



Sustainability and U.S. Soy Impact and business drivers

Rosalind Leeck
Regional Director – Northeast Asia
U.S. Soybean Export Council



What is Sustainability?

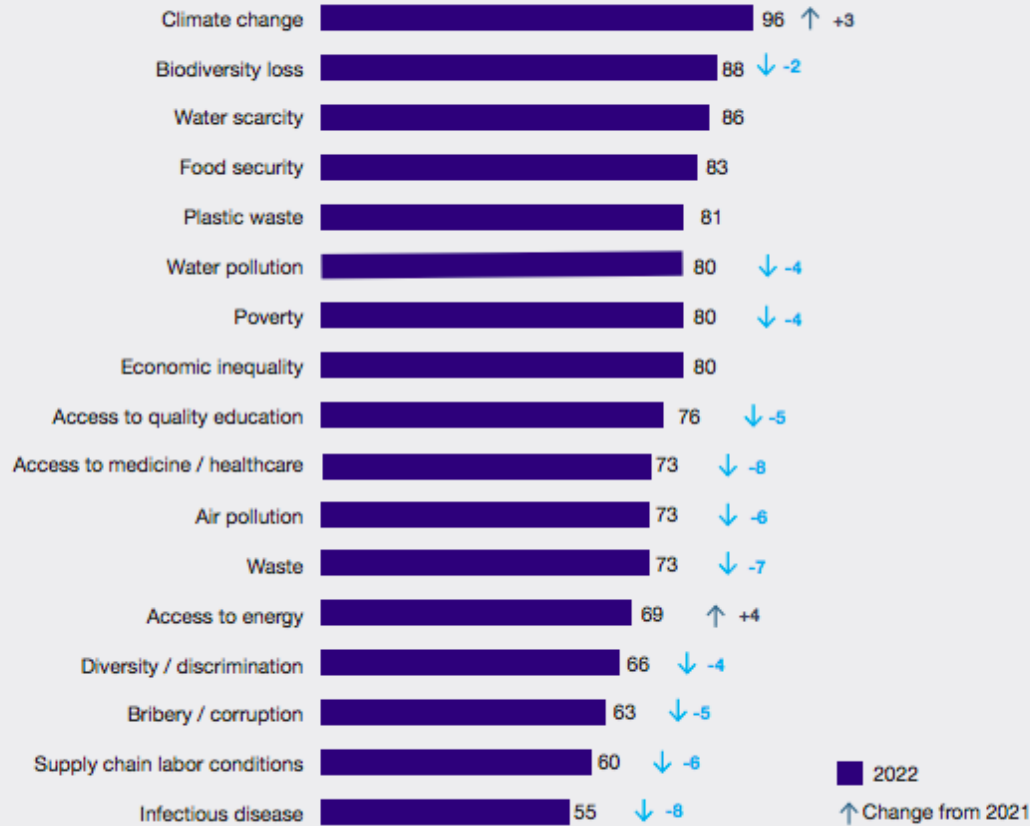


Sustainability Perspectives in the Food and Agriculture Value Chain



Corporate Sustainability Leaders Perspective

% of Experts, "Urgent" (4+5), 2021-2022



#1
Climate change

#2
Biodiversity loss

#3
Water scarcity



Question: Please rate the URGENCY of each of the following sustainability challenges?

Food and Ag Sustainability Trends

FARMING

- Methane momentum building
- Carbon farming foundations
- Steps to scale sustainability

MANUFACTURING AND PROCESSING

- Scope 3 collaboration
- Deforestation fight
- Plant-based foods

BRANDS AND RETAILERS

- Sustainable pricing wars
- Sustainable labelling battlegrounds



Materiality Assessment & SDGs

Updating the U.S. Soy Sustainability Materiality Assessment

Materiality assessment outcomes are an asset for sustainability reporting, marketing communications, and long-range strategic planning – but must be refreshed periodically to ensure relevance.

BACKGROUND:

- In 2019, USSEC conducted a Sustainability Materiality Assessment for U.S. Soy.
- Materiality determines the importance and impact of an issue to an organization to identify business risk and opportunity. Materiality informs sustainability strategy, target-setting and reporting. Materiality assessments are generally conducted as a baseline, then refreshed every 2-5 years.

OBJECTIVES

of the U.S. Soy Sustainability Materiality Update:

- Update stakeholder prioritizations of sustainability aspects material to U.S. Soy, with a *forward-looking lens*
- Identify stakeholder prioritizations of sustainability aspects for U.S. Soy to take **action** for **impact**
- Actively **engage** internal and external **stakeholders**
- Utilize output to inform sustainability goal setting and regional opportunities

What has changed since 2019?

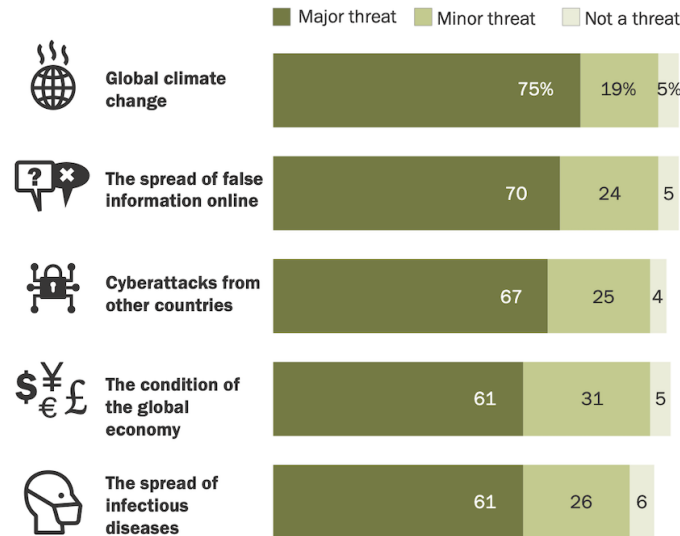


Strategic Framework 2022-31



Three-in-four across 19 countries view global climate change as a major threat to their country

