

## Padma Shri Award to Dr. Jhingran

Born on 18th June, 1919 Dr. Vishwa Gopal Jhingran obtained the M. Sc. degree in Zoology from Banaras Hindu University in 1941 and did his Ph. D. in Fishery Biology in 1948 from Stanford University (California), U.S.A. He was elected Fellow of the National Academy of Sciences of India in 1969 and Fellow of the Zoological Society of India in 1970. He is the President of the Inland Fisheries Society of India.

Dr. Jhingran was awarded the Rafi Ahmed Kidwai Memorial Prize for the biennium 1972-73 for his outstanding contribution in the field of fish culture jointly with two other scientists of the Central Inland Fisheries Research Institute by the Indian Council of Agricultural Research in 1976. He has made significant contributions to the development of new concepts of aquaculture. His work on composite fish culture in freshwater and on prawn and mullet culture in brackish waters has been of immense practical importance and represents a major breakthrough in inland aquaculture in India. This work has led to the initiation of rural aquaculture projects in West Bengal and Orissa.



Dr. V. G. Jhingran, Director, CIFRI receiving the Padma Shri Award from the Acting President of India, Shri B. D. Jatti, at the Investiture Ceremony at Rashtrapati Bhavan, New Delhi on Saturday, the 2nd April, 1977

## RESEARCH HIGHLIGHTS

### DECOMPOSING AQUATIC WEEDS AS POND MANURE

*In situ* killing of aquatic weeds by herbicides in fish ponds and allowing them to decompose helps in recycling of nutrients otherwise trapped by the noxious weed masses. This enriches the nutrient status of the pond

### MURREL PRODUCTION FROM DERELICT POND

Trial on murrel culture in a 0.1 ha derelict, swampy pond in Lalbagh gardens at Bangalore, Karnataka yielded a production at the rate of 4,041 kg/ha/7 months. The culture operation was conducted under the All India Coordinated Research Project on Air-breathing Fish Culture of the Central Inland Fisheries Research Institute in collaboration with the Directorates of Fisheries and Horticulture, Government of Karnataka. The harvested fish was sold to the public at the rate of Rs. 8/- per kg. The operation registered a net profit at the rate of Rs. 14,000/ha in seven months from a pond which was not suitable for conventional fish culture.

On April 22, 1977 Hon'ble Minister of Fisheries and Horticulture, Government of Karnataka, Shri K. T. Rathod declared that the soundness of culture techniques for murrel has been conclusively proved in Karnataka. While highlighting the successful production of murrels at Lalbagh garden pond in Bangalore, he emphasised that murrel culture could be taken up in other places in the city.

ecosystem chemically and biologically and leads to enhanced fish production. Decomposing aquatic weeds also support a rich bottom fauna and give rise to a population of periphyton useful for browsing on by carps.

In a recent field trial in a 0.25 ha pond stocked with common carp, catla, rohu, silver carp and mrigal (1 : 3 : 3 : 1 : 2) @ 6,000 fingerlings/ha, an estimated production of 1,700 kg/ha (against an Indian average of 600 kg/ha/yr) was obtained in 10 months when about 9,000 kg of weeds, mostly *Pistia* sp. and water hyacinth (*Eichhornia* sp.) were allowed to decompose in the pond during the above period. No other measure such as conventional fertilisation of pond and supplementary feeding of fish was adopted, thus reducing the cost of inputs in fish culture operations, well within the means of the poor fish farmers.

### CARP CULTURE IN SEWAGE-FED PONDS AT RAHARA, WEST BENGAL

In a polyculture experiment, a municipal pond (0.17 ha) at Rahara, West Bengal, fertilised with semi-treated sewage effluent was stocked with major carps, common carp and silver carp fingerlings in July, 1976. The pond was stocked @ 15,000 fingerlings/ha in the ratio of catla 1.0 : rohu 2.5 : mrigal 2.5 : common carp 2.0 : silver carp 2.0. After seven months of rearing, average net gains in length and weight by the species were : catla

He has also made a significant contribution on the age and growth studies of *Cirrhinus mrigala*, an Indian major carp. He has worked on the problem of depletion of fisheries of the Chilka Lake, which has led to the formulation of clear cut measures for the development of fisheries of the lake.

