

## Integrated Rice-Duck Farming: An appropriate technology in post-earthquake period<sup>1</sup>

Principle	Exploit symbiotic relationship between ducks and rice for higher productivity
Time of introducing ducklings in rice field	15 days after rice transplantation
Appropriate breed of duck	<ul style="list-style-type: none"> <li>- Hongkong and Peking</li> <li>- It grows quickly than the local ones.</li> </ul>
Benefits	<ul style="list-style-type: none"> <li>- Paddling of ducks stimulates the growth of rice, resulting into healthy plants.</li> </ul> <p><u>Environmental benefits</u></p> <ul style="list-style-type: none"> <li>- Droppings serve as organic fertilizer.</li> <li>- Ducks feed on insects and weeds.</li> <li>- Duck paddling suppresses the methane and nitrous oxide, which are the contributors of greenhouse effect, emissions from rice field.</li> </ul> <p><u>Economic benefits</u></p> <ul style="list-style-type: none"> <li>- It cancels out the chemical fertilizer and pesticides/herbicides input, thereby reducing the cost of purchasing it.</li> <li>- Farmer can get the rice produced without using any chemicals and can get better market price.</li> <li>- Better productivity (13% more) to address the problem of food insecurity.</li> <li>- At the end of rice harvest, sale of duck gives additional economic return.</li> </ul> <p><u>Nutrient benefit</u></p> <ul style="list-style-type: none"> <li>- Carbohydrate plus protein: rice plus duck meat.</li> </ul>
Research findings	<ul style="list-style-type: none"> <li>- An experiment conducted by Practical Action in Chitwan (Nepal) resulted 13% increase in rice productivity and 44% increase in net income of farmers.</li> <li>- A study carried out by Chinese scientists in South China showed that constant paddling of ducks in rice field could suppress methane and nitrous oxide emissions from rice field, thereby opening that this farming will contribute to alleviating global warming.</li> <li>- A research done by Hiroyuki Morii (Asst. Professor, University of Occupational and Environmental Health) in Japan showed that the ducks could control methane emission from rice field. (Methane is one of the major greenhouse gas and rice field is estimated to contribute 12% of all methane released into</li> </ul>

<sup>1</sup> It's based on an article entitled 'Plant an animal' authored by Sanjib Chaudhary and Menila Kharel and published in [www.ekantipur.com](http://www.ekantipur.com).

	environment.)
Quotes	<p>'Weeding and other intercultural operations done by ducks are better than what humans can do. The rice-duck field looks greener and fresher than the normal one.'</p> <p style="text-align: right;">- Meera Darai, Farmer and Chairperson, Janashakti Dhan Hans Palan Samuha, Kathar VDC, Chitwan</p> <p>-----</p> <p>'I did not use any chemical fertilizers and pesticides in my rice field, though, my neighbor did so 3 times in a single cultivation period. The unwanted insects, like drosophila, mosquito are eaten by ducks in the evening.'</p> <p style="text-align: right;">- Ramlal Chaudhary, Farmer and Member, Gunastariya Dhan Hans Palan Samuha, Kumrose VDC, Chitwan</p>
Source	Plant an animal (Sanjib Chaudhary and Menila Kharel); <a href="http://www.ekantipur.com">www.ekantipur.com</a>