



*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

# **PLANTATION MANAGEMENT EXHIBITION AND SEMINAR 2018 (PiMES)**

*Melaka, Malaysia*

*December 15, 2018*

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## **DEAN PREFACE**



Assalamualaikum Warahmatullahi 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*

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## **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 agribusiness, 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.

**EFFECT OF VIGNA UNGUICULATA MULCHING ON GROWTH AND  
YIELD PERFORMANCE IN AEROBIC RICE (AERON 1)**

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**ABSTRACT**

This research was carried out to evaluate the effect of mulching application on growth and yield performance of an aerobic rice at the greenhouse Universiti Teknologi Mara (UiTM), Melaka Campus Jasin. The objectives of this study is to study the effectiveness of *Vigna unguiculata* mulching on yield and growth performance. There were 2 treatments along with 5 replications were used in this experiment. The treatment consist of *Vigna unguiculata*. and no mulching (control) and each of it consist five replications. Each of aerobic rice were planted in a single pot and each pot were applied 20 gram of mulching which act as a treatments. AERON 1 variety was chosen in this experiment because of rapid growth and this experiment was conducted for 100 days. *Vigna unguiculata* mulching has the highest mean number for plant height (116.37cm), number of tiller (9.55), and plant biomass (83.108g). The result showed the rice plant consist of mulching has better result in growth performance for all parameter included plant height ( $P = 0.004$ ), number of tillers ( $P = 0.004$ ), and also plant biomass ( $P = 0.002$ ). As for yield, the result shows the highest mean for all parameter was the mulching application for the number of panicle (14.40), total weight of grain (14.19g), and the total weight of unfilled grain (12.42g). There were no significant different in number of panicle ( $P= 0.089$ ), and the total weight grain ( $P=0.133$ ). Unfortunately, the total weight of unfilled grain has significant with  $P=0.027$ . Lastly, the mulching application was effective and showed that it had significant different on growth performance, but on yield performance there was no significant due to several factors such as being attack by pest. The application of mulching can be used by farmer as it would give benefit in terms enhancing the plant growth and yield.

*Keywords: Mulching, Vigna unguiculata, growth performance, yield performance, AERON1*