

# REARING TRIAL OF CORAL TROUT, *Plectropomus leopardus* LARVAE TO SUPPORT ITS CONSERVATION

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## INTRODUCTION

- ◆ Coral trout, *Plectropomus leopardus* is one of groupers which has high economically value. Volume of groupers for export increases over the year and most of them were obtained from wild capture.
- ◆ The fish culture has been done to conserve its existence in nature. Larvae rearing of this species has been done in the Research Institute for Mariculture since 2004.
- ◆ The purpose of this study was to produce better quality of larvae and to increase the survival rate by improving the larvae rearing methods.

## RESULTS

### Rotifers enrichment with boiled chicken yolk

Treatments	Total length of larvae on each age (mm)					Specific growth rate
	d-3	d-4	d-5	d-6	d-7	
A (2 g chicken yolk + rotifers)	2.40±0.01 <sup>a</sup>	2.43±0.02 <sup>a</sup>	2.48±0.06 <sup>a</sup>	2.54±0.04 <sup>a</sup>	2.60±0.03 <sup>a</sup>	1.09%
B (3 g chicken yolk + rotifers)	2.51±0.03 <sup>b</sup>	2.51±0.04 <sup>b</sup>	2.51±0.05 <sup>b</sup>	2.68±0.08 <sup>a</sup>	2.85±0.20 <sup>a</sup>	2.98%
C (4 g chicken yolk + rotifers)	2.46±0.05 <sup>ab</sup>	2.44±0.03 <sup>ab</sup>	2.50±0.03 <sup>ab</sup>	2.63±0.04 <sup>a</sup>	2.75±0.12 <sup>a</sup>	3.44%
D (rotifers)	2.37±0.10 <sup>a</sup>	2.40±0.06 <sup>a</sup>	2.47±0.07 <sup>a</sup>	2.58±0.13 <sup>a</sup>	2.69±0.27 <sup>a</sup>	3.17%

Values in column followed by the same superscript are not significantly different (P>0.05)

Rotifers enrichment with boiled chicken yolk seems to be useful for first feeding of 3-4 days old larvae

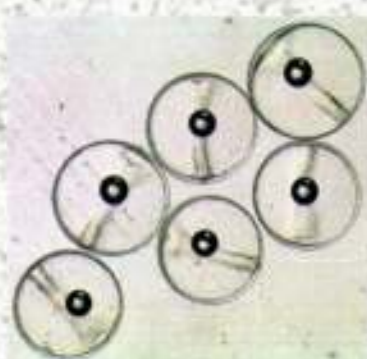
## METHODS



Source of eggs :  
natural spawning of  
domesticated  
broodstocks in  
concrete tanks

