

Green Technology Book

Solutions for
climate change
mitigation



Material substitution: bio-based and compostable food packaging from cassava starch and banana fibers

Hya Bioplastics



Photo: Getty Images / © Fresh5plash

Hya Bioplastics, a startup in Uganda, has developed a bio-based and fully home-compostable food packaging alternative to paper or petroleum-based plastics. The company uses cassava starch – a cheaper alternative to maize – and pulped fibers as their key raw material. The fibers are from the lower part of banana leaves, otherwise treated as waste. Products include a range of food packaging including fruit and vegetable trays, takeaway food boxes and disposable plates. The technology is currently in pilot phase.

- Contracting type: For sale/collaboration
- Technology level: Medium
- Country of origin: Uganda
- Availability: Uganda
- Contact: [WIPO GREEN Database](#)

Material substitution: water hyacinth fibers for use as insulation, packaging and wood-plastic composites

In-Between International



Photo: Getty Images / © Bkamprath

CYNTHIA® is a patented bio-based fiber made from water hyacinth – a common invasive species in many rivers where it blocks sunlight and threatens aquatic ecosystems. The fiber can be produced in various shapes and sizes making it suitable for several use cases. These include insulation for construction and building applications, packaging and wood-plastic composites. The products are currently available as laboratory prototypes and samples, but the company aims to bring the products to market.

- Contracting type: For collaboration
- Technology level: Medium
- Country of origin: Belgium
- Availability: Under development
- Contact: [WIPO GREEN Database](#)