Collection, maintenance, characterization and evaluation of land races of Small millets especially for biotic stresses in the tribal areas of Rewa division of Madhya Pradesh

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General Information

1. Title of the Project **:** *Collection, maintenance, characterization and evaluation of land races of Small millets especially for biotic stresses in the tribal areas of Rewa division of Madhya Pradesh.*

2. Project duration **:** 2 years (01.10.2008 to 30.9.2010)
Extended up to 30.9.2011

3. Date of start : 01.10.2008

4. Date of termination : 30.9.2011

5. Sanction No. : MPSBB/M(P)/2008/1751 dated 07.8.2008

6. Project cost **:** 10, 51,600=00
(Rs. Ten lakh fifty one thousand six hundred only)

7. Executing agency **:** Jawaharlal Nehru Krishi Vishwa Vidyalya
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1. Introduction

Small millets are a group of small seeded cereals namely finger millet (*Eleusine coracana*), little millet (*Panicum sumatrense*), kodo millet (*Paspalum scrobiculatum*), foxtail millet (*Setaria italica*), barnyard millet (*Echinochloa frumentacea*) and proso millet (*Panicum miliaceum*) representing the area grown in that order. These crops are considered the least important cereals. However, they are of local importance as staples and as reserve crops in marginal areas. Highest area under small millets (other than finger millet) is in Madhya Pradesh. (307 thousand hectares) followed by Chhatisgarh (164 thousand hectares), but productivity of these crops is highest in Uttarakhand (1187 kg/ha) followed by Gujarat (1067 kg/ha). Where as it is only 290 kg/ha in M.P. and 194 kg/ha in Chhatisgarh (Table 1 and 2) . In Rewa division, these crops are cultivated in 22.1 thousand hectares with annual production of 6.0 tones and productivity of 295 kg per hectare (2008). The reason for low productivity of these crops in Madhya Pradesh is not its yield potential but it is being grown in poor soils with low or no inputs. Among small millets, kodo millet and little millet are predominant, while foxtail millet and barnyard millet are grown in erratic pockets of Madhya Pradesh. These crops are rich in nutrient composition, hence, are now reffered as **Nutri-cereals (**Table 3). Small millets are grown in diverse soils, varying rainfall regimes and in areas widely differing in thermo and photoperiods. Utilization of these crops is mainly as food for human consumption and is largely confined only in rural areas. The problem of biotic stresses in these crops is negligible. These crops are gaining little emphasis and least attention. The promotion of these crops can lead to efficient natural resource management and holistic approach in sustaining precious agro-biodiversity.

A comprehensive collection of germplam is the base for any crop improvement programme. Its evaluation leads to identification of genotypes of high yield potential and other useful economic characters like disease and insect-pest resistance. Conservation of such valuable germplasm for further utilization in future is important. Keeping this in view, land races of different small millets were collected from actual area of its cultivation and evaluated for morphological characters, yield traits and especially for biotic stresses. The collected land races were maintained at College of Agriculture, Rewa (M.P.) and conserved for long term storage at NAGS, Bangalore and NBPGR, New Delhi.

Table-1 : Area , production and productivity of Small millets in prominent states of India (2008-09)

States	Other Small millets			Finger millet		
	Area ('000 ha)	Production ('000 t)	Yield (kg/ha)	Area ('000 ha)	Production ('000 t)	Yield (kg/ha)
Madhya Pradesh	307	89	290	-	-	-
Chattisgarh	164	32	194	-	-	-
Uttarakhand	75	89	1187	135	193	1130
Maharashtra	73	37	507	126	125	992
Gujarat	45	48	1067	19	20	1053
Karnataka	33	15	455	841	1394	1658
Tamil Nadu	32	29	918	90	170	1887
Andhra Pradesh	30	16	533	50	52	1040
Jharkhand	25	12	480	12	8.5	702
Arunachal Pradesh	22	18	848	-	-	-
Bihar	-	-	-	11	9.3	816
Odisha	-	-	-	65	41	624
West Bengal	-	-	-	13	14.7	1157
Other states	99.3	59.1	632	15.4	12.4	779
India	**905.2**	**444.8**	**646**	**1378.4**	**2039.9**	**1552**

Table-2 : Area, Production and Productivity of Small Millets in M.P. since last 20 years

Year	Area('000 ha)	Production('000 ha)	Productivity(kg/ha)
1990-91	774	224	289
1991-92	715	158	221
1992- 93	697	176	253
1993- 94	675	205	304
1994- 95	633	168	265
1995- 96	555	154	277
1996- 97	593	171	288
1997- 98	565	139	246
1998- 99	552	163	295
1999- 00	539	161	299
2000- 01	478	82	172
2001- 02	460	117	254
2002- 03	432	97	225
2003- 04	457	126	276
2004- 05	385	106	275
2005- 06	352	104	295
2006- 07	327	87	266
2007- 08	315	86	273
2008- 09	304	87	286
2009- 10	269	73	271

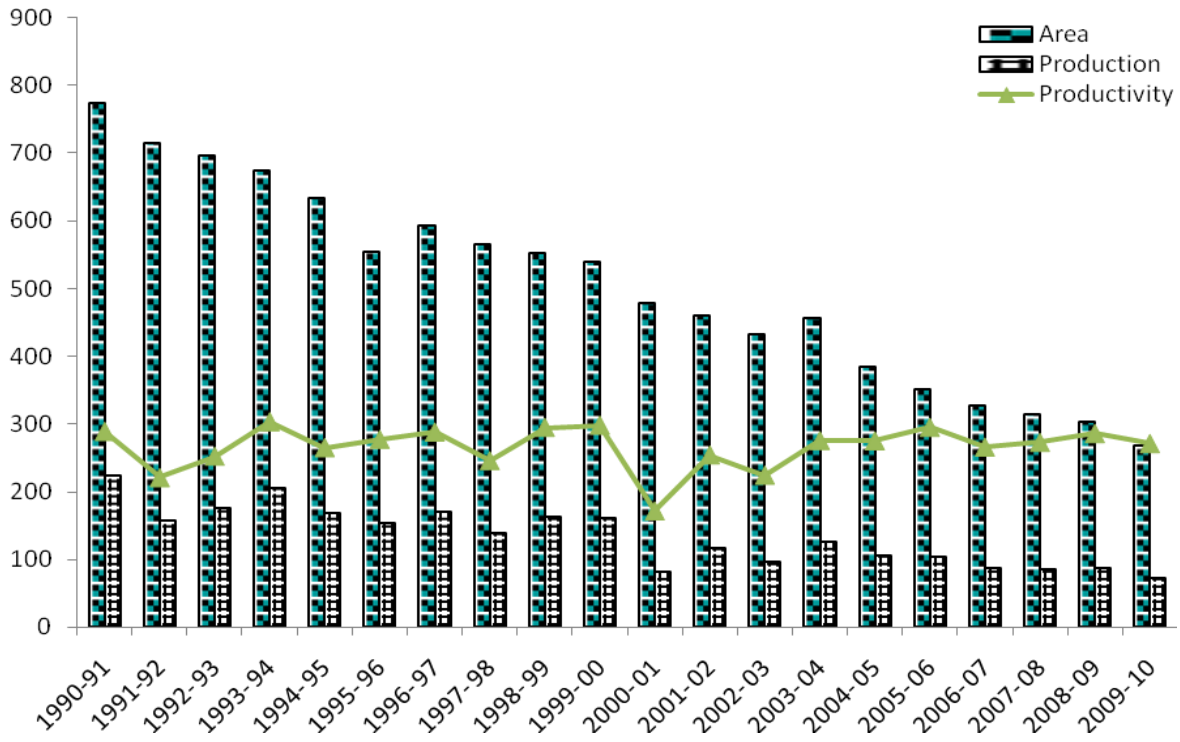

Figure 1. Trend of area, production and productivity of Small millets in Madhya Pradesh

Table 3. Nutrient composition of Small millets and cereals (per 100 g grain)

Food grain	Protein (g)	Carbohydrates (g)	Fat (g)	Crude fiber (g)	Mineral matter (mg)	Calcium (mg)	Phosphorus (mg)	Fe (mg)
Small Millets								
Finger millet	7.3	72.0	1.3	3.6	2.7	344	283	3.9
Kodo millet	8.3	65.0	1.4	9.0	2.6	27	188	12.0
Proso millet	12.5	70.4	3.1	7.2	1.9	14	206	10.0
Foxtail millet	12.3	60.9	4.3	8.0	3.3	31	290	5.0
Little millet	7.7	67.0	4.7	7.6	1.5	17	220	6.0
Barnyard millet	6.2	65.5	2.2	9.8	4.4	11	280	15.0
Cereals								
Wheat	11.8	71.2	1.5	1.2	1.5	41	306	5.3
Rice	6.8	78.2	0.5	0.2	0.6	45	160	

Objectives of the study

The traditional cultivars have some desirable characters, which may be utilized in crop improvement programmes. Hence, following objectives were under taken in the present study:

1. Collection of the land races of Small millets from tribal areas of Rewa division along with passport data about ITKs and value addition.
2. To study the genetic diversity among the collected land races for yield, yield traits and biotic stresses.
3. To study the variability in the symptoms produced by the biotic factors and its phyto-pathological effects on host plant along with rational approaches for theirmanagement.
4. Extensive field survey and preparation of disease map in major small millets growing districts of Rewa division.
5. Documentation , conservation and registration of valuable land races of Small millets collected from Rewa division.

Approved work

1st year

1. Local land races / cultivars of major Small millets will be collected through personal visits from the tribal areas of Rewa division.
2. Diversity in yield, its attributing characters and reaction to biotic stresses will be determined
3. Rational approaches for the management of biotic factors will be studied
4. The existence of variability for seed characters will be determined.
5. Extensive field survey for biotic stresses will be carried out in Small millets growing areas of Rewa division.
6. Information regarding ITKs and consumption pattern of these crops will be accounted.
7. Nutritional studies were carried out in different land races of Small millets

2nd year

1. Collected land races / germplasm will be evaluated for their yield, yield traits and biotic stresses under natural epiphytotic conditions.
2. Diversity in yield, its attributing characters and reaction to biotic stresses will be determined.
3. Rational approaches like cultural practices, biopesticides etc. for the management of biotic factors will be studied.
4. Disease map of important pathogens in major small millets growing areas of Rewa division will be prepared.
5. Documentation, conservation and registration of economic land races / germplasm of Small millets will be done.
6. Land races of good nutritional values were popularized among the consumers for value addition through extension activities.

Rationale of Study

Small millets are generally grown in the degraded soils of poor fertility in rainfed ecosystem by tribal and poor farmers and consumed by them only. Looking to the high qualities of these grains, popularization among the people of high society is need of today. Germplasm forms the basic raw material for any crop improvement programme and easy access is important to make rapid strides on plant breeding research.

Extensive field survey gives the status of biotic stresses prevailed in farmers fields, which helps to plan strategies for eco-friendly remedial measures. Knowledge of ITKs and grain consumption will help to develop and popularize the value addition foods.

The proposed research work will be based on collection, characterization, conservation and cataloguing of local land races/ gemplasm of Small millets from tribal and remote areas of Rewa division.

2. Methodology

2.1 Collection of landraces

A roving extensive field survey was conducted in the districts of Rewa, Satna, Sidhi, Singrauli, Shahdol, Umaria and Anuppur districts of Madhya Pradesh for the collection of land races of small millets (Tanle 4). The collections were made through personal visit and contacts with farmers and personnels of agriculture department from the remote and tribal areas during the year 2008-09. About 50 to 100 g of seed samples were collected along with passport information about the sample like name of the farmer, village, block and district. The collected samples were kept in cloth bags and cleaned in the laboratory for further evaluation (Annexure-I, II, III and IV).

Table -4. Small millets landraces collection sites of Madhya Pradesh

District	Block	Latitude	Longitude	Altitude
Rewa	Rewa, Raipur kurchulian, Java, Gangeb, Mauganj, Hanumana, Sirmour, Teonthar, Naigarhi	24^0 33'N to 25^0 00'N	81^0 17'E to 82^0 10'E	151 to 365
Satna	Rampur Baghelan, Ramnagar, Sohawal, Majhagavan, Amarpatan, Maihar	24^0 18'N to 24^0 55'N	80^0 46'E to 81^0 26'E	463 to 563
Sidhi	Sidhi, Majholi, Rampur Naikin, Sihawal, Kusumi, Churahat	24^0 24'N to 24^0 35'N	81^0 30'E to 82^0 14'E	272 to 372
Singrauli	Waidhan, Chitarangi, Deosar	24^0 10'N to 24^0 21'N	83^0 17'E to 83^0 23'E	365 to 609
Shahdol	Beohari, Jai Singh Nagar, Sohagpur, Gohparu, Budhar	23^0 19'N to 24^0 01'N	81^0 20'E to 81^0 27'E	338 to 593
Umaria	Karkeli, Manpur, Pali	22^0 23'N to 23^0 38'N	75^0 38'E to 80^0 56'E	398 to 489
Anuppur	Rajendragram	23^0 05'N to 30^0 28'N	81^0 45'E to 82^0 12'E	505 to 1048

2.2 Information on ITKs and consumption of Small millets

During collection of the samples, information about its processing, consumption pattern, value addition, medicinal values, biotic stresses and other indigenous technology knowledge were also collected through conversation with the farmer and their family members.

2.3 Survey for important biotic stresses

A extensive roving field survey was conducted in the month of October to January, 2009 and 2010 in Rewa division for important biotic stresses of Small millets. Diseases were identified on the basis of symptoms produced. Variability in the symptoms was recorded. The specimens were collected for laboratory studies and confirmation of the disease. The disease incidence and severity were recorded as per standard procedure. Incidence of phanerogamic plant parasite i.e. *Striga* species was also recorded. Six villages of Satna district and 4 villages of Rewa districts were surveyed for important diseases of little millet. Disease survey in kodo millet was under taken in 45 villages of Rewa, 18 villages of Satna, 16 villages of Sidhi, 13 villages of Singrauli, 10 villages of Umaria and 16 villages of Shahdol district.

2.4 Evaluation of land races of Small millets

2.4.1 Kodo millet : Four hundred seventy nine land races of kodo millet were evaluated along with local and national checks for morphological, phenological characters as well as biotic stresses during 2009-10 and 2010-11 at College of Agriculture, Rewa (M.P.). Observations on various parameters were recorded at appropriate stage as per descriptors.

Experimental details

Design : Augmented
Replication : Non-replicated
Plot size : Two rows of 3.0 m length
Spacing : 25 cm row to row and 7.5 cm plant to plant
Total blocks : 24
Fertilizer : 40:20:0 kg NPK/ha
Land races : 479 + JK 13 (LC) & GPUK 3 (NC)

Observations recorded: Observations were recorded as per following descriptors during 2009-10 and 2010-11.

Table 5. Descriptors for the evaluation of Kodo millet land races.

S. No.	Descriptor	Particulars
1	Plant height (cm)	From ground level to the tip of the inflorescence at the dough stage
2	Number of basal tillers	Total number of tillers in the plant
3	Days to 50% flowering	Counted as date from sowing to 50% of plant in flower
4	Length of inflorescence (cm)	Measured from node of lowest raceme (thumb) to the tip pf last raceme
5	No. of racemes above thumb	No. of racemes above first (lowest) primary axis node
6	Length of longest raceme (cm)	Length of the inflorescence excluding thumb
7	Days to maturity	No. of days taken from planting to the physiological maturity of 50% of the main tillers
8	Grain yield per plant (g)	Mean of five random plants yield
9	1000 grain weight (g)	Weight of random samples of 1000 seeds from the total harvest of an accession
10	Growth habit	40 days after sowing based on tillering attitude and categorized as : a. Erect b. Decumbent c. Prostrate
11	Degree of culm branching	3. Lower branch number(Upper one to four nodes rarely branched) 5. Medium branch number (Upper 2 to 4 nodes produce inflorescence) 7. High branch (Most nodes produce inflorescence)
12	Sheath pigmentation at flowering	0. Absent 1. Present
13	Sheath base pigmentation at flowering	0. Absent 1. Present
14	Juncture pigmentation at flowering	0. Absent 1. Present
15	Internode pigmentation at flowering	0. Absent 1. Present
16	Lamina pigmentation at flowering	0. Absent 1. Present
17	Flag leaf at the second primary axis node	0. Absent 1. Rudimentary 2. Well developed
18	Degree of lodging at maturity	3. Low

		5. Intermediate 7. High
19	Ear exertion (at dough stage)	1. Complete 2. Partial
20	Ear appearance (at dough stage)	3. Open 5. Semi compact 7. Intermediate
21	Spikelet arrangement on the rachis	1. Regular rows 2. Regular rows in upper half of inflorescence and irregular in lower half 3. Two to three irregular rows 4. Two to four irregular rows
22	Shattering of inflorescence	0. Absent 1. Present
23	Uniformity of plant maturity	0. absent 1. Present
24	Grain shape	1. Orbicular 2. Ellipsoidal 3. Oval
25	Grain colour	1. Grey brown 2. Brown 3. Dark brown
26	Head smut (%)	Percent head smut infected plant
27	Shoot fly (%)	Percent dead hearts at 20-25 days after sowing

Numerical ratings for head smut:

Head smut incidence (%)	Reaction
0	Highly resistant (HR)
Up to 1	Resistant (R)
1.1to 5	Moderately resistant (MR)
5.1 to 10	Moderately susceptible (MS)
10.1 to 20	Susceptible (S)
> 20	Highly susceptible (HS)

Numerical ratings for shoot fly:

Dead heart (%)	Reaction
0 to 5	Highly resistant (HR)
5.1 to 10	Resistant (R)
10.1 to 15	Moderately resistant (MR)
15.1 to 20	Moderately susceptible (MS)
20.1 to 30	Susceptible (S)
> 30	Highly susceptible (HS)

2.4.2 Little millet : One hundred thirty three land races of little millet along with local and national checks were evaluated for morphological, phenological characters as well as biotic stresses during 2009-10 and 2010-11 at College of Agriculture, Rewa (M.P.). Observations on various parameters were recorded at appropriate stages as per decriptors

Experimental details

Design : Augmented
Replication : Non-replicated
Plot size : Two rows of 3.0 m length
Spacing : 25 cm row to row and 7.5 cm plant to plant
Total blocks : 07
Fertilizer : 40:20:0 kg NPK/ha
Land races : 133 + JK 8 (LC) & OLM 203 (NC)

Observations recorded: Observations were recorded as per following descriptors during 2009-10 and 2010-11.

Table 6. Descriptors for the evaluation of Little millet land races.

S. No.	Descriptor	Particulars
1	Plant height (cm)	From ground level to the tip of the inflorescence at the dough stage
2	Number of basal tillers	Total number of tillers in the plant.
3	Flag leaf length (cm)	Measured from ligule to leaf tip at flowering
4	Flag leaf width (cm)	Measured across the centre of leaf at flowering
5	Flag leaf sheath length (cm)	Measured from internode to ligule at flowering
6	Peduncle length (cm)	Measured from the base of the inflorescence to the first node ..
7.	Inflorescence length (cm)	Measured from node of lowest raceme to tip of last raceme
8	Days to 50% flowering	Counted as days from sowing to 50% of plants to flower.
9	1000 grain weight (g)	Weight of random samples of 1000 seeds from the total harvest of an accession
10.	Grain yield per plant (g)	Mean of five random plants yield
11	Growth habit	40 days after sowing based on tillering attitude and categorized as : 1. Erect 2. Erect geniculate

		3. Decumbent 4. Prostrate
12	Plant pigmentation	0. Absent 1. Present
13	Culm branching	0. Absent 1. Present
14	Ligule pubescence	1. Essentially glaborous 2. Medium pubescent 3. Strongly pubescent
15	Leaf blade pubescence	1. Essentially glaborous 2. Medium pubescent 3. Strongly pubescent
16.	Sheath pubescence	1. Essentially glaborous 3. Medium pubescent 3. Strongly pubescent
17.	Degree of lodging at maturity	3. Slight 5. Medium 7. Extensive
18	Inflorescence compactness	3. Open 5. Intermediate 7. Compact
19	Inflorescence shape	3. Diffused 5. Arched 7. Globose- elliptic
20	Grain colour	1. Dark grey 2. Brown 3. Light brown 4. Grey 5. Golden yellow 6. Straw white/ Creamy 7. Black
21	Grain shape	1. Elliptical ./ ellipsoidal 2. Ovate
22	Uniformity in the lines of germplasm	0. Absent 1. Present
23	Grain smut	Grain smut incidence, severity were recorded and Susceptibility index was calculated
24	Sheath blight	Percent incidence at seedling stage was recorded.
25	Shoot fly	Percent dead hearts were counted at 25 days after sowing

Numerical ratings for grain smut and sheath blight:

Grain smut severity index

Smutted grains ear^{-1} (%)	Grade	Reaction
< 1	1	Highly resistant (HR)
1.1 to 5	2	Resistant (R)
5.1 to 10	3	Moderately resistant (MR)
10.1 to 25	4	Moderately susceptible (MS)
25.1 to 50	5	Susceptible (S)
> 50	6	Highly susceptible (HS)

SES scale for Sheath blight

% necrotic area	Grade	Reaction
No infection	0	Highly resistant (HR)
Vertical spread of the lesions up to 20% of plant height.	1	Resistant (R)
Vertical spread of the lesions up to 21-30% of plant height.	3	Moderately resistant (MR)
Vertical spread of the lesions up to 31-45% of plant height.	5	Moderately susceptible (MS)
Vertical spread of the lesions up to 46-65% of plant height.	7	Susceptible (S)
Vertical spread of the lesions more than 66% of plant height.	9	Highly susceptible (HS)

Numerical ratings for shoot fly:

Dead heart (%)	Reaction
0 to 5	Highly resistant (HR)
5.1 to 10	Resistant (R)
10.1 to 15	Moderately resistant (MR)
15.1 to 20	Moderately susceptible (MS)
20.1 to 30	Susceptible (S)
> 30	Highly susceptible (HS)

2.4.3 Barnyard millet : Sixty eight land races of barnyard millet along with local and national checks were evaluated for morphological, phenological characters as well as biotic stresses during 2009-10 and 2010-11 at College of Agriculture, Rewa (M.P.). Observations on various parameters were recorded at appropriate stages as per procedure. Obervations on disease and insect pest incidence were also recorded.

