

The Importance of Crop Improvement in Conservation of Diversity

K.C. Adhikary, S.P. Adhikary, and K.R. Adhikary
Development and Environment Club
Bagnas, Kaski

Abstract

In this paper, farmers describe the agroecology of Bagnas and the diversity of crops grown there.

Brief description of the Bagnas Village

Bagnas is a small hilly village to the northeast and 16 kilometers away from the well-known tourist center Pokhara. Facing the north-south direction, the village lies about 600 to 1400 meters above sea level. It lies in the mid-hill region, and like the rest of the other villages in Nepal, it is equally remarkable for agricultural diversity.

A variety of agricultural production and one single crop with a diversity of species is the greatest wealth of this village. Some time ago, farming was carried out in this village on the basis of absolutely personal interest and experience. But since the last 10 to 15 years, we farmers have been attracted to collective and participatory farming systems. Caste-wise, the village has a majority of Brahmins, and 97% of the population is dependent upon agriculture.

The land is such that in the north are the steep hilly areas, and there are plenty of gullies and hills with narrow strips of land between them. So comparatively speaking, the upper areas of the village are cold and dry/parched, and the lower belt is moist and hot. On the basis of our experience and experiments, in the north belt we grow millet, maize, and *Ghaiya* (a type of paddy), and in the lower part of the land, we cultivate paddy. There is no irrigation system, so we are entirely dependent upon the monsoon rain. Although during the monsoon months of Ashadh/ Srawan (June-September), we collect water in small man-made reservoirs and pools for farming. Since the main crop in this village is paddy, we are fully involved in cultivating paddy. We are not engaged commercially in agriculture but in terms of sustaining our lives.

The following is a proposal about the Participatory Plant-Improvement Program and our experiences and suggestions about paddy cultivation in our Bagnas Village.

Common species of crops

We, the villagers of Bagnas, have been cultivating crops according to our long traditional methods of trial and experience so that we have been able to study what sort of crops are suitable in one place and what crop at which time. Having observed these details, we have been cultivating our fields. The common crops that we have been cultivating are as follows:

- *Pakho* (hillside, slanted, uncultivable slope):
Millet, maize, *Ghaiya* (paddy), *Pidalu*, sugarcane, buckwheat, and vegetables (potatoes, radishes, gourds)
- Field (for paddy plantation):
Paddy (and also minimum cultivation of wheat and mustard)

Status of paddy species system

The procedures for cultivating the paddy species have been based on the traditional technology followed by our forefathers. Actually, the majority of the farmers in the village follow the same methods of farming. Even now, the local species of paddy have a greater influence in the choice of

cultivation, although in some places, improved species of paddy are also being used by some farmers. The common varieties of paddy being cultivated are *Mansuli*, *Taichung*, and *Radha-7*, while some years back, we (one-third of the farmers) cultivated the varieties called *Mansule*, *Madhise*, *Chhote*, and *Radha-7* in order to make a better profit. But these improved varieties needed chemical fertilizers, good irrigation facilities, and pesticides to control pests and diseases. When these requirements were not fulfilled, we lost half the harvest in some years. So then we reverted to cultivating our own local varieties, and among the most popular ones are almost 35 to 40 species. That is why we cultivate the different varieties of the local species. We do not only work on an individual level but also collect ourselves into different groups and work towards preserving and protecting the local species. In our village, on the basis of our yearly experiences with these different varieties of local paddy, we continue to grow them and alternate the seeds in trying to create continuity to our work and efforts at conserving the local paddy species.

Diversity in the local paddy species

In order to fulfill different usage requirements and needs, we have been preserving different local species. At present in Begnas Village, we have 16 collective development groups, and among the participating farmers, there are from nine to 43 species of paddy that are being locally cultivated. (table 1). Now we are planting the following local paddy species (table 2). These local species have many qualities that are suitable for our soil and climatic conditions, so we are giving continuity to our local species. Yet there are some qualities that we think it would be great to improve upon, so we have asked for assistance from the INSITU Conservation Program. With the help of this program, the local species like *Aanga*, *Thulo gurdi*, *Sano gurdi*, *Biramful*, *Pahele*, *Ekle*, and *Mansara* are being crossed with improved varieties like *Savitri*, *Himali*, and *Khumal-4*. In this way, if we could cross local with improved varieties, the local species would not disappear. In fact, many of the local varieties like *Marsi*, *Pahele*, *Thulo Marsi*, *Seto*, and *Jadan* are in the process of being lost, and some other species like *Anga*, *Rate*, *Chobo*, and *Jhinuwa* have completely disappeared.

Table 1. Collective Development Groups and Participating Farmers, Begnas Village

	Group names	No. of paddy species received in exhibition
1	Darathar Collective Development Committee (CDC)	43
2	Bisaunathar CDC	30
3	Majhthar CDC	30
4	Chaur CDC	21
5	Kotbari CDC	24
6	Aduwabari CDC	20
7	Poudelthar CDC	2
8	Archalthar CDC	19
9	Paurakhe CDC	18
10	Adhikarithar CDC	18
11	Sundaridada CDC	15
12	Talbesi CDC	15
13	Kalimati CDC	14
14	Kholbesi CDC	12
15	Simalpata CDC	9

Groups	Names of farmers	Species of paddy under cultivation
Archalthar	Tara Tiwari	16
Adhikarithar	Goma Adhikari	13
Poudelthar	Padam Raj Poudel	11
Bisaunathar	Padma Kumari Adhikari	11

Table 2. Common Paddy Species Found in Begnas Village

Main species	Reasons for being selected by farmers	Drawbacks	Interest of the farmers
<i>Ekle/Gurdi</i>	Good taste, long straws, soft, good rice grains, <i>ganjaune</i> , heavy harvest	Less in areas where water is not available	Long straws, heavy harvest, early crop, less wastage through easy dropping of paddy grains, not easily crushed, more rice, increase in cooked rice volume, able to resist disease
<i>Jetho buro</i>	Fragrant, good for serving to guests, expensive market price, used during festivals	Needs plenty of water	
<i>Kathe gurdi</i>	Semi-irrigated fields	Comparatively greater chance of being reduced to tiny pieces	
<i>Ramani</i>	Long straw, good harvest, able to resist fertilizer and water	Must have good irrigation	
<i>Lahare gurdi</i>	Long straw, good harvest, tasty, able to resist fertilizer and water.	Needs plenty of water	
<i>Bayami</i>	For medication (sprain, in suffocation)	Needs plenty of water	
<i>Jarneli</i>	Excellent for beaten rice (<i>chiura</i>)	Needs plenty of water	
<i>Anadi</i>	<i>Siramla</i> , for medication in state of dizziness		
<i>Naal tumme, mansara, pakhe jarneli, rate anga, aap jhuthhe, madhise, tunde, thapachini, etc.</i>			

We farmers want improvement in the quality and quantity of the paddy according to our interests and needs. But we lack the knowledge and technology to do that. Therefore, the farmers must select the species through their own presence and participation in the process so that by crossing different species, a great variety of species can be obtained, yet also keeping the original breed, so that the improved species can be strong and withstand local conditions. Hence, we feel confident that with the help of the in situ Program we will surely succeed in improving the local species.