Dr. Jhingran has helped in raising the productivity of fish in experimental aquaculture operations in ponds from about 6 quintals/ha/yr to over 6 tonnes/ha/yr which provides a practical method of boosting country's inland fish production. The technology has been named by him as "AQUAPLOSION".

Dr. Jhingran has participated in several national and international conferences and has on many occasions been invited abroad by international organisations as a specialist and consultant.

380 mm/850 g, rohu 333 mm/625 g, mrigal 325 mm/400 g and common carp 368 mm/810 g. The silver carp, which was stocked later, had grown to 393 mm/600 g in 5 months. The average sizes attained by the different species add to the immense utility of sewage effluent in rearing carps in sewage-fed ponds when no other management practices towards fertilisation of pond and feeding fish were involved.

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## EXTENSION ACTIVITIES

### HARVESTING DEMONSTRATION AT HANSPUKUR

#### Mass Culture of Fish Food Organisms

For enhanced fish production an adequate supply of fish food organisms is an essential requirement. Plankters, both phyto and zoo form the chief food of many fresh- and brackishwater cultivated fishes. *Daphnia lumholtzi* which constitutes a major natural food item for carps in fish ponds has been mass cultured successfully in laboratory conditions, providing different feeds such as dried Brewer's yeast and freshly cultured unicellular alga (*Chlorella vulgaris*).

The propagation and growth of *D. lumholtzi* was remarkably high in 0.1% uniform suspension of dried Brewer's yeast. The density of *Daphnia lumholtzi* could be increased to 12,650 organisms per litre from an initial inoculum of 10 organisms within a culture period of 7 days, leading to possibilities of its large scale production in field conditions.

A harvesting demonstration was organised on March 24, 1977 at Hanspukur in a 0.55 ha pond. The pond was stocked with the Indian major carps and exotic carps in the proportion of silver carp 30, catla 10, grass carp 5, rohu 20, mrigal 15, common carp 20 @ 5,000 fingerlings/ha in March, 1976. A total of 2,718.5 kg of fish was harvested during the netting demonstration, giving a production rate of 5,034.3 kg/ha/yr.

The harvesting demonstration was presided over by Dr. V. G. Jhingran, Director, Central Inland Fisheries Research Institute and was attended by several fish farmers, pond owners, fishery officials and private entrepreneurs. Shri S. N. Roy, Director of Fisheries, Government of West Bengal, was the Chief Guest.

On this occasion 200 kg of brood fish, mainly silver carp and

grass carp, were supplied to two private entrepreneurs, Messrs. Spandan Enterprises, Narendrapur and Socio-Economic Development Project, Keorapukur, who propose to undertake a massive fish breeding programme during the coming monsoon season. The catch was sold to the consumers at site and over 1.5 tonnes of fish was handed over by the pond owner to the Central Fisheries Corporation.

#### Fish Farmers visit CIFRI

A batch of 30 fish farmers from Barasat Block led by the Principal Agricultural Officer, Barasat, 24 Parganas (North), visited this Institute on May 16, 1977. They were apprised of the activities and achievements of the Institute. Modern fish farming techniques were explained to them with the help of charts, posters and working models.

Fish catch from Hanspukur pond being handed over to the pond owner



Sale of harvested fish at the pond site in the village Hanspukur, 24 Parganas, West Bengal

# Training Programme



A six-day training programme was arranged under the Rural Aquaculture Project at Hanspukur from April 11-16, 1977. A group of 43 trainees, including fish farmers, pond owners, educated unemployed youths and school teachers participated in the training programme. Under the programme, 14 lectures on different aspects and activities of fish culture were delivered to the participants.

A netting demonstration and practical field trainings were also arranged during this programme. The educated unemployed youths showed a special interest in collection of fish pituitary glands which, according to them, is a ready source of income.

