



# More plant clinics in Bangladesh

RDA, AAS and Shushilan



*An update*

By Jeffery Bentley

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# Acronyms

AAS	Agricultural Advisory Society
BARI	Bangladesh Agricultural Research Institute
BSMRAU	Bangabandhu Sheikh Mujibur Rahman Agricultural University
DFID	Department for International Development, UK
GPC	Global Plant Clinic
GSI	Good Seed Initiative
PKSF	Polli Karma Shakayed Foundation (Rural Employment Facilitation Foundation)
RDA	Rural Development Academy
WRC	Wheat Research Centre

**Cover photo:** Popular TV host Hanif Sanket (in striped shirt) interviews RDA's Zakaria (in blue shirt) at a plant clinic. Photo by RDA.

# Summary

Shushilan is going to start two new plant clinics, and has a new European Union project, which could be strengthened with plant clinics.

RDA's plant clinics have been on national TV twice, on good shows both times. The government of Bangladesh is starting to give them some support. They have built two new clinic buildings for the old clinics and started eight new clinics, spurred by the interest generated by the TV shows. They are nearly ready to publish two glossy promotional accounts of the clinics.

AAS gave two short courses to plant doctors with my help and approached BARI and BSMRAU to explore future collaboration for training and diagnostics.

# Introduction

The Global Plant Clinic has collaborated with AAS, RDA and Shushilan in Bangladesh since 2005 to operate plant health clinics. By 2009 there were 18 fulltime clinics (AAS 12 in Natore, RDA three in Bogra, and Shushilan three in Shatkira). Ten new ones are now being opened.

# Acknowledgements

Thanks to Harun-Ar-Rashid for going with me on most of this trip, and for his flawless planning and organization, and for his expert facilitation of the two short courses. Mostafa Nuruzzaman and Dider of Shushilan were kind enough to meet me Dhaka. AKM Zakaria, Babu Haque and Parvin of RDA made my stay in Bogra enjoyable and productive, organizing trips to the plant clinics and a meeting with the plant doctors. Thanks to everyone who shared their time and knowledge with us on this trip. Thanks to Eric Boa for sending me to Bangladesh once again, and for his enthusiasm and optimism.

We gratefully acknowledge the support of DFID.

# 1. Shushilan

## Two new clinics

In the evening of 11 July I met with Mostafa Nuruzzaman (director of Shushilan), Dider (plant doctor) and Dider's wife Ani, along with Harun. They were happy to tell me that they had been awarded a European Union project to work with 13,000 farmers in eight districts, involving tractors, agricultural inputs, saplings and trees. They may be able to implement some of the project with the help of plant clinics.

They are going to start two more plant clinics in Kaliganj, for a total of five, because local people have requested them.

Dider likes working at the clinics. Farmers ring him almost every day, asking for advice. He seemed happy to get their calls, even when he is on holiday.

Most of the farmers who come to the clinics don't bring in samples, but sometimes they come in and Dider can't understand what they are describing, so he asks them to bring a sample. Since they live nearby they go get one and bring it back while the clinic is still open. Sometimes he shows them photos he has taken to reconfirm a diagnosis. (Eric has always said to use photos in plant clinics, but not everyone does it).

I gave Dider a hard copy of the manual from Nepal. He said that he had already received a copy (on the internet), but he was pleased to have a hard copy. The internet is great for sharing information between countries.

## PLANS FOR THE FUTURE

**Reporting.** They will send the GPC a short report once a month at the end of the month on what's new, problems, and how many farmers came in.

**Clinic records.** Shushilan will send clinic records to Harun twice a year, who will compile a data base. They will send him what they have by the end of this month.

**Fact sheets.** Dider is working on 20 to 25 fact sheets, which he agreed to finish by the end of the year. If that is too much to do, they should at least get started, and send me some. I emailed them the fact sheets from Sierra Leone as an example.

Dider will visit Natore and see the plant clinics there.

