

SEED GERMINATION OF *MIMOSA FIGRA*
SEEDLINGS IN DIFFERENT SALINITY LEVELS

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SEED GERMINATION OF *MIMOSA PIGRA* SEEDLINGS IN DIFFERENT
SALINITY LEVELS

By

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**JABATAN SAINS BIOLOGI
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**PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II**

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: SEED GERMINATION OF *MIMOSA PIGRA* SEEDLINGS IN DIFFERENT SALINITY LEVELS oleh Wan Azizan binti Abd Aziz, no. matrik: UK7984 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperoleh ijazah Sarjana Muda Sains - Sains Biologi, Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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LIST OF ABBREVIATIONS / SYMBOLS

ppt	-	Part per thousand
DOA	-	Department of Agriculture
FGR	-	Fastest germination rate
MGR	-	Maximum germination rate
RL	-	Root length
SL	-	Stem length

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ABSTRACT

The study was conducted to determine the seed germination of *Mimosa pigra* to different salinity levels and defoliation effect of *M. pigra* seedlings at three different cutting methods. The seed germination test was done in 0, 5 and 10 ppt. The defoliations were performed by cutting 15cm from based, 7cm from shoot and total cut of seedlings stem. Result showed that 5 ppt was the best salinity level for the germination of *M. pigra* seed (84.45% in six days). The highest mean of stem length were also observed in 5 ppt. However, the highest root length occurred in zero ppt. The defoliation effect is failed to be tested due to the slow growth of *M. pigra* seedling. Seedlings failed to reach the required height after 60 days at 5 ppt salinity. Further study was suggested to determine the growth rate of *M. pigra* seedling at lower salinity level. Therefore, defoliation effect may be conducted if the seedlings successfully grow.

PERCAMBAHAN BIJI BENIH *MIMOSA PIGRA* DALAM SALINITI BERBEZA

ABSTRAK

Kajian ini dijalankan bertujuan untuk mengkaji percambahan biji benih *Mimosa pigra* dalam saliniti berbeza dan mengkaji kesan tiga cara pemangkasan batang terhadap pertumbuhan *M. pigra*. Percambahan biji benih dijalankan dalam saliniti 0, 5 dan 10ppt. Pemangkasan batang dilakukan 15cm dari tanah, 7cm dari pucuk dan keseluruhan batang anak pokok. Hasil kajian mendapati saliniti 5ppt adalah saliniti yang paling sesuai bagi percambahan biji benih *M. pigra* (84.45% dalam enam hari). Min panjang batang tertinggi juga diperhatikan dalam saliniti 5ppt. Walau bagaimanapun, min panjang akar yang tertinggi diperhatikan dalam 0ppt. Kajian kesan pemangkasan gagal dijalankan disebabkan kadar pertumbuhan anak pokok *M. pigra* yang terlalu perlahan. Anak pokok gagal mencapai tinggi yang diperlukan dalam tempoh 60 hari penanaman dalam saliniti 5ppt. Kajian lanjut adalah dicadangkan untuk mengenalpasti kadar pertumbuhan anak pokok *M. pigra* dalam saliniti yang rendah. Kajian kesan pemangkasan mungkin dapat dijalankan sekiranya anak pokok tumbuh dengan sihat.