A trainee receiving certificate from Dr. V. G. Jhingran, Director, Central Inland Fisheries Research Institute



The trainees visited the laboratories of the CIFRI and two films "Composite Fish Culture" and "Induced Breeding" were also screened to provide them a visual reality of the entire technology of fish culture. The trainees also went round an exhibition depicting the activities and



## EXHIBITION

An exhibition was arranged at the Scottish Church College, Calcutta from March 9 to 11, 1977, with the help of charts, lighted panels, blow-up photographs etc., depicting work and achievements of Central Inland Fisheries Research Institute, with special reference to inland aquaculture.

Fish netting demonstration at Hanspukur fish pond under CIFRI/IDRC Rural Aquaculture Project



achievements of the Institute.

Dr. V. G. Jhingran, Director, Central Inland Fisheries Research Institute distributed certificates to the trainees on May 9, 1977 in the auditorium of the CIFRI. Dr. R. Raghu Prasad, Assistant Director General (Fisheries), ICAR, was the Chief Guest on the occasion.

## TRAINING, DEPUTATIONS ETC.

### Conference, Symposium, Meeting etc.

Dr. V. G. Jhingran, Director, Central Inland Fisheries Research Institute, Barrackpore, delivered a series of six lectures to the 3rd batch of Agricultural Research Service probationers at the Central Staff College for Agriculture at Hyderabad on 23rd, 24th and 25th May, 1977. He also attended the first meeting of state level Reservoir Fisheries Development Committee, Karnataka at Krishnarajsaagar on May 28, 1977.

The Senior Extension Officer attended the meeting of the implementation committee of the Operational Research Project of the Jute Agricultural Research Institute at Gosaba on May 17, 1977.

Shri B. N. Saigal, Scientist S-1, was deputed to undergo a short training course in Documentation and Information Services held in Calcutta from March 28, to April 30, 1977. The course was sponsored by the Department of Science and Technology, Government of India and organised by the Documentation and Training Centre, Bangalore, the Indian National Scientific Documentation Centre, New Delhi and Jadavpur University, Calcutta.

Shri M.V. Gupta, Scientist S-1, has joined UN/ESCAP assignment as an expert on fish breeding at Laos PDR on deputation for a period of one year commencing from April 12, 1977.

Sarvashri S. D. Tripathi and R. D. Chakraborty Scientists S-2,

have been deputed to Singapore, U. S. A., West Germany, Hungary and Canada for training in aquaculture under the International Development Research Centre, Canada for a period of about five months. Shri R. M. Bhowmick, Scientist S-1, has also been deputed to Singapore, U. S. A. and Canada for training in aquaculture under the International Development Research Centre, Canada for a period of about three months. These Officers left India on June 3, 1977.

Shri M. A. V. Lakshmanan, Scientist S-1, has also left India on June 22, 1977 for Singapore, Indonesia, Thailand and Philippines for training in aquaculture under the International Development Research Centre, Canada.

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## LIBRARY

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The following books were added to the Central Library of the Institute :-

- Albanese, Anthony A. *ed.*  
Newer methods of nutritional biochemistry with applications and interpretations. Vol. 1 to 4
- Allen, Herbert E. & James R. Kerner *ed.*  
Nutrients in natural waters
- Connell, J. J.  
Control of fish quality.
- Cronin, L. Eugene *ed.*  
Estuarine research volume 1: chemistry, biology and the estuarine system.
- Cushing, D.H.  
Marine ecology and fisheries.
- Hart, C.W. & Samuel L. H. Fuller *ed.*  
Pollution ecology of freshwater invertebrates.
- Holmes, R. L. & J. N. Ball  
The pituitary gland: a comparative account. (Biological structure and function 4)
- Royce, William F.  
Introduction to the fishery science.
- Welcher, Frank J. *ed.*  
Standard methods of chemical analysis. Vol. 2. Industrial and natural products and noninstrumental methods. Part A. 6th *ed.*

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Standard methods of chemical analysis. Vol. 2. Industrial and natural products and noninstrumental methods. Part B. 6th *ed.*

The British Council Division of the British High Commission, Calcutta has proposed to offer to this Institute British books and publications worth £ 3,600 under the Ministry of Overseas Development's Book Presentation Programme to the developing countries. In response to this, the Institute Library has placed selections of 376 titles of British books and publications on inland fisheries and allied disciplines.

