Trout Culture in Sikkim



Trout farming provided excellent opportunity for utilizing the abundant resources of coldwater having the temperature range of 0-20°C in different hill states



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Sikkim, the small but beautiful kingdom is situated in the Eastern Himalaya. Sikkim is termed as the Switzerland of the East, a heavenly paradise on earth. It covers an area of 2818 square miles 7325 square kilometers. Geographically it is 28 degree 07' 48" degree and 27 degree 04' 46" North latitude, and 88 degree 00' 58' and 88 degree 55' 25" East longitude. The State Govt. has taken all possible initiatives to promote trout culture in the state considering the suitable climatic condition and abundance of water. Presently, three trout breeding units are functional for production of sufficient trout seed in order to stock in various Govt. farms and supply to the private farmers in the vicinity. This programme has given a boost in adopting technology in private sector as there are 199 farmers in the state (52 in East district, 72 in West district and 42 in North and 33 in South district) at present compared to 2008-09 when there was only one private farmer in the state. Hon, ble Minister of Fisheries (Govt. of Sikkim) is pleased to see the progress and sought for developing 700 more trout farmers in the coming two years.



State trout farm Uttaray



Breeding & culture of Trout by a private farmer at Kuokhola

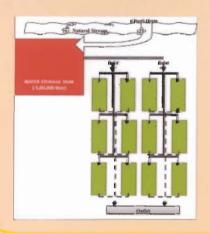
For raising table rainbow trout in captivity, the fingerling (size-2-5g) produced are transferred to bigger growing concrete rectangular ponds / raceways (40-100 m²). The fish is fed intensively on artificial dry feeds, with an emphasis that no compromise is to be made with the quality and quantity of feed ingredients. At various growing stages, periodical thinning and grading of trout stocks should be carried out to avoid cannibalism and to allow all fishes to grow uniformly. Under suitable water and sufficient supply of good quality of feed trout attains 200-300 grams size in 14-15 months but same size can be achieved in 10 months if stocking size remains 5-10 gm. The marketable size of the fish depends on the demand but 200-300 gm size is most preferred by the people.

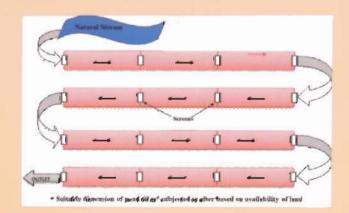
The stocking ponds are generally graded during four stages; (i) 2-5 gm size, (ii) 10-20 gm size, (iii) 50-60 gm size and (iv) more than 100 gm size.

Dry floating pelleted feed with high protein content is required for feeding.

Size of the Fish	Protein Content	% of body weight	Times
< 10 gm	40 %	5-10 %	7-8
<50 gm	35 %	5 - 6 %	3-4
> 50 gm	35 %	2-3%	2 - 3

Design of a Model Trout Farm





Production: 10-15 kg/m³ water volume.

Cost of raceway construction(size-20X2X1m): Rs.5 lakh/40m²
Operational cost: Rs. 1,15,000/40m²
Income: Rs. 2,25,000/40m²
Net profit: Rs. 1, 10,000/40m²

Market Potential:

High demand in executive class hotels, local market and export of processed fish

Water is the foremost criteria for site selection

- Cool, clean and highly oxygenated water
- Water- free from heavy metals and turbidity
- Water in enough quantity
- Water temperature- below 20°C round the year
- Dissolved Oxygen (DO) more than 7mg/l.
- pH of water 6.5 to 8.0
- The site should be of 1-3 % slope
- The site should be accessible to road

One litre of water per minute per age- month is needed for every 1,000 fish.

Benefits of Technology

Enhanced production

High income Earning of foreign money

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