Conclusion and recommendations

Our conclusions and recommendations are that the in situ Program will surely assist the farmers of this small Begnas Village in conserving the diversity of the local species of paddy and inspiring the local farmers to participate in collective activities, so we not only conserve the local species but also bring together maximum participation of the farmers so that the standard of life of the local farmers will also improve.

Question-and-Answer Session with Nepali Farmers

Q. 1. Everybody stressed crossing but who is actually doing it? Farmers? Scientists? Or is it done jointly?

Ans: The farmers in the village initiated the crossing program with technical support from LI-BIRD as and when needed.

Q. 2. Where do the male and female plants come from in maize crossing?

Ans: The male is an improved variety—*ganesh-1*—from NARC, and the female is a local land-race—*Thulo pahelo*.

Q.3. Are you willing to share the seeds of your crossing? If 'yes,' why? If 'no,' why not?

Ans: *Farmer 1.* Seed from crossing is community property, so it's up to the community to decide whether or not to share it.

Ans: *Farmer 2.* We are willing to share and, in fact, have already done so by supplying 250 kg. If our new varieties help improve the production of other farmers, we will share it.

Q.4. Today, large companies have the potential to spread biotechnology as a form of imperialism. Gandhi used the spinning wheel as a symbol of freedom. What should be the symbol of the farmers to fight against such domination?

Ans: One way to be self-reliant is to improve our seeds/varieties so that they are more productive or competitive, before the large companies grab away our genetic materials. The farmers should have control over the genetic resources.

Q.5. How will the new lines coming out of crossing *sathi* be developed and studied?

Ans: The decision to select or reject the outcome of the cross rests in community. No individual holds absolute rights over developing the lines.

Diversity Versus Mono-Cropping

Bidakanne Sammamma

DDS woman farmer from Andhra Pradesh, South India

Abstract

A farmer from Bangladesh describes crop diversity in her fields and gives the reasons for encouraging diversity versus mono-cropping.

I am trying here to explain the soil type, the problems associated with the soil in my area. You will find a lot of stones there, so farming is very difficult. The soil is black and you can see the amount of stones. In the areas where there is red soil, the depth is very shallow—not more than five to six inches—and below it there is a complete sheet of rock. So keeping in mind the soil types and the problems associated with rainfed agriculture in my area, the women try to grow a lot of crops in a given area so that they can be sure of getting at least one crop in the crop season.

We store different types of seeds of different crops and mix all these crops. Women, especially, play a vital in this mixing. Keeping in view the soil fertility, we observe the soil—which type of crop can be grown in a certain patch of land the woman owns. So women play a vital role and they mix all the different types of crops that can give food, fodder, and add to the fertility of the soil.

We grow a range of crops—at least eight to 10 crops in a year in a given area: you can see crops like *jowar* (sorghum), red gram, field beans, and cow peas. We grow this many crops to get some of the crops at one time and others at another time. Some crops will mature first, so they are harvested first, so we get food when we are hungry.

The main reason behind growing so many crops in a given period is that even if, due to any reason, some crops fail, we are sure of getting something. So we will be harvesting different crops over a period of a season of six months. Every time we go to the field, we will get something to take back to our homes to cook. At the same time, there won't be much work because during the period of six months, one crop will be coming at one time and another the next time and another the next. So the load is spread evenly on the women and not all at one time.

The second reason is that there are different varieties of *jowar*—compact-headed and loose ones. In our area, we sometimes get rain at the harvesting stage. When we get rain at this time, the compact-headed seeds germinate in the head itself. So we also grow the loose-headed variety. Even if there is drizzle for two or three days, this variety can overcome that problem. Unless there is a big drizzle for one week, I am sure of getting at least some *jowar* for consumption.

Keeping in mind the soil fertility, I also mix legume crops like field beans and *jowar*. We grow *jowar* also because of the fodder requirements of the animals we own.

Cow peas and field beans may not be important to you, and although we sow these crops in just a few rows, they are very important to us because they take care of the soil fertility and we also get very good nutritious food out from them. So they are important to us even though they are grown in small quantities. Now I will explain about the multiple uses of crops like red gram. We use the pulse for *dhal*, a curry that we eat with our bread and rice. We use the stalks of red gram for fuel wood and for thatching. This crop is very important to us; it is useful to us in a number of ways.

In the *rabi* (winter) season, we also grow a range of crops. We grow mustard with wheat for pest control because some insects that attack wheat will be attracted to mustard, and in this way pests will be controlled.

Foxtail millet is the first crop of the season in our area. When we don't have anything to eat in our homes, this is the first crop that will meet our hunger needs because most of the things stored from the earlier season will have been used up.

When we grow crops, we also keep in mind the fodder requirements of the animals we own. That is the reason we grow some varieties that will give more fodder for our animals.

One agricultural practice in our area is this: after harvesting red gram, the farmers plow back the land, so that whatever leaf-fall there is from the red gram will immediately go back to the soil. We are conscious of whatever we extract from the soil and we try to give back the same amount of things that we are extracting from the soil. This is very important to us.

The more crops we grow, the more the load will be evenly spread on us for harvesting them. More than that, we will also get more employment. The greater the diversity of crops, the more harvesting there is for different crops at different times; people in the village will get more employment when there is more diversity.

Women in our area do not prefer mono-cropping. The greater the diversity, the fewer the grains of each crop, so the women won't want to sell this small quantity of grain in the market. Neither will the men bother because of the small quantity; they will think that "even if I take this to the market, what is it that I am getting?" When you see each crop individually, it will be very small, but when we compare the grain production for all of them, there will be more grain in total. If we have a range of different crops in our homes, then whenever we feel hungry, we can consume them. With a single crop, we may or may not get a good yield. If the crop fails, we will starve for most of the year. You may think that if you get good crop, you may purchase some of the grains of different crops to eat, but even if you can get it in the market, poor women will definitely not buy so many different crops. They would rather spend the money on other things than food. If we have grains in our own homes, the satisfaction is different than when we buy it from the market. Even if you want to eat, you may not have the money, and even buying from the market, we will eat less and the satisfaction will not be there. If we grow a range of crops and have the different grains in our homes, then whenever children ask, we can cook different recipes from the different grains and provide them with nutritious food at the same time, which is not possible when we grow a single crop.