## 2. RDA

### Famous Plant Clinics

At 9:00 PM on 30 April the RDA plant clinics were on one of the most popular TV shows in Bangladesh. It is a one-hour magazine called Ittyadi (“Etcetera”) that only airs four times a year. It includes entertainment, travel features on the Statue of Liberty and other exotic spots, plus comedy and news. 80% of the viewers in Bangladesh tune it in. Zakaria and the plant clinics were given 10 minutes on the most popular show in Bangladesh.

It is almost impossible to get on Ittyadi. The anchorman, Hanif Sanket, can pick and chose the people he features. But Zakaria got Mr. Sanket’s attention by sending him a paper. Sanket responded, visited RDA while Steve

Edgington was here, decided that the clinics were newsworthy, then came back with his crew and enough equipment to make a movie. And his journalistic angle was simply that humans have clinics, animals too, but not plants, even though they also get sick. The plant clinic’s elegant concept has mass appeal.

This was the first time Sanket had ever made a short about agriculture, and it was a bit of a stretch for him. His shows have to be fun. But the clinics went so well that Sanket came back later and shot another six or seven minute short, which will air in the future. The clinic spot was so popular he’s going to do more shows on agriculture.

After it aired, people started calling and coming by RDA asking to become plant doctors. So in June RDA gave a three day training to eight women and four men.

Besides the three regular RDA clinics, at Maria, Radhangor and Amrul there are eight new ones. They gave the plant doctors books on plant diagnostics and solutions by Hashanur Rahman, and forceps, knife, scissor, and a magnifying glass.

The Secretary for Rural Development, Begom Reya Sholutana of the Ministry of Local Government and Rural Development, visited the plant clinics. She liked the clinics so much she asked the DG of RDA to put money into them. With the money RDA developed two “venues,” that is a small shelter, where visitors to the plant clinic can get out of the weather.

On 2 June, Secretary Sholutana visited RDA a second time and dedicated one of the venues. Secretary Sholutana wants to replicate the clinic idea in many projects, in many areas. The place to start is Gopalganj, the prime minister’s home town. There will be a national planning meeting at RDA on 5 and 6 of August when people from Gopalganj will formally request training to put on the clinics. Zakaria wants to prepare a 15 to 20 day course to train plant doctors, beyond the basic three day course. It’s a great idea.



Plant doctors Anzuara (left) and Mahmuda (right) at the new venue in Radhangor

#### Eight new plant clinics

<i>upazila</i>	<i>district</i>
Kalai (2)	Jaypurhat
Khetal (2)	Jaypurhat
Namuja	Bogra
Shariagandi	Bogra
Gobindaganj	Gaibandha
Gorarghat	Dinajpur

Besides the fact sheets, Zakaria has *another 100 leaflets* ready to publish on botanical pesticides. These are mostly ideas RDA learned from villagers at the plant clinics. The leaflets will be published as a book, the first of its kind in Bangladesh. It includes one on neem and garlic, one on garlic alone, one on chilli, one on soap and even one on killing insects with fermented yoghurt and water. All of the leaflets have been validated with farmers at the clinics. RDA also holds a monthly meeting with the plant doctors, which helps keep up the group spirit.

## The new plant clinic venues in Amrul

The plant clinics in Amrul are the three oldest ones RDA has, which started in 2005. With UNICEF journalist Shamsuddin Ashmed and RDA, we visited the plant clinic at Radhangor, Amrul. The appropriate little building cost about \$500 to buy the sheet metal roof, a sign, a table, benches. It has a mud floor. It was packed with farmers, mostly women, all of them holding a sample and patiently waiting their turn. I talked to local farmer Najia Sharkar.

