



Programme and Abstracts

PIMES

**PLANTATION MANAGEMENT
EXHIBITION & SEMINAR**

15th December 2018

Faculty of Plantation and Agrotechnology
Universiti Teknologi MARA
Melaka Branch, Jasin Campus
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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.

**GROWTH AND DEVELOPMENT OF OIL PALM SEEDLINGS
RESPONSE ON WATER STRESS AT PERTUBUHAN PELADANG
KAWASAN KOTA TINGGI TIMUR (CASE STUDY)**

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ABSTRACT

Oil palm or in scientific name is known as *Elaeis Guineensis* is a major crop that most popular planted in Malaysia. Oil palm also known as very sensitive crop that need good management practices to produce the best quality of the yields. The management started from the nursery stage. At the nursery, water is the essential requirement that needed for plant growth. Oil palm seedlings in the pre nursery need 0.5 liters water while in the main nursery the oil palm seedlings should get 2.0 liters per day. Besides, water also can lead the oil palm seedlings to stress. There are many factors that can cause the water stress such as drought and raining season and poor irrigation system. This experiment is focused on growth and development of oil palm seedlings in response to water stress conditions. After soil water holding test have been made, the oil palm seedlings is transferred to the sandy loam soil in the polybags. Then, the experiment is carried out by using complete randomize with four water levels that measured as water stress which were control that give enough water for the seedlings, excess water level from control, partially flooding and continuously flooding condition. Then, growth and development of the seedlings based on parameter such as plant height, diameter, number of leaves, roots length and dry weight were measured. From the experiment, insignificant change is occurred but the best result of seedlings even face the water stress is on partially flooding because it has the highest result on the most of measured parameter.

Keyword: Oil palm, seedlings, water stress, water level