Our food, our knowledge, and whatever we are doing should not be a threat to diversity, but should enhance diversity. The types of food we eat now should also help in increasing diversity.

Women organized a biodiversity festival (called a *jatra*). Farmers from 75 villages attended this *jatra*. Using all local materials, there were exhibits of different traditional landraces and how they were used—which part of the plant is used for what purpose, like thatching, etc. Many farmers were inspired by this and have collected nearly 72 traditional landraces. They are extending all these seeds in 75 villages. Now they can crop at least 2000 acres of land with these 72 traditional landraces. After seeing this biodiversity festival, many farmers left the area understanding the importance and uses of the different crops. They are coming forward to cultivate the landraces, and in each village 20 farmers are cultivating these 72 different landraces.

Whatever inputs we are using for farming, the resources should be available locally and the farmer should not depend on any external resources. We want to use our own products; we want to use some of the green-leaf manuring crops. We give a lot of importance to soil fertility management. Whatever variety you may grow, unless the soil is fertile, we cannot achieve anything; we cannot achieve the potential yield even though the genetic potential may be there. So soil fertility is one of the most important things we are trying to address.

Our way of looking at the productivity of a farm is different. We generally don't look at yield only or yield per unit of land only or only general yield. There are many things we get from the farm, like uncultivated greens, medicinal plants, vegetables, fodder. So if you monitor all these things, they will be more than what you would get from a single crop. Everything is equally important in this whole farming system, so we look at different things in farming and not at a single thing.

Experiences Growing a Modern Rice Cultivar

Raksya Begam

Woman farmer from Bangladesh

Abstract

A farmer from Bangladesh describes her experiences growing a modern rice variety.

I'm from Bangladesh and my name is Rabia. I am here to talk about our experiences. The scientists told us, the farmers, that you can take a variety and plant it in your fields and you will get plenty—20 mounds of rice per acre. We were very simple; we believed it and were very happy to hear the news. We actually planted this variety. It was a dwarf variety, and the kind of straw we got from these plants was the type that if there was rain then all the straw got rotten and was no good for fodder for livestock, not even as fodder for the scavenger chicken. Although the straw mixed with cow dung created many insects, which were useful for chickens to eat. We also had to use pesticides and fertilizers and soon the whole land became hard like rock.

Previously we used to cultivate the local rice varieties of *Aaush* and *Aamon*. The straw of these varieties was long—taller—and was very good for fodder. It ensured that we could keep livestock and poultry.

Now, the scientists have always made claims. They showed us the profit—what we will get from the production of their varieties—but they never actually calculated the losses, the other losses that the farmers have to pay the cost for. Now we, the farmers, have realized these other costs. The situation right now is that the soil has become just like rock and the fertility is not the same as it was before. Now it also requires a lot of money to cultivate paddy or to remain in agriculture and the returns to the farmers are very poor.

Previously, the kind of variety we used to cultivate was tastier, compared to the modern varieties. It was also not a source of disease: it did not contain any pesticide or pesticide residues. After consuming these new rice varieties, we are now suffering from many diseases, so there are health problems along with the other problems. There are health problems in the livestock and poultry also, so the management of livestock and poultry is more difficult now.

On the other hand, uncultivated food is not available any more, at least it has really become scarce. But the scientists never calculated this serious cost to the farmers. So we farmers have now realized that we have had to pay too much for these new varieties and it is time to realize that we need to get away from them.

The older varieties had many other uses. We could use them as sources of energy and also as a kind of organic fertilizer. The dwarf—or modern—variety is not useful as the older varieties.

There is a proverb in Bengal, "Don't go to the field in the east." This is a local saying, which means, "Don't go to a place where you will hear bad information; it looks like the sun but it is not the sun." Now we realize that to the scientists, the farmers were not their objective—their main focus was not really to serve the interests of the farmers.

Is There an Imminent Crisis in Agriculture?

Abu Taher Rahamani
Farmer from Bangladesh

Abstract

A farmer from Bangladesh, with 22 years of experience, predicts an imminent crisis in agriculture.

I have been practicing modern agriculture for quite a long time and received the Presidential Award twice. I am here to share some of my experiences with the different varieties, especially the modern varieties, that I have planted on my own farmland. In terms of the productivity of a single crop, I have been able to demonstrate that some of the varieties performed well, but economically, I did not gain. In my 22 years as a farmer planting modern varieties, one thing I would like to say is that we are heading for an imminent crisis in agriculture. And we need the collaboration of the government and the scientists with the farmers. As scientists have noticed, the organic matter is very low, now it is 0.50 (the lowest) and 1.63 (the highest). This is the range in one area. We can talk about plant breeding or talk about the introduction of modern varieties, but unless we take care of the problems of organic matter in the soil, we will not be able to resolve the crisis in agriculture.

On my farmland, I am trying to make available more organic matter from my farm and I am also reducing the use of pesticides. Despite the fact that many people are aware of the dangers of pesticides, the use of pesticides is increasing, partly because of the companies' aggressive marketing techniques. Farmers are sometimes confused with this type of aggressive marketing and eventually they pay the cost of using pesticides. In my experience and from the literature available to me, none of the pesticides I am familiar with can reduce the attack to 50% or 60%. In contrast, partly from my own experience, from my own practice, and at the same time from some of the training I got for integrated pest management (IPM), I have been able to reduce the attack of pests by 80%–90%.

At the same time, seed is a very vital issue. You have to have good-quality, healthy seeds for the farmers. So this is a very sensitive area for the farmers. You have to have good-quality seeds for the experiments that we are trying.

And now there is more promotion of hybrid seeds around the world. They say that the hybrid cannot contribute to the interests of the farmer because they cannot keep the seeds. The farmers will not know the characteristics of the seeds the way they know the traditional varieties. So eventually it cannot be good for the welfare of the farming community.¹

My general feeling about the technology is that when you promote a technology, it is very important to understand the nature of the technology, whose interests it is serving, and how it is good for the farmer, or for that matter, who the constituencies of the technology are. Unless you know very clearly about that, then eventually the technologies will not be very fruitful.

When we decide about technology, certain characteristics are very important. One is that it should not be costly or it should be at least within the reasonable reach of farmers. Second, it should be verified by scientific procedures and by an indication that it can perform as they are claiming it is going to perform. Third, it should be gainful to the farmer—the recipient who is receiving it. It should be sustainable and also should be used by a large number of farmers.