### Box: Return customer

Najia Sharkar had come to the clinic this time with pomegranate. But two months ago she came in with lychee. The fruit was falling, the leaves were cracked and had red spots. The plant doctor identified it as red mites, *lal mako*. Mrs. Sharkar sprayed a chemical and it got better. Three of her ten trees had mites. She was pleased with the results from spraying, but she said she also used to get good results by breaking off the branch if it had mites. Another time she brought strawberry to the clinic. It is a new crop. Farmers are always experimenting, and she had brought it from the district where her sister lives. That could have been difficult to diagnose, but the plant doctor said it was strawberry rot. Mrs. Sharkar also sprayed that and got good results.



Najia Sharkar has been to the clinic for strawberry, lychee and pomegranate. Repeat clients are satisfied clients

Red mites on lychee

### Box: Killing insects with neem

Jubeda Khatun was at the clinic, but she had also come a month earlier with beans, on half a *bigha* (on 667 square meters). The plant doctor told her to spray neem for the insects on her beans. She ground the leaves, mixed them with a litre of water, put the mash in a cloth and squeezing out the liquid. She applied it twice and the insects died. The local name of the insect is *āta* (ring, like a wedding ring). She knows she got good results but she doesn't know how good they were, because she just harvested several bunches several times.



Jubeda Katun is happy to ask her plant doctor about okra, because she had good results with an earlier query about beans. The plant diagnostic book on the table is a useful reference

Before we left, plant doctor Anzura gave me her card. Each plant doctor has cards, with her photo and mobile number.

Then we went to Maria and had a quick chat with “farmers’ sister” Aklima, who said that sometimes farmers give her five Taka (about three cents, US) for a consultation. She doesn't send samples in very often because now she knows everything that comes in. She also gave me her card. Farmers not only call with problems, but they often call her to make an appointment. As Zakaria says, if farmers are calling, it means they are spending money for the service, which shows that it is valuable to them.

### The new plant clinic on a *chor*

A *chor* is a river island (usually spelled “char,” due to a conventional glitch in transliterating Bengali words to English).

At the Jamuna River Babu and Parvin hired a boat, and we started up river. The chor-dwellers are isolated; families live on them for generations, and have their own dialect. The land is rich, but they frequently lose their land and homes to the river, and have to shift to a new chor.

At Hatsherpur Chor we met plant doctor Abul Kalam Ajad, who is assisted by Mosheda Begom. They both recently had RDA training and this is a new clinic. There are 1300 households on this char, which is 2 km sq. Although they are poor and isolated, they are represented in the local government. Four people from the chor are members of the union parishod, including the chairman.

We looked at the clinic register. It had four sheets filled out. The prescription pad makes its own carbon copies.

RDA gives the plant doctors the book on diagnosis by Hashunro Rahaman. It is practical. First it has all the insects by crop, then all the diseases by crop. The problems are all illustrated with small photos. Eric would say they need improvement, but you can often make out what the insect is, plus there are common names in Bengali and in English.

Ajad has known Zakaria since 2008, through the GSI project, which RDA runs here with 60 households. But when Ajad saw Zakaria on TV he went to RDA to ask him about becoming a plant doctor.

Ajad does not write down all of the prescriptions because sometimes he is in the field and doesn't have his register handy. He doesn't have a set day to run the clinic. He receives people whenever they come over.



### Box: Satisfied clients at Hatsherpur Chor plant clinic

The women who had brought in the four problems were all hanging out in the back. One by one Babu read the register to me and we asked the clients what they did about it.

The first farmer, Nalpuna, had *law kumra poka*, fruit fly in gourd. The recommendation was to make a paste of onion leaf, mix it in 10 litres of water and then squeeze it in a sack and spray it. Nalpuna said that she got good results and now had no insects in her gourd.

The second one was ash gourd, with leaf borer. The recommendation was to collect five little bottles of tobacco snuff, called *gul*, mix it in a litre of water and squeeze it in a cloth. Ajad learned this in one-day biopesticide training at RDA. The client, Jorda said she got many ash gourds after applying the *gul*. She ate some gourds and sold some.

