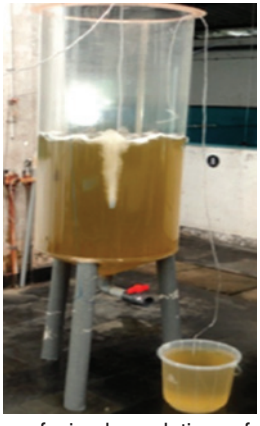
Harvesting *in situ* microalgal feed by enriching seawater

P. Kaladharan and P. K. Asokan
Research Centre of CMFRI, Calicut

Mixed populations of marine natural microalgae were continuously cultured at high density through seawater enrichment with the Walne's medium, at the marine hatchery complex of Calicut Research Centre of CMFRI. Freshly collected seawater from Konnad beach, decanted after an hour of sedimentation to remove sand and debris, was transferred to big transparent containers. Seawater

was enriched with Walne's medium at the rate of 200 ml solution A, 100 ml solution B and 50 ml of vitamins for 100 l seawater. This enriched seawater tanks were kept under a transparent roof and continuously aerated. After four days of high density mixed culture, *Astrionella japonica*, *Pyrophacus horologium, Chlorella marina* and species of *Diplopsalis*, *Trichodesmium, Spirulina, Chaetoceros, Pinnularia, Haplodinium, Dinophysis* and *Hemidiscus* were found growing exponentially (Table). This technique of live feed production is found very cost-effective for high density culture of multiple species of micro-algal feed for fish larval rearing.



High density culture of mixed populations of marine microalgae

Details (group, order and family) of the different algal species grown in the mixed culture

Species	Group	Order	Family
Astrionella japonica	Diatom	Fragilariales	Fragilariaceae
Pyrophacus horologium	Flagellates	Gonyaulacida	Pyrophacaceae
Chlorella marina	Chlorophyta	Chlorellales	Chlorellaceae
Diplopsalis sp.	Flagellates	Peridiniida	Protoperidiniaceae
Trichodesmium sp.	Blue green algae	Oscillatoriales	Phormidioideae
Spirulina sp.	Blue green algae	Pseudanabaenales	Pseudanabaenaceae
Chaetoceros sp.	Diatom	Chaetocerotanae	Chaetocerotaceae
Pinnularia sp.	Diatom	Naviculales	Pinnulariaceae
Haplodinium sp.	Flagellates	Prorocentrida	Haplodiniaceae
Dinophysis sp.	Flagellates	Dinophysida	Dinophysiaceae
Hemidiscus sp.	Diatom	Coscinodiscales	Hemidiscaceae