So I appeal to the scientists to note what I have said. I hope you will take it as coming from the farmers and that you will take interest in these issues.

1. *Translator's comment:* He (the farmer) is emphasizing the question of whether the farmers can really keep these seeds in the household or if they can have any control over the seed system.

Acronyms

ACAP	Annapurna Conservation Area Project	HYV	high-yielding variety
AICSIP	All India Coordinated Sorghum Improvement Project	INGO	international nongovernmental organization
BAU	Birsa Agricultural University	IARC	international agricultural research center
BBE	<i>Beej Bachao Andolan</i> (Save Seed Movement)	IARI	Indian Agricultural Research Institute
BCJ	Brahmin/Chhetri/Jogi (ethnicity category for LI-BIRD research)	ICAR	Indian Council of Agricultural Research
BLB	bacterial leaf blight	ICARDA	International Center for Agricultural Research in the Dry Areas
CAZS	Centre for Arid Zone Studies	ICIMOD	International Centre for Integrated Mountain Development
CBD	Convention on Bio-Diversity	ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
CBDC	Community-Based Biodiversity Development and Conservation	IDP	intensive data plot
CBDC-ITP	CBDC International Technical Programme	IDRC	International Development Research Centre
CBO	community-based organization	IGAU	Indira Gandhi Agricultural University
CBR	community biodiversity register	INGO	international nongovernmental organization
CC	CONSERVE cross	INTACH	Indian National Trust for Art and Cultural Heritage
CCI	conventional crop improvement	IPGRI	International Plant Genetic Resources Institute
CFFT	coordinated farmers' field trial	IRD	informal research and development
CGIAR	Consultative Group on International Agricultural Research	IRRI	International Rice Research Institute
CIAT	Centro Internacional de Agricultura Tropical	ITDG	Intermediate Technology Development Group
CIMMYT	Centro Internacional de Mejoramiento de Maíz y Trigo / International Maize and Wheat Improvement Center	JPP	Jajarkot Permaculture Programme
CONSERVE	Community-Based Native Seeds Research Center	KDS	Kami/Damai/Sarki (ethnicity category for LI-BIRD research)
CPB	conventional plant breeding	KRIBHCO	Krishak Bharati Co-operative
CPR	common property resources	KRIBP	Indo-British Rainfed Farming Project
CRRI	Central Rice Research Institute	KVK	Krishi Vigyan Kendra
CVSRAFT	Central Visayas State College of Agriculture, Forestry and Technology	LARC	Lumle Agricultural Research Centre
DDS	Deccan Development Society	LI-BIRD	Local Initiatives for Biodiversity Research and Development
DFID	Department of International Development	M&E	monitoring and evaluation
DUS	distinctive, uniform, and stability	MAFFM	Ministry of Agriculture, Fisheries, Forests and Meteorology
FAMPAR	farmer-managed participatory research	MNC/TNC	multinational/transnational corporation
FAT	farmers' acceptance test	MSSRF	M.S. Swaminathan Research Foundation
FFT	farmer field trial	MV	modern variety
FGD	focus-group discussion	NARC	Nepal Agricultural Research Council
FOCUS	Focus Humanitarian Assistance	NARS	national agricultural research system/s
FPB	farmer participatory breeding	NGO	nongovernmental organization
FSR	farming systems research	NMRP	National Maize Research Programme
GAU	Gujarat Agricultural University	NRCS	National Research Centre for Sorghum
GMN	Gurung/Magar/Newar (ethnicity category for LI-BIRD research)	NRRP	National Rice Research Programme
GRAIN	Genetic Resource Action International	NSI	national systems of innovation
HH	household	OPV	open-pollinated variety
HLQ	household-level questionnaire		
HPPS	high-potential production system		

OST	on-station trial	SRISTA	Society for Research and Initiatives for Sustainable Technologies and Institutions
PAU	Punjab Agricultural University		
PCI	participatory crop improvement	TIP	Taro Improvement Project
PGR	plant genetic resources	TLB	taro leaf blight
PGRE	plant genetic resource enhancement	TRIPs	trade-related intellectual property rights
PHILRICE	Philippine Rice Research Institute	TWN	Third World Network
PPB	participatory plant breeding	UBINIG	Unnayan Bikalper Niti Nirdharoni Gobeshana (Bengali, Bangladesh)
PR	Punjab rice	UNCTAD	United Nations Conference on Trade and Development
PRA	participatory rural appraisal	UPLB	University of the Philippines—Los Baños
PRGA	Participatory Research and Gender Analysis (CGIAR systemwide program)	UPOV	International Convention for the Protection of New Varieties of Plants
PTD	participatory technology development	USP	University of the South Pacific
PVP	plant-variety protection	VDC	village development committee
PVS	participatory varietal selection	VRRC	Variety Release and Registration Committee
R&D	research and development	UD	Using Diversity Network
RD	recommendation domain	WTO	World Trade Organisation
RRA	rapid rural appraisal	WARDA	West Africa Rice Development Association
RRS	regional research station		
SADC	Southern African Development Community		
SANFEC	South Asia Network for Food, Ecology and Culture		
SEARICE	Southeast Asia Regional Institute for Community Education		

Participants

Bangladesh

Raksha Begam

UBINIG
Bangladesh

Obaidul Islam

PGRS
Bari, Bangladesh
iobaidul@hotmail.com

Farhad Mazhar

UBINIG
Dhaka, Bangladesh

Sham Sun Nahar

UBINIG
Vill: Bihropur, Deldur
Dist: Tangail, Bangladesh
ubinig@eitechao.net
880-3-813065

Abu Taher Rahamani

Naya Kisi Farmer, UBINIG
Vill -Purba Bara Bheola,
P.O. Sikder Para
P.S. Chakaria, Dist.-COXBAZER
Bangladesh
ubinig@eitechao.net
880-3-813065

Canada

Daniel Buckles

International Development Research Centre (IDRC)
P.O. Box 8500
Ottawa Ontario, Canada, K1G 3H9
dbuckles@idrc.ca
1-613-567-7749

Brian Davy

International Development Research Centre (IDRC)
P.O. Box 8500
Ottawa Ontario, Canada, K1G 3H9
bdavy@idrc.ca
1-613-567-7749

Colombia

Nadine Saad

Participatory Research and Gender Analysis (PRGA)
Centro Internacional de Agricultura Tropical (CIAT)
Cali, Colombia
n.saad@cgiar.org

Germany

Kirsten Vom Brocke

University of Hohenheim
Institute 350/3
70539 Stuttgart, Germany
Brocke@pz.uni-hohenheim.de
49-711-459 2343

