



Dr. Tonny Obua
Assistant Lecturer / Crop Scientist

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About/Introductory statement

I am passionate about Plant Breeding, genetics, and Seed systems; especially for legume crops. I love working with smallholder farmers.

Qualifications

PhD in Agriculture, Makerere University Kampala, 2022

Master of Science in Crop Science, Makerere University Kampala, 2014

Bachelor of Science in Agriculture, Makerere University Kampala, 2011

Member, National Variety Release Committee (Uganda)

Member, National Plant Variety Protection Committee (Uganda)

Biography

I teach courses related to plant breeding and genetics at the university; including both conventional and modern plant breeding techniques.

I am part of the research team that has so far developed six improved soybean varieties that are being grown by 94% of farmers in Uganda.

I have equally passionate about improving the yields of farmers especially those involved in soybean production. One of my key aspirations is to disseminate the improved soybean varieties we develop from

Makerere University to reach all the smallholder farmers in Uganda and across the East African region.

I am equally keen on community transformation through the establishment of local seed businesses (LSBs)/community seed banks that enable our soybean varieties to reach smallholder farmers in the shortest time.

Teaching

1. Principles of Plant Breeding
2. Plant Breeding Technologies
3. Plant Breeding Methods

Research

Soybean breeding with a focus on yield, nutritional traits (protein and oil content), short maturity period

Research groups and Centres

Soybean Africa Ltd
<https://soybeanafrica.com>

Community based work

I have supported several farmer groups to grow improved soybean varieties in Uganda; either as grain or seed. Some of these include; Bala Women and Youth (Kole), Alito Joint Multi-Purpose Cooperative (Kole), West Acholi Cooperative (Gulu), Dokolo Young Oil Seeds Cooperative (Dokolo), Kwera Young Oil Seeds Cooperative (Dokolo), Gang Dyang (Agago)

Publications

Harun Murithi, Michelle L Pawlowski, Tizazu Degu, Deresse Hunde, Molla Malede, **Tonny Obua**, Hapson Mushoriwa, Daniel Leigh Coyne, Phinehas Tukamuhabwa, and Glen L Hartman. 2021. Evaluation of Soybean Entries in the Pan-African Trials for Response to *Coniothyrium glycines*, the Cause of Red Leaf Blotch. *Plant Disease*. <https://doi.org/10.1094/PDIS-05-21-1017-RE>.

Obua, T., Sserumaga, J.P., Awio, B., Nganga, F., Odong, T.L., Tukamuhabwa, P., Tusiime, G., Mukasa, S.B., Nabasiye, M. 2021. Multi-Environmental Evaluation of Protein Content and Yield Stability among Tropical Soybean Genotypes Using GGE Biplot Analysis. *Agronomy* 11 (7), 1265. <https://doi.org/10.3390/agronomy11071265>.

Clever Mukuze, Phinehas Tukamuhabwa, Mcebisi Maphosa, Shorai Dari, **Tonny Obua**, Hellen Kongai and Patrick Rubaihayo. 2020. Evaluation of the performance of advanced generation soybean [*Glycine max*

(L.) Merr.] genotypes using GGE biplot. *Journal of Plant Breeding and Crop Science* 12(3): 246-257. DOI: 10.5897/JPBCS2020.0905.

Clever Mukuze, Phinehas Tukamuhabwa, Mcebisi Maphosa, Shorai Dari, Isaac Onziga Dramadri, **Tonny Obua**, Hellen Kongai and Patrick Rubaihayo. 2020. Genetic diversity analysis among soybean genotypes using SSR markers in Uganda. *African Journal of Biotechnology* 19(7): 439-448. DOI: 10.5897/AJB2020.17152.

Tonny Obua, Julius P. Sserumaga, Stephen O. Opiyo, Phinehas Tukamuhabwa, Thomas L. Odong, Josiah Mutuku & Nasser Yao. 2020. Genetic Diversity and Population Structure Analysis of Tropical Soybean (*Glycine Max* (L.) Merrill) using single Nucleotide Polymorphic Markers. *Global Journal of Science Frontier Research* 20 (6): 35-43.

Tonny Obua, Julius P. Sserumaga, Fredrick Nganga, Phineas Tukamuhabwa, Thomas L. Odong, Josiah Mutuku & Nasser Yao. 2020. Nutrient Profiling of Tropical Soybean (*Glycine Max*) Core Collection. *Global Journal of Science Frontier Research* 20 (7): 23-30.

T Obua, M Nabasirye, M Namara, G Tusiime, M Maphosa and P Tukamuhabwa. 2020. Yield stability of tropical soybean genotypes in selected agro-ecologies in Uganda. *South African Journal of Plant and Soil* 37(2): 168-173. DOI: 10.1080/02571862.2019.1678687.

Phinehas Tukamuhabwa, **Tonny Obua**, Mercy Namara, Dennis Okii, Paul Kabayi and George Yiga. 2019. Soybean Research and Development in Uganda: Highlights 2002-2018. *Makerere University, Kampala, Uganda*.

Tukamuhabwa P. and **Obua T.** 2015. Soybean Production Guide in Uganda. *Makerere University, Kampala, Uganda*.

Karungi J., **T. Obua**, S. Kyamanywa, C. N. Mortensen and M. Erbaugh. 2013. Seedling protection and field practices for management of insect vectors and viral diseases of hot pepper (*Capsicum chinense* Jacq.) in Uganda, *International Journal of Pest Management*, 59:2, 103-110

Obua T. 2013. Soybean Rust Diversity and Response of Elite Soybean Lines to Ugandan Environment. MSc. thesis. Makerere University, Kampala