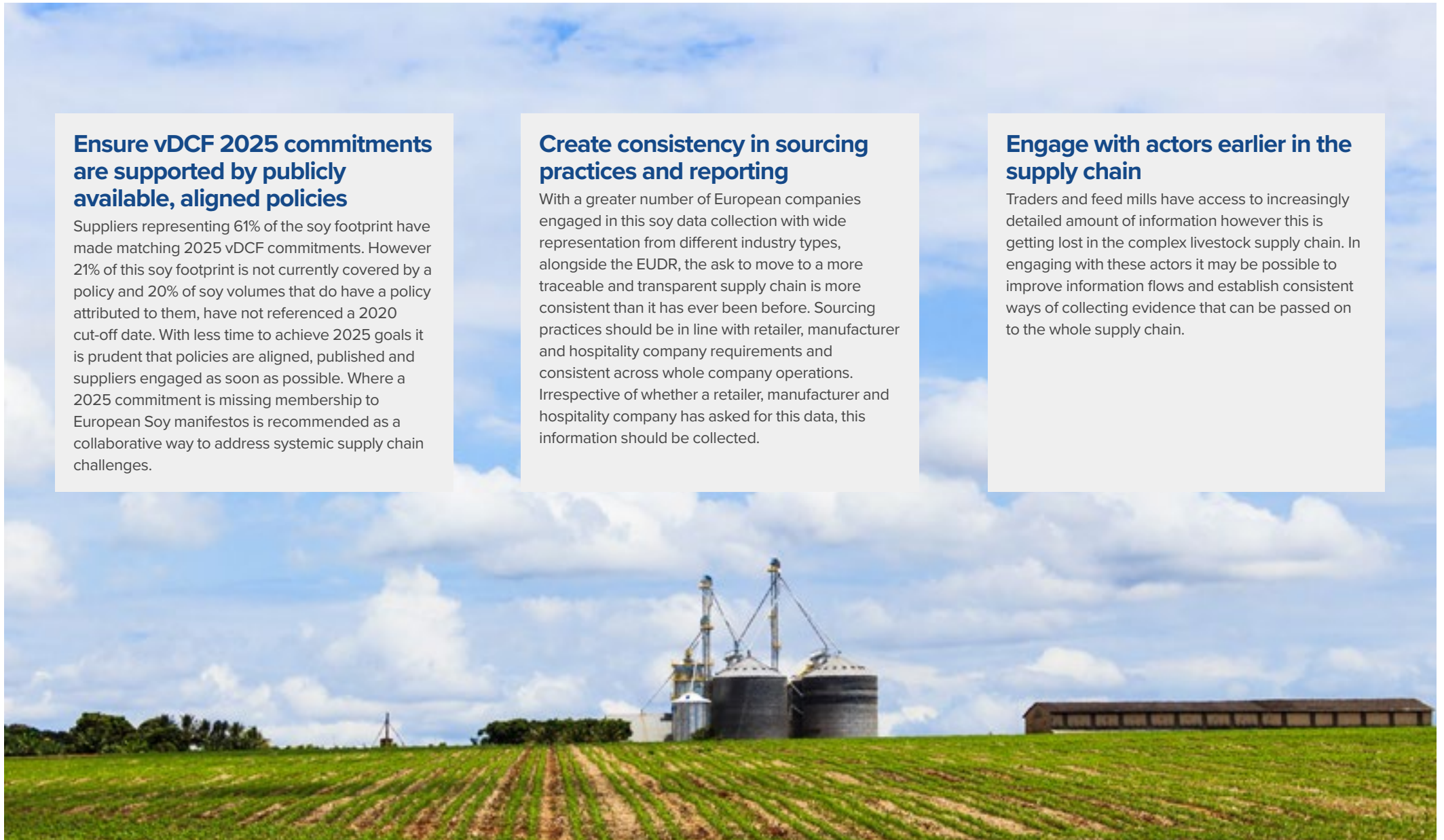
Suppliers representing 61% of the soy footprint have made matching 2025 vDCF commitments. However 21% of this soy footprint is not currently covered by a policy and 20% of soy volumes that do have a policy attributed to them, have not referenced a 2020 cut-off date. With less time to achieve 2025 goals it is prudent that policies are aligned, published and suppliers engaged as soon as possible. Where a 2025 commitment is missing membership to European Soy manifestos is recommended as a collaborative way to address systemic supply chain challenges.