India

V. Arunachalam

M.S. Swaminathan Research foundation
7-5A-2/2 Gopalakrishna Street
Ramaroa Pet
Kakinada, A.P., India
91-44-2351319

Elizabeth Fajber

International Development Research Centre
(IDRC)
208 Jor Bagh
New Delhi-110003, India
efajber@idrc.org.in
91-11-462-2707

D. K. Ganguli

Birsha Agricultural University (BAU)
Ranchi, India
bau@bitsmart.com

B. T. S. Gowda

Geneticist
University of Agricultural Sciences (UAS)
GKVK,
Bangalore, India
91-80-3332387

S. N. Goyal

Senior Maize Breeder and Head
Main Maize Research Station
Gujarat Agricultural University
P. O. Box # 45
Godhara 389001 (Gujarat), India

B. H. Halaswamy

Project coordination cell
AICRP on Small Millets
University of Agricultural Sciences
Bangalore, India, 560065
btsg@uasbir.nic.in
91-80-3332387

Vijay Jadhari

Beej Bachao Andolan (Save Seed Movement)
P. O. Nagni, UP, India

Arun Kumar

Birsha Agricultural University (BAU)
Ranchi, India
bau@bitsmart.com
91-651-455625

Ravi Kumar

Plant Breeding and Genetics
Birsa Agricultural University
Kanke, Ranchi- 834006, India
kribhco-cirfp@bitsmart.com
91-0651-230904

P. N. Mathur

International Plant Genetic Resources Institute
(IPGRI)
New Delhi
p.mathur@cgiar.org

M. Narsamma

DECCAN Development Society
A-6, Meera Appts
Basheerbagh, Hyderabad-29, India
ddshyd@hd1.vsnl.net.in
91-40-322 2260/ 322 2867

S. C. Prasad

Consultant
Krishak Bharati Co-operative (KRIBCHO)
282, Pani Jahaj Kothi, Kanke Road
Ranchi-834008, India
kribcho_eirfp@bitsmart.com
91-651-230904

Vanaja Ramprasad

Green Foundation
Bangalore, India
van@vsnl.com

B. S. Rana

NRCS
Rajendranagar
Hyderabad-500 030.A.P., India
nrcshyd@ap.nic.in
91-40-4016378

B. Suresh Reddy

Deccan Development Society
A-6, Meera Appts
Basheerbagh, Hyderabad-29, India
ddshyd@hd1.vsnl.net.in
91-40-3222260/ 3222867

R. K. Sahu

Senior Rice Breeder
I. G. Agricultural University
Krishak Nagar, Raipur MP 492012, India
ramkumarsahu@yahoo.com
91-771-424532

Sammamma

Deccan Development Society
A-6, Meera Appts
Basheerbagh, Hyderabad-29, India
ddshyd@hd1.vsnl.net.in
91-40-322 2260/ 322 2867

A. Seetharam

Project Coordinator
GKVK Campus
University of Agricultural Sciences
Bangalore 560068, India
asram@uas.blr.nic.in
91-80-3332387

Shibu M. P.

GREEN Foundation
Bangalore, India

Abha Singh

International Rice Research Institute (IRRI)
L/31 neel Vihar Colony
P. O. Ram Nagar Colony, Faizabad (UP)
Pin code. 224001, India
singh_abha@hotmail.com

Joginder Singh

Punjab Agricultural University
India
91-161-400945

R. K. Singh

Central Rainfed Upland Rice Research Station
(CRURRS)
P. O. Box 48
Hazaribag, Pin-825301, Bihar, India
91-6546-23697

R. K. P. Singh

Department of Agricultural Economics
Rajendra Agricultural University
Rau, Pusa, Samastipur, India (849125)
rau@bin.nic.in
91-6274-74226

Vir Singh

Dept. of Animal Science
College of Agriculture
GB Pant University of Agriculture & Technology
Pantnagar - 263145
Tehri Garhwal, India
91-5944-33611

P. S. Sodhi

Krishak Bharati Co-operative (KRIBCHO)
63, Sardarpura, Meera Hotel Lane
Udaipur 313004, India
grtutr@bppl.net.in
91-294-523412

Ravi Shankar Thupalli

Attn: Dr. T. Ravishankar
M.S. Swaminathan Research Foundation
7-5A-2/2 Gopalakrishna Street
Ramaroa Pet, Kakinada, A.P., India
rthupalli@hotmail.com
91-884-380095

V. S. Tomar

Krishak Bharati Co-operative
GVT-KRIBCHO
48,-49 Red Rose House, Nehru Place
New Delhi, India
vst64@hotmail.com
91-11-6213412

Sundaram Verma

Society for Research and Initiatives for Sustainable
Technologies and Institutions (SRISTI)
P.O.- Danta
(Dhawayali Keth), Dist- Sikar (Rajasthan), India
Pin-332702
91-1577-70221/ 70074

Yesu

DECCAN Development Society
Hydrabad, India

Indonesia**Caecilia Afra Widyastuti**

International Potato Center (CIP)
Kebun Percobaan Muara
Raya Ciapus, Bogor 16610
Indonesia
c.widyastuti@cgiar.org
62-251-316264/ 333667

Italy**Pablo Eyzaguirre**

International Plant Genetic Resources Institute
(IPGRI)
Rome, Italy
p.eyzaguirre@cgiar.org

Jordan**Omar Kafawin**

Department of Agricultural Research &
Environment
University of Jordan
Jordon
kafawin@agr.ju.edu.jo
962-6-5355 (ext. 2695)

Nepal**K. Adhikari**

NRMP
Rampur, Nepal

N. P. Adhikari

NRMP
Nepal Agricultural Research Council (NARC)
Hardinath, Nepal

Surya Prasad Adhikari

Insitu
Begnas, Kaski, Nepal

Nem Bahadur

Jajarkot Permaculture Programme (JPP)
Nepalgunj, Nepal

Lal Kumari Basnet

LI-BIRD Farmer
Gulmi, Nepal

M. R. Bhatta

Nepal Agricultural Research Council (NARC)
National Wheat Research Program
Siddharthanagar, Bhairahawa, Nepal
rwp@nwrp.mos.com.np
977-1-071-21905

Sam Bickersteth

Department of International Development
(DFID)
Kathmandu, Nepal
s.bickersteth@dfid.gov.uk

S. D. Biggs

Nepal Agricultural Research Council (NARC)
Khumaltar, Nepal
s.biggs@wlink.com.np

Christina Chan

Participatory Research and Gender Analysis
(PRGA)
Centro Internacional de Agricultura Tropical
(CIAT)
Kathmandu, Nepal
cchan@mos.com.np

