140

Organic Farming in Bangladesh

G. Rahmann[1], R. Alam (BAU)

Goal

Bangladesh has a human density of 1000 inhabitants per km^2. About 70 % of the population lives in rural areas, agriculture contributes 33 % of the GDP. It is estimated that 48 % of the population live in poverty and 27 % in absulate poverty. The average farm size is 1.5 hectare and has to feed the farmers family of 5 to 7 people. Food security was and is still one of the major problem in the country. Therefore, nearly every square meter of land and natural resource are used for food production and other human needs, mainly on subsistence level. Crop production dominates the farm activities, animal husbandry is done with cattle, small ruminants (goats, sheep), chicken and ducks.

The need to increase food production with increasing population was reached by increasing farmland productivity. This was done with the use of modern technology. But, increasing application of chemical fertilizers, pesticides in combination with irrigation, monocultures and high yielding varieties led to problems in degradation of soil fertility, water pollution and decreasing biodiversity. The conflict of food production and sustainable land use is obvious. Therefore, new means of farming need to meet the food needs of today and tomorrow as well as the ecological resources of biodiversity, climate and soil fertility.

Organic farming can be an option for economical and ecologically sound farming in Bangladesh. Because this is not practiced in the country (certified), the impact of conversion to organic farming towards production yield, biodiversity and soil fertility is not known. Particularly the impact of animal husbandry in organic farms needs scientific recognition, because it is rarely considered in developing countries. The mutual relations of animals and crops are substantial in the matter of nutrient cycles and usage of by-products in crop production. Last but not least animal products play an important part in the human diet and farm income. Therefore, countries with shortage of food and high human density livestock has to be considered with more emphasis in development of sustainable farming systems.

Methods

The interdisciplinary research project will be done from 2003 to 2006 under the approach of the New Farming Systems Research and Development (NFSR+D). The focus will be on the triangle of animal, man and environment respectively in the scientific disciplines of animal husbandry, socio- economy and agri-ecology.

- Describing farming systems in Mymensingh
- Households, attitudes and perception of small scale farmers on organic farming.
- Measuring the effect of converting toward organic farming
- Design an appropriate organic farming system for the Mymensingh District

The project will be divided into two parts: on-farm and on-station.

1. The on-farm studies will be done on 10 selected farms which convert for the period of two years towards organic farming and 10 conventional farms adjacent to the converting farms for comparison. The farms are selected in a bigger village (150 farm households) close to the BAU (RRA approach). Experience on research and extension to the farms close to the BAU exists within the joining departments. The joining farms shall have following structure: about 2 ha crop land, livestock, willing and able to convert for the period of the project, farming with high contribution to household income (PRA approach). The farms are paid by the project for accompany the project and monitored and controlled by technical staff for the period of two years. On the farms the socio-economic impact of converting towards organic farming, the effect on crop and livestock production, their mutual relations and the effects in floristic biodiversity are of interest.
2. On the research station 4 ha of crop land converted towards organic production will be used for experiments in several natural fertilizing strategies: different qualities and quantities of manure, compost, interseeding of legumes, natural fertilizer: blue algs, stone minerals, by-products of crop farming etc. Different crops will be used for the experiments to get data about the potential of crop rotation (Soil Science/Crop production). Stock

1 Institut für ökologischen Landbau, Bundesforschungsanstalt für Landwirtschaft (FAL), 23847 Trenthorst, E-Mail: oel@fal.de – Druckfassung, kein mündlicher Beitrag.

of the research farm will be used for experiments in fodder value and digestion of organic produced roughage (weeds, by-products of crop production, legumes etc. in the dept. of Animal Science.

Results

There are no result till today because the project has just started. From 2004 to 2006 there are several mutual visits planed under the umbrella of bilateral co-operation. The research will start on the scientific theme of shrubs as a fodder resource for sheep and goats and the impact on animal health and growth.

Co-operation

Dept. of Animal Science, Prof. Dr. M. Raisul Alam

Dept. of Soil Science, Prof. Dr. A. Hashem

Bangladesh Agricultural University

Mymensingh 2202, Bangladesh

References

Hashem A (2000): A brief note on crop farming systems in Bangladesh and need for organic farming for biodiversity and agro-ecology. Bangladesh Agricultural University, Dept. of Soil Science, Mymensingh

FAO (1999): Codex alimentarius in Organic Farming. Roma

Rahman G (2000): Biotoppflege als neue Funktion und Leistung der Tierhaltung. Agraria, Bd. 28, Hamburg

Willer H, Yussefi M (2000) Organic Agriculture Worldwide. Statistics and Future Prospects. Bad Dürkheim

Sonderheft 258
Special Issue

FAL
Bundesforschungsanstalt für Landwirtschaft

Landbauforschung
Völkenrode
FAL Agricultural Research

Statusseminar Welternährung
Beiträge zur globalen Ernährungssicherung

herausgegeben von
Martina Brockmeier, Gerhard Flachowsky und Ulrich von Poschinger-Camphausen

Statusseminar Welternährung im Forum der FAL
am 21. November 2003.
Initiiert vom Senat der Bundesforschungsanstalten im Bundesminiterium für Verbraucherschutz, Ernährung und Landwirtschaft (BMVEL).

Braunschweig, im November 2003