

**M.S.61. SOBHA PRATAP RAO SHERE—Studies on sporulation and propagation on selected Agarophytes—1986—
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Studies on sporulation of four commercially important agarophytes *Gelidiella acerosa*, *Gracilaria corticata*, *G. edulis* and *Hypnea musciformis* growing in the vicinity of Mandapam coast were carried out from October 1981 to September 1983. During the study, fruiting behaviour in the natural population of these species was also investigated.

Maximum output of tetraspores and carpospores were observed mostly on the first day of the experiment in the four red algae studied. The tetrapore output decreased from second day onwards and rhythmic liberation of carpospores with peak shedding of spores at intervals of different days was also observed.

In the experiments conducted in the laboratory to study the effect of environmental factors, spore output declined with increase in the duration of exposure of fruiting thalli in shade and maximum number of spores were liberated from the plants mostly under submerged condition. The spore output varied in different salinities tested.

The germination of tetraspores in *Gelidiella acerosa* and tetraspores and carpospores in *Gracilaria corticata*, *G. edulis* and *Hypnea musciformis* occurred throughout the year in the laboratory conditions. But under selected environmental factors in the laboratory, maximum number of dividing tetraspores in *Gelidiella acerosa* and tetraspores and carpospores in *Gracilaria corticata*, *G. edulis* and *Hypnea musciformis* occurred in submerged conditions, at salinities ranging from 20-40‰, light intensity from 500 to 3000 lux and temperature 25 to 30°C.

Mode of germination observed in *gelidiella acerosa* was that of 'Gelidium type' and that observed in *Gracilaria corticata*, *G. edulis* and *Hypnea musciformis* was that of 'Dumontia type'.