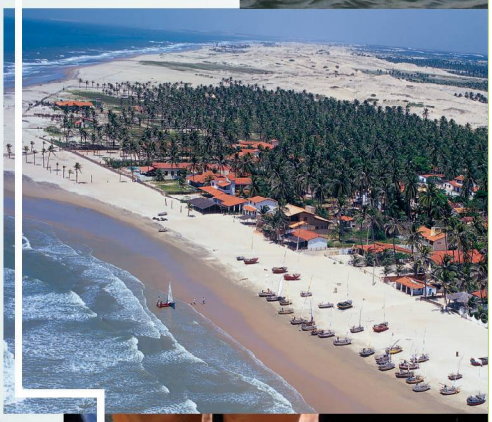
Science & Industry Joining Forces to Meet Seafood Demands

FENACAM & LACQUA/SARA (WAS) '15
LATIN AMERICAN & CARIBBEAN AQUACULTURE 2015
SOUTH AMERICAN REGIONAL AQUACULTURE 2015
XII INTERNATIONAL SHRIMP FARMING SYMPOSIUM
XII INTERNATIONAL AQUACULTURE TRADE SHOW
IX INTERNATIONAL AQUACULTURE SYMPOSIUM
3rd TILAPIA ECONOMIC FORUM



NOVEMBER 16-19, 2015
CEARA CONVENTION CENTER
FORTALEZA, BRAZIL

THE ANNUAL INTERNATIONAL CONFERENCE & EXPOSITION OF

LAQUA15 Fortaleza, Brazil

ABCC Associação Brasileira de Criadores de Camarões

World Aquaculture Society

HELD IN CONJUNCTION WITH FENACAM 2015

Feira Nacional do Camarão FENACAM 16 a 19 de Novembro 2015 Fortaleza-CE Brasil

SPONSORS

ADECE Agência de Desenvolvimento do Estado do Ceará S.A.

Banco do Nordeste

Governo do Estado do Ceará
Secretaria da Pesca e Aquicultura

SEBRAE

SURGERY IN ADULT PIRARUCU *Arapaima gigas* FOR INSERTION OF TELEMETRY TAG

Leandro K.F. de Lima*; Adriana F. Lima; Patricia O. Maciel

Embrapa Fisheries and Aquaculture
Brazilian Agriculture Research Corporation-EMBRAPA
Palmas, Tocantins, Brazil
leandro.kanamaru@embrapa.br

Telemetry equipment is largely used in behavioral and fish migration studies in lakes, rivers and oceans. The application of this technology in aquaculture is recent and is being tested to evaluate pirarucu reproduction behavior in ponds. The equipment is composed by receivers and transmitters, including a range test tag (13 mm width, 36 mm length), that allows to identify the fish movement at 3 seconds intervals. This tag needs to be inserted in the fish coelomic cavity. In January of 2015, three animals (total length 1.39 m; 1.36 m; and 1.35 m) were submitted to a surgery in order to receive the tag and have their movement monitored. Fish were caught in ponds, transported with a special net to a shaded place, where they were placed in the left lateral position on a damp surface. The animals were anesthetized using gill aspersion of MS222 solution (200 mg/L) before starting the surgery and during all procedure, when signs of recovery from anesthesia were observed. The region where the tag was implanted was the final third of the body, four scales above the left pelvic fin, where was previously observed lesser risk to affect an important organ. It was necessary to remove five scales to clean the incision area and access the skin, which was disinfected using iodized alcohol. The incision had a length of 3cm and a depth of approximately 4cm to access the coelomic cavity where the tag was introduced. The Wolf suture was used to close the incision, using an absorbable suture wire (catcromo 4-0 0,75 cm). In the end of the surgical procedure, a healing and antibiotic ointment (Ganadol®) was applied in suture area. Fish were recovered from anesthesia by water aspersion at the gills. When the complete recovery was observed, the fish were returned to the ponds carefully in order to avoid drowning. Fifteen days after the surgery, the fish were eating normally, and were caught to evaluate the incision healing process (Figure 1). The performed procedure was safe, allowing the complete recovery of fish and the continuity of the telemetry research.

FIGURE 1. Surgery in pirarucu to implant a telemetry tag. (A) Anaesthesic procedure using gill aspersion of MS222 solution (200mg/L); (B) Incision area; (C) Tag. (1) Incision with a length of 3 cm; (2) Suture with 3 or 4 Wolf stiches; (3) Healing process in the incision area 15 days after surgery.