

# Breeding Research and Aquaculture Industry of *Pyropia* (Gim) in Korea

Mi Sook Hwang

National Institute of Fisheries Science

*Pyropia* is the most important commercial seaweed in Korea, representing 533 thousand tons and 631 billion won in production. *Pyropia* industry is growing into an export-driven food industry reaching record high of \$790 million in 2023. Three species of *Pyropia*, *P. yezoensis*, *P. dentata* and *P. seriata* have been cultivated in aquafarm. The need to develop new varieties has increased since the implementation of plant variety protection (PVP) system in 2012. Due to the efforts of several researchers, the breeder's rights for 31 *Pyropia* varieties have been applied and those for 26 were registered. The varieties with one or more characteristics of rapid growth, high-temperature tolerance and disease resistance are included among them and they have played an important role in improving productivity of *Pyropia*. Isolation, hybridization, mutation and genetic transformation have been tried as breeding methods, and several good varieties resulted from Isolation and mutation. Hot issues in aquaculture industry of *Pyropia* such as diseases, discoloration (chlorosis), damage by high temperature, etc. will be discussed.