

PRIMARY ARTICLE

Present Status Of Certain Govt. Trout Farmes Of South Kashmir

Nargis Annayat , Shabana And Arjamand



ABSTRACT

Since the beginning of the 1990's trout farming was being carried out on several fish farms in Kashmir. The state of J&K is having special agro climatic conditions ranging from tropical to severe cold, with a tremendous potential for development of warm water and cold water fisheries. The approximate water spread area of the state about 57000 hectares, out of which about 24000 hec, are in the shape of lakes and marshy areas, reservoirs and 23000 hec, in the shape of river systems. During last 25 years great efforts have been made for development of fish and fisheries in the state on modern scientific lines. The siting of these aquaculture facilities was based on the availability of water in required quantity and quality. Detailed study have been conducted on trout farming in South Kashmir from March 2011 to Aug 2011. The survey involved study of different Govt. Trout Farms namely as:

- 1 : Govt. Trout Rearing Unit Achabal
- 2: Govt. Trout Rearing Unit Aliyalpora Shopian
- 3: Govt. Trout Rearing Unit Chawalgam
- 4: Govt. Trout Rearing Unit Tchansar (Kulgam)
- 5: Govt. Trout Rearing unit Kulgam
- 6: Govt. Trout Rearing Unit Panzeth Wanpora

Keyword: Trout Farmes, Aquaculture And Fishing .

INTRODUCTION

The state of Jammu and Kashmir encompasses a mountainous region in the heart of Asia, with borders touching to both south and central Asia. Jammu and Kashmir is India's northern most state, lying between six mountain ranges and covering an area of 2,22,236 Sq Km . It is located between 32°17' and 36° 58' north altitude and between 37°26' and 80° 30' east longitude .Anantnag the land of springs is situated between 75o 08`` east and 75° 10`` 00 and 33° 43' 00" North and 33° 44` 00" north at an altitude of 1,600 m above M.S.L. It lies at the foot of the western extremity of Martand Plateau, also known as Islamabad named after its founder. The name Anantnag is derived from Anant, which means "Many" and Nag means "Springs"

Aquaculture and fishing in India have great scope for employment as well as export markets. Fresh water aquaculture can play a pivotal role in improving the state's economy and solving the nutritional problems besides acting as tool for rural development through integration of aquaculture with agriculture and horticulture. In 1899, the first attempt of introducing exotic solomonids (Trout) in the waters of Jammu and Kashmir state (kashmir) was carried out by Mr F.J. Mitchal who reared them. M. F Michel known as father of Kashmir trout Fisheries, who established the first trout Hatchery at Harwan in 1901. And now more than 20 trout farms are found in Kashmir.

MATERIAL & METHODS

The work was carried out for the period of six months period by way of daily visiting noting their activities and getting random collection of information from both local as well as farm management authorities. The survey involved study of different Government Trout Farms . The parameters which were taken as:

