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journal homepage: www.elsevier.com/locate/aqua-online

) z , (Carassius auratus gibelio)

Animal Science College, Zhejiang University, Key Laboratory of Molecular Animal Nutrition, Ministry of Education, Hangzhou, 310029, China
Key laboratory of Food Safety of Zhejiang Province, Food Quality & Safety Department, Zhejiang Gongshang University, Hangzhou, 310035, China

ARTICLE INFO

ABSTRACT

Article history:		27	2008	3	2009
A	3		2009		

Keywords:

A
 (-2) , *Carassius auratus gibelio*. fi (-1)
 fi -1 -2 . (P<0.05) ()
 $1.31 \mu^{-1}$, (6.10 + 0.78 μ^{-1}) -1 -2 (16.42 + 1.07 μ^{-1}) 13.52 +
 $1.31 \mu^{-1}$,). (P<0.05) (P<0.05) -1 -2
 fi (▲-) -1 -2 fi
 ▲- (P<0.05) -1 -2 2009 A

1. Introduction

(..., 1990).

7 (1972)

(*z*, 1994) A fi (*z*, 1997). 2. Materials and methods
 (.. 2005). 2.1. Materials and diets

.., 2006; .., 2007). (A (A) . (2001). 60 80 ,

* .164,
..: +86 571 86986730; : +86 571 86994963.
E-mail address: fl@z . . (.).

2400 (▲ „ A).
 $\frac{1}{-1}$ (A -2200, ,).

2.3. Sampling and analytical methods

(250)

1 (-1) 2 (-2), - 0.5 A z (1998).
 $\frac{-1}{-1}$ (2050,). A

-20 , , , , fi , , . A
 $\frac{-20}{-20}$ (AA6501, z ,).

2. A fi : (fi - (%) / : (100%.
 $\frac{A}{A}$ - -) / (fi - -).

2.2. Fish and experimental design

▲ z , (6 24 z -222
 $\frac{400}{400}$ 150 100 3), (3- z 1:2500.
 $\frac{z}{z}$ (r=3) 20 (3- z).

30- A (13.08-15.12).
 $\frac{z}{z}$ (-1, -2 A).

6:00, 12:00 18:00
 $\frac{3\%}{z}$ (1976)

. A

(50%).

fi fi (fl : 1 m^{-1}),

(„ „).
 $\frac{25-26}{12}$

12 () ,

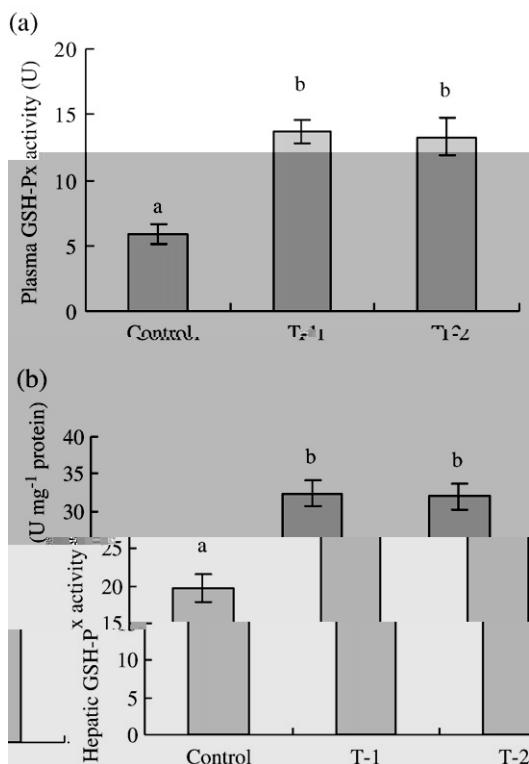


Fig. 1. (▲-) (-1) (-2) fi (P<0.05).

3. Results

3.1. Water quality and growth performance

A (0–0.2 μM^{-1}), (0–0.1 μM^{-1}) (7.4–7.8 μM^{-1}). fi (P<0.05). fi (P>0.05).

30

3.2. Biochemical analysis

A 30 (P<0.05) fi 0.78 μM^{-1} , -2 (4). fi (P>0.05).

3.3. Enzyme activity

(▲-) (-1 -2) fi 2000).

4. Discussion

(1984)
punctatus)

fi (Zctalurus
&
, Carassius auratus gibelio.

0.1 fi -1 500 -1 (, 1976).

(() () (, 1983; (, 1993; , 1987),

(, 1995). fi (, 2001). ▲

fi (, 2000)

▲- (, 1994). fi (, 2001). ▲ (, 1986).

(, 2000).

1

(, 1997).

(P>0.05)

(, 1982). A

(z , (

, 2003). ▲- (, 1993).

Acknowledgments

(973) (. 2009 118705),
 fi , (. 2004 32031)
 (. 09-20).

References