% who say ___ is a major threat, minor threat or not a threat to their country



Note: Percentages are medians based on 19 countries.
 Source: Spring 2022 Global Attitudes Survey, Q10a-e.
 "Climate Change Remains Top Global Threat Across 19-Country Survey"

PEW RESEARCH CENTER

REPORT | MAY 26, 2021



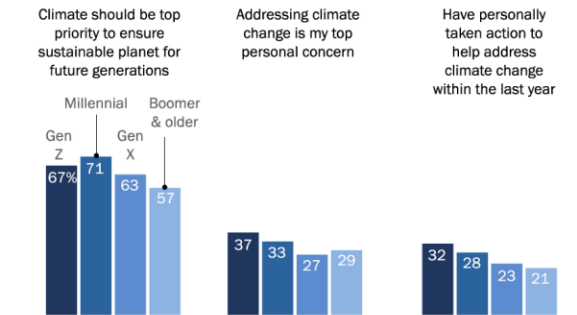
Gen Z, Millennials Stand Out for Climate Change Activism, Social Media Engagement With Issue

Majorities of Americans support array of measures to address climate change but stop short of full break with fossil fuels

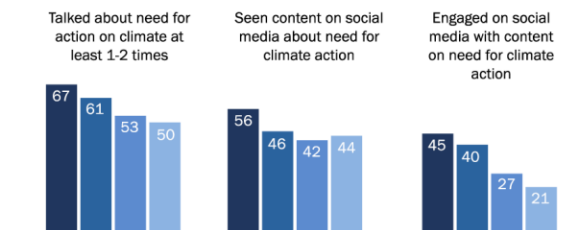
BY ALEC TYSON, BRIAN KENNEDY AND CARY FUNK

Gen Z, Millennials more active than older generations addressing climate change on- and offline

% of U.S. adults who say ...



In the past few weeks ...



Note: Respondents who gave other responses or did not give an answer are not shown. Seen content on social media and engaged with climate content based on social media users.
 Source: Survey conducted April 20-29, 2021.
 Gen Z, Millennials Stand Out for Climate Change Activism, Social Media Engagement With Issue

PEW RESEARCH CENTER

Downstream customers are more deeply involving supply chains to deliver on bigger commitments (recent example)

SUSTAINABILITY

Mars Spending \$1 Billion on Path to Net Zero GHG Emissions

The company is aiming to cut its carbon emissions by roughly 15 million metric tons by 2030 and reach net zero greenhouse gas emissions by 2050.

By — Morgan Smith

Sep 19, 2023

Mars has published its Net Zero Roadmap, which details steps the company will take in its efforts to cut its carbon emissions in half by 2030 from a 2015 baseline and achieve net zero greenhouse gas (GHG) emissions across its full value chain by 2050. To help meet its goals, the company will invest \$1 billion over the next three years.

The roadmap was created in response to an Ipsos survey that found on average 69% of adults across the world's seven largest economies think businesses' focus on tackling climate change should be equal to or greater than tackling economic challenges, as well as the recent release of the UN-backed Intergovernmental Panel on Climate Change's findings that it is "now or never" to take action on climate change to avoid a global disaster.

To achieve Net Zero, Mars will:

- **Transition to 100% renewable energy** by changing how it powers its factories, offices, and veterinary hospitals, and addressing energy used by farmers, how it sources ingredients, and the energy used by retailers
- **Redesign its supply chains to stop deforestation** by enhancing the transparency and traceability of key ingredients
- **Scale up initiatives in climate-smart agriculture** by working with farmers on regenerative agriculture, optimizing sourcing, and switching to renewables
- **Optimize recipes** by developing lower GHG-footprint ingredients for snacks and human-food dishes, as well as alternative proteins for pet food
- **Optimize logistics** by redesigning networks, the type of transport Mars relies on, and the energy sources used
- **Focus on climate action in its business** by including it as a shareholder objective and in variable remuneration plans of senior executives, investment planning processes, its merger and acquisition strategy, and more

Poul Weihrauch, Mars CEO "Companies must be judged - Mars included - on the actual results we deliver against our climate plans, not just the scale of the commitment we make - just as we are judged by our boards and investors on the delivery of financial results, not the quality of our financial forecasts."

Source: ProFoodWorld



Material Aspects for U.S. Soy Sustainability – 2019 Baseline Assessment

Environmental	Social	Economic
Greenhouse Gas Emissions (lbs. CO ₂ e)	Labor Practices and Safe Working Conditions (i.e., Occupational Health & Safety, Training & Development)	Market Presence (i.e., market access, share of national and global markets and market outlook)
Energy Management (i.e., direct and embedded energy to produce crop and crop inputs)	Human Rights (i.e., Non-discriminatory, Child Labor, Forced Labor)	Economic Performance (i.e., direct economic value generated)
Water Management (use, types, quality)	Society (i.e., Anti-corruption and Anti-competitive behavior)	Indirect Economic Performance (i.e., enhancing skills and knowledge in a geographical region, economic impact of improving social or environmental conditions)
Soil Health/Carbon Sequestration (conservation of soil, adding more C than use, sequester CO ₂ from atmosphere)	Product Safety, Quality and Nutrition (i.e., Safety, Compliance, Health Benefits)	2019 Interview Asked: <ol style="list-style-type: none"> Rate aspects in IMPORTANCE, as either Low, Medium, or High importance as you think about U.S. SOY. Rate U.S. Soy's Ability to IMPACT these environmental aspects (Low, Medium, High). Three MOST and two LEAST important aspects? Both TODAY and for 5-10 YEARS from now. For update: <ol style="list-style-type: none"> Anything missing?
Land Use (not expanding crop production into marginal lands)	Investment in Global Agricultural Development (i.e., programs like WISHH – the World Initiative for Soy and Human Health)	
Biodiversity (i.e., wildlife habitat, pollinators and integrated pest management, cultivated and non-cultivated areas)		
Deforestation (achieving zero net deforestation OR positive forestation)		

ALL 15 factors: GHGe is the top priority; consistent with 2019 predictions

“Thinking about ALL 15 sustainability factors together, what are the TOP areas for U.S. Soy to make an impact?”

