Project: Nutrients Up-cycling in Herefordshire to Clean Up the Wye

Project Scope This project endeavours to establish a robust **Manure Upcycling System** designed to minimise the environmental impact of intensive poultry farming practices. Its primary goal is by processing the manure on-farm (egg manure) and off-site (broiler manure) with the applied LOHAS biotechnology, to significantly decrease waste poultry litter from intensive poultry (meat and egg production) farming within the Wye catchment, reducing associated impact on local ecosystems.

LOHAS NU (Nutrients Up-cycling) Hubs

LOHAS NU Hubs transform poultry litter into sustainable Organic-based fertiliser, simultaneously safeguarding nearby rivers from pollution and reducing carbon emissions.

Project facts

Biomass type - Poultry litter | Start date - Sep 2024 | Site Location - River Wye Valley

Organic-based fertiliser production | Prevent river pollution | Carbon removal

SDGs met

Technology choice

3 x 10000L Fermentation processors | Moisture reduction system | Fertiliser pelletising system

Introduction

LOHAS NU Hubs stand at the forefront of innovation, representing a pioneering initiative aimed at **transforming poultry litter into Organic-Based Fertiliser** while simultaneously mitigating carbon emissions and preventing local river pollution. The project marks a significant milestone in sustainable agricultural practices, offering a holistic solution to address pressing environmental concerns.

Project Overview Commencing in Sep 2024, the LOHAS NU Hubs initiative targets the River Wye Valley, a region with excess phosphorus runoff, mainly from intensive poultry farming. LOHAS project will make the best use of poultry litter to prevent associate ecological damage. With the increased rate of manure management and manure upcycling, LOHAS project will improve local ecosystems, quality of life, and economic prosperity.

Proposed Solution

LOHAS presents a comprehensive solution centred around proteolysis, a biotechnology-based process designed to convert poultry litter into Organic-Based Fertiliser. By implementing state-of-the-art proteolysis and drying equipment, coupled with stringent biosecurity measures, LOHAS ensures the safe, efficient, and economically viable processing of poultry litter. The proposed NU Hub, strategically located in Herefordshire, serves as a model facility, showcasing the efficacy of proteolysis in reducing manure waste, recovering the Wye, reducing carbon emissions from the biomass, increasing novel fertiliser production and creating a circular economy . Through localised operations and close collaboration with the farming community, LOHAS aims to minimise transportation costs and emissions while incentivising litter supply.

Project Impact

The resulting Organic-Based Fertiliser boasts a high organic matter content and a balanced nutrient profile, enhancing soil fertility, structure, and healthy microbial activity. By retaining nutrients within the soil and promoting healthy plant growth, the fertiliser contributes to increased crop yields and improved agricultural sustainability. Additionally, the project serves as an educational hub, disseminating knowledge on sustainable farming practices and promoting environmental stewardship within the industry.

Additional Benefits

Beyond conventional organic fertiliser initiatives, the LOHAS NU Hubs project delivers significant environmental benefits by eliminating pollution associated with current poultry litter disposal methods. By offering competitive rates for litter supply and leveraging low-cost proteolysis equipment, the project ensures both financial and environmental sustainability. Furthermore, revenue generated from the sale of CORCs enhances the project's commercial viability, supporting the development of a robust bio-based circular economy and bolstering the resilience of UK Agriculture and Horticulture.

LOHAS NU Hubs project represents a transformative approach to sustainable agriculture, addressing environmental challenges while fostering economic prosperity and innovation within the poultry farming sector. Through strategic partnerships and pioneering technologies, LOHAS is committed to realizing a future where agricultural practices are in harmony with nature, ensuring a greener, more sustainable future for generations to come.

Pioneering **Bio-Based Materials and Manufacturing** for **Nutrients Circularity**, **Carbon Reduction** and **Circular Economy.**

To discuss the project, please contact our Project Manager Lian Lin
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