Create consistency in sourcing practices and reporting

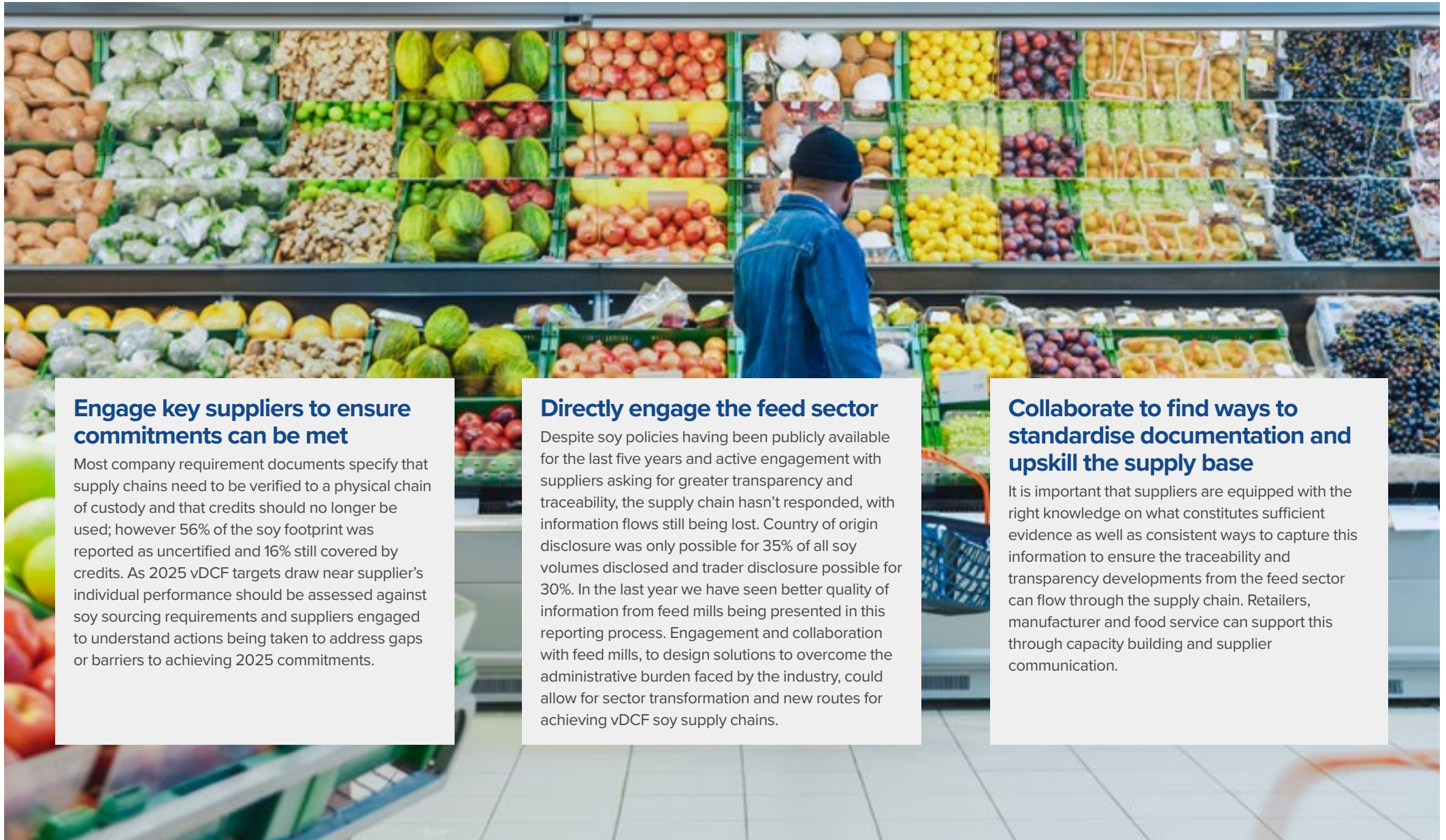
With a greater number of European companies engaged in this soy data collection with wide representation from different industry types, alongside the EUDR, the ask to move to a more traceable and transparent supply chain is more consistent than it has ever been before. Sourcing practices should be in line with retailer, manufacturer and hospitality company requirements and consistent across whole company operations. Irrespective of whether a retailer, manufacturer and hospitality company has asked for this data, this information should be collected.

Engage with actors earlier in the supply chain

Traders and feed mills have access to increasingly detailed amount of information however this is getting lost in the complex livestock supply chain. In engaging with these actors it may be possible to improve information flows and establish consistent ways of collecting evidence that can be passed on to the whole supply chain.



Retailers, Manufacturers and Food Service Recommendations



Engage key suppliers to ensure commitments can be met

Most company requirement documents specify that supply chains need to be verified to a physical chain of custody and that credits should no longer be used; however 56% of the soy footprint was reported as uncertified and 16% still covered by credits. As 2025 vDCF targets draw near supplier's individual performance should be assessed against soy sourcing requirements and suppliers engaged to understand actions being taken to address gaps or barriers to achieving 2025 commitments.

