

## **AQUACULTURE AND AGRICULTURE – A USEFUL CONNECTION**

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The Marine and Freshwater Resources Institute (MAFRI) at Snobs Creek has recently embarked on a new project to demonstrate the environmental benefits of linking agriculture and aquaculture.

The three year project, entitled 'Ecologically Sustainable Agriculture through Aquaculture Integration', will aim to increase awareness within the farming community about aquaculture as a viable and sustainable option with commercial potential.

There are many similarities between agriculture and aquaculture systems, both relying on basic inputs such as land, water and nutrients to produce marketable commodities. These similarities can be exploited to increase the efficiency of resource use by linking the two systems so that the outputs of one system can be used as the input to the other. The linking of agriculture and aquaculture is formally known as Integrated Agri-Aquaculture Systems (IAAS).

MAFRI's Snobs Creek campus is recognised as the leading centre in Australia for this area of research and development. Research undertaken by the institute over the past few years has shown that various IAAS models are technically feasible under Australian conditions.

The work has shown that there is potential in multiple water use in existing farm water bodies such as ponds, tanks and channels; in the use of otherwise unproductive resources such as inland saline water for aquaculture; and in the utilisation of aquaculture wastewater for hydroponics (also known as 'aquaponics').

The environmental benefits of IAAS depend on the model adopted, but can include the re-use of otherwise wasted resources (water, nutrients, energy), the rehabilitation of unproductive land, and improvements in on-farm biodiversity through the enhanced productivity of culture ponds.

The objectives of this project, funded by the Ecologically Sustainable Agriculture Initiative of the Department of Natural Resources and Environment is to develop, promote and coordinate commercial-scale IAAS practices within Victoria. It is intended to establish one or more case study/demonstration sites that will be monitored to assess the environmental and socio-economic cost-benefits of IAAS. An industry development strategy with best practice environmental management guidelines for IAAS will also be developed to encourage others to adopt IAAS models across the state.

For more information about this project please contact Fiona Gavine, IAAS project coordinator, MAFRI Snobs Creek, Private Bag 20, Alexandra, VIC 3714. Phone (03) 5774 2208, or email: [fiona.gavine@nre.vic.gov.au](mailto:fiona.gavine@nre.vic.gov.au)