

MSPPC 2008

19th Malaysian Society of Plant
Physiology Conference

18-20 November 2008
Cophthorne Orchid Hotel,
Tg. Bungah, Penang

**Programme
& Abstract**

**SUSTAINABLE
CROP AND PLANT
PRODUCTIVITY IN
RELATION TO
CLIMATE CHANGE**

Organized by

**MALAYSIAN SOCIETY
OF PLANT PHYSIOLOGY
(MSPP)**



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MALAYSIAN SOCIETY OF PLANT PHYSIOLOGY (MSPP)

Co-organized by

Universiti Putra Malaysia

Universiti Sains Malaysia

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P29 SOIL WATER CONTENT IN DIFFERENT SOIL WATER CONSERVATION METHODS IN AN OIL PALM ESTATE

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The purpose of this study was to compare the soil water content in five soil water conservation methods in an oil palm estate. The treatments were empty fruit bunches (EFB), ecomat (EFB fibre mat, 20 mm thick), silt pit, oil palm fronds and control (bare ground). The soil water content measured was for seven soil depths: 0, 0.15, 0.225, 0.30, 0.45, 0.60 and 0.75 m. Measurements were done daily from May 2008 and continues until today (data up to July 2008 was presented here). Results indicated that both EFB and silt pit were the best methods to conserve soil water (both conserving about a weekly mean of 35% more water than the control), followed by ecomat (about a weekly mean of 7% more water than control). Both the control and oil palm fronds methods had similar soil water content with each other: their mean weekly water content differed less than 1% from each other. Both EFB and silt pit could store a maximum total of about 590 mm per day, whereas ecomat, oil palm fronds and control could only a maximum of about 510 mm per day. This study is still ongoing but results so far indicate that EFB is the best and cheapest method to conserve soil water.

P30 SCREENING OF *Ganoderma boninense* IN OIL PALM SEEDING BY INDIRECT ELISA METHOD USING HIGHLY PURIFIED POLYCLONAL ANTIBODY ANTI-HYPAE

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Ganoderma BSR disease has been known for many years but efforts to control the disease in other countries have been futile. It is among the major disease which infecting many economically important crops such as coconut, rubber and oil palms. There are currently no reliable diagnostic methods for detecting *Ganoderma* BSR from palms available in the market and conventional methods to detect early symptoms of the disease such as calorimetric method using EDTA and by drilling technique, are time consuming and the accuracy in not very high. Therefore, the development of a simple, inexpensive and accurate enzyme immunoassay screening kit for detecting *Ganoderma* BSR in palms is highly desirable in decision making for appropriate control of *Ganoderma*. In this work we have demonstrated the efficiency of the *Ganoderma boninense* detecting method using indirect ELISA. The indirect ELISA method is using the highly purified polyclonal antibody anti-hyphae attached to solid supports combined with enzyme reactions to produce systems capable of detecting *Ganoderma boninense*. The results showed that out of the 30 seedlings tested for the presence of *Ganoderma boninense*, none tested positive. Since the seedlings were known to be free of *Ganoderma boninense* infection, the results obtained in this works suggest that the method is suitable for detection of *Ganoderma boninense* due to non occurrence of false positive results.