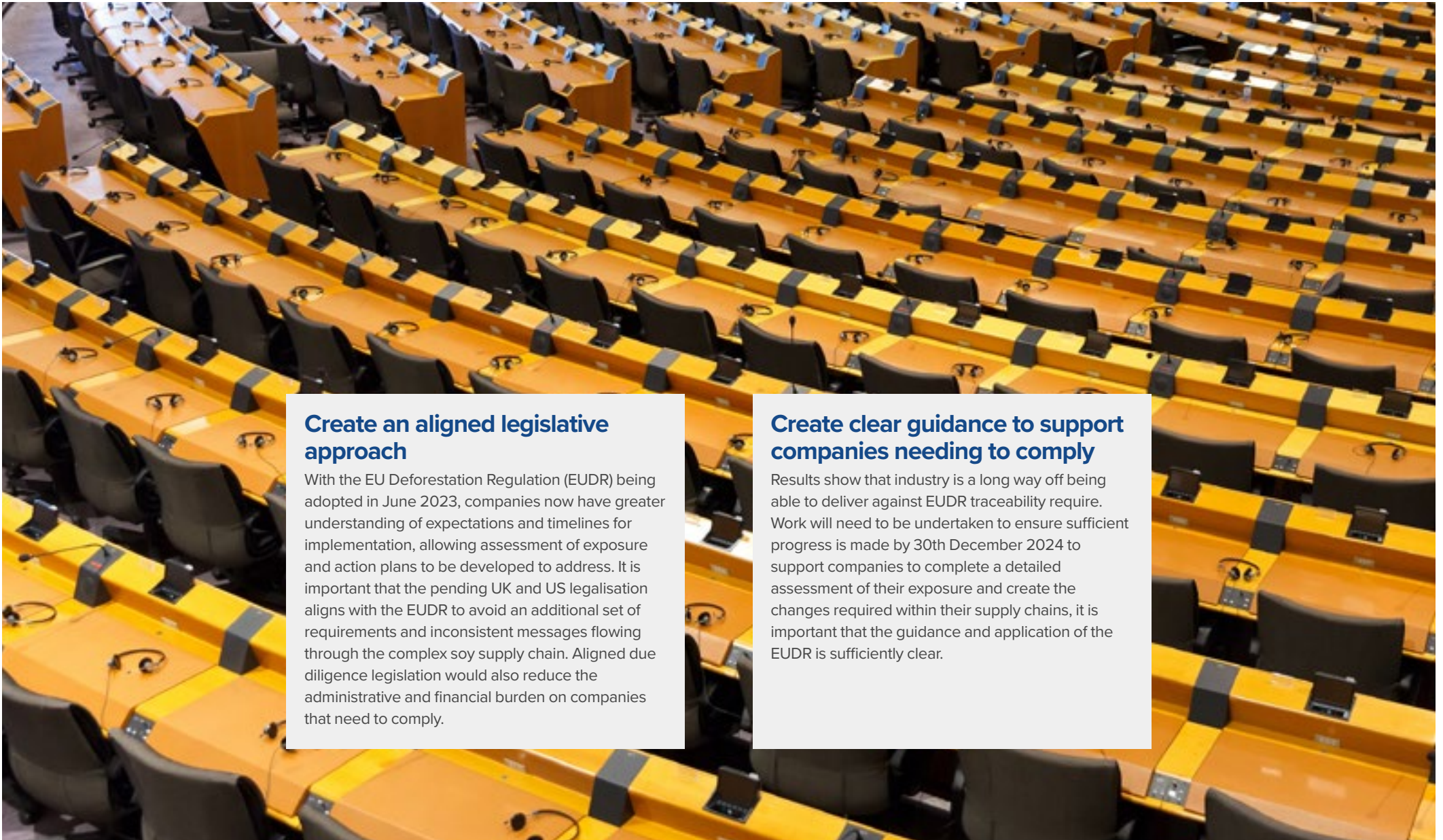
Directly engage the feed sector

Despite soy policies having been publicly available for the last five years and active engagement with suppliers asking for greater transparency and traceability, the supply chain hasn't responded, with information flows still being lost. Country of origin disclosure was only possible for 35% of all soy volumes disclosed and trader disclosure possible for 30%. In the last year we have seen better quality of information from feed mills being presented in this reporting process. Engagement and collaboration with feed mills, to design solutions to overcome the administrative burden faced by the industry, could allow for sector transformation and new routes for achieving vDCF soy supply chains.

Collaborate to find ways to standardise documentation and upskill the supply base

It is important that suppliers are equipped with the right knowledge on what constitutes sufficient evidence as well as consistent ways to capture this information to ensure the traceability and transparency developments from the feed sector can flow through the supply chain. Retailers, manufacturer and food service can support this through capacity building and supplier communication.

