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 MANAGEMENT EXHIBITION AND SEMINAR 2018 (PiMES)*
*Melaka, Malaysia*
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# *IN VITRO* EVALUATION OF AQUEOUS WEED EXTRACTS AGAINST COLLETOTRICHUM GLOEOSPORIOIDES, A CAUSAL AGENT OF COLLETOTRICHUM LEAF FALL DISEASE ON RUBBER

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## ABSTRACT

*Colletotrichum* leaf fall disease (CLD) had become one of major disease on rubber in Malaysia. *Colletotrichum gloeosporioides* is the commonly fungal pathogen that caused this disease. The widespread of *Colletotrichum gloeosporioides* also not only focusing on rubber but also toward others crop such as citrus, cocoa, mango, papaya and many more. This is because the biological and cultural controls become inefficient for control this disease and currently depending on chemical used to handle it that can cause others problem such as environment problems. In this study, there were three replications for each type of weed species. Therefore, the main objectives of this study were to determine the antifungal activity of five selective weed extracts toward Colletotrichum leaf disease (CLD) on rubber using the in vitro experiment and to determine the most effective weed extract that can reduce growth of fungal activity. The total of five weed species was collected at Share farm in UiTM Jasin Campus, Melaka such as Solanum torvum, Lantana camara, Momordica charantia, Amaranthus viridis and Morinda elliptica. For antifungal activity, the technique that was used known as food poisoning technique. The weed extracts that showed the highest inhibitory effect of fungal growth was Solanum torvum with 82% of mycelial inhibition followed by Momordica charantia (19.42%), Lantana camara (11.03%), Morinda elliptica (10.07%) and Amaranthus viridis (7.14%). There are significant different between the diameter of fungal growth inhibition of weed species captured ($p<0.05$) through ANOVA analyze. Apart from that, the results identified the common weed species that has potential used as biological control agent for *Colletotrichum gloeosporioides* which was *Solanum torvum*.

*Keyword: Colletotrichum gloeosporioides, food poisoning technique, Solanum torvum, rubber, weed extracts*