

# Use of Different Feed Analysis Growth and Survival of Moina

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## Introduction :-

Moina are a type of freshwater zooplankton that can also be used as a live food source because they are nutritious and ideal for feeding small fish, fry, and crustacean larvae. Moina are also one of the easiest live foods to culture at home in small containers. With a basic setup and proper care, aquarists can produce a regular supply of Moina to feed out to their fish.

As I have already said, Moina are rich in high-quality proteins, beneficial lipids, vitamins, and minerals. It supports growth, health, coloration, and development in aquarium fish.

Additionally, their soft bodies are also easily digested by fry, which allows efficient absorption of the nutrients. All in all, it makes Moina an excellent live food choice even compared to other great live feeds such as Rotifer and Artemia.

## Objective:-

To evaluate growth and survival of MOINA at using of different type of feed.

## MATERIALS AND METHODS

### TOPIC : USE OF DIFFERENT FEED ANALAYSIS GROUTH AND SURVAIVAL MOINA

- ❖ **Experimental Location:** The experiment was carried out in the Wet laboratory of College of Fisheries, Shirgaon, Ratnagiri.
- ❖ **Materials**
- ❖ **Experimental zooplankton**

MOINA Size 0.008 – 0.02 inch (0.2 – 0.5 mm)

**Shape :** The body is oval-shaped and moderately compressed laterally. The head is fused with the body.



**Experimental Containers :** Circular plastic tank 100 Liter capacity were used for this experiment.

### Feed :

- 1) GOC
- 2) YEAST

### ❖ Aeration:

An air pump was used for providing aeration to two experimental tube . The aeration tubes were placed in each tub with sinkers attached at the end of tubes.



**Ground nut oil cake**



**Dry yeast**



**Culture tank**



**Moina**



**Wet laboratory**





### Collecting the Moina outside:

in mirakarwada jettyare a small amount.

### Prepare the tank :

The taking the 100 L capacity but for the experiment there are the taking 2 tub filling the water 100L water in the 2 tub and maintaining the pH and temperature and 5000 inoculum are use in each tank

**Install aeration:** set up an pump to provide gentle aeration this help keep the water oxygenated.

### Feeding:

The Moina were fed at the rate of 50 – 200 % BW/day. The feed was offered twice a day.

**Maintenance of Temperature and pH:** A reservoir tank, in which water of 7-8.5 pH range was prepared. maintain the temperature 21 - 27 °c



moina inoculam collecting

moina



100 l. tank

### WATER QUALITY PARAMETERS :-

- ❖ **pH :** They prefer a pH between 7-8.5, with optimal growth around 7.5-8. Moina do not like acidic water. Therefore, if you have such water you will need to use alkaline buffers .
- ❖ **Temperature :** Some species of Moina are resistant to extremes in temperature and easily tolerate variations from 41–88°F (5–31°C). Nonetheless, the ideal temperature range is 70-85°F (21-29°C). Cooler temperatures below 60°F (15°C) slow reproduction. Heat above 90°F (32°C) shortens lifespan.
- ❖ **Oxygen :** Some aquarists do not use it since Moina require very little oxygen. At the same time, experiments showed that by keeping food particles in suspension, we increase phytoplankton production. As a result, females produce more eggs. So, it is highly recommended to set up an air pump to provide gentle aeration.
- ❖ **Salinity :** Moina do best at salinity zero ppt. According to the study, the survival rate of Moina macrocopa at salinity 15 ppt was approximately 20%.

*Note: Moina are extremely sensitive.*



Water temperature

pH Test

### FEEDING :-

The for the moina using the tow type of feed supernatant fertilized Yeast and the Groundnut Oil Cake (GOC) and they feeding to the moina in a day two time morning 9:30 and evening 5:30.

The Moina eat between 50-200% of their body weight in food particles daily. So, feed the culture small amounts of powdered food every day.



