

Tippawan Kraivilas 2009: Spore Releasing and Growth of Gut Weed, (*Ulva intestinalis* Linnaeus). Master of Science (Fisheries Science), Major Field: Fisheries Science, Department of Fishery Biology. Thesis Advisor: Associate Professor Chatcharee Keawsuralikhit, M.S. 83 pages.

This study on spore releasing of gut weed (*Ulva intestinalis* Linnaeus) was done by using three factors for stimulation of spore releasing. They were salinity, desiccation and combination of salinity and desiccation. Five grams of gut weed were stimulated for spore releasing in a 3-liter glass tank with plastic plates at the bottom. The plastic plates were collected and the released spores were counted under a microscope every 3 hours for 24 hours. In the salinity experiment, the salinity was varied at 0, 5, 10, 15, 20, 25, 30, 35, and 40 psu. The highest number of total spores released was 1,880 cells/ g /day at 40 psu with no significant difference ($P \geq 0.05$) from 25, 30 and 35 psu. In the desiccation experiment; 0, 15, 30, 45, and 60 min of desiccation periods were used. At 30 min of desiccation, the gut weed released the highest number of total spores which was 4,880 cells/ g /day with no significant difference ($P \geq 0.05$) from 15 and 45 min of desiccation. In the combination experiment, the salinity at 15 psu and 30 min of desiccation showed the highest number of total spores which was 3,309 cells/ g/ day. The spores of gut weed were cultured for studying its growth. The one-day-old spore was 8-10 μ m in diameter and translucent. Then, it became greener under microscope condition. Within 3 days, cell division occurred and the spore developed into a young thallus which was 120-150 μ m in length within 30 days.

Student's signature

Thesis Advisor's signature