Government Recommendations



Create an aligned legislative approach

With the EU Deforestation Regulation (EUDR) being adopted in June 2023, companies now have greater understanding of expectations and timelines for implementation, allowing assessment of exposure and action plans to be developed to address. It is important that the pending UK and US legalisation aligns with the EUDR to avoid an additional set of requirements and inconsistent messages flowing through the complex soy supply chain. Aligned due diligence legislation would also reduce the administrative and financial burden on companies that need to comply.

Create clear guidance to support companies needing to comply

Results show that industry is a long way off being able to deliver against EUDR traceability require. Work will need to be undertaken to ensure sufficient progress is made by 30th December 2024 to support companies to complete a detailed assessment of their exposure and create the changes required within their supply chains, it is important that the guidance and application of the EUDR is sufficiently clear.

References

Global Witness 2022 - Toxic Takeaways

Our World in Data 2021 - Is our appetite for soy driving deforestation in the Amazon

Profundo 2022 - Mapping the European Soy Supply Chain

Profundo 2023 - Setting a New Bar for Deforestation and Conversion-free Soy in Europe

Proterra 2022 – Delivering deforestation and conversion free soy: Monitoring, reporting, and verifying supply chains

Soil Association 2022 – Stop Poison Poultry

Science Based Target Initiative 2023 - Forest, Land and Agriculture ScienceBased Target Setting Guidance.

UK Soy Manifesto 2022 - The UK Soy Manifesto & AIC Soy Supply Group aligned definition of verified deforestation and conversion free soy

Appendix

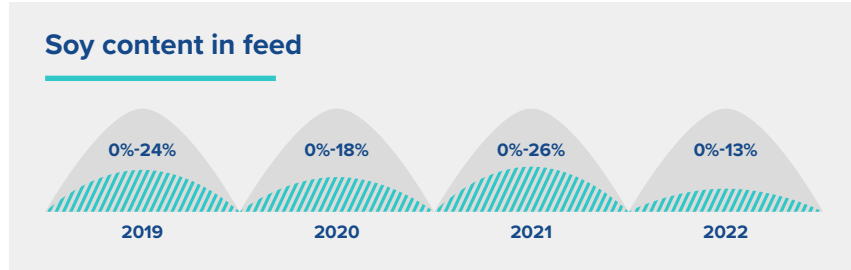
Livestock summaries

Beef & Lamb

Most of the European cattle industry is a mixture of pasture and grain fed cows in a largely independent producer sector. Farmers are often rearing a mixed herd composing dairy and bull varieties that have variable diets. Some farmers do not use any soy within their feed ration, whilst others have been surveyed to use up to 13% soymeal in their feed mix.

Lamb can be seasonally produced in Europe or New Zealand, and similar to beef, there is significant variation among farmers on the amount of soy in feed. Often, soy is used in feed for only part of the animal's diet, in a 'finishing diet'. New Zealand lamb, however, is produced almost exclusively within a grazing system.

The figures provided in this report have assumed that lamb from New Zealand does not have a soymeal footprint due to the known production methods used in the industry and the absence of information.