The third problem was an insect eating the fruit and leaves of ash gourd. The recommendation was 100 grams of garlic, made into a paste and put in water, add 100 grams of soap, mix it finely then squeeze it out and spray it. Helena said she applied it two times and got good results. The insects died and there are no more symptoms. She got one harvest for eating, not to sell.

The fourth recommendation was for brinjal fruit borer: five bottles of snuff in one litre of water, mixed and sprayed. Mrs. Roke said that she put the *gul* in one litre of water then put that in 10 litres of water, which was the recommendation. There are no insects in the crop now. She mixed it with a stick and rented a backpack sprayer (one day for 20 taka, 33 cents US) and her son applied it. I was wondering about toxic affects from spraying tobacco, which can be dangerous. But Roke said her son did not have any bad effects because he covered his mouth with a cloth. He learned this from his parents. "All *chor* dwellers know to cover their face when they use the machine," she said, with Babu translating.



A confident and happy plant doctor, Abul Kalam Ajad at the new plant clinic on Hatsherpur Chor

## Other news about RDA

**Ninety four people trained.** RDA has trained 94 agricultural technicians for PKSf (Rural Employment Facilitation Foundation). PKSf is an NGO that supports NGOs with micro-financing. Now the trick is to provide the new trainees with refresher training, equipment, sign boards, and have a joint collaboration with the GPC, RDA and PKSf.

**Meeting with plant doctors.** Zakaria took me to a meeting at RDA with the plant doctors. The six original ones from Amrul were there: Piyara Begum, Anjuara Begum, Afroza Begum, Mahmuda Begum, Aklima Khatun, and Rozina Akter, along with most of the new plant doctors.

This last person, on this list, Jusim Uddin has not had any training. He saw the plant doctors on TV, and decided he wanted to be one, so he travelled across the country on his own initiative. He just happened to walk into Zakaria's office a few minutes before the meeting, so Zakaria took him to the meeting. That's the power of television.

It turns out that the plant clinics here are getting more coverage than I thought, because after I talked about the plant doctors in Bolivia, Zakaria played a DVD of a half hour TV show about the RDA plant doctors that had been on the government channel the previous week. This popular show is anchored by a respected journalist who has been doing agricultural shows for 25 years. He showed Secretary Sholutana dedicating a venue in Amrul. Then she sat at the plant doctor's desk, beaming approval. The time is ripe for Bangladesh to go national.

<b>Name</b>	<b>gender</b>	<b>upazila</b>	<b>district</b>
Rowshanara	female	Kalai	Jaypurhat
Sheli	female	Kalai	Jaypurhat
Phahima	female	Kalai	Jaypurhat
Moslema	female	Khetal	Jaypurhat
Shakila	female	Shador	Bogra
Shamshul Hoque	male	Khetal	Jaypurhat
Ariphul	male	Shador	Bogra
Matiyar Rahman	male	Gorarghat	Dinajpur
Arepha Begom	female	Gorarghat	Dinajpur
Munsur Rahman	male	Gobindaganj	Gaibandha
Jusim Uddin	male	Phortik Chori	Chittagong



Secretary for Rural Development Begom Reya Sholutana wearing the plant doctor's coat at the inauguration of the venue (photo by RDA)

**An interview.** I interview many people, but rarely get interviewed myself. So it was a pleasure when Shamsuddin Ahmed from UNICEF interviewed me. We sat down with Zakaria and I rehearsed the history of the plant clinics, including Bolivia, but stressing the accomplishments in Bangladesh. I talked about both impact studies, in Bolivia and Bangladesh. The story will appear in web magazine, Integrated Regional Information Network, managed by OCHA, in New York and Nairobi.

**School of hard knocks for plant doctors.** I gave the RDA brochure and the glossy booklet a light

editing for mechanics. I was happy to do it. It gave me a chance to get to know the plant doctors a little better. Their lives have been tough: early marriages, hunger, hopes for further education dashed by poverty and responsibilities. They are natural leaders and organizers, many with years of experience in grassroots organizations. We are privileged that they chose to become plant doctors.