Experimental details

Design : Augmented
Replication : Non-replicated
Plot size : Two rows of 3.0 m length
Spacing : 25 cm row to row and 7.5 cm plant to plant
Total blocks : 04
Fertilizer : 40:20:0 kg NPK/ha
Land races : 68 + RBM 7, RBM-2 (LC)

Observations recorded: Observations were recorded as per following descriptors during 2009-10 and 2010-11.

Table 7. Descriptors for the evaluation of Barnyard millet land races.

S. No.	Descriptor	Particulars
1	Plant height (cm)	From ground level to the tip of the inflorescence at the dough stage
2	Number of basal tillers	Total number of tillers in the plant.
3	Flag leaf length (cm)	Measured from ligule to leaf tip at flowering
4	Flag leaf width (cm)	Measured across the centre of leaf at flowering
5	Peduncle length (cm)	Measured from the base of the inflorescence to the first node ..
6	Inflorescence length (cm)	Measured from node of lowest raceme to tip of last raceme
7.	Length of lower raceme (cm)	Length of the raceme situated at the base of the inflorescence
8	Days to flowering	Counted as days from sowing to 50% of plants to flower.
9	1000 grain weight (g)	Weight of random samples of 1000 seeds from the total harvest of an accession
10.	Grain yield per plant (g)	Mean of five random plants yield
11	Growth habit	40 days after sowing based on tillering attitude and categorized as : a. Erect b. Decumbent c. Prostrate
12	Plant pigmentation	0. Absent 1. Present

13	Culm branching	0 Absent 1 Present
14	Degree of lodging at maturity	3. Low 5. Intermediate 7. High
15	Colour of inflorescence	1. Green 2. Light purple 3. Dark purple
16	Inflorescence shape	1. Cylindrical 2. Pyrimidical 3. Globose to elliptical
17	Inflorescence compactness	3. Open 5. Intermediate 7. Compact
18	Shape of lower raceme	1. Straight 2. Curved 3. Slender
19	Branching of lower raceme	0. Absent 1. Present
20	Spikelet arrangement	1. One side of rachis 2. Arranged around rachis
21	Shattering arrangement	0. Absent 1. Present
22	Uniformity of individual plant maturity	0. Absent 1. Present
23	Grain colour	8. Straw white 9. Grey + straw white 10. Brownish grey 11. Grey 12. Light grey
24	Grain shape	1. Concave 2. Oval
24	Grain smut	Grain smut incidence, severity were recorded and Susceptibility index was calculated

Numerical ratings for grain smut

Grain smut severity index

Smutted grains ear^{-1} (%)	Grade	Reaction
< 1	1	Highly resistant (HR)
1.1 to 5	2	Resistant (R)
5.1 to 10	3	Moderately resistant (MR)
10.1 to 25	4	Moderately susceptible (MS)
25.1 to 50	5	Susceptible (S)
> 50	6	Highly susceptible (HS)

2.4.4 Foxtail millet: Seventy nine land races of foxtail millet collected from different geographic regions along with local and national checks were evalaueted for morphological, phenological characters as well as biotic stresses during 2009-10 and 2010-11 at College of Agriculture, Rewa (M.P.). Observations on various parameters were recorded at appropriate stages as per procedure.

Experimental details

Design : Augmented
Replication : Non-replicated
Plot size : Two rows of 3.0 m length
Spacing : 25 cm row to row and 7.5 cm plant to plant
Total blocks : 04
Fertilizer : 40:20:0 kg NPK/ha
Land races : 79 + RFM 10, Kakun local (LC)

Observations recorded: Observations were recorded as per following descriptors during 2009-10 and 2010-11.

Table 8. Descriptors for the evaluation of Foxtail millet land races.

S. No.	Descriptor	Particulars
1	Plant height (cm)	From ground level to the tip of the inflorescence at the dough stage
2	Number of basal tillers	Number of tillers at ground level or from the basal nodes.
3	Flag leaf length (cm)	Measured from ligule to leaf tip at flowering
4	Flag leaf width (cm)	Measured across the centre of leaf at flowering
5	Peduncle length (cm)	Measured from top most node to the base of the inflorescence.
6	Ear length (cm)	From base to the tip of ear on the main tiller at dough stage.
7.	Panicle exertion	Measured from the exposed point of the peduncle from the leaf sheath up to base of the inflorescence.
8	Days to flowering	From sowing to stage when the ears have emerged on 50% of the main tillers .
9	1000 grain weight (g)	Weight of random samples of 1000 seeds from the total harvest of an accession
10.	Grain yield per plant (g)	Mean of five random plants yield
11	Plant pigmentation at flowering	0. Non-pigmented (green) 1. Pigmented

12	Leaf colour	1. Green 4. Yellow 5. Purple 6. Deep purple
13	Blade pubescence	1. Essentially glaborous 5. Medium pubescence 9. Strongly pubescent
14	Sheath pubescence	1. Essentially glaborous 5. Medium pubescence 9. Strongly pubescent
15	Degree of lodging at maturity	1. Very slight 5. Medium 7. Extensive
16	Senescence	1. Actively green 9. Dead
17	Inflorescence lobes	0. Absent 3. Short 7. Long 9. Large & thick
18	Inflorescence bristle	0. Absent 1. Very short 3. Short but obvious 5. Medium 7. Long 9. Carrying a spikelet
19	Lobe compactness	3. Loose 5. Medium 7. Compact 9. Spongy
20	Inflorescence shape	1. Cylindrical 2. Pyramidal 3. Obovate
21	Inflorescence compactness	3. Loose 5. Medium 7. Compact 9. Spongy
22	Fruit colour	1. Red 2. Black 3. White 4. Yellow
23	Grain shape	1. Oval 2. Elliptical
24	Apical sterility in panicle	0. Absent

		1. Present
25	Helminthosporium leaf blight	0. No incidence 1. Up to 1% necrotic leaf area 2. 1.1 to 5% necrotic leaf area 3. 5.1 to 25% necrotic leaf area 4. 25.1 to 50% necrotic leaf area 5. > 50% necrotic leaf area
26	Rust	0. No incidence 1. Up to 1% necrotic leaf area 2. 1.1 to 5% necrotic leaf area 3. 5.1 to 25% necrotic leaf area 4. 25.1 to 50% necrotic leaf area 5. > 50% necrotic leaf area

Numerical rating for Helminthosporium leaf blight and Rust

	Grade	Reaction
No incidnece	0	Highly resistant (HR)
Scattered spots/postules covering up to 1% leaf area.	1	Resistant (R)
Scattered spots/postules covering up to 1to 5 % leaf area.	2	Moderately resistant (MR)
Scattered spots/postules covering up to 5.1 to 25% leaf area.	3	Moderately susceptible (MS)
Scattered spots/postules covering up to 25.1 to 50% leaf area.	4	Susceptible (S)
Scattered spots/postules covering more than 50% leaf area.	5	Highly susceptible (HS)

a. Low cost management of biotic stresses in Small millets

2.5.1 Kodo millet : One fungicide carboxin, two insecticides namely Thio methaxam and Monocrotophos, NSKE(Neem seed kernel Extract), Vermicompost, Neem cake and one bio agent *Trichoderma viride* were tested alone and in different combinations as seed dresser, foliar spray and soil application for the management of important biotic stresses of Kodo millet. Susceptible variety of kodo millet GPUK 3 was sown in a plot size of 2.25 x 3.0 m in randomized block design with three replications during kharif 2009-10 and 2010-11. The recommended packages of practices were followed for optimum crop growth. Head smut incidence was recorded by counting healthy and smutted plants at dough stage . Incidence of shoot fly was recorded at 25 days after sowing by counting healthy and dead heart showing plants. Grain yield was recorded at maturity per plot basis and converted into quintle per hectare.

Experimental details

Design : RBD
Replication : 03
Plot size : 2.25 x 3.0 m
Fertilizer : 40;20;0 kg NPK/ha
Variety : GPUK 3
Treatments ; 10

Treatment details

T_1 : Seed treatment with Carboxin @ 2 g kg^{-1} seed.
T_2 : Seed treatment with Thiamethaxam @ 2 g kg^{-1} seed.
T_3 : $T_1 + T_2$
T_4 : T_3 + NSKE (5%) spray
T_5 : T_3 + Foliar spray of Monocrotophos @ 1.5 ml / l. of water
T_6 : Soil application of Vermicompost @ 4 t ha^{-1}
T_7 : T_6 + Seed treatment with *Trichoderma viride* @ 5 g kg^{-1} seed
T_8 : Soil application of Neem cake @ 25 kg ha^{-1}
T_9 : T_8 + Seed treatment with *Trichoderma viride* @ 5 g kg^{-1} seed
T_{10}: Control

Numerical ratings for head smut

Head smut incidence (%)	Reaction
0	Highly resistant (HR)
Up to 1	Resistant (R)
1.1to 5	Moderately resistant (MR)
5.1 to 10	Moderately susceptible (MS)
10.1 to 20	Susceptible (S)
> 20	Highly susceptible (HS)

Numerical ratings for shoot fly:

Dead heart (%)	Reaction
0 to 5	Highly resistant (HR)
5.1 to 10	Resistant (R)
10.1 to 15	Moderately resistant (MR)
15.1 to 20	Moderately susceptible (MS)
20.1 to 30	Susceptible (S)
> 30	Highly susceptible (HS)

2.5.2 Little millet : One fungicide carboxin, two insecticides namely Thio methaxam and Monocrotophos, NSKE (Neem seed kernel Extract) , Vermicompost, Neem cake and one bio agent *Trichoderma viride* were tested alone and in different combinations as seed dresser, foliar spray and soil application for the management of important biotic stresses of Kodo millet. Susceptibel variety of little millet JK 8 was sown in a plot of 2.25 x 3.0 m in randomized block design with three replications during kharif 2009-10 and 2010-11. The recommended packages of practices were followed for optimum crop growth. Observations of grain smut incidence was recorded at dough stag where as , shoot fly incidence was recorded 25 days after sowing. Grain yield was recorded at maturity per plot basis and converted into quintle per hectare.

Experimental details

Design : RBD
Replication : 03
Plot size : 2.25 x 3.0 m
Fertilizer : 40;20;0 kg NPK/ha
Variety : JK 8
Treatments ; 10

Treatment details

T_1 : Seed treatment with Carboxin @ 2 g kg^{-1} seed.

T_2 : Seed treatment with Thio-methaxam @ 2 g kg^{-1} seed.

T_3 : T_1 + T_2

T_4 : T_3 + NSKE (5%) spray

T_5 : T_3 + Foliar spray of Monocrotophos @ 1.5 ml / l. of water

T_6 : Soil application of Vermicompost @ 4 t ha^{-1}

T_7 : T_6 + Seed treatment with *Trichoderma viride* @ 5 g kg^{-1} seed

T_8 : Soil application of Neem cake @ 25 kg ha^{-1}

T_9 : T_8 + Seed treatment with *Trichoderma viride* @ 5 g kg^{-1} seed

T_{10}: Control

Numerical ratings for grain smut:

Grain smut severity index

Smutted grains ear^{-1} (%)	Grade	Reaction
< 1	1	Highly resistant (HR)
1.1 to 5	2	Resistant (R)
5.1 to 10	3	Moderately resistant (MR)
10.1 to 25	4	Moderately susceptible (MS)
25.1 to 50	5	Susceptible (S)
> 50	6	Highly susceptible (HS)

Numerical ratings for shoot fly

Dead heart (%)	Reaction
0 to 5	Highly resistant (HR)
5.1 to 10	Resistant (R)
10.1 to 15	Moderately resistant (MR)
15.1 to 20	Moderately susceptible (MS)
20.1 to 30	Susceptible (S)
> 30	Highly susceptible (HS)

2.6 Nutritional studies of small millets

Twenty four promising land races of f kodo millet, twelve land races of little millet and ten each of barnyard millet and foxtail millet were analysed for protein estimation. .The 100 g seed samples of each millets were cleaned thoroughly and dehusked. The rice of kodo millet, little millet, barnyard millet and foxtail millet were analysed for protein content. .

2.7 Documentation, conservation and registration of economic land races of Small millets.

After two years of evaluation, the land races were deposited for conservation. Fifty gram seeds of each small millets were sent to National Active Germplasm Site (NAGS), Project Coordinating Unit of AICRP on Small millets, UAS, Bangalore for registration and conservation. Similarly Twenty gram seeds of small millets along with the passport information (Annexure V, VI and VII) were deposited to National Beauro of Plant genetic Resources (NBPGR), New Delhi for lond term storage and obtaining national identity number.

3. Results

3.1. Collection of Small millets land races

A total 759 land races of Small millet (Table- 4 and 5) were collected from 9 blocks of Rewa, 6 blocks of Satna, 6 blocks of Sidhi & 3 blocks of Singarauli districts of Rewa division and 5 blocks of Shahdol , 3 blocks of Umaria and one block of Anuppur district of Shahdol division (previously in Rewa division). Among different small millets, 479 land races of kodo millet, 133 of little millet, 68 of barnyard millet and 79 of foxtail millet were collected from diverse geographical ecosystem. The cultivation of kodo millet was found almost in all the districts, while little millet is confined in Hanumana block of Rewa, Majhagavan block of Satna, Majhauli block of Sidhi, Waidhan, Chitrangi and Deosar blocks of Singrauli, Beohari and Jai Singh Nagar blocks of Shahdol and traces in Umaria district. Major collections of barnyard millet are from Majhagavan block of Satna and Chitrangi block of Singarauli district. Foxtail millet land races were collected from Majhagavan block of Satna and Beohari block of Shahdol district. Maximum collections were made from Shahdol districts (186) followed by Rewa (179), Satna (127), Singrauli (96), Sidhi (83), Umaria (64) and Anuppur (24) districts of Madhya Pradesh. Collected samples were numbered, cleaned and stored in room temperature for further evaluation.

Table 9 . Land races of small millets collected from Rewa and Shahdol division of Madhya Pradesh during 2008-09 and 2009-10..

District	No. of blocks	Kodo millet	Little millet	Barnyard millet	Foxtail millet	**Total**
Rewa	9	151	20	03	05	**179**
Satna	6	63	09	16	39	**127**
Sidhi	6	54	12	07	10	**83**
Singrauli	3	43	24	29	0	**96**
Shahdol	5	102	51	09	24	**186**
Umaria	3	52	07	04	01	**64**
Anuppur	1	14	10	00	00	**24**
Total	33	**479**	**133**	**68**	**79**	**759**

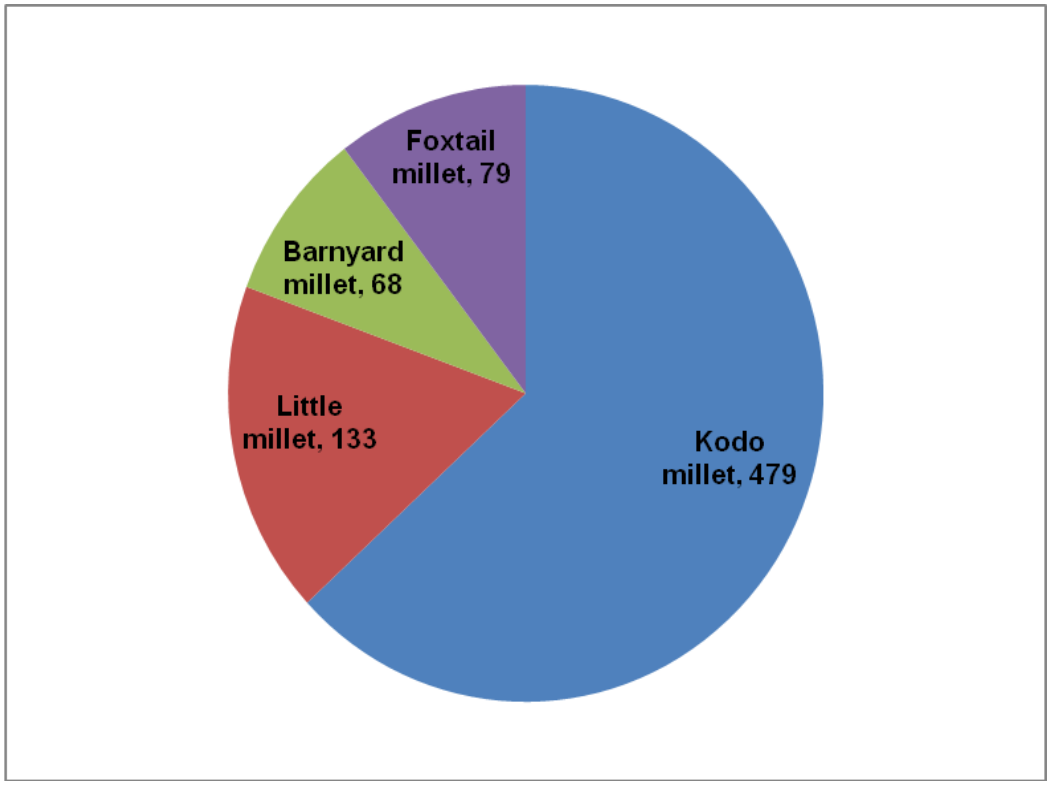

Figure 4. Land races of small millets collected from Rewa and Shahdol division of Madhya Pradesh