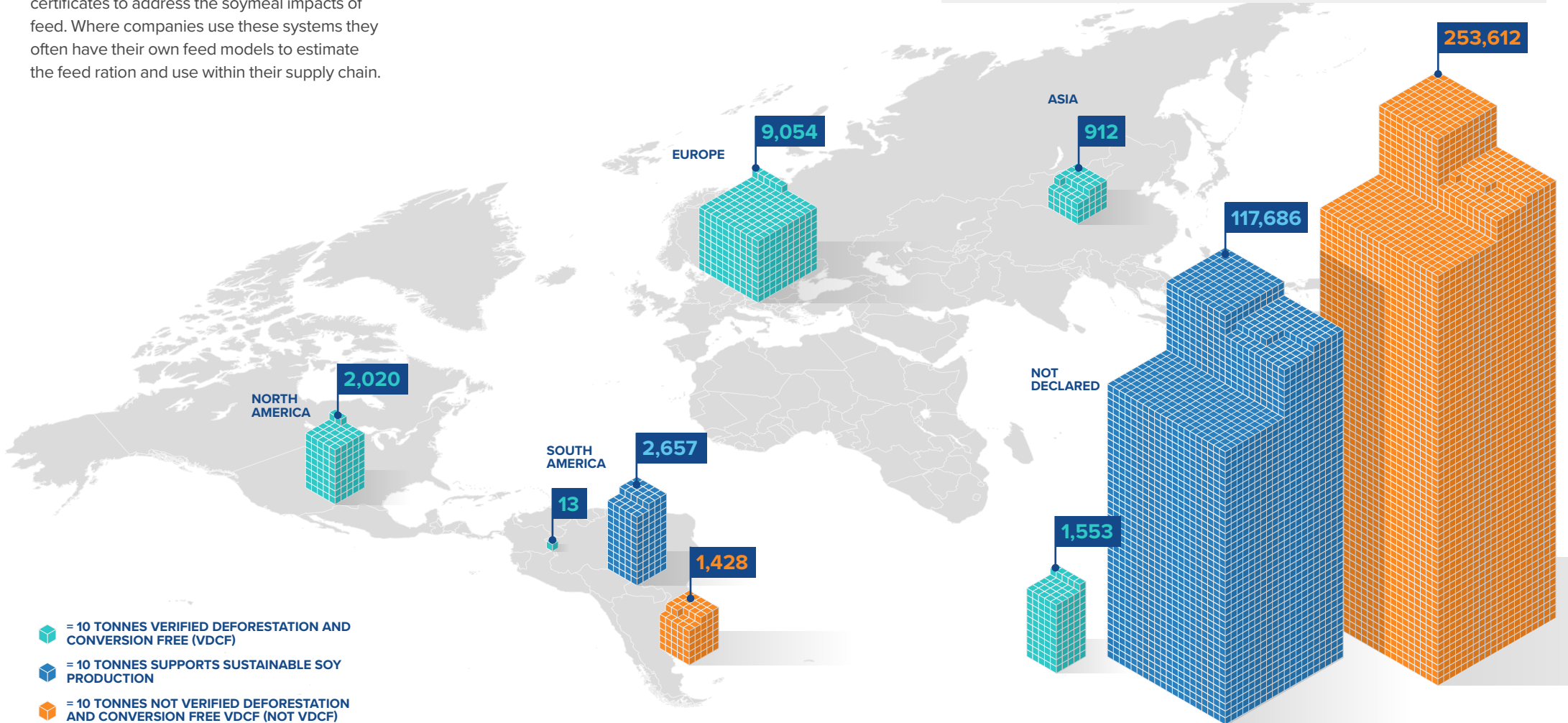
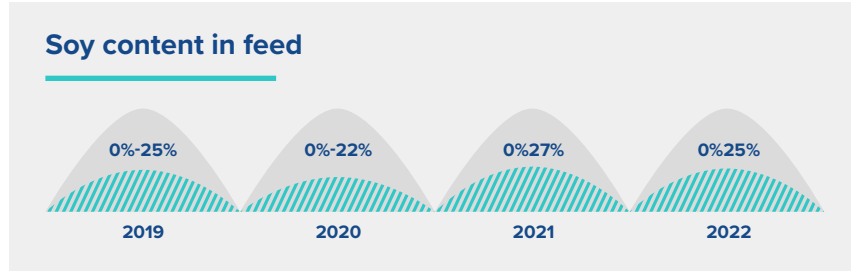
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-  = 10 TONNES SUPPORTS SUSTAINABLE SOY PRODUCTION
-  = 10 TONNES NOT VERIFIED DEFORESTATION AND CONVERSION FREE VDCF (NOT VDCF)

Dairy

A few major dairy producers contract directly with farmers throughout Europe for the majority of fresh milk and dairy supply. Non-European dairy is a small part of the overall supply into European retail and food service markets. The processing sector is consolidated with just a few major producers, some of which have company policies to purchase soymeal credits and/or certificates to address the soymeal impacts of feed. Where companies use these systems they often have their own feed models to estimate the feed ration and use within their supply chain.

Some supply chains have removed soymeal from their dairy production.

Several country-level soy initiatives and sourcing agreements exist at the country-level, such as the Swedish Soy Dialogue, the Switzerland Soy Network and The Sustainable Dairy Chain's 100% responsible soy commitment for dairy companies in the Netherlands.

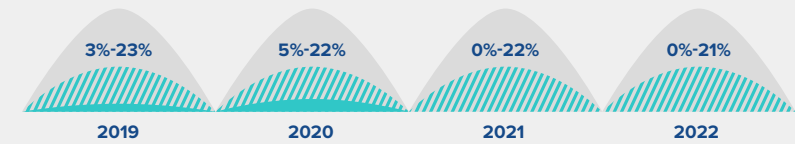


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Eggs

Egg producers have good access to the soymeal content information associated with their feed. As a direct cost for centralised production systems, these inputs are monitored well.