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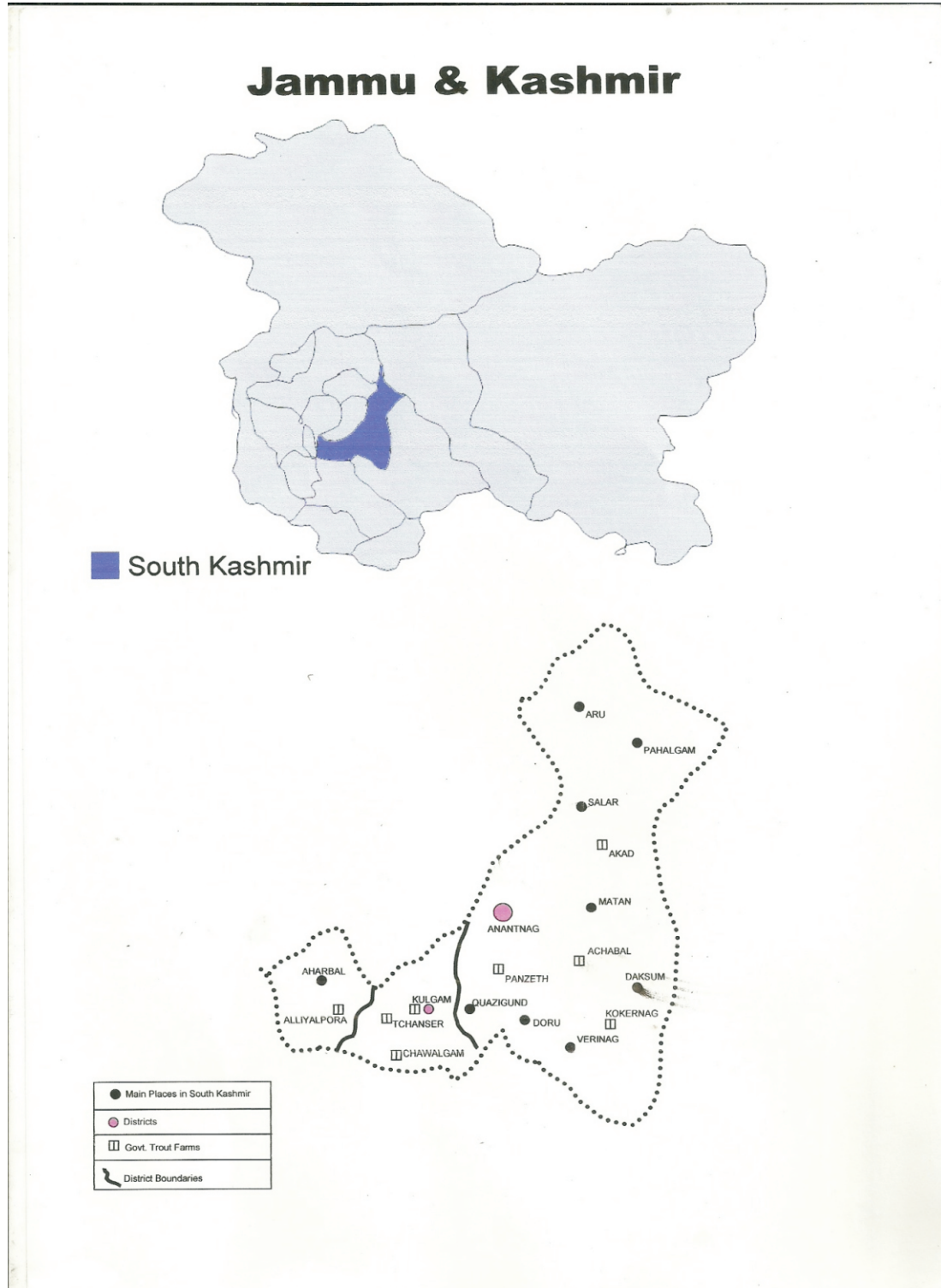
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(a) General Infrastructure of the farm**(b) Hatchery****(c) Food Mill****(d) Cultural Practices****(e) Marketing****(f) Transportation etc.**

DISCUSSION

Anantnag shares the major part of the east and south basin drainage system of the valley, consisting of rivers and rivulets, the Jehlum being the prominent amongst them, these rivers . The district has the distinction of having the gaint trout fish farming project at Kokernag established with the assistance of European economic community (EEC) the project is spread over an area of more than 8.5 hectares . The Trout Fish Farm Kokernag is the unique Fish Farm in Kashmir , destined to produce the quality fishes of exotic cold water fishes mainly Rainbow Trout (*Oncorhynchus mykiss*). It was established in 1985, Due to the introduction of Rainbow trout and their excellent production, it has become one of the biggest trout farm in Asia. Besides, the district has Achabal trout hatchery spread over 1.5 hectares and the source of water to the hatchery is Achabal springs . The survey on various districts of Southern Kashmir was conducted from March, 2011 to August, 2011. During this survey various concepts of Aquacultural practices especially government farm were studied.

