

Research program IZS VE 07/13

Innovative technique to stun rainbow trout (*Oncorhynchus mykiss*) before killing and processing

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World total demand for fish and fishery products is estimated to expand by almost 50 million tonnes to 183 million tonnes by 2015 and it is expected that 50 % will come from aquaculture. In 2011 there was an average consumption of fish of 16,4 Kg for individual. Due to this continuous growth of the aquaculture industry, fish welfare is an important issue for the industry and for the consumers. Different studies on rainbow trout (*Oncorhynchus mykiss*) have shown the presence of nociceptors and supported the hypothesis that it can experience pain, stress and fear. Although organizations such as Farm Animal Welfare Council, Humane Slaughter Association and the Standing purposes have published recommendations regarding the welfare of farmed fish, stunning still represents one of the most important immediate and irreversible loss of consciousness.

The purpose of this research project is to set up a multidisciplinary method to evaluate the level of stunning in farmed rainbow trout through an analysis of some physiological and behavioural parameters. Three different methods to stun trout before killing and processing will be evaluated: electrical stunning, ice slurry and salt water at -10°C (innovative technique).