



AGRO4AGRI

Summary of Workshop Proceedings

Pathways to Impact in Sustainable Agrochemistry
3Bs Materials Conference | Lisbon, 10 April 2026

About the Workshop

Hosted by the AGRO4AGRI Horizon Europe project at the 3Bs Materials Technology Conference in Lisbon, this half-day workshop (08:45–12:30 CEST) brought together researchers, industry practitioners, and ecosystem experts to examine how biobased agrochemical innovations move from early-stage research into practical agricultural use. It comprised four expert presentations followed by two moderated expert panel discussions, chaired by Lesley Tobin and Dr Jolanta Beinaroviča (Optimat UK), respectively.

Summary of findings

This workshop examined what it actually takes for biobased agrochemical innovations to move from research into real agricultural use. Bringing together researchers, industry, and ecosystem actors, the discussions made one point clear:

The main barrier is not the science. It's everything around it.

The session traced the innovation pathway from materials development (nanocellulose and biochar-based fertiliser systems) through scale-up to commercialisation. While promising results are emerging at lab scale, persistent challenges remain around cost, reproducibility, and the physical realities of scaling production.

Across both panel discussions, a consistent set of insights emerged:

- **Adoption is driven by incentives, not innovation.**
If the wrong actor carries the risk, technologies do not move. Cost and proof under real conditions are decisive.
- **Farmers prioritise performance and practicality.**
Yield, reliability, and ease of use matter far more than sustainability claims. Field validation is essential.
- **Scale-up is where most innovations fail.**
The main challenges are not chemical, but logistical and engineering-related - especially materials handling, process design, and water use.
- **Different stakeholders require different evidence.**
Industry looks for ROI and manufacturability; regulators for safety and environmental data; farmers for clear, local proof of effectiveness.
- **Sustainability frameworks are not yet operational.**
SSbD is shaping thinking but remains difficult to apply in day-to-day research and decision-making.
- **Regulation is a key driver of change.**
Without regulatory pressure or incentives, market uptake is unlikely.
- **End users must be involved from the start.**
Projects that engage farmers and industry early are far more likely to achieve real-world impact.
- **A critical 'missing role' remains.**
There is a persistent gap between research, industry, and practice - a need for actors who translate between these communities and align them around adoption.

Overall, the workshop reinforced that successful innovation is not just about developing better technologies, but about designing them for adoption from the outset.

About AGRO4AGRI

AGRO4AGRI is a Horizon Europe project developing Safe and Sustainable by Design (SSbD) solutions for plant nutrition and protection. It combines controlled-release systems based on inorganic and biobased nanomaterials with RNAi-based biocontrol technologies, targeting a >50% reduction in agrochemical inputs while improving soil health and crop resilience. The project runs May 2024–April 2028, involves 12 partners across 7 countries, with a total budget of €5.3 million (Grant Agreement No. 101130890).



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AGRO4AGRI is a Horizon Europe project (Grant Agreement No. 101130890) developing bio-based and nano-enabled solutions for sustainable agriculture. This factsheet is part of AGRO4AGRI's work to support policy development, stakeholder engagement, and the wider transition toward safe and sustainable agrochemical systems.

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