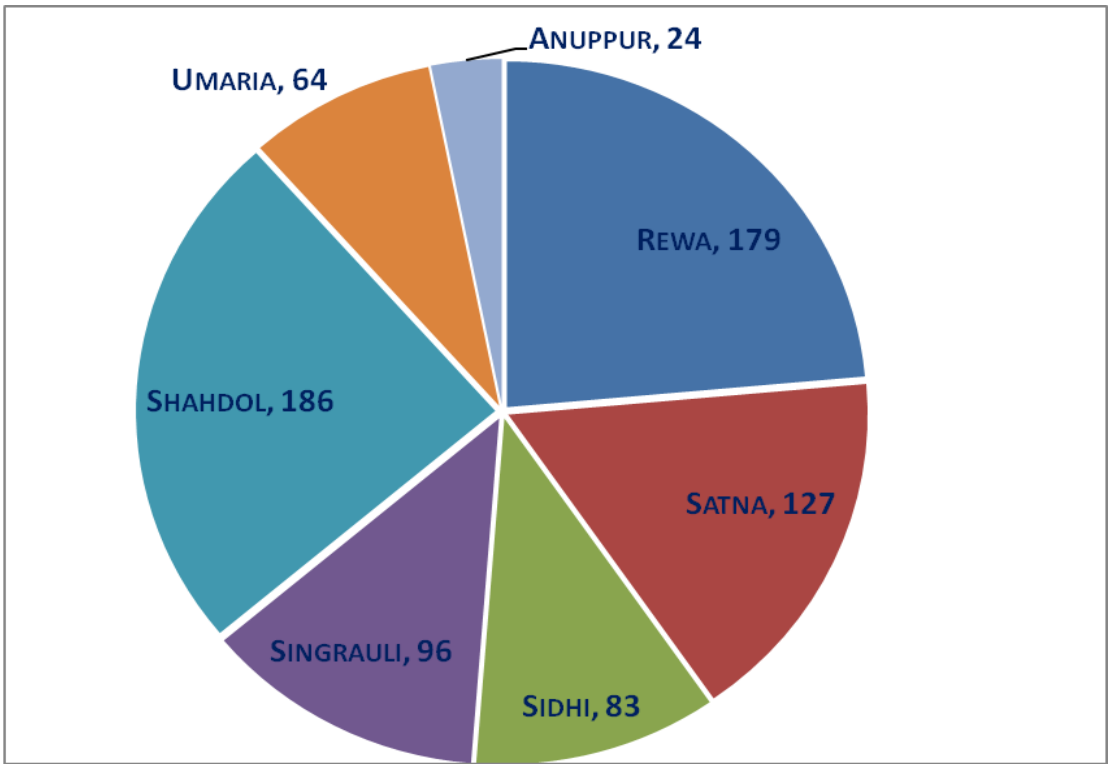

Figure 5 . District wise collection of small millet land races

Table 10 . Locality wise collection of Small millet land races

S. No	District	Block	No. of land races collected				
			Kodo millet	Little millet	Barnyard millet	Foxtail millet	Total
1	Rewa	Rewa	07	-	-	-	
		Raipur kurchulian	14	01 (1)	-	-	
		Java	01	-	-	-	
		Gangeb	23	-	-	-	
		Mauganj	19	-	-	-	
		Hanumana	34	19 (13)	01(01)	03(01)	
		Sirmor	31	-	02(02)	-	
		Teonthar	07	-	-	02(01)	
		Naigarhi	15	-	-	-	
		Total	**151**	**20 (14)**	**03(03)**	**05(02)**	**179**
2	Satna	Rampur Baghelan	02	-	-	-	
		Ramnagar	05	-	-	-	
		Sohawal	05	-	-	01(01)	
		Majhagavan	45	09 (6)	16(09)	38 (11)	
		Amarpatan	04	-	-	-	
		Maihar	02	-	-	-	
		Total	**63**	**09 (6)**	**16(09)**	**39(12)**	**127**
3	Sidhi	Sidhi	11	02(01)	04(03)	03(02)	
		Majholi	13	08(05)	02(01)	02(01)	
		Rampur naikin	06	-	-	-	
		Sihawal	14	01(01)	01(01)	05(02)	
		Kusumi	09	01(01)	-	-	
		Churhat	05	-	-	-	
		Total	**54**	**12(08)**	**07(05)**	**10(05)**	**83**
4	Singrauli	Waidhan	13	07(05)	07(07)	-	
		Chitrangi	22	10(08)	18(12)	-	
		Deosar	08	07(05)	04(03)	-	
		Total	**43**	**24(18)**	**29(22)**	**0**	**96**
5	Shahdol	Beohari	35	23 (13)	07(06)	20(10)	
		Jai Singh Nagar	34	18 (13)	02(02)	04(04)	
		Sohagpur	14	03 (03)	-	-	
		Gohparu	03	01 (01)	-	-	
		Budhar	16	06(04)	-	-	
		Total	**102**	**51(34)**	**09(08)**	**24(14)**	**186**
6	Umaria	Karkeli	21	03(03)	01(01)	-	
		Manpur	15	02(01)	01(01)	-	
		Pali	16	02(02)	02(02)	01(01)	
		Total	**52**	**07(06)**	**04(04)**	**01(01)**	**64**
7	Anuppur	Rajendragram	14	10(07)	0	0	24
		Total	**14**	**10(07)**	**0**	**0**	**24**
	Grant total		**479**	**133 (93)**	**68(51)**	**79(34)**	**759**

Figures in parentheses denoted number of villages

3.2 Consumption and ITKs of Small millets

During the collection of land races of small millets and survey for biotic stresses, following information on consumption pattern and ITKs of various small millets were generated from the growers

i. Kodo millet is mainly consumed as rice (bhat), chapatti, kheer and popped grains. Kodo rice is a heavy diet for hard working people. Tribal people also used kodo rice in preparation of pays, which is a cooked and fermented product. Kutki (Little millet), Sawan (Barnyard millet) and Kakun (Foxtail millet) are consumed as Rice and kheer as festive food.

ii. The grains of kodo millet have excellent storage property and can be stored for several years without fear of damage from store grain pests under ordinary storage conditions.

iii Medicinally kodo millet is styptic and is used in inflammation, diseases of liver, ulcer, dysentery and heat the body of both human and cattles. The rice of kodo (Kudai) and little millet is consumed by the diabetic people. It also reduced the cholesterol level in blood.

iv. Processing of small millets specially kodo millet is a tedious task. No improved mills are available for dehusking and debranning. Traditional practices like use of *Chakara* for dehusking and *Musal* for debranning is still in use.

v. Harvesting of the crop is done at maturity by sickles, where as threshing is done by traditional practicesi.e. use of bullocks. Few farmers use tractors for threshing.

vi All the Small millets specially little millet , barnyard millet and foxtail millet are also a good source of green fodder at early stage of crop growth for cattles.

Vii The straw of kodo millet is used in construction of earthen houses, earthen bins, pots and local mattresses in rural areas.

Viii Kodo poisoning (Matona) is also reported from few places, which is due to production of mycotoxins by mould fungi.

3.3 Survey for important biotic stresses

A roving field survey was conducted in the districts of Rewa, Satna, Sidhi, Singrauli, Shahdol and Umaria during 2009-10 and 2010-11 for important biotic stresses of Small millets (Table-6 and 7). Six villages of Satna district and 4 villages of Rewa districts were surveyed and no disease incidence was observed in standing crop of little millet. However, as per farmers view, shoot fly incidence in the early stages of crop growth was found in little millet as well as in kodo millet and results in severe damage to the crop.

Average incidence of head smut locally known as *kando or karia* varied from 0.0 to 7.0 % and *Striga* spp. varied from 0.0 to 14.5% was recorded in kodo millet in the districts of Rewa, Sidhi, Singarauli, Satna, Umaria and Shahdol. Problem of Matona (kodo poisoning) was also reported from Pokhara village of Sidhi district and Kudari village of Umaria district.

Table 11 : Summary of field survey for important diseases of kodo millet.

District	Bolck	Head smut (%)		*Striga* spp. (%)	
		Range	Mean	Range	Mean
Rewa	06	0.0 to 7.0	2.78	0.0 to 14.5	3.36
Satna	03	0.0 to 4.5	2.10	0.0 to 8.7	2.37
Sidhi	05	0.0 to 4.5	2.34	0.0 to 3.5	1.62
Singrauli	03	0.0 to 3.8	2.08	0.0 to 7.8	1.65
Umaria	03	0.0 to 3.5	2.19	0.0 to 7.5	2.91
Shahdol	04	0.0 to 3.8	1.97	0.0 to 3.8	1.58

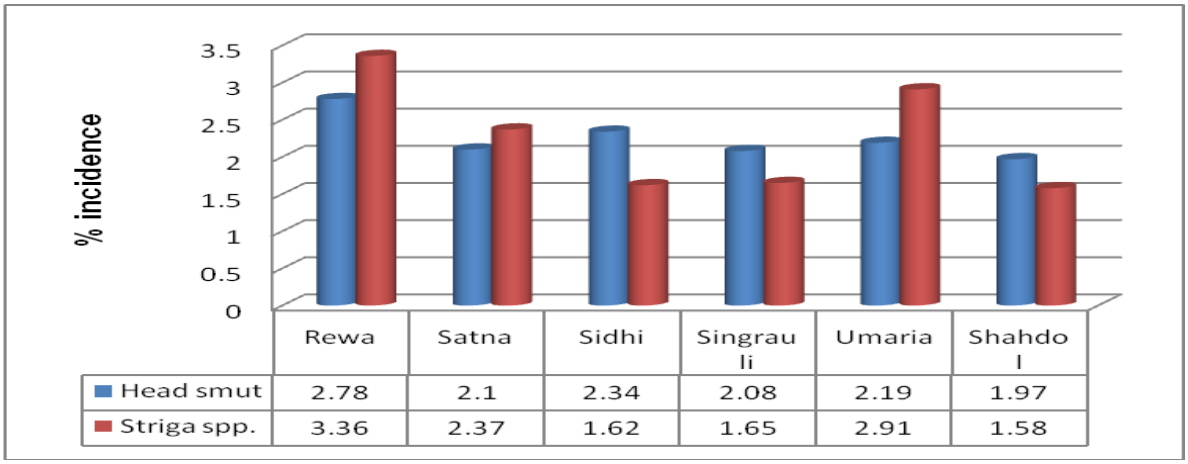

Fig. 6 Scenario of head smut and *Striga* species in kodo millet at farmers fields of different districts in Madhya Pradesh

Table 12 Important diseases of kodo millet recorded during field survey in various districts of M.P..

District	Block	Village	Head smut (%)			*Striga* spp. (%)		
			2009	2010	Mean	2009	2010	Mean
Rewa	Sirmour	Ataria	0.0	-	0.0	0.0	-	0.0
		Sav	3.5	-	3.5	2.5	-	2.5
		Shahpur	2.2	-	2.2	4.0	-	4.0
		Purva	0.0	-	0.0	0.0	-	0.0
		Bara	1.5	4.5	3.0	2.5	5.0	3.7
		Bhitwa	2.5	-	2.5	3.5	-	3.5
		Sirhana	-	2.5	2.5	-	3.5	3.5
		Karmai	-	1.7	1.7	-	2.0	2.0
		Ovara	-	3.5	3.5	-	4.5	4.5
		Palhan	-	2.5	2.5	-	4.6	4.6
		Amiliki	-	1.5	1.5	-	1.6	1.6
		Dihiya	-	2.4	2.4	-	1.8	1.8
		Kapsa	-	1.3	1.3	-	1.7	1.7
		Hinauta	-	2.7	2.7	-	3.4	3.4
	Raipur Kurchulian	Budhawa	4.0	2.0	3.0	0.0	1.5	0.7
		Geruar	3.5	-	3.5	5.0	-	5.0
		Banjari	2.0	0.5	1.2	3.0	1.5	2.2
		Tamari	3.0	-	3.0	4.0	-	4.0
		Narha	0.0	-	0.0	0.0	-	0.0
		Pokhara	-	2.7	2.7	-	3.2	3.2
		Charhai	-	3.3	3.3	-	2.7	2.7
	Gangeb	Keoti	-	2.3	2.3	-	1.2	1.2
		Rojhonhi	-	3.3	3.3	-	2.5	2.5
		Sarai	-	0.0	0.0	-	1.5	1.5
		Sonversa	-	5.5	5.5	-	12.4	12.4
		Ambi	-	3.5	3.5	-	2.5	2.5
	Mauganj	Khaira	3.0	3.0	3.0	0.0	0.5	2.5
		Dehar	-	0.5	0.5	-	8.0	8.0
		Kankesara	7.0	-	7.0	5.5	-	5.5
		Jhalwar	6.5	-	6.5	4.5	-	4.5
		Khutaha	-	3.7	3.7	-	2.2	2.2
		Naudhiya	-	2.5	2.5	-	1.5	1.5
		Kheeri	-	2.6	2.6	-	3.5	3.5
		Mundariya	-	2.5	2.5	-	1.5	1.5
	Hanumana	Khatkari	2.5	-	2.5	0.5	-	0.5
		Patehara	-	3.0	3.0	-	2.2	2.2
		Baraunhi	-	5.0	5.0	-	12.5	12.5
		Raghynathgarh	-	4.5	4.5	-	2.5	2.5
		Kailaspur	-	2.7	2.7	-	3.5	3.5
		Teekat	-	3.8	3.8	-	4.5	4.5
		Pidariya	-	5.5	5.5	-	14.5	14.5

		Gada	-	3.5	3.5	-	5.0	5.0
	Naigarhi	Dihiya	-	3.4	3.4	-	2.0	2.0
		Shivrajpur	-	2.2	2.2	-	0.0	0.0
		Sumedakala	-	0.0	0.0	-	0.0	0.0
Total	**6**	**45**			**2.78**			**3.36**
Satna	Rampur Baghelan	Shukwah	0.0	-	0.0	0.0	-	0.0
	Majhagavan	Jariha	2.0	3.5	2.7	0.0	2.4	1.2
		Karha	4.0	-	4.0	0.0	-	0.0
		Mohar	2.0	-	2.0	1.5	-	1.5
		Chhatimate	2.5	-	2.5	1.5	-	1.5
		Bhargavan	3.2	3.8	3.5	9.0	8.5	8.7
		Michkurin	0.0	-	0.0	0.0	-	0.0
		Kailaspur	1.0	-	1.0	2.5	-	2.5
		Sui Pahari	2.5	-	2.5	1.5	-	1.5
		Jillaha	1.0	-	1.0	0.0	-	0.0
		Sanda	0.0	-	0.0	0.0	-	0.0
		Chauraha	1.5	-	1.5	0.5	-	0.5
		Padwani	0.0	-	0.0	2.5	-	2.5
		Bijahari	-	3.8	3.8	-	2.5	2.5
		Dalela	-	3.6	3.6	-	6.8	6.8
		kathauta	-	4.5	4.5	-	5.5	5.5
	Sohawal	Jhanda	3.5	2.8	3.1	2.5	4.5	3.5
		Didone	3.0	-	3.0	1.0	-	1.0
Total	**3**	**18**			**2.10**			**2.37**
Sidhi	Sidhi	Baniadol	-	2.2	2.2	-	1.2	1.2
		Panwar	-	4.5	4.5	-	1.7	1.7
		Koluha	-	3.3	3.3	-	2.5	2.5
	Sihawal	Pokhara	-	2.2	2.2	-	1.5	1.5
		Dholutola	-	0.0	0.0	-	0.0	0.0
		Taraka	-	0.0	0.0	-	0.0	0.0
	Majholi	Chamaradol	-	2.2	2.2	-	1.0	1.0
		Bodari	-	3.8	3.8	-	2.5	2.5
		Badkadol	-	0.5	0.5	-	1.5	1.5
		Chandohidol	-	2.0	2.0	-	3.5	3.5
	Kusumi	Baheradol	-	3.5	3.5	-	1.5	1.5
		Ramgarh	-	1.5	1.5	-	1.5	1.5
		Bastua	-	3.0	3.0	-	2.5	2.5
	Rampur Naikin	Budhgauna	-	2.2	2.2	-	3.5	3.5
		Kandwari	-	3.5	3.5	-	0.0	0.0
		Lehchua	-	3.0	3.0	-	1.5	1.5
Total	**5**	**16**			**2.34**			**1.62**
Singrauli	Chitrangi	Khirwa	-	2.2	2.2	-	3.5	3.5
		Piperkhad	-	3.8	3.8	-	2.4	2.4

		Parsohar	-	2.2	2.2	-	0.0	0.0
		Kapurdai	-	3.8	3.8	-	7.8	7.8
		Sakaria	-	0.0	0.0	-	0.0	0.0
	Deosar	Ufradol	-	2.2	2.2	-	0.0	0.0
		Jatthatola	-	0.0	0.0	-	0.0	0.0
		Gajra Bahar	-	2.5	2.5	-	1.5	1.5
	Waidhan	Jamgarhi	-	2.8	2.8	-	2.0	2.0
		Rampa	-	0.0	0.0	-	0.0	0.0
		Koilkho	-	3.6	3.6	-	1.2	1.2
		Madhi	-	2.5	2.5	-	1.5	1.5
		Zeer	-	1.5	1.5	-	1.5	1.5
Total	**3**	**13**			**2.08**			**1.65**
Umaria	Manpur	Gangital	2.0	2.8	2.4	2.0	1.2	1.6
		Kudri	3.0	2.5	2.7	2.5	1.5	2.0
		Khutar	-	3.5	3.5	-	7.0	7.0
		Chhapdor	-	3.0	3.0	-	2.0	2.0
	Kerkeli	Uchehara	-	2.5	2.5	-	0.0	0.0
		Badagaon	-	0.0	0.0	-	2.0	2.0
		Pathar	-	1.8	1.8	-	2.5	2.5
	Pali	Sarvai khurd	-	3.5	3.5	-	7.5	7.5
		Salaiya	-	2.5	2.5	-	2.5	2.5
		Bannodha	-	0.0	0.0	-	2.0	2.0
Total	**3**	**10**			**2.19**			**2.91**
Shahdol	Jai Singh Nagar	Kanadi Khurd	1.0	-	1.0	2.5	-	2.5
		Mascera	0.0	-	0.0	0.0	-	0.0
		Barkachha	-	2.8	2.8	-	1.5	1.5
		Vijaha	-	3.8	3.8	-	2.5	2.5
	Gohparu	Baraha	-	0.0	0.0	-	0.0	0.0
		Aswari	-	2.5	2.5	-	2.5	2.5
	Sohagpur	Baruka	-	3.6	3.6	-	1.5	1.5
		Diyapeepar	-	2.6	2.6	-	0.5	0.5
		Raurapani	-	1.5	1.5	-	1.5	1.5
		Pathara	-	3.5	3.5	-	2.0	2.0
		Bhawarha	-	0.0	0.0	-	3.8	3.8
	Beohari	Sejahari	-	2.5	2.5	-	0.0	0.0
		Karondia	-	3.5	3.5	-	2.0	2.0
		Naudhiya	-	0.0	0.0	-	1.5	1.5
		Jamodi	-	1.5	1.5	-	1.0	1.0
		Charkhari	-	2.8	2.8	-	2.5	2.5
Total	**4**	**16**			**1.97**			**1.58**

3.4 Evaluation of land races of Small millets

3.4.1 Kodo millet

Four hundred seventy nine land races of kodo millet were evaluated for characterization using descriptors during *Kharif* 2009-10 and 2010-11 at College of Agriculture, Rewa (M.P.). Out of 479 land races, 428 were germinated. Statistics of important characters contributing to yield and biotic stresses is presented in Table 13 and 14. Large variation in plant height, no. of basal tillers, inflorescence length, grain yield and 1000 grain weight was recorded. Average maturity period varied from 90.5 to 107.5 days was recorded. Among important biotic stresses, incidence of head smut, sheath blight and shoot fly incidence ranging from 2.1 to 39.1%, 13.7 to 49.5% and 2.1 to 60.7%, respectively was recorded. High coefficient of variation (CV) was recorded in shoot fly incidence (65.3%) followed by head smut incidence (43.6%), number of basal tillers (30.9%) and grain yield per plant (21.2%), where as lowest CV was noted in days to maturity (2.6%) followed by days to 50% flowering (3.9%) and 1000 grain weight (7.9%).

Table 14. Pooled variability analysis of Kodo Millet landraces for Yield, Its Component Characters and Biotic Stresses (Average of 2009-10 and 2010-11)

S. No.	Character	Range		Mean	Standard Deviation	CV (%)
		Minimum	Maximum			
1	Plant height (cm)	34.2	82.4	58.10	6.45	10.1
2	No. of basal tillers	1.6	8.9	4.26	1.32	30.9
3	Days to 50% flowering	55.5	71.0	63.23	2.50	3.9
4	Inflorescence length (cm)	7.6	32.4	20.22	3.72	18.4
5	Raceme No.	2.5	12.2	6.45	1.34	20.8
6	Longest raceme length (cm)	3.8	8.4	6.59	0.57	8.6
7	Days to maturity	90.5	107.5	97.52	2.55	2.6
8	Grain yield per plant (g)	7.5	26.5	12.97	2.75	21.2
9	1000 grain weight (g)	3.35	6.65	4.83	0.38	7.9
10	Head smut (%)	2.1	39.1	17.27	7.54	43.6
11	Sheath blight (%)	13.7	49.5	25.71	5.39	20.9
12	Shoot fly (%)	2.1	60.7	25.18	12.53	65.3

Four hundred twenty nine land races of kodo millet were grouped into different categories on the basis of morphological, phonological characteristics and biotic stresses (Table 15). Results showed that 69.2% land races were erect, 87.6% semi dwarf and 59.8% land races have medium tllering capacity. All the screened land races showed sheath, sheath base, juncture and internode pigmentation, where as lamina pigmentation was observed in 97.7% land races.Medium maturity period (96 to 101 days) was recorded in 71.3% land races and 67.5% land races have medium grain yield (10.1 to 15 g) potential where as 78% land races have medium test weight (4.6 to 5.5 g). Based on spikelet arrangement on rachis, land races were categorized into regular rows, regular rows in upper half and irregular in lower half, two to three trregular rows and two to four irregular rows. Maximum land races i.e. 75.3% have spikelet arrangement on rachis was in regular rows. Ear exertion was complete in 419 (97.7%) land races, while partial ear exertion was recorded in 10 (3.3%) land races. Ear appearance was open in 124 (28.9%), semi compact in 237 (55.2%) and intermediate in 68 (15.9%) land races.