No. 1**Government Trout Farm Achabal**

Name	: Govt. Trout Rearing Unit Achabal
Location	: Achabal bagh
Country	: India
State	: J & K
District	: Anantnag
Established	: 1908
Rearing unit/farm	: Rearing unit Achabal
Production	: 15 Tons /Year i.e. 3 lakh /year
Saleable size of the Fish	: 250 gm to 500 gm
Seed (from where)	: Kokernag Hatchery (Mother Farm)
Feeding	: As for their body weight is concerned
Feed (From where)	: Kokernag Hatchery (Mother Farm)
Marketing	: Daily (3pm – 4 pm) at sale centre)
No. and type of raceways	: European raceways, 13, circular pond
Male female ratio	: Breeding not performed
Breeding Season	: Nov. - March
Equipments	: Hand net, shading nets, Inlet screen, outlet screens, Brush, Bucket, Drag, net etc.
Distance from main district	: 8 Km (approximately)
Seed Type	: Rainbow Seed .
Disease	: Fungal
Medicine	: KMNO ₄ . Nacl, OTC (Oxytetrachloride,) Formalin
Source of water	: Spring water (Achabal)
Source of pollution	: Silt in water
Land covered	: 26 Kanals

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It was established in the year 1908, the total area of this trout farm is about 1.5 h. The source of water to this farm is the “Achabal Nag” It is a helocrene type of spring. It is a rearing unit only.

No.2 Government Trout Rearing Unit Aliyalpora Shopian

Name	:Govt. Trout Rearing Unit Aliyalpora shopian
Location	: Aliyalpora Shopian
Country	: India
State	: J & K
District	: Shopian
Established	: 2010
Rearingunit/farm	: Rearing unit
Production	: Till date nil (newly opened)
Salable size of the Fish	: 250 gm to 500 gm
Seed (from where)	: Kokernag Hatchery
Feeding	: 1 ½ % if their body weight
Feed (From where)	: Kokernag Hatchery
Marketing	: At any time within rearing unit apart from Sunday
No. and type of raceways	: Only European Type (5 pair)
Male female ration	: Breeding not carried out daily basis
Breeding Season	: Nov. March
Equipments	: Hand net, Shading nets, Inlet screen, outlet screens, Brush, Bucket, Drag, net etc.
Distance from main district	:1 Km
Seed Type	: Rainbow Seed .
Disease	: Fungal disease
Medicine	: KMNO4. Nacl, OTC (Oxytetrachloride)
Status (economic value)	: Till date not known
Source of water	:River Water (Rambiara Nallah)
Source of pollution	:Drainage from houses, Insecticide from Paddy fields

This rearing unit is one among the newly established trout units of Kashmir Valley. It was established by the state government in September, 2010. It is just 50 Kms away from the Srinagar City . It is located in District Shopian in the south Kashmir .The Land covered by this trout rearing unit is 25 Kanals. At present there are atleast 3000 live stocks in these raceways bearing weight of 100-200 gms, when the fish gains the size of 250-500 gm , then they are ready for sale and then the marketing is done within a rearing unit. There is a sale counter in this trout rearing unit. Marketing is done at any time in a day and till date any type of marketing is not done in the rearing unit,because it is newly opened .The annual production is not yet known.

