

POLICY BRIEF 4

Circular bio-based fertilisers in a global context

Key challenges

- EU sustainable food strategies impact global agriculture through policy, regulation, and cooperation.
- Locally adapted bio-based fertiliser technologies are essential for food security in the Global South.
- International cooperation should prioritise contextual research, innovation, and supportive policies.
- Global regulatory differences complicate International BBF trade, hindering efforts to balance nutrient demand and supply.

CURRENT CONTEXT

EU strategies

EU green Deal and F2F strategies aim to make the EU's food systems sustainable, focusing on reducing synthetic fertiliser use and encouraging bio-based alternatives.

Global cooperation

The EU promotes sustainable food production globally through international partnerships and funding R&I to drive climate mitigation and sustainable practices.

Trade and standards

EU trade agreements help extend environmental standards abroad. The 2022 EU FPR sets standards and strict guidelines for BBF in the EU market.

PROBLEMS ENCOUNTERED

Regional variability

Production and use of circular bio-based fertilisers vary significantly across regions due to differences in fertiliser needs and availability of residue feedstock.

Cooperation potential

Geographic mismatches between nutrient-rich residue hotspots and nutrient-poor regions create opportunities for international cooperation to balance resources.

Trade challenges

Discrepancies in global fertiliser regulations complicate international trade of bio-based fertilisers.

Nutrient recovery gaps

Insufficient nutrient recovery from residues and waste limits human nutrition, farmer incomes, and the availability of affordable agricultural inputs.

Local adaptation barriers

Limited development of locally adapted technologies, business models, and supportive policies hinders effective BBF use and local value chain development.

RECOMMENDATIONS TO POLICY MAKERS



Adapt bio-based fertiliser **technologies and value chains to local contexts**, ensuring solutions fit regional resources, capacities, and market needs.



Develop cost-effective solutions for **specific residue streams and target crops**, addressing challenges such as limited residue availability and infrastructure gaps.



Establish a regulatory framework that ensures a **level playing field** to facilitate international cooperation and trade in bio-based fertiliser components and blends.



Balance support for **international trade and local supply chains**, facilitating cooperation through material and knowledge transfer and streamlined regulation.