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An Investigation on the Indigenous Method of Fish Drying in Bandipora District of Kashmir Valley

T. H. Bhat*, Rizwana, M. H. Balkhi and Bilal Ahmad Bhat

Faculty of Fisheries, Sher-e-Kashmir University of Agricultural Sciences
And Technology of Kashmir, India

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Abstract: The study conducted in district Bandipora that is one of the major fish producing districts of Kashmir valley. Sun drying of fish adopted by all the fishers of this district and contributes significantly to their income. The conventional method employed in drying of fishes is unscientific and can cause serious health hazards. Quality assurance of processed fish is of utmost concern that has greater implications from health point of view. In this backdrop, the present study conducted to investigate and report the traditional method of fish drying.

Key words: Traditional fish drying, Sun drying, Unscientific, Kashmir.

INTRODUCTION

Fish is one of the most important sources of animal protein and has been widely accepted as a good source of protein and other elements for the maintenance of healthy body¹. It also a good source of vitamins and minerals. It is an extremely perishable commodity and quality losses can occur very rapidly after catch²). Drying is an ancient and simplest method of fish preservation. In India, about 17% of the total catch used for the production of dry fishes^{3, 4}. Sun drying is a simple and the oldest known method of fish preservation where fish dried under the sun. Drying considered as the least expensive method of fish preservation⁵. The state of Jammu and Kashmir is not only famous for breath taking endeavours but also for its immense water spread area of 40,000 hectares comprising

lakes, streams, rivers, *sars*, springs etc. congenial for fish culture. While in Kashmir valley, the temperate zone offers potential for development of cold-water fisheries, viz trout and Chinese carps, the sub tropical zone of Jammu division offers potential for development of warm water fisheries, viz culture of Indian Major Carps and Chinese carps. Fish production plays an important role in the - economic development of Jammu & Kashmir State. Statistics indicates that the annual fish production in the state has touched to 19 tons, out of which 16 tons produced in Kashmir valley. Fish and fish products are an important means of poverty alleviation and nutritional security for the people of state. The overall annual production from 1965 to 2012 of different species of fish in the state of Jammu and Kashmir is given in table-1(Digest of Statistics) ⁶.

Table-1: Annual production of different fish species in Jammu and Kashmir State⁶.

			Kashmir Province			Jammu Province	
S.No.	Year	Trout	Mirror Carp	Country Fish	Total	Jammu Fish	Total state
1	1965- 66	86	31048	9346	40480	2292	42772
2	1968 – 69	84	27872	16277	44233	8272	52505
3	1970 – 71	60	36917	20291	57268	4909	62177
4	1974 – 75	70	40798	23132	64000	3156	67156
5	1979 – 80	67	53204	28546	81817	2415	84232
6	1980 – 81	79	62712	29914	92705	2713	95418
7	1985 – 86	144	67950	32050	100144	5030	105174
8	1990 – 91	62	82558	35391	118011	17000	135011
9	1995 – 96	182	106521	37828	144531	20669	165200
10	1997 – 98	248	112021	40588	152857	22944	175801
11	1998 – 99	561	115296	42407	158264	30246	188510
12	1999 – 00	680	115727	42144	158551	31057	189608
13	2000 -01	792	114323	41295	156410	28257	184667
14	2001 -02	864	115405	42154	158423	29642	188065
15	2002 -03	921	116492	42737	160150	29950	190100
16	2003 -04	958	116547	42795	160300	30200	190500
17	2004 -05	1350	116587	42380	160317	30240	190557
18	2005 -06	1500	116675	42928	161103	30397	191500
19	2006 -07	1520	116835	43028	161383	30617	192000
20	2007 – 08	1625	116942	43035	161602	30898	192500
22	2008 – 09	1680	116987	43041	161708	30992	192700
23	2009 – 10	1450	69270	34245	104965	24735	129700
24	2010 - 11	1950	117413	43395	162758	34242	197000
25	2011 –2012	2580	118025	43450	164055	34496	198551
26	2012 – 13 (up to Nov. 12)	2010	78508	38150	118668	28332	147000

During recent years fish consumption has significantly increased owing to the realization that consumption of fish and products have health enhancing effects beyond simple nutrition. The methods employed for handling and processing of fish in Kashmir are still traditional and need lot of improvement. The information pertaining to various aspects of post harvest handling, processing and quality control is important as it acts as a tool for fisheries development and acts as a forward linkage for value addition and quality control with consequent economic and employment benefits. Therefore, the present study was carried out in one of the major fish producing districts of valley to know the indigenous method of fish drying.

METHODOLOGY

Location: The study conducted in various villages of district Bandipora, which situated on the banks of Wular Lake. They get subsistence from their catch but the gradually declining fisheries resources have caused them hardships.

Data collection: A well-structured interview schedule devised to collect the data. The fishers who were actively involved in the fish drying identified and the Focus Group Discussion (FGD) with those anglers and the womenfolk conducted to know the traditional method of drying. Cross check, interviews also conducted with as many respondents as possible (Fig.1to 8).

Findings: The fishers revealed the following method for the fish drying:-

- The catch is unloaded from the traditional boats and graded as per species and size.
- The small fish belonging to the *Nemacheilus*, *Trypophysa* and *Cyprinus carpio* species is selected for drying
- The selected fish then transported in plastic tubs.



Fig.1: Fish being unloaded from the traditional boat

The methods adopted for drying the fish are

- Either directly spreading the catch on the ground for drying or
- Hanging the catch with the help of ropes in open air.

In both the cases no washing or gutting is done.



Fig.2: Fish spread on the ground for drying



Fig.3: Fish hanging from the rope for drying



Fig.5: An old angler knitting a paddy grass rope used for fish drying

- Knots are made in the rope and in each knot a fish is tied.
- After this the rope is hanged in open air for few days



Fig.6: A knot made with the grass rope



Fig.7: Fish hanged on the wooden logs for drying

- When the fish is dry it is removed from the rope by untying the knots
- Fish is then packed in gunny bags and stored in house



Fig.8: Fish being packed in gunny bags

CONCLUSION

The study revealed that the indigenous method of fish drying was unscientific. Therefore, fishers need to be educated and trained in scientific fish drying. The traditionally dried fish is not only unattractive but is also unsafe for human consumption with a short shelf life thereby fetching the fishers' low price. The adoption of low cost technology of solar tent drying will make the product attractive, safe for consumption and will fetch higher economic returns.

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Corresponding author: T. H. Bhat; Faculty of Fisheries, Sher-e-Kashmir University
of Agricultural Sciences and Technology of Kashmir