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03 June 2021

Dear Mr Goodrem,

## **Re: Use of Vigoland's Plant Growth Stimulator (Vigo®) in the production of an underutilised legume crop**

Research was conducted by an MSc candidate, Mr Sipiwo Zidubule, on the use of biostimulants in the production of an underutilised legume species, Bambara groundnut (jugo bean, izindlubu). The research commenced in 2019 and concluded in 2020 and was supervised by myself (Ethel Phiri, Department of Agronomy) and Dr Palesa-Natasha Mthapo (Division for Research Development).

The research, titled "Use of biostimulants to assess the production of the underutilised legume, Bambara groundnut". In the thesis, published in March 2021, "humic substance" is in reference to **Vigoland's (Vigo®)**. While Vigoland donated the (Vigo®) for research purposes, the study utilised three different "biostimulants" including the commercially available Kelpak® and an Moringa extract. Thus, the results are presented without prejudice.

The main highlights of the results are:

- Vigo treated plants reached 50% flowering significantly earlier than the control and other treatments.
- Treatment with Vigo resulted in higher yield parameters, i.e., number of pods per plant, 100-seed weight, and total seed yield.
- Vigo treated plants showed the highest harvest index percentage relative to the other treatments.
- Statistically (multiple linear regressions), the study showed that variation in total seed yield was due to treatment, i.e. Vigo.
- The nutrient composition (fatty acids, carbohydrates, and proteins) of the Bambara groundnut seeds was improved under Vigo treatment, meaning that the treatment not only improved plant growth and productivity but maintained the nutritional composition of the crop.

We look forward to future collaborations.

Sincerely,

**Dr Ethel E. Phiri | PhD | PG Dip. Agronomy**

Lecturer: Agronomy

Sustainable Plant Production and Protection

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