

**PRELIMINARY STUDY ON THE INFLUENCE OF  
HERBAL EXTRACTIONS; *Cardiospermum halicacabum*,  
*Allium sativum* ON THE GROWTH PERFORMANCE OF  
THE *Carassius auratus***

A dissertation submitted to the  
Faculty of Animal Science and Export Agriculture  
Uva Wellassa University  
in partial fulfillment of the requirement of  
the degree of  
Bachelor of Aquatic Resources Technology

By

**LAKSHMAN HEMASIRIGE DIMESHA HASINI KUMARI  
LAKSHMAN**

**Aquatic Resources Technology Degree Programme  
Faculty of Animal Science and Export Agriculture  
Uva Wellassa University  
2013**

## ABSTRACT

The study was carried out to evaluate the effects of Welpenea (*Cardiospermum halicacabum*) and Garlic (*Allium sativum*) on growth performance of the goldfish (*Carassius auratus*). A total number of 90 fish (0.11-0.13 g in weight and 0.4- 0.6 cm in length) was used. Fish were divided in to 9 groups and fed with seven different feed types. For *C. halicacabum* three different concentrations (20 g/ kg, 40 g/ kg, and 60 g/ kg) were used and for *A. sativum* three concentrations (20 g/ kg, 40 g/ kg and 60 g/ kg) were used. Three tanks were used as control treatment. The experiment was conducted for 60 days and three replicates were used for each of the concentrations. The results showed that mean weight, mean standard length and growth performance of *Carassius auratus* increased significantly ( $p < 0.05$ ) and Feed conversion ratio decreased in all groups fed with *C. halicacabum* and *A. sativum* with lower mortality rate and higher color changing rate compared to control group. Highest growth performances were shown by the 40 g/ kg of both *C. halicacabum* and *A. sativum* treatments. In conclusion, it can be suggested that addition of *C. halicacabum* and *A. sativum* to fish diet can promote growth rate, decrease motality rate and enhance the color changing in fish.

Key words – Goldfish (*Carassius auratus*), Garlic (*Allium sativum*), Welpenela (*Cardiospermum halicacabum*)