No.3 Govt. Trout Rearing Unit chawalgam

name	: Govt. Trout Rearing Unit Chawalgam
Location	: Chawalgam
Country	: India
State	: J & K
District	:Kulgam
Established	: 1970
Rearing unit/farm	: Rearing unit
Production	: 20 Tons /Year
Salable size of the Fish	: 250 gm to 500 gm
Seed (from where)	: Kokernag Hatchery
Feeding	: As for their body weight is concerned
Feed (From where)	: Kokernag Hatchery(Mother farm)
Marketing	: Within rearing unit
	(Wednesday 10 am to 4 pm)
No. and type of raceways	: European (1 pair)+ American (2 pair)
Male female ratio	: Breeding not carried out daily basis
Breeding Season	: Oct- Feb. (Winter season)
Equipments	: Hand net, shading nets, Inlet screen, outlet
	Brush, Bucket, Drag, net etc.
Distance from main district	: 2 Km
Seed Type	: Rainbow Seed .
Disease	: Tail rot(Fungal),Dropsy
Medicine	: KMNO ₄ , NaCl, OTC(Oxytetrachloride,) Formalin
Status (economic value)	: It has socio economic value, much more
	demand than production.
Source of water	:River water, Vishow, Small Springs
Source of pollution	: Silt in water ,muddy water
Land covered	: 6 Kanals

It is located in the south of Kashmir valley and it is about 75 Kms away from Srinagar city (the summer capital of Jammu and Kashmir state) .The population of this tehsil is 422786. It was established in 1970. It is very beautiful place (picnic Spot) known for its natural beauty and good climatic conditions. The farm is covering an area of 6 kanals. The equipments used for handling the fishes are hand net, screens, bucket, brush etc. The most common diseases found in this trout farm is tail rot diseases, and Dropsy and the medicinal treatment given for these diseases are known, OTC, TM200, Vitamin A and C.

The main source of pollution for this trout rearing farm is muddy water, rainfall and heating, these natural as well as manmade pollutants are responsible for these diseases. There is lack of staff in this trout rearing farm. The main problem of this trout rearing farm is that the land covered by this farm is very least and seed provided are also least in number.

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No. 4 Government Trout Rearing Unit Tchansar Kulgam

Name	: Govt. Trout Rearing Unit Tchansar Kulgam
Location	: Tchansar Kulgam
Country	: India
State	: J & K
District	: Kulgam
Established	: 2010
Rearingunit/farm	: Rearing unit
Production	: 6.5Tons /Year
Salable size of the Fish	: 250 gm to 500 gm
Seed (from where)	: Kokernag Hatchery(Mother farm)
Feeding	: 1 ½ % if their body weight
Feed (From where)	: Kokernag Hatchery
Marketing	: At any time within rearing unit apart from Sunday
No. and type of raceways	: American 3 in No.
Male female ration	: Breeding not carried out daily basis
Breeding Season	: Nov. March
Equipments	: Hand net, Shading nets, Inlet screen, outlet screens, Brush, Bucket, Drag, net etc.
Distance from main district	: 3 Kms
Seed Type	: Rainbow Seed .
Disease	: Fungal
Medicine	: KMNO4. Nacl, OTC (Oxytetrachloride) Formalin
Status (economic value)	: It has socio economic value, much more demand than production.
Source of water	: Spring snow fed (Kashnag + creedneynag)
Source of pollution	: Silt in Water
Land covered	: 26 Kanals

Tchansar Trout Rearing Unit is also one among the newly established Trout rearing units of Kashmir. It is located about 73 Kilometers away from the Srinagar City (The Summer Capital of J & K State) .Source of water for this Trout rearing unit comes from two springs namely Kashnag and Creedneynag. Land covered by this trout rearing unit is 26 kanals. Moreover a hatchery unit is under construction, which will aid in providing fingerlings, in future to south area of Kashmir valley.