Item	Overall Rank	Rank Distribution	Score
GREENHOUSE GAS EMISSIONS (lbs. CO ² e)	1		219
PRODUCT SAFETY, QUALITY AND NUTRITION (i.e., Safety, Compliance, Health Benefits)	2		159
SOIL HEALTH/CARBON SEQUESTRATION (conservation of soil, adding more C than used, sequester CO ₂ from atmosphere)	3		148
MARKET PRESENCE (i.e., market access, share of national and global markets and market outlook)	4		125
ECONOMIC PERFORMANCE (i.e., direct economic value generated)	5		98
WATER MANAGEMENT (use, types quality)	6		98

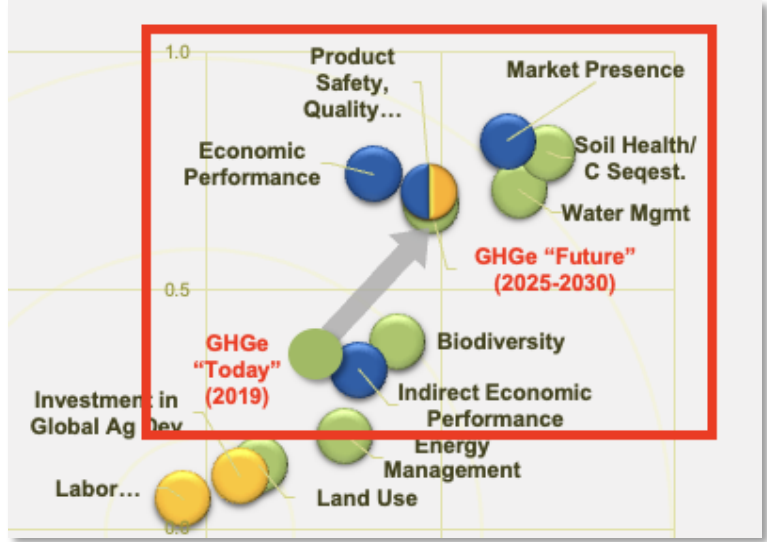
(table represents top 6 priorities from all 92 respondents)

Note: “Score” is a weighted calculation based on the sum of weighted values, i.e. the number of respondents ranking that item as first, second, third, etc.



In 2019, Stakeholders Prioritized Material Issues by *Importance to U.S. Soy* and *Ability of U.S. to Make an Impact In 5-10 Years*.

Respondents in 2019 predicted that **GHG emissions** would rise in **PRIORITY** in the near future... and indeed, in **2023**, respondents ranked **GHGe** as the most important sustainability factor for U.S. Soy to make an impact.



“Thinking about ALL 15 sustainability factors together, what are the TOP areas for U.S. Soy to make an impact?”

External Stakeholders

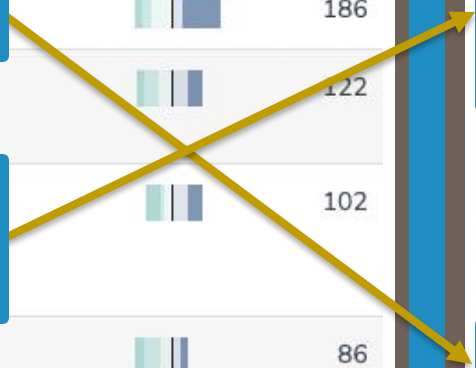
Item	Overall Rank	Rank Distribution	Score
GREENHOUSE GAS EMISSIONS (lbs. CO ² e)	1		186
PRODUCT SAFETY, QUALITY AND NUTRITION (i.e., Safety, Compliance, Health Benefits)	2		122
SOIL HEALTH/CARBON SEQUESTRATION (conservation of soil, adding more C than used, sequester CO ₂ from atmosphere)	3		102
MARKET PRESENCE (i.e., market access, share of national and global markets and market outlook)	4		86
WATER MANAGEMENT (use, types quality)	5		75
ECONOMIC PERFORMANCE (i.e., direct economic value generated)	6		69

Note: “Score” is a weighted calculation based on the sum of weighted values, i.e. the number of respondents ranking that item as first, second, third, etc.



U.S. Soy Internal Stakeholders

Item	Overall Rank	Rank Distribution	Score
SOIL HEALTH/CARBON SEQUESTRATION (conservation of soil, adding more C than used, sequester CO ₂ from atmosphere)	1		46
MARKET PRESENCE (i.e., market access, share of national and global markets and market outlook)	2		39
PRODUCT SAFETY, QUALITY AND NUTRITION (i.e., Safety, Compliance, Health Benefits)	3		37
GREENHOUSE GAS EMISSIONS (lbs. CO ² e)	4		33
ECONOMIC PERFORMANCE (i.e., direct economic value generated)	5		29
INVESTMENT IN GLOBAL AGRICULTURAL DEVELOPMENT (i.e., programs like WISHH – the World Initiative for Soy and Human Health)	6		23
WATER MANAGEMENT (use, types quality)	7		23



External stakeholders are looking for the *result* of **GHGe reduction** – U.S. Soy Family is focused on *farm practices* to reduce GHGe.

