**Short communication**

# Status o~~O~~f Trout Culture i~~I~~n Kashmir, India

## ABSTRACT

Trout farming is one of the oldest forms of commercial fish production. The present production of Trout fish being carried out in public sector only and is about 100-120 tones/annum. Currently Department has about 150 raceways with the carrying capacity/rearing space of about 150 tones.The Jammu & Kashmir state has huge human resources in the form of unemployed youth who can be trained in trout farming or earning their livelihood. In spite of huge market demand, vast natural and human resources, trout culture in Kashmir is far away from realizing its potential. The health awareness among the masses has shifted the choice of people from Red Meat to White Meat. The consumption of fish has become a protein of choice to the people having obesity and heart related problems.There is enormous scope for creating additional infrastructure in the shape of hatcheries/rearing space in the private sector to further improve the trout production in the J&K.

*Keywords: Commercial fish production, Trout farming, protein content, Hatcheries.*

## 1. PRESENT SCINARIO

The trout culture is mostly done in the states of Himachal Pradesh, Arunachal Pradesh, Skim and Western Ghats of Tamil Nadu and Kerela [1] ~~(Salim Sultan, 2016).~~The production in the UT has increased over the last few years by construction of more rearing units and increasing the rearing facilities due to remodeling of existing units. Presently the producing is about 100-120 metric tons of fish per annum from the rearing units which are located in all most all the Districts of the State.

The present production of Trout fish being carried out in public sector only and is about 100-120 tones/annum. Currently Department has about 150 raceways with the carrying capacity/rearing space of about 150 tones.

So far, the production level is optimum or below it. The intensive rearing could be achieved by providing additional facilities. The main constraint presently is the availability sufficient/required quantity of feed. The State Fisheries Department has two feed mills one at

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Kokernag and another at Harwan. The Feed Mill installed at Kokernag has been in operation for the last 14 years and is the main feed production unit. Feed is being supplied to all the rearing units of the State from this production plant. In Harwan there is a small feed mill which is more than 2 decades old now.

It is urgently required to establish Feed Mill Unit in the every district of the UT for the sustainable Development of Trout/Carp Fish Sector. The same may collapse if alternate arrangements are not made.

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## 2. PRIVATE SECTOR

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Division intends to extend technology (from Lab to Land) to common farmer having land around a suitable water resource in any parts of the UT. In order to boost the production in private sector, 1000 raceways could be constructed in next five years (Kashmir)--600, Jammu--- 300) which will help to grow it into an industry. The construction of these ponds will be a revenue generating units in the backward areas. It will help in upliftment of socio-economic condition of these backward classes and will create employment for masses in these areas.[2]

The production of feed could also be taken in Private Sector as an activity which will involve private entrepreneurs for procurement of raw ingredients from different parts of the country, establishment of feed manufacturing units and production of fresh and balanced feed supplied to various units with allied requirements like laboratories etc.

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The suitable zones are found in all the nooks and corners of the Valley. To introduce the scheme in the private sector Division proposes to establish standard 1000 rearing units in next five years with a carrying capacity of 1 to 2 tonnes per unit annually. Some higher reaches of the UT where Cold Water resources are available in plenty are all feasible for establishment of trout rearing units. Therefore there will be no difficulty in selecting feasible sites in all the districts of the UT.

In an individual unit a pair of ponds having 80 $m^2$area can be established with an inlet and out let drain. The water can be drawn from the natural water resources existing nearby and can be released back within 100 m or less.

## 3. ESTABLISHMENT OF FEED MILL AND PROVISION OF FEED

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In order to ensure regular and dependable feed supply to the units that shall be existing or proposed to be constructed in future, the installation of feed mills is of prime importance. Along with the establishment of Trout/Carp Rearing units it is imperative to have feed mills also established in different zones of the Union territory. It is proposed to have mini feed mills established in various areas where trout meet the demand of feed for various units established in such areas. The establishment of feed mills can also be taken up in Private Sector. It can in turn generate employment and economic Development for the educated and un-educated youth of the State.

