

PROJECT

TURBOT AQUACULTURE IN TURKEY: FROM PAST UNTIL TODAY

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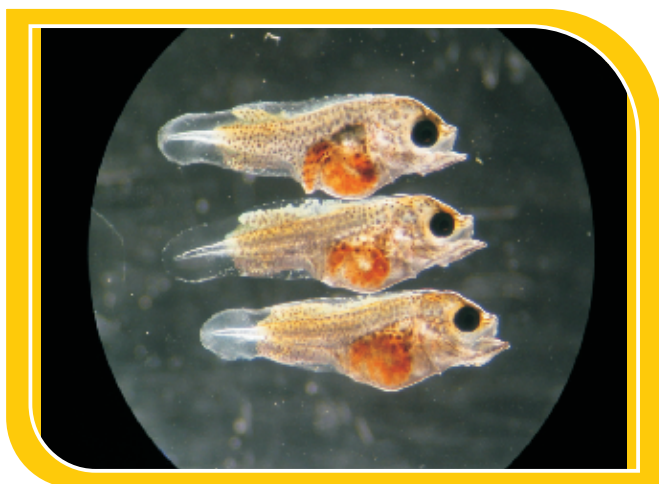
Fish aquaculture has recently increased in Turkey. Rainbow trout, sea bream and sea bass can be listed among the species that are mostly being cultured. As the aquaculture increases, prices do decrease and therefore new techniques for the culture of new fish species are needed. Turbot do inhabit within a large area starting from Norway, through the Atlantic coasts to the Mediterranean and the Black Sea and is a target species for aquaculture in many countries. Turbot aquaculture has become attractive in Turkey for their natural stocks in the Turkish territorial waters decrease and their market value is high both in Turkey and in the European countries.

First trials for turbot aquaculture started in the UK and France in 1970s and in Spain in the 1980s and the aquaculture technology has swiftly grown from then on. Prioritizing fisheries aquaculture for fisheries management and conservation of fishing resources became highly important in Turkey within the scope of the 7th and 8th 5-Year Development Plans (1996-2000 and 2000-2005). The project “Development of Fish Aquaculture in the Black Sea” has been carried out mutually by the Japanese International Cooperation Agency (JICA) and by the Central

Fisheries Research Institute, Trabzon affiliated to the Ministry of Agriculture of the Turkish Government. The subject project was launched in April 1997 and turbot was selected as the target species. Turbot juvenile aquaculture was succeeded in Turkey for the first time in 1998.

The aim of the project “Development of Fish Aquaculture in the Black Sea” is to produce turbot by means of aquaculture, to spread turbot aquaculture, and to support current stocks by means of fishery. The subject project was conducted between April 1997 and April 2002. Development of turbot juvenile aquaculture and of aquaculture techniques was realized as a part of the same. The project, carried out in cooperation with JICA, was extended for two and a half year in order to obtain more detailed information in some important aspects. After this extension period, a new project again in cooperation with JICA was conducted between January 2004 and 2007 in order to develop sustainable juvenile aquaculture. The new project included studies on developing the egg-juvenile quality and preventing diseases in turbot aquaculture. Annual achievements in the juvenile aquaculture after the year 1998, when first juveniles were obtained, showed that sustainable and controlled juvenile aquaculture could be manageable.

The project under the name “Releasing the Aqua cultured Turbot Juveniles to the Natural Stocks and Examination of Their Bio-ecologic Characteristics” has been set up by our institute, in line with the aquaculture studies started in 1998, in order to support the current stocks through fishery. As a part of the subject project, 28178 turbot juveniles with an approximate length of 13.9 (6.5-25.7) cm and weight of 59.8 (4.6-257.1) g were tagged and released to sea from 14 different zones and during 20 Separate





periods from the Southeast Black Sea (Sinop-Hopa) coastal line in 1999-2002. A 7-year long monitoring program was realized between 1999 and 2005 in order to recapture the tagged turbot fish.

Another goal of the project was to spread turbot aquaculture. For this purpose, approximately 115000 juvenile fish were distributed to those who wished to produce turbot and to some faculties for use in research studies in different regions such as Rize, Ordu, Milas/Mugla between 1998 and 2006 and technical support regarding turbot aquaculture was provided.

The projects, which were conducted in cooperation with the JICA in January 2007, have been successfully completed. However studies to increase larval survival rate, to obtain qualified egg and larvae, to effectively get egg from the hatchery-originated broodstocks and to meet the specific food requirements of the larvae and eggs, etc. must be carried on. Therefore, "Development of Turbot Fish Aquaculture Techniques" project

has been set up by our Institute and supported by the Ministry of Agriculture. Studies on the aforementioned subjects do continue within the framework of this project. Positive results like 20% on the larval survival rate and 5.4% and 5.5% the malpigmentation and abnormality rate respectively as indicators of larval quality were obtained in the studies in 2007-2009. The larval survival rate of 30% is also possible according to studies.



Our Institute continues to support those who wish to aquaculture turbot while the research studies go on. A project, set up by a big firm operating in the Fisheries sector in Turkey, has been approved. Besides, a few domestic-foreign companies have some attempts regarding turbot aquaculture. The existence of a private sector supporting turbot aquaculture and undertaking some attempts for this purpose is satisfactory for its contribution to Turkey's economy. We wish that turbot fish would accelerate fisheries aquaculture.