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Programme and Abstracts

PIMES
PLANTATION MANAGEMENT
EXHIBITION & SEMINAR

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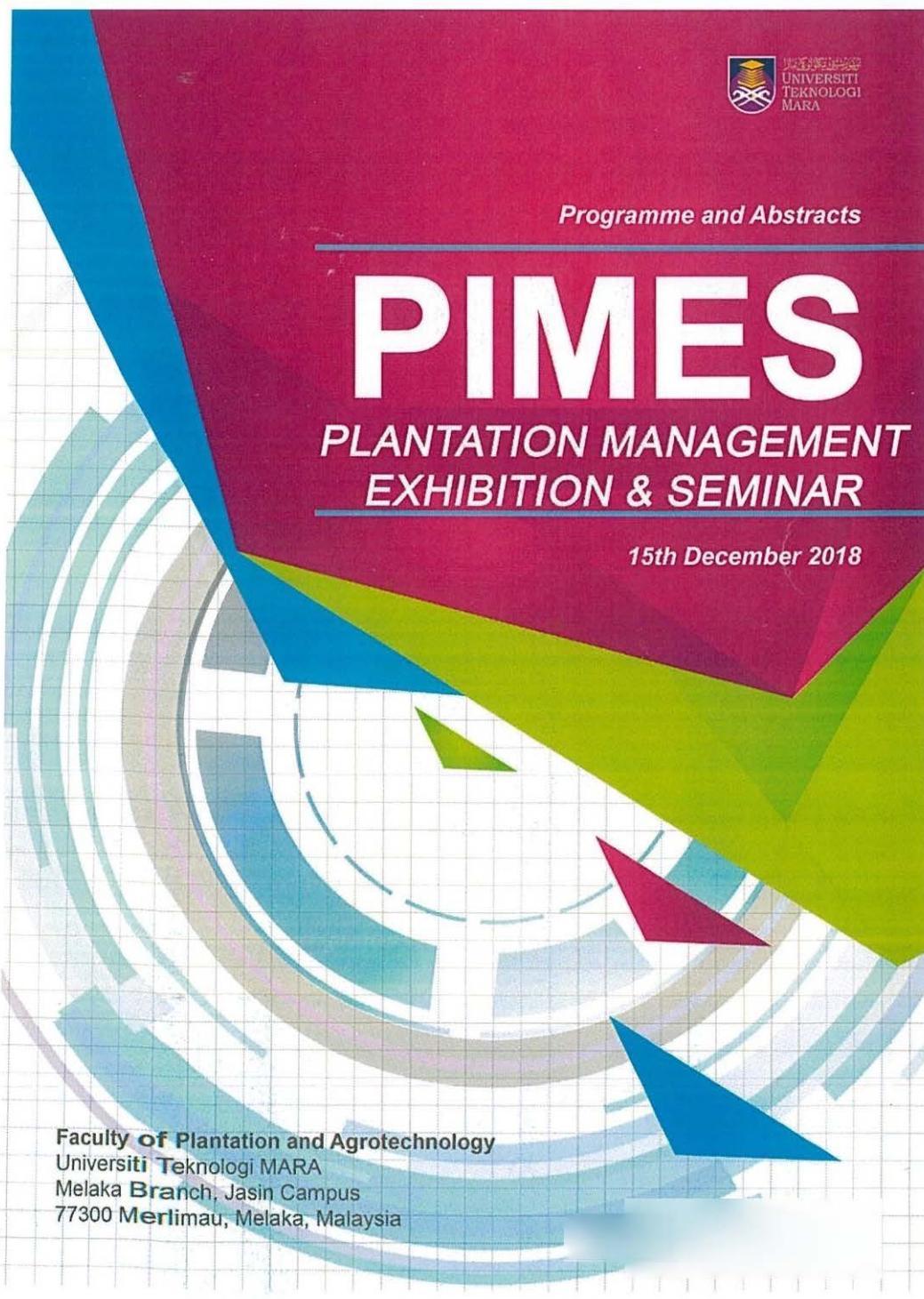
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PLANTATION MANAGEMENT EXHIBITION AND SEMINAR 2018 (PiMES)

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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.

ANALYSES OF SOIL CHEMICAL PROPERTIES ON MINERAL SOIL AND PEAT SOIL TOWARD GROWTH PERFORMANCE OF PINEAPPLE (MD2)

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ABSTRACT

There are confusing facts that the mineral soil is high in nutrient compared to the peat soil but most of pineapple in Malaysia were cultivated on the peat soil. Thus, a set of experiment was conducted to evaluate the relationship of chemical properties on mineral soil and peat soil toward growth performance of pineapple and to compare the early growth performance of MD2 pineapple that planted in mineral soil and peat soil. The chemical properties such as soil pH, cation exchange capacity (CEC), soil salinity and nutrient contents which are phosphorus (P), potassium (K), calcium (Ca) and Magnesium (Mg) from both soil were analyzed. The growth performance (plant height, leaf length, leaf number and leaf width) of pineapple cultivated on different of soil also were measured. Results showed peat soil significantly ($p = 0.00$) more acidic (3.49) compared to mineral soil (5.38). The pH of soil was influenced cation exchange capacity (CEC) of the soil which the CEC of mineral and peat soil was 18.85 $cmol_c/kg$ and 2.82 $cmol_c/kg$ respectively. Salinity of both soil indicate it was suitable for pineapple growth which between 1-2 dS/m. Mineral soil content high nutrient compared to peat soil especially for Ca (626.81 mg/L) and Mg (45.55 mg/L) content. While peat soil significantly high in P and K content compared to mineral soil. However, the growth performance of pineapple cultivated on both type of soil shows no significant difference ($p \geq 0.05$) except for leaf width.

Keywords: peat, mineral, chemical properties, growth performance