

Nano Science, Technology and Industry Scoreboard

## **Startup Puts up Factory for Crop Growth Stimulant**

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MakilingTek, a spin-off company of UPLB researchers, has built a facility for the semi-commercial scale production of the plant growth stimulant called HormoGroe™. The Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) granted construction funds for the pilot plant at the UPLB Science and Technology Park in Los Baños, Laguna.

MakilingTek President Dr. Lilia Fernando said HormoGroe<sup>™</sup> is a "locally developed solution that can increase the yields and profits of farmers. With the pilot plant, we will be able to produce more, resulting in more farmers benefiting. We are moving steps away from doing research for academic and promotional purposes and moving forward to doing research to address the challenges of the farming communities."



Production of plant growth regulators from lab to semi-commercial scale.

As a plant growth regulator derived from bacteria, HormoGroe<sup>™</sup> is an economical alternative to synthetic and imported plant hormones. Its nanotechnology-based formulation offers the advantage of efficient plant uptake by 30 percent.

To speed up farmers' access to agri-technologies, the <u>SEARCA</u> Grants for Research towards Agricultural Innovative Solutions (GRAINS) was awarded in 2022 to the project entitled <u>"Establishment</u> of a Pilot Plant as Manufacturing Facility for HormoGroe™ Nanoencapsulated Plant Growth Regulators for High Value Crops Production." The equipment and materials for manufacturing HormoGroe™ were funded by another grant from DOST-PCIEERD.

Program Head of SEARCA Emerging Innovation for Growth Department, Asst. Prof. Glenn Baticados said, "GRAINS supports startups and innovators with promising technologies aimed at uplifting the lives of farmers and farming families. Ripe for commercialization, HormoGroe™ is an example of how farmers can tackle poor soil quality without resorting to costly, imported, or ineffective fertilizers."

Dr. Fernando explained that HormoGroe<sup>™</sup> has formulations for root initiation, shoot growth, and fruit setting and flowering. Enhanced germination, plant survival, rooting, and yield were especially observed with tests in banana, coffee, cacao, high-value vegetables, and ornamentals.

Read the <u>original article</u> on SEARCA.