



## Third Laureate Research & Development

- ◆ **Project title:** The effects of slurry on Larviculture of *Rutilus firsii kutum* and chines carp yield and determination of efficient concentration for increasing of production
- ◆ **Representative:** Maryam Fallahi (Ph.D.)

### Abstract:

*Rutilus firsii kutum* is one of the important fish of Caspian sea which has significant economical role in the region .The objective of this project is a comparative study on traditional culture of fishes versus anaerobic fermentation of cow manure (Slurry) . This survey were conducted on nine pound of 1.7 hec triplicate with there treatment with stocking densities of 1.7 million fish larva at center culture and propagation center at Siakal. The result indicate that net fish production was 1.7 to 2 times higher in slurry than traditional treatment also the survival rat were 1.7 times higher in slurry treatment. Slurry with several active substances is more effective and can promote the growth of zooplanktons which is the food of larval stage of *rutilus frisii kutum*. Nutritional content of phosphorous, nitrogen, calcium, potassium and magnesium after anaerobic fermentation as well as protein and lipid content with 1.4and 1.9 times respectively were higher in slurry treatment than control. In second phase of this project the effect of slurry was surveyed on Chinese carp.The survival rat in slurry treatment was more than traditional treatment, so the survival rat were 98,100,84 and 52 percent in Silver carp, Big head, , common carp and grass carp respectively however it was 96, 98.3 ,82.8 and 20 for traditional treatment.The results showed that survival rat and yield were higher in slurry than control . The increasing percent of yield were 13.5, 2.6, 18.4 and 85.3 in Silver carp, Big head, common carp and grass carp respectively. The survival rat of grass carp was twice higher in slurry treatment than control. Zooplankton abundant in slurry pounds was more but blue-green algae density was less than control. In general the result indicate that the slurry with higher nutritional content is more effective on the survival and growth rate of fishes and also is more efficient in proliferation of plankton in particular zooplankton and it reduce the use of chemical fertilizers.