Pashupati Chaudhary

Local Initiatives for Biodiversity Research and
Development (LI-BIRD)
P. O. Box 324
Pokhara, Nepal
libird@mos.com.np
977-61-26834

G. Ortiz-Ferrara

Centro Internacional de Mejoramiento de Maíz
y Trigo (CIMMYT)
P. O. Box 5186
Kathmandu, Nepal
oferrara@mos.com.np
977-1-419352

Devendra Gauchan

Nepal Agricultural Research Council (NARC)
P. O. Box# 5459
KTM, Nepal
dgauchan@hotmail.com
977-1-528002/ 540817 (Fax: 977-1-521197)

Resham Gautam

Local Initiatives for Biodiversity Research and
Development (LI-BIRD)
P. O. Box 324
Pokhara, Nepal
rglibird@mos.com.np
977-61-26834

Yamuna Ghale

ActionAid
P. O. Box 6257, Nepal
yamunag@actionaidnepal.org

Barun Gurung

Participatory Research and Gender Analysis
(PRGA)
Centro Internacional de Agricultura Tropical
(CIAT)
Kathmandu, Nepal
b.gurung@cgiar.org

Peter Hobbs

Centro Internacional de Mejoramiento de Maíz
y Trigo (CIAT)
Kathmandu, Nepal
p.hobbs@cgiar.org

D. Joshy

Nepal Agricultural Research Council (NARC)
Khumaltar, Nepal

K. D. Joshi

Local Initiatives for Biodiversity Research and
Development (LI-BIRD)
P. O. Box 324, Pokhara, Nepal
libird@mos.com.np

Scott Justice

Centro Internacional de Mejoramiento de Maíz
y Trigo (CIMMYT)
Kathmandu, Nepal
justice@wlink.com.np

S. P. Khatriwada

NRRP
Nepal Agricultural Research Council (NARC)
Hardinath, Nepal

Keshab B. Koirala

Maize Breeder
National Maize Research Program
Rampur, Chitwan, Nepal
977-56-29301

Hira Kaji Manandhar

Nepal Agricultural Research Council (NARC)
Khumaltar, Nepal
hira@hira.wlink.com.np

B. Mishra

NORP
Nepal Agricultural Research Council (NARC)
ORP, Nawalparasi, Nepal

Ashok Mudwari

Nepal Agricultural Research Council (NARC)
ABD, Khumaltar, Nepal
iscc-nepal2@wlink.com.np

R. K. Neupane

NGLRP
Rampur, Nepal

D. S. Pathic

Nepal Agricultural Research Council (NARC)
Khumaltar, Nepal

T. P. Pokharel

National Wheat Development Program
Nepal Agricultural Research Council (NARC)
Bhairahawa, Nepal
rwp@nwrp.mos.com.np
977-1-071-20226/ 22196

Chandra Kanta Poudel

LI-BIRD Farmer
Dhikurpokhari, Pokhara, Nepal

Diwaker Poudel

Local Initiatives for Biodiversity Research and
Development (LI-BIRD)
P O Box. 324, Pokhara, Nepal
libird@mos.com.np
977-61-26834

Bhola Pradhan

Nepal Agricultural Research Council (NARC)
Khumaltar, Nepal

R. Pradhan

Jajarkot Permaculture Programme (JPP)
Nepalgunj, Nepal

Dil Bahadur Rai

Jana Sewa Samaj-Nepal
Jalapa VDC, Khotang, Nepal

Prati Man Rai

Jana Sewa Samaj-Nepal
Jalapa VDC, Khotang, Nepal

R. B. Rana

Local Initiatives for Biodiversity Research and Development (LI-BIRD)
P. O. Box. 324
Pokhara, Nepal
rbliard@mos.com.np
977-61-26834

Joel Ransom

CIMMYT
P. O. Box 5186
Kathmandu, Nepal
jransom@mos.com.np

K. B. Regmi

Jajarkot Permaculture Programme (JPP)
Nepalgunj, Nepal

Deepak K. Rijal

Local Initiatives for Biodiversity Research and Development (LI-BIRD)
P. O. Box. 324, Pokhara, Nepal
drliard@mos.com.np
977-61-26834

Ram P. Sah

ARS Lumle
Nepal Agricultural Research Council (NARC)
Lumle, Pokhara, Nepal

R. P. Sapkota

ABD
Nepal Agricultural Research Council (NARC)
Khumaltar, Nepal

D. P. Sherchan

Local Initiatives for Biodiversity Research and Development (LI-BIRD)
P O Box. 324, Pokhara, Nepal
dslbird@mos.com.np
977-61-26834

P. K. Shrestha

Local Initiatives for Biodiversity Research and Development (LI-BIRD)
P. O. Box. 324, Pokhara, Nepal
psliard@mos.com.np
977-61-26834

Bhuwon R. Sthapit

IPGRI-APO (Nepal outpost)
3/202 Buddha Marg
Nadipur Patan, Kaski district
Pokhara-3, Nepal
b.sthapit@cgiar.org
977-61-21108

A. Subedi

Local Initiatives for Biodiversity Research and Development (LI-BIRD)
P. O. Box 324, Pokhara, Nepal
asliard@mos.com.np
977-61-26834

M. Subedi

Local Initiatives for Biodiversity Research and Development (LI-BIRD)
P. O. Box 324, Pokhara, Nepal
msliard@mos.com.np
977-61-26834

Sharmila Sunuwar

Local Initiatives for Biodiversity Research and Development (LI-BIRD)
P. O. Box 324, Pokhara, Nepal
liard@mos.com.np
977-61-26834

Dhruva B. Thapa

ABD
Nepal Agricultural Research Council (NARC)
Khumaltar, Nepal

T. P. Tiwari

Agricultural Research Station
Pakhribas, Dhankuta, Nepal
arsp@ccsl.com.np
977-26-20345

M. P. Upadhyay

Nepal Agricultural Research Council (NARC)
Agricultural Botany Division, PO Box# 1134
Kathmandu, Nepal
iscc-nepal2@wlink.com.np
977-1-521197

Bishnu Raj Upreti

Wageningen Agricultural University,
The Netherlands
P. O. Box 12709, Kathmandu, Nepal
bupreti@unlimit.com

Mahanaryan Yadav

Insitu Bara
Kachorwa VDC, Ward No 5, Nepal

Norway

Gry Synnevag

Noragric
P.B. 5001
N-1432 AS- NLH, Norway
gry.synnevag@noragric.nlh.no
47-6494-0760

