The impact of soybean cultivation in the Amazon on climate change and the possible alternatives for animal feed.

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GOALS

1. To understand and expand on the **factors involving the problems** created by the **use of soybeans in animal feed**.
2. To Identify possible **initiatives** to combat these problems
3. To propose **alternative leguminous crops** that could be used to **feed livestock in Spain** and therefore not rely so much on the importation of soybeans.

Why are soybeans used in animal feed?

They have great nutritional value and are especially used for their high protein content, which is about 40%. In addition, they are very cheap (Liu, 1999).

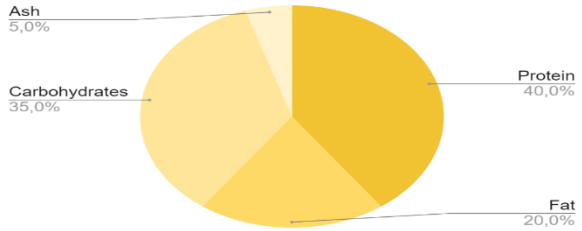

Figure 1. Chemical composition (% dry matter) of soybeans.

It should be taken into account that…

Brazil

Stands out as the main exporter (CAPECO, 2020).

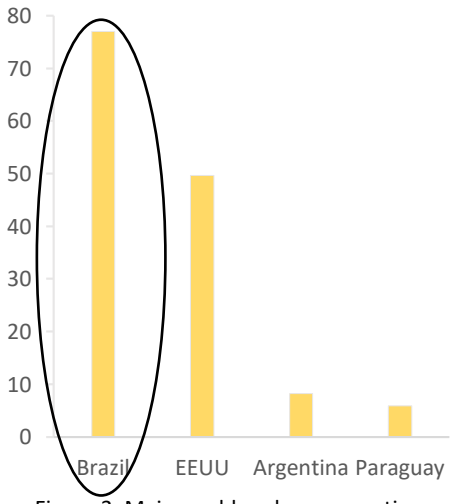

Figure 3. Main world soybean exporting countries (in million tonnes)

Spain

Spain is the second largest importer of soybeans in Europe (2.3% of the world's imports), mostly destined for animal feed (MAPA, 2019).

CONCLUSIONS

1. ↑Soybean demand
Easy availability of land for conversion → Deforestation → Monoculture expansion → **CO2 release** from soil and logs
↑Soil erosion, ↓Precipitation and ↑Use of pesticides → ↓Greenhouse gas mitigation capacity

2. (1) Main initiative → The **Soybean moratorium** to not sell or finance soybeans from deforested areas of the Amazon. → There's a lot of non-compliance so new laws are needed. (2) Europe → **support for sustainable small farms** → A reduction in the over-expansion of the culture. (3) Actions to **reduce meat consumption in Europe** → Less imports of soybeans → There is still a lack of awareness among the inhabitants. (4) Greenpeace advocates **no use of unauthorized products (pesticides)** → Many countries do not comply.

3. Lupin, beans and peas because of the good climatic conditions in Spain and their high protein content. As a novelty, the species ***Vicia narbonensis*** was cultivated in the past and could be recovered. Also, the species ***Morus alba*** although it is not a legume, has good nutritional value and is currently cultivated in other countries. Spain could look at this.