

## Report

### National Training Program for Rice Conservators Phase I held on 22<sup>nd</sup> and 23<sup>rd</sup> of June 2013

#### Proposal:

BACKGROUND: Most biopiracy patents are logically and legally untenable, as they systematically violate the patentability clauses of “novelty” and “prior public knowledge”. This scientific training effort is first of its kind and is a part of the national movement for local sovereignty over biodiversity. It upholds people’s fundamental rights to their resources and knowledge through Community Biodiversity Registers (CBRs). The necessity and value of CBRs are also pitted in the Biodiversity Act 2004, which requires that all components of biodiversity existing in a locality be documented and registered as a legitimate evidence of people’s knowledge and right to use local biodiversity. A special form of CBR which registers a significant part of indigenous agro biodiversity with its scientific characterization is essentially needed in different parts of the country. Normal CBR without scientific documentation often creates a huge deal of confusion which creates ways for MNC’s towards biopiracy. A workshop is therefore proposed to train conservators/ farmers to create database in form of a special Community Biodiversity Registers (CBRs) for rice varieties in order to prevent biopiracy of the heirloom varieties.

AIM: To create a farmer database of their rice varieties, in order to prevent biopiracy of the heirloom varieties.

#### OBJECTIVES:

- 1) To enable farmer-conservators to assess and document 52 characteristic descriptors of rice varieties.
- 2) To train farmer-conservators to rogue out the off-types based on selected descriptors in order to maintain genetic purity.

#### MODULE:

Training to be given in **three phases** – at three life history stages of the rice plant, namely:  
2 DAYS during the Sowing stage (June): 6-10 days after sowing.

This phase of the training will include a day for methodological Introduction and orientation.

5 DAYS around the Flowering stage (August-September): Panicle initiation to milk stage:  
approx.

10 DAYS around the Harvesting stage (December): Maturity to post-harvest assessments.  
Total: 17 days.

RESOURCE PERSON: Dr. Debal Deb, Basudha, Odisha and OFAI Trainer

#### SUBJECT OF TRAINING:

Assessment of 52 rice morphological characteristics/ descriptors, according to INGER and Biodiversity International guidelines

INSTRUMENTS: 4 Hand lenses, 4 measuring tapes, Graph papers, pencils.

#### EXPECTED OUTCOME:

All trainees will be repeatedly examined and assisted until they attain full capability of rice characterization at the international standard, and qualify as trainers for farmer-conservators.

NUMBER OF TRAINEES ATTAINED: 20 (off-campus accommodation)

Report:

The first phase of the training workshop was organized on 22<sup>nd</sup> and 23<sup>rd</sup> of June 2013 in Kerandiguda a small village, 15 Km from Muniguda in western Odisha by joint efforts of active members from OFAI, Living Farms and Basudha. In all 20 seed savers/ farmer- conservators from five different states – Maharashtra, Odisha, Karnataka, Tamil Nadu and Assam participated for the first phase of this training workshop. (List of participants attached at the end of the report)



The first day began with an introductory session on types of cultivated rice and rice plant biology. Importance of maintaining purity of traditional varieties of rice was explained along with the instances where in the process of cultivation, cross pollination or mixing take place and how it can be eliminated by farmers through examining the seeds for purity. Visual examination of seed samples by farmers and removal of the “off types” – based on characteristics of grains needs to be undertaken. Six genetically fixed characters during the sowing – transplanting stage were described one by one, explaining detailed structure and function of each part. They include Lemma and palea colour (LP), Grain length (mm), Grain width (mm), Colour of awn, Apiculus colour and Lemma-palea pubescence.



Before and after lunch a thorough session on measuring grain length and width was carried out using graph papers and magnifying glasses. Simple technique to measure the grain length and width to second decimal point accuracy was demonstrated using ten grains on a simple graph paper. Every participant was under personal attention and supervision of Dr. Debal till everyone got it right. Participants were introduced to new simple instruments like a magnifying eye lenses with a Vernier-caliper scale fitted internally.

Participants were made aware at periodic intervals regarding the importance of these subtle intricate differences in fixed characters and their importance in maintaining purity of a variety before incorporation into CBRs. Good interactive session with full participation from farmers to researchers were seen during this class room indoor session. The next day was planned for the field visit to Dr. Debal's farm where the colour related characters and field related vegetative characters had to be studied.

For example: The character, Lemma and palea colour (LP) has following colour codes according to IPGR standards

- 1 Straw
- 2 Gold and gold furrows on straw
- 3 Brown (tawny)
- 4 Brown spots
- 5 Brown furrows on straw
- 6 Purple
- 7 Reddish to light purple
- 8 Purple spots
- 9 Purple furrows on straw
- 10 Black

Each colour code and colour was correlated, seen under magnifying glasses and everyone's perceptions were noted down according to these codes. Grains from 25 different varieties were meticulously looked under the magnifying glasses by all participants for Lemma and palea colour (LP), Apiculous colour (AC), Apiculous pubescence (AP) and Awn colour. All these characters have their specific colour codes. (refer training material attached in the end)



Vegetative characters like the Coleoptile colouration, Seedling height and Basal leaf sheath colour were observed and noted in the field.



