ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF AGRICULTURE
DEPARTMENT OF AGRICULTURE
AGRICULTURE SECTOR SUPPORT PROJECT
(ASIE/2005/17649)

DOA/ASSP/29/730 18th May 2009

PD (RNR-RC Bajo), Mahesh Ghimiray, Karma Lhendup, (CNR), Roger White

Subject: SRI Planning Workshop

Dear Colleagues

I attach the minutes of the meeting held at RNR-RC Bajo. Thank you for your participation in the meeting and preparation of the protocol. We have circulated the protocol under a separate letter

Yours sincerely

Ganesh Chettri
Project Director

Cc:

1. Director DOA
2. DAOs Sarpang, Tsirang, Dagana, Wangdue, Punakha, Chukha and Samtse

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Minutes of SRI Planning Workshop on 12th May 2009 at RNR-RC Bajo

Objectives:

- To review outcomes of research and field trials during 2008/9
- To plan activities on SRI for 2009/10
- To agree guidelines and reporting

Attendance – see attached register.

1. Welcome and Introduction (PD, RNR-RC)

The PD reported briefly on the RC's recent involvement with SRI that started about 2 years ago. He said that the RC was self educating itself about the approach and wanted to establish the facts at different altitudes. He welcomed the exchange of information to take place in the workshop.

2. Presentation by RC Bajo (Mahesh Ghimray)

Mahesh presented the results of the on-station trial last year. Yield achieved was 8.5 t/ha and the SRI method clearly out-performed conventional planting. The following advantages were noted:

- Earlier maturity (125 against 140 days)
- Less seed (2.5 kg against 20 kg)
- Lower water requirement
- Shochum infestation was less – reason uncertain.

Much of the benefit probably derived from lowering the shock to the seedlings while transplanting. Plans for the coming year include observation, collection of socio-economic data, production of seed and farmers' visits.

The main drawbacks were the higher labour requirement for weeding (twice at 15 and 30 days) and the difficulty of water control in the monsoon.

3. International Experience of SRI (Roger White)

Roger had been involved with SRI while at ICIMOD. He cited examples from the sub-continent where SRI had become very popular including Sri Lanka, India and Pakistan. Yields were generally much higher and there were other benefits including:

- Lower use of water (water use efficiency increased by 90% in Sri Lanka)
- Much higher straw yield especially important in Pakistan.
- Millers' preference as grains are larger and less broken

He emphasized that SRI is 'work in progress' and referred to the CIIFAD web site. He said there was a need for perseverance as initial results were sometimes less convincing. The recommendation was

therefore to start small and get the procedure right for the specific conditions. Thereafter international experience was that SRI method of rice production was adopted very quickly by farming communities – exponentially in some areas.

4. 3 years experience of SRI in Bhutan (Karma Lhendup – CNR)

Karma Lhendup, Lecturer at the College of Natural Resources (CNR) shared his experiences on SRI and his effort in creating awareness on this method to the agricultural trainees, farmers and extension agents for the past three years. Karma started work on SRI in 2006 in Eastern Bhutan where he was based at Sherubtse College. Follow-up work was carried out at Lobesa, both on-station (CNR farm) and in farmer's field for two consecutive years after his transfer to CNR. The last season under ASSP funding trials were carried out jointly with RC-Bajo. He reported a yield of 9.3 t/ha with 96 hills under SRI compared with 6.6 t/ha with 211 hills under conventional techniques.

Karma recounted how he came to know about this method from Prof. Norman Uphoff, while pursuing his Masters degrfee in Soil and Crop Sciences at Cornell University where Professor Norman was based.

Ganesh commended Karma on his efforts and said that DOA looked forward to more collaboration. He suggested the importance of looking at the following factors:

- Straw yield
- Sowing/planting time
- Varieties
- Organic SRI versus non-organic SRI
- SRI method versus conventional and farmer's method
- Nursery methods including trays
- Mechanized planting
- Post-harvest activities

Karma is managing the Bhutan web page at the CIIFAD web site.

5. Experience of DAOs/EAs in 2008/9

Punakha

SRI trial carried out in two plots in 2008 of 50 m square. Nursery planted June 10th, transplanted June 26th at 25 cm spacing, 2 weedings and harvested 13th October. Yield of SRI reported was 2,100 kg/acre, which is higher by 400 kg. Variety used was Bondey, local aromatic variety. Main problem faced was with water management. SRI trials in 2009 season planned in 7 geogs of 0.25 acre each. Suggested a protocol on SRI work to be made available at the earliest.