#### Future RDA plant clinic activities

<b>Action</b>	<b>Date</b>
1. Publish the RDA plant doctor brochure in English	It's ready to go. End of August
2. Publish the glossy book in English	End of September.
3. Publish the black and white leaflets on biopesticides in Bengali.	Publish 50 in August and the others in October.
4. Publish the fact sheets as a book	Publish 100 in October.
5. Enter data from clinic registers	Will update regularly.

### 3. AAS, trainings

*One-day, short, short courses*



FIRST VERSION

**Abridged version of Module 1 given to AAS plant doctors at Bon Para on 20 July**

	TITLE	NOTES
C1-1	Profile (and intro)	
P1-1	Introduction module 1	Just the first half.
F1-1	Describing symptoms	
P1-2	Symptoms in plants	
P1-3	Field diagnosis	
P1-4	Causes of plant health problems	

For two days, Harun and I taught one-day short courses, clipped from Module 1. On the first one, we started past 10, broke for tea, had a nice lunch and quit at 3:15. We covered about half of what I had planned, so all in all we did about a fourth of Module 1. I ran through the presentations quickly the day before with Harun, and during the course he gave them in Bengali, in a loud, clear, friendly but authoritative voice, with little help from me, adding in explanations of his own. I'd never seen anybody get up and give one of these talks so well before, with so little preparation.

When we talked about field diagnosis vs. lab diagnosis the plant doctors said they had nowhere to send samples. That has to change. I encouraged them to use labs. Harun and I planned to visit some on Thursday.

## SECOND VERSION

For the second course, we skipped the personal profile, because it took too much time the first day. We started a bit earlier and ended later. This group was keener to get on with things, so even though there were more of them, we moved quicker. We did fewer presentations the second day, because the groups responded better to exercises.

### Version of module 1, second course

	TITLE	NOTES
P1-1	Introduction module 1	
F1-1	Describing symptoms	Excellent exercise
P1-X	How to run a plant clinic	Added this one because this group does not now run plant clinics, but could in the future
C1-2	ABC the first diagnosis, with photo sheet	This needs to be redone, with fewer photos, and better examples
P1-4	Causes of plant health problems	
C1-3	Common symptoms and probable causes – first part	Also gave out two handouts on symptoms and probably causes. We should translate these and distribute them more widely
C1-4	Common symptoms and probable causes – second part	
P1-5	Common symptoms and their causes	

The group coordinators are farmers, who have some formal education (e.g. they all read and write well in Bengali, and some speak a little English). They are leaders of groups of farmers that interact with the price project.

## 4. AAS, with BARI and BSMRAU

### VISITS TO FORMALIZE COLLABORATION WITH AAS

**The Agricultural University.** At the BSMRAU we met the vice chancellor, Abdul Mannan Akanda. He asked us into his large comfortable office and gave us tea and said he would be happy to collaborate with plant clinics. He is a plant pathologist (he went on one of Eric's workshops, Harun said) and he is a friend and an old classmate of Harun's. They went to university together.

He asked us to write up a letter saying what kind of collaboration we wanted and he would sign it. He said that he thought the plant clinics were a great way to get information to farmers about plant health management.

We also met Asadur, a Ph.D. student of Mannan, writing his thesis on potato virus. He has been with the clinics several times and analyzed the data for our Bangladesh clinic impact study. Asadur is going to analyze the data for the GSI impact study.

**At BARI** we went to see Dr Tapan Kumar Dey, who is head of plant pathology. He took us to see his lab. He has a new laminar flow chamber and a row of incubators and growth chambers which are refrigerated, but have lights, simulating winter in Bangladesh. They had a tray of potato plants growing in the growth chamber. They had new centrifuges, including one ultra fast one.