External Stakeholders prioritize **Product Safety, Quality and Nutrition...** as do U.S. Soy family respondents

U.S. Soy family ranked **Market Presence** of particularly high priority for continued action by U.S. Soy – “table stakes”

U.S. Soy Priorities and Sustainable Development Goals



SDG 2.4

“By 2030, ensure **sustainable food production systems** and implement **resilient agricultural practices** that increase **productivity** and production, that help maintain **ecosystems**, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively **improve land and soil quality.**”



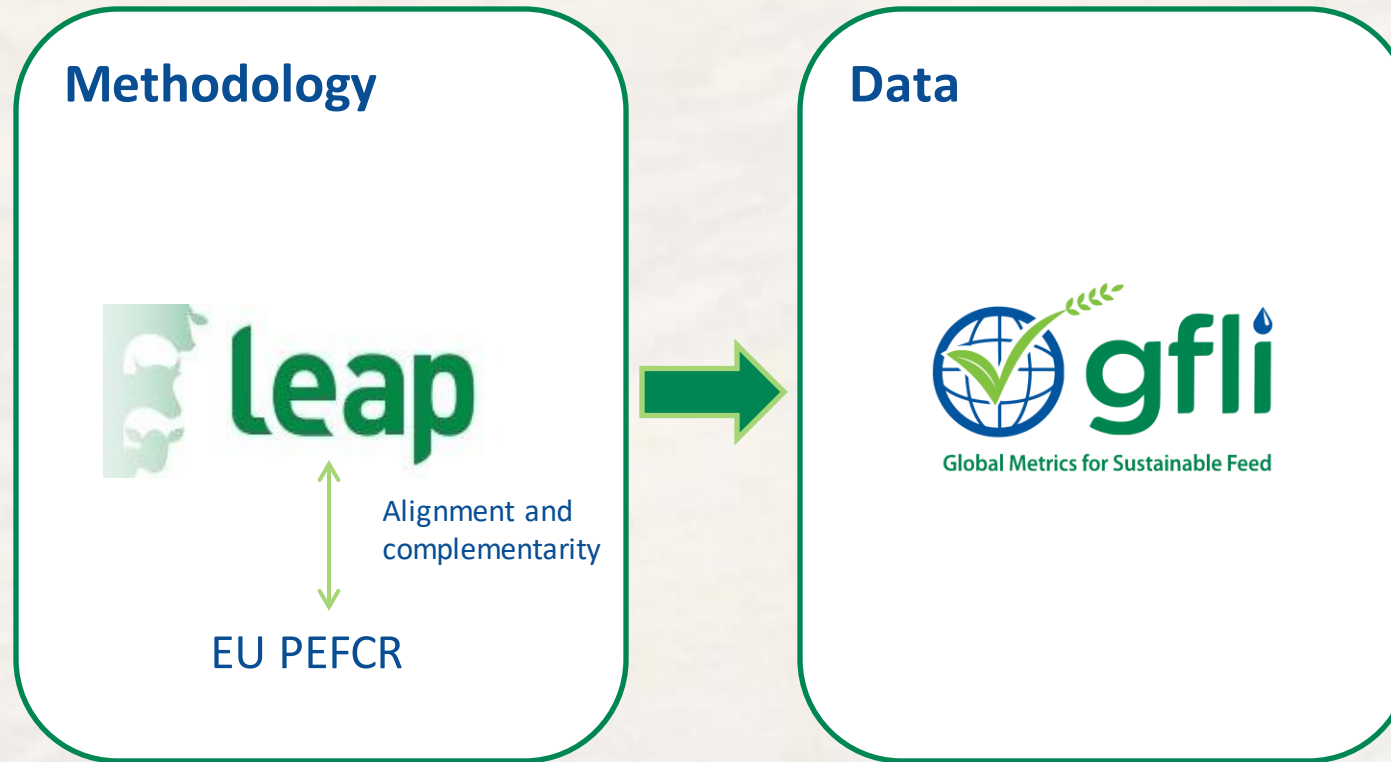
Carbon Footprinting

SSOY
Delivers Solutions

USSEC



Data Generation Methodology



Alignment with the FAO-LEAP guidelines for feed ensures the integrity and quality of LCA feed datasets.

- **Climate change**
- **Ozone depletion**
- **Human Toxicity**
- **Ecotoxicity**
- **Particulate matter**
- **Ionizing radiation**
- **Photochemical ozone formation**
- **Acidification**
- **Eutrophication**
- **Land Use**
- **Water Use**
- **Resource Use**



How Can GFLI Data be Used

- **Benchmarking, hotspot analysis, scenario analysis**
- To **drive innovation** for more sustainable feed and animal protein
 - Reduce business risk, differentiate & increase sales
- Meet **Scope 3 emissions targets**
 - 50-80% of animal protein impact is from feed
- **Improve internal processes** of a company
- **Marketing and communication** of results of own company based on data calculated using a **transparent and harmonized methodology**
 - Verification (Green Claims)
- Academic and other **research** and studies