Netherlands

Louise Sperling

Participatory Research and Gender Analysis
(PRGA)
Centro Internacional de Agricultura Tropical
(CIAT)
Netherlands
l.sperling@cgiar.org

Pakistan

Iqbal Kermali

FOCUS Humanitarian Assistance
House 13, Street 33, Sector F6/1 Islamabad
Pakistan
iqkermali@aol.com
92-51-201976

Philippines

Gilda T. Ginogaling

Community-Based Native Seeds Research
Center, Inc (Conserve)
Poblacion, Pres. Roxas, Corabato, Philippines
63-6428-81517

Karen McAllister

Social Sciences Division
International Rice Research Institute (IRRI)
Makati city, Philippines
k.mcallister@cgiar.org

Thelma R. Paris

International Rice Research Institute (IRRI)
Makati city, Philippines
t.paris@cgiar.org

Hidelisa De Ramos

SEARICE
Unit 331 Eagle Court Condominium
26 Matalino St. Piliman
Quezon City, Philippines
searice@philonline.com.ph
63-2-922-6710

Samoa

Danny Hunter

University of the South Pacific (USP)
Samoa
hunter_dn@samoa.usp.ac.fj

UK

D. S. Virk

Department of International Development (DFID)
Plant Sciences Research Programme
Centre for Arid Zone Studies (CAZS)
University of Wales
Bangor, Gwynedd, LL57 2UW, UK
d.s.virk@bangor.ac.uk
44-1248-371533

John Witcombe

Department of International Development (DFID)
Plant Sciences Research Programme
Centre for Arid Zone Studies (CAZS)
University of Wales
Bangor, Gwynedd LL57 2UW, UK
j.r.witcombe@bangor.ac.uk
44-1248-371533

Vietnam

Nguyen Ngoc De

Rice Research Department
Mekong Delta Farming System R&D Institute
CanTho University
CanTho, Vietnam
nnde@ctu.edu.vn
84-71-831270/ 831251



International Symposium on:
Participatory Plant Breeding
and
Participatory Plant Genetic Resource Enhancement
An Exchange of Experiences from South and South East Asia

Venue: Pokhara, Nepal

Date: May 1–5, 2000

Co-hosted by:

The System-wide Program on Participatory Research and Gender Analysis (PRGA)
The International Plant Genetic Resources Institute (IPGRI)
The International Development Research Center (IDRC)
The Department for International Development (DFID)
Using Diversity Network (UD)
South Asia Network for Food, Ecology and Culture (SANFEC)
Deccan Development Society (DDS)
Local Initiatives for Biodiversity Research and Development (LiBird)
The Eastern Himalayan Network

Sunday, April 30

17:00-17:30	Registration
18:30-19:30	Welcome Cocktail
19:30	Dinner

Monday, May 1

07.00-08.00	Breakfast
-------------	-----------

Opening Plenary

08:30-08:45	Welcome Address <i>Mr. Dhruva Joshi, Executive Director, NARC</i>
08:45-09:15	Objectives and Organization of Seminar <i>L. Sperling, PGRA</i>
09:15-10:30	Presentation of Participants (Farmers, Scientists, and Development Professionals)
10:30-11:00	Tea Break

Session 1: Overview Papers — Moderator: D. Buckles, IDRC

11:10-11:40	Participatory Plant Breeding: A Framework for Analyzing Diverse Approaches <i>L. Sperling, PRGA</i>
11:40-12:10	Participatory Varietal Selection in High-Potential Production Systems <i>J. Witcombe, DFID, Plant Sciences Program, University of Wales</i>

Program

- 12:10-12:40 Enhancing Biodiversity and Production through Participatory Plant Breeding
B. Sthapit, IPGRI; D. Jarvis/IPGRI; P. Ezyguirre/IPGRI; K. Joshi/LIBIRD; R. Rana/LIBIRD
- 12:40-13:10 Discussion
- 13:10-14:10 Lunch

Session 2: The Context of Participatory Plant Breeding — Moderator: Bhuwon Sthapit, IPGRI

- 14:20-14:40 Cultivating the Landscape: Enhancing the Context for Plant Improvement
D. Buckles, IDRC and F. Mazhar, UBINIG

Tuesday, May 2

07:00-08:00 Breakfast

Session 4: Starting from Farmers' Knowledge When Planning PBB/Participatory PGR Programs

08:20 - 08:30 Opening remarks and organization: Vanaja Ramprasad, Green Foundation

Session 4A	Session 4B	Session 4C
Moderator: Stephen Biggs	Moderator: Peter Hobbs	Moderator: KPS Chandel
08:40-09:00 Caecilia Afra Widyastuti, CIP-ESEAP Region, "Using farmer knowledge for participatory sweet-potato variety selection in Garut, West Java, Indonesia"	08:40-09:00 T. Paris, IRRI, Philippines, "Lis- tening to farmers' perceptions: ex- periences and lessons learned"	08:40-09:00 Kirsten vom Brocke, ICRISAT, Ger- many, "Opportunities and con- straints for participatory breeding: farmer's seed management strate- gies in Rajasthan and their effects on pearl millet populations "
09:00-09:20 R.B. Rana, LI-BIRD, "Understand- ing agroecological domains: a key to a successful participatory plant breeding program"	09:00-09:20	09:00-09:20 P. Chaudary, LI-BIRD, Nepal, "Strength of farmers' knowledge and participation in crop improve- ment and managing agrobiodiversity on-farm"
09:20-09:50 Discussion Period	09:20-09:50 Discussion Period	09:20-09:50 Discussion Period

10:00-10:30 Tea Break

Session 5: Farmers Speak for Themselves about Plant Breeding and PGR Management

10:40-10:50 Opening remarks and organization. Moderator: F. Mazhar, UBINIG

10:50-12:00 Need for Advocacy for Effective Participatory Crop Improvement and Plant Genetic Resource Enhancement: Case Studies on Rice-Breeding Processes from Khotang and Jajarkot Districts, Nepal

Y. Ghale, Action Aid, Nepal

Farmers from Action Aid and UBINIG speak for themselves about plant breeding and PGR Management