No. 5 Government Trout Rearing Unit Kulgam

Name	: Govt. Trout Rearing Unit Kulgam
Location	: Kulgam
Country	: India
State	: J & K
District	: Kulgam
Established	: 2007
Rearingunit/farm	: Rearing unit
Production	: 3 Tons /Year
Salable Size of the Fish	: 250 gm to 500 gm
Seed (from where)	: Kokernag Hatchery
Feeding	: 1 ½ % of their body weight
Feed (From where)	: Kokernag Hatchery
Marketing	: At any time within rearing unit apart from Sunday
No. and type of raceways	: Village type raceways in series
Male female ration	: Breeding not carried out daily basis
Breeding Season	: Oct- Feb (Winter season)
Equipments	: Hand net, Shading nets, Inlet screen, outlet screens, Brush, Bucket, etc.
Distance from main Distt	: 0 Kms
Seed Type	: Rainbow Seed .
Disease	: Fin rot, fungal
Medicine	: KMNO ₄ . Nacl, OTC(Oxytetrachloride) Formalin
Status (economic value)	: It has socio economic value, much more demand than production.
Source of water	: Spring snow fed (Kawal) local name (Tehsil Branch)
Source of pollution	: Drainage from houses, Insecticide from Paddy fields
Land covered	: 3Kanals

It is situated, in district Kulgam in the south of Kashmir valley. The trout rearing unit Kulgam is about 65 Kms away from the Srinagar city .. It was established by state Government in 2007. The population of this Tehsil is 422786 approximately. The environmental conditions and other abiotic and biotic factor are extremely favourable for the culture of the fish species at the Kulgam trout rearing unit. The unique feature of this farm is village type raceways in series.

Land covered by this rearing unit is 3 Kanals only Rainbow type seed is brought from Kokernag Hatchery. Only rainbow trout is reared in this rearing Unit. The breeding season of the rainbow trout starts from Oct-Feb .

No.6 Govt. Trout Rearing Unit Panzeth Wanpora

Name	: Govt. Trout Rearing Unit Panzeth Wanpora
Location	: Panzeth Wanpora Quazigund
Country	: India
State	: J & K
District	: Anantnag
Established	: 2001
Rearingunit/farm	: Rearing unit
Production	: 3 Ton / year
Salable Size of the Fish	: 250 gm to 300 gm
Seed (from where)	: Kokernag Hatchery
Feeding	: 1 ½ % if their body weight
Feed (From where)	: Kokernag Hatchery
Marketing	: At any time within rearing unit apart from Sunday
No. and type of raceways	: American type (4 in No)
Male female ration	: Breeding not carried out daily basis
Breeding Season	: Nov. to March
Equipments	: Hand net, Shading nets, Inlet screen, outlet screens, Brush, Bucket, Drag, net etc.
Distance from main district	: 20 Km
Seed Type	: Rainbow Seed .
Disease	: Fungal Disease
Medicine	: KMNO ₄ . NaCl, OTC(Oxyletrachloride)
	Formalin
Status (economic volue)	: It has socio economic value, much more demand than production.
Source of water	: Spring water (Satreshni)
Source of pollution	: Drainage from houses, Insecticide from Paddy fields , Slit in water
Land covered	: 16 Kanals
Seed Type	: Rainbow Trout

It is situated in district Anantnag in the southern part of Kashmir valley . This unit is located in village Panzeth Wanpora , 5 Kms from Quazigund and about 20 Kms from the main district Anantnag. It is located in south Kashmir about 65 Kms from Srinagar . It is fed by the spring fed Panzeth Stream namely Satrashin.

SUGGESTIONS & RECOMMENDATIONS

Few suggestions are recommended for the conservations, restoration, protection, development and management of different trout farms, so there is an urgent need to focus attention on:

1. Prevention of pollution in water sources of farms, ban on use of plastics.
2. The area of the fish farms should be defined and protected from all human activities such as agriculture brick making and soil lifting
3. Further growth of trout hatcheries and establishment of farms for commercial production of trout .
4. Revision of state Fisheries Act and inclusion of conservation and propagation
5. Identification and declaration of proper hatcheries for trout species in different parts of the Kashmir should be taken up .
6. There should be make the use of common methods for producing low- value freshwater fish in developing countries, especially in Low Income Food Deficit Countries (LIFDC's) is to use a combination of fertilizer application and supplementary feed .
7. Further growth of trout hatcheries should be established which will aid in providing seeds in future to south Kashmir.

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PICTURES