Shattering nature of inflorescence was observed in 181 land races, where as 247 were non-shattering type. Land races were grouped into orbicular, ellipsoidal and oval type grain shape. Maximum 99.8% land races have ellipsoidal grain shape and only one was orbicular type. Based on grain colour, the land races were grouped into grey brown, brown and dark brown. Dark brown grain colour was observed in 199 land races, where as 180 were brown and 50 were grey brown. Land races were also classified as resistant, moderately resistant and susceptible to head smut, sheath blight and shoot fly. Maximum (97.6%) land races were susceptible to head smut, 88.1% moderately resistant to sheath blight and 62.9% susceptible to shoot fly.

Table 13. Performance of kodo millet ;and races against morphological characters , yield and biotic stresses.

S. No	Entry	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	RPS 502	58.6	4.4	65	12.6	3.5	7.3	97	11.0	5.30	b	3	1	1	1	1	0	2	5	1	3	1	0	1	2	1	30.2	14.7	11.4
2	RPS 503	61.4	4.4	62	11.2	2.6	6.7	95	18.2	4.55	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	1	31.7	19.0	13.5
3	RPS 504	59.9	3.9	64	11.7	2.7	5.9	95	12.3	5.05	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	1	11.3	21.0	16.5
4	RPS 505	62.8	4.4	62	9.7	2.8	7.1	94	8.9	4.25	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	1	16.4	22.3	21.1
5	RPS 506	60.0	6.1	61	10.8	3.2	6.3	94	13.3	4.20	b	3	1	1	1	1	1	2	5	1	3	4	0	1	2	2	18.4	21.7	12.5
6	RPS 507	59.9	2.6	58	11.6	3.7	7.7	93	15.5	5.70	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	2	8.8	25.3	23.4
7	RPS 508	74.0	5.2	65	11.6	3.2	7.3	98	12.2	4.20	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	1	25.2	19.0	29.8
8	RPS 509	64.6	5.6	64	11.0	2.9	7.4	98	11.8	5.25	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	2	16.2	23.0	21.9
9	RPS 510	65.8	3.5	62	10.1	3.2	7.1	94	10.8	5.15	b	3	1	1	1	1	1	2	5	1	5	4	0	1	2	1	24.9	17.3	20.0
10	RPS 512	48.9	4.9	62	10.7	3.9	7.8	94	12.1	5.35	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	1	15.7	29.0	40.2
11	RPS 513	66.1	4.4	65	9.0	3.0	6.7	95	9.5	4.20	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	2	24.8	23.7	40.9
12	RPS 514	60.9	4.9	61	8.5	3.3	6.5	93	10.7	5.25	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	2	22.4	28.7	22.7
13	RPS 515	61.9	3.9	62	7.9	2.9	6.4	94	10.3	5.00	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	1	28.9	26.0	9.2
14	RPS 516	68.1	4.9	62	8.1	3.1	6.9	94	12.1	4.20	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	2	26.2	19.7	52.7
15	RPS 517	54.2	5.1	62	7.7	2.9	6.5	95	12.6	4.90	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	2	15.2	23.3	35.9
16	RPS 518	60.2	3.5	59	13.9	3.8	7.4	93	8.3	4.30	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	2	13.4	25.0	34.3
17	RPS 519	55.3	4.4	62	22.0	6.5	6.4	94	9.0	4.40	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	3	27.5	30.0	28.2
18	RPS 520	52.6	5.6	61	26.1	6.9	6.5	93	12.3	4.90	b	3	1	1	1	1	1	2	5	1	7	1	0	1	2	3	22.1	22.0	36.4
19	RPS 521	34.2	2.8	58	18.2	5.6	6.8	94	9.9	4.90	b	3	1	1	1	1	1	2	5	1	7	1	0	1	2	1	10.2	25.7	22.2
20	RPS 522	47.5	3.1	58	19.7	6.9	7.0	93	11.9	4.40	b	3	1	1	1	1	1	2	5	1	7	1	0	1	2	2	22.5	26.0	30.4
21	RPS 529	43.2	3.1	62	21.0	7.3	6.7	95	8.5	4.55	b	3	1	1	1	1	1	2	5	1	7	1	0	1	2	3	9.7	17.0	33.4
22	RPS 530	59.2	3.3	62	23.0	6.4	6.9	98	11.8	5.35	b	3	1	1	1	1	1	2	5	1	7	1	0	1	2	1	7.6	25.7	33.5
23	RPS 531	46.5	4.0	63	18.0	5.6	6.7	99	7.5	4.35	b	3	1	1	1	1	1	2	5	1	7	1	0	1	2	2	24.2	18.3	41.7
24	RPS 532	53.8	2.3	62	20.3	6.3	6.4	93	8.0	4.20	b	5	1	1	1	1	1	2	5	1	7	1	0	1	2	3	14.3	29.3	24.3
25	RPS 533	51.8	3.9	63	19.7	8.3	6.0	94	10.0	4.15	b	3	1	1	1	1	1	2	5	1	7	1	0	1	2	3	18.7	23.0	42.2
26	RPS 534	52.4	2.4	63	20.1	6.7	6.1	96	9.4	4.30	b	3	1	1	1	1	1	2	5	1	7	1	0	1	2	1	13.3	24.3	33.4
27	RPS 535	48.2	3.5	63	17.2	7.7	6.5	97	9.3	4.35	b	5	1	1	1	1	1	1	5	1	5	1	0	1	2	3	5.3	19.0	34.5
28	RPS 536	51.3	3.5	63	15.8	6.9	6.6	96	9.9	4.35	b	5	1	1	1	1	1	1	5	1	5	1	0	1	2	2	24.4	20.3	47.2
29	RPS 537	58.1	3.0	64	16.5	7.1	6.4	96	9.4	5.15	b	3	1	1	1	1	1	2	5	1	5	1	0	1	2	3	19.8	23.3	40.5
30	RPS 538	61.5	3.5	63	16.6	7.0	6.7	98	12.1	5.20	b	5	1	1	1	1	1	2	5	1	5	1	0	1	2	2	15.9	20.7	56.1
31	RPS 539	52.9	3.1	59	21.0	5.9	6.5	97	7.6	4.05	b	3	1	1	1	1	1	1	5	1	5	4	0	1	2	2	4.8	30.7	48.5
32	RPS 540	52.8	3.8	59	19.0	5.3	6.4	92	14.8	6.05	b	3	1	1	1	1	1	2	5	2	3	4	0	1	2	3	11.1	24.3	42.9

33	RPS 541	42.8	4.5	62	21.2	9.6	7.6	92	10.3	5.20	b	5	1	1	1	1	1	2	5	1	3	4	0	1	2	1	12.5	25.7	22.5
34	RPS 543	59.2	4.3	65	22.8	6.4	7.6	95	10.0	5.10	b	3	1	1	1	1	1	0	5	1	5	1	0	1	2	1	22.2	18.3	41.9
35	RPS 544	57.3	3.3	66	18.8	5.2	7.2	95	13.0	5.10	b	3	1	1	1	1	1	1	5	1	5	1	0	1	2	1	12.6	20.0	40.0
36	RPS 546	44.0	4.3	60	17.8	5.9	6.4	91	11.3	4.10	b	5	1	1	1	1	1	0	5	1	5	4	0	1	2	1	10.5	28.3	37.1
37	RPS 547	51.5	4.6	63	16.8	7.1	6.7	94	8.5	4.25	b	7	1	1	1	1	1	1	5	1	5	3	0	1	2	1	17.0	21.3	25.9
38	RPS 548	59.0	3.5	66	19.1	4.6	7.2	100	8.1	4.10	b	3	1	1	1	1	1	0	5	1	5	1	0	1	2	1	15.4	19.3	41.0
39	RPS 549	58.7	3.3	67	18.8	5.7	6.7	98	9.6	4.30	b	3	1	1	1	1	1	1	5	1	3	3	0	1	2	1	10.1	28.0	49.4
40	RPS 550	53.8	2.4	64	12.6	4.5	5.4	96	13.1	5.20	b	5	1	1	1	1	1	0	5	1	7	4	0	1	2	2	13.1	17.0	34.1
41	RPS 551	54.0	3.0	64	17.7	5.2	6.3	96	14.0	4.90	b	7	1	1	1	1	1	2	5	1	3	1	0	1	2	2	14.8	24.7	23.6
42	RPS 552	50.1	3.2	66	15.5	6.1	6.3	100	15.3	4.90	b	7	1	1	1	1	1	1	5	1	3	2	0	1	2	1	15.8	24.0	35.8
43	RPS 555	53.0	3.9	65	14.9	5.3	6.1	100	9.3	4.95	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	1	21.7	23.3	38.8
44	RPS 556	54.1	5.3	59	16.1	5.7	6.9	93	18.2	6.15	b	3	1	1	1	1	1	2	5	2	3	4	0	1	2	3	7.9	17.0	55.2
45	RPS 557	50.9	5.4	65	17.2	4.9	7.1	100	14.9	5.20	b	3	1	1	1	1	1	1	5	1	5	0	0	1	2	3	25.8	26.0	19.1
46	RPS 558	58.0	4.3	65	20.4	6.3	7.0	98	12.4	5.05	b	3	1	1	1	1	1	2	5	1	5	4	0	1	2	2	15.0	21.7	25.7
47	RPS 559	54.0	2.8	66	19.4	5.6	6.5	102	7.9	4.40	b	7	1	1	1	1	1	1	5	1	5	5	0	1	2	2	13.7	33.3	42.5
48	RPS 560	55.7	3.1	66	19.9	6.2	7.2	101	8.1	3.35	b	3	1	1	1	1	1	2	5	1	5	2	0	1	2	2	13.1	25.7	47.4
49	RPS 561	68.2	3.7	66	20.5	6.3	5.6	101	10.0	4.60	b	7	1	1	1	1	0	2	5	1	7	1	0	1	2	3	16.8	21.3	38.5
50	RPS 562	66.6	4.7	62	22.7	7.4	5.7	99	10.9	5.40	c	7	1	1	1	1	0	2	5	1	5	1	0	1	2	3	25.8	23.3	35.1
51	RPS 566	55.3	7.5	65	26.9	12.3	6.5	101	17.3	5.45	c	7	1	1	1	1	0	2	5	1	5	1	0	1	2	1	26.3	17.3	41.7
52	RPS 567	50.5	3.1	64	17.9	6.0	6.8	99	16.8	5.30	c	7	1	1	1	1	0	2	5	1	5	4	0	1	2	1	11.0	24.3	43.7
53	RPS 568	53.0	4.9	61	21.1	6.2	6.9	101	11.6	5.05	c	7	1	1	1	1	0	2	5	1	5	4	0	1	2	3	16.2	26.0	25.0
54	RPS 569	57.3	3.9	62	23.4	7.5	6.9	101	12.3	4.85	a	7	1	1	1	1	1	2	5	1	5	2	0	1	2	2	19.3	28.0	22.6
55	RPS 570	54.5	4.4	66	22.7	6.1	6.6	102	8.6	4.60	a	7	1	1	1	1	1	2	5	1	5	1	0	1	2	2	22.9	28.0	30.9
56	RPS 571	55.8	5.4	58	22.6	6.2	6.1	95	11.4	4.55	a	7	1	1	1	1	1	2	5	1	5	1	0	1	2	1	26.0	25.7	17.0
57	RPS 572	59.6	5.9	59	23.7	6.9	6.9	98	11.2	4.40	c	5	1	1	1	1	1	2	5	1	5	2	0	1	2	1	14.7	24.3	13.4
58	RPS 573	56.7	3.7	56	21.5	5.9	6.6	95	8.7	4.35	a	5	1	1	1	1	1	2	5	1	5	1	0	1	2	1	9.4	24.3	25.4
59	RPS 574	63.2	4.4	55	23.5	7.1	6.8	94	10.7	4.75	a	5	1	1	1	1	1	2	5	1	5	1	0	1	2	1	6.7	22.7	18.4
60	RPS 575	59.1	5.3	56	23.2	7.4	7.1	97	10.8	4.50	a	5	1	1	1	1	1	2	5	1	5	1	0	1	2	3	4.7	19.7	11.6
61	RPS 576	57.6	4.9	57	21.5	6.1	6.6	94	9.2	4.75	a	7	1	1	1	1	1	2	5	1	5	1	0	1	2	2	10.7	23.7	16.3
62	RPS 577	53.9	4.2	56	20.7	6.7	6.6	94	11.1	4.95	a	7	1	1	1	1	1	2	5	1	5	1	0	1	2	3	9.4	17.7	26.2
63	RPS 578	56.4	4.0	57	26.4	6.9	7.0	95	8.8	4.75	a	7	1	1	1	1	1	2	5	1	5	1	0	1	2	2	7.4	21.0	17.9
64	RPS 579	54.4	3.7	63	20.3	6.2	6.9	98	8.5	4.35	a	7	1	1	1	1	1	2	5	1	5	1	0	1	2	2	7.8	17.3	11.8
65	RPS 580	53.5	3.9	63	22.5	6.1	6.8	99	9.4	4.35	a	7	1	1	1	1	1	2	5	1	5	2	0	1	2	3	11.4	20.7	23.1
66	RPS 581	54.8	3.5	63	24.4	7.9	7.2	100	8.7	4.30	a	5	1	1	1	1	0	1	5	1	3	1	0	1	2	3	2.2	25.0	20.2

67	RPS 582	55.0	3.2	63	21.4	6.5	6.3	97	7.9	4.10	a	5	1	1	1	1	0	1	5	1	3	1	0	1	2	3	5.8	20.0	30.1
68	RPS 583	50.4	3.8	66	21.2	7.3	6.3	101	7.9	4.15	a	5	1	1	1	1	0	1	5	1	5	1	0	1	2	3	4.2	24.7	8.9
69	RPS 584	49.8	3.5	65	20.9	5.9	6.3	101	9.0	4.15	a	5	1	1	1	1	0	1	5	1	5	1	0	1	2	2	6.0	21.0	21.7
70	RPS 585	50.9	3.7	65	21.4	6.2	6.4	100	8.9	4.10	a	5	1	1	1	1	0	1	5	1	5	1	0	1	2	2	5.9	19.7	46.8
71	RPS 587	45.3	3.0	65	17.1	4.9	7.3	103	8.0	3.75	a	5	1	1	1	1	0	2	3	1	5	1	0	1	2	2	12.0	24.0	34.5
72	RPS 588	47.1	2.2	66	15.5	4.3	6.8	104	8.4	4.00	a	7	1	1	1	1	1	2	3	1	5	1	0	1	2	3	7.5	26.7	19.6
73	RPS 589	49.6	3.1	67	17.5	4.5	6.2	105	8.8	4.55	a	5	1	1	1	1	1	2	3	1	5	1	0	1	2	3	13.7	20.3	15.6
74	RPS 590	51.4	3.3	69	18.7	5.5	6.9	108	9.2	4.40	a	7	1	1	1	1	1	2	3	1	5	1	0	1	2	3	3.7	20.7	16.3
75	RPS 591	48.8	3.5	68	13.5	4.8	6.9	106	8.7	4.30	a	5	1	1	1	1	1	1	3	1	5	1	0	1	2	1	11.6	23.0	17.2
76	RPS 593	50.9	2.5	62	17.3	7.4	6.8	97	10.1	4.65	b	3	1	1	1	1	1	1	3	1	3	1	0	1	2	1	11.4	17.7	31.9
77	RPS 594	54.1	2.5	63	17.0	5.5	6.0	99	11.5	4.85	b	3	1	1	1	1	1	1	3	1	5	1	0	1	2	2	6.4	21.3	33.0
78	RPS 595	53.1	4.2	67	18.1	5.5	6.7	104	11.0	4.70	b	5	1	1	1	1	1	2	3	1	7	1	0	1	2	1	10.0	20.7	36.0
79	RPS 596	49.5	3.3	68	16.1	7.3	7.0	105	10.1	4.65	a	7	1	1	1	1	1	2	3	1	5	1	0	1	2	1	18.0	25.0	31.4
80	RPS 597	56.0	3.9	66	16.6	8.9	7.4	104	11.0	4.85	a	5	1	1	1	1	1	1	3	1	5	1	0	1	1	1	7.8	27.7	16.3
81	RPS 598	54.0	3.2	64	16.5	6.9	6.9	103	10.9	4.55	b	3	1	1	1	1	1	2	3	1	5	1	0	1	2	1	16.8	29.0	43.8
82	RPS 599	60.2	3.9	63	17.4	9.2	7.1	99	9.7	4.65	a	5	1	1	1	1	1	2	3	1	5	1	0	1	2	2	20.0	28.3	19.4
83	RPS 600	57.0	2.9	66	19.1	7.4	6.8	102	12.5	4.60	a	5	1	1	1	1	1	2	3	1	5	1	0	1	2	1	13.3	28.3	29.4
84	RPS 604	63.3	5.7	63	17.5	4.7	6.9	101	13.3	4.85	b	5	1	1	1	1	1	2	3	1	5	1	0	1	2	2	11.1	27.0	48.1
85	RPS 605	62.5	4.9	65	17.3	5.3	7.0	99	11.6	4.20	b	7	1	1	1	1	1	2	3	1	5	1	1	1	2	2	17.8	22.3	30.8
86	RPS 606	57.2	3.2	64	19.0	5.5	7.0	98	8.7	4.50	b	5	1	1	1	1	1	12	3	1	5	1	0	1	2	1	10.0	22.7	40.5
87	RPS 607	58.9	3.5	64	20.4	6.5	7.2	99	9.9	4.45	b	3	1	1	1	1	1	1	3	1	5	1	1	1	2	1	11.5	18.0	36.5
88	RPS 608	59.7	3.8	66	18.9	5.7	7.1	103	10.0	4.25	b	5	1	1	1	1	1	2	3	1	5	1	0	1	2	1	19.1	23.0	40.9
89	RPS 609	52.7	3.6	63	18.5	5.9	7.2	98	12.7	4.10	b	3	1	1	1	1	1	2	3	1	5	1	1	1	2	2	20.8	17.3	29.8
90	RPS 610	57.5	3.3	66	20.2	7.7	6.6	102	11.1	4.15	b	7	1	1	1	1	1	2	3	1	5	1	0	1	2	1	27.8	24.7	44.7
91	RPS 611	55.3	4.3	66	18.0	6.3	6.3	100	14.0	5.35	b	7	1	1	1	1	1	2	3	1	7	1	1	1	2	1	23.9	27.7	30.6
92	RPS 612	49.6	3.5	66	19.6	5.6	7.0	102	12.9	5.65	b	7	1	1	1	1	1	2	5	1	5	1	0	1	2	1	19.2	23.3	6.8
93	RPS 614	55.8	5.3	63	18.4	6.4	6.4	99	13.5	5.80	b	7	1	1	1	1	1	2	5	1	5	1	0	1	2	2	23.8	26.0	49.1
94	RPS 615	59.0	3.5	63	20.0	6.7	6.6	97	9.9	4.20	b	7	1	1	1	1	1	1	3	1	5	1	1	1	2	2	13.6	29.3	35.0
95	RPS 616	61.9	4.4	65	20.7	6.8	6.6	100	13.0	5.30	b	7	1	1	1	1	1	1	5	1	3	1	0	1	2	2	23.3	22.3	48.0
96	RPS 617	59.9	2.0	65	17.0	5.9	6.0	99	9.8	5.10	b	7	1	1	1	1	1	2	3	1	7	3	1	1	2	2	15.6	27.7	28.2
97	RPS 618	61.0	3.5	63	22.5	7.2	7.2	96	8.8	4.25	b	3	1	1	1	1	1	1	5	1	3	1	0	1	2	2	8.9	29.0	41.2
98	RPS 619	60.9	3.3	63	24.4	7.3	7.0	96	8.4	4.30	b	3	1	1	1	1	1	2	5	1	3	4	1	1	2	2	19.2	26.0	29.1
99	RPS 620	59.1	3.1	64	18.6	6.3	7.0	96	16.8	5.95	b	3	1	1	1	1	1	1	5	1	5	1	0	1	2	1	15.5	28.7	34.8
100	RPS 621	59.3	3.9	61	23.3	7.6	6.6	94	11.5	4.85	b	3	1	1	1	1	1	2	5	1	3	1	1	1	2	2	24.8	19.3	25.7
101	RPS 624	52.8	4.5	62	19.9	7.3	6.4	97	10.9	4.55	a	5	1	1	1	1	1	2	5	1	7	1	0	1	2	3	10.5	21.7	12.4

