



Sustainable Protein Production in EU

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EU has a significant Protein Deficit

>70%

Of EU protein is imported

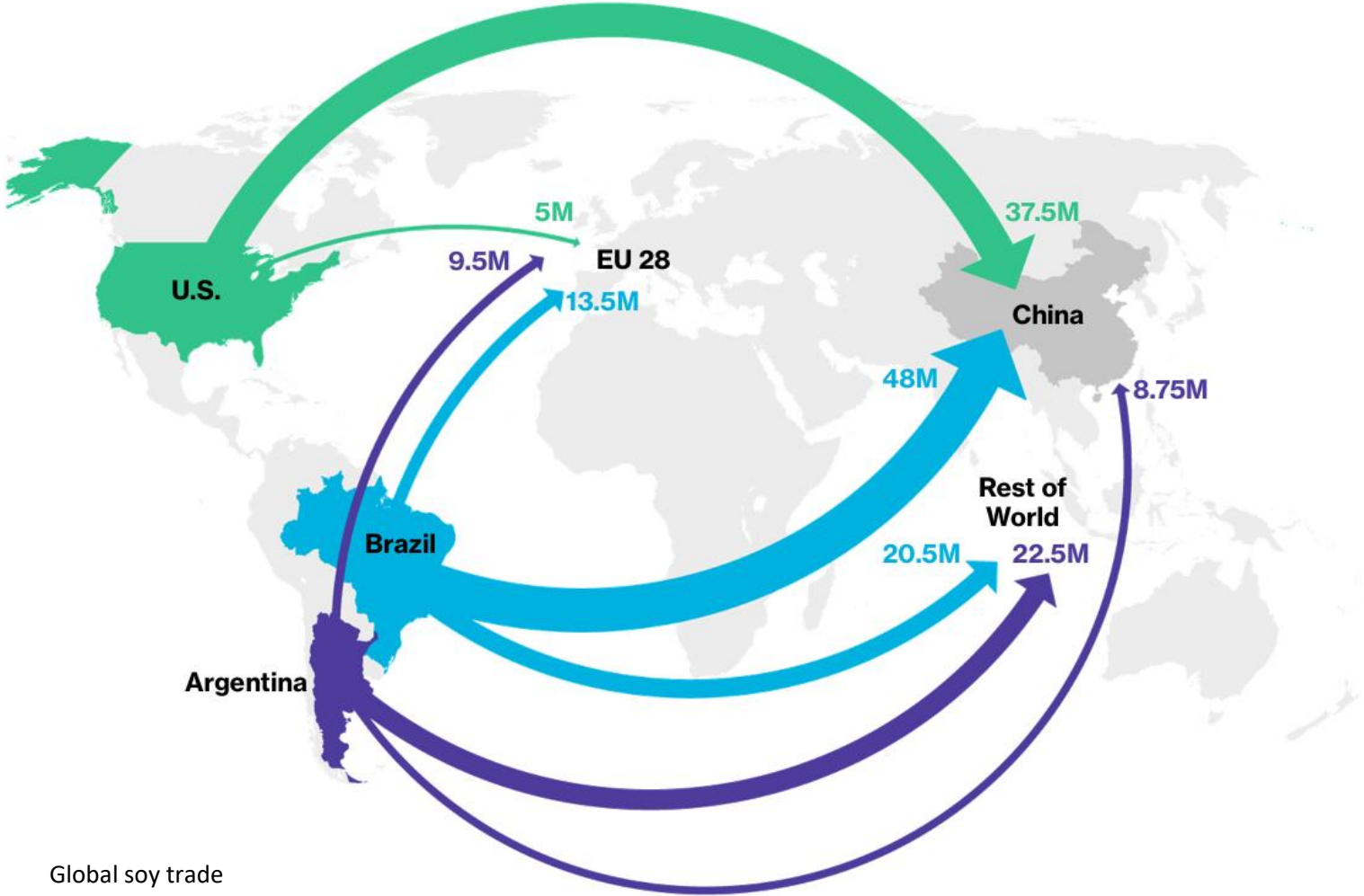
34Mt

Of soybean is imported in EU annually

95%

Of EU soybean is imported

