



Evaluation of Aquaculture Units Established in Inland Salt Affected Areas of District Fazilka, Punjab

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Abstract: Underproductive or unproductive (zero earning) inland salt affected waterlogged areas in northern states of India offers an opportunity for commercial utilization and productive use through aquaculture. The present study was taken up in two inland salt affected waterlogged villages (Shajrana and Bahadur Khera) in district Fazilka of Punjab, to evaluate the status of aquaculture units with respect to water quality and suitability for rearing of freshwater and brackish water species. The water samples, collected from twenty two aquaculture units from selected villages, were analysed for different physico-chemical parameters viz., pH, salinity, electrical conductivity, total hardness, total alkalinity and salts including sodium, calcium, potassium, magnesium, chloride and sulphate. All the units surveyed during the present study, were being used for rearing of freshwater carps like *Catla catla* (Catla), *Labeo rohita* (Rohu), *Cirrhinus mrigala* (Mrigal), *Ctenopharyngodon idella* (Grass carp) and *Cyprinus carpio* (Common Carp), under semi intensive polyculture system and the salinity of 02 (9.09%), 08 (36.36%) and 12 (54.54%) units was found to be <5, 5 and >5 ppt, respectively. Out of 22 aquaculture units surveyed, only 02 units with salinity range 3-4 ppt (< 5 ppt), were found suitable for rearing freshwater carps without any intensive technological intervention, while productivity of fresh water carps in 08 aquaculture units (5ppt) is not expected to remain sustainable on long term basis and rest of the units (12) with salinity levels >5 ppt (6-14 ppt) are not suitable for any profitable carp culture practices.

Keywords: Inland saline areas, Aquaculture, Punjab, Sustainability