102	RPS 626	55.2	3.3	63	24.3	7.4	6.1	97	9.4	4.45	a	7	1	1	1	1	1	2	5	1	5	1	0	1	2	3	20.3	20.0	18.3
103	RPS 628	61.8	4.9	63	20.7	6.7	6.0	96	15.0	5.00	b	3	1	1	1	1	1	2	5	1	5	1	0	1	2	3	20.7	20.7	6.2
104	RPS 629	64.8	4.5	65	22.8	6.2	6.7	100	14.5	4.95	b	5	1	1	1	1	1	2	3	1	5	2	1	1	2	3	14.5	13.7	11.9
105	RPS 630	62.8	4.7	64	21.1	6.8	6.8	97	13.8	5.10	b	3	1	1	1	1	1	1	3	1	3	1	0	1	2	3	19.9	24.0	12.1
106	RPS 631	63.1	3.5	63	20.2	6.8	6.4	97	14.8	5.00	b	7	1	1	1	1	1	1	3	1	5	1	1	1	2	1	34.4	27.7	14.8
107	RPS 632	63.1	5.7	60	20.1	6.9	6.6	91	12.0	5.05	b	7	1	1	1	1	1	2	3	1	7	1	0	1	2	3	19.9	20.3	21.8
108	RPS 634	62.2	3.7	65	21.6	6.6	6.4	98	14.5	4.70	b	3	1	1	1	1	1	1	3	1	7	1	0	1	2	3	30.4	17.0	22.2
109	RPS 635	65.2	3.3	65	20.7	6.5	7.0	99	16.6	5.40	b	7	1	1	1	1	1	2	3	2	5	1	1	1	2	2	29.6	21.7	20.4
110	RPS 636	59.1	2.7	65	19.2	5.9	5.7	101	15.5	5.35	b	3	1	1	1	1	1	2	3	1	7	1	0	1	2	2	18.8	23.0	21.8
111	RPS 637	64.0	4.6	64	20.4	6.1	6.9	98	9.8	4.20	b	7	1	1	1	1	1	2	3	2	5	1	1	1	2	3	5.3	23.0	32.7
112	RPS 638	58.9	3.4	63	19.4	6.9	7.2	95	16.8	5.65	b	5	1	1	1	1	1	1	3	1	5	1	0	1	2	2	32.3	28.3	18.6
113	RPS 639	67.1	3.6	63	19.9	6.7	7.5	98	19.6	6.40	b	5	1	1	1	1	1	1	3	2	5	1	1	1	2	3	8.4	24.7	23.1
114	RPS 640	61.2	4.9	64	21.6	6.4	6.2	98	13.4	4.85	b	7	1	1	1	1	1	1	5	1	3	1	0	1	2	3	18.5	20.7	31.0
111 115	RPS 641	57.2	4.5	63	22.6	6.3	6.7	99	10.3	4.40	b	7	1	1	1	1	1	1	3	1	5	2	1	1	2	2	24.7	28.3	20.8
116	RPS 642	68.6	3.6	63	20.6	6.2	6.7	98	16.1	5.70	b	7	1	1	1	1	1	2	5	1	5	1	0	1	2	1	26.7	28.7	5.8
117	RPS 643	56.0	5.2	63	18.7	7.0	6.7	97	11.6	4.25	b	5	1	1	1	1	1	2	3	2	5	1	1	1	2	3	30.2	25.3	16.9
118	RPS 644	58.3	4.7	64	20.3	6.2	7.0	100	9.7	4.30	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	2	7.2	21.3	34.7
119	RPS 645	64.5	5.8	67	20.7	6.5	7.2	102	11.2	4.80	b	3	1	1	1	1	1	1	3	2	7	1	1	1	2	3	10.8	27.7	20.4
120	RPS 646	59.2	4.5	63	19.0	7.2	6.3	97	9.8	4.45	b	5	1	1	1	1	1	1	3	1	7	3	0	1	2	3	17.0	16.7	15.9
121	RPS 647	54.6	5.8	66	18.0	6.0	6.0	101	11.8	4.60	b	7	1	1	1	1	1	1	3	2	7	2	1	1	2	3	24.6	24.0	10.3
122	RPS 648	69.1	4.3	65	20.0	7.1	5.7	100	12.8	5.55	b	5	1	1	1	1	1	1	3	1	5	1	0	1	2	2	13.6	32.3	30.0
123	RPS 649	61.3	7.9	63	16.8	6.5	6.6	97	23.9	5.05	b	7	1	1	1	1	1	2	3	1	7	1	1	1	2	1	32.2	19.7	38.4
124	RPS 650	70.1	5.7	63	18.8	7.2	7.6	99	14.1	5.50	b	5	1	1	1	1	1	2	5	1	7	1	0	1	2	3	16.8	25.3	30.2
125	RPS 651	58.6	6.9	63	18.4	6.0	6.3	97	12.4	5.35	b	7	1	1	1	1	1	1	7	1	7	1	1	1	2	3	8.7	26.7	35.9
126	RPS 652	63.4	5.4	63	18.9	6.2	6.5	96	13.6	5.30	b	7	1	1	1	1	1	2	7	1	3	2	0	1	2	3	22.1	21.0	32.7
127	RPS 653	56.2	5.5	63	18.4	6.7	6.6	98	14.7	5.00	b	5	1	1	1	1	1	2	5	1	5	2	0	1	2	3	15.1	33.3	41.8
128	RPS 654	66.2	4.7	63	18.3	6.6	6.4	97	13.6	5.35	b	3	1	1	1	1	1	2	5	1	3	1	0	1	2	2	39.1	21.7	37.9
129	RPS 655	49.6	6.6	60	16.3	5.3	6.1	97	9.6	4.60	b	5	1	1	1	1	1	2	5	1	5	3	0	1	2	3	14.5	23.0	38.2
130	RPS 656	54.0	4.3	60	17.6	6.2	6.4	97	12.3	4.95	b	3	1	1	1	1	1	1	5	1	3	2	0	1	2	2	8.9	24.7	39.2
131	RPS 657	58.0	4.9	63	17.8	5.5	5.9	96	12.9	4.90	b	5	1	1	1	1	1	2	5	1	5	1	0	1	2	3	15.7	27.3	49.1
132	RPS 658	60.6	7.1	60	21.9	7.6	7.0	96	16.4	5.30	b	3	1	1	1	1	1	2	5	1	7	1	0	1	2	3	18.7	29.0	28.6
133	RPS 659	60.2	5.3	63	19.2	5.6	6.5	96	10.9	4.15	b	5	1	1	1	1	1	2	3	1	5	1	0	1	2	3	15.2	23.3	35.0
134	RPS 660	60.8	4.9	62	19.7	6.4	6.3	95	15.7	4.40	c	5	1	1	1	1	1	2	5	1	7	2	1	1	2	3	17.8	24.3	35.6
135	RPS 661	47.6	3.1	64	15.6	5.9	5.2	98	13.1	4.90	c	7	1	1	1	1	1	1	5	1	5	1	1	1	2	3	14.3	18.3	32.7

136	RPS 662	53.0	3.7	63	17.9	6.8	6.1	96	13.9	4.65	c	7	1	1	1	1	1	1	5	1	7	1	1	1	2	3	13.4	17.0	20.6
137	RPS 663	55.0	2.7	61	15.6	5.6	5.7	95	8.5	4.40	c	1	1	1	1	1	1	2	7	1	5	2	1	1	2	3	11.3	20.3	17.9
138	RPS 664	56.5	3.7	58	16.9	5.6	5.4	98	8.6	4.50	b	7	1	1	1	1	1	2	5	1	7	1	1	1	2	3	11.0	28.0	30.7
139	RPS 665	54.9	5.3	58	19.8	6.0	5.7	96	9.1	4.35	b	7	1	1	1	1	1	1	5	1	7	2	1	1	2	3	23.8	22.7	42.4
140	RPS 666	45.3	5.1	58	16.5	5.6	5.5	97	8.6	4.65	b	3	1	1	1	1	1	2	5	2	5	3	1	1	2	3	12.5	30.3	22.4
141	RPS 667	50.1	5.2	57	20.7	7.6	6.7	93	11.4	4.85	b	7	1	1	1	1	1	2	5	2	7	1	1	1	2	3	10.3	24.3	27.4
142	RPS 668	52.1	5.2	57	17.4	7.4	5.7	97	10.2	4.70	b	5	1	1	1	1	1	1	5	1	5	2	1	1	2	3	12.3	25.3	20.0
143	RPS 669	51.7	5.3	58	16.0	5.9	6.5	96	9.5	4.85	b	7	1	1	1	1	1	1	5	1	5	1	1	1	2	3	6.0	28.0	44.2
144	RPS 670	53.0	4.6	61	19.8	7.0	6.2	100	12.3	4.35	b	5	1	1	1	1	1	1	5	1	7	3	0	1	2	2	12.6	20.3	35.4
145	RPS 671	59.7	3.9	62	19.0	6.4	6.7	99	17.0	5.10	b	3	1	1	1	1	1	2	3	1	5	1	0	1	2	3	13.6	24.7	32.4
146	RPS 672	58.9	3.1	62	20.0	7.6	6.7	98	14.6	5.10	b	5	1	1	1	1	1	2	5	1	7	1	0	1	2	2	23.4	20.0	36.2
147	RPS 673	52.2	3.3	61	21.9	6.4	6.2	97	12.3	4.90	b	3	1	1	1	1	1	2	3	1	5	1	0	1	2	2	20.8	20.7	30.0
148	RPS 674	52.1	5.4	59	20.0	7.2	5.7	96	12.2	4.90	b	7	1	1	1	1	1	2	5	1	5	1	0	1	2	1	11.7	25.0	41.0
149	RPS 675	50.1	4.7	59	19.8	6.6	5.9	98	13.0	5.30	b	3	1	1	1	1	1	1	3	1	3	1	0	1	2	2	20.8	29.0	53.4
150	RPS 676	51.1	5.3	61	20.3	7.5	6.7	96	11.5	4.95	b	7	1	1	1	1	1	2	5	1	5	1	0	1	2	2	15.8	24.7	40.8
151	RPS 677	48.3	3.7	58	19.1	6.6	6.7	98	10.7	4.90	b	3	1	1	1	1	1	2	3	1	3	1	0	1	2	3	16.7	34.7	28.4
152	RPS 678	52.2	4.9	59	18.8	5.3	6.4	95	10.0	4.80	b	5	1	1	1	1	1	2	5	1	7	1	0	1	2	3	6.4	20.0	29.6
153	RPS 679	51.8	4.9	59	20.7	8.5	5.7	97	11.3	4.95	b	7	1	1	1	1	1	2	5	1	7	1	0	1	2	2	9.6	28.7	25.0
154	RPS 680	51.9	4.3	67	19.8	6.4	5.4	103	8.9	4.85	b	3	1	1	1	1	1	2	5	1	5	1	0	1	2	2	12.5	28.0	29.6
155	RPS 681	51.0	2.6	58	19.2	5.4	6.9	92	10.9	4.85	b	5	1	1	1	1	1	1	3	1	5	4	0	1	2	1	17.1	24.7	24.9
156	RPS 683	44.7	4.1	59	16.5	6.6	6.7	93	10.6	4.85	b	7	1	1	1	1	1	2	3	1	5	1	0	1	2	3	21.3	20.7	23.8
157	RPS 685	55.9	4.3	60	20.0	5.4	6.7	94	11.9	4.85	c	5	1	1	1	1	1	2	7	1	7	1	0	1	2	1	15.8	20.7	6.3
158	RPS 686	50.1	3.3	63	19.3	5.9	6.9	96	9.1	4.65	b	7	1	1	1	1	1	1	7	1	5	1	0	1	2	1	18.3	25.0	20.6
159	RPS 687	52.1	3.5	60	21.6	7.9	5.7	92	10.5	5.25	b	3	1	1	1	1	1	1	5	1	5	2	0	1	2	1	24.2	21.0	24.8
160	RPS 688	57.1	3.5	60	23.6	7.7	6.7	95	17.4	5.45	b	7	1	1	1	1	1	2	5	1	5	1	0	1	2	2	34.6	22.0	14.3
161	RPS 689	58.0	3.3	61	18.4	6.3	5.9	97	15.4	5.15	b	3	1	1	1	1	1	1	5	1	3	2	0	1	2	2	13.9	17.3	12.4
162	RPS 690	64.6	3.7	64	20.4	8.2	5.6	98	14.0	4.85	b	3	1	1	1	1	1	2	5	1	5	2	0	1	2	2	28.8	23.0	28.6

163	RPS 691	60.1	5.9	63	23.3	7.6	6.7	94	12.3	4.75	b	5	1	1	1	1	1	2	5	1	5	1	0	1	2	2	13.6	18.3	12.5
164	RPS 692	58.0	4.7	64	18.1	5.6	6.5	94	11.2	4.85	b	5	1	1	1	1	1	2	7	1	5	1	0	1	2	3	23.0	24.0	27.7
165	RPS 693	63.2	4.5	64	20.5	8.2	7.3	99	13.4	5.05	b	5	1	1	1	1	1	1	5	2	5	1	0	1	2	2	13.8	29.3	12.2
166	RPS 694	56.0	5.5	64	20.3	6.7	6.2	97	14.0	4.55	b	5	1	1	1	1	1	1	5	1	3	1	0	1	2	3	7.1	17.7	11.3
167	RPS 695	61.3	4.6	64	22.4	7.3	6.0	96	12.6	4.85	b	5	1	1	1	1	1	2	5	1	5	1	0	1	2	3	15.8	18.0	13.5
168	RPS 696	53.1	4.5	64	15.9	5.7	6.2	92	11.2	4.75	b	5	1	1	1	1	1	2	5	1	5	2	0	1	2	3	15.1	31.3	22.7
169	RPS 697	57.1	4.3	60	17.4	5.7	6.5	97	11.6	5.05	b	7	1	1	1	1	1	1	5	1	5	1	0	1	2	2	10.4	21.0	21.7
170	RPS 698	60.0	5.9	60	21.5	7.4	5.9	96	11.9	4.85	c	3	1	1	1	1	1	1	5	1	5	3	0	1	2	2	19.3	30.3	24.2
171	RPS 699	64.2	4.7	63	21.9	5.2	7.2	96	13.5	4.95	b	5	1	1	1	1	1	1	5	1	5	1	0	1	2	3	15.5	21.7	36.7
172	RPS 700	51.1	6.5	60	16.8	4.3	5.7	91	13.4	5.65	c	7	1	1	1	1	1	1	5	1	3	1	0	1	2	2	13.4	24.3	26.4
173	RPS 701	46.6	6.6	65	18.0	4.3	5.9	95	14.3	5.30	c	5	1	1	1	1	1	1	3	1	5	3	0	1	2	1	19.4	30.0	36.7
174	RPS 702	47.8	5.1	65	16.7	5.1	6.2	95	12.2	5.10	c	5	1	1	1	1	1	1	3	1	5	3	0	1	2	3	34.4	28.0	28.3
175	RPS 705	65.9	3.9	71	22.2	7.2	7.5	103	13.1	5.70	a	5	1	1	1	1	1	2	3	1	7	4	0	1	2	3	33.0	28.7	60.7
176	RPS 707	63.9	4.9	66	18.7	6.7	7.0	98	16.3	5.20	a	5	1	1	1	1	1	2	5	1	5	1	0	1	2	3	23.2	36.3	40.5
177	RPS 708	55.2	4.0	64	16.2	6.1	6.9	96	16.4	5.95	b	3	1	1	1	1	1	1	7	1	3	3	0	1	2	3	16.8	17.0	40.4
178	RPS 709	57.8	6.5	65	21.0	4.3	6.2	95	15.4	5.70	b	5	1	1	1	1	1	1	7	1	3	1	0	1	2	3	34.8	25.0	46.9
179	RPS 710	72.8	4.9	65	17.8	5.6	6.2	96	26.5	5.35	b	7	1	1	1	1	1	2	7	1	5	1	0	1	2	3	15.6	32.0	52.6
180	RPS 711	58.0	6.1	68	18.9	7.2	6.4	101	12.8	4.85	b	5	1	1	1	1	1	2	7	1	5	1	0	1	2	3	26.1	32.0	26.9
181	RPS 712	67.8	5.3	68	20.9	5.2	7.6	98	23.2	4.75	b	5	1	1	1	1	1	2	7	1	5	1	0	1	2	3	5.6	22.0	29.2
182	RPS 713	65.8	5.3	68	18.8	7.2	5.7	99	13.6	5.15	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	13.8	29.7	41.0
183	RPS 714	69.8	5.7	61	16.7	4.4	6.7	95	12.2	4.55	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	20.6	24.0	28.6
184	RPS 715	65.0	6.6	65	19.0	7.2	6.5	96	17.0	4.85	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	18.5	22.3	32.7
185	RPS 716	60.4	5.1	65	16.0	5.6	6.5	94	13.0	4.85	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	11.2	30.3	43.3
186	RPS 717	60.6	5.2	64	18.5	6.2	6.5	95	12.3	4.55	b	5	1	1	1	1	1	2	7	1	3	2	0	1	2	3	21.1	24.7	51.7
187	RPS 718	61.5	3.1	64	18.7	5.7	6.3	97	14.6	4.95	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	21.3	23.0	30.0
188	RPS 719	62.6	4.3	64	17.5	6.8	6.2	96	11.7	4.95	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	10.7	25.7	34.3
189	RPS 720	58.8	4.7	64	16.5	6.4	6.2	95	12.7	4.85	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	22.5	23.3	27.0

190	RPS 721	49.1	5.3	65	16.7	4.6	6.7	99	11.8	4.65	b	5	1	1	1	1	1	2	7	1	3	2	0	1	2	3	21.3	21.3	40.2
191	RPS 722	51.8	5.3	63	16.5	5.2	6.3	98	14.4	4.85	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	22.3	31.3	24.4
192	RPS 723	54.4	4.1	64	14.7	5.7	6.0	98	12.0	4.70	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	19.1	21.0	36.1
193	RPS 724	63.1	6.7	65	17.9	6.6	6.5	97	17.4	4.95	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	18.6	23.0	30.4
194	RPS 725	66.5	5.9	65	23.6	6.9	6.9	98	10.6	4.90	b	5	1	1	1	1	1	2	7	1	3	1	0	1	2	3	29.6	34.3	34.5
195	RPS 726	56.8	4.5	65	19.2	6.7	6.3	97	12.2	4.55	b	5	1	1	1	1	1	2	7	1	3	2	0	1	2	3	11.8	26.7	31.5
196	RPS 727	53.7	4.1	64	20.5	7.7	5.9	98	10.5	4.85	b	5	1	1	1	1	1	2	5	1	3	1	0	1	2	3	20.3	33.3	38.4
197	RPS 729	56.9	6.5	68	20.2	6.4	6.6	100	14.8	4.95	b	5	1	1	1	1	1	2	5	1	3	1	0	1	2	3	10.4	21.0	35.3
198	RPS 730	59.4	5.9	66	18.0	6.6	6.5	95	14.5	4.60	b	5	1	1	1	1	1	2	5	1	3	1	0	1	2	3	32.6	32.0	26.8
199	RPS 731	59.9	5.2	67	18.2	5.7	6.2	96	12.3	4.75	b	5	1	1	1	1	1	2	5	1	3	1	0	1	2	3	22.2	25.0	35.5
200	RPS 733	44.2	5.5	64	17.7	5.9	5.9	97	13.6	4.80	b	5	1	1	1	1	1	2	5	1	3	1	0	1	2	3	34.4	24.0	31.5
201	RPS 734	47.8	7.1	64	18.7	7.2	6.1	94	16.5	4.60	b	5	1	1	1	1	1	2	5	1	3	1	0	1	2	3	13.2	31.7	26.7
202	RPS 736	55.0	7.2	66	23.4	8.9	6.7	98	14.5	4.85	b	3	1	1	1	1	1	2	5	1	3	3	0	1	2	3	18.4	33.3	48.4
203	RPS 737	56.0	7.3	65	24.1	7.7	6.7	97	14.3	5.45	c	5	1	1	1	1	1	1	7	1	5	1	0	1	2	3	21.5	31.7	52.8
204	RPS 738	56.8	3.6	65	19.6	6.4	5.1	97	11.2	4.75	c	5	1	1	1	1	0	1	7	1	5	1	0	1	2	3	14.7	25.0	54.9
205	RPS 739	52.9	7.8	65	22.5	7.4	6.7	93	16.2	4.85	c	5	1	1	1	1	0	1	7	1	5	1	0	1	2	3	13.5	15.7	57.5
206	RPS 740	54.6	7.2	65	22.8	7.7	6.5	97	15.6	4.65	c	5	1	1	1	1	0	1	7	1	5	3	0	1	2	3	17.4	25.3	20.8
207	RPS 742	59.0	4.8	63	18.3	4.7	7.3	93	10.9	4.65	c	5	1	1	1	1	0	1	7	1	5	1	0	1	2	3	29.2	22.5	31.7
208	RPS 743	52.3	3.7	63	19.2	5.7	6.5	96	11.6	4.95	c	3	1	1	1	1	0	1	5	1	5	1	0	1	2	3	15.7	26.0	21.6
209	RPS 744	64.8	3.7	62	20.2	6.4	7.4	97	16.2	4.65	c	3	1	1	1	1	0	1	5	1	5	1	0	1	2	3	16.9	24.7	19.9
210	RPS 745	59.0	4.3	62	21.7	7.6	6.9	97	14.0	5.15	c	5	1	1	1	1	0	1	5	1	5	1	0	1	2	2	9.0	27.0	25.8
211	RPS 746	69.8	4.9	63	24.4	7.5	6.9	97	12.4	4.85	c	1	1	1	1	1	1	1	7	1	5	1	0	1	2	3	21.1	33.3	26.0
212	RPS 747	82.4	4.5	67	22.7	7.0	8.1	100	14.1	5.20	c	3	1	1	1	1	1	1	7	1	5	1	0	1	2	3	28.2	24.0	29.0
213	RPS 748	79.1	4.3	68	23.8	7.7	7.0	102	15.1	4.85	c	3	1	1	1	1	1	2	5	1	3	1	0	1	2	3	26.2	21.0	38.2
214	RPS 749	68.9	3.5	63	23.4	6.6	7.5	98	16.6	5.05	c	3	1	1	1	1	1	2	5	1	3	1	0	1	2	3	34.7	27.0	30.6
215	RPS 751	70.1	5.7	63	21.7	6.7	6.9	97	14.6	5.05	c	7	1	1	1	1	1	2	7	1	5	1	0	1	2	3	19.5	24.3	25.8
216	RPS 752	73.4	4.8	63	26.5	7.7	7.1	98	12.0	5.05	c	5	1	1	1	1	1	2	5	1	7	1	0	1	2	3	18.7	28.0	28.3

