



Deutscher Tropentag, October 11-13, 2005, Hohenheim

“The Global Food & Product Chain—  
Dynamics, Innovations, Conflicts, Strategies”

## International Scientific Cooperation as Base for Preventive Consumer Protection: Implementation of Biological Plant Protection Factors in Chinese Greenhouse Vegetable Production

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### Abstract

Initiated by the German Ministry of Consumer Protection, Food and Agriculture and the Chinese Ministry of Agriculture, a cooperation between partners of the Chinese Agricultural University, Beijing, Xinjiang Academy of Agricultural Sciences, Urumqi, and Chinese Academy of Sciences with the Federal Biological Research Centre for Agriculture and Forestry (BBA) a) introduces the new mycorrhizal technology for an integrated plant protection strategy to Chinese horticulture, b) expands the basic knowledge of Chinese scientists about the population dynamics of pests and pathogens on vegetables under greenhouse conditions, c) promotes the development of new soil improvers/biofertiliser products in China, and d) demonstrates sustainable, consumer oriented methods for horticulture to Chinese students, scientific professors and supervisors of plant producers. Therefore, future developments of Chinese plant protection strategies will have the chance to be designed more adapted to compliance criteria of farm assurance systems as important catalogues of food quality control criteria. Furthermore, the cooperation of BBA with Chinese partners increases the expertise of German scientists on the field of use of biological plant protection factors under biotic stresses in greenhouses and enhances specific knowledge about Chinese horticultural and agricultural plant production systems.

Since 2002, in demonstration projects under practical conditions the following steps have already been realised: a) The mycorrhizal technology at the XAAS (Urumqi) was established, b) biological control of biotic stressors (nematodes and fungal pathogens, insects etc.) on tomato, bell pepper and cucumber by beneficials and mycorrhizal fungi under greenhouse conditions is recently carried out, c) eco-physiological studies on mycorrhizal functioning under greenhouse conditions (influence of light, nutrition, population biological means etc) have started demonstrating the strong interest of all partners in the consumer oriented research.

**Keywords:** Biological plant protection, China, greenhouse, horticulture, mycorrhiza, vegetable