

## **Seasonal occurrences of epiphytic algae on the commercially cultivated red alga *Kappaphycus alvarezii* (Solieriaceae, Gigartinales, Rhodophyta)**

### **Abstract**

Common problems faced in farming of the red algal genus *Kappaphycus*/*Eucheuma* are "ice-ice disease" and the occurrence of epiphytes. Considerable work has been documented on "ice-ice disease" and its mode of infection but limited information is available on the emergence of epiphytes. The present study addresses the phenomenon of epiphyte infection, its prevalence in commercially cultivated red alga, *Kappaphycus alvarezii*, and their variability associated with seasonality. Cultured seaweed became susceptible to epiphytes in the dry seasons (1) between March - June and (2) September - November. Findings revealed *Neosiphonia savatieri* (Hariot) M. S. Kim et I. K. Lee, as the dominant infecting epiphyte, representing up to 80-85% of the epiphyte present during peak seasons. Besides *N. savatieri*, *Neosiphonia apiculata*, *Ceramium* sp., *Acanthophora* sp. and *Centroceras* sp. were observed in smaller quantities. SEM (Scanning Electron Microscope) micrographs revealed the epiphyte's attachment to the host. Further histological study showed the extent of penetration of epiphytes into the host's cortex tissues and condition of its surrounding tissues. The outbreak of epiphytic filamentous red algae also correlated with drastic changes in seawater temperature and salinity during March - June and September - November.