Soy content in feed

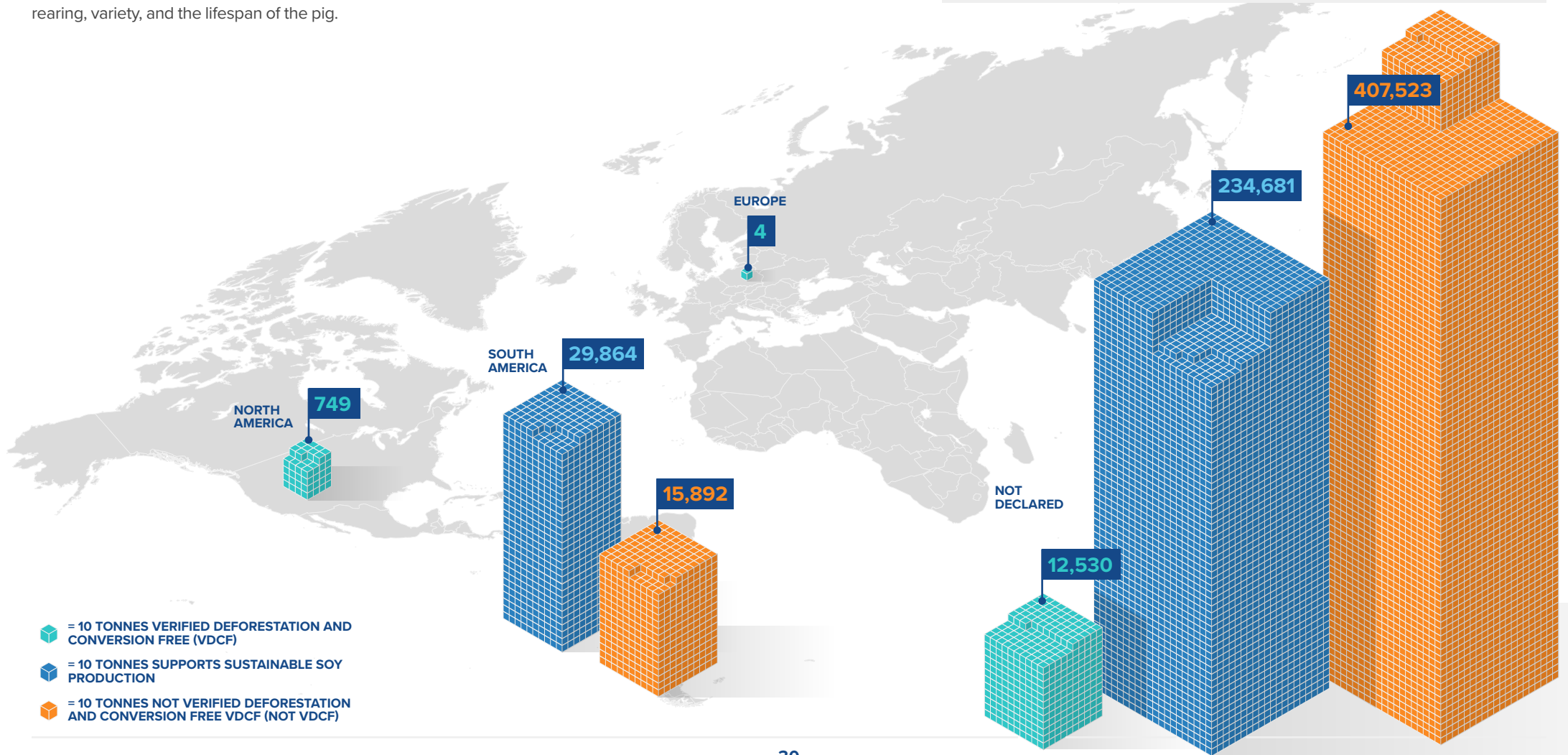
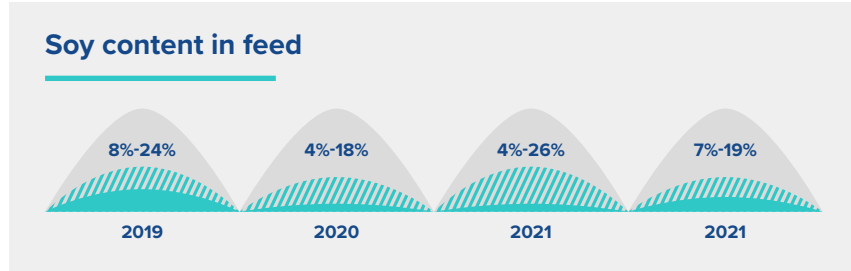


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Pork

Rearing pigs is the second biggest contributor to the European retail and food service soy meal footprint. The pork industry is composed largely of independent producers that control their own feed supply.

Depending on the supplier, a wide variations in soy rations within diets exist, even within the same company, due to indoor and outdoor rearing, variety, and the lifespan of the pig.