Major Global Trade Streams in Soybean implies geopolitical risk for EU

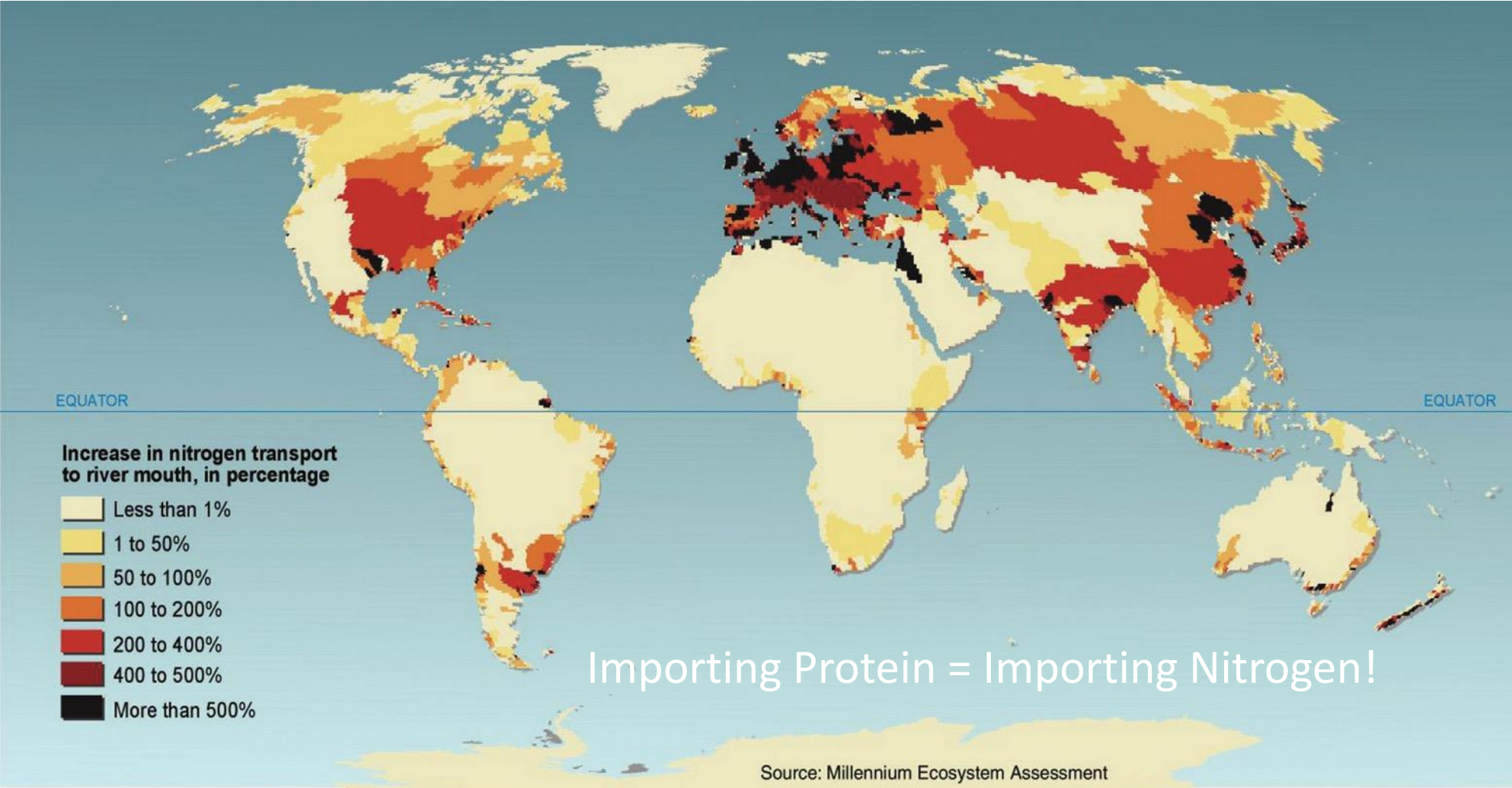


Global soy trade
Source: Rabobank

And our Hunger for Protein has devastating Impact on S-Am Ecosystems



Importing protein is importing Nitrogen!

