# Predators key to sustainable farming

August 21 2009

Barn owls have emerged as the unlikely heroes in the fight against climate change, saving Malaysian farmers more than money, UQ PhD Student Chong Leong Puan has found.

A student from UQ's School of Integrative Systems, Mr Puan examined predator behaviour to determine the effectiveness of barn owls in rodent control on Malaysian palm oil plantations.

"Owl species that are associated with forest habitats are regarded as an indicator of forest health," Mr Puan said.

"Many species remain high in the food chain and have an ecological role of maintaining ecosystems in a steady state."

Mr Puan, a representative for the World Owl Trust, saw a need to research a more cost effective and environmentally friendly method of pest control.

"I spent 14 months on a palm oil plantation in Malaysia trapping rats, observing owl breeding conditions and collecting owl pellets," he said.

Mr Puan found that high rodent levels correspond with increased owl fertility rates.

"There was a significant positive correlation between the relative abundance of rats captured and number of pellets collected during breeding months of the birds," Mr Puan said.

He also found that biological controls can be used to overcome environmental problems associated with chemical pesticides, such as rodent resistance and secondary poisoning of non-target animals.

The cost efficiency of such biological controls are another reason to adopt the method in Malaysia, the world's second largest palm oil producer.

Annually, rodents cost the palm oil industry more than $32 million USD, with many plantations relying heavily on chemical control methods.

At a time when both the economy and the environment are struggling on the global stage, Mr Puan's findings pave the way for sustainable farming practices across the agricultural industry.

Provided by University of Queensland (news : web)