217	RPS 753	72.2	4.3	63	24.5	7.9	7.2	97	13.9	4.85	c	7	1	1	1	1	1	2	5	1	3	1	0	1	2	3	25.3	19.3	38.1
218	RPS 754	71.1	4.1	63	23.5	6.8	6.6	97	16.9	5.00	b	3	1	1	1	1	1	1	5	1	3	1	0	1	2	3	19.3	24.3	36.6
219	RPS 755	76.6	3.7	68	24.5	7.3	7.0	102	16.4	5.05	b	3	1	1	1	1	1	1	7	1	3	1	0	1	2	3	13.1	18.7	36.4
220	RPS 756	74.0	5.5	66	22.0	6.8	6.4	100	12.8	5.05	b	5	1	1	1	1	1	0	7	1	3	1	0	1	2	3	17.3	25.3	40.2
221	RPS 757	61.9	6.1	67	21.4	6.4	6.6	98	15.2	5.05	c	7	1	1	1	1	0	1	7	1	3	7	0	1	2	3	30.5	20.7	28.2
222	RPS 758	76.9	3.2	68	21.7	7.0	8.0	101	12.7	5.00	b	7	1	1	1	1	1	1	7	1	3	1	0	1	2	3	25.6	20.3	43.4
223	RPS 759	72.1	4.7	66	22.4	6.7	7.2	97	13.7	5.15	c	7	1	1	1	1	0	1	5	1	3	1	0	1	2	3	9.5	25.3	28.7
224	RPS 760	63.4	5.6	64	19.4	6.4	6.7	96	14.1	5.35	c	7	1	1	1	1	1	1	5	1	3	1	0	1	2	3	35.5	27.0	20.6
225	RPS 761	70.2	5.7	63	21.7	6.7	6.9	98	15.0	5.05	c	7	1	1	1	1	1	2	7	1	5	1	0	1	2	3	8.8	20.3	24.2
226	RPS 762	60.1	5.8	63	19.6	6.0	6.9	97	17.0	5.00	c	7	1	1	1	1	1	2	7	1	7	7	0	1	2	3	13.1	26.3	14.4
227	RPS 763	57.1	4.1	64	21.4	5.4	6.7	98	14.3	5.25	c	7	1	1	1	1	1	2	7	1	5	2	0	1	2	3	27.7	27.3	7.5
228	RPS 764	59.0	5.1	64	20.0	5.0	7.0	98	12.8	4.75	b	5	1	1	1	1	1	1	7	1	7	2	0	1	2	2	27.1	23.7	14.7
229	RPS 765	60.8	3.1	63	22.8	5.6	5.6	97	13.1	4.90	c	7	1	1	1	1	1	1	7	1	5	3	0	1	2	2	19.7	26.7	30.2
230	RPS 767	64.9	5.2	59	20.3	7.4	6.7	95	12.0	4.90	c	3	1	1	1	1	1	1	7	1	5	2	0	1	2	3	16.8	20.7	19.3
231	RPS 768	61.7	5.1	59	23.0	6.5	5.9	95	11.8	4.85	c	7	1	1	1	1	1	1	7	1	7	4	0	1	2	3	13.8	34.0	27.8
232	RPS 769	57.2	6.9	59	21.6	6.7	6.8	98	19.2	4.45	c	7	1	1	1	1	1	1	7	1	5	4	0	1	2	3	12.6	28.3	20.1
233	RPS 770	57.1	6.3	65	21.7	7.4	7.1	97	14.5	4.65	c	7	1	1	1	1	1	2	7	1	5	4	1	1	2	2	5.8	20.2	28.7
234	RPS 772	58.1	5.2	63	25.4	8.2	6.8	97	11.0	4.85	c	7	1	1	1	1	1	1	7	1	5	2	1	1	2	3	27.4	25.7	27.1
235	RPS 773	57.2	6.9	64	18.6	6.4	6.1	98	13.9	4.45	c	7	1	1	1	1	1	2	7	1	7	3	1	1	2	3	24.0	27.5	24.7
236	RPS 775	55.0	8.9	62	22.5	8.0	6.6	99	18.5	4.35	c	3	1	1	1	1	1	1	7	1	7	3	1	1	2	3	18.4	37.0	42.2
237	RPS 776	59.1	4.9	63	22.7	7.3	6.5	97	11.9	4.85	c	5	1	1	1	1	1	1	7	1	5	3	0	1	2	3	26.1	25.2	33.3
238	RPS 779	54.6	4.9	63	22.5	7.3	6.3	97	11.4	4.65	c	5	1	1	1	1	1	2	7	1	5	1	0	1	2	3	13.5	23.0	43.2
239	RPS 780	62.5	6.6	65	21.8	7.6	6.4	99	20.0	4.50	b	7	1	1	1	1	1	2	7	1	7	2	1	1	2	3	20.6	29.0	37.8
240	RPS 781	59.2	7.3	63	24.5	8.6	6.1	98	13.2	4.45	c	7	1	1	1	1	1	1	7	1	7	2	1	1	2	3	26.5	24.7	52.1
241	RPS 782	64.4	4.3	62	23.5	8.0	6.3	99	12.8	4.25	b	3	1	1	1	1	1	1	5	1	5	1	1	1	2	3	25.0	28.3	37.4
242	RPS 783	60.2	5.1	62	21.6	6.0	6.6	100	12.9	4.80	b	5	1	1	1	1	1	1	5	1	7	1	1	1	2	3	31.7	33.0	30.7
243	RPS 784	59.1	5.7	62	18.4	6.4	5.3	99	10.9	4.65	c	7	1	1	1	1	1	1	5	1	5	1	1	1	2	3	19.9	31.0	38.6

244	RPS 785	56.4	5.5	62	22.3	8.4	7.0	98	14.6	4.65	c	7	1	1	1	1	1	2	5	1	7	2	1	1	2	3	23.0	31.7	37.0
245	RPS 786	60.7	4.4	62	19.3	6.2	6.7	99	15.4	4.95	c	7	1	1	1	1	1	2	5	1	5	2	1	1	2	3	35.0	24.0	54.8
246	RPS 787	60.6	5.7	62	23.0	7.1	6.5	99	13.7	4.65	c	7	1	1	1	1	1	0	5	1	5	3	1	1	2	3	23.5	17.7	29.1
247	RPS 788	59.6	4.9	62	17.4	5.6	6.2	98	13.0	4.55	c	7	1	1	1	1	1	2	5	1	5	1	1	1	2	3	17.4	26.3	29.0
248	RPS 789	60.4	2.9	62	19.5	6.3	6.6	99	13.1	4.60	b	3	1	1	1	1	1	1	7	1	7	1	1	1	2	3	22.9	19.0	27.0
249	RPS 790	61.7	8.3	65	24.5	8.2	6.7	100	11.8	4.85	c	5	1	1	1	1	1	0	7	1	5	1	1	1	2	3	22.1	20.3	36.7
250	RPS 791	66.3	8.0	63	21.3	7.6	6.3	98	15.5	4.35	c	5	1	1	1	1	1	0	5	1	5	4	1	1	2	3	20.3	21.0	53.7
251	RPS 792	63.5	5.1	63	22.4	7.5	6.5	99	16.3	4.45	c	5	1	1	1	1	1	2	7	1	5	1	1	1	2	3	16.9	24.3	31.2
252	RPS 793	57.3	6.2	63	21.1	7.5	6.4	100	10.4	4.25	c	3	1	1	1	1	1	1	5	5	5	1	1	1	2	3	18.9	26.7	26.3
253	RPS 794	63.1	6.3	63	22.5	6.6	6.0	96	17.4	4.45	b	5	1	1	1	1	1	1	7	1	5	1	0	1	2	3	19.9	20.7	36.4
254	RPS 795	64.1	6.6	61	23.3	8.2	7.3	95	16.3	4.95	b	5	1	1	1	1	1	2	7	1	5	1	0	1	2	3	19.8	24.7	42.6
255	RPS 796	67.5	4.3	62	21.4	8.0	6.0	97	13.5	4.55	b	7	1	1	1	1	1	2	7	1	5	2	1	1	2	3	9.3	23.0	26.6
256	RPS 797	57.1	5.9	63	22.7	7.6	6.8	96	14.1	4.65	b	7	1	1	1	1	1	1	7	1	5	1	1	1	2	3	21.8	25.7	38.0
257	RPS 798	58.8	8.7	63	26.3	9.7	7.0	96	21.4	4.45	b	7	1	1	1	1	1	1	7	1	7	2	1	1	2	3	10.3	20.7	29.6
258	RPS 799	66.0	5.6	63	24.4	7.9	6.6	97	10.6	4.45	b	7	1	1	1	1	1	1	5	1	7	1	0	1	2	3	24.2	24.3	31.1
259	RPS 800	55.5	4.4	61	21.0	6.7	5.9	94	16.8	4.60	b	7	1	1	1	1	1	1	5	1	7	1	1	1	2	3	32.0	28.7	33.1
260	RPS 801	40.8	3.1	67	21.3	6.1	6.4	96	13.4	4.85	a	7	1	1	1	1	1	1	5	1	5	1	1	1	2	3	15.0	28.0	14.8
261	RPS 802	67.6	3.3	66	24.7	7.1	7.0	97	13.4	4.85	a	7	1	1	1	1	1	2	7	1	5	2	1	1	2	3	18.7	25.7	15.8
262	RPS 803	59.0	6.7	63	26.0	7.4	6.2	99	13.9	4.75	b	7	1	1	1	1	1	1	7	1	5	1	1	1	2	2	20.0	28.7	17.8
263	RPS 804	67.0	7.3	62	22.3	7.3	6.6	97	13.2	4.80	b	3	1	1	1	1	1	1	2	5	1	7	1	1	2	3	4.8	33.7	10.0
264	RPS 805	61.7	4.2	62	23.9	8.1	6.4	98	14.6	4.35	c	7	1	1	1	1	1	1	5	1	7	1	1	1	2	3	20.9	25.3	18.8
265	RPS 806	71.6	4.2	68	23.4	7.2	6.5	105	15.3	4.85	b	5	1	1	1	1	1	1	7	1	7	1	1	1	2	3	31.1	27.0	7.2
266	RPS 807	64.2	4.4	63	25.6	8.0	5.4	100	13.4	4.70	b	7	1	1	1	1	1	1	5	1	7	1	1	1	2	3	25.5	30.0	10.8
267	RPS 808	64.1	3.3	63	23.5	7.0	5.9	97	11.6	4.50	b	3	1	1	1	1	1	2	7	1	7	1	1	1	2	3	22.8	22.0	10.2
268	RPS 809	63.7	3.6	63	20.6	6.3	6.3	100	13.2	4.65	b	5	1	1	1	1	1	1	5	1	7	1	1	1	2	3	18.2	22.0	13.1
269	RPS 810	69.1	4.6	63	19.7	6.7	6.8	99	17.2	5.25	b	7	1	1	1	1	1	2	5	1	7	2	1	1	2	3	12.2	22.7	9.6
270	RPS 811	53.9	3.3	63	20.2	6.7	5.7	97	13.6	4.45	b	7	1	1	1	1	1	2	5	1	7	1	1	1	2	2	10.7	33.0	3.4

271	RPS 812	58.5	4.1	63	20.8	6.4	6.1	96	14.6	4.60	b	7	1	1	1	1	1	2	5	1	7	1	1	1	2	2	27.8	30.3	15.4
272	RPS 814	52.0	2.9	61	21.0	7.0	6.8	96	13.3	4.70	a	3	1	1	1	1	1	2	5	1	7	1	1	1	2	2	18.1	15.0	17.0
273	RPS 815	53.9	2.4	61	20.2	6.7	6.5	97	13.8	4.70	a	3	1	1	1	1	1	2	5	1	3	1	1	1	2	2	14.3	29.7	28.0
274	RPS 816	61.1	3.1	62	20.3	6.1	6.6	99	14.9	4.80	a	7	1	1	1	1	1	2	5	1	7	1	1	1	2	2	19.0	30.7	22.1
275	RPS 817	57.5	4.3	62	24.2	6.5	5.3	99	15.0	4.50	a	7	1	1	1	1	1	2	7	1	7	1	1	1	2	2	24.1	34.0	21.5
276	RPS 818	57.2	3.8	62	21.0	7.2	7.1	99	14.7	4.55	b	7	1	1	1	1	1	1	7	1	7	1	1	1	2	2	4.4	30.3	31.0
277	RPS 819	59.8	4.3	62	23.3	7.4	6.2	98	13.3	5.05	b	3	1	1	1	1	1	1	7	1	7	1	1	1	2	2	15.4	31.7	22.3
278	RPS 820	59.2	3.7	59	24.0	7.4	7.0	98	16.3	4.80	a	3	1	1	1	1	1	1	7	1	7	1	1	1	2	2	5.0	24.7	28.0
279	RPS 821	55.0	5.5	66	22.6	8.0	6.3	101	13.3	5.05	c	7	1	1	1	1	1	2	7	1	7	1	1	1	2	2	10.5	26.7	15.9
280	RPS 822	59.1	5.7	66	21.7	7.2	5.7	100	14.3	5.15	c	7	1	1	1	1	1	2	7	1	7	1	1	1	2	2	17.3	26.4	5.9
281	RPS 823	57.8	3.3	67	21.4	6.8	5.9	102	14.8	5.05	c	5	1	1	1	1	1	2	7	1	3	1	1	1	2	2	18.1	21.0	9.6
282	RPS 824	58.9	3.5	63	22.6	6.4	7.2	97	17.2	5.20	c	5	1	1	1	1	1	2	7	1	5	1	1	1	2	2	8.3	28.3	11.0
283	RPS 825	50.6	3.5	61	21.5	6.6	6.4	96	15.8	4.95	c	5	1	1	1	1	1	2	7	1	5	1	1	1	2	3	9.9	33.7	10.6
284	RPS 826	58.2	2.7	61	23.2	6.7	6.0	97	15.1	4.95	b	5	1	1	1	1	1	1	7	1	7	1	1	1	2	2	20.6	22.0	15.2
285	RPS 827	69.7	3.5	67	22.4	6.0	7.1	100	16.5	4.80	c	5	1	1	1	1	1	1	5	1	7	1	1	1	2	2	13.8	22.0	19.7
286	RPS 828	59.6	3.1	63	19.8	6.3	6.8	98	15.0	4.85	c	7	1	1	1	1	1	2	7	1	5	1	1	1	2	2	12.7	28.7	14.4
287	RPS 829	61.4	3.5	62	20.0	6.4	6.9	96	13.1	4.65	c	5	1	1	1	1	1	2	7	1	5	1	1	1	2	2	16.9	31.0	14.4
288	RPS 830	57.8	4.1	62	19.3	5.6	6.9	98	16.9	5.05	c	5	1	1	1	1	1	2	7	1	5	1	1	1	2	3	4.5	17.3	21.0
289	RPS 831	67.8	2.4	62	22.5	6.7	7.0	98	12.7	4.80	c	3	1	1	1	1	1	1	7	1	5	1	1	1	2	2	13.3	22.0	25.1
290	RPS 832	69.9	5.1	62	21.1	7.0	6.8	97	16.2	4.95	c	3	1	1	1	1	1	1	7	1	7	1	1	1	2	2	9.9	23.3	28.7
291	RPS 833	60.6	2.9	63	21.4	6.7	6.7	98	13.5	4.50	c	5	1	1	1	1	1	2	7	1	5	2	1	1	2	2	6.8	29.7	11.7
292	RPS 834	61.9	4.9	62	20.8	6.2	6.6	100	12.0	4.25	c	5	1	1	1	1	1	2	7	1	5	1	1	1	2	2	8.4	28.7	8.8
293	RPS 835	63.2	4.1	62	20.9	6.3	6.5	100	12.1	4.55	c	5	1	1	1	1	1	0	7	1	5	1	1	1	2	2	16.8	29.7	11.7
294	RPS 836	59.4	4.3	65	20.6	7.2	6.3	98	13.7	5.05	c	5	1	1	1	1	1	0	7	1	5	1	1	1	2	2	14.3	32.7	25.9
295	RPS 837	58.6	5.5	61	21.7	7.4	6.8	100	14.0	4.95	b	7	1	1	1	1	1	2	7	1	3	1	1	1	2	2	5.6	31.7	11.3
296	RPS 840	62.8	4.3	62	21.7	6.6	6.8	97	11.2	4.65	b	3	1	1	1	1	1	1	7	2	5	2	1	1	2	2	13.2	28.6	22.7
297	RPS 841	60.8	6.9	63	22.6	7.7	6.6	97	15.9	4.75	a	3	1	1	1	1	1	1	7	2	3	1	1	1	2	2	8.1	24.0	12.5