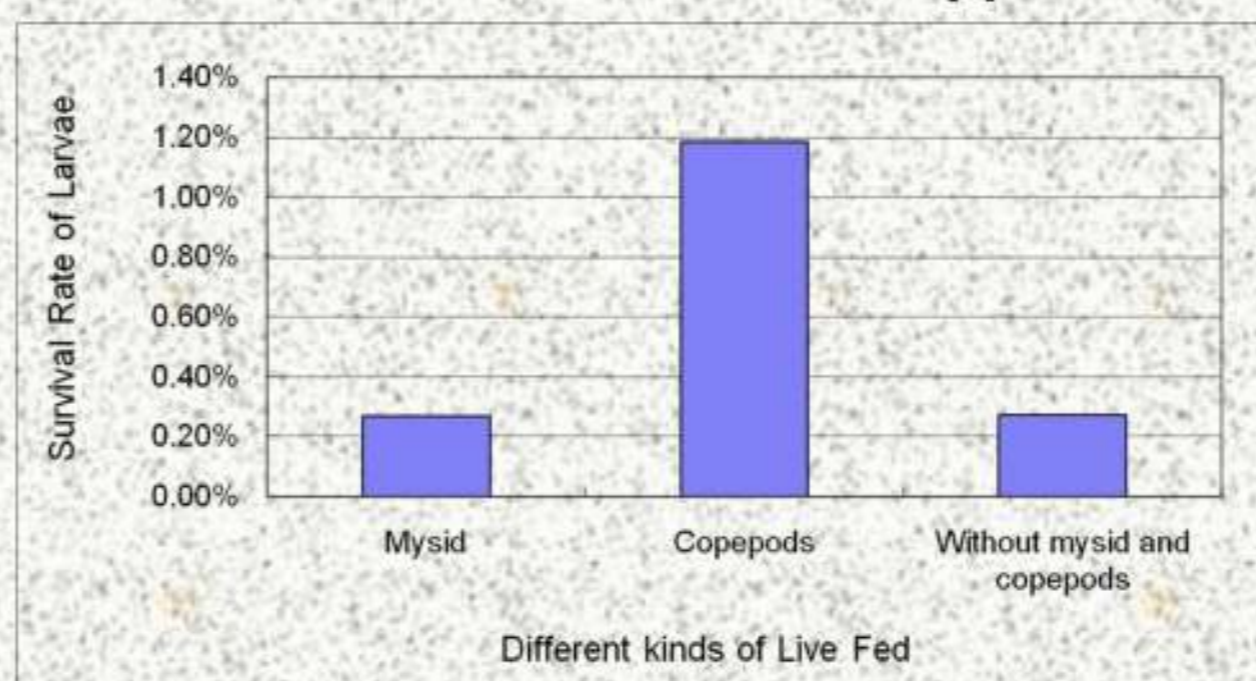


Selected fertilized eggs



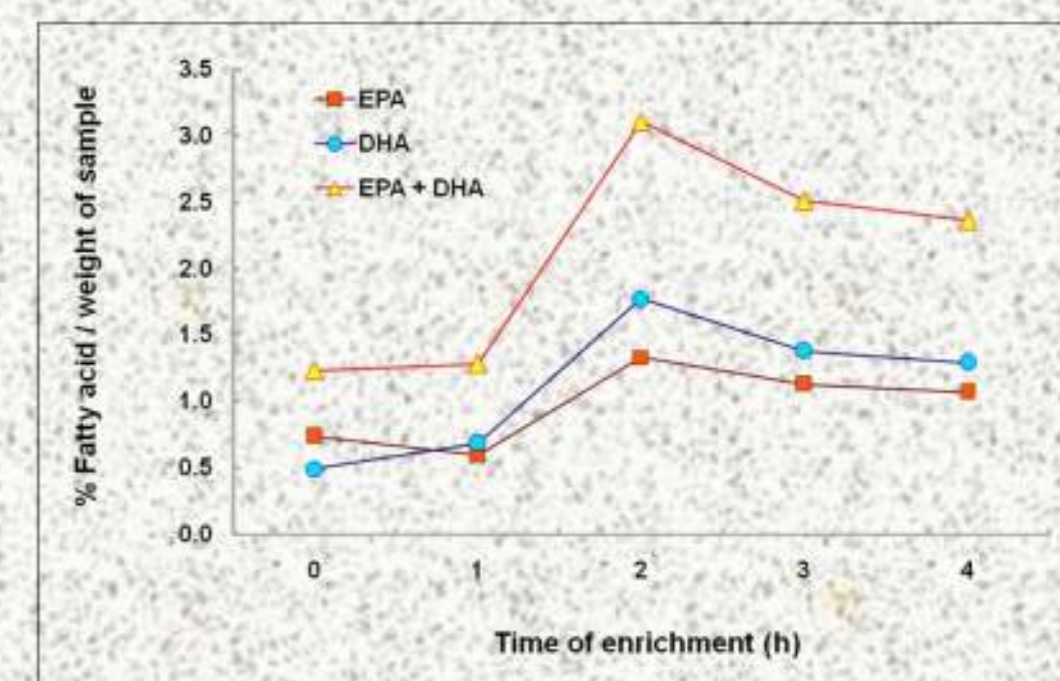
6 Larvae rearing tanks,  
10,000 L volume

### Different Kinds of Live Feed Application



The use of copepods, besides rotifers only, resulted higher survival rate of larvae than using mysid and without mysid and copepods