***Incorporating GFLI data into a commercially sold tool is possible via an annual subscription.**



Deriving Business Value from GFLI Data

Leverage GFLI Data
for feed
formulation
ingredients

**Integrate GFLI
data*** with life
cycle study or
software tool

**Define local
footprint** of feed
and animal protein

**Identify
opportunities for
impact reduction**
(scenario analysis)

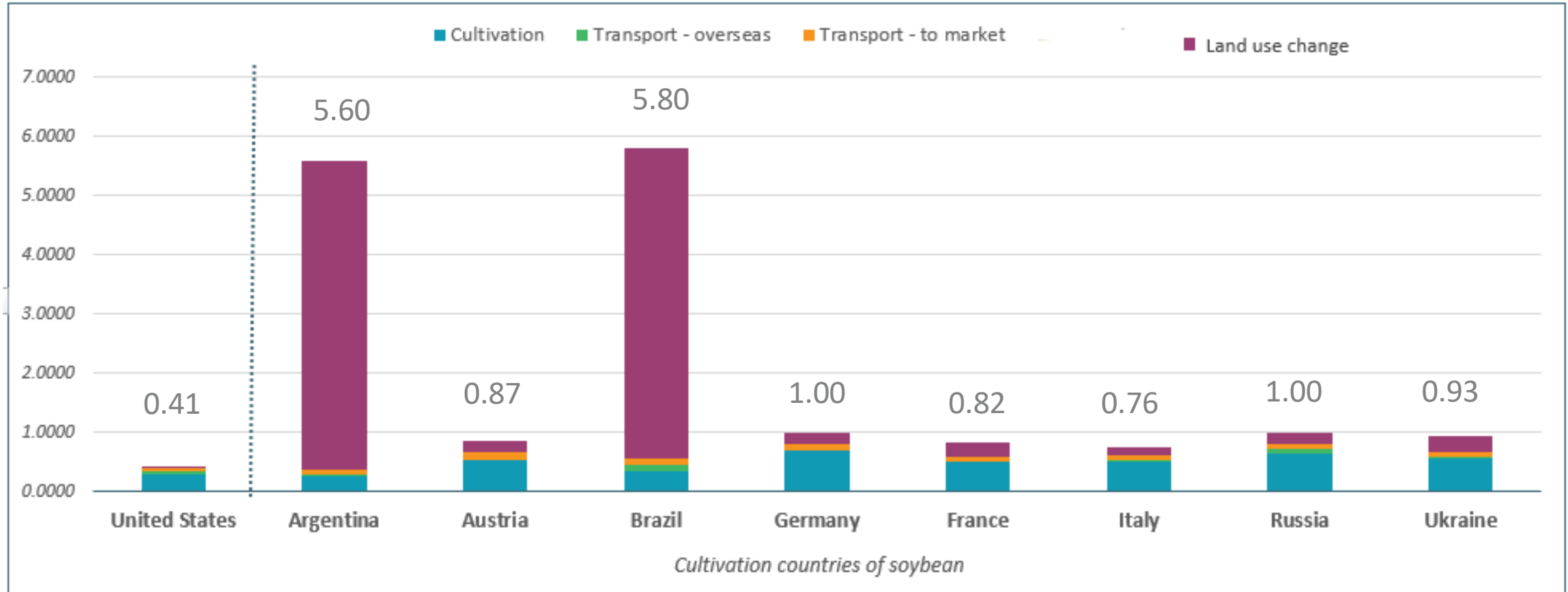
**Deliver
sustainability
innovation** for feed
& animal protein

**Communicate
impact reduction
results**

*Consider the FAO LEAP Guidelines for LCA and include data in scope such as transportation, feed mill processing data, use phase of feed formulation on farm (i.e. life of animal incl excretion) and packaging and associated impacts as required by local needs.

Carbon footprint of US soy

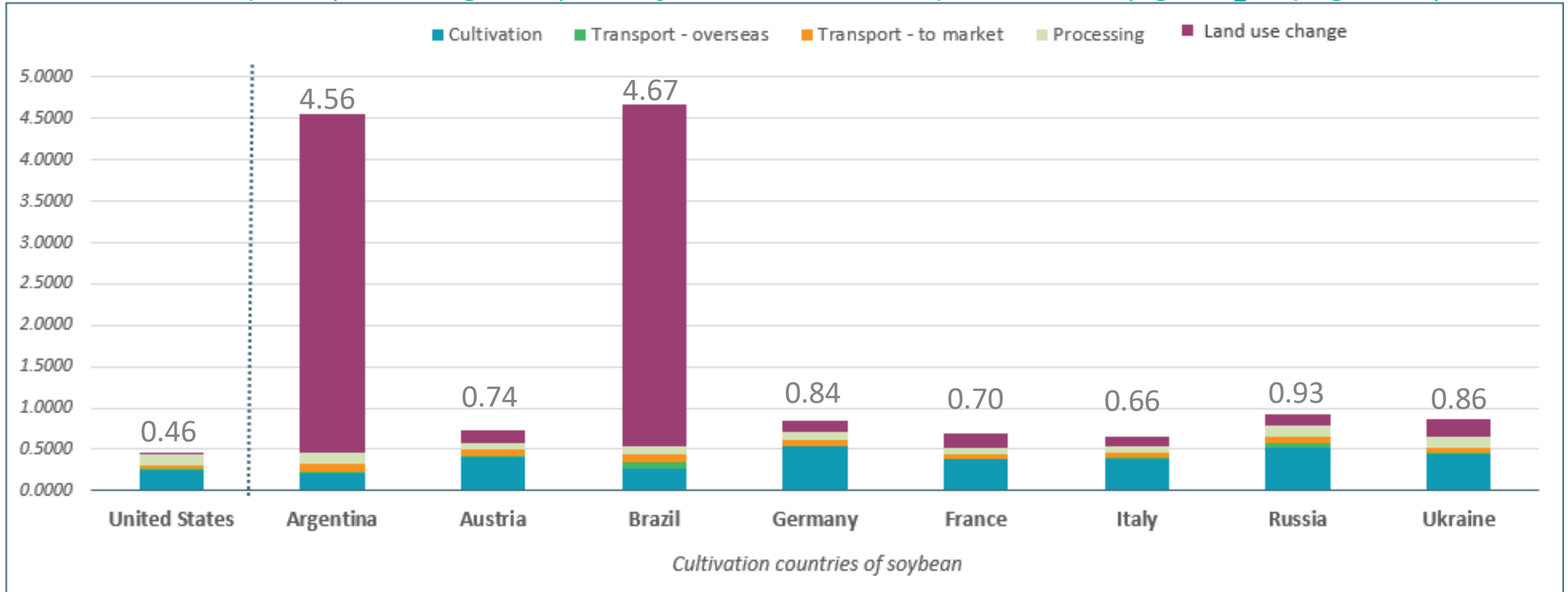
Carbon footprint (including LUC) of soybean for Japan market (kg CO₂-eq/kg soybean)



Calculations are country averages. Specific supply chains may have different carbon footprint results.

