

## **SUITABILITY OF COASTAL SOIL AND WATER FOR BRACKISHWATER SHRIMP CULTURE ALONG UDUPI DISTRICT, KARNATAKA STATE**

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### **ABSTRACT**

Selection of potential and suitable sites is the first and foremost step for successful aquaculture. Adequate water supply and its characteristics, soil quality and topography are the most important characteristics of a good site. Selection of suitable site plays an important role since it is helpful for proper planning, design, construction, operation and maintenance of ponds.

The locations selected to check the suitability of soil for brackishwater shrimp culture were Kaipunjil, Mattu, Pangalagudda, Garadimane, K.G.Road and Maabukula of Udupi taluk, and Moodahodu and Aarate of Kundapura Taluk, Udupi District. Pits were made at four spots in each location and samples were collected at a depth of 30 - 40 cm from the ground surface. The soil parameters viz., bulk density, specific gravity, textural classification of soil, permeability, electrical conductivity, salinity, water holding capacity, organic matter, pH and water content were measured using standard procedures. The soil properties of some sites had low pH, high sand content, low organic carbon content, and therefore these soils require special attention such as proper planning and management namely liming, organic manuring, addition of clay and silt and also additional compaction of soils for the designated use. These soils are considered to be suitable for brackishwater shrimp culture with the above preparation and management.

Water samples were collected at the surface of the source fortnightly during the study period to check their suitability for shrimp culture. The water sources were Pavanje, Suvarnanadi, Seethanadi and Kollure river. Water parameters viz., temperature, pH, electrical conductivity, total dissolved solids, dissolved oxygen, turbidity, salinity and hardness were also analysed using standard procedures. Water quality parameters of the above source water were within the permissible limits required for shrimp culture. Hence the water of these sources is considered to be suitable for shrimp culture.