

C626713 : MAJOR BIOTECHNOLOGY

KEY WORD: *Bruguiera gymnorrhiza*/PROPAGATION/TISSUE CULTURE/MANGROVE
KULLANART OBSUWAN : HYPOCOTYL CUTTING AND IN VITRO
CULTURE TECHNIQUES FOR PROPAGATION OF BLACK MANGROVE
Bruguiera gymnorrhiza Lamk. THESIS ADVISOR : ASSIST.PROF.
PIPAT PATANAPONPAIBOON, Ph.D., THESIS COADVISOR :
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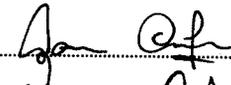
A study on improvement of hypocotyl cutting techniques of *Bruguiera gymnorrhiza* Lamk. by dividing hypocotyl into 2 pieces, apical half and basal half and using auxins, IBA and NAA. The result indicated that both IBA and NAA had different effected on root number and root length formed on the cuttings. The apical cutting produce more roots than the basal ones. In the apical cuttings both IBA and NAA 1000 mg/l were considered to be the best concentration for rooting. While the basal cuttings NAA concentration 1000-10000 mg/l or IBA 10000 mg/l were the best.

In vitro culture of various parts of *B. gymnorrhiza*, contamination was a serious problem. Explants used derived from natural habitat carried several contaminants. In addition, the plant tissues cultured in vitro produced a lot of browning substance which had inhibitory effect on cell division and growth. This experiment thus was carried out to examine the disinfection techniques and the application of chemicals and methods to decrease excretion of browning substance. The success of in vitro induction of shoot formation from hypocotyl explant provided a method to solve contamination problem and these shoots produced were aseptic and were able to subculture further. The suitable medium for shoot induction from hypocotyl section culture was concluded, however the medium for root induction needed further study.

ภาควิชา.....

สาขาวิชา..... เทคโนโลยีทางชีวภาพ

ปีการศึกษา..... 2539

ลายมือชื่อนิสิต 

ลายมือชื่ออาจารย์ที่ปรึกษา 

ลายมือชื่ออาจารย์ที่ปรึกษาร่วม 