**AGRICULTURAL ADMINISTRATION (RESEARCH AND EXTENSION) NETWORK**

---

NETWORK PAPER 17

ISSN 0951-1873
December 1990

# THE MENNONITE CENTRAL COMMITTEE'S EXPERIENCE IN AGRICULTURE RESEARCH AND EXTENSION IN BANGLADESH 1973 to 1990

By

JERRY BUCKLAND and PETER GRAHAM

Mennonite Central Committee
Box 785, 1/1 Block 'A', Mohammedpur
Dhaka, Bangladesh

ACKNOWLEDGEMENTS

Impetus for the review was provided by Dr. John Farrington of the Overseas Development Institute. His personal and professional interest in MCC's work encouraged us to undertake a comprehensive assessment of the achievements and limitations of the programme. Funding for the research was made possible by a generous grant from PRIP Bangladesh (Private Rural Initiatives Project of USAID).

The authors are most grateful for comments received from various reviewers and from MCC volunteers Miles Zimmerly and Tom Bruulsema, but accept all responsibility for any errors in fact or interpretation.

Most significant, however, is the opportunity to thank all those workers in MCC, both expatriate and Bangladeshi, past and present. Without their efforts and commitment to the cause of the rural poor, this report would not have been possible. We hope that a report detailing further successes will be possible to write twenty years from now.

Network Personnel:

| | |
|---|---|
| Coordinator: | John Farrington |
| Assistant Coordinator: | Kate Wellard |
| Secretary: | Kate Cumberland |

This Network is sponsored by:

The Overseas Development Administration (ODA)
Eland House, Stag Place, London SW1E 5DH

The opinions expressed in this paper do not necessarily reflect those of ODA.

CONTENTS

*Table of Contents (continued)*



LIST OF FIGURES

# GLOSSARY

## MCC Programmes

| | |
|---|---|
| **AP** | Agriculture Programme |
| **AR** | Annual Report |
| **AT** | Appropriate Technology Research and Extension Programme |
| **EP** | Extension Programme |
| **HSP** | Homesite Programme |
| **PARE** | Partnership in Agriculture Research and Extension Programme |
| **PMM** | Planning Meeting Minutes |
| **RP** | Research Programme |
| **RSP** | Rural Savings Programme |
| **SFP** | Subsistence Farmer Programme (of the EP) |
| **SP** | Soybean Programme (of the EP) |
| **TAC** | Thana Agriculture Coordinator |
| **WCP** | Winter Crop Programme |

## National and International Institutes or Agencies

| | |
|---|---|
| **AVRDC** | Asian Vegetable Research and Development Centre |
| **BADC** | Bangladesh Agriculture Development Corporation |
| **BRAC** | Bangladesh Rural Advancement Committee |
| **BARI** | Bangladesh Agriculture Research Institute |
| **BAU** | Bangladesh Agriculture University |
| **BCSIR** | Bangladesh Council for Scientific and Industrial Research |
| **BCSRP** | Bangladesh Coordinated Soyabean Research Programme |
| **BRRI** | Bangladesh Rice Research Institute |
| **CDP** | Crop Diversification Programme (CIDA-GOB) |
| **CIDA** | Canadian International Development Agency |
| **CIMMYT** | International Maize and Wheat Improvement Centre |

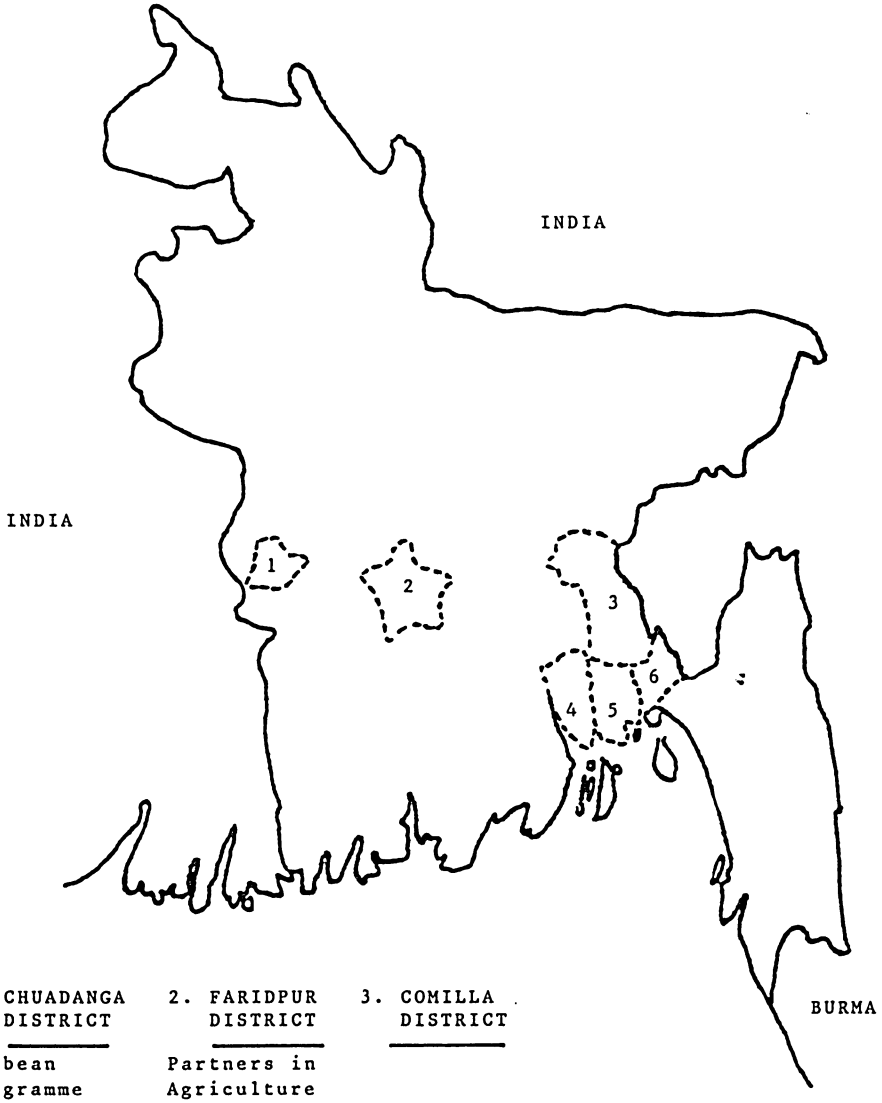
*Glossary (contined)*

| | |
|---|---|
| **CGIAR** | Consultative Group on International Agricultural Research |
| **GOB** | Government of Bangladesh |
| **ICRISAT** | International Crops Research Institute for the Semi-Arid Tropics |
| **IDE** | International Development Enterprises |
| **INTSOY** | International Soybean Programme, University of Illinois, USA |
| **IRDP** | Integrated Rural Development Programme (GOB) |
| **JCCIP** | Joint Caritas-Catholic Relief Society Irrigation Programme |
| **MAWTS** | Mirpur Agricultural Workshop and Training School |
| **TADP** | Tangail Agriculture Development Programme |
| **RDRS** | Rangpur Dinajpur Rural Services |

Miscellaneous

| | |
|---|---|
| **ALART** | Advanced Lines Adaptive Research Trial |
| **aman** | Rainy season rice crop, July - December |
| **aus** | Spring season rice crop, March - July |
| **boro** | Winter season rice crop, December - April |
| **char** | Land newly formed by siltation and accretion |
| **CSR** | Cropping systems research |
| **DTW** | Deep tubewell |
| **FSR** | Farming systems research |
| **kharif** | Summer rainy season, roughly May - October |
| **LRP** | Long range plan |
| **NGO** | Non-Government Organisation |
| **Pb-1** | Punjab-1 soybean variety |
| **thana** | administrative geographic area, equivalent to county |
| **rabi** | Winter dry seasons, roughly November - April |
| **STW** | Shallow tubewell |
| **Upazila** | formerly thana |

MAP 1: LOCATION OF MCC's AGRICULTURE PROGRAMME IN BANGLADESH




1. CHUADANGA DISTRICT

Soybean Programme

2. FARIDPUR DISTRICT

Partners in Agriculture Research and Extension Programme

3. COMILLA DISTRICT

GREATER NOAKHALI DISTRICT

4. LAKSHMIPUR DISTRICT
5. NOAKHALI DISTRICT
6. FENI DISTRICT

Homesite Programme
Farming Systems Research Programme
Extension Programme
Soybean Programme
Appropriate Rural Technology Programme
Rural Savings Programme

## *ABSTRACT*

*Since beginning work as a voluntary non-government development organization in Bangladesh in 1970, Mennonite Central Committee's (MCC) technically qualified volunteers and staff have conducted farmer participatory research and collaborated with government researchers and institutions for agricultural development. MCC achieved limited success in communicating the needs and constraints of marginal farmers to government researchers and institutions, and likewise had limited success in adapting government research to the subsistence farmer context.*

*The paper documents the evolution of MCC's Agriculture Programme, describes MCC's agricultural research and extension effort and impact, discusses MCC's procedure for setting research agenda, presents case studies of collaborative efforts, and indicates possible MCC directions for the future.*

# 1. INTRODUCTION

Mennonite Central Committee (MCC) is the international service agency of the Mennonite and Brethren in Christ churches of North America. Established in 1922 to provide relief aid to Russian Mennonites after the Russian revolution, the mission of MCC worldwide has expanded from providing relief and rehabilitation in times of disaster to working in sustainable development, self-reliance and social justice.

MCC now has programmes in over 50 countries and utilizes the services of 1000 North American volunteers worldwide. MCC Bangladesh currently has 18 of its 30 volunteers working with 135 Bangladeshi staff engaged directly in agriculture. The 1990 Agriculture programme budget, excluding expatriate maintenance costs, is approximately US $400,000.

MCC Bangladesh identifies one of its distinctive capacities as the ability to place professionally competent, highly motivated, value driven people close to the grass roots. Seven key values are specifically promoted as part of MCC Bangladesh's organisational ethos: compassion, respect for the poor, justice, simplicity in life style and work style, non-violence, integrity and teamwork[1]. The MCC Agriculture Programme has established a good reputation in Bangladesh - not only for competent research and grass roots extension, but for the development values and attitudes conveyed through the programme activities and staff.

# 2. EVOLUTION OF MCC'S INVOLVEMENT IN AGRICULTURE RESEARCH AND EXTENSION

MCC came to Bangladesh in late 1970 to provide relief to victims of a severe cyclone. By 1973 the main focus of programme efforts shifted from relief and rehabilitation to agricultural development. MCC's Agriculture Programme goal is to improve the incomes, productivity, nutritional status and living conditions of the rural women, marginal farmers and landless of Bangladesh. Complementary themes of community development, job creation, and more recently social organising are also stressed as part of a broader rural development perspective within MCC Bangladesh.

---

[1] MCC Bangladesh General Policy Manual. 1990. Attachment 5.

a) relief and rehabilitation (1970-72),
b) new crop demonstration and adaptive research (1972-78),
c) general extension and diversification (1975-82),
d) cropping systems research (1979-87),
e) poverty focus: targeted research and extension (1982 - continuing), and
f) farming systems research and extension (1987 - continuing).

## 2.1 *Relief and Rehabilitation (1970-73)*

After extensive flooding and a tidal bore in Noakhali District in southeastern Bangladesh in December of 1970, MCC undertook direct relief aid. Relief and material aid items such as blankets, food, milk powder, clothing and medical supplies were provided to disaster victims. Crop losses due to the cyclone were identified and attempts made at compensating for local shortages by giving food and seed.

Programmes were developed to distribute relief goods to orphanages, hospitals, schools, slum dwellers, refugees and disaster victims. A house building project was established in Maijdi, Noakhali and also in some border areas near Feni, Noakhali. Relief aid continues to be a part, although small, of MCC's activities in Bangladesh today.

During the early seventies MCC volunteers noted two key agricultural limitations. First, dry season irrigation was not very common, so farmers were missing the opportunities for an extra crop every year. Second, it was also clear that families in the coastal char areas were particularly vulnerable to disasters and crop failures, not only because of the area's susceptibility to flooding and tidal bores, but because the more recently accreted lands were still very saline and able to grow only one rainy season crop a year.