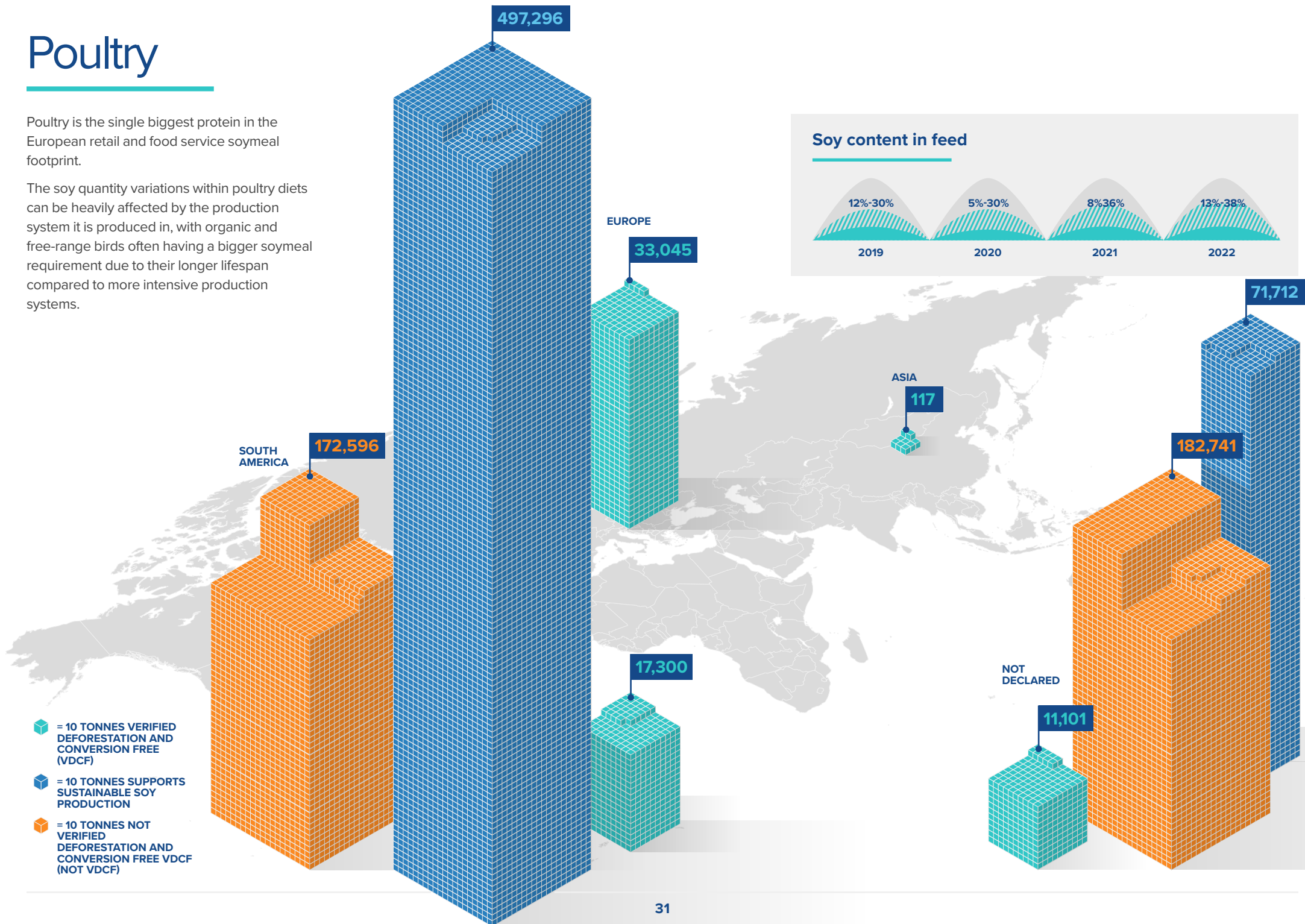
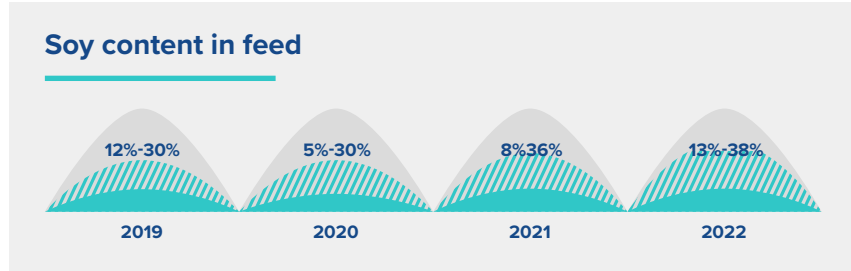


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Poultry

Poultry is the single biggest protein in the European retail and food service soymeal footprint.