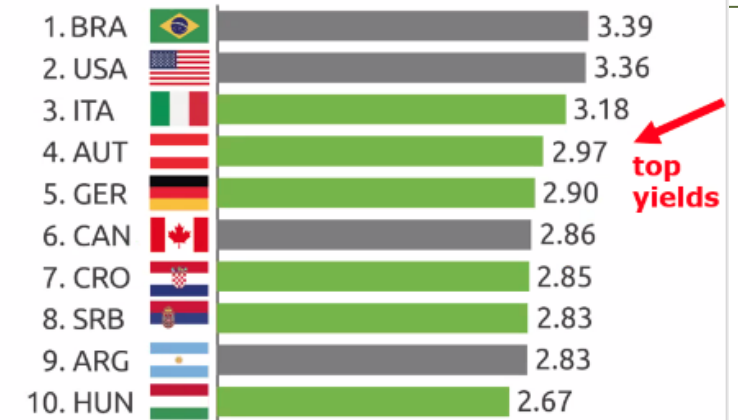


It is possible to be self sufficient in protein

It's a choice! It's even an Opportunity

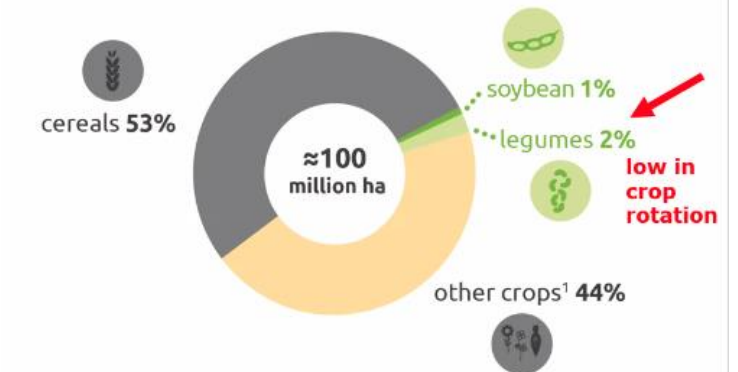
- 34Mt of import at 3t/ha → 11.3Mio ha of land
 - 157.4 Mio ha of farmed land in EU
 - 7.1% of the acreage on top of the existing 1%
 - Global average of pulses in rotation schemes is 5.3% (FAO)
- We DID grow pulses before the Blairhouse agreement
 - Opportunity for N-EU. Benefit of co-localizing with plant-based industry
- OK, but than we just shift import to wheat and corn instead?

Top 10 soya yields* (t/ha, avg 2017–21):



* the list includes countries with min. 50,000 ha soybean area in 2022.
Sources: USDA + Donau Soja

Cropping of arable land in the EU (2021):



¹ including set-aside and fallow land (area which has been left unplanted for a period of time).
Sources: Donau Soja on basis DG AGRI data

The Current Soy (& soy meal) Use Case for EU? Feed!

93%

Feed

7%

Food

While we import Proteins we grow starch as energy source in feed



- Respond well to high Mineral Fertilizer input.
- Mineral N Fertilizer (Globally)
 - 1% of world energy and CO2
 - Nitrous oxide as by product: 265x more potent GH gas than CO2
 - Price linked to natural Gas price
- Neutral for soil carbon



- Fix own nitrogen from ambient air
→ Make nitrogen also available for follow-up crop
 - Symbiosis with soil bacteria
 - Basically free
- Stores soil carbon (regenerative)



We need a Protein Shift! (but where's the subsidy shift?)