## 2.2 *New Crop Demonstration and Adaptive Research (1972-78)*

In late 1972 MCC established an office in Bangladesh and began a long-range plan of development. Agricultural work began with the import of high yielding varieties of vegetable seeds, the introduction of new crops, and research into the cropping system.

### 2.2.1 The Winter Crop Programme

The cornerstone of MCC's agriculture programme was initially called the Winter Crop Programme (WCP). The objective of the WCP was to help Bangladesh achieve nutritional self-sufficiency, with emphasis on the establishment and promotion of new dry (rabi) season crops, which were often from North America or Europe[2].

A geographical focus on Noakhali District was taken due to the limited resources of MCC in relation to the size of the problems, the huge char areas in the region which were predominantly single-cropped, the high population density in the region, and because MCC was already present there[3].

MCC's intention was and is to work within the Government of Bangladesh's (GOB) own objectives:

> *The objective of MCC is to provide leadership in the development of diversified crops so that when the government turns its attention to them in some future date the foundations for a rapid introduction have been laid*[4].

Another stated reason for focusing on rabi crops (other than rice) was the realization that a strategy that focused on the promotion of rice only, which the government was then doing, could only partly alleviate the nutritional gap in Bangladesh. MCC was working toward self-sufficiency for Bangladesh on the basis of nutritional requirements in conjunction with and yet in distinction to the GOB's goal of food self sufficiency[5]. MCC intended to expand the production and introduction of new crops which would contribute toward an increase in the available quantity of protein plus the vitamins and other materials which are deficient in the Bengali diet.

Emphasis on rabi crops was also due to the situation of the Mennonite constituency in North America:

---

[2] MCC 5-year plan proposal. 1973. p 1.

[3] Ibid, p 29.

[4] MCC 5-year plan proposal. 1973. p 3.

[5] WCP Report. 1973. p 9.

> *The Mennonite people have a strong agrarian tradition, enabling MCC to field people with both academic and practical skills in the areas of crop production, soil science, agricultural engineering, mechanization, horticulture, poultry and livestock development. Since the areas of Mennonite settlement are essentially dryland farming or irrigation for crops other than rice, the skills of MCC are oriented toward cereals, oil seeds, and vegetables rather than rice*[6].

From its beginning, MCC's Agriculture Programme placed an emphasis on field orientation, with research considered a supportive role. MCC felt the 'missing link' was not primary applied research, but its adaptation and extension in the Noakhali context:

> *The requirement was for knowledgeable extension workers (emphasis in original) who could relate intelligently both to the researcher and the farmer and thereby bridge this huge chasm*[7].

Thus MCC started its WCP during the rabi season of 1972/73 with 400 small test/demonstration plots in Noakhali District[8]. In the 1973/4 rabi season MCC planted a total of 400 acres of several rabi crops including wheat, rape, sorghum, sunflower, soybeans, barley, maize, vegetables and potatoes[9]. This project was undertaken in large blocks organised with cooperating farmers where MCC provided inputs and a crop buy-back guarantee. Results seemed positive for immediate extension of wheat, sorghum, sunflower, potato, vegetables, and soybeans, which then became the basis for the 1974/5 programme.

In the aus season of 1974 MCC began working with rice. Rice was worked with for three reasons: one, it would help in the development of farmer contacts, two, it would help in understanding Bangladeshi farmers and their cropping system; and three because MCC realized that newly released HYV's could benefit the farming community[10]. Whereas rabi crop

---

[6] MCC 5-year Plan Proposal. 1986. p 1.

[7] MCC Agriculture AR. 1975. p 3.

[8] MCC Agriculture AR. 1975. p 1.

[9] MCC Agriculture AR. 1975. p 1.

[10] MCC Agriculture AR. 1975. p 35.

seeds were often brought from North America and expertise came from expatriate staff, new rice variety seed came from BRRI and BADC and these institutes' expertise was relied upon[11].

## 2.3 *General Extension and Diversification (1975-82)*

With new confidence from positive results from the WCP and having won the President's Gold Medal for Agriculture in 1975, MCC's Agriculture Programme (AP) diversified and expanded in 1975 and 1976. New programme emphases were made in appropriate technology for the provision of irrigation facilities, systematic credit extension, and an expanded and improved system for general crop extension (using Thana Agriculture Coordinators) now loosely separated from the research component.

### 2.3.1 Appropriate Technology (Shallow Tubewells)

In the general area of Appropriate Technology research and extension (AT), initial work began in 1974/5 to provide shallow tubewells on credit from a national bank in order to promote potato cultivation in the rabi season. Irrigation provision fit within MCC's general objective of attempting to bring otherwise fallow land under cultivation[12]. MCC's methodology was similar to the Government of Bangladesh's Integrated Rural Development Programme (IRDP) applied to potato cultivation[13]. Cooperatives were set-up with interested farmers, then MCC helped in the procurement of seed, fertiliser, and cold storage facilities for the cultivation of potatoes.

The work appeared largely successful in terms of promoting irrigated potato cultivation, except for some problems with credit repayment[14], the tendency of farmers to prefer to cultivate rice when the shallow tubewell

---

[11] MCC Agriculture AR. 1975. p 75.

[12] MCC Agriculture AR. 1977. p 66.

[13] Government of Bangladesh. 1973. *The First Five Year Plan 1973-78.* Dhaka.

[14] MCC Agriculture AR. 1978. p 56.

was installed[15], and the incohesiveness of groups[16]. As early as 1974 there were questions on the ability of the IRDP model of cooperatives and credit to benefit small farmers[17]. This disenchantment also occurred in MCC after a few years of experimentation with the approach.

The shallow tubewell programme ended in 1980. As this programme was phasing out, MCC was developing a relatively low-cost hand tubewell technology (the Rower Pump), which could meet the irrigation constraint without involving the problems of cooperatives or (potentially) credit. Thus, the Rower Pump Programme (see section 2.5.2) was really the successor to the shallow tubewell programme in terms of MCC objectives[18].

### 2.3.2 Credit Extension

MCC began its work with rural credit in 1974. Initially it followed a general methodology as stated above regarding tubewells, ie., loans were given to cooperatives for purchasing inputs (either tubewells, seeds, and or fertiliser), for crop cultivation and crop storage. Credit was supplied by a national bank with MCC loan guarantees which were phased out over time until by 1980 there was no MCC guarantee. Repayment rates averaged 84 percent[19].

The programme was terminated in 1981, and the Rural Credit Project (the precursor to the current Rural Savings Programme; section 2.5.4) began that year. As will be seen in the next section, a related reason MCC moved away from this programme was the move to a target group approach. Since the credit programme until 1980 had been unable to target poorer farmers, MCC refocussed its efforts:

---

[15] MCC Agriculture AR. 1980. p 51.

[16] MCC Agriculture AR. 1978. p 57.

[17] Bose, Swadesh. 1974. "The Comilla Co-operative Approach and Prospects for Broad-based Green Revolution in Bangladesh." *World Development*. Vol 2, No 8.

[18] Spare, Dan. 1982. *The Rower Pump: A Summary of its Development 1978-1982*. MCC.

[19] MCC Agriculture AR. 1980. p 65.

*It was observed that the main beneficiaries and/or defaulters of these bank loans tended to be medium and large farmers, rather than only subsistence farmers, who are MCC's target group. It was therefore decided in August of 1981 to initiate the Rural Credit Project, which was tailored specifically for rural landless people and the smallest farmers*[20].

### 2.3.3 Extension Programme

MCC set-up a systematic extension effort using paraprofessional staff known as Thana Agriculture Coordinators (TACs). In 1975, 15 TACs were hired and placed in all but three thanas (upazilas) in Noakhali District. The TACs were to extend to the general farming community the new technologies MCC had tested the past two years. They would maintain a demonstration garden, promote new rabi season crops amongst GOB extension personnel, and sell seed to interested farmers[21].

Initially cash "incentives" through payments for farmer labour or subsidy on inputs were given to farmers who properly grew the new crops, and a guaranteed buyback was often included. Crop diversification using MCC promoted crops was stalled in many areas when it was found reliance on government extension would not lead to dissemination to enough farmers[22]. Therefore the number of TACs was doubled in 1976 and then increased slightly the following years. At this point in the programme there was no particular socio-economic target group; simply willing farmers from the community in general.

In 1978 the contact farmer approach (a variation of the Training and Visit system) was started within the Extension Programme (EP). The idea was to improve on the existing random visitation system with farmers with the introduction of a more systematic process of farmer visits. The process was initiated by one particularly innovative TAC, and he found that the approach "resulted in a more enthusiastic, motivated farmer", and that the

---

[20] MCC Agriculture AR. 1982. p 23.

[21] MCC Agriculture AR. 1975. p 6.

[22] MCC Agriculture AR. 1975. p 7.

contact farmer, "assumed the role of an extension worker in his area as the season progressed "[23].

MCC's extension methodology continued to evolve to the point where in 1982 it was well developed in MCC:

> In the ideal situation it was hoped that each TAC would have about 20-30 contact farmers and that he would visit the farmers at a rate of 4-6 farmers per day for 5 days a week. Through these 20-30 contact farmers the TAC was able to reach and effectively service a large number of farmers. In one thana over 500 farmers are being serviced by one TAC[24].

### 2.3.4 Research Programme

As MCC's extension methodology developed and became more specialized, so did the crop research component. Since the major focus of the Agriculture Programme was to increase crop production during the winter season by introducing new crops and evaluating their production potential, research was an important part of the effort.

The Bangladesh national system of research was relatively underdeveloped in the 1970s and MCC was able to place expatriate agronomists and research scientists at the field level where adaptive testing of new crops was necessary. MCC research was applied research, sometimes undertaken independently and on a small scale, other times in cooperation with national and international organisations on a larger scale.

Early MCC reports show that a wide variety of cooperative trials were carried out with International Research Institutes: the Asian Vegetable Research and Development Centre(AVRDC)--tomatoes; International Maize and Wheat Improvement Center (CIMMYT)--wheat and maize; International Soybean Programme (INTSOY)--soybeans; International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), and Purdue University, USA--sorghum[25].

---

[23] MCC Agriculture AR. 1978. p 11.

[24] MCC Agriculture AR. 1982. p 2.

[25] MCC Agriculture AR. 1974.

Major national agencies and NGOs cooperated also: grains, oilseeds and forage crops were tested in the early seventies by the Livestock Ministry, BCSIR, BARI, RDRS, BRAC, and other NGOs. MCC imported and tested a wide variety of crops itself: screening and adaptive testing of cabbage, cauliflower, broccoli, Chinese cabbage, vegetable legumes (snap bean, bush-type beans, cowpea, English pea and Lima bean), carrot and local and imported green leafy vegetables was completed.

From 1975, the Research Programme,(RP) had a separate section within the Annual Report, and in 1976, Panchgachia station, MCC's first research station was opened, followed in 1977 and 1978 by the opening of two other stations. In 1976-77 MCC centralized its agronomic and varietal research at the new Panchgachia research station. It was felt this centralized research was needed to ensure a more systematic approach[26].

### 2.3.5 Training

MCC's Winter Crop Programme developed into separate Research and Extension Programmes by 1976-78. Furthermore, a Training Programme also developed as an outgrowth of the WCP in 1976. The Training Programme worked with expatriate personnel, TACs, contact farmers and government extensionists to train them on new crop cultivation and new methods/ideas for research and extension.

## 2.4 *Cropping Systems Research (1979-87)*

By 1979 MCC's research and extension efforts had developed into specialized programmes; research continued on new rabi season crops and varieties at three research stations, while extension's methodology was evolving and the contact farmer system had been developed.

The next important change which occurred in the Agriculture Programme involved the addition of a Cropping Systems Research (CSR) component in 1980. During the 1970s, at both the international and national research institution levels, there was a general movement towards a CSR approach.

Cropping systems research was introduced to the Bangladesh Rice Research Institute (BRRI) from the International Rice Research Institute

---

[26] MCC Agriculture AR. 1977. p 9.

(IRRI) in the mid-1970s and later taken up by the Agricultural Research Institute (BARI) and the Agricultural Research Council (BARC)[27]. But even before the CSR approach was fully operational in the national research institutes MCC was noted as having played a valuable research and extension role in the introduction of vegetables, soybeans, rice and wheat, and low cost irrigation technology[28]. Based on MCC research results the government began national research programs for some crops (soybeans, wheat, sorghum) and MCC-led cooperative efforts with the national seed multiplication agency resulted in the block method of growing seed potatoes being adopted on a national scale[29].

