REDUCING THE IMPACT OF PRODUCTION ENHANCERS

THE NEW APPROACH TO PRIMARY FOOD PRODUCTION AND DISTRIBUTION

FOOD 2030: CLIMATE, INNOVATION

Current agricultural production with its use of fertilisers and pesticides in plant production and antibiotics in animal production, has brought challenges through their environmental impact. New approaches are researched to reduce that impact and improve the footprint of production.

SPECIFIC R&I BREAKTHROUGH TOPICS

New approaches to fertilisers: Soil nutrients are usually replenished using non-organic fertilisers. The market for the use of bio-fertilisers is extending, as is the understanding of the soil microbiome, fungi, nematodes, protozoa, and other beneficial organisms to convert unavailable plant nutrients to an available form for plant uptake.

New approaches to pesticides: Crop yield efficiencies are greatly diminished by the effect of parasites, insects, weeds, and other natural organisms. Chemical pesticides are commonly used, but many are considered hazardous for the environment or humans if used in large quantities. New solutions lead to pesticides that have lesser effects against the environment, biodiversity, and human health.

New approaches to animal antibiotics: Livestock farmers use antibiotics to keep animals safe from bacterial infections. However, the excessive use of antibiotics can create antibiotic-resistant bacteria which could be worse for animals and humans. Novel research approaches seek alternatives and new ways to reduce antibiotic use while maintaining animal health.

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EXPECTED IMPACT

Overall, this approach intends to reduce the environmental impact of agricultural production, by using smart alternatives to the current production model with intensive use of chemicals. The expected impact should be a better footprint of production, better use of natural resources, and less environmental damage in rural areas.

MARKET OPPORTUNITIES / CHALLENGES

- There is an increasing market of products produced under these practices. Consumers become increasingly willing to pay more if there are indications of less environmental footprint.
- The solutions provided have to prove of equal or near equal efficiency as the standard solutions to be viable. This is a challenge as usually there are trade-offs in the different provided solutions.
- The process of approval of many of these new solutions might take time, which makes the launch of products to the market difficult for new innovators and entrepreneurs.
- The use of smart technologies can be also used to minimise the input of production enhancers.

EXAMPLE REFERENCES

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ASSOCIATED TRENDS IN FIT4FOOD2030 (URL)

- Climate change
- Malnutrition
- Scarcity of natural resources
- Agricultural pollution
- Biodiversity loss
- Engaged consumer
- Transboundary pests and diseases
- Alternatives to conventional pesticides
- Changes in farm structures

ASSOCIATED CASES IN FIT4FOOD2030 (URL)

- Soilfood
- Lufa farms
- Infarm

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