



**SRR & CVR GOVERNMENT DEGREE COLLEGE
(AUTONOMOUS)
MACHAVARAM, VIJAYAWADA-520004
DEPARTMENT OF ZOOLOGY**

BEST PRACTICE- 2021-22

Experimental Learning- Murrel Culture

- In the Department of Zoology, IInd B.Voc Aquaculture Technology students started one of their departmental best practice as Experimental Learning in Murrel Culture.
- Our Principal Dr. K. Bhagya Lakshmi has inaugurated this programme on 17th November 2021.
- As a part of the curriculum in the aquaculture syllabus, cultural aspects of different aquatic organisms are included, of which students have to study the cultural aspects theoretically which is a general process of regular learning.
- But as apart of experimental learning, students have selected murrel fish because of its hard and wild nature.



**Inauguration of Murrel Fish Culture by Our Principal,
Dr.K.Bhagya Lakshmi, along with the zoology staff and IInd B.Voc
Aquaculture Technology Students**



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- The students have gone to Kaikaluru Hatcheries and brought fingerling of size 3 to 4 inches weighing 6 to 8 gms and started the culture in our college fish tanks which were used for the experimental/ practical purposes.
- In the process of culture, exchange of water in the tanks is a general process which is used to be followed based on the turbidity, ammonia from fish excreta etc.
- So, during this process of exchanging water students will be experimentally learn how to exchange water, when to exchange of water and study different water quality parameters on regular basis by collection the water samples from their own culture tanks.



Students learning how to exchange water using motor on regular basis.



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- In the process of regular feeding of the fish, students started the feed to fish initially by purchasing the feed commercially from the feed supply shops.
- But in course of time, students were able to identify that the commercially formulated feed was very costly and the results on growth of the fish weight was not as far as studied in the theory process.
- So, on experimental basis students started to feed the fish by preparing their own feed formulation using different raw materials following different steps studied in theory.
- In this process they tried different combinations of feed formulations and practically there are able prepare the feed pellets on their own and are able to understand the economical aspects on the feed preparation by experimental basis following trail and error method

Murrel feed preparation on trial-and-error method



1. Choosing of different feed ingredients



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2. Roasting of feed ingredients



3. Grinding and mixing of feed ingredients



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- In the process of preparation of the feed, students were able to do experimentation on the type of feed given to the fish.
- In preparation of the pellets, students were able to increase and decrease the size of the pellets that are prepared based on the feed conversion ratio which they studied as part of theory.
- Finally in the process of feed preparation, they tried with different ratios of nutrients and were able to standardize the size of pellets and ratios of nutrients on experimental basis.



4. Pelleting and drying of feed prepared by their own feed formulation.



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- In the process of culture, they are able to identify different diseases in the tank, due to parasites or due to stocking density or due to feed deficiency reasons etc.
- So, on this experimental basis, students were able to use different antiseptic properties materials such as garlic, turmeric powder on experimental bases.

Students using different antiseptic medicine such as garlic and



turmeric powder etc.

- In the process of the culture students were able to identify the reasons for less growth, may be due lack of environmental conditions in natural conditions.



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- So, on experimental basis students tried to maintain natural environmental conditions by adding soil for growth of the plankton and aquatic plants for natural oxygen deficiency that was observed during the process of culture.



Maintaining aquatic plants to enhance the natural environment in the tanks.

- On daily observation and taking weigh on regular basis, students were able to identify the difference in relation to weight and feed conversion efficiency.
- Junior students were also involved in the process of culture so that the juniors will also continue the culture aspects and hand over to the next juniors.



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**Comparison of Initial fingerling brought from hatchery to adult
Murrel fish-FRY to ADULT**



Daily monitoring of students and staff at the culture tanks.
