

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

Melaka, Malaysia December 15, 2018

NO	CONTENTS	PAGES
1.	The Dean, Faculty of Plantation and Agrotechnology. Universiti Teknologi MARA	1
2.	Introduction PiMES	3
3.	Committees	4
4.	Schedule of PiMES	5
5.	Room Distribution For Poster Presentation	7
6.	Distribution For Poster Presentation	8
7.	Abstracts	29
.8.	List Of Panels Industries	241

Melaka, Malaysia December 15, 2018

#### 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

Melaka, Malaysia December 15, 2018

#### INTRODUCTION

The PiMES committee and UiTM (Melaka), lasin 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.

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# THE BENEFITS AND ISSUES TOWARD GOLDEN RICE AS GENETIC MODIFIED CROP

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#### ABSTRACT

Golden Rice (GR) was developed to produce beta-carotene by genetic engineered (GE) method as the solution for vitamin A deficiency (VAD) problem. Beta-carotene act as pro-vitamin A which can convert to vitamin A in human body. Since GR is genetic modified (GM) crops, there are many issues raised among public include its effectiveness and impact show the reason of GR not commercialize for it uses and still under research until now. It be questioned by public, scientists and non-government organization because less information about this issue and lack of studies to show the future safety of golden rice regards to health and environment. The issues rise included gene contamination, potential unexpected effect with GR plant, risk to human health also compromising food security. GR also have their own potential benefits. It has been proven to have potential to assist in reducing VAD which become the public health problem especially in developing countries. The benefits of GR are shown on their effectiveness, safety, cost saving and maintain the original taste of the rice. The development and study of GR must be continued to answer all issues toward GR as well as improve and fixed the problem within GR.

Keyword: Golden rice, pro-vitamin A, vitamin A deficiency, genetic modified crops