298	RPS 842	59.1	4.4	62	23.0	7.6	6.3	98	13.0	4.65	a	3	1	1	1	1	1	2	7	1	5	1	1	1	2	2	7.5	21.0	9.8
299	RPS 843	50.1	2.5	61	20.1	5.7	6.8	96	12.8	4.45	a	3	1	1	1	1	1	1	5	1	3	1	1	1	2	2	9.4	32.0	11.1
300	RPS 844	58.6	4.7	65	22.5	6.9	6.2	97	9.9	4.55	a	7	1	1	1	1	1	2	7	2	3	3	1	1	2	2	8.1	20.7	23.3
301	RPS 846	56.1	5.9	65	20.5	6.4	6.6	98	13.1	4.75	a	7	1	1	1	1	1	1	7	2	5	1	1	1	2	2	15.5	31.7	8.4
302	RPS 847	55.6	4.1	62	22.9	5.9	7.3	95	12.7	4.50	a	7	1	1	1	1	1	1	7	1	5	2	1	1	2	2	16.7	34.0	18.3
303	RPS 848	57.8	6.2	68	19.3	6.2	7.1	103	11.8	4.85	a	3	1	1	1	1	1	1	5	1	3	1	1	1	2	2	16.6	28.3	16.0
304	RPS 850	55.8	5.3	67	19.5	6.2	7.1	101	10.1	4.65	b	7	1	1	1	1	1	2	7	1	3	1	1	1	2	2	10.8	25.0	25.4
305	RPS 851	60.0	4.1	63	19.5	5.4	6.4	98	15.2	4.95	c	7	1	1	1	1	1	1	7	1	5	2	1	1	2	3	18.5	24.3	22.5
306	RPS 852	63.1	6.6	66	18.7	6.5	6.7	101	15.6	5.05	b	7	1	1	1	1	1	0	5	1	5	1	1	1	2	3	26.3	32.7	23.3
307	RPS 853	66.4	5.1	65	24.6	6.5	7.2	97	13.4	5.30	c	7	1	1	1	1	1	0	7	1	5	1	0	1	2	3	29.0	31.0	32.5
308	RPS 854	62.9	4.1	65	21.7	6.5	7.0	100	15.9	4.95	c	7	1	1	1	1	1	1	5	1	5	2	0	1	2	3	23.2	27.3	28.9
309	RPS 855	61.9	3.9	64	18.7	6.3	7.0	99	14.3	4.75	c	3	1	1	1	1	1	1	5	1	5	3	0	1	2	3	17.0	24.3	29.8
310	RPS 856	61.0	3.0	65	20.7	7.2	6.9	100	12.9	4.75	b	5	1	1	1	1	1	1	5	1	5	1	0	1	2	2	25.3	31.7	35.9
311	RPS 857	65.8	5.4	65	21.4	6.4	6.4	98	14.0	4.55	b	7	1	1	1	1	1	2	5	1	5	1	0	1	2	2	18.2	27.3	26.2
312	RPS 858	75.8	2.3	66	22.9	6.8	7.1	101	13.0	4.55	a	7	1	1	1	1	1	2	5	1	5	1	1	1	2	3	29.7	23.7	49.6
313	RPS 859	74.6	3.9	58	19.6	7.3	6.5	96	24.8	4.75	a	7	1	1	1	1	1	1	5	1	5	1	0	1	2	3	3.8	23.7	43.2
314	RPS 860	68.8	3.0	65	19.5	8.2	6.3	100	12.4	4.65	a	7	1	1	1	1	1	2	5	1	7	1	1	1	2	2	23.5	21.0	50.5
315	RPS 861	59.1	3.6	59	17.3	5.6	7.1	96	13.4	4.85	a	5	1	1	1	1	1	2	5	1	5	1	0	1	2	3	22.9	24.3	33.4
316	RPS 862	60.6	3.7	62	15.1	5.6	7.5	99	13.5	4.75	b	5	1	1	1	1	1	2	5	1	5	3	0	1	2	2	24.6	26.0	22.4
317	RPS 863	67.6	3.6	57	15.4	4.6	6.7	96	14.8	4.75	a	7	1	1	1	1	1	2	7	1	5	1	0	1	2	2	13.9	33.0	19.5
318	RPS 864	64.9	3.1	58	16.3	5.0	7.4	98	14.2	4.75	b	5	1	1	1	1	1	2	7	1	5	1	0	1	2	2	31.2	24.3	20.6
319	RPS 865	61.8	3.5	61	15.4	4.7	7.3	99	12.5	4.65	b	5	1	1	1	1	1	2	7	1	5	1	0	1	2	2	23.5	24.0	31.2
320	RPS 866	67.0	3.6	62	16.7	5.3	7.2	99	15.8	4.90	b	7	1	1	1	1	1	2	7	1	5	1	0	1	2	3	26.1	23.3	21.3
321	RPS 867	66.2	3.6	62	15.8	5.2	7.2	100	14.9	4.75	b	7	1	1	1	1	1	2	7	1	5	1	0	1	2	3	25.3	18.7	14.6
322	RPS 868	60.1	2.7	59	16.8	6.0	6.8	98	14.3	4.90	b	7	1	1	1	1	1	2	7	1	5	4	0	1	2	3	37.8	24.7	17.4
323	RPS 869	59.8	3.2	62	16.8	4.9	6.5	100	12.8	5.15	b	5	1	1	1	1	1	2	5	1	3	1	0	1	2	3	36.5	22.0	20.5
324	RPS 870	58.5	3.9	62	13.9	4.0	6.7	98	12.6	4.80	b	5	1	1	1	1	1	2	5	1	3	2	0	1	2	3	27.2	31.0	15.8

325	RPS 871	50.6	2.3	65	13.8	4.4	6.9	100	12.3	4.75	a	3	1	1	1	1	1	2	5	1	5	4	0	1	2	2	15.7	32.0	9.4
326	RPS 872	59.1	3.9	62	15.6	3.8	7.1	101	13.2	4.65	b	5	1	1	1	1	1	2	5	1	5	1	0	1	2	2	15.2	31.0	8.7
327	RPS 873	59.2	2.7	62	14.4	4.7	6.9	99	12.0	4.55	b	5	1	1	1	1	1	2	5	1	5	1	0	1	2	2	18.2	27.3	10.5
328	RPS 874	59.0	2.5	66	15.2	5.2	6.9	103	13.5	4.85	b	5	1	1	1	1	1	2	5	1	5	1	0	1	2	2	5.8	32.7	19.0
329	RPS 875	57.1	3.2	65	15.7	4.6	7.0	101	16.3	5.40	b	7	1	1	1	1	1	2	5	1	3	1	0	1	2	2	12.5	28.3	32.2
330	RPS 876	57.2	3.0	65	14.0	4.0	7.2	100	14.3	4.55	b	7	1	1	1	1	1	2	5	1	3	1	0	1	2	2	9.3	31.0	16.0
331	RPS 877	53.5	3.1	61	13.0	4.0	7.8	97	12.2	4.75	b	5	1	1	1	1	1	2	3	1	3	3	0	0	2	2	11.6	27.7	15.8
332	RPS 880	59.7	3.2	68	13.4	4.1	7.7	103	10.8	4.65	b	3	1	1	1	1	1	1	3	1	3	1	0	1	2	3	6.4	26.3	14.5
333	RPS 881	56.8	2.6	65	15.2	4.4	7.1	101	14.5	4.60	b	5	1	1	1	1	1	2	3	1	3	1	0	1	2	3	8.6	16.7	26.9
334	RPS 882	54.2	2.4	69	13.6	3.8	7.1	104	13.3	4.65	b	5	1	1	1	1	1	2	5	1	3	1	0	1	2	2	7.5	20.3	23.5
335	RPS 883	54.1	2.5	66	15.2	4.0	7.5	101	14.0	4.65	b	5	1	1	1	1	1	2	3	1	5	1	0	1	2	2	16.5	18.0	10.9
336	RPS 884	55.1	1.9	65	14.7	4.1	7.4	101	13.0	4.55	b	3	1	1	1	1	1	2	3	1	5	1	0	1	2	2	10.6	30.0	30.7
337	RPS 885	57.2	2.5	62	14.0	3.9	7.7	99	12.4	4.50	b	3	1	1	1	1	1	2	3	1	3	1	1	1	2	3	18.0	24.3	12.7
338	RPS 886	59.6	2.5	65	14.2	3.2	8.1	100	13.9	4.80	b	3	1	1	1	1	1	2	3	1	3	1	1	1	2	3	2.4	32.3	17.2
339	RPS 887	56.7	3.1	63	14.3	4.0	7.0	98	13.7	4.65	b	5	1	1	1	1	1	2	3	1	3	1	0	1	2	2	21.3	29.7	25.1
340	RPS 888	57.3	2.9	65	15.4	4.6	7.3	99	13.5	4.45	b	5	1	1	1	1	1	2	3	1	5	1	0	1	2	3	14.6	24.0	17.0
341	RPS 889	51.2	4.6	62	19.1	7.2	6.5	99	13.1	4.65	c	3	1	1	1	1	1	2	5	1	5	4	0	1	2	2	5.3	28.0	32.5
342	RPS 890	61.0	3.5	61	25.3	6.2	7.9	98	13.8	4.85	c	5	1	1	1	1	1	2	3	1	5	1	0	1	2	3	22.7	29.0	22.9
343	RPS 891	59.1	3.3	59	24.6	6.9	6.8	95	16.1	5.05	b	5	1	1	1	1	1	2	5	1	5	1	0	1	2	3	16.3	23.0	44.3
344	RPS 892	59.6	2.6	59	23.0	6.2	6.9	96	15.3	5.00	b	3	1	1	1	1	1	1	7	1	3	2	1	0	2	2	12.7	31.7	11.1
345	RPS 893	54.7	4.3	60	21.9	6.4	6.6	96	10.4	4.85	b	3	1	1	1	1	1	1	5	1	5	4	0	0	2	2	19.8	23.7	22.5
346	RPS 894	52.1	4.1	61	22.7	6.6	4.9	95	10.2	4.75	b	7	1	1	1	1	1	1	7	1	5	3	0	1	2	2	22.2	20.7	17.2
347	RPS 895	61.8	3.7	66	26.9	8.7	6.7	101	11.6	4.35	b	5	1	1	1	1	1	1	7	1	5	2	0	1	2	2	29.4	20.0	28.7
348	RPS 896	59.2	3.6	61	24.2	9.2	6.1	96	13.6	4.85	b	3	1	1	1	1	1	1	7	1	3	3	1	1	2	2	10.3	28.0	20.5
349	RPS 897	56.1	3.9	61	24.4	9.3	6.3	95	9.0	4.80	b	3	1	1	1	1	1	1	7	1	3	1	1	1	2	2	8.4	20.7	33.4
350	RPS 898	56.0	4.4	61	21.2	7.4	6.4	98	10.2	4.85	b	5	1	1	1	1	1	2	7	1	5	3	1	1	2	2	4.6	21.3	17.6
351	RPS 899	56.2	4.9	64	21.0	7.9	6.5	99	10.4	4.85	b	5	1	1	1	1	1	2	7	1	3	2	1	1	2	3	11.0	22.0	32.6

352	RPS 901	54.6	7.6	67	25.9	9.2	6.5	102	11.6	4.70	b	7	1	1	1	1	1	1	3	1	5	1	0	1	2	2	20.1	42.0	5.6
353	RPS 902	54.7	4.2	62	22.5	6.9	6.7	96	10.1	4.75	b	7	1	1	1	1	1	2	5	1	5	1	0	1	2	2	13.2	29.0	3.4
354	RPS 903	65.7	3.3	62	26.5	7.3	6.7	98	15.8	5.30	b	5	1	1	1	1	1	1	5	1	5	1	0	1	2	3	34.8	35.0	10.7
355	RPS 904	59.1	3.3	61	22.4	7.3	5.5	98	15.7	4.95	b	5	1	1	1	1	1	2	5	1	3	1	0	1	2	3	13.1	36.0	2.1
356	RPS 905	70.1	6.3	61	24.8	8.6	5.8	97	12.0	4.85	b	7	1	1	1	1	1	2	7	1	5	1	1	1	2	2	28.4	29.0	3.1
357	RPS 906	56.3	3.7	60	17.5	5.4	5.6	95	16.7	5.30	b	5	1	1	1	1	1	1	7	1	5	1	1	1	2	3	11.2	26.0	36.5
358	RPS 907	67.1	3.3	60	19.6	5.7	5.6	97	13.8	4.65	b	5	1	1	1	1	1	1	7	1	5	1	1	1	2	3	25.2	29.5	11.9
359	RPS 908	63.6	3.5	60	24.7	6.6	5.4	95	14.5	4.65	b	5	1	1	1	1	1	2	7	1	5	1	1	1	2	3	18.5	41.0	11.0
360	RPS 909	54.2	3.7	62	22.3	6.4	5.6	98	13.6	4.85	b	5	1	1	1	1	1	1	7	1	5	1	1	1	2	3	20.1	23.5	8.2
361	RPS 910	67.2	2.9	62	28.2	6.4	7.7	104	18.5	6.65	a	5	1	1	1	1	1	2	5	1	5	1	0	1	2	3	4.6	20.0	6.2
362	RPS 911	54.2	4.3	61	25.6	7.6	3.8	98	17.8	5.25	b	5	1	1	1	1	1	1	5	1	5	1	0	1	2	3	14.2	26.0	11.1
363	RPS 912	57.0	3.6	62	23.3	7.3	7.2	99	17.6	5.65	b	5	1	1	1	1	1	2	5	1	5	1	0	1	2	3	25.7	34.0	10.3
364	RPS 913	55.0	4.4	63	21.7	7.8	5.6	98	12.9	5.05	b	5	1	1	1	1	1	2	5	1	5	1	0	1	2	3	15.5	36.0	10.5
365	RPS 914	49.6	4.9	68	20.6	7.9	6.7	102	12.9	4.95	b	7	1	1	1	1	1	2	7	1	5	1	0	1	2	3	11.3	29.0	6.3
366	RPS 915	50.7	2.7	62	21.6	6.5	5.4	96	11.7	4.95	b	3	1	1	1	1	1	1	5	1	5	1	1	1	2	3	10.3	28.0	9.5
367	RPS 916	54.2	3.1	62	25.5	8.2	6.2	100	15.2	4.95	a	3	1	1	1	1	1	2	5	1	5	1	1	1	2	3	15.0	25.0	13.0
368	RPS 917	50.1	3.1	62	20.6	6.0	6.3	98	13.0	5.20	b	5	1	1	1	1	1	1	5	1	5	4	1	1	2	2	26.0	21.0	9.3
369	RPS 918	49.9	3.5	61	21.6	6.4	6.0	98	12.4	5.05	c	3	1	1	1	1	1	1	5	1	5	2	1	1	2	2	16.5	18.0	7.8
370	RPS 919	50.7	2.7	67	20.7	7.0	6.1	101	14.9	5.05	b	5	1	1	1	1	1	1	5	1	5	3	1	1	2	2	12.6	18.0	5.9
371	RPS 920	46.1	3.2	67	20.6	6.6	7.1	101	16.8	5.35	b	5	1	1	1	1	1	1	5	1	5	4	1	1	2	2	27.0	26.0	17.5
372	RPS 921	62.1	3.2	62	27.0	7.9	8.4	99	16.0	5.30	b	7	1	1	1	1	1	2	5	1	3	1	1	1	2	2	19.2	24.7	5.8
373	RPS 922	59.7	4.2	63	24.6	7.4	6.8	99	16.1	4.75	b	3	1	1	1	1	1	1	7	1	5	1	1	1	2	2	15.2	31.0	19.0
374	RPS 923	54.8	1.7	67	22.1	6.7	6.2	100	13.4	4.85	b	3	1	1	1	1	1	1	5	1	1	1	1	1	2	3	13.0	18.3	37.5
375	RPS 924	49.0	2.2	63	16.5	5.6	6.0	100	9.4	4.65	b	3	1	1	1	1	1	2	5	1	5	1	1	1	2	3	23.0	36.0	11.9
376	RPS 925	49.8	3.1	63	26.4	8.6	7.4	98	12.2	4.80	c	5	1	1	1	1	1	2	5	1	5	1	1	1	2	2	17.0	27.3	9.7
377	RPS 926	44.2	2.2	61	26.0	9.4	7.4	96	10.3	4.65	b	3	1	1	1	1	1	1	5	1	5	1	1	1	2	2	9.8	32.3	12.5
378	RPS 927	46.8	3.3	62	22.0	7.4	6.5	97	12.2	4.75	c	5	1	1	1	1	1	1	5	1	5	2	1	1	2	2	12.7	31.3	8.3

379	RPS 928	52.9	2.7	62	27.4	9.0	7.3	97	13.5	4.65	c	5	1	1	1	1	1	1	5	1	5	2	1	1	2	2	9.9	39.7	13.4
380	RPS 929	51.1	1.5	62	22.7	6.7	6.4	98	11.0	4.85	c	3	1	1	1	1	1	1	5	1	3	1	1	1	2	2	14.6	15.7	2.8
381	RPS 930	55.0	2.4	61	25.5	6.4	7.0	96	14.5	5.25	b	5	1	1	1	1	1	2	5	1	3	1	1	1	2	2	32.5	31.7	5.3
382	RPS 931	57.1	1.9	62	27.0	7.5	7.2	97	13.6	5.20	b	3	1	1	1	1	1	2	5	1	5	1	1	1	2	2	29.9	26.7	12.0
383	RPS 932	52.2	2.7	62	26.4	7.3	7.3	97	16.0	5.15	b	5	1	1	1	1	1	2	5	1	5	1	1	1	2	2	28.9	35.7	14.6
384	RPS 933	55.2	3.1	68	25.7	8.9	7.6	100	12.5	4.75	b	5	1	1	1	1	1	2	5	1	5	1	1	1	2	2	15.6	24.0	7.8
385	RPS 934	52.8	2.2	68	24.4	7.9	7.3	102	10.9	4.85	b	5	1	1	1	1	1	2	5	1	3	1	1	1	2	2	27.2	32.7	7.2
386	RPS 935	51.0	2.9	63	23.5	5.9	6.8	98	14.8	5.05	b	5	1	1	1	1	1	2	5	1	3	1	1	1	2	2	27.8	35.3	14.6
387	RPS 936	54.9	2.6	60	24.0	7.0	6.6	96	14.5	5.25	b	3	1	1	1	1	1	2	5	1	5	1	1	1	2	2	18.3	33.7	16.5
388	RPS 937	54.2	1.9	62	21.0	5.2	6.5	96	14.2	5.05	b	3	1	1	1	1	1	1	5	1	5	1	1	1	2	2	16.8	30.0	10.3
389	RPS 938	52.8	2.4	61	26.5	7.3	6.5	95	13.8	5.10	b	5	1	1	1	1	1	2	3	1	5	1	1	1	2	2	30.5	21.7	5.6
390	RPS 939	53.4	2.2	63	26.1	9.0	6.7	98	14.7	5.05	b	5	1	1	1	1	1	2	3	1	3	1	1	1	2	2	17.6	31.7	7.5
391	RPS 940	56.0	2.7	63	28.9	7.1	7.1	99	13.8	4.95	b	3	1	1	1	1	1	2	5	1	3	1	1	1	2	2	10.2	28.7	11.7
392	RPS 941	58.7	6.5	62	25.8	11.3	7.3	98	11.1	5.25	b	7	1	1	1	1	1	2	3	1	5	1	1	1	2	2	17.9	41.0	4.8
393	RPS 942	52.1	4.9	61	25.0	8.2	7.1	98	12.8	4.45	b	7	1	1	1	1	1	2	3	1	5	1	1	1	2	2	11.1	30.0	21.2
394	RPS 943	60.8	3.5	62	28.8	8.4	7.0	98	16.7	5.05	b	5	1	1	1	1	1	2	7	1	5	1	1	1	2	2	21.8	29.0	9.6
395	RPS 944	65.8	2.6	61	32.5	11.7	8.3	97	14.3	5.05	b	5	1	1	1	1	1	2	7	1	3	1	1	1	2	2	18.9	27.0	8.1
396	RPS 945	63.1	2.3	61	31.2	7.0	7.2	98	14.8	4.95	b	3	1	1	1	1	1	2	7	1	5	2	1	1	2	2	12.3	49.5	8.8
397	RPS 946	61.9	4.5	62	29.2	9.8	6.7	98	14.7	4.85	b	5	1	1	1	1	1	2	7	1	5	1	1	1	2	2	21.7	29.5	4.2
398	RPS 947	61.7	3.8	63	28.4	7.7	7.7	98	15.0	5.05	b	5	1	1	1	1	1	2	7	1	3	1	1	1	2	2	23.6	46.0	42.4
399	RPS 948	57.2	2.7	61	23.0	6.4	6.7	98	12.8	5.45	b	5	1	1	1	1	1	1	7	1	3	1	1	1	2	2	24.7	27.0	5.6
400	RPS 949	56.9	2.6	62	22.7	6.3	6.8	98	14.0	5.15	b	7	1	1	1	1	1	1	7	1	3	1	1	1	2	2	8.4	22.5	21.8
401	RPS 950	65.0	4.1	62	25.4	6.5	7.2	98	12.8	5.00	b	7	1	1	1	1	1	1	5	1	3	1	1	1	2	2	9.1	30.0	15.9
402	RPS 951	58.6	3.1	61	21.6	5.6	6.7	98	13.4	5.00	b	5	1	1	1	1	1	2	5	1	5	1	1	1	2	2	13.6	31.0	7.7
403	RPS 952	55.0	2.9	63	21.0	6.4	6.3	97	15.5	4.95	b	5	1	1	1	1	1	1	5	1	5	1	1	1	2	2	14.7	36.5	14.5
404	RPS 953	62.7	3.5	62	26.0	6.9	6.9	96	11.7	4.90	b	7	1	1	1	1	1	1	5	1	3	1	1	1	2	2	16.8	22.0	6.3
405	RPS 954	58.9	3.7	62	22.3	6.8	6.6	97	13.2	4.75	b	5	1	1	1	1	1	1	5	1	3	1	1	1	2	2	20.5	34.0	15.1