They have a new gene scanner. They want to work on genetic engineering e.g. to come up with potatoes that are resistant to *Phytophthora*. This is the kind of institution that should be doing genetic engineering, for the public good.

They have a microscope with a screen to view nematodes live under magnification, and they have an electron scanning microscope.

Dr Tapan agreed to receive samples from Harun.

At BARI we also met Dr. Kamal Humayun Kabir, head of the entomology division. He recently finished an interesting study called Pesticides in Bangladesh. The good news: Bangladesh does not use nearly as much pesticide as other countries. Bangladesh uses an average of 300 g of active ingredient per ha. The USA uses 3 kg, Honduras uses 7 kg and Taiwan and Holland use 17 kg. Most rice farmers in Bangladesh use no insecticide. And only DDT and organophosphates persist in the environment. But the bad news is: pesticide abuse in vegetables. Of 120 vegetable samples BARI analyzed, 20% were contaminated with pesticides. So everybody in Bangladesh is eating pesticides, mostly because the vegetable growers apply far too late (sometimes even after harvest) and too often, especially for borer in brinjal.

Dr Kabir was interested in the plant clinics. He did say he was willing to get involved in training the plant doctors. And he said after the training, the plant doctors could contact the entomologists. Those were both excellent ideas.

### FUTURE AAS ACTIVITIES

#### Future AAS plant clinic activities

Action	Comment
Visit BCRL (Biocontrol Research Laboratory) in Bangalore, India, to see their work with plant clinics, learn more about biopesticides and share ideas with them about plant clinics in Bangladesh.	Possibly in December, pending Indian visa.
Conduct more activities jointly with Shushilan, e.g. visits and collecting electronic clinic registers.	Agreed between Shushilan and AAS.
Formalize links with BARI and BSMRAU.	Underway.

# Annex 1: participants in first short course

## Participants on first course, plant doctors in Boraigram

	NAME	PLANT CLINIC
1	Mahbub Hassan	Parbagdob
2	S.M. Shahidul Islam	Kochua
3	Ishaque Ali	Parkol
4	Abu Bakar Siddic	Rayna Bharot
5	Shamsul Islam	Chandai
6	Nuruzzaman	Ahamadpur
7	Sree Digendronath	Ramagari
8	Goljar Hossain	Merigachha
9	Ashraful Islam	Jonail
10	Diderul Alom	Jonail
11	Saidur Rahman	Parkol
12	Kafil Uddin	Kochua
13	Rafiqul Islam	Merigachha
14	Mohammad Ali	Rayna Bharot
15	Md. Jojimin Uddin	Shibpur
16	Aftab Uddin	Moukhara
17	Akkas Hossain	Moukhara
18	Shabanur Rahman	Ahamadpur
19	Enamul Haque	Ramagari
20	Mosarraaf Hossain	Parbagdob
21	Anowar Hossain	Tirail
22	Mizanur Rahman	DK Bazar
23	Rafiqul Islam	DK Bazar