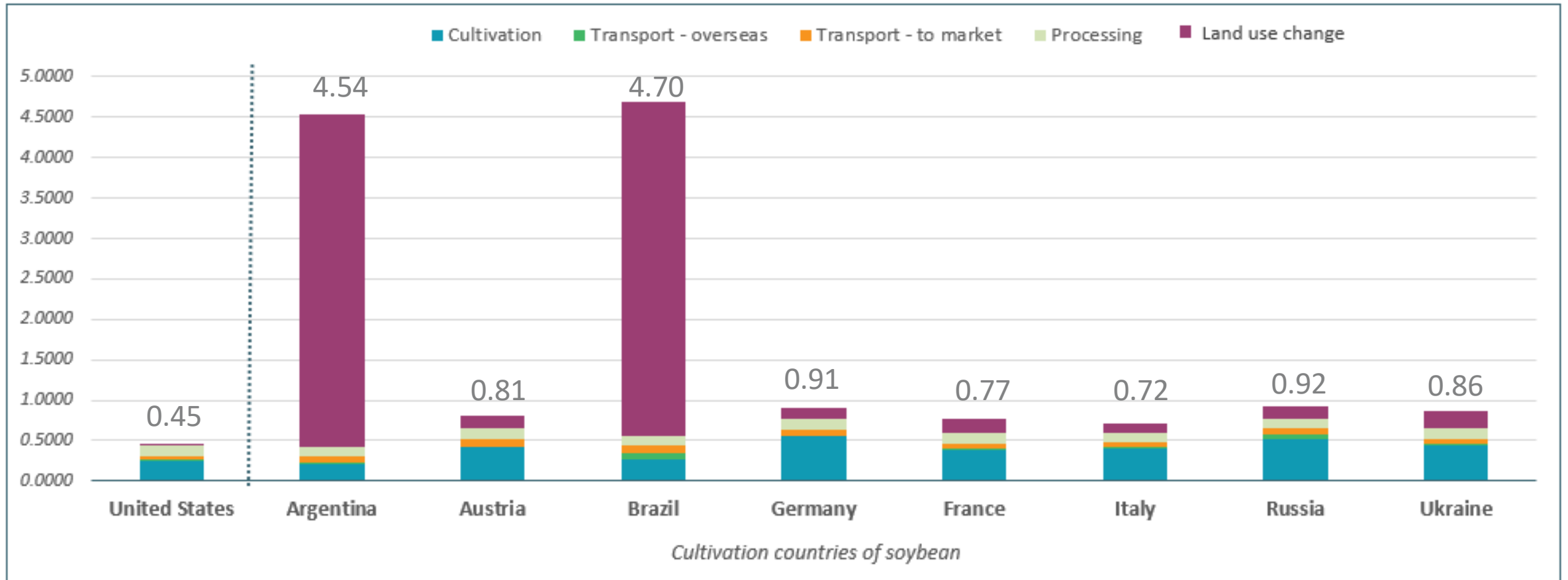
Carbon footprint of U.S. Soybean Meal (crushed at destination)

Carbon footprint (including LUC) of soybean meal for Japan market (kg CO₂-eq/kg SBM)



Carbon footprint of U.S. Soybean Meal (crushed at origin)

Carbon footprint (including LUC) of soybean meal for Japan market (kg CO₂-eq/kg SBM)



Lowest Carbon Footprint



Did you know U.S. Soy has the lowest carbon footprint compared with soy of other origins?

Discover More

We'd like to hear from you

Share your feedback via the email address below.

→ Email newsletters@economist.com

Biodiversity, the U.S. and U.S. Soy farmers commitments in action

BY ABBY RINNE - THURSDAY, OCTOBER 5, 2023

CATEGORY: [GROUND WORK](#) [REPORTS](#) [SUSTAINABILITY](#) [UNCATEGORIZED](#)

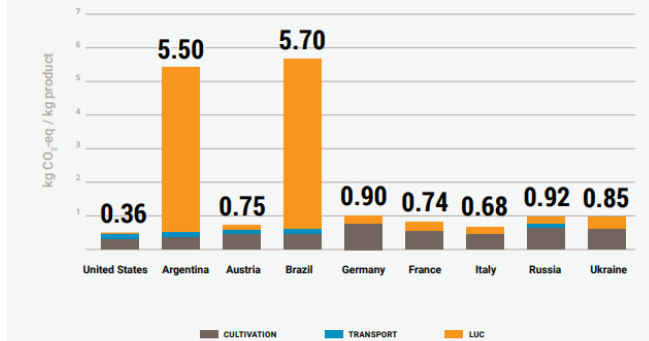
SHARE THIS [Twitter](#) [Facebook](#) [LinkedIn](#)

By Abby Rinne, Director of Sustainability, USSEC

U.S. Soy is rooted in a commitment to biodiversity conservation. Every time international customers opt for sustainable U.S. Soy, with its lowest carbon footprint compared with other origins, they are supporting a comprehensive system of biodiversity efforts.

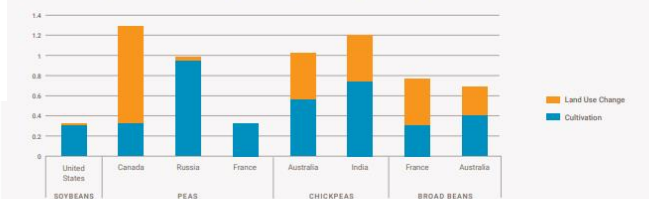
Every time international customers opt for sustainable U.S. Soy, with its **lowest carbon footprint compared with other origins**, they are supporting a comprehensive system of biodiversity efforts.

Carbon footprint (including LUC) of whole soybeans



US Soybeans vs. Other Proteins

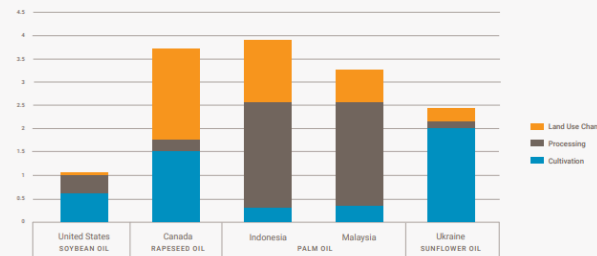
Carbon Footprint (in. Land Use Change, ex. Peat) - Total (kg CO₂ eq/kg product)*



Source: Blonk Consultants, Agri-footprint
 *Results based on default emission modeling, including land use change emissions, according to the rules of the PEFCR Feed guidance document (European Commission, 2018) as implemented in the Agri-footprint 5.0 database. Input data rely on country average FAO statistics and other secondary sources. Supplier specific information would improve data quality and may provide differing results. Comparisons have not been reviewed in the context of ISO 14040/14044 compliance.