### CIFRI Canteen

A staff-canteen has been organised at the premises of the Central Inland Fisheries Research Institute, Barrackpore from 2nd May, 1977 on no-profit-no-loss basis.

# STAFF NEWS

## APPOINTMENTS

Consequent to his appointment as Administrative Officer at this Institute, Shri G. C. Sharma has taken over charge from Shri S. N. Chakraborty, Assistant Administrative Officer on March 26, 1977.

The following persons were appointed during the period from March to May, 1977 :-

<u>Name &amp; Designation</u>		<u>Place of posting</u>
Shri S. Bhattacharyya	Jr. Stenographer	Barrackpore
Shri T. Chattopadhyay	Jr. Stenographer	Barrackpore
Shri A. K. Saha	Jr. Stenographer	Barrackpore
Km. Bul Bul Mondal	Jr. Clerk	Barrackpore
Shri P. B. V. S. Murty	Jr. Clerk	Kakinada
Shri A. K. Mazumder	Driver	Barrackpore
Shri K. Ganesan	Driver	Bangalore
Shri Pashupati Lal	Driver	Barrackpore
Shri C. R. Das	Pumpman	Barrackpore
Shri G. C. Bain	Messenger	Bhubaneswar
Shri P. C. Shetty	Messenger	Dhauri
Shri P. Arumugam	Watchman	Madras
Shri Sital Prasad	Fisherman	Rihand
Shri Kuldip Singh	Fisherman	Bilaspur
Shri S. Bondare	Fisherman	Pune
Shri B. Boro	Fisherman	Gauhati
Shri Subramani	Fisherman	Madras

## Agricultural Research Service

Sarvashri P. K. Chakraborty, B. Roy and Smt. G. K. Vinci, Technical Assistants of the Institute have been selected for Agricultural Research Service (Fish & Fisheries) on the basis of the competitive examination of the Agricultural Scientists Recruitment Board, New Delhi, held in February, 1977.

## TRANSFERS

Shri V. T. Prabhakaran, Jr. Statistician S-1, has left this Institute on inter-institutional transfer in the afternoon of 7th May, 1977 to take up his new assignment at the Institute of Agricultural Research Statistics, New Delhi.

The Undermentioned transfers were made during March-May, 1977 :-

<u>Name &amp; Designation</u>		<u>From</u>	<u>To</u>
Shri S. B. Saha	Scientist S-1	Barrackpore	Calcutta
Shri A. Sengupta	Fish Farm Engineer	Kakdwip	Barrackpore
Shri G. C. Laha	Scientist S	Barrackpore	Calcutta
Shri B. K. Banerjee	Technical Assistant	Hazaribagh	Bhagalpur
Shri S. K. Sarkar	Technical Assistant	Hazaribagh	Bhagalpur
Shri N. C. Mondal	Jr. Survey Assistant	Barrackpore	Calcutta
Shri S. P. Ghosh	Jr. Survey Assistant	Barrackpore	Calcutta
Shri D. P. Verma	Jr. Survey Assistant	Hazaribagh	Buxar
Shri B. B. Shetty	Driver	Cuttack	Bhubaneswar
Shri C. Lakra	Laboratory & Field Assistant	Hazaribagh	Ranchi
Shri M. R. Bose	Aquarium Attendant	Barrackpore	Calcutta
Md. Samood	Fieldman	Ranchi	Barrackpore
Shri G. J. Raundale	Fieldman	Pune	Ranchi
Shri R. N. Saha	Laboratory Boy	Gauhati	Barrackpore
Shri Joseph Khalko	Messenger	Hazaribagh	Ranchi
Shri P. C. Das	Boatman	Hazaribagh	Bhubaneswar

Edited & compiled by B. N. Saigal & P. K. Chakrabarti

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