## Annex 2: participants in second short course

Participants on second course, group coordinators

	NAME	PLACE OF RESIDENCE
1	Harun-or-Rashid	Lakshmipur, Boraigram, Nator
2	Pentu	Chorgorgoria, Ishurdi, Pabna
3	Obaidur Rahman	Chorgorgoria, Ishurdi, Pabna
4	Nazim Uddin	Chorgorgoria, Ishurdi, Pabna
5	Ali Ahsan	Chorgorgoria, Ishurdi, Pabna
6	Akram Hossan	Chorgorgoria, Ishurdi, Pabna
7	Hasanur Rahman	Kamalpur, Ishurdi, Pabna
8	Gozar Hossain	Kamalpur, Ishurdi, Pabna
9	Abdul Halim	Kamalpur, Ishurdi, Pabna
10	Abdus Samad	Chorgorgoria, Ishurdi, Pabna
11	Abul Kalam Mirdha	Chorgorgoria, Ishurdi, Pabna
12	Pentu Biswas	Kamalpur, Ishurdi, Pabna
13	Abdul Mannan	Kamalpur, Ishurdi, Pabna
14	Alli hossain	Domadi, Putia, Rajshahi
15	Khairul Islam	Domadi, Putia, Rajshahi
16	Habibur Rahman	Rahimpur, Ishurdi, Pabna
17	Bokul Hossain	Gorgoni, Ishurdi, Pabna
18	Abdul Latif	Chok Bhita, Putia, Pabna
19	Siddiqur Rahman	Muladuli, Ishurdi, Pabna
20	Nazrul Islam	Batra, Boraigram, Natore
21	Montu Malitha	Chorgorgoria, Ishurdi, Pabna
22	Motiur Rahman	Khamat Pathuria, Gurudaspur, Natore
23	Zakir Hassan	Khamat Pathuria, Gurudaspur, Natore
24	Abdul Kader	Nondonpur, Putia, Rajshahi
25	Ziaur Rahman	Dhulia, Boraigram, Natore
26	Abdul Jalil	Kodim Chilam, Lalpur, Natore
27	Ikramul	Purbo Noyamara Gurudaspur, Natore
28	Tozzamel Hossain	Chorgorgoria, Ishurdi, Pabna
29	Kamruzzaman	Chorgorgoria, Ishurdi, Pabna
30	Shahidul Islam	Chorgorgoria, Ishurdi, Pabna

## Annex 3: Itinerary

FRIDAY 9 JULY. I arrive in Dhaka. Meeting in the afternoons with Harun-Ar-Rashid regarding another CABI project (impact study of Good Seed Initiative).

SATURDAY 10 JULY. Planning impact study of GSI with Harun. Discussed AAS activities in the future. Edited impact study of plant clinics with Harun (begun in September 2009).

SUNDAY 11 JULY. Continued editing. Met with Nuruzzaman and Dider and Ani from Shushilan (with Harun).

MONDAY 12 JULY. Harun put me on the bus to Bogra. Met with AKM Zakaria at RDA.

TUESDAY 13 JULY. Visited plant clinic in session at Radhanagor, Amrul, and visited Aklima at Maria, with a small delegation from UNICEF, along with Babu, Parvin and Zakaria.

WEDNESDAY 14 JULY. Took a boat up the Jamuna River to plant clinic on the river island at Hatsherpur Chor with Babu and Parvin. Visited a group of women producing vegetable seed with RDA and GSI. Edited the plant clinic brochure for RDA.

THURSDAY 15 JULY. Gave a talk on history of plant clinics to the plant doctors at RDA. Gave an interview to Shamsuddin Ahmed. Gave Zakaria photos for fact sheets. Went to Bogra and got the glossy plant doctor booklet for RDA.

FRIDAY 16 JULY. Edited the glossy booklet.

SATURDAY 17 JULY. Worked on another CABI project.

SUNDAY 18 JULY. Worked on another CABI project.

MONDAY 19 JULY. Planned course on diagnostics with Harun.

TUESDAY 20 JULY. Gave first course on diagnostics to 23 plant doctors and community plant doctors at Bon Para, Baraigram, Natore.

WEDNESDAY 21 JULY. Gave second course on diagnostics to “group coordinators”, community leaders who help to facilitate other projects (e.g. the Price Project) in villages.

THURSDAY 22 JULY. Drove to Dhaka. Met with Prof. Dr. Md. Abdul Mannan Akanda, Vice-Chancellor of the Bangabandhu Sheikh Mujibur Rahman Agricultural University, and with Asadur, who will crunch the numbers for the GSI impact study. Met Dr Tapan Kumar Dey, head of plant pathology at BARI and Dr. Kamal Humayun Kabir, head of entomology at BARI.

FRIDAY 23 JULY. Writing.

SATURDAY 24 JULY. Writing. Left Bangladesh