

Converting Agricultural Waste into Biochar & Syngas: Evaluation of Poas Solution for Grainpulse

Timeline: 08/24 - 07/25
Budget: €27k

Startup

poás

- Name: Poas
- Founded: 2022
- Tagline: Agricultural residues into biochar & syngas
- Location: Michigan, USA

Industry partner



- Name: Grainpulse LTD.
- Founded: 2002
- Tagline: Fertilizer producer, trader of agricultural products
- Headquarter: Kampala, Uganda

The problem

Grainpulse - a subsidiary of K+S based in Uganda - produces 140 tons of coffee husks and 1,500 tons of corn cobs annually, which are currently burned to generate thermal energy for a Grainpulse facility in Uganda.

The solution

Poás has developed a gasifier capable of converting agricultural residues into biochar and methane-rich syngas. This process meets the thermal energy demand of the Grainpulse facility while producing a carbon-negative soil additive that can be incorporated into fertilizers.

Project deliverables

- Test of new feedstock for a comparative impact analysis between biomass gasification (biochar & syngas production) and current biomass combustion for the Grainpulse facility
- Development of a biochar-fertilizer mix
- Field trials to evaluate the biochar-fertilizer mix



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