

# EU-27 Geopolitical Vulnerability for the Supply of Amino Acids for Feed Use

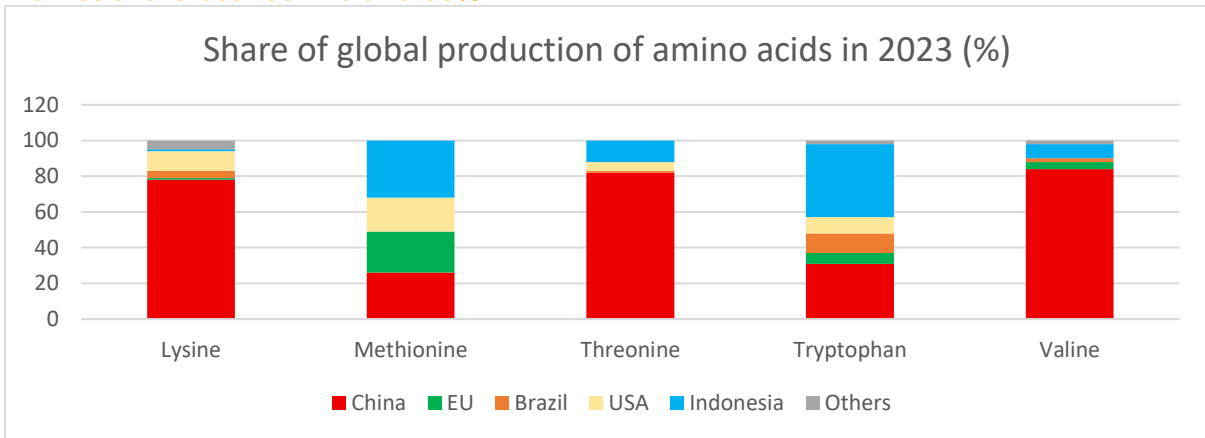
## Overall geopolitical vulnerability

Using amino acids in feed diets is the most cost-effective solution to reduce nitrogen emissions and EU dependency on third countries for soya, while contributing to maintain high level of animal health and welfare.

Very low	Low	Medium	High	Very high
		Methionine	Lysine, tryptophan	Threonine, valine

### Global market concentration

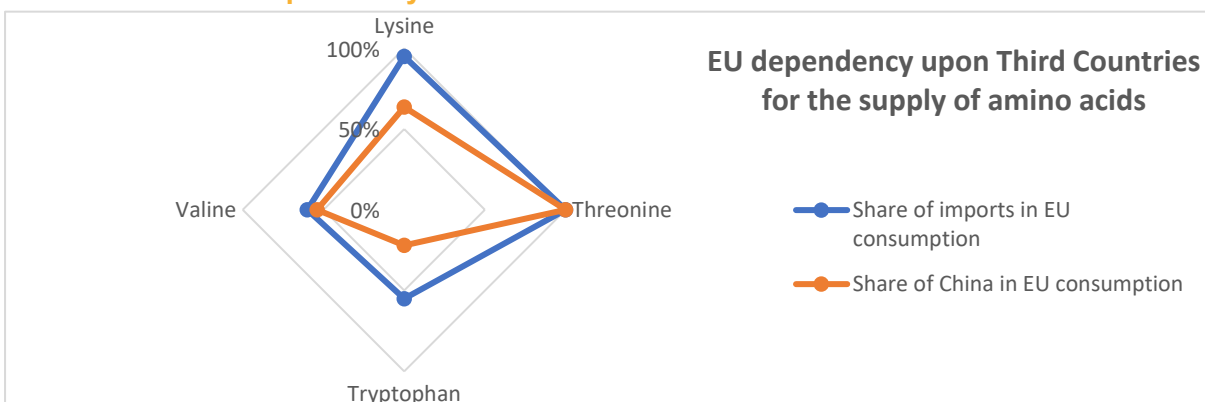
China is the only country producing the 5 most essential amino acids, with a global market share between 25 and 85%.



- The global market of amino acids is concentrated in only 11 producing countries, thereof 3 may be regarded as high geopolitical risk: China, Russia and Belarus.
- Methionine production (chemical process) is well shared globally (7 producing countries), whereas the production of other amino acids (by fermentation) is more concentrated, with China being largely dominant.

### EU dependency

The more than 95% EU-27 dependency on third countries for the supply of lysine drives the overall EU-27 dependency on amino acids.