### Rotifers enrichment with HUFA



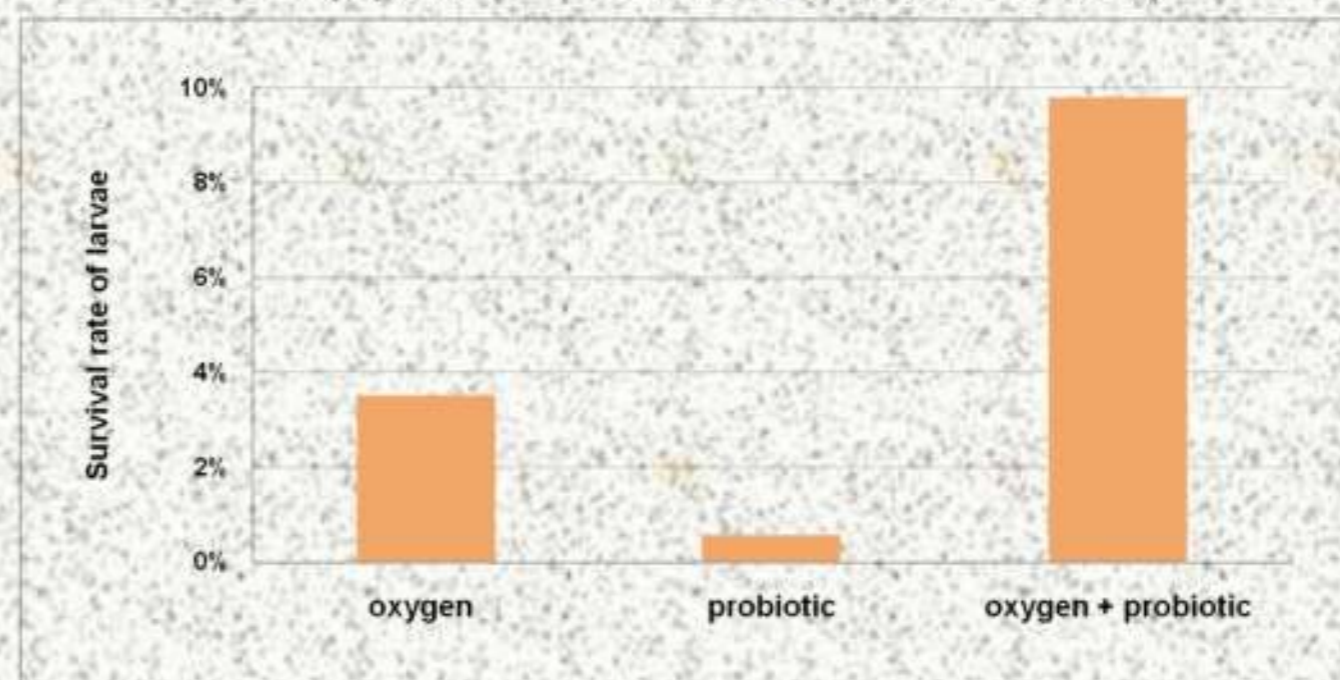
The optimum of rotifers enrichment with HUFA was 2 hours

## FEEDING REGIME & REARING METHOD

	Time (days)														
	1	2	3	4	5	6	7	8	9	10-15	16-20	21-30	31-45		
Phytoplankton															
<i>Nannochloropsis</i> sp.															
Zooplankton Rotifers															
<i>Brachionus</i> sp.															
Zooplankton wild copepod															
Micro diet															
Zooplankton Artemia															
Zooplankton Mysid															
Water exchange															

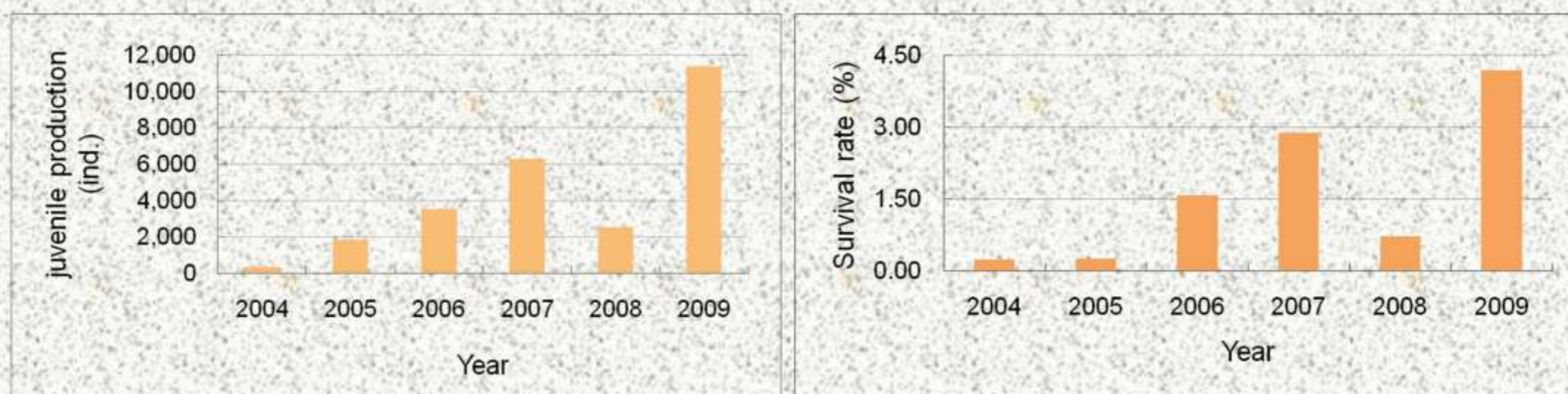


### Oxygen & Probiotic Application



The combination of oxygen and probiotic resulted the highest survival rate of larvae

## PRODUCTION STATUS



Applying the improved methods gave higher production and survival rate of coral trout juveniles in 2009 than those in the previous years

## SOME IMPROVEMENTS :

- Rotifers enrichment with boiled chicken yolk
- Different kinds of live feed application
- Live feeds enrichment with Hufa
- Oxygen & probiotic application



## CONCLUSIONS

Some improvements in larvae rearing methods, i.e. rotifers enrichment with boiled chicken yolk, the use of copepods, HUFA enriched rotifers and oxygen + probiotic application led to an increase in growth and survival rate of coral trout juveniles production from 2004 until 2009.

## REFERENCES

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