UNIVERSITI TEKNOLOGI MARA

Programme and Abstracts

PIMES

PLANTATION MANAGEMENT EXHIBITION & SEMINAR

15th December 2018

Faculty of Plantation and Agrotechnology
Universiti Teknologi MARA
Melaka Branch, Jasin Campus
77300 Merlimau, Melaka, Malaysia

DEAN PREFACE

Assalamualaikum Warahmatulllahi Wabarakatuh

My heartiest congratulations go to the Committees for successfully organized PIMES September 2018. PiMES September 2018 enables lecturers and panels from strong industrial background to reflect and share significant ideas, experiences and research findings in the workplace and in partnerships. It is also hoped to encourage collaboration among the lecturers and enhance the quality and performance of the faculty. The research findings derived from this substantial event shall indicate the commitment of lecturers not only in teaching, but also in striving to unfold new knowledge and processes that will benefit the nation. The efforts of our lecturers need to be further extended to a wider audience so that the nation will benefit from the research findings. It is also hoped that, the proceedings will trigger serious thought and more robust research in the field of education as well as plantation and technology so as to help Malaysia achieve Vision 2020.

As we know, agriculture production has increased tremendously today because of the demand from various sectors in the world. To meet the challenges of increasing food demand, techniques and ways should be created to improve productivity, profitability and sustainability of the agricultural system. Industrial agricultural system has led to irretrievably changes in the landscape diversity, soil quality, environment integrity, and natural resource base. This has resulted major questions and curiosity worldwide in relation to the sustainability of agricultural production system. The most significant damage to natural ecosystems and the environment was caused by habitat conversion and corresponding climate change, loss of biodiversity and ecosystem functions, soil erosion and degradation, and pollution from fertilizers and pesticides. Concepts in plant protection have changed in past decades from exclusion or destruction of pest to pest management. Serious problems with pesticides, rapid development of pest resistance, environmental effects of pesticides, and high costs led to development of new approaches and techniques in pest management based on improved knowledge of pest dynamics and their natural enemies, and the interaction between the pest and the crop.

It remains only for me to thank all those who have helped to make this events such a great and wonderful success. Much appreciation is due to the board editor, and reviewers of all papers submitted as well as to all authors whose ideas and contributions ensured rich and lively discussion during the various sessions.

DEAN.
Assoc Prof Dr Asmah Awal

INTRODUCTION

The PiMES committee and UiTM (Melaka), Jasin Campus residents are very pleased to welcome all participants in the Plantation and Management Seminar (PIMES) which is organized by Faculty and Agrotechnology.

PiMES aims to give an exposure to the students about the procedure to make a poster by extracting information from their final year project. This seminar will sharpen their communication skill as well as they can exchange and share their research result, projects, experiences and new ideas related to all aspects of studies in plantation management and agribussiness, plant sciences, soil sciences, plant protection, plant biotechnology and agricultural engineering. We sincerely hope that you will enjoy and return home with plenty of inspiration to improve agro-industry plantation practices and research activities.

PLANTATION AND MANAGEMENT SEMINAR 2018 (PiMES)
Melaka, Malaysia
December 15, 2018

ANTAGONIST ACTIVITY OF Trichoderma spp. AGAINST Sarocladium oryzae ON SHEATH ROT DISEASE OF RICE CULTIVATION IN VIVO ASSAYS

Ariff Abdul Somad Hamzah, Intan Sakinah Mohd Anuar

Faculty of Plantation and Agrotechnology, UiTM (Malacca) Jasin Campus, 77300 Merlimau, Malacca.

Corresponding Author:
intan_sakinah@melaka.uitm.edu.my

ABSTRACT

Sheath rot (Sarocladium oryzae) disease was one of a serious disease that effects the rice production in Malaysia. The sheath rot has widely infest in many rice cultivation areas in Malaysia and reported to result at about 40% to 60% loss of revenue. Due to the wide spread of diseases infestation, farmers tend to increase the uses of pesticide to counter the diseases that might harm the environment and increase the cost of maintenance. Therefore, this study was conducted to measure the performance of Trichoderma sp. suspension by pathogenicity test against Sarocladium oryzae. This study is conducted under greenhouse condition to specify the ability of soil borne pathogen specimens which is Trichoderma sp. to counter, resist, or withstand against the causal agent of sheath rot disease which is Sarocladium oryzae in MR219 rice variety. This biological control research is tested by antagonistic activity (in-vitro) by conversion of both pathogen into conidial suspension and applied or tested on the rice crop. Both severity and results were recorded and it was found that Trichoderma sp. showed the ability to inhibit or stop the severity or Sarocladium oryzae pathogen infection on the rice crop. As for conclusion that can be drawn from this study are the method can be further develop into an alternative method in controlling sheath rot or maybe other diseases on rice crop in the future as biological control have become a trend and step among agriculture agency or farmers in order to prevent high uses of chemical for pest maintenance to reduce cost and environment pollution.

Keyword: Sarocladium oryzae, Trichoderma sp., antagonistic activity, conidial suspension, disease severity.