Meat and Dairy

93% 

- Cheap imported GM soy
 - High carbon footprint
 - Nitrogen Accumulation
 - Low conversion efficiency, higher acreage required

Meat and Dairy Alternatives

7% 

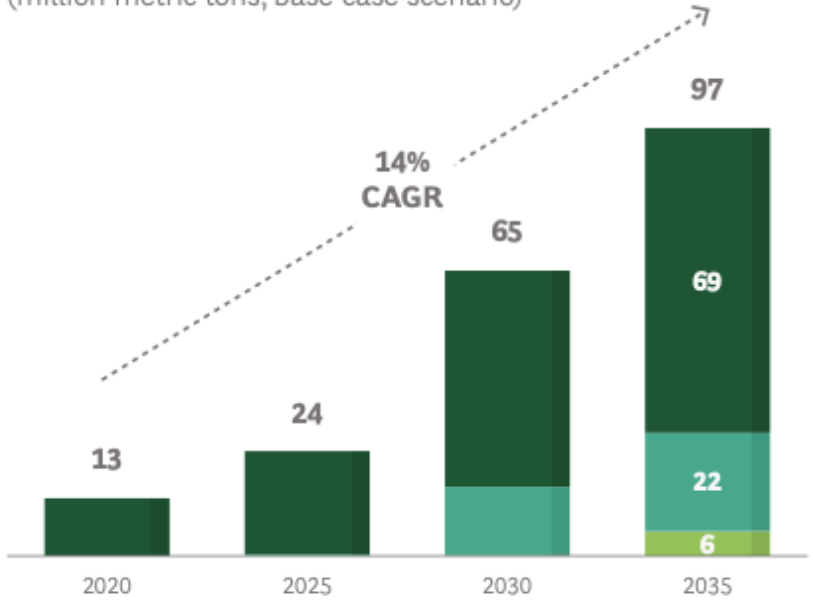
- Premium local non-GM soy
 - Low carbon and nitrogen footprint
 - Soil regeneration (Nitrogen and Carbon)
 - High conversion efficiency, less acreage required

Supply chain issues start to grow as non-GM soy is scarce on global markets

A partial protein shift resolves the land use conundrum

We need to embrace a protein shift as opportunity for our farmers

Consumption of alternative proteins by protein source
(million metric tons, base-case scenario)



14% CAGR

CAGR	CAGR	CAGR
2020–2025	2025–2030	2030–2035
13%	22%	8%
12%	16%	7%
45%	111%	8%
52% ¹	66%	120%

-  Plant-based
-  Microorganism-based
-  Animal-cell-based

Source: BCG

The world non-GM market is ramping up to supply Europe’s protein shift!

EU Green Deal – Farm-to-Fork



European food must remain safe, nutritious and of high quality.

Europa and AgBioTech: Seeding solutions but not reaping the benefits?

Technology adoption and regulatory clarity is crucial. Technology thresholds need to be low to foster SME innovation.

Europe's Plant Biotech Strengths

Biologicals



Reduce inputs

A.I. (e.g. in Genetics)



Improve Productivity

Autonomous Robots, drones...



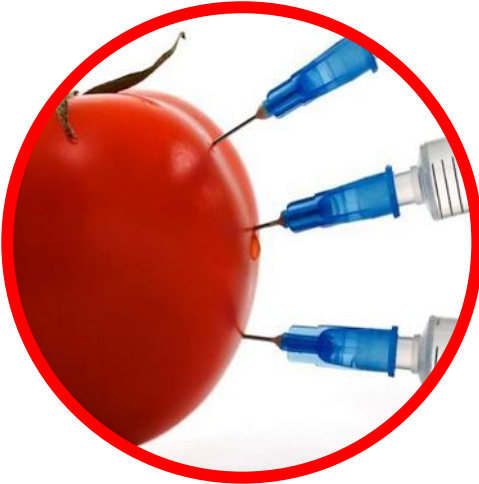
Reduce Herbicides

Gene Editing



Reduce Fungicides
Climate Resilience
Improve Quality

GMO



Reduce Insecticides

What is Needed?

- Leverage the protein shift to bring an alternative to Farmers
- Let farmers be the guardians of our ecology and landscapes and reward them for it
- Level competition playing field for imports that do not adhere to same EU ESG standards
- Subsidy schemes should focus first on sustainable land use
- Technology needs to be embraced

Thank You!