The move to shift large resources into CSR came in the aftermath of a MCC-initiated external evaluation (called the Kauffman & Brubaker report) in late 1979. The evaluation called for a major shift in MCCs' Agriculture Programme towards a cropping systems approach to research and extension. It was envisioned by the report, and by later MCC volunteers, that CSR would not just change the nature of MCC's research, but also improve and integrate the extension effort[30].

One of the major constraints in winter crop production was identified as crops not fitting into the farmer's cropping pattern. The Kauffman & Brubaker evaluation stated that now MCC needed to develop a better understanding of the existing agro-socio-economic situation of the Noakhali farmer before new advances could be made[31]. The evaluator's recommendations, judging by the MCC reactions, appear to have been quickly accepted. For example, there are comments indicating MCC must better understand the "receiving system" (ie., the farmer) instead of "refining the delivery system"[32].

---

[27] Pray, C E and Anderson, J R. 1985. *Bangladesh and the CGIAR Centers (CGIAR Study Paper No 8).* Washington: The World Bank.

[28] Ibid. pp 9,37.

[29] Vander Zaag, Peter. 1990. "Feni Revisted: Assessing Impact". Unpublished mimeo.

[30] Kauffman & Brubaker. p 6.

[31] Kauffman & Brubaker. p 5.

[32] MCC Director's response to Kaufmann & Brubaker. 1979.

In fact MCC's shift to CSR had as large an impact on its extension effort as its research. MCC's general extension programme budget was cut by 40 percent and almost one-half of their field level staff were released[33]. The CSR approach to MCC meant the set-up of a new component associated with the existing station research, and the change of some extensionists to the designation of cropping systems extensionists (in 1981 four in total). They were to work with the CSR programme in evaluating and extending new technologies.

The CSR programme began monitoring commodity prices, crop inputs and outputs, and farm household income and expenditure. This monitoring was done based out of three new CSR sites, following the land/soil types in which MCC had earlier started station research (medium highland where flooding did not exceed 80 cm, medium lowland where flooding did not exceed 1.5m, and charland which was characterized by saline soils). CSR also led MCC to experimentation with local crops and varieties; eg., fertiliser trials, planting date trials, comparative assessment of local vegetables with imported varieties, and other general management trials.

## 2.5 *Poverty Focus: Target Group Approach (1982-onward)*

### 2.5.1 Beginning of Target Group Approach: from 1979

By the end of the 1970s GOB institutions had developed to the point where they were able to provide services in crop research and extension, although primarily for the medium and large farmer. However, MCC was disillusioned with the government's agricultural development approach through the IRDP, where it seemed the poor did not benefit nor could those farmers who were not part of a tubewell-based cooperative. MCC's experiences with credit extension and shallow tubewell development reflect the limits of the IRDP approach. The result for MCC in the late 1970s and early 1980s was a sense that MCC must somehow target its efforts and interventions directly to the poor.

---

[33] MCC Agriculture AR. 1980. p 6.

2.5.2 Rower Pump Programme

Arguably, in terms of technical interventions, the Rower pump was the first to be targeted to the smaller farmer:

> *Many of the mechanized DTWs and STWs are not under sufficiently coordinated management to accommodate the needs of the farmer with small acreages. A Hand Tubewell in these cases would offer a farmer the opportunity of being less dependent on coordination with his neighbours*[34].

The development of the Rower pump was an attempt to help farmers overcome the dry season irrigation constraint but in an affordable, labour-intensive package. Technical development of the pump continued through 1979 and applied research up until 1988. Concurrently with technical development, MCC set-up a dealer network using private businessmen in areas of Comilla and Noakhali Districts, and worked extensively with a local workshop (MAWTS) for construction and design improvements. In general Rower pump sales have been above 500 per year, often between 700-1000.

In 1989 the production and promotion of the pumps was privatised and MCC began to act only in an advisory role. Thus an agreement was signed with a local workshop in 1989 to produce and market the Rower and other manual pumps. This decision to establish an indigenous organisation for the production and marketing of the pumps was done for several reasons: technically the pump was fully developed, and there were several other non-government organisations (IDE, MAWTS, JCCIP) and private businesses willing to promote the rower pump. In addition the pump was not affordable to the marginal farmers on a cash basis, and MCC did not want to become involved with bank credit[35], preferring instead that private sector mechanisms be developed.

---

[34] Spare, D. op cit. p 1.

[35] MCC Agriculture PMM. 1989. p 3.

2.5.3 Homesite Programme

MCC had been working with Bangladeshi women in Noakhali since 1975, promoting kitchen gardens, cooking demonstrations with new crops, as well as nutrition education. However, this work was not continuous, as expatriate "unassigned spouses" tended to work in this area without formal job descriptions or replacements[36]. However, it was felt within MCC that women should be specifically targeted, given their precarious position in Bangladesh[37]. This sentiment had been an issue both internationally and nationally for several years, and was becoming an increasingly emphasized area.

In 1979-80, the vegetable component of the EP included a section to work with the existing MCC Women's programme[38]. By 1982 the horticulturalist was pushing for a different methodology for promoting homesite vegetables, as there was dissatisfaction with the extension programme's effort in promoting kitchen gardens. Thus at the June planning meeting in 1982 a proposal was accepted to initiate a joint research and extension programme which would focus on women in their homesteads - looking at and trying to improve upon homesite vegetables, livestock, and poultry. The new Homesite Programme (HSP) would also work extensively with basic education in nutrition and health.

HSP's first year focused on research in several intervention areas: duck and poultry vaccination/breed improvements, homesite vegetable gardens, spice and fruit trees, and nutrition and health education. HSP now works with one or two poor women from each household grouping in a village, bringing the women together in groups for training and providing individual follow-up at the household level. Upon completion of a two to three year process with the women, HSP "graduates" the women, and attempts to link them with other activities or services in the area.

HSP works with their target women in groups in order to train them on cultivation practices and other issues. However, they are not involved in savings or group formation per se and are only slightly involved with "consciousness-raising". The focus is more on health and nutrition education with improvements to agricultural resource utilization at the

---

[36] MCC Agriculture PMM. 1982. p 1.

[37] MCC Agriculture PMM. 1982. p 1.

[38] Rowell, B. op cit. p 5.

household level. In some sense the move toward HSP research and extension was really MCC's first attempt at developing a full farming systems research and extension approach. However, HSP has been unable to benefit significantly from MCC's Research Programme because of the RP's emphasis on field crops and vegetables. Potentially more cooperation can occur with the RP's shift to a Farming Systems Research methodology.

### 2.5.4 Rural Savings Programme

In the early 1980s, while MCC was recognizing its limited success for women in development, interest also peaked regarding the situation of the landless. MCC had been working primarily with one target group - medium farmers. HSP introduced women of poor rural households as a new target group. However, one of MCC's objectives worldwide is to work with the poorest of the poor. In the rural areas of Bangladesh these are the landless households. Crop interventions for them are almost irrelevant.

MCC had been involved in several agricultural credit efforts since 1974 to support farmers in crop cultivation, grain storage, and irrigation. Some of these efforts achieved their goals, while others did not. It was observed that the main beneficiaries and/or defaulters of these bank loans tended to be medium and larger farmers, rather than the subsistence farmers.

In 1981 MCC initiated the Rural Savings and Credit Programme, which was tailored specifically for rural landless people and the smallest farmers[39]. Initially MCC worked with group formation and coordinated loans from local banks. This strategy was changed in 1985 when it was agreed to stop working with banks directly and only promote group savings because of the social, institutional and administrative barriers to linking the rural poor with commercial banks.

The programme's methodology now includes group formation and savings with the assistance of a MCC Group Facilitator. There are roughly equal numbers of women and men's groups. Investments both individual and group-wise are encouraged. Other aspects of the programme include consciousness-raising, literacy and numeracy training, group management, project planning, and forming a central committee with other savings groups.

---

[39] MCC Agriculture AR. 1982. p 23.

2.5.5 Extension Programme

MCC's Extension Programme developed a contact farmer approach in 1978 and continued to experiment and develop its extension methodology throughout the 1980s. The target group remained medium farmers in order to achieve MCC's (and the GOB's) macro-objective of increasing food supply to meet nutritional need. However, in 1983 the EP started on a small-scale level working with subsistence farmers. The objective was to target the EP effort to those people intended to benefit from MCC's efforts; poor farmers.

Subsequently, in 1983 the EP identified two programme foci: the Subsistence Farmer Project (SFP), and the Soybean Project (SP). The soybean extension effort was the only remaining crop-based extension effort not targeted specifically to subsistence farmers. Other commodity-specific extension efforts had either been dropped or subsumed within the subsistence farmer project: potato, wheat and general rice extension was left to the government, and sorghum and sunflower extension was discontinued after bird and wind damage consistently reduced yields.

The contact-farmer methodology was modified by the end of 1982. Initially each TAC (extensionist) was to work with 10 subsistence farmers (a subsistence farmer is defined as one who can provide between three and eight months of rice for the farm household from their owned or share-cropped farm resources in one year). As the extension methodology and the technical knowledge about the horticultural interventions has been improved over time, each MCC extensionist is now responsible for working with 100 subsistence farmers in his extension area.

The extensionist first collects baseline data on the subsistence farmer's agricultural and socio-economic conditions, then motivates farmers to try one of a variety of winter, summer or rainy season vegetable "projects" on a small area of land. Costs and returns are monitored to determine the impact of any MCC intervention. Farmers are worked with for four years and then the extensionist seeks out new farmers from the same area.

Presently the Extension Programme continues working with only vegetables and soybeans, although some lines of new rice varieties not yet available through the government are also extended. Soybeans are extended via separate extensionists as the more land-extensive nature of the crop and the greater profit potential of vegetables makes soybeans less than optimal

for subsistence farmers with very small landholdings. Vegetables are the cornerstone of the SFP because, "the use of horticultural crops seems to be an excellent way to address some of the needs of poorer farmers"[40].

## 2.6 *Farming Systems Research and Extension (1987-onward)*

As the Extension Programme focused its efforts more and more on subsistence farmers, the requests extensionists made for research changed. As extension focused on farmers with very small landholdings, it became clear that a strictly crop/vegetable intervention would have only limited impact:

> *As a result of our work with these farmers who somehow manage to just get by, subsisting on their meager holdings, we have learned that we cannot help them with crops alone*[41].

Thus new requests were made for information on fish and shrimp cultivation, new chicken, duck and goat varieties and vaccination practices, as well as cattle disease treatment. The structure of the RP at that time was unable to provide information in these areas, as specialisation had occurred in crops and vegetables.

### 2.6.1 Farming Systems Research Programme

The Research Programme's shift towards a cropping systems approach was partly justified because it was felt it would help researchers understand poor farmers better. Better comprehension would in turn lead to technologies which poor farmers could adopt, it was believed[42]. However the 'general' or medium farmer target group was retained within the RP until 1986. With the move by Extension towards almost complete work with subsistence farmers (excluding soybean extension) in 1986, a research focus on marginal farmers became more appropriate. In addition, the

---

[40] MCC Agriculture AR. 1984. p 31.

[41] MCC Agriculture AR. 1985. p 3.

[42] Kauffman & Brubaker. and MCC Responses.

HSP and RSP were requesting the Research Programme to develop technologies for landless and near-landless households.

MCC officially started doing FSR in 1988, although research on various components (including fisheries, livestock, women's homestead production, poultry, fruit trees, crops, and vegetables) had existed for several years in both the Homesite and Extension Programmes. Currently the Research Programme has researchers in crop, livestock and poultry science, horticulture, fisheries, and socio economics.

2.6.1.1 MCC Research Goals and Objectives

The primary goals of MCC's (Farming Systems) Research Programme are

i) to develop approaches to overcome the constraints to increased food production and profitability faced primarily by subsistence farm families; and

ii) to aid in the wider effort of increasing food production in Bangladesh.

Subsistence farmers usually have less than half an acre of land available to them, and are unable to provide for all their families' food needs throughout the year from farming activities alone. These farmers can seldom afford to take the risks involved in testing new crops, varieties or cultural practices. Likewise, they also are reluctant to test new breeds of livestock or poultry, or to test new feeding or rearing techniques that are much riskier than their current practices. MCC conducts applied, on-station and on-farm research in an effort to develop new production practices which can be adopted by subsistence farmers with little additional risk or investment.

