Farming a new economically viable fish species: Kisinja (Barbus altianalis)

Feeding

In wild, Kisinja is omnivorous and feeds on crustaceans such as crabs and snails. Although the feeding technologies and appropriate feeds are yet to be developed, the hatchlings have so far been raised on Ranan starter feeds and the brood stocks are fed on Ugachick 30% growers pellets.

Future strategies

The station intends to refine the breeding protocol so that the technology is easily available to hatchery operators who can produce sufficient fry/fingerlings to sell to the fish farmers. Appropriate feeds for culture of Kisinjja are being formulated and will be available along with those for seed after multiplication.

Importance of successful culture of Kisinja

a) Increased incomes for farmers (a kilo of Kisinjja costs about UShs 10,000)

b) Increased availability and accessibility of high value proteins

c) Reduced pressure on wild fish stocks in lakes and rivers

d) Preserving and preventing of its extinction of wild stocks

It grows faster and attains larger size than commonly farmed fishes in Uganda, including the Nile tilapia, the African catfish, and mirror carp.

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Farming a New Economically Viable Fish Species: Kisinja *(Barbus Altianalis)*

By Aruho C. & Ondhoro C.C. ARDC KAJJANSI 2010

Introduction

Kisinjja *(Barbus altianialis)* (Figure 1) is an indigenous omnivorous fish, of high economic value in Uganda. It was widely distributed in most lakes and rivers in the country but its stocks were depleted due to overfishing and degradation of its natural habitat. It can grow up to a maximum length of 120 cm and a weight of 15kg in the wild and grows faster, attains larger size than commonly farmed fishes in Uganda, including the Nile tilapia, the African catfish, and mirror carp. Kisinja is a highly valuable table fish with good taste and aroma especially when smoked. Increased production of Kisinja is therefore necessary to meet economic and nutritional benefits of the communities and conservation of the species. The option for increasing production of Kisinja and preventing its extinction is through fish farming. Consequently technology for culturing Kisinja is being developed at Kajjansi.

Figure 1. Adult Kisinja (*Barbus altianalis*)

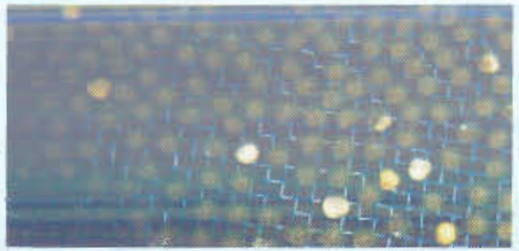

Figure 2: Eggs being incubated

Spawning procedure

Ripe broodstock are collected from the wild (River Nile at Jinja) during the rainy season and transported to the hatchery at Kajjansi. The ripe females are put in holding tanks and water is flashed continuously for about four hours to stimulate eggs to become ready for stripping. The eggs are stripped by applying gentle pressure along the belly of the female fish while the milt is obtained by gentle pressure along the belly of the male. The eggs are collected in a bowl and fertilized with the milt obtained from the male. The fertilized eggs are introduced into incubation tray submerged in water between 5-10 cm below the water surface (Figure 2). The eggs are incubated at 27^{O}C for 48 to 60 hours before hatching into larvae (Figures 3 & 4). The larvae are kept in a hatchery for further nursery procedures involving proper feeding, maintenance of suitable water quality, periodic grading and later transferred to nursery ponds as fingerlings (Figure 5).

Figure. 3: Newly hatched larvae

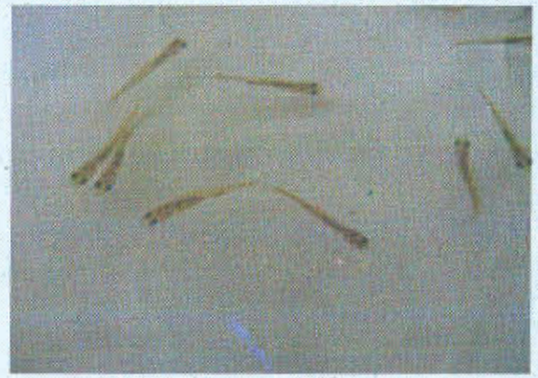

Figure 4 : two weeks old fry

Figure 5. Picture of one month old *Barbus* fingerling