



Programme and Abstracts

PIMES

PLANTATION MANAGEMENT EXHIBITION & SEMINAR

15th December 2018

Faculty of Plantation and Agrotechnology
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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.

NUTRIENT AND HEALTH BENEFIT OF GM RICE: A REVIEW

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ABSTRACT

Oryza sativa is one of the world's valuable crops which become staple food crop for more than 60 per cent of the people in the world. Moreover, rice becomes problem among people where rice is become their staple food but it is low in macronutrients that required for daily diet. The objective of this review is to review on potential benefit of GM rice and to verify that GM rice can fulfil recommended levels of daily dietary nutrient by human. Improvement on biofortified can be done through genetic engineering and conventional breeding. But, use of genetic engineering made it possible to transfer gene of interest from wild relatives and distinct species that is practicable compared to conventional breeding. Genetic engineering used to ensure plant food get all of micronutrient content to fulfil human needs. Many approaches used to improve multiple GM rice nutrient such as improve amino acid, vitamin A, folate and iron accumulation. However, use of genetic engineering has triggered controversial and further research is also needed to get better understanding about this technology and its role in food security. Potential risk of GM rice to human health also concerned to ensure they are not involved to danger when consume GM rice in their daily life. From this review, GM rice seems like does not show a good future and there is a possibility that this research will not being continue. Then, current scientific advances need to be continued along with the campaign and promotion to provide a better understanding among consumers and also to encourage consumers to participate in review or research to receive GM rice products. GM food should be environmental friendly and safe for human intake and need more assessment before supplied to general.

Keywords: Oryza sativa, staple food, genetic engineering, nutrient, GM rice