DM2009 Project Summary

Project Number: 4307 Booth Number: 53

Daphnia Grazing to Stem Global Warming-Linked Bacterial Toxins in Fish Ponds

COUNTRY: Serbia
ORGANIZATION: SZTR Sunce
FUNDING REQUEST: $199,000

OBJECTIVE: Our goal is to mitigate and diminish the negative impacts of cyanobacterial toxins on the quality of commercial fish meat. By introducing small-scale, cost-effective methods of biomanipulation into the fish-farming process, toxin-producing cyanobacterial strains can be controlled and maintained at levels that will not result in blooming and toxin production.

RATIONALE: Global warming and climate change have significantly increased the occurrence of toxic cyanobacterial blooms, especially in fishponds. Cyanobacterial toxins in commercial fishponds greatly impact the quality of fish produced, and even impose legal restrictions due legislation on food safety.

INNOVATION: In the area of climate adaptation, our new approach is related to controlling cyanobacterial toxic blooms triggered by global warming in fishponds. Introducing Daphnia (a small, planktonic crustaceans) to control the release of cyanotoxins and their accumulation in fish and the food chain is the main innovation of this project. Monitoring cyanobacterial growth rate and introducing daphnia precisely in the exponential growth phase are novel aspects of this project. The idea behind our project can mitigate climate-change problems arising globally, and thus is not limited or restricted to the area we propose here. It can be a widely applicable and useful method in any region where water quality presents an obstacle to fish farming.

CONTACT: Pavle Zeliç
izlecenje@yahoo.com