The Research Programme's objectives are stated as:

i) To conduct inter-disciplinary research which focuses on the socio-economic, vegetable, fruit tree, fish culture, livestock and poultry constraints of subsistence farm families;

ii) To aid in the transfer of technology from national research institutions to subsistence farmers and from the field level to the national research and extension institutes by collaborating

on research projects, exchanging seed and information, and publishing results;

iii) To develop improved farming practices, including new varieties, cultural practices, and animal husbandry techniques, that increase the yield or yield stability of the land farmed by subsistence farmers or the income of the farm family. In addition, the MCC extension programs (EP, HSP, RSP, SP) must be able to extend these practices.

2.6.1.2. MCC's FSR Methodology

The Research Programme addresses its objectives through a combination of station research sites, on-farm research sites, and multi-location trials as follows:

*Station Research:* New varieties, cultural practices, and animal husbandry technologies are compared using MCC supervision and management. Promising technologies are further tested by conducting on-farm trials.

*On Farm Research Sites:* Using farmer's management, promising varieties and cultural practices are tested in two different land types: medium highland and charland. MCC provides only the inputs being tested with all remaining inputs supplied by the farmer. MCC generally provides no guarantee against failure and has seldom had to pay farmer's any compensation for losses or failures. Thus the farmer becomes part of the trial: he accepts ownership and risk as if the crop was his own and his comments and suggestions are important in the process. Promising technologies are then further tested in multi-location trials.

*Multi-location Trials:* These are conducted as on-farm trials in cooperation with the Extension Programme. Results from these trials are used to define recommendation domains, that is, to decide whether a technology, variety, or animal husbandry practice should be actively extended to all (MCC) farmers across all MCC agro-ecological zones.

Cooperation with national research institutes continues to be an important part of the Research Programme. The capacity of national agricultural research institutes is significantly greater than it was in the 1970's, and MCC work now complements the institutes as an additional level of

on-farm adaptive research. Some work is done for location-specific testing of varieties and new lines, eg., wheat salinity screening and newly released rice variety multiplication and extension, while other work is farming system specific, eg., legume forage trials and combined fish and rice cultivation trials.

MCC publishes its research results in scientific format in both its own publication and by submitting results of cooperative trials to the participating national research institute. "Extension Circulars" are published in English and Bengali to publicize new technologies or to update GOB extension and research officers on recent changes in MCC recommendations. Narrative summaries of research results are published in the Agriculture Programme's Annual Report, and MCC research and/or extension officers meet monthly with GOB subject matter specialists and extension officers at the district level. In addition, scientists at national research institutes are invited to participate at MCC's internal research reviews, and MCC scientists are also invited to BARI and BARC reviews.

Performance criteria for MCC research scientists include targets for visits to national research institutes as well as targets for amount of time spent with MCC extensionists. Almost 25 percent (18 out of 76) of MCC's research trials in 1989 were conducted with national research institutes and almost ten percent of staff time (143 out of 1540 total person-days available) was spent with other organisations.

### 2.6.2 Partnership in Agriculture Research and Extension

A final recently developed MCC programme, Partnership in Agriculture Research and Extension (PARE) has been developed in a flood prone area of Bangladesh as a response to the 1988 flood. PARE tries to transfer some of the knowledge and technologies learned in the Noakhali region while also combining research and extension using a farming systems approach. A unique feature of this programme is that it is targeted towards other NGOs in the area who are successfully promoting social organising and interested in new agricultural technologies for their target group. This is MCC's latest attempt to combine technological and social interventions to promote development amongst the poor in Bangladesh.

Difficulties in the PARE programme have to date centred on the limited ability of the partner NGOs to learn the technologies and effectively

implement them. MCC has over 15 years of experience in agriculture while many of the partner NGOS have almost no formal programmes using trained staff, programme plans, regular funding, etc. The idea and theory of sharing knowledge between NGOs (and thereby to farmers) is very appealing, but the reality of initiating and implementing a cooperative programme has forced a view of considerable caution. Because the PARE Programme is so new, however, it is too early to judge what the final outcomes of the programme will be. The programme is as much an experimentation with the appropriateness of technologies as it is an experiment in intervention styles.

## 3. MCC's RESOURCE ALLOCATION IN AGRICULTURE

MCC's Agriculture Programme in Bangladesh has two unique features: one, a large percentage of the AP's expenditure is made up of salaries, and two, expatriate expenditure is separated from programme expenditure and generally does not affect programme budgets. Expatriate data is combined with programme expenditure data by prorating expatriate maintenance costs for respective programmes; however, expatriate personnel expense data is only available since 1977.

### 3.1 *Programme Budget*[43]

MCC total expenditure in real terms increased from 1973 until 1978, past which it seems to fluctuate but not increase again until 1989 (Figure 1). The 1973-78 expansion reflects with a typical growth cycle of a new organisation later increase is associated with MCC's response to the devastating 1988 flood in Bangladesh. This is a planned short-term budget increase.

Total expenditure on agriculture increases up to 1977, but is not as large as the overall budget increase. This is indicative of MCC starting up new non-agriculture programmes such as Job Creation.

Initially MCC's agriculture efforts focused primarily on extension (with a strong research component) and appropriate technology research and extension. From 1978 research developed into a separate programme, and

[43] All financial figures are given in constant 1990 Takas. The Bangladesh Consumer Price Index has been used to adjust for inflation.

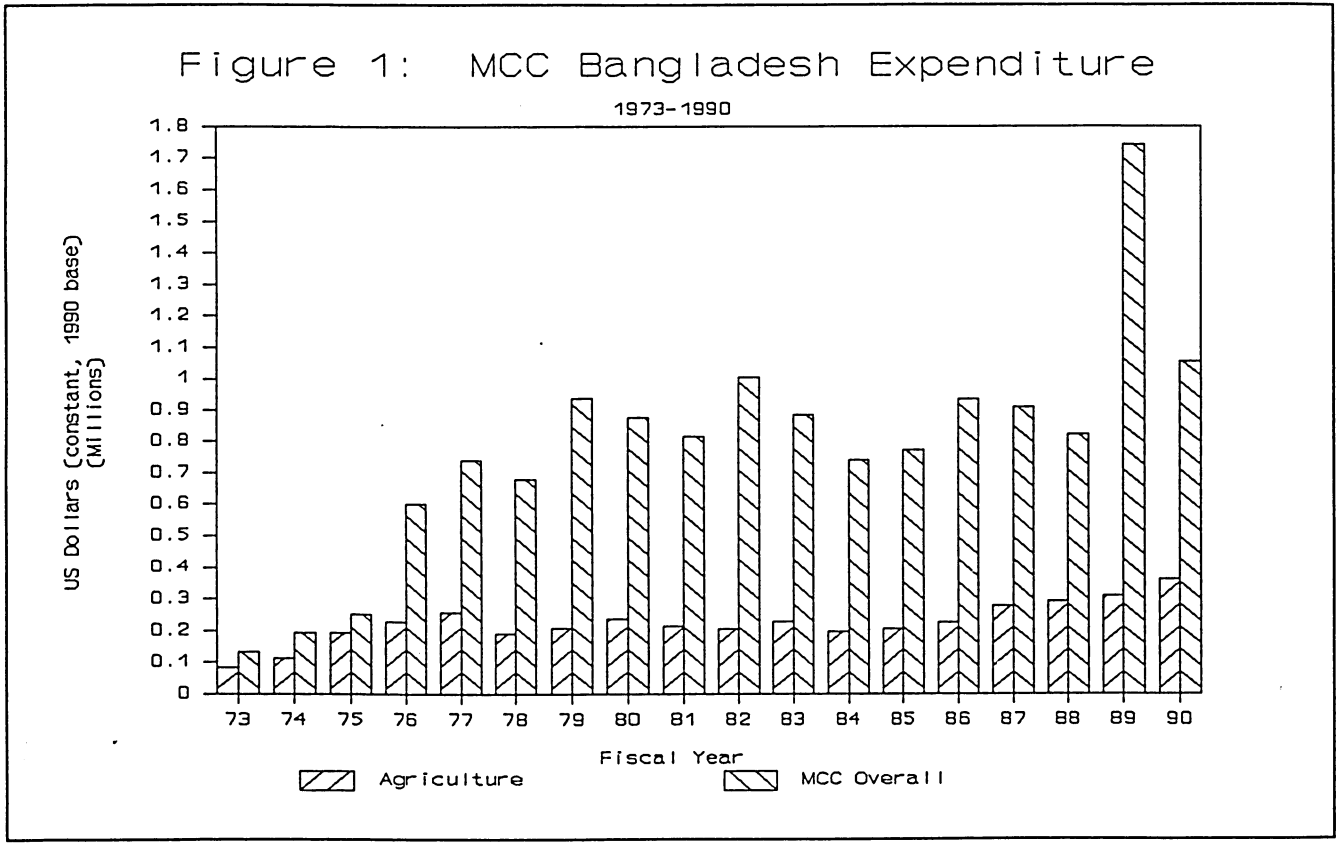
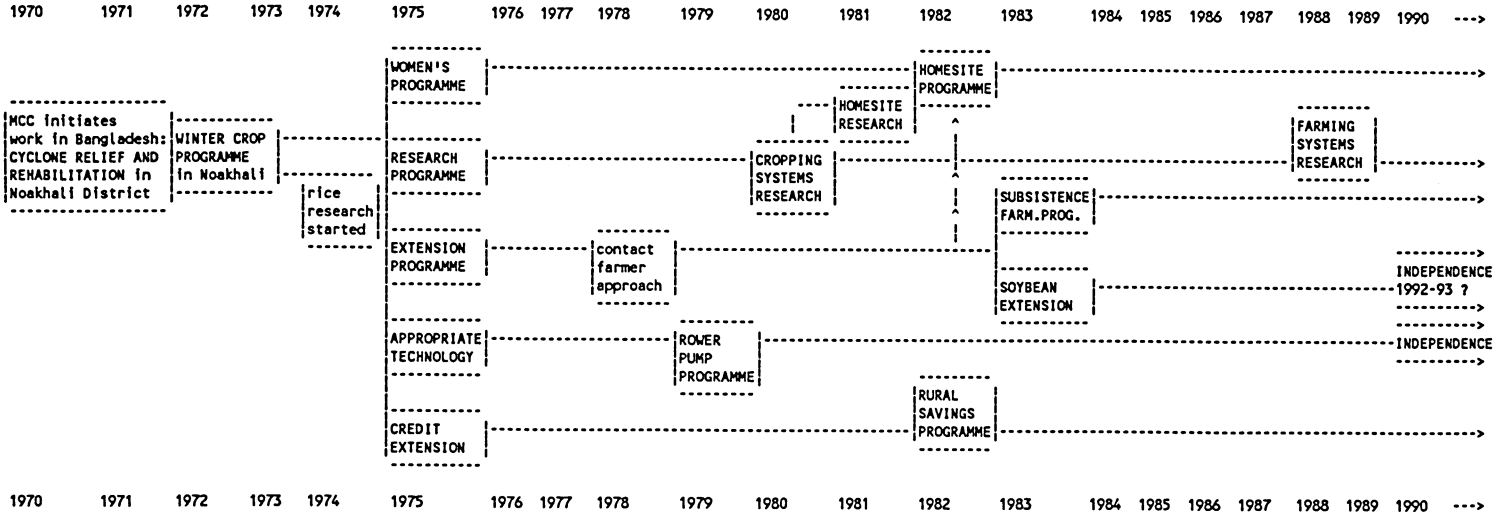


Figure 1: MCC Bangladesh Expenditure
1973-1990
US Dollars (constant, 1990 base)
(Millions)
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90
Fiscal Year
Agriculture
MCC Overall

**Figure 2 Historical Chart of MCC's Agriculture Programme**



in 1982 both RSP and HSP became independent programmes (Figure 2). From one programme in 1973, MCC's Agriculture Programme has developed into five (six including PARE) separate field-based programmes (not including Training or Programme Support).

### 3.2 *Personnel Allocations*

Expatriate allocations in different agriculture programmes has not changed markedly over time. The total level of expatriates in the agriculture programme has remained fairly constant, between 13-18. The Research Programme has the largest number of expatriates (fluctuating between three and six), while the EP, AT, HSP, RSP all have roughly half this number each.