U.S. Soybean Oil vs. Other Vegetable Oils

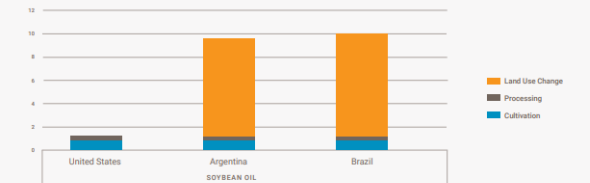
Carbon Footprint (in. Land Use Change, ex. Peat) - Total (kg CO₂ eq/kg product)*



Source: Blonk Consultants, Agri-footprint
 *Results based on default emission modeling, including land use change emissions, according to the rules of the PEFCR Feed guidance document (European Commission, 2018) as implemented in the Agri-footprint 5.0 database. Input data rely on country average FAO statistics and other secondary sources. Supplier specific information would improve data quality and may provide differing results. Comparisons have not been reviewed in the context of ISO 14040/14044 compliance.

U.S. Soybean Oil vs. Argentina & Brazil Soybean Oil

Carbon Footprint (in. Land Use Change, ex. Peat) - Total (kg CO₂ eq/kg product)*



Source: Blonk Consultants, Agri-footprint
 *Results based on default emission modeling, including land use change emissions, according to the rules of the PEFCR Feed guidance document (European Commission, 2018) as implemented in the Agri-footprint 5.0 database. Input data rely on country average FAO statistics and other secondary sources. Supplier specific information would improve data quality and may provide differing results. Comparisons have not been reviewed in the context of ISO 14040/14044 compliance.



