

HARVEST HIGHLIGHTS

Biosolutions for improved farming systems



The Harvest Highlights series provides insights of past events and reports, and illustrates how they are relevant for ongoing discussions and developments



Relevant now because

Biosolutions address key challenges such food security, climate change, and biodiversity loss, while promoting sustainable agriculture. They also highlight the growing demand for eco-friendly solutions, driven by consumer awareness and export market requirements.

Key Biosolutions for Soil Fertility

Challenges:

Over-reliance on inorganic fertilizers leads to pollution and limited soil recovery.

Innovative Solutions:

- Biofertilizers, biochar, green manure for soil restoration.
- Insect Farming: Black Soldier Fly transforms waste into biofertilizer.
- Vermiculture: Earthworms create nutrient-rich compost.
- Microbial Inoculants: Boost nitrogen fixation in legumes.

4 Perspectives for Biosolutions

Addressing Innovation Gaps

- Biopesticides, biofertilizers, and biostimulants for pest control and soil health.
- Example: Push-pull technology for integrated pest management.

Institutional Arrangements

- Public-private partnerships to scale biosolutions.
- Strengthen policy frameworks for sustainable inputs.

Finance

- Need for blended finance to close funding gaps for SMEs.
- Incorporate natural value accounting in financial systems.

Gender & Youth:

- Invest in youth training and business opportunities.
- Ensure equal access for women in farming and technology.

Scaling Pathways for Biosolutions

Capacity Development:

Training and farmer awareness.

Market Access: Develop niche markets and improve supply chains.

Policy and Advocacy: Harmonize regulations and promote agroecological standards.

Biosolutions in Livestock Health

Emerging Solutions:

- Bio repellents for vector control (e.g., tsetse fly collars).
- Biopesticides for tick-borne diseases.

Challenge: Outdated regulation for biosolutions in animal health.

The way forward

Key Action: Empower stakeholders across the supply-consumer-policy nexus to scale biosolutions for sustainable agriculture.



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Based upon: [DeSIRA-LIFT Knowledge brief 2: Biosolutions for improved farming systems.](#)

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