

**THE EFFECTS OF SALINITY TO THE GROWTH, DEVELOPMENT AND  
YIELD ON IR72 AND MR159 PADDY VARIETIES**

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**THIS DISSERTATION IS SUBMITTED IN PARTIAL FULFILMENT PART OF  
THE BACHELOR DEGREE IN SCIENCE WITH HONOURS**

**PLANT TECHNOLOGY PROGRAMME  
SCHOOL OF SCIENCE AND TECHNOLOGY  
UNIVERSITI MALAYSIA SABAH**

**April 2008**



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UNIVERSITI MALAYSIA SABAH

## ABSTRACT

Salinity is a major environmental stress that adversely affects plant growth and metabolism. The objectives of this study were to evaluate the effects on salinity on the growth, development and yield of IR72 and MR159 rice varieties and to evaluate the tolerance of IR72 and MR159 to salinity. Paddy plants were grown in pots at the field laboratory at School of Sustainable Agriculture in Universiti Malaysia Sabah. The plants were treated with three concentration having electrical conductivities of 1.5-2.0 dS m<sup>-1</sup>, 3.5-4.0 dS m<sup>-1</sup> and 5.5-6.0 dS m<sup>-1</sup>. The experiment was conducted until plant maturity before harvested. The results showed that the various salinity treatments had no effect on plant height, the number of tillers, the number of panicles, For IR72 variety, the weight of filled spikelets was significant at 3.5-4.0 dS m<sup>-1</sup> but for MR159, the weight of filled spikelets was not significant for various salinity treatments. The 3.5-4.0 dS m<sup>-1</sup> salt treatment showed the greatest reduction in paddy yield for both varieties. MR159 variety was more tolerant to salinity compared to IR72 variety.