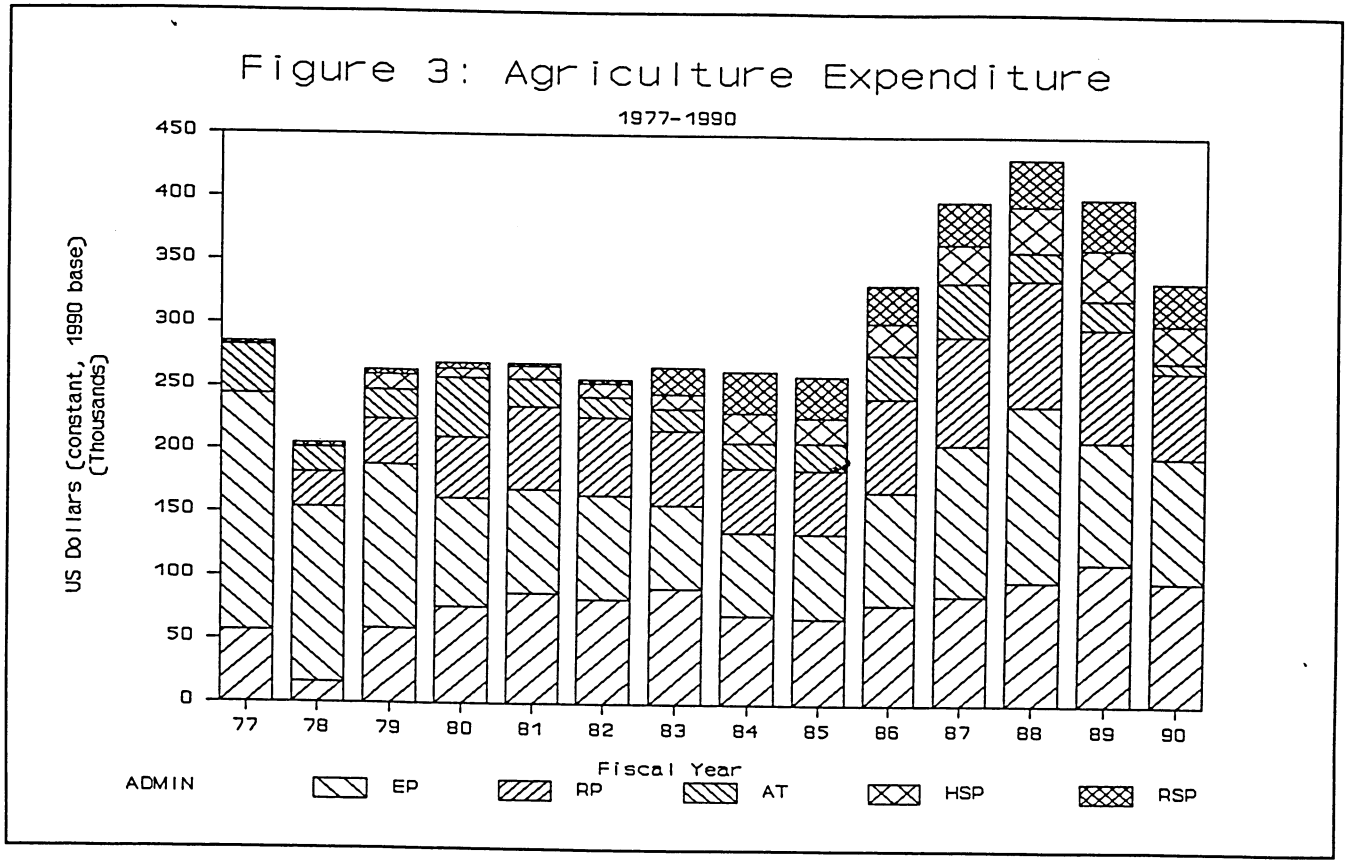
Recent reductions in the number of agricultural volunteers suggests that MCC will continue at a faster pace its approach of placing Bangladeshis in programme leadership roles where appropriate. Expatriates do very little direct extension or research work, but instead work closely with Bangladeshi counterparts in a more advisory role. MCC's intention is not to displace skilled or competent Bangladeshi workers, but with expatriate volunteers is able to place highly trained and motivated young space for professionals in the rural areas - where similarly qualified Bangladeshis are often reluctant to go. MCC has a commitment to staff development at all levels of the organisation, and the Agriculture Programme spent the equivalent of over 10 percent of staff salaries on staff development in 1989.

### 3.3 *Sectoral Budget Allocations*

The three main programme categories within the AP include the Extension (EP, HSP, RSP), Research (RP, AT) and Support Programmes (Training and Program Support). Because the PARE programme is very recent, (and also separately funded) it is not included in the overall resource allocation between the different programmes shown in Figure 3.

Extension programme allocations declined significantly (as research programme allocation increased) from 1979 for two reasons; one, research was being done within the EP prior to 1979 so in a sense the research expenditure had been disguised, and two, MCC was moving away from highly subsidized general extension of crops like sunflower and sorghum.

# Figure 3: Agriculture Expenditure



### 3.3.1 Subsistence versus Landless Expenditure

MCC started its programme focusing primarily on agriculture in the early 1970s. The specific target group was medium-sized Bangladeshi farmers who would be reached through research and extension of new crops and varieties. By the early 1980s, the emphasis was shifted within the EP to focus more on marginal farmers, and the Rural Savings and Homesite programmes focused on groups with even less resources: the nearly landless and women.

However, neither RSP nor HSP (landless-focused) have expanded to the size of Extension or Research (farmer-focused), implying the Agriculture Programme continues to focus particularly on the farming community, although it is trying to work with the more marginalised or landless who have little direct access to primary agriculture (Figure 4).

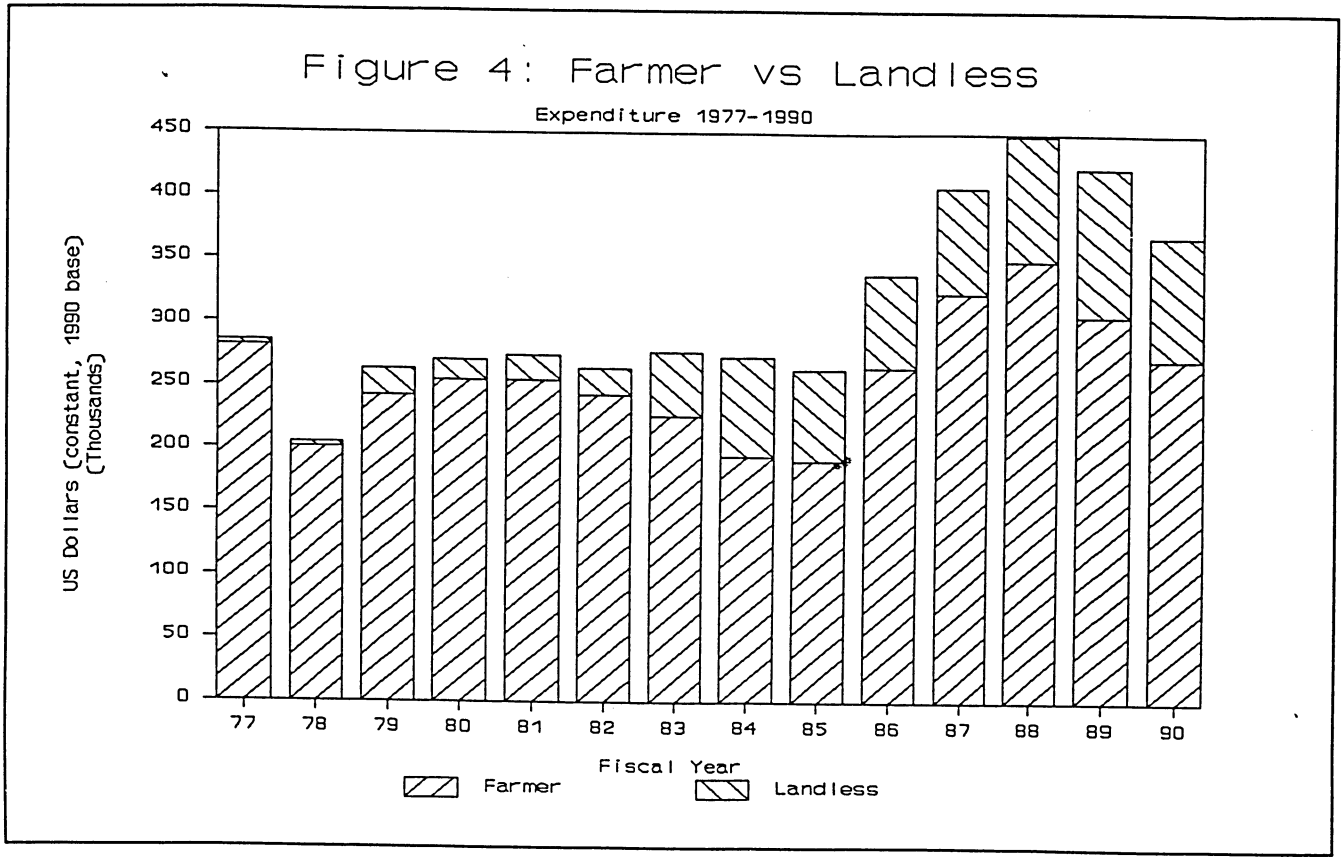
MCC's tendency is to stay removed from socio-political issues and focus on applied technical research and extension targeted to the poor, although not the poorest of the poor such as refugees and the homeless. However, the Extension, Research and PARE programmes are promoting and developing fish, beekeeping and livestock technologies in an attempt to meet the needs of landless families.

## 3.4 *Regional Resource Allocation*

The Extension and Research Programmes have worked throughout the greater Noakhali and Comilla districts since 1973. The Homesite and Rural Savings programmes are located mostly around the towns of Maijdi and Feni respectively, where MCC has regional offices. The Appropriate Technology programme also worked in the Greater Noakhali District but this was less systematic than both EP and RP, and less well documented, so it will not be dealt with here.

Initially MCC placed one or two Thana Agriculture Coordinators (TACs) in each upazila (then called thana) in Greater Noakhali and southern (Greater) Comilla Districts. The number of upazilas covered in 1975 was 12 and grew to 21 by 1979. In 1979 there were a total of 32 offices and 32 TACs since each TAC had their own office.

# Figure 4: Farmer vs Landless



In 1980, MCC moved to a Cropping Systems Research and Extension approach. With this additional programme emphasis, the EP was cut back 40 percent and forced to close one-half of their offices[44], although most upazilas continued to have one office. However, from 1980 increased emphasis was placed on the char located in the southern portion of Sudharam upazila in Noakhali district. This is a relatively less-developed area for both infrastructure and cropping intensity.

In the following years, more offices were closed as the EP was restructured to make supervisory staff field-office based with field-level extensionists required to live in their actual extension area of 10 sq. miles. Then in 1987 the number of extensionists was increased by 12 which meant a 63 percent increase in field staff.

The EP now works out of six offices located in six upazilas. This has been an evolutionary process where MCC moved out of areas it felt it could not benefit (as in 1980) in favour of areas that were relatively poorer, for example the Noakhali char versus intensively cultivated and prosperous Comilla. Today the EP supports MCC's soybean development efforts and works with marginal farmers in six upazilas spread through Noakhali, Comilla, Lakshimpur, and Feni districts (see map, p iii).

The Research Programme has tended to be land or soil-type based, relating to the major agro-ecological zones found in and around the Greater Noakhali District. This has included saline charland, medium highland, and medium lowland. Station research started at a medium highland location in 1975, followed by a char location in 1977 and medium lowland in 1978. In 1979 a research station location was opened just for soybeans. In 1981 on-farm sites were started at each location following a CSR methodology. The station research and on farm components were later combined; first at the medium lowland location in 1984, then at the medium-highland in 1988 and char 1989.

## 4. ANALYSIS OF RESEARCH AGENDA SETTING

MCC's Research Programme agenda setting can be divided into two general categories; strategic longer-term, and shorter-term instrumental decisions. Strategic decisions were to focus on vegetables and soybeans, or cropping systems or farming systems research. Instrumental decisions

[44] MCC Agriculture AR, 1980. p 6.

involve, for example, decisions relating to particular types of vegetable trials to work on - whether with tomatoes or cabbages, and what type of trial (eg., date of planting, fertiliser, etc.).

