

MSc scholarship: Plant-soil eco-evolutionary feedbacks within vegetable intensified push-pull technology (VIPPT)

Closing date for applications: 15 January 2023

Project summary

The magnitude and direction of organismal interactions is chiefly influenced by genotypic composition and the environment. In agroecosystems, such background contexts can mediate crop performance through alterations in key traits such as defence against pests, resource allocation for growth and ultimately yield. Interestingly, the trajectory of such key traits can be mediated by the functional diversity of soil microbes therein, as determined by the aboveground plant communities. Since its inception over 27 years ago, progressive farmer adoption of push-pull thereafter provides a generational timescale that can be an excellent platform for examining eco-evolutionary trophic relationships with a goal to better predict and develop adaptive location-specific crop combinations that optimise pest management, and subsequent vegetable yield. The current student project will investigate variation in chemical defences against insect herbivory and agronomic performance of 3 selected vegetable crop species recently introduced within VIPPT plots of variable ages in multilocation trial that will link with recently determined soil-microbe communities. We therefore seek a dynamic candidate interested in tackling both theoretical and applied questions in this theme to join the push-pull program at ICIPE Thomas Odhiambo Campus, Mbita Point, Kenya. The student will be hosted by the EU-UPSCALE project under the supervision of Dr F. Chidawanyika.

Starting date: February 2023.

Eligibility criteria and desirable attributes

1. Should be a national of an African country
2. Completed a bachelor's degree in ecology/entomology/microbiology
3. Knowledge in molecular biology is a plus
4. Registered for MSc in a recognized University (or eligible for a full masters by research dissertation as prescribed by the registering University)
5. Completed course work/year one of study awaiting research
6. Basic knowledge in analytical software (STATISTICA, and/or R)
7. Proficiency in scientific writing

How to submit your application and supporting documents

- i. Please download and complete the [Application Form](#). **Download the Application Form [HERE](#)**
- ii. Please submit your application form and supporting documents (see below) by uploading to the icipe online application platform [HERE](#) by **15 January 2023**
- iii. The accepted formats for supporting documents are doc, docx, pdf, rtf, zip, rar, jpg, jpeg, png, bmp, tif. Maximum size for any one file is 5 MB. Do not exceed this size.
- iv. Once you have entered and uploaded everything, click the Continue button. This will take you to the Review your Entries page where you can review and change anything in your application. Once you are satisfied with your application, click the Continue button to submit your application. This cannot be undone, so please make sure all your application information is correct before submitting. You will receive an email acknowledgement when we receive your completed online application.
- v. You will receive an email acknowledgement of your submission.
- vi. Do not submit your application by email. Only applications and supporting documents submitted online will be accepted. Applications submitted by email will be rejected.

Also, please upload the following supporting documents:

- a. Curriculum vitae
- b. Motivation letter
- c. Certified university degree certificates (pdf)
- d. Certified academic transcripts (pdf)