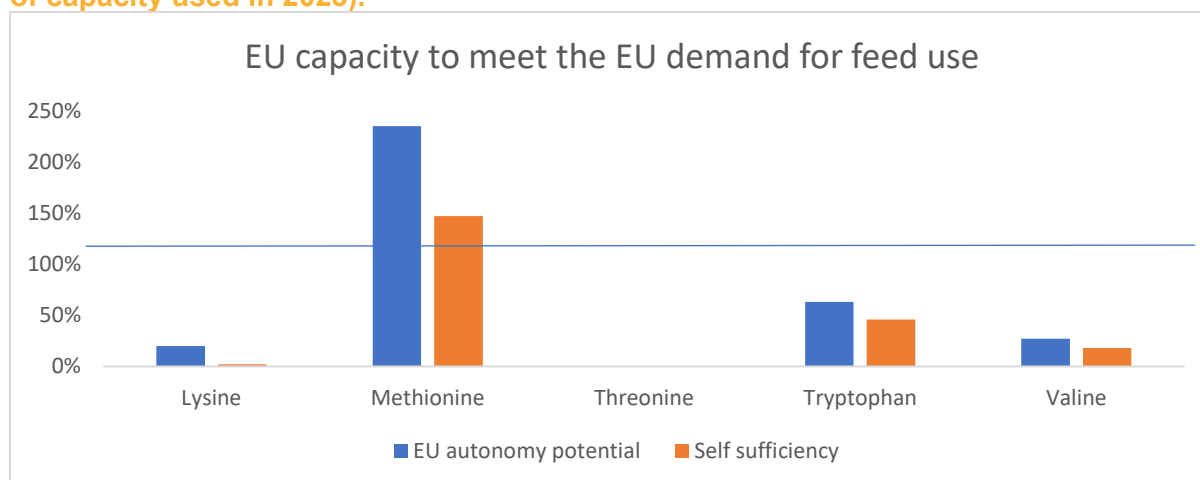


- Improving EU-27 strategic autonomy for proteins while minimising nitrogen emissions requires improving EU's autonomy on amino acids otherwise it means replacing the dependency upon America for soy by the dependency upon China for amino acids.
- The EU is more than 95% dependent upon Third Countries for its supply in lysine, the first "limiting" amino acid. Being independent for the supply in methionine alone (second limiting amino acid) does not allow reducing imports of soya if there is not enough lysine available for the EU market.
- China represents 65 to 90% of the volume of fermentation amino acids currently imported in the EU.

## EU-27 autonomy potential<sup>1</sup>

To be autonomous, the EU-27 would need to invest in production capacities for the production of lysine, methionine, threonine valine and tryptophane.

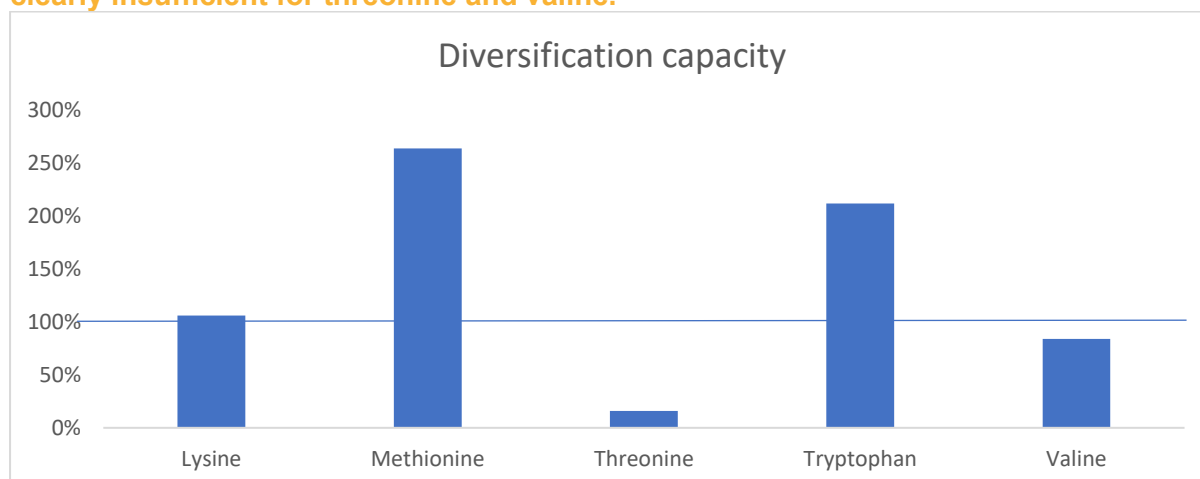
For lysine, there is a clear deficit of competitiveness of the EU-27 production (only 10% of capacity used in 2023).



- The transition towards more environmentally friendly livestock farming systems will drive upward the EU-27 demand for the third, fourth and fifth “limiting” amino acids (i.e. threonine, tryptophan and valine), justifying a long-term strategy of investments.

## EU-27 diversification potential<sup>2</sup>

The production capacity of amino acids in medium or low geopolitical risk countries is sufficient nowadays to substitute for high geopolitical risk countries in case of major trade incident regarding methionine and tryptophan, but just sufficient for lysine and clearly insufficient for threonine and valine.



**Disclaimer:** The information above is the result of a vulnerability assessment for access to vitamins and amino acids, performed by FEFAC in spring 2025. These results are based to a large extent on expert data and, while we endeavour to reach a high level of quality and robustness of the data, we make no representations or warranties of any kind, express or implied, about their completeness, accuracy, reliability, suitability or availability. Any reliance you place on these data is therefore strictly at your own risk.

<sup>1</sup> Autonomy potential is the ability to meet the EU demand when making use of the full production capacity

<sup>2</sup> Diversification of supply is the ability to replace imports from high geopolitical risk countries by imports from low and medium risk countries. However, in absence of specific import data for tryptophan, a proxy was used for estimates of imports from high geopolitical risk countries, i.e. the difference between EU consumption and EU production.