## 4.1 *Strategic Decision Making*

Strategic decisions with MCC's EP and RP, and Agriculture Programme in general, tend to develop over time in an iterative process. A particular idea for programme change may initially come from any number of sources, but becomes a strategic decision after time has allowed it to be checked out by the experience of the farmer, extensionist, researcher, and the organisation. The idea to work with vegetables and soybeans in MCC almost 20 years ago could have come from any number of sources, but it is because of continued farmer enthusiasm and success that has passed on to extensionist and researcher that the strategic decision was made to specialise here. Vegetables generally involve high labour inputs but also high returns (especially since there is a very low opportunity cost for a farmer's labour). Thus the demand for the vegetable technology package is quite high among land-poor farmers who experience high levels of underemployment.

Organisationally vegetable extension is not too complicated: MCC assists with the sale of quality seed, but otherwise only motivates farmers to try new crops and ensures that extensionists give correct advice on cultural practices. MCC provides no credit for inputs and allows market focus to dictate prices - this minimizes farmer dependency and encourages a sustainable approach suited to farmers' actual conditions. Both extensionist and researcher are also pleased because they are able to show/see actual physical results. Thus vegetables became a strategic programme with long-term support from the target group and the organisation.

Soybeans present an interesting contrast. Soybean is the only MCC crop promoted on a commodity basis, mainly because of its vast potential for contributing to Bangladesh's food and nutritional self sufficiency targets. Although the soybean has relatively low production costs and high nutritional value, until recently MCC has been plagued by the lack of a variety with good seed quality characteristics. Soybean has not been indigenously cultivated and so introduction of the crop must be done in conjunction with creating a market demand, which includes changing food preferences and overcoming nutritional ignorance. And then, as with any

new crop, it must fit into the farming system. Needless to say, these seemingly simple problems complicate things immensely.

MCC has worked with soybean possibly as long as and with as much energy as vegetables, but it has tended to be more controversial within MCC[45]. The problem is exacerbated by the fact that the farmer who grows soybeans is often a small or medium farmer, not a subsistence farmer. This confounds MCC's target group approach, and then when soybeans are sold mainly for middle-class products that poor people can seldom afford, the validity of soybean extension again comes under scrutiny vis-à-vis MCC objectives.

This is not to criticise the strategic objective to establishment of soybean in Bangladesh. No doubt it is a valid one that now appears to be paying-off. The point here is that the strategic decisions will hold to the extent they are perceived as contributing to their main goal. If this is not happening, or if the route becomes too indirect then the activity would be dropped (as with sorghum, sunflower, credit extension, shallow tubewells, etc.).

## 4.2 *Instrumental Decision Making*

In terms of the more day-to-day research agenda setting, current MCC research staff were surveyed to discover their perception of the origin of their trials. Researchers were asked what percentage of their trials came from the following sources: MCC research staff (including themselves), MCC extensionists, GOB researchers, and farmers. Ten researchers responded and, on average, the most significant source was the MCC research staff (32 percent), followed by MCC extension staff (26 percent). An even percentage came from farmers (17 percent), and GOB researchers (15 percent).

The design of the question no doubt oversimplifies the reality of the micro-level decision-making process. Arguably it too is a complicated iterative process where ideas come from any number of directions, are then subsequently considered by the researcher, and if it looks promising then the research is initiated. For example, if a horticulturalist gets an idea from an agronomist, the researcher is most likely to check it with an extensionist, or directly with the farmer before initiating the work.

---

[45] see MCC 1986 evaluation, and MCC Agriculture 1987 PMM, p vi.

Conversely, if the idea comes from a farmer, it will often be checked-out by other extensionists or researchers before the trial is initiated. If the researcher is not convinced the idea is a good one through this process, then most likely the idea will be dropped.

## 5. MCC-GOB RESEARCH AND EXTENSION COLLABORATION

Since MCC first started in agriculture development in Bangladesh, an explicit goal was to cooperate with the government. As stated in a 1975 report:

> *We also request a continuing contact with the Ministry of Agriculture and the Ministry of Rural Development to share our results in the field and to coordinate our imports and programmes with those of the government agencies*[46].

Although the form of cooperation has changed over time, the contact remains strong today.

### 5.1 *The Role of MCC-GOB Collaboration*

In MCC's initial stages, its agriculture programme was seen as a bridge between GOB extension and existing research:

> *The MCC programme is not a research programme or purely an extension effort. It is attempting to create a link between the available research capacity on one side, and the extension apparatus and the cultivator or the other side. Hopefully the MCC project may lead to some organizational changes which will lead to a permanent linkage without the need for a foreign catalyst*[47].

However, with the separation of different programmes within the AP, some of them focused on GOB contacts more than others. Specifically, it became the role of the RP to liaise with different GOB research organisations. In MCC's 1986 five-year plan the third general objective for

---

[46] MCC Planning Proposal. 1973. p 3.

[47] MCC Agriculture AR. 1975. p 4.

the RP is, "*to help transfer the technologies developed by the national research institutions*"[48].

Other MCC agriculture programmes focus on the government relationship, including the EP and HSP, although their efforts tend to be directed mainly at the local level (particularly District and Upazila Department of Agriculture Extension). Research Programme-GOB communications have not remained static over time. The RP especially in the last three or four years has clearly strengthened its ties, particularly with Bangladesh Agriculture Research Institute (BARI), Bangladesh Rice Research Institute (BRRI), and Bangladesh Agriculture University (BAU). For example in 1987-88, three percent of overall effort was devoted to cooperative work with GOB, in 1988-89 this increased to 24 percent, and 25 percent in 1989-90[49].

Having said this, it is clear that MCC researchers have had long-standing relationships with BRRI, BARI and the Bangladesh Agricultural Development Corporation (BADC). It is also interesting to note the process of secondment to national institutes in which MCC was involved. The idea for secondment developed out of a need for professional assistance for the national research institutes. MCC had a good reputation and was able to bring well-trained researchers from North America. In 1978, three MCC volunteers were seconded to BARI, followed by one in 1982 (all for two to three year terms). In 1987 one MCC researcher was seconded to BRRI's on-farm research division for almost 2 years. Unfortunately, the secondment process is unpredictable, as the MCC person's role and relationship with the rest of the research institute is unclear and viewed with some suspicion. MCC is unlikely to continue the secondment process in the future.

## 5.2 *Perceptions of the Value of MCC-GOB Collaboration*

A survey of present MCC researchers revealed that, in general, they felt that communications with GOB researchers are important and indicated that the relationship can benefit MCC's target group. Generally, they can cite examples of newly released varieties or new technologies that they learned about from a GOB source. Reasons given for the relationship

---

[48] MCC 5-year plan. 1986. p 9.3.

[49] MCC Agriculture PMM; 1987. 1988, 1989.

range from coordinating joint research trials (eg., advanced lines rice trials), obtaining and/or checking out new ideas, and maintaining collegial relationships. The number of GOB contacts per researcher range from just one or two contacts for some researchers to over ten contacts per year for others who have been here longer and tend to emphasise this relationship.

While MCC researchers' attitudes are quite positive about the eventual outcome of some GOB contacts, it is difficult to see results that actually benefit the poor. In general the cooperation is one-sided, with MCC pursuing visits and correspondence much more than the GOB researchers, and MCC continually trying to draw GOB researchers' attention to the case of the subsistence farmer, who MCC feels should be the main target for research efforts.

Of those GOB researchers approached regarding this study (a total of eight scientists from BARI, BRRI and BAU), a semi-structured interview revealed that all indicated support for continuing cooperation with MCC as they felt it quite positive. The sentiment was generally that MCC provided them with high-quality field data for their work which required little effort on their part. It appeared that in some cases MCC was even preferred over the particular institutes' own on-farm division.

However, from the interviews the general sense arose that although MCC is a partner in the research, it is being orchestrated by the GOB researcher. Thus the idea that communication is flowing from the farmer via MCC to the institution does not appear to be a significant factor in the GOB's researcher working with MCC.

MCC's primary objective in cooperating with GOB institutes is to learn of new techniques for MCC's target group which have been developed by the institutes. This does happen as evidenced by the bait-fly trap experience (see section 5.3.2.2) as well as when new varieties are released. It is more doubtful that MCC is being a conduit of farmer concerns to GOB institutions.

Some BARI scientists are eager to know farmer feedback regarding their new technologies and practices; however, most seem to look upon MCC results as just another replication of their trial with nothing qualitatively different about the results. Probably the truth lies somewhere between these two extremes: MCC's interest in particular trials/areas surely communicate to the institution MCC's (and thus presumably the farmer's)

concerns and priorities. However, due to the semi-official status of MCC researchers, and their possibly lower academic qualifications than senior decision-makers, MCC's specific objectives, priorities and results do not appear to be much taken into account in the GOB institution's research decision-making process.

Given MCC's strong reliance on vegetables within both its EP and HSP, it seems that both a research component, and links with GOB vegetable researchers are justified. There are actual examples of where this relationship has proven beneficial. What is unclear is to what extent the relationship is useful. Time and energy spent cultivating these relationships (which is significant) potentially has a high opportunity cost eg., less time spent in the field's focus away from farmers, more general research. Thus the investment must be evaluated carefully.

## 5.3 *Case Studies in Collaboration*

To illustrate some of the benefits and difficulties of MCC's relationship with the GOB and the national agricultural research institutes, four case studies have been selected. These are potatoes, vegetables, soybeans, and rice. MCC worked with potatoes, vegetables and soybeans since 1973, and rice since 1974.

### 5.3.1 Potatoes

The best testament to MCC's contribution to the development of potato cultivation is contained in a recent short mimeo by Peter Vander Zaag[50]. Formerly with MCC from 1973 to 1975, Vander Zaag is now with the International Potato Centre (CIP). Vander Zaag was largely responsible for MCC's early efforts with potatoes. He writes:

> *Potatoes now are the third most important crop in Bangladesh. From 1973 to 1975 we established a model of block farming to grow seed potatoes. ...This programme was so successful that we invited BADC from Dhaka to assess our work. They agreed to have their seed specialists trained by us. Then BADC implemented this programme on a national scale. They now produce 6000 tonnes of seed each year. This has lead to near*

[50] Vander Zaag, Peter. 1990. op. cit.

*self-sufficiency in seed potatoes for Bangladesh. Our initial work has now helped the whole nation--impact beyond all expectations.*

MCC no longer extends potatoes as part of its ongoing programmes. A major impact was made, and MCC turned over the activity to the GOB. Farmers are now able to grow potatoes almost all over Bangladesh, although potato production could still be significantly increased.

### 5.3.2 Vegetables

Vegetables have played a key role in MCC's extension programme since MCC started in Bangladesh. Arguably, in terms of a transfer-of-technology intervention for subsistence farmers, through several years of testing vegetables have proven the most successful of all MCC extended crops. Because of the particular characteristics of vegetable cultivation (high labour and skill requirement, low land requirement with high returns, responsiveness to inputs at low levels) they are a very effective means for increasing subsistence farmers' income.

Subsistence farmers can undertake vegetable cultivation at the risk and investment level they wish. While MCC promotes correct fertiliser and management practices, most farmers cannot afford the investment for purchased inputs. Therefore MCC does not promote vegetable production to maximise farm income, but to increase income at a farmer-determined level of acceptable risk. On average, from 1982-86, farm income of MCC subsistence farmers was increased by almost ten percent just by the introduction of year-round vegetable cultivation[51].

MCC Extension Programme sets internal performance criteria in relation to the amount of increased income farmers gain as a result of MCC practices: in 1990 the target was set that 50 percent of second-year

---

[51] Buckland, Jerry and Kar, Anup K. 1989. "Costs, Returns and Profitability of Vegetable Cultivation to Small Farmers in Southeastern Bangladesh" in *The Journal of Rural Development*, Vol. XIX, No 1. Bangladesh Academy of Rural Development: Dhaka. p 174.

farmers should gain the income-equivalent of what their family food needs are for one month[52].

Popular vegetables in the EP include cauliflower, cabbage, and tomato, but also eggplant, radish, kholrabi, carrot, etc. Presently MCC's EP extends ten types of winter vegetables and 13 types of summer/rainy season vegetables.