Wangdue

SRI trial carried out at two sites, Sijuana and Tekikha. Chumro variety at Sijuana and a local white variety at Tekikha. Nursery raised in the third week of June –considered too late. Seedlings transplanted at 12 days for local white variety and chumro at 18 days. 25 x 25 cm spacing used for chumro while 30 x 30 cm

for the local white variety. Hand weeding twice and water management applied. Chumro yield was 2423 kg/acre (fresh weight) with SRI method and with farmer's practice, 1,333 kg/acre (an increase of 1090 kg). The shochum problem was notably reduced. The other site with local variety failed due to late planting and long maturity,

Dagana

SRI trial carried out at one geog. Seedling transplanted in one terrace at 14 days 2/3 leaf stage at 25 x 25 cm. 1 hand weeding, no agro-chemicals. Comparative figures:

Item	Non SRI	SRI
Yield (kg/acre)	991	1350
Tillers (no)	6	17
Height (m)	1.04	1.25
Grains/panicle	123	150

Tsirang

SRI trial carried out at 2 locations with a local variety (Chotay Mousino) planted on 30th June at 25 by 25 cm spacing, hand weeded three times. No. of tillers ranged from 28 to 37 with SRI and 20 to 25 under conventional practices. One plot showed 1,350 kg/acre for SRI and 1,050 kg/acre for conventional method, an increase of 350 kg. The other plot at another location was a total failure. Reasons may be late transplanting, site and management.

6. Guidelines and plans for 2009/10

- Combination of young seedlings and late transplanting wrong – must transplant by 15th June in Punakah/Wangdue, slightly later in Tsirang and Dagana depending on altitudes.
- Keep to a few locations and do proper monitoring and record keeping
- Try both local and improved varieties but not aromatic.
- In Punakha/Wangdue valley perhaps compare high and low altitude.

The table below gives the provisional plans for 2009.

Table: Plans for 2009 SRI TRIALS

Dzongkhag/District	Gewog/Block	Nos. of locations
Punakha	Baap	2
	Chubu	1
	Guma	2
	Shengana	1
	Talo	1
	Tewang	1
	Toep	1
Wangdue	Bjena	1
	Rubesa	1
	Nisho	1
	Thedtsho	1
Dagana	Trashiding	1
	Tseza	3
	Kana	2
	Goshi	2
	Tsendegang	2
	Khebisa	1
	Tshangkha	2
Tsirang	Kikorthang	1
	Goseling	1
	Dunglagang	1

(Note: Please will other dzongkhags submit their final SRI plans)

5.0 Discussion and Summing Up (PD-ASSP)

1. There is a need for a field trial protocol as well as the extension leaflet prepared by Karma Lhendup. Mahesh and Karma to prepare the protocol by Friday, 15th.

2. Keep to limited locations and do them well. Some kind of compensation might be justified in extreme cases, but this should be on a case by case basis, and there should be no mention when identifying farmers (only consider at the end of the season)

3. Land preparation is very important to get an even surface to enable proper water control. There must be a means of draining off during heavy monsoon showers.

4. A full record of the process should be kept. Also the conventional techniques used by the farmer should be noted. These can then be adapted to SRI principles.

5. Farmers' field days should be held say twice in the season, but not elaborate affairs, no DSA, just an afternoon.

6. A field tour should be planned to dzongkhags and other sites around 1st October, and a review of the year's results and planning for 2010 should be held around December.

7. Any (minor) costs to launch this year's sites should be taken from advances held by dzongkhags but there should be no payment to the farmers who would be expected to provide all the labour.

SRI Meeting

RC Bajo

12 May, 2009

Sl.No	Name	Designation	Place
1	Mahesh Ghimiray	Principal RO	RC Bajo, Wangdue
2	Roger White	Advisor	DoL, Thimphu
3	Sangay Duba	PD	RC Bajo, Wangdue
4	Suraj Gurung	AEO	Ruepisa, Wangdue
5	Karma Chewang	ADAO	Wangdue
6	Tendu	AEO	Tsirang
7	Karma Lhendup	Lecturer	CNR, Lobesa
8	Harry Franks	Project Advisor, ASSP	DoA, Thimphu
9	Tandin Tshewang	ADAO	Punakha
10	Tshering Tobgyel	AEO	Chubu
11	Tshering Dema (F)	Jr. EO	Baap, Punakha
12	Suraj Khawas	AEO	Toewang, Punakha
13	GB Chettri	PD, ASSP	DoA, Thimphu
14	DB Galley	Fr. EO	Khebisa, Dagana