

The effect of sea water on planting of mangrove tree species, *Bruguiera gymnorrhiza* seedling

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Summary

The mangrove forest is decreasing rapidly on the both stands of distribution area and resources in the world. The forest of mangrove is the important ecosystem called "ecotone" which occupied the coastal and river mouth area. The conservation and reforestation of the mangrove forest is an important problem for the environmental tasks in the world, especially in the tropical and subtropical zone. In this study, the effect of sea water on planting of *B. gymnorrhiza* seedling was examined under the greenhouse condition.

The viviparous seedling of *B. gymnorrhiza* sprouted fresh water and grew about ten months under the greenhouse conditions. After six weeks of pre-treatment of 25% to 100% sea water condition, all the seedling were moved to 10 % salt water condition.

On the 2nd days after treatment, photosynthesis rate was measured in each condition which was sea water, 50% sea water and fresh water, it was almost null or minus in numerical value, however, it seemed that leaves showed no injured by the treatment. After 10 days, more than 50% of leaves die or fell in each condition and all leaves die on 20 days after treatment. From these behavior to the high concentration of salt water, *B. gymnorrhiza* seedling has specific reaction to compare with it of *Kandelia candel* seedling.