SSAP & SUSS

SSOY
Delivers Solutions

USSEC

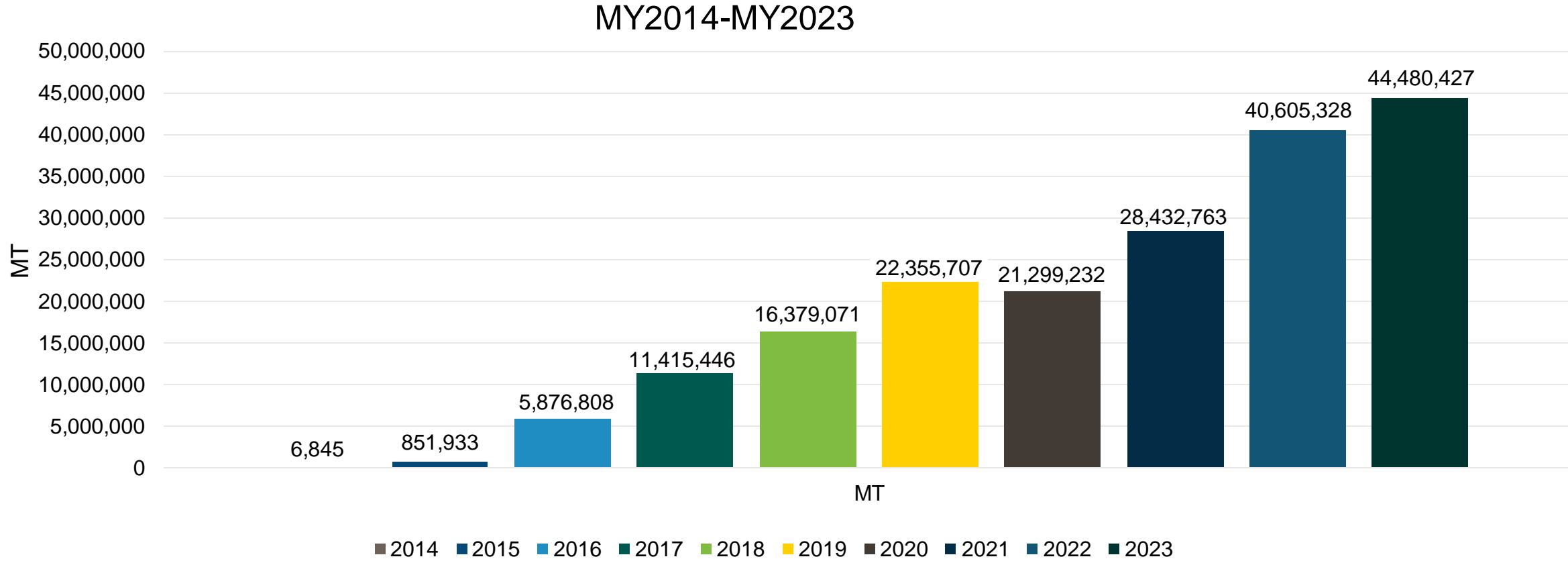
Key Achievements for SSAP



Silver Equivalency



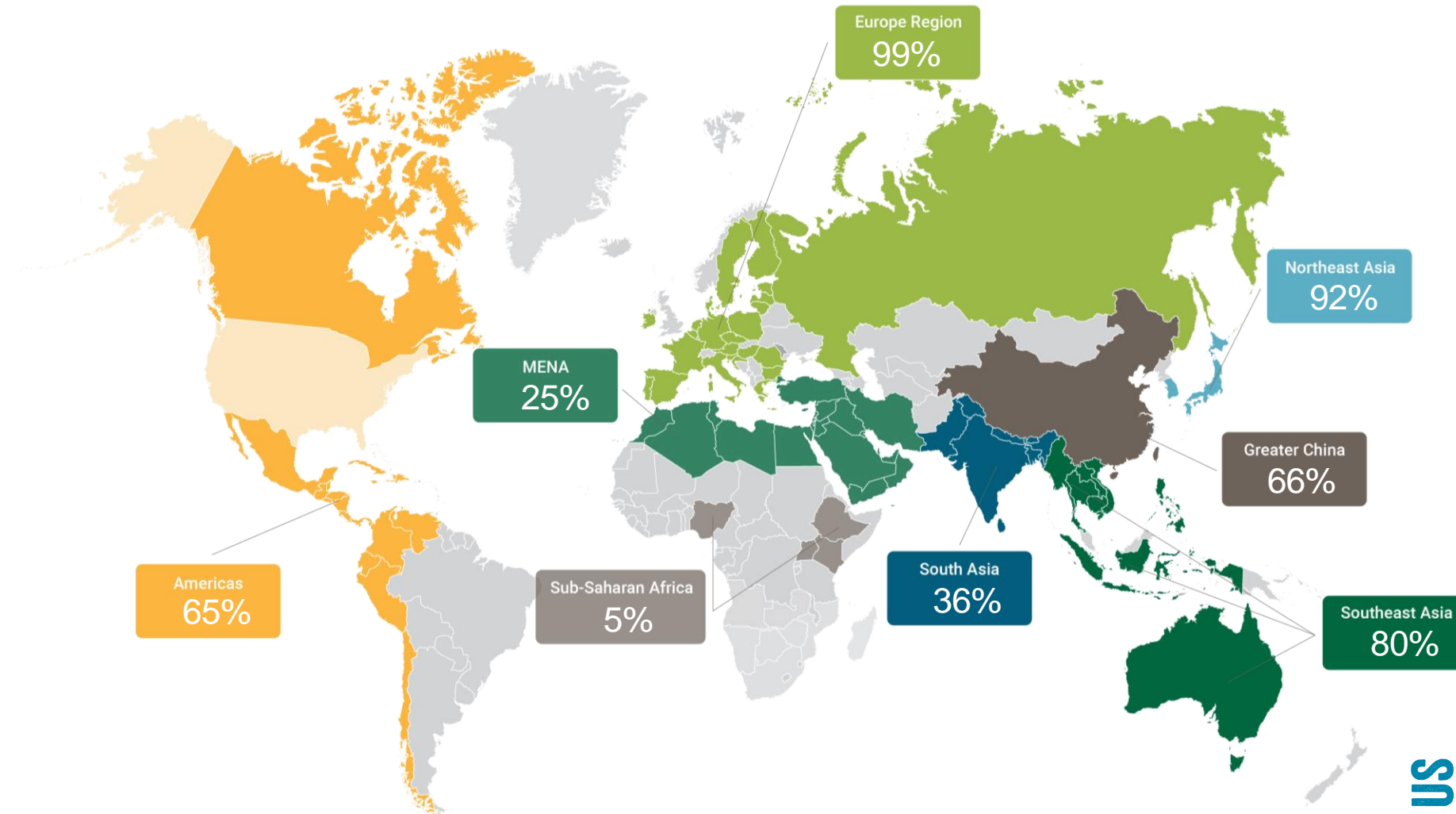
SSAP Shipments for MY 2014-2023



Verification requested for 70% of all exports



SSAP Shipments as a Percent of Total U.S. Soy



SUSS/Fed with SUSS Logos





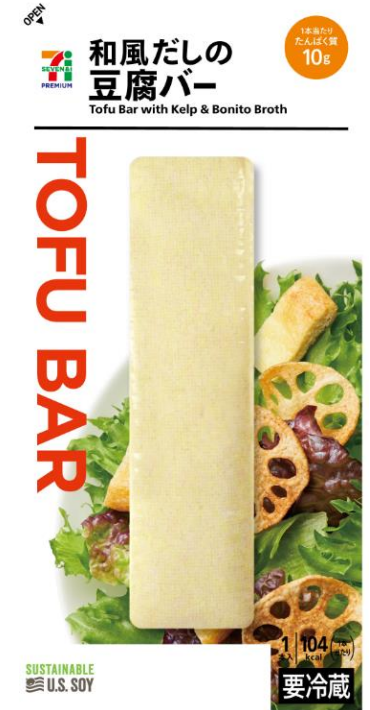
Sajo Daerim– Protein Paste
South Korea



Proteinol – Cooking Oil
Mexico



Seven Eleven – Tofu Bar
Japan



18 Countries
89 Companies
1079 SKUs

Agropequaria SSK S.L.R.
– Eggs
Dominican Republic








Grupo ACI S.A. Tilapia
Costa Rica



“Product differentiation” and “responding to customers needs for sustainable products” were tied as the leading benefit cited from using the SUSS logo

KEY
 ● Increasing
 ● Neutral
 ● Decreasing

Rank	SUSS Logo Benefit	Expected Benefit Trends	
		Current	Future (+5 yrs.)
1	 Product Differentiation	●	● ●
	 Responding to Customers Needs	●	●
2	 Increases Brand Recognition	●	●
3	 Maintaining Competitiveness	●	●
4	 Increasing Sales and/or Purchases	●	●
5	 Improving Access to Financing and/or Markets	●	●

Q. Please rank the following benefits of using the SUSS logo in ascending order, where 1 represents little to no perceived benefit and 5 represents a high perceived benefit. The order of responses for these benefits will provide insights as the priorities for your business in using the SUSS logo. Rank five options.



US SOY.ORG

USSEC.ORG | US SOY.ORG



While the U.S. Soybean Export Council (USSEC) does not guarantee the forecasts or statements of USSEC Staff or Contractors, we have taken care in selecting them to represent our organization. We believe they are knowledgeable and their presentations and opinions will provide listeners with detailed information and valuable insights into the U.S. Soy and U.S. Ag Industry. We welcome further questions and always encourage listeners to seek a wide array of opinions before making any financial decisions based on the information presented. Accordingly, USSEC will not accept any liability stemming from the information contained in this presentation.