GOB cooperation regarding vegetables has primarily involved BARI, and to a lesser extent BAU. Station research began on winter vegetables in 1981[53]. From 1976 until 1985 much of MCC's research work for winter vegetables focused on varietal trials using new varieties from overseas and international research organisations (eg., AVRDC, University of Hawaii), Japanese hybrids, and locally available commercial lines. In the last five years, as winter vegetable production technologies have reached their adoption potential, farmers have shown more interest in summer vegetable production. Interestingly, research on summer vegetables involves mainly comparison of local varieties.

#### 5.3.2.1 Failure of Varietal Release

Until 1985 MCC pursued a strategy to extensively test new varieties from outside international institutes. It was only after attempts were made to get released what were considered superior varieties that this strategy proved problematic. It was finally argued in 1985 after many failed attempts to have new tomato lines (from AVRDC) released that, "*BARI has also had many years of positive research results from AVRDC lines and yet no lines have been released*"[54]. This was primarily because even when new superior lines were found, they could not be extended as obtaining release from the National Seed Board was extremely difficult. As early as 1980 questions were being asked in MCC about the wisdom of working

---

[52] MCC Planning Proposals. 1990. p 111. The calculation for increased "sufficiency" is based on a farmer's ability to feed his family from his own resources, without selling assets or labour. Income equivalents are based on family size multiplied by the estimated cost of rice per member. In 1990, MCC estimated Taka 330 per month per adult equivalent (30 kg rice times Taka 11 per kg.)

[53] Swartzentruber, op cit. p 31.

[54] Shwartzentruber, op cit. p 31.

with unapproved varieties, since *"if lines cannot be released and multiplied, we are wasting our efforts conducting variety trials"*[55].

Thus in 1985 a revised strategy was designed to strengthen MCC's relationship with BARI:

> *This (relationship) is most essential not only for facilitating the release of varieties, but also for us to be more aware of what is being done (in vegetable research) and sharing what we are doing*[56].

MCC felt by 1985 that progress in the development of new vegetable technologies was less likely via importing new line varieties. Emphasis was placed more on working with, primarily, the Vegetable Sector of BARI. This change in emphasis can be seen in terms of the number of cooperative trials, and correspondence in the past four years, which has significantly increased.

### 5.3.2.2 The Bait Fly Trap Success

MCC has been involved with increasing numbers of cooperative trials with BARI and BAU in the last few years. These are generally varietal trials (eg. with tomatoes, and beans) but management practices are also researched.

One recent success developed out of MCC learning of a cucurbit fruit-fly bait trap system being tested by a senior entomologist at BARI in 1988. Even though he had been experimenting for almost eight years with the trap it had still not been recognized as a valuable low-cost alternative for farmers. MCC undertook station research first, and then did on-farm trials that showed good results.

The technique was tested by MCC to evaluate its effectiveness to stop fruit fly attack of cucurbits, a problem which had grown to serious proportions amongst EP farmers cultivating cucurbits. The bait trap was statistically significant in its ability to reduce fruit fly damage, was low-cost, increased yields by up to 78%, and was well received by farmers. MCC

---

[55] Rowell, op cit. p 18.

[56] Swartzentruber, op cit. p 31.

reported these results back to BARI for consideration at their annual internal review. The results were noticed by a senior official in the Department of Extension and he has now requested the bait trap to be demonstrated and extended throughout the country.

### 5.3.3 Soybeans

MCC has worked with soybeans for many years, as soybean fit within MCC's objective of increasing Bangladesh's nutritional self-sufficiency by being an excellent source of protein. However, as discussed above in section 4.1, the particular characteristics of soybeans make it something of a more indirect route for the pursuit of development for the poorest of the poor. This puts soybeans out of the mainstream where researchers and extensionists focus on subsistence farmers, women or the landless.

Because of the relationship of soybeans to MCC's overall development approach MCC has tried to establish soybeans as a crop and then remove itself from the effort. Thus the objectives are quite different from those associated with vegetables. With soybeans it is intended that the GOB will eventually take over efforts of seed multiplication, market development, and agronomic research, leaving MCC to use soybeans as one crop of an assortment to be used to benefit subsistence farmers.

Involvement with GOB institutions stems from 1975, when the government set-up the Bangladesh Coordinated Soybean Research Project (BCSRP), made up of seven institutions, a food corporation, and MCC. This was coordinated by the Bangladesh Agriculture Research Council (BARC). GOB involvement in soybean research was spearheaded by BAU where varietal trials were conducted as well as the development of inoculum for soybean that could be domestically produced. BADC was also involved in seed multiplication, and BCSIR in soyfood development.

BCSRP was terminated as a project in 1981, with two main factors given by the programme: "difficulty in producing good (soybean) seed, and two, the need for solvent extraction facilities"[57]. These production problems aside, INTSOY's (International Soybean Programme of the University of Illinois) closure of production promotion must also be considered a

[57] Horlings and Martens, p 36.

factor[58]. After the termination of the project, only BAU and MCC continued soybean research to any significant extent.

The termination of BCSRP in 1981 put most of the responsibility for the establishment of soybeans onto MCC in conjunction with BAU. With clear evidence that the establishment process would require an integrated approach including both supply and demand-side interventions, it obliged MCC to attempt a large-scale effort.

Presently MCC's soybean effort is quite large, involving not only agronomic varietal research, seed multiplication and extension, but also market promotion, and soy-food product development: an integrated approach to crop promotion. This approach has evolved over time from primary emphasis on the supply-side factors, combined with homestead level demand promotion through cooking demonstrations. At least two breakthroughs can be seen as critical to bringing the soybean effort where it is today. This includes the introduction of an Indian soybean variety, Pb-1 in 1985 which has vastly improved seed quality and good seed storability over existing Bangladesh varieties[59]. This variety has led to improved plant stand and allowed farmers to store their own seed.

A second area of recent success associated with the soybean effort has involved the development of demand for soybean by private snack-food companies. MCC increased its effort on the demand-side from 1988 by developing an overall marketing strategy which included approaching local businesses to encourage them to use soybean in their process. This has led to a situation in the last two years where supply can not keep pace with demand[60] and farmers are more confident to grow soybeans. In conjunction with rising prices for other pulses, these factors have allowed soybean acreage to expand from 275 acres in 1987, to 1200 acres in 1989.

In the past four years, MCC has been primarily interested (in terms of GOB cooperation) in having the National Seed Board release Pb-1 as an official variety in Bangladesh. This would be a major step to having soybeans established in Bangladesh. However, even with very good agronomic results for Pb-1, MCC could not even attract enough interest in the GOB to have them send a team from the National Seed Board

---

[58] Bruulsema, Tom. 1990. personal communication.

[59] MCC Agriculture AR. 1986. p 29.

[60] MCC Agriculture AR. 1989. p 24.

down to see the crop and talk to farmers[61]. This visit was key in the process of acceptance of a new variety by the Seed Board.

Finally in 1989, soybean was included in the Crop Diversification Programme (CDP), a CIDA-GOB jointly sponsored programme. A five-year soybean action plan was drawn up, and soybeans finally seem to have become a part of the Ministry of Agriculture's overall crop promotion strategy.

Another milestone occurred in 1988 when a large NGO in a different area (Tangail) introduced soybeans into their programme and joined MCC in the pursuit of establishing soybean as a crop alternative for all Bangladesh. But, as this report is being written, the same organisation has withdrawn from extension because a new institutional relationship they are making with the GOB has thrown their whole programme into disarray and they do not know whether they can continue with soybean extension.

Even though MCC would like to privatise soybean production, the many ups and downs of the cooperative efforts suggest that MCC will continue its work for many years in soybeans.

### 5.3.4 Rice

MCC initially had no plans to work with rice within the Winter Crop Programme. This quickly changed in 1974 as it was thought that working with rice would lead to more continuous farmer contact and help in understanding the cropping system (see Section 2.2). From 1974 to 1980, this research primarily involved varietal testing of GOB newly-released lines. With the establishment of the CSR programme in 1980, fertiliser and management trials were also added (for both local and newly-released varieties). Then in 1985, MCC started collaborative work with BRRI's Adaptive Research Division. This arrangement meant MCC would provide BRRI with agronomic results for hopeful new lines that were being tested via their Advanced Lines Adaptive Research Trial (ALART).

The types of trials associated with rice tend to be constricted mainly to varietal trials. However there have been some positive results from fertiliser trials, especially in areas where fertiliser has been recently

[61] Stout, Kevin. 1990. personal communication.

introduced[62]. Currently, MCC's EP is extending four newly released varieties of rice, including: BR-11, BR-20, BR-21, and BR-23.

Unlike cooperative research in, eg. vegetables, ALART trials are all pre-designed. Furthermore, MCC does not have clear evidence that its results are used by BRRI. MCC results are supposed to be used in BRRI's overall assessment of whether or not to release a new variety, but may not be sufficient to influence national decisions.

For instance MCC consistently had very good results from one particular new variety, and tried to promote its release, but was unsuccessful. Even with several years of positive results for this variety, there is no sign of it being released. The variety apparently did not perform well in other locations in Bangladesh so was not certified.

In another instance, when MCC requested the supply of 300 kg of a newly released variety the seed came to MCC direct from the research/seed multiplication site. This reflects a strong communication link between MCC and the concerned institute. Unfortunately when MCC reviewed the seed even after inspecting the plant stand before harvest, the seed contained many off-types and had germination of only 60 percent!

There has been some concern raised that the RP does too much rice research given the extensive work done by BRRI[63]. With the RP's move towards a FSR approach in 1988, less emphasis will be placed on rice trials, although ALART trials will likely continue.

## 5.4 *The Value of Collaboration*

Overall it would appear that MCC's efforts at developing GOB relationships have proven beneficial. Of course the more critical question is whether the benefits from these relationships have outweighed the costs. Some cooperative trials have proven beneficial for MCC, while others have not:

---

[62] Buckland, Jerry and Kar, Anup K. 1989 op cit.

[63] MCC Research-Extension Coordination Meeting minutes. 1988.

*occasionally cooperative trials are done for the benefit of the national research institutions, even if these trials do not directly benefit MCC's own research*[64].

Beyond this rationale for the GOB cooperative relationship, there are at least three others. Since historically MCC researchers are expatriates, often with little experience with tropical agriculture, this relationship provides access to invaluable "background information", and a check for new ideas originating from the expatriate. Second, if the institute has developed new technologies, then MCC can act as a conduit to bring the information to the farming community (notably subsistence farmers). Third, through the MCC-GOB relationship information can flow from the farmer level back to the national research institutes. There is evidence for all these types of benefits.

The answer to the question 'who benefits?' is more difficult. MCC hopes to act as a two-way conduit, so that information flows not only from the institution to the farmer, but also from the farmer to the institution. The hope is that MCC can communicate the concerns of the subsistence farmer to researchers within the GOB institutions, leading to the development of technologies tailored to this class of farmer. Presently there is little evidence that this type of two-way communication exists; it appears to be primarily from the institute to the farmer, if indeed even to the subsistence farmer.

Finally it is difficult to decide if the investment in a relationship with GOB research institutions is worthwhile. MCC has benefitted from the relationship with national research institutes where its positive reports on a new variety or technique have supported those of the government. If however, MCC alone is excited about a particular variety (or sometimes even when one GOB institute is also excited about it), then MCC can do little to promote its release, and much research energy can be wasted. When MCC has taken the initiative to promote a new variety (eg., Pb-1 soybean), success has not quite been achieved - even after many years, and after much human and financial effort. There are so many factors out of the control of MCC, and even out of the control of directly concerned agencies (for example, ineptitude, corruption, and political posturing), that when the benefits will reach the poor in a major or national way is difficult to say.

---

[64] MCC Agriculture PMM. 1986. p 1.

In terms of MCC being a cog in the transfer-of-technology process which places the GOB institution at the top and farmers at the bottom (with MCC in the middle), the MCC-GOB collaboration has been moderately successful. There has no doubt been a substantial contribution to MCC's target group.

However, in the development of more participatory relationships between farmers and scientists, only slight progress has been made. It would be a positive development if GOB relationships with MCC and other NGOs were pursued with more of a mutual learning approach, rather than with an air of reluctance and superiority. That said, however, it is also important to note that some national research scientists do make conscious efforts to visit MCC and the field. There are changes happening and some good relationships and research are occurring.

