

Investigation of the distribution of Aquatic plants and study the suitable technologies to enhance propagation

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Background

The Aquatic plant exporters have been arguing that there are sufficient wild stocks of aquatic plants to collect and export. However among the exported species several endemic and endangered species are listed. Therefore present regulations prevent the export of wild stock until proper data is available on the distribution of such species. Presently only nursery cultured stocks are permitted for export. Therefore development of low cost technologies for plant propagation and popularizing aquatic plant culture could expand the industry as there is a need for sufficient export quality plants.

- Propagation of aquatic plant – technology development

Tank experiments were carried out for quality improvement of selected important plants using different substratums. Most plant experiment tanks were affected by snails causing damage to plants and proper growth rate could not be determined. Presently low cost substances for snail control is being studied. Salt was tried as a snail control substance at concentrations of 1ppt, 2ppt, 5ppt & 6ppt. concentrations. Only 5ppt and 6 ppt were successful when kept for 24 hours. However some finely leaved plants were affected when this concentration of salt was used for that long period of 24 hours. Ten percent salt concentration is effective for snail control at 1 hour periods but it causes wilting in plants and therefore is not suitable for plant tanks as the plant quality is lowered by using this salt concentration. Use of salt therefore produced negative results.

- Survey and collection of plant species in selected areas.

Survey in Ampara district was carried out in reservoirs, irrigation canals and streams and 14% reservoirs contained no plants at all. A species of *Cryptocoryne* was recorded from 2 locations in streams and was identified as *C. undulatus*. It was found in patches of 3 – 5 plants per $1m^2$. Other plants found in the district were mainly weeds. *Hydrilla* and *Potamogeton* were found in flowing water, *Salvinia*, *Typha*, *Najas*, *Pistia* and *Eichornia* were found in 18%, 6%, 3%, 4%, 10%, and 40% reservoirs respectively. *Hydrilla* was found in 60% of irrigation canals.

- Preparation of a distribution map for Polonnaruwa district

Since digital maps are not available, it has been mapped on a land use sheet.

The distribution of aquatic plants important in the ornamental industry or ayurvedic purposes were low in the ampara district. Lotus was found in 29% reservoirs and 2% reservoirs were fully covered with lotus. This was considered a weed in the district, but no permanent control measures were used.