**PRESS RELEASE**

**Extending the shelf life of fruit: Ugandan entrepreneurs Sandra Namboozo and Samuel Muyita in top 10 innovators of the Young Inventors Prize 2025**

* **Food loss and waste account for 8-10% of annual global greenhouse gas emissions, according to the UNFCCC**
* **Namboozo and Muyita’s sachets keep fruit fresh by up to extra 30 days, reducing waste and boosting farmer incomes**
* **The pair are among top ten innovators for the Young Inventors Prize, awarded by the European Patent Office (EPO) on 18 June 2025**

**Munich, 6 May 2025** – Over 1 billion tonnes of food are wasted annually, while 783 million people face hunger, according to the [United Nations Framework Convention on Climate Change (UNFCCC)](https://unfccc.int/news/food-loss-and-waste-account-for-8-10-of-annual-global-greenhouse-gas-emissions-cost-usd-1-trillion). Ugandan entrepreneurs **Sandra Namboozo (26) and Samuel Muyita (27), founders of Karpolax, have developed** a plant-based sachet that **extends the shelf life of fresh fruit by up to 30 days.** Their sustainable, biodegradable preservation solution has earned them a place in top 10 innovators **in the Young Inventors Prize 2025**, **known as Tomorrow Shapers,** which recognises young inventors tackling global challenges. They were selected from 450 candidates by an independent jury.

**Sustainable preservation and fresher produce**

Despite the steady increase in the global population, [around 40% of all food produced does not reach the market](https://wwf.panda.org/discover/our_focus/food_practice/food_loss_and_waste/driven_to_waste_global_food_loss_on_farms/%22HYPERLINK%20%22https%3A//wwf.panda.org/discover/our_focus/food_practice/food_loss_and_waste/driven_to_waste_global_food_loss_on_farms/), according to the World Wildlife Fund**.**

Namboozo and Muyita both grew up in farming families and saw first-hand the challenges of post-harvest losses, which have a devastating impact on the profit of small-scale farmers. **Determined to find a natural and more affordable alternative to synthetic preservers**, they developed sachets, which release a blend of plant-derived volatile organic compounds (VOCs) to **slow ripening and prevent spoilage.** The compounds– extracted from cloves, lemongrass, eucalyptus and wintergreen– inhibit ethylene production, the natural gas responsible for fruit ripening, and **offer protection against mould, fungi and bacteria.** Their solution allows for the controlled, sustained release of these compounds, tailored to different fruit types, thereby providing a biodegradable alternative to conventional artificial preservers.

Pilot tests conducted with Uganda’s National Agricultural Research Organization showed that mangoes stored with the sachets remained fresh for 33 days, while those without them lasted only 11 days. The sachets have since been successfully used on bananas, apples, and oranges. With an affordable price point, Karpolax’s sachets are particularly suited to smallholder farmers and local markets, offering **a cost-effective and locally accessible way to reduce food waste and increase earnings.**

**Protecting innovation for lasting impact**

*“Farmers are one of our biggest customer groups. We wanted to use our knowledge and technical skills to develop something that would not just end on a paper in a lab but really be used by somebody,”* explains Namboozo.

The duo met while studying at Makerere University in Kampala, where they quickly bonded over a shared ambition to reduce food waste. They launched Karpolax in 2020 and aim to expand its reach across Africa, targeting Kenya, Rwanda and beyond. “*Starting from zero, you need to source for that funding yourself. We had some supervisors from the university who supported us and made us feel confident that we could succeed,” added Muyita.*

By 2023, Karpolax had already worked with over 100 farmers, 20 exporters and 250 market vendors. The company is now expanding its product line to include sachets for pineapples, capsicum and berries.

**The Young Inventors Prize celebrates worldwide innovators 30 and under using technology to address global challenges posed by the United Nations Sustainable Development Goals (SDGs).** Namboozo and Muyita’s work supports SDG 2 (Zero Hunger) by reducing post-harvest losses and SDG 12 (Responsible Consumption and Production) by promoting sustainable food preservation practices.

**The prizes of the 2025 edition will be announced during a ceremony** [**livestreamed**](https://www.epo.org/en/news-events/young-inventors-prize/2025-event?mtm_camp=pressrelease&mtm_key=yip2025&mtm_med=press) **from Iceland on 18 June 2025.**

Find more information about the invention’s impact, the technology and the inventor’s story [here](https://www.epo.org/en/news-events/young-inventors-prize/sandra-namboozo-and-samuel-muyita?mtm_camp=pressrelease&mtm_key=yip2025&mtm_med=press).

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**About the Young Inventors Prize**

Aimed at individuals 30 and under, the Young Inventors Prize showcases the transformative power of youth-driven solutions and recognises the remarkable young people paving the way to a more sustainable future. Established in 2022, trophies were first handed out during the European Inventor Award ceremony. From 2025 onwards, the Prize will move up a gear with its own dedicated event, held separately from the Award. Among the 10 Tomorrow Shapers selected for each edition, three will be awarded a special prize: World Builders, Community Healers, and Nature Guardians. In addition, a People’s Choice winner, voted by the public online, will be revealed. Each Tomorrow Shaper will receive EUR 5 000, the three special prize winners will each receive an extra EUR 15 000. The People’s Choice winner will be awarded an additional EUR 5 000. [Read more](https://www.epo.org/en/news-events/young-inventors-prize?mtm_camp=pressrelease&mtm_key=yip2025&mtm_med=press) on the Young Inventors Prize eligibility and selection criteria.

**About the EPO**

With 6,300 staff members, the[European Patent Office (EPO)](https://www.epo.org/?mtm_camp=pressrelease&mtm_key=yip2025&mtm_med=press) is one of the largest public service institutions in Europe. Headquartered in Munich with offices in Berlin, Brussels, The Hague and Vienna, the EPO was founded with the aim of strengthening co-operation on patents in Europe. Through the EPO's centralised patent granting procedure, inventors are able to obtain high-quality patent protection in up to 46 countries, covering a market of some 700 million people. The EPO is also the world's leading authority in patent information and patent searching.