After the field session an announcement was made for donations. The eco friendly construction of the Vrihi seed bank was under way when parts of a wall collapsed due to heavy rains just few days before the training workshop. So the plan of accommodating few participants in that construction was not possible because of which we had to book extra rooms in lodge. So the expenses incurred by OFAI went high as Rs. 19,664. Living Farms have taken care of the travel expenses of Rs. 3188 according to Debyeet Sarangi. So we have spent Rs. 16,476 for the first phase.

We received donations of Rs. 3000 from Kavitha and Ananthoo and Rs. 1500 from Sanjay Patil for their participation for the phase 1 in the OFAI account.

**List of ideal colour codes:**



**B 57:**

Lemma Palea colour: Straw  
Apiculus colour: Brown  
Awn colour: Brown  
Lemma Palea pubescence: Short hairs



**J 10:**

Lemma Palea colour: Purple spots on straw  
Apiculus colour: Purple  
Lemma Palea pubescence: Short hairs



**C 18:**

Lemma Palea colour: Reddish  
Apiculus colour: Brown  
Lemma Palea pubescence: Short hairs



**J 13:**

Lemma Palea colour: Brown furrows on straw  
Apiculus colour: Straw  
Lemma Palea pubescence: Short hairs



**K 18:**

Lemma Palea colour: Purple spots on straw  
Apiculus colour: Black  
Lemma Palea pubescence: Short hairs



**K 47:**

Lemma Palea colour: Brown  
Apiculus colour : Brown  
Lemma Palea pubescence: Long hairs



**K 44:**

Lemma Palea colour: Straw  
Apiculus colour: Straw  
Lemma Palea pubescence: Short hairs



**K 67:**

Lemma Palea colour: Brown (tawny)  
Apiculus colour: Brown  
Lemma Palea pubescence: Short hairs



**K 86:**

Lemma Palea colour: Black  
Apiculus colour: Black  
Lemma Palea pubescence: Long hairs



**TT08:**

Lemma Palea colour: Straw  
Apiculus colour: Brown  
Lemma Palea pubescence: Short hairs



**M 29:**

Lemma Palea colour: Brown furrows on straw  
Apiculus colour: Straw  
Lemma Palea pubescence: Short hairs



**S 7:**

Lemma Palea colour: Straw  
Apiculus colour: Straw  
Lemma Palea pubescence: Long hairs  
Awn colour: Straw

List of participants for the first phase:

<b>Sr. No.</b>	<b>Name of the participant</b>	<b>Organisation</b>	<b>State</b>	<b>Mobile Number</b>	<b>Gender</b>
1	Ms. Shamika Mone	OFAI	Goa	08888862293	F
2	Mr. Sanjay Patil	BIAF	Thane, Maharashtra	09623931855	M
3	Mr. Ganni	Sahaja Samrudha	Karnataka	09901713351	M
4	Mr. Rechanna	Sahaja Samrudha	Karnataka	09901713351	M
5	Mr. Vijay Sambare	Pani Panchayat	Maharashtra	09421329944	M
6	Mr. Jayakumar	Restore	Tamil Nadu	09444166779	M
7	Mr. Ananthoo	Restore	Tamil Nadu	09444166779	M
8	Ms. Kavitha Kurugunti	ASHA	Karnataka	09393001550	F
9	Mr. Vijay kumar	United Artists Association (UAA)	Ganjam, Odisha	09437064314	M
10	Mr. Punimahapatra	United Artists Association (UAA)	Ganjam, Odisha	09437064314	M
11	Mr. S. Ramprasad	Chetana Organics	Odisha/ Andhra Pradesh	08374878997	M
12	Mr. Hasan Uzzaman	Chetana Organics	Odisha/ Andhra Pradesh	08374878997	M
13	Mr. Himanshu	Chetana Organics	Odisha/ Andhra Pradesh	08374878997	M
14	Mr. Dhano	Chetana Organics	Odisha/ Andhra Pradesh	08374878997	M
15	Mr. Farmer, Tentulipada	Chetana Organics	Odisha/ Andhra Pradesh	08374878997	M
16	Mr. Farmer, Bhimdonga	Chetana Organics	Odisha/ Andhra Pradesh	08374878997	M
17	Ms. Namita	Sambhav Farms	Odisha	09937222024	F
18	Mr. Farmer	Sambhav Farms	Odisha	09937222024	M
19	Mr. Shivakumar	Green Foundation	Karnataka	09008549827	M
20	Mr. Ramesh Hegde	Green Foundation	Karnataka	09482416418	M
21	Ms. Pompy Ghosh	Fertile Grounds	Assam	09854678719	F