## 4. PRODUCTION VOLUME

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There are about 150 fishing beats spread over 40 streams with an aggregate length of 500 km, besides, there are 12 high altitude lakes ranging from 8,000 feet to 12,000 feet above the sea level having Brown Trout [2](PTI, 2019). By proper production planning fish can be provided round the year. There are no major constraints to produce 50 tons of Trout Fish in the first year and shall increase every year by 250 tonnes. Therefore, at the end of five year the total production from Private Sector will be about 2000 tonnes / year.

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## 5. DEMAND FOR TROUT FISH

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The Dachigam Trout Culture Farm near Srinagar is one of the oldest trout hatcheries established by the Jammu and Kashmir State Fisheries Department. It lies at an elevation of 1708 metres above mean sea level at a distance of about 22 km from the city centre, amidst the world famous Dachigam National Park[3]. ~~(Tasaduq et., al. 2009).~~The health awareness among the masses has shifted the choice of people from Red Meat to White Meat. The consumption of fish has become a protein of choice to the people having obesity and heart related problems. Being the non carrier of any disease the utility of fish has increased among other white meats. This has increased the demand of fish many folds.

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Being a european commodity, trout fish has been transplanted to the waters of Kashmir and has remained basically as an a Angling sport. Very few people actually among the locals know Angling.

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During the last two decades with the establishment of trout farming in Kashmir, Rainbow Trout has grown as a successful economical viable venture. Over the years the demand has grown for trout fish in both domestic and international market. It is considered to be more of a delicacy than pomfret and is most expensive fish after Salmon.

### 5.1 ~~(a)~~ Local Demand~~.~~

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Department has already been selling about 50 m tonnes to the local but there is presently demand of about 100-200 tonnes annually.

## 5.2 ~~(b)~~ Domestic Demand

With the facilities of Air transport available due to ever increasing number of incoming/outgoing flights from Srinagar Airport, the ever increasing demand of Trout Fish in the Five Star Hotels,Flight Kitchens and Restaurants of the Metropolitan cities like Delhi. Mumbai, Kolkatta, Chennai, Bangalore etc .has increased many folds and shall earn revenue for the Department.

## 5.3 ~~(c)~~ Export Demand

It can be exported to countries like middle east. where the potential institutional buyers are the 5- Stars Hotels, Flight Kitchens and Special restaurants and local super markets where the fish is sold in frozen and processed condition. In order to earn foreign exchange for the UT and encourage export of organic products of J & K like Trout Fish which is an certified variety of disease free commodity it is high time to expose it to international market and earn foreign exchange for the J &K.~~.~~

## 6. EXECUTIVE SUMMARY

*The commercialization of Trout on large scale will lead to following conclusions:*

- There are no major constraints for production of Trout Fish on commercial lines. The untapped resources in the upper streams are suited for Trout Farming.
- The on growing rearing units will be located in far flung and backward areas of the Valley.
- The rearing units in far flung areas will be revenue generating units and will help in socio-economic upliftment of these areas.
- It will provide employment to about 1000 people directly.
- Women can be made active participants in the production units.
- It may help to remove the mal-nutritional effects of the rural masses.
- The project does not have any detrimental environmental effects.
- The project is economically viable in small scale rearing also.

## 7. PHASEWISE DEVELOPMENT

### 7.1 Extension ~~O~~of Existing Infrastructure

### 7.1.1 Strengthening of infrastructure for trout fisheries~~:~~

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➡ There is enormous scope for creating additional infrastructure in the shape of Hatcheries/Rearing space in the private sector to further improve the trout production in the J&K. The various steps proposed are summarized as under:-

*I) Establishment of more rearing space in existing units.*

*II) Establishment of new Rearing Units:-* Since there is enormous water resources available in J & K , the establishment of new units can be taken up on a large scale.

*III) Establishment of mini feed mills:-* In order to make available sufficient feed and cater to the demand of various rearing units for feed it is proposed to have feed mills (mini feed mills) in the every district of the J & K.

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