

# Establishment of *Porphyra* culture system

Successional change of *Porphyra* cultivation system by the view point of establish method of bamboo or nets

Primitive type

Modern type



Whole fixing  
type

Bundle of  
bamboo  
Fixed in the  
bottom

Fixing and  
semi-floating

Fixing and floating

Whole floating  
(invertible type)

# Outdoor Seeding of conchospores

## Envelope seeding method

Sections of net are piled in groups and enclosed in polyethylene envelope sheeting - placed on each set of cultivation nets



tied to PVC frame  
(1.8m x 4 m : 30~50 nets)



Modified methods : large section of net  
(1.8m x 20 m /1.8m x 40m)



Transferred to the sea, attached to stakes in shallow water during 10~14 days

# Change of *Porphyra* net size

1960 ~ 1970s



1 Check:  
1.8 m x 4 m x 10 nets  
(ca. 1.8 m x 40 m)

1980s



Long nets placed singly  
in a vast grid supported  
by polystyrene floats.  
The whole structure with  
32 nets, fixed by 24  
anchors.

1995s ~ Present



1 Check:  
2.1 m x 100 m

# Change of exposure method

- Buoys are attached to the upper side of nets
- The net can be turned upside down easily
- As the result, the nets are freely exposed to the air

1970s ~ 1980s



Exposure frame

1980s ~ Present



Invertible type

# New exposure treatment

With the introduction of this treatment, the production of dried nori sheets and the income of fishermen increased by as much as 144% and 408% respectively (Oohusa, 1993).



Submerged culture nets



Turning over the culture nets  
by ship



Exposure culture nets  
on the air

# Auction of *Porphyra*





Harvesting of *Porphyra*



Harvesting of *Porphyra*



**Turning over the culture nets by ship**



*Porphyra* cultivation