As with any activity in development, MCC feels it is not only important to keep the end goal in view but it also important to make a good effort at the process. For that reason MCC-GOB cooperative relationships will continue, regardless of their ebbs and flows, their trials and tribulations, their successes and failures. MCC takes heart from comments such as

> *In this area there never used to be any vegetables grown. Because of MCC we now export vegetables*"[65].

or as a former director of MCC recounts:

> *To me it was very rewarding to hear Dr. Baddrudoza, longtime director of the Agriculture Research Institute and vice chair of the Agriculture Research Council say to me: 'There was a time when the only thing we knew as food was rice. You people drew our attention to winter crops and helped us understand that wheat and other crops are also food*"[66].

[65] Noakhali District Commissioner. 1990. personal communication.

[66] Paul Myers. 1990. personal communication.

# 6. FUTURE DIRECTIONS FOR MCC IN AGRICULTURE

## 6.1 *Planning for Development*

MCC has been in Bangladesh for 20 years. The Agriculture Programme has been fully operational for 17 of those years and planning and reporting on results has been a key feature of MCC's Agriculture Programme since it's inception. Compatibility of MCC's plans with the GOB's five year plan objectives is a fundamental basis for planning, although MCC's plans have a particular emphasis on the rural poor.

A system of regular planning, monitoring and reporting functions has been built into the AP structure. There are long term planning meetings and five year plans, annual planning meetings and plans, semi-annual planning review meetings, bimonthly programme coordination meetings, monthly work planning and weekly work scheduling. The Research Programme semi-annual Internal Review provides a forum for dissemination of results and critiques of direction by both GOB researchers and MCC researchers and extension staff. There is an inter-programme research committee and occasional ad hoc committees for planning on particular issues. Performance is monitored against target for general annual reporting, as well as monitored against internal programme performance criteria. Staff performance is reviewed yearly and linked with salary. Staff development and training is an integral part of each programme.

The Agriculture Programme publishes a general annual report, annual plans and targets, a scientific report on research results, occasional subject matter reports, and general quarterly reports. Research and extension "circulars" are published to inform GOB researchers and extension agents and other associated communities of interest of MCC results and recommendations. Specific annual plans, performance criteria, and programme monitoring results are maintained for internal use. Study tours to institutions or other NGOs within Bangladesh or the sub-continent are strongly encouraged and facilitated.

## 6.2 *Development Tensions and Issues*

The Agriculture Programme prides itself on its decentralised structure which is intended to put organisational decision-making at the grass-roots. Looking at the Agriculture Programme's multifaceted structure and its iterative planning process tends to confirm this understanding. The

advantage of the decentralised or grass-roots approach is that staff close to their target group will be making knowledgeable decisions about their programmes' future direction. The disadvantage is that the ability of the organisation as a whole to chart a common path becomes difficult as there is not rigid central control.

There are many tensions within MCC's programme in Bangladesh that surface from time-to-time, but are always present. The 1986 five year plan made some of these tensions explicit. The most significant tensions relate to issues of MCC's vision of development, and to its work and impact in Bangladesh. Two of the most powerful tensions involve MCC's reliance on expatriates, and the balance between social and technical solutions to poverty.

### 6.2.1 Expatriates in Development

MCC's strategy world-wide is always to send human resources with physical resources. This strategy relates to MCC's strong belief that direct transfer of physical resources is impersonal and the benefit of a relationship is lost. An MCC poster states "*MCC believes that development is concerned first with the gardener, then the garden.*" This attitude permeates all MCC efforts, even agricultural research, as MCC attempts to be a resource for meeting human need, to work at meeting the needs of the economically marginalised and social disenfranchised people of rural Bangladesh.

MCC understands that expatriates also benefit from their service, that expatriates who learn much from their overseas experience can return home to teach others. Since MCC's approach is to send volunteers, not just money, the Bangladesh programme will always have an expatriate presence. But an over-emphasis on expatriates can lead to stifled national leadership (which MCC considers anti-developmental). This issue is continually surfacing in MCC planning meetings and it will never be completely resolved.

### 6.2.2 Technical Versus Social Development

A closely related tension involves finding the appropriate balance between technical and social interventions in order to promote people-centred development. MCC has a unique ability in that it can place highly

motivated young professionals at the field level, and MCC also has a history of and ability to work at the technical side of agricultural development. A bias toward the more technical approach to development is also supported because of the GOB's insistence that incoming expatriates have technical skills suitable to the job description or visa position under which MCC expatriates are allowed to work in Bangladesh.

Furthermore, as MCC sees itself as a foreign organisation and recognises its expatriates' cultural limitations, it does not feel it appropriate to work in social issues to the extent it would like[67]. The belief is that Bangladeshis should control their own development and that MCC should remain a facilitator, making short term interventions for long term change.

### 6.3 *Current Trends; Future Strategies*

The tension of technical intervention versus social organising, perhaps one of the strongest in MCC, has implications for MCC's future strategy. MCC has already made its target group focus clear - the general technical approach to agricultural development was left behind in the 1970's.

#### 6.3.1 Downstream Research, People-oriented Development

The Agriculture Programme is still technically oriented, but as efforts increase to focus on the needs of the poorest, MCC's efforts are continually being adapted to the social, cultural and economic limitations of the women and men of landless and subsistence farmer households.

There is greater and greater push from within the AP to move MCC research efforts further "downstream." Research stations, on-farm trial sites and extension offices are being located in close proximity. Plans are being made on how to have researchers work closely with extensionists and farmers, for example, by being responsible for combined demonstration and research plots or trials at extension offices.

Cooperation between programme components such as HSP, RSP, EP and RP is increasing and continual efforts (which have performance criteria) are being made to link up the interdisciplinary skills and methodologies of the different programmes into a more comprehensive farming systems

---

[67] MCC LRP. 1986. p 3.20.

based development approach. MCC extension officers have received training on statistics and experimental design, and field extensionists receive not only technical subject matter training but also broader theoretical or methodological training such as on FSR or farmer motivation and communication. There have been discussions between RSP and HSP on the potential of combining the best of both programmes into one. However, MCC recognizes that the challenge of structural change is a large one, especially when programmes have become quite specialized to fit their micro environments.

### 6.3.2. Partnership in Development

In recognition of MCC's ability on the technical side, and it relative limitation on the social side, the 1986 Long Range Plan suggested a strategy to work as "partners" with national NGOs who are working in the area of social organising:

> *. . . group formation and development is so crucial that we should not just stand passively by and wait for it to happen (or not happen) by itself. We should actively seek to promote it by working cooperatively with organizations that promote such groups and with the groups themselves by providing technical support in our normal programme specialties. And if such groups do not exist and are not being actively promoted in our operating area we should encourage national or local NGOs with proven capability in this activity to work in an area and if necessary help them to get needed funding*[68].

The largest-scale application of this idea is MCC's Partnership in Agriculture Research and Extension (PARE) programme set-up in the flood-prone area of Faridpur (see section 3.6). Presently PARE is a separately funded, four-year experimental programme, with no guarantees that it will continue if not successful. However, the intention to work through other organisations will remain and MCC will modify its methodology in light of the insights gained in the PARE experience..

---

[68] MCC LRP. 1986. p 3.20.

## 6.4 *Sustaining Impact*

MCC's intention is to create sustainable development. Social organising is one method, partnership with local organisations another. Another way is through establishing independent programmes in the private or public sector. MCC is in this process as discussed above with the Rower Pump and the Soybean Programmes. In the former case, private businesses are producing, promoting and selling rower and other manual pumps in Noakhali. Demand is strong for manual pumps and whether or not the MCC-identified businesses succeed or fail is now not a significant question. The market will be supplied through the private sector now that the technology is readily accepted.

With regard to soybean it is hoped that both GOB and private initiative will take on the major development efforts. Previous failures have left many government people sceptical about the value or importance of soybeans. The private sector is not yet participating in soybean development, although small local food processors are purchasing not only in the market place but also directly from farmers. MCC is collaborating with the GOB and other NGOs to develop production areas, but MCC expects to have to significantly increase its effort. This may be done by obtaining separate funding for MCCs soybean programme and establishing a semi-autonomous organisation focused solely on soybeans. This could allow MCC's main agricultural development efforts to remain target group focused, while the soybean programme follows a commodity-based promotion approach.
Other MCC efforts, such as extension and research, have existing public sector counterparts. MCC will continue its services in these areas as long as there are poor people who are in need, who are not being effectively reached by GOB programmes or who are not able to access or participate in the technologies or services GOB promotes.

MCC intends its efforts to be sustainable and therefore attempts to make technologies available to small farmers or the landless in a way that minimizes dependence on MCC and encourages self-reliance. For instance, MCC promotes the saving of seed, small farmer nurseries, compost-making, integrated pest management with natural sprays and biological controls, low-cost beekeeping, simple oral rehydration therapy not only for humans but also for livestock, and group savings and loans for small productive investments such as tubewells or sprayer machines.

There are also innumerable small innovations that have been and can be gleaned from the indigenous technical knowledge of farmers and rural people. MCC is finding its work increasingly successful as it listens to and understands the situation of the rural poor while trying at the same time to introduce new knowledge and new ideas. With this approach, MCC feels it is more able to contribute to national development efforts, whether through cooperation with the national agricultural research institutes, local government extension officers, partner NGOs or simply with the people themselves.

# REFERENCES

Bose, Swadesh. 1974. "The Comilla Co-operative Approach and Prospects for Broad-based Green Revolution in Bangladesh." *World Development*. Vol 2, No 8.

Buckland, Jerry and Kar, Anup K. 1989. "Costs, Returns and Profitability of Vegetable Cultivation to Small Farmers in Southestern Bangladesh" in *The Journal of Rural Development*, Vol. XIX, No. 1. Bangladesh Academy of Rural Development: Dhaka.

DeFehr, Arthur. 1972. "Notes on Bangladesh". Unpublished: Dhaka.

Government of Bangladesh. 1973. *The First Five Year Plan 1973-78.* Planning Commission: Dhaka.

Horlings, George and Martens, Ron. 1985. *Soybeans in Bangladesh: A Background Report*. MCC: Dhaka.

Islam, N M; Abdus Salaam, and Clements, D J. 1986. "Review of MCC's Bangladesh Agricultural Programme". Unpublished: Dhaka.

Kauffman, Harold and Brubaker, Kenton. 1979. "Evaluation of MCC Bangladesh Agriculture Programme". Unpublished: Dhaka.

Mennonite Central Committee. 1973-1989. "Agriculture Programme Annual Report (AR) Part I". MCC: Dhaka.

Mennonite Central Committee. 1975-1989. "Agriculture Programme Annual Report Part II: Research Results (RR)". MCC: Dhaka.

Mennonite Central Committee. 1990. "MCC Bangladesh General Policy Manual". Unpublished: Dhaka.

Mennonite Central Committee. 1982-1989. "Planning Meeting Minutes (PMM)". Unpublished: Dhaka.

Mennonite Central Committee. 1986. "Long Range Plan for 1987-91". Unpublished, Dhaka.

Myers, Paul. 1979. "Response to Kauffman/Brubaker Evaluation". Unpublished, Dhaka.

Pray, C E and Anderson, J R. 1985. *Bangladesh and the CGIAR Centers (CGIAR Study Paper No 8).* The World Bank: Washington.

Rowell, Brent. 1980. "Review of (MCC's) Vegetable Crop Programme: 1972-1980". MCC Special Report: Dhaka.

Schmitt, Monica; Hashnahena Akhter; Bruulsema, Bette-Ann and Sanders, Rebecca L. 1989. "Homesite Programme Profile: 1982-1989". MCC Special Report: Dhaka.

Spare, Dan. 1982. "The Rower Pump: A Summary of Its Development: 1978-82". MCC Special Report: Dhaka.

Swartzentruber, Conrad. 1985. "A Review of MCC's Horticulture Programme: 1980-1985". MCC Special Report: Dhaka.

Vander Zaag, Peter. 1990. "Feni Revisted: Assessing Impact". Unpublished mimeo: Dhaka.

Agricultural Administration Unit
Overseas Development Institute
Regent's College
Inner Circle
Regent's Park
London NW1 4NS
England
Telephone: 071-487 7413
Fax: 071-487 7590