12:00-12:30 Discussion period

12:40-13:40 Lunch

Session 6: Focus on Methods on PPB: Breeding Concerns

13:50-14:00 Opening remarks and organization: V. Arunachalam

Session 6A	Session 6B	Session 6C
Moderator: Bhuwon Sthapit	Moderator: Dr. RP Sah	Moderator: Dr. DN Sah
14:10-14:30 D. Hunter, University of the South Pacific, W. Samoa, "Beyond taro leaf blight: a participatory approach for plant breeding and selection for taro improvement in Samoa"	14:10-14:30 R. Kumar, Birsa Agricultural University, India "Participatory plant breeding in rice in eastern India"	14:10-14:30 J. Wiltcombe, DFID, "Towards a practical participatory plant-breeding strategy in predominantly self-pollinated crops"
14:30-14:50 A. Kumar, Birsa Agricultural University, India "Participatory plant breeding in maize for the Chhotanagpur plateau of eastern India"	14:30-14:50 SN Goyal, Gujarat Agricultural University, India "Participatory crop improvement in maize in Gujarat, India"	14:30-14:50 TP Tiwari, Nepal, "Participatory crop improvement for intercropped maize in bari terraces with trees"
14:50-15:10 Discussion Period	14:50-15:10 Discussion Period	14:50-15:10 Discussion Period

15:20-15:50 Tea Break

Session 7: Skill Building Opportunities (1)

16:00-16:10 Opening remarks and organization: Louise Sperling, PRGA

Skill Building Workshops			
16:20-18:35 Basic PRA Skills and Introduction	16:20-18:35 Gender Analysis and Practice in PPB/PGR	16:20-18:35 Guidelines for developing PPB programs	16:20-18:35 Assessing Impact in PPB programs
Facilitator: PK Shrestha	Facilitator: Thelma Paris	Facilitator: Louise Sperling	Facilitator: Nadine Saad

19:00 Dinner

Wednesday, May 3

07:00-08:00 Breakfast

Session 8: Lessons Learned, Evaluation and Impact in PPB

08:30-08:40 Opening remarks and organization: A. Sudebi, LI-BIRD

Session 8A	Session 8B	Session 8C
Moderator: D. Hunter	Moderator: Percy Sajise	Moderator: Dr. Ortiz-Ferrara
08:50-09:10	08:50-09:10 RK Singh, IRRI, India, <i>"Participatory varietal selection: results and lessons learned from East India"</i>	08:50-09:10 J. Singh et al., India <i>"Equity issues in varietal dissemination through farmers' fairs in Punjab, India"</i>
9:10-9:30 BH Halaswamy, AICRP on Small Millets, <i>"Participatory varietal selection in finger millet"</i>	9:10-9:30 DS Virk, DFID, <i>"A holistic approach to participatory crop improvement in wheat"</i>	9:10-9:30 BS Rana et al., India <i>"Participatory varietal selection in rabi sorghum in India"</i>
9:30-9:50 KD Joshi, J. Witcombe, <i>"Participatory varietal selection, food security and varietal diversity in a high-potential production system in Nepal"</i>	9:30-9:50 SS Malhi, DFID, <i>"Participatory varietal selection in rice in the Punjab"</i>	9:30-9:50 KD Joshi et. al. LI-BIRD, Nepal <i>"Impact of PPB on landrace diversity: a case study for high-altitude rice in Nepal"</i>
9:50-10:10 Discussion Period	9:50-10:10 Discussion Period	9:50-10:10 Discussion Period
10:20-10:50	Tea Break	

Session 9: Focus on Methods in PPB: Social Science Tools for Understanding What End Users Need

11:00-11:10 Opening remarks and organization: Thelma Paris, IRRI

Session 9A	Session 9B
Moderator: Dr. S. Apparao	Moderator: Liz Fajber
11:20-11:40 M. Subedi, LI-BIRD, Nepal, "Role of farmers in setting breeding goals"	11:20-11:40 RK Singh, CRURRS, India, "Sensory evaluation of upland rice varieties with farmers: an experience in eastern India"
11:40-12:00 Mathur, IPGRI, India, "PPB in relation to genetic erosion monitoring"	11:40-12:00 PK Shrestha, LI-BIRD, Nepal, "Incorporation of users' perspective in farmer-led participatory plant breeding on maize: experiences from the western hills of Nepal"
12:00-12:40 LI-BIRD	12:00-12:20 RK Sahu, IRRI, India, "Understanding farmers' selection criteria for rice varieties: a case in Madhya Pradesh, India"
12:20 -12:40 Discussion Period	12:20 -12:40 Discussion Period

12:50-13:50 Lunch

Session 10: Developing New PPB/PGR Programs

14:00-14:10 Opening remarks and organization: V. Arunachalam, MSSRF

Session 10A	Session 10B
Moderator: Farhad Mazhar	Moderator: Daniel Buckles
14:20-14:40 Iqbal Kermali, FOCUS, Afghanistan, "Seed security in Badakshan, Afghanistan"	14:20-14:40 O. Kafawin, University of Jordan, Jordan, "Increasing the relevance of breeding to Small farmers: farmers participation and local knowledge in breeding barley for specific adaptation to Dry areas of Jordan"
14:40- 15:20 J. Ransom, J. Adhikari, CIMMYT, Nepal, "Involving farmers in the development process to improve adoption of varieties developed by national maize-breeding programs"	14:40- 15:00 MR Bhatta and G. Ortiz-Ferrara, CIMMYT, Nepal, "Present status of participatory plant breeding research on wheat at the national wheat research program of Nepal"
15:00-15:20 L. Sperling, PRGA, Holland, "Participatory plant breeding and property rights "	15:00-15:20 Discussion
15:00-15:20 Discussion	

15:30-16:00 Tea Break

Farmers Speak for themselves about plant breeding and PGR Management (II)

16:10-18:10 Nepali farmers speak for themselves. Moderator: KD Joshi, LiBird

Summary remarks (organizers) and planning for field trip

18:10-

Thursday, May 4: FIELD TRIP**Friday, May 5**07:00-08:00 *Breakfast*

08:30-09:30 Feedback from Field trip Moderator: DK Rijal

Session 12: Skill Building Opportunities (2)

Session 12: Skill Building Opportunities (2)			
09:40-12:40 Basic PRA Skills and Introduction	09:40-12:40 Gender Analysis and Practice in PPB/PGR	09:40-12:40 Guidelines for developing PPB Programs	09:40-12:40 Assessing Impact in PPB Programs
Facilitator: PK Shrestha	Facilitator: Thelma Paris	Facilitator: Louise Sperling	Facilitator: Nadine Saad

12:50-13:40 *Lunch***Session 13: Dialogue**

14:00-14:10 Opening and Rational for the Session. Moderator:

14:20-15:20 Interaction meetings between farmers, scientists, and development professionals

15:20-15:50 *Tea Break*

16:00-16:30 Interaction meetings between farmers, scientists, and development professionals

16:40-17:40 Conclusions from Interaction meetings

17:40-18:40 Closure, Reflections and Next Steps. Moderator: Organizing Committee

19:30 *Farewell Dinner*

