

Biological control of seed-borne diseases of rice and vegetables – A joint research collaboration between Can Tho University, Vietnam and Swedish University of Agricultural Sciences, Sweden

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Objectives: To establish and develop a joint research collaboration between Can Tho University, Vietnam and Swedish University of Agricultural Sciences, Sweden on biological control of seed borne diseases in vegetables and rice.

Project period: June 2017 - May 2018.

The pilot project will include:

- Planning of future project collaboration (jointly together at SLU June 2017).
- Plan and carry out the pilot project on biological control of seed-borne diseases in vegetables and rice. Focus will be on seed treatment with bacteria and/or fungal biocontrol agents (BCAs) either with one strain or combinations of two BCA organisms. Two vegetable species relevant for both Sweden and Vietnam as well as one rice cv - all known to have problems with seed borne pathogens - will be chosen as models for biocontrol experiments.
- Technologies for seed treatments with BCAs will be evaluated for their applicability for use with the selected plant seeds. A protocol for treating the seeds and carry out the field experiments under field conditions in Vietnam will be established based on results from a 3 week study stay of two Vietnamese students at SLU, June 2017.
- Short field/semi field experiments for testing biocontrol under conditions in Vietnam will be carried out July - November 2017. Processing data and presenting the results December 2017- February 2018. Writing proposal(s) for funding future network collaboration and student exchange is planned with application deadline in April 2018.
- Evaluating results and writing report including a plan for future collaboration (May 2018).

We envisage that CBC can take part in the project with Margareta Hökeberg and Sebastian Håkansson as affiliated.

Outcome: We will address a possible biocontrol solution for seed borne diseases in vegetables and rice in Vietnam, especially in the Mekong Delta, aiming at reducing pesticide use and form the basis for future research collaboration in this area of research. For future collaboration we will address both applied science and basic research for revealing important traits of BCAs seen in relation to the disease cycles they are to act upon and the environment in which they are to act.