

Design can change:

A new nethouse system makes safe farming attractive to Punjabi vegetable farmers

India produces the largest quantities of basic pesticides in Asia and is the 12th biggest pesticide producer worldwide. Insecticides account for more than 60 percent of India's total pesticide consumption. Applying insecticides is the most common solution farmers use to solve the problems posed by pests and diseases, but the majority of these insecticides are among the most toxic available. "Due to excessive pesticide use, pesticide residues in food, especially vegetables, in India are the highest," says Dr. Srinivasan Ramasamy, leading entomologist at AVRDC – The World Vegetable Center. "Several nationwide surveys indicated that 50-70% of vegetables are contaminated with insecticide residues. India accounts for one-third of all pesticide poisoning cases in the world. With an annual quantity of 6,900 tons, Punjab is the largest pesticide consumer in the country."

Together with Punjab Agricultural University (PAU) the Center is developing safer alternatives to pesticides, including state-of-the-art nethouse systems. Their work is supported with funding from Sir Ratan Tata Trust (SRTT).

Producing vegetables under nethouse structures has several benefits including reduced pesticide use, off-



Vegetable production in nethouses: High income per unit area

season vegetable production, advancing maturity, increased productive period, and improved quality. As the income per unit area is high, even small farmers have expressed interest in this technology.

The average nethouse does not cope well with weather conditions in the Punjab. But there is good reason to assume the weather will no longer be a constraint to farmers who want to use nethouses.

A Senior Research Engineer from PAU, Dr. K.G. Singh, has designed an advanced nethouse structure that performs much better under the specific geographic and climatic settings in the Punjab. As part of a participatory process involving scientists, extensionists, and farmers, the draft model was discussed and improved. The prototype of the newly designed nethouse is being

constructed at PAU. A second model will soon be constructed at AVRDC's Regional Center for South Asia (AVRDC-RCSA) in Hyderabad, India.

"Although the cost of construction is higher (about INR 160,000 or US \$ 3,330), the structure is very stable and will allow for safe and sustainable vegetable production over a long period of time," says developer Dr. K.G. Singh.

What the Indian media say about the work:

<http://news.webindia123.com/news/articles/India/20081215/1128788.html>

Times of India: December 9, 2008
("Nethouse design for quality agriculture")

The Tribune: December 10, 2008
("Nethouse cultivation being promoted")