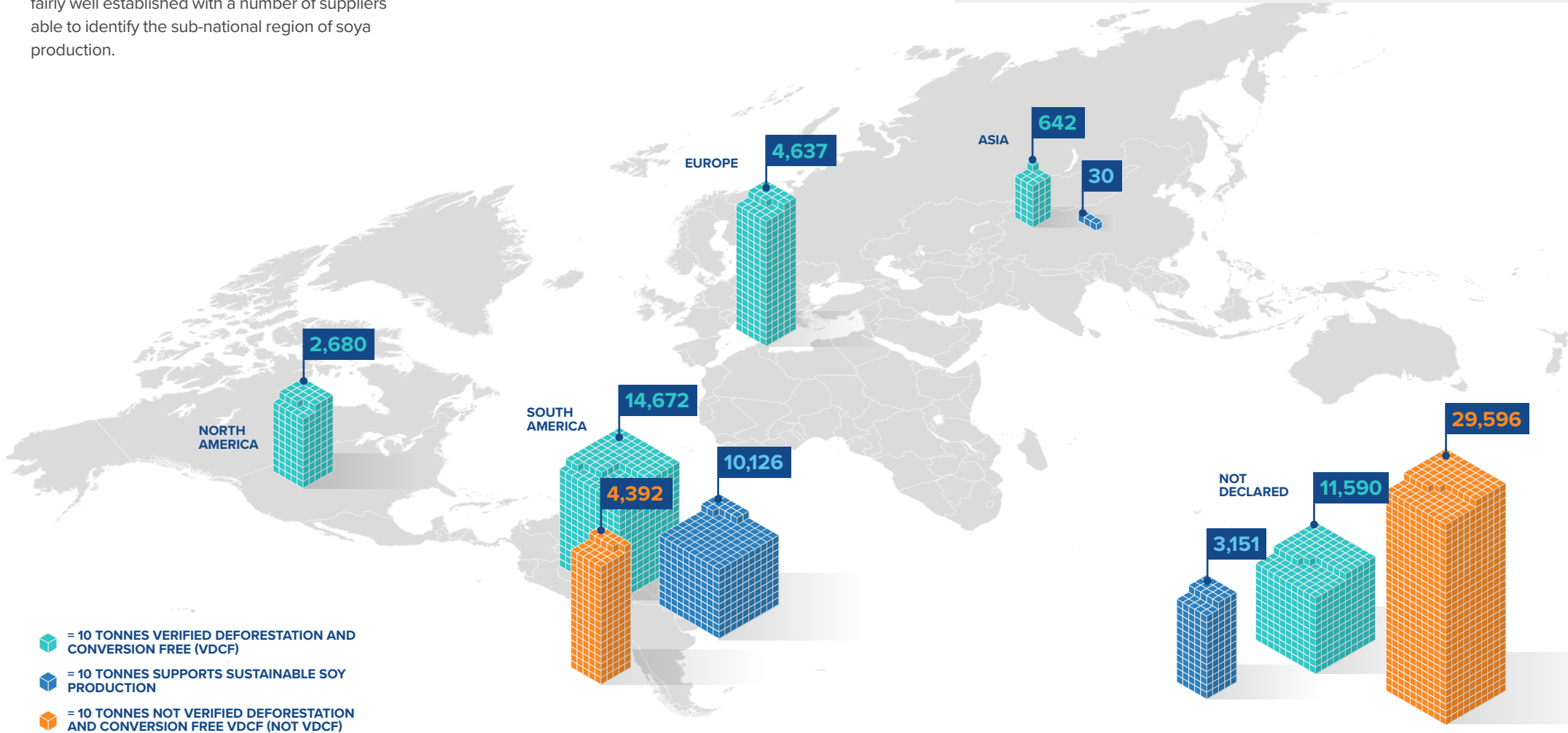
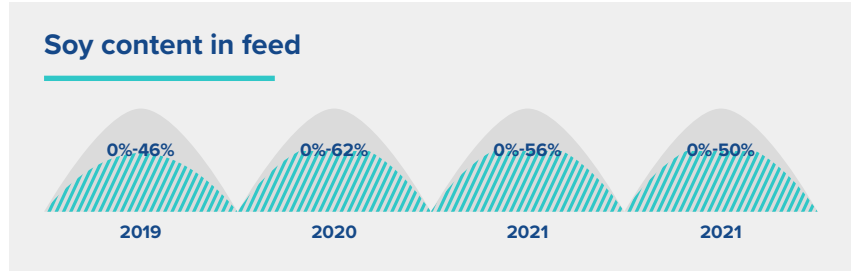
The soy quantity variations within poultry diets can be heavily affected by the production system it is produced in, with organic and free-range birds often having a bigger soymeal requirement due to their longer lifespan compared to more intensive production systems.



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Seafood

The European salmon production industry is highly consolidated with just a few key feed suppliers. These feed manufacturers are largely committed to providing certified soymeal within their feed mixes, thus contributing to the relatively high proportion of feed that is certified compared to other livestock groups. Information related to the transparency of this system is also fairly well established with a number of suppliers able to identify the sub-national region of soya production.



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