RECOVERY OF SHIJIMI CLAM IN LAKE TOUGHO -CONTROL OF SALT CONCENTRATION-

TOSHINORI FUKUI[1], SHINPEI FURUTA[1], ISAO YOSHIDA[2], MASAYOSHI HARADA[2], KIITIRO SITIJYO[2], AND KUNIHIKO YONEHARA[2]
[1]Tottori Prefectural Fisheries Research Center, Tomari, 689-0602 JAPAN
[2]Tottori University, Koyama-Cho, Tottori 680-8553, JAPAN

Lake Togo is brackish and situated at the central part of Tottori City, Tottori Prefecture, Japan. Four big rivers flow into the lake and the lake water flows out only through the River Hashizu to the Japan Sea. As the Hasizu River is a tidal river, a tidal gate has been constructed at Hasizu near the mouth of the river to prevent seawater from intruding into the lake. Fishermen have got good catch of Shijimi clam a few years ago. But, recently, the catch has been decreasing rapidly. Then, Fisherman asked us to study how to increase the catch. Therefore, the authors have begun the study of promoting resuscitation of Shijimi clan. It is considered that main causes are due to the lowering of salt concentration in lake and eutro-phication.

Then, first of all, negotiations with concerned authorities about opening the gate has been begun in order to raise the salt concentration from 5psu to 7psu only during spawning season. In 2002, a trial operation was carried. In this paper, the results are reported.

The results are summarized as follows: 1) Due to raising the salt concentration, the number of small shijimi has increased and the habitat has greatly widened. 2) After the trial, there were no reports about the salt damage against crops, flooding, damage against other fish and other shellfish, and occurrence of a red water. 3) Dissolved oxygen in water near bottom is higher than 9ppm.