### Maintenance of Moina Culture :-

- Keep your water warm. Moina will reproduce quickly in warm water.
- Check culture density daily. They slow down reproduction in high densities.
- Siphon out any uneaten food accumulations at the bottom to prevent fouling.
- Keep notes on feeding schedules and responses to refine the diet and culturing methods.
- Control nitrates and It is believed that high concentrations are the main cause why the culture can crash. Do small water changes.
- Always have backups. Ideally, you need to have 3-4 cultures at the same time.
- If you see that they stop not reproducing well, the culture should be completely harvested and a new culture started.

### Harvesting :-

- First harvesting the with help of the plankton net moina are the harvesting tank one and tank two the 1<sup>st</sup> harvesting done 18 jul 2024 feeding the angel fishes and some inoculam releasing in pond number 1.

Tank number1 (yeast)	Harvesting: 2,80,000	Restoking: 50,000
Tank 2(GOC)	Harvesting: 120,000	Restoking: 50,000

### Second Harvesting :-

The 2<sup>nd</sup> harvesting was done 20 jul 2024, with the help of plankton net harvesting the moina zooplankton , feeding the angel fishes and some inoculam releasing in pond no.1.

Tank number1 (yeast)	Harvesting: 3,00,000 no.moina	Restoking: 50,000 no.moina
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Tank 2 (GOC)	Harvesting: 1,75,000 no.moina	Restoking: 50,000
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### Third Harvesting :-

The 3<sup>rd</sup> harvesting was done 24 july 2024 with the help of plankton net harvesting the moina zooplankton , feeding the angel fishes and some inoculum releasing in pond no.1

Tank 1 : (yeast)	Harvesting: 1,16000 no. moina	Restoking: 15,000
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Tank 2 (GOC)	Harvesting: 84000	Restoking: 10000
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**HARVESTING**



**HARVESTED MOINA**



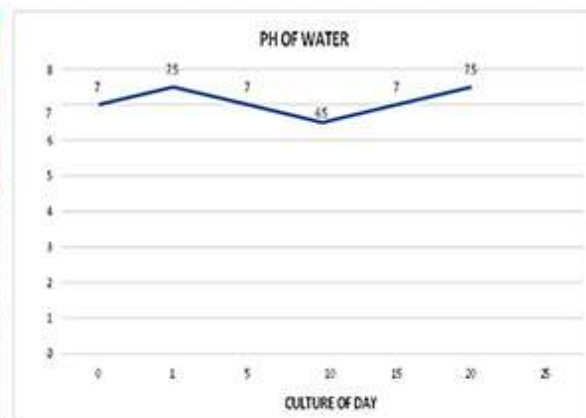
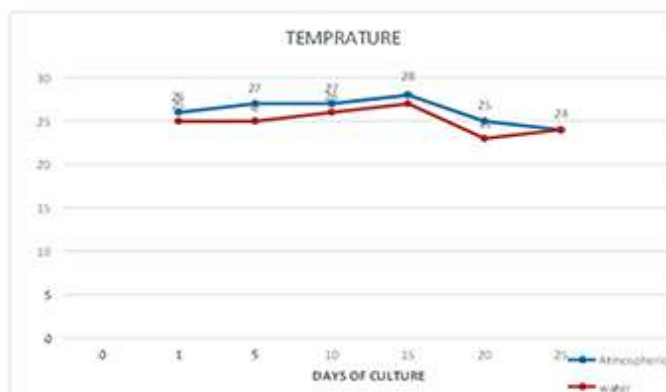
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## Stocking in the 500 Liter Tank :

After the completely harvesting in the 100 litre tank then transfer the 500 litre big tank before the transferring cleaning the tank and disinfecting the tank and then drying one day after the drying one day filling the tap water 500liter maintaining the water temperature and the ph of water after the maintaining all water parameters , dissolving the Moina inoculum in the water and continue the culture. Feeding to the Moina regularly morning and evening two time and maintaining the water parameters regularly.



## CONCLUSION :

- Moina are grow and survive both feed goc and yeast
- But as compare to the goc ,yeasts gives the good growth and survival.

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