406	RPS 955	52.6	5.3	62	22.0	6.6	6.3	98	12.3	5.05	b	7	1	1	1	1	1	2	5	1	5	4	1	1	2	2	16.2	22.0	23.7
407	RPS 956	50.9	2.6	67	22.2	6.4	6.5	99	12.3	5.05	b	5	1	1	1	1	1	2	5	1	3	1	1	1	2	2	17.6	16.0	45.5
408	RPS 957	48.7	2.3	61	20.0	5.3	6.8	98	11.0	4.75	b	5	1	1	1	1	1	2	5	1	5	2	1	1	2	2	17.4	27.0	21.3
409	RPS 958	54.8	3.3	63	25.1	6.6	6.8	97	9.7	4.85	b	5	1	1	1	1	1	2	5	1	5	2	1	1	2	2	15.1	31.0	26.3
410	RPS 959	48.8	3.5	63	19.0	5.6	6.5	97	11.1	5.05	b	7	1	1	1	1	1	1	5	1	3	1	1	1	2	2	8.8	29.7	18.2
411	RPS 960	50.8	2.7	62	21.0	5.8	6.5	97	11.5	4.85	b	5	1	1	1	1	1	1	5	1	3	1	1	1	2	2	7.0	29.7	20.9
412	RPS 961	56.9	5.1	62	20.0	6.2	7.0	98	12.8	4.65	b	7	1	1	1	1	1	2	7	1	5	1	1	1	2	2	13.9	14.7	28.2
413	RPS 962	57.2	5.3	63	21.1	5.6	6.8	97	10.1	5.05	b	7	1	1	1	1	1	2	7	1	5	1	1	1	2	2	6.2	20.3	25.7
414	RPS 963	53.7	5.2	62	23.0	6.2	6.6	97	12.4	4.55	b	7	1	1	1	1	1	2	7	1	5	2	1	1	2	2	6.0	22.0	20.5
415	RPS 964	55.7	3.7	68	17.6	5.8	6.5	102	11.9	4.85	b	7	1	1	1	1	1	2	7	1	5	1	1	1	2	2	5.5	30.0	17.3
416	RPS 965	54.0	3.9	63	22.7	5.9	6.0	100	12.9	5.05	a	7	1	1	1	1	1	2	3	1	3	1	1	1	2	2	20.7	21.3	25.4
417	RPS 967	57.5	6.9	62	19.4	5.9	6.4	98	19.3	5.05	b	7	1	1	1	1	1	2	7	1	5	1	1	1	2	2	16.2	28.0	3.6
418	RPS 968	52.1	4.5	62	19.5	6.9	5.7	100	12.2	4.85	b	7	1	1	1	1	1	2	5	1	5	2	1	1	2	2	17.0	25.7	4.8
419	RPS 969	50.1	3.3	62	23.3	8.4	5.5	98	9.6	4.55	b	7	1	1	1	1	1	2	5	1	3	1	1	1	2	2	14.6	29.0	15.9
420	RPS 970	51.2	5.3	63	20.6	7.4	6.2	96	12.0	4.80	b	7	1	1	1	1	1	2	7	1	5	1	1	1	2	2	17.7	42.0	9.9
421	RPS 971	58.7	4.5	62	20.5	6.2	5.7	99	11.5	4.95	b	7	1	1	1	1	1	2	7	1	3	1	1	1	2	3	20.3	31.7	10.7
422	RPS 972	59.2	2.2	62	21.2	6.8	6.4	100	15.1	5.15	b	5	1	1	1	1	1	2	7	1	3	1	1	1	2	2	16.1	37.3	12.9
423	RPS 973	56.9	2.5	61	19.3	5.6	6.0	100	13.1	5.05	b	5	1	1	1	1	1	2	7	1	5	4	1	1	2	3	15.0	39.0	12.5
424	RPS 974	57.6	2.3	61	22.4	8.0	6.0	99	13.2	4.85	b	5	1	1	1	1	1	2	7	1	5	3	1	1	2	2	23.1	29.0	9.8
425	RPS 975	60.7	4.9	67	19.0	6.5	7.4	103	13.0	5.30	b	5	1	1	1	1	1	2	7	1	5	3	1	1	2	3	7.9	37.0	18.9
426	RPS 976	61.1	4.7	63	20.8	5.6	7.6	99	15.4	5.10	b	7	1	1	1	1	1	2	7	1	5	1	1	1	2	3	7.2	25.0	16.5
427	RPS 977	61.6	7.5	63	22.2	8.6	6.6	99	21.5	4.85	b	7	1	1	1	1	1	2	7	1	3	1	1	1	2	3	3.3	38.5	10.5
428	RPS 978	56.0	4.9	61	20.6	5.2	6.3	99	12.9	4.95	b	7	1	1	1	1	1	1	2	7	1	3	3	1	1	2	25.1	34.5	26.6
	Mean	**58.1**	**4.2**	**63**	**20.2**	**6.4**	**6.6**	**98**	**13.0**	**4.83**																	**17.27**	**25.71**	**25.18**

Kodo millet – Descriptors studied

1. Plant height : From ground level to the tip of the inflorescence at dough stage.
2. No. of basal tillers : Total number of tillers in the plant.
3. Days to flowering : Counted as days from sowing to 50% of plants in flower.
4. Length of inflorescence (cm) : Measured from node of lowest raceme (thumb) to tip of last raceme.
5. No. of racemes above thumb : Number of racemes above first (lowest) primary axis node.
6. Length of longest raceme (cm) : Is the length of inflorescence excluding thumb.
7. Days to maturity : No. of days taken from planting to the physiological maturity of 50% of the main tillers.
8. Grain yield per plant (g) : Mean of five random plants yield.
9. Thousand grain weight (g) : Weight of random samples of 1000 seeds from the total harvest of an accession.
10. Growth habit : 40 days after sowing based on tillering attitude and categorized as :
    a. Erect b. Decumbent c. : Prostrate
11. Degree of culm branching : 3. Low branch number (upper one to four nodes rarely branched)
    5. Medium branch number (upper two to four nodes produce inflorescences)
    7. High branch number (most nodes produce inflorescences)
12. Sheath pigmentation at flowering : 0 = Absent 1 = Present
13. Sheath base pigmentation at flowering : 0 = Absent 1 = Present
14. Juncture pigmentation at flowering : 0 = Absent 1 = Present
15. Inter node pigmentation at flowering : 0 = Absent 1 = Present
16. Lamina pigmentation at flowering : 0 = Absent 1 = Present
17. Flag leaf at the secondary primary axis node: 0 = Absent 1 = Present 2 = Well developed
18. Degree of lodging at maturity : 3 = Low 5 = Intermediate 7 = High
19. Ear exertion 9at dough stage : 1 = Complete 2 = Partial
20. Ear appearance at dough stage ; 3 = Open 5 = Semi-compact 7 = Intermediate
21. Spikelet arrangement on rachis : 1 = Regular rows 2 = Regular rows in upper half of inflorescence and irregular in lower half 3 = Two to three irregular rows 4 = Two to four regular rows
22. Shattering of inflorescence : 0 = Absent 1 = Present
23. Uniformity of plant maturity : 0 = Absent 1 = Present
24. Grain shape : 1 = Orbicular 2 = Ellipsoidal 3 = Oval
25. Grain colour : 1 = Gray brown 2 = Brown 3 = Dark brown
26. Head smut (%) :
27. Sheath blight (%) :
28. Shoot fly (%) :

Table 15 Quantitative grouping of 429 Landraces of Kodo Millet (2009-10 & 2010-11)

S.No.	Character	Group	Frequency	Percent (%)
1.	Plant height	Dwarf (50 cm)	35	8.2
		Semi dwarf (50.1 to 70 cm)	375	87.6
		Tall (> 70 cm)	18	4.2
2.	Number of basal tillers	Low (up to 3)	63	14.7
		Medium (up to 5)	256	59.8
		High (Above 5)	109	25.5
3.	Inflorescence length	Low (up to)	31	7.2
		Medium (up to)	363	84.8
		High (Above)	34	8.0
4.	Number of racemes above thumb	Low (up to)	24	5.6
		Medium (up to)	369	86.2
		High (Above)	35	8.2
5.	Length of longest raceme	Low (up to)	63	14.7
		Medium (up to)	281	65.7
		High (Above)	84	19.6
6.	50% flowering	Early	39	9.1
		Medium	310	72.4
		Late	79	18.5
7.	Maturity	Early (up to 95)	68	15.9
		Medium (96-101)	305	71.3
		Late (>101)	55	12.8
8.	Grain yield per plant	Low (up to)	59	13.8
		Medium (up to)	289	67.5
		High (Above)	80	18.7
9.	1000 grain weight	Low (up to)	80	18.7
		Medium (up to)	334	78.0
		High (Above)	14	3.3
10.	Growth habit	Erect	296	69.2
		Decumbent	52	12.1
		Prostrate	81	18.7
11.	Degree of culm branching	Low (up to 3)	88	20.6
		Medium (up to 5)	182	42.5
		High (Above 5)	158	36.9
12.	Sheath pigmentation	Absent	0	0.0
		Present	428.	100.0
13.	Sheath base pigmentation	Absent	0	0.0
		Present	428	100.0
14.	Juncture pigmentation	Absent	0	0.0
		Present	428	100.0
15.	Internode pigmentation	Absent	0	0.0
		Present	428	100.0

16.	Lamina (margin) pigmentation	Absent	21	4.9
		Present	407	95.1
17.	Flag leaf at the second primary axis	Absent	10	2.3
		Rudimenary	143	33.4
		Well developed	275	64.3
18.	Degree of lodging at maturity	Low	67	15.6
		Intermediate	227	52.9
		High	135	31.5
19.	Ear exertion	Complete	419	97.7
		Partial	10	3.3
20.	Ear appearance	Open	124	28.9
		Semi compact	237	55.2
		Intermediate	68	15.9
21.	Spikelet arrangement on the rachis	Regular rows	323	75.3
		Regular rows in upper half & regular in lower	51	11.9
		2-3 irregular	30	6.9
		2-4 irregular	25	5.8
22.	Shattering of inflorescence	Absent	247	57.7
		Present	181	42.3
23.	Uniformity of plant maturity	Absent	03	0.69
		Present	426	99.3
24.	Grain shape	Orbicular	01	0.2
		Ellipsoidal	427	99.8
		Oval	0	0.0
25.	Grain colour	Grey brown	50	11.7
		Brown	180	41.9
		Dark brown	199	46.4
26.	Head smut	Resistant	0	0.0
		Moderately Resistant	14	3.3
		Susceptible	414	96.7
26.	Sheath blight	Resistant	47	11.0
		Moderately Resistant	377	88.1
		Susceptible	4	0.9
27.	Shoot fly infestation	Resistant	48	11.2
		Moderately Resistant	111	25.9
		Susceptible	269	62.9

3.4.2 Little millet

Out of 133 collected land races, 112 were found viable and evaluated during 2009-10 and 2010-11 at College of Agriculture, Rewa (M.P.) for yield and biotic stresses. Twenty three descriptors were recorded for evaluation and characterization of land races. Variation in different parameters is presented in Table 16 and 17. Significant variation in plant height, number of basal tillers, flag leaf length , width, inflorescence length, flowering period, grain yield per plant and 1000 grain weight were recorded. Susceptibility index of grain smut ranging from 1.8 to 15.2, sheath blight incidence varied from 18.3 to 50.0% and shoot fly incidence varied from 8.6 to 51.9% were recorded. Highest CV was recorded in grain yield per plant (44.9%) followed by peduncle length (36.4%), susceptibility index of grain smut (36.2%), shoot fly incidence (33.1%) and number of basal tillers (30.6%). Lowest CV was noted in plant height (7.7%) followed by days to 50% flowering (9.8%) and 1000 grain weight (10.0%). Frequency distribution of morphological and phonological characters of little millet (Table 18) showed that 83 (74.1%) land races were semi-dwarftype having plant height between 80.1 to 95 cm. Thirteen land races were dwarf and 16 were tall. Maximum 71 land races were medium tillering capacity. Nine land races were erect, 44 were erect heniculate, 29 were decumbent and 30 have prostrate groth growth habit. All the land races have essentially glabrous ligule, leaf blade and sheath pubescence. Plant pigmentation was absent in 89 land races, where as in 23 land races plant pigmentation was present. Culm branching was present only in 25.9% land races. Seven land races were early, 83 were medium and 22 were late maturing. Length of inflorescence was high in only 11 land races, while 61 land races have medium (20.1 to 25 cm) inflorescence length. Sixty eight land races have medium grain yield per plant (5.1 to 10 g) and nineteen have more than

10 g grain yield per plant. High test weight (1000 grain weight) was recorded in 26 land races. Forty seven land races were shown slight lodging and 32 shown extensive lodging at maturity. Arched inflorescence shape was recorded in 93 (83.1%) land races, where as diffused inflorescence was in 19 land races. Inflorescence compactness was intermediate in 108 (96.4%) land races and 4 land races have open type inflorescence. On the basis of grain colour, land races were categorized. Seventy eight land races were light brown, 12 straw white/creamy and 22 were black coloured. Reaction of land races against grain smut showed that 13 were resistant, 56 moderately resistant and 43 susceptible. Maximum 100 land races were moderately resistant to sheath blight. Thirteen land races were resistant, 70 moderately resistant and 29 were susceptible to shoot fly under natural field conditions.

Table 16. Performance of little millet land races against morphological characters, yield and biotic stresses.

S. No	Land race	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	RLM 101	83.8	3.7	25.6	0.7	3.3	2.2	19.7	45	1.65	5.3	3	0	0	5	1	1	7	5	3	7	1	1	7.1	24.3	26.7
2	RLM 102	76.1	4.4	23.0	0.9	4.4	1.8	20.0	45	1.70	6.0	3	0	0	5	1	1	7	5	3	7	1	1	6.4	21	38.5
3	RLM 103	86.7	3.4	23.6	0.9	4.4	2.1	17.8	45	1.60	3.6	3	0	0	5	1	1	7	5	3	7	1	1	10.7	19	28.6
4	RLM 104	90.1	2.6	21.7	0.6	4.5	2.4	18.2	45	1.55	4.2	3	0	0	5	1	1	7	5	3	7	1	1	6.2	21	21.4
5	RLM 105	94.7	2.0	20.3	0.5	3.3	1.5	19.7	45	1.35	2.4	3	0	0	5	1	1	7	5	3	7	1	0	7.6	25.7	33.3
6	RLM 106	92.9	4.4	21.9	0.7	5.7	3.0	20.4	45	1.70	7.2	3	0	0	5	1	1	7	5	3	7	1	1	6.9	23.3	21.4
7	RLM 107	92.3	3.4	23.9	0.6	7.5	4.3	20.8	35	1.90	7.3	4	0	0	5	1	1	7	5	5	6	1	0	5.7	27.7	15.8
8	RLM 108	87.9	4.3	18.9	0.8	5.3	3.7	19.0	39	1.65	3.7	3	0	0	5	1	1	5	5	5	7	1	1	8.6	31	41.7
9	RLM 109	91.2	6.1	20.7	0.5	6.4	4.6	18.8	40	1.45	6.1	4	0	0	5	1	1	5	5	5	7	1	1	8.8	33.7	23.1
10	RLM 110	94.9	3.8	20.9	0.5	6.0	2.7	19.2	41	1.40	5.2	3	0	0	5	1	1	5	5	5	7	1	1	7.3	27.3	41.7
11	RLM 111	86.1	3.6	20.6	0.6	6.7	5.7	21.4	38	1.85	2.7	4	0	1	5	1	1	7	5	5	6	1	0	5.5	20.5	25.4
12	RLM 112	96.4	5.1	24.2	0.6	5.2	2.9	24.5	40	1.75	7.9	2	0	0	5	1	1	5	5	5	7	1	1	6.7	27.7	30
13	RLM 113	94.9	4.8	21.1	0.5	5.3	2.6	22.7	41	1.80	4.5	2	0	0	5	1	1	5	5	5	7	1	1	8.8	38.3	35
14	RLM 114	93.8	4.6	22.3	0.6	5.3	4.3	22.2	42	1.80	7.5	2	0	0	5	1	1	5	5	5	7	1	1	8.2	34.7	26.1
15	RLM 115	95.2	3.8	25.4	0.5	3.2	1.9	21.7	44	1.80	4.3	2	0	0	5	1	1	1	3	3	2	1	1	9.2	41.7	30
16	RLM 116	86.8	4.8	24.9	0.5	5.5	2.6	20.1	42	2.10	6.2	2	0	0	5	1	1	7	5	5	7	1	1	6.9	35	27.8
17	RLM 117	87.9	5.1	25.3	0.5	5.4	4.4	19.4	42	1.75	6.0	2	0	0	5	1	1	7	5	5	7	1	1	6.7	26.3	25
18	RLM 118	94.2	6.7	17.5	0.5	8.6	3.1	21.7	41	1.85	15.9	2	0	0	5	1	1	7	5	5	7	1	1	8.1	41	9.1
19	RLM 119	86.7	4.0	23.7	0.5	6.5	4.9	24.9	42	1.85	5.0	2	0	0	5	1	1	5	5	5	7	1	1	7.3	35	33.3
20	RLM 120	91.6	3.4	25.3	0.8	7.8	4.8	24.9	41	1.70	4.0	2	0	0	5	1	1	5	5	5	7	1	1	8.3	28	29.4
21	RLM 121	91.2	3.4	24.2	0.5	5.2	2.8	17.8	41	1.70	6.4	2	0	0	5	1	1	5	5	5	2	1	1	5.6	21.7	40
22	RLM 122	95.7	4.4	25.3	0.7	1.9	2.6	16.6	40	2.00	11.1	2	0	0	5	1	1	5	5	5	2	1	1	6	27.7	15
23	RLM 126	85.1	4.2	20.6	0.5	2.9	2.5	18.2	42	1.85	7.1	2	0	0	5	1	1	7	5	5	2	1	1	7.1	24.3	37.5
24	RLM 127	82.2	4.4	23.1	0.5	8.7	4.6	19.4	40	1.80	6.6	2	0	0	5	1	1	7	5	5	2	1	1	6.6	22	54.5
25	RLM 128	80.1	4.4	26.4	0.7	8.4	3.7	22.4	43	1.80	7.1	2	0	0	5	1	1	5	5	5	2	1	1	6.9	23	46.1
26	RLM 129	82.6	4.3	21.8	0.7	7.4	3.0	20.1	38	1.90	9.2	2	0	0	5	1	1	3	5	5	2	1	1	7.3	23.7	35.7
27	RLM 130	69.8	4.1	19.6	0.6	4.6	2.2	17.6	41	1.85	7.5	2	0	0	5	1	1	3	5	5	2	1	1	6.8	20	46.7
28	RLM 134	80.6	3.4	17.5	0.5	4.5	2.3	18.5	41	1.95	8.3	2	0	0	5	1	1	5	5	5	7	1	1	6.1	39	57.1
29	RLM 135	76.9	3.4	18.8	0.5	3.3	1.8	17.9	40	1.90	10.8	4	0	0	5	1	1	3	5	5	2	1	1	8.1	36.7	41.7
30	RLM 138	87.4	3.4	21.0	0.7	4.6	2.4	19.0	38	1.95	7.4	1	0	0	5	1	1	3	5	5	2	1	1	7.8	25	42.8

31	RLM 139	89.6	3.6	21.6	0.6	7.3	3.9	21.9	38	1.95	7.8	1	0	0	5	1	1	3	5	5	2	1	1	7.6	21.3	33.3
32	RLM 140	95.5	3.2	23.8	0.8	7.9	5.2	21.6	40	1.90	6.3	1	0	0	5	1	1	3	5	5	2	1	1	9	37	53.8
33	RLM 141	99.0	4.7	24.5	0.6	7.6	4.0	21.1	42	1.95	15.3	4	0	0	5	1	1	3	5	5	2	1	1	7.4	26	33.3
34	RLM 142	97.3	3.4	22.6	1.1	6.6	3.2	21.2	42	1.95	4.6	3	1	1	5	1	1	3	5	5	2	1	1	7.2	24	22.2
35	RLM 143	94.5	5.1	22.8	0.7	6.3	3.3	22.2	38	1.95	10.8	3	0	1	5	1	1	3	5	5	2	1	1	9.7	24.3	33.3
36	RLM 144	93.2	3.4	24.0	0.8	3.3	2.1	19.9	42	2.05	7.5	2	1	1	5	1	1	3	5	5	2	1	1	7.8	29	15
37	RLM 145	93.5	4	24.5	0.6	4.9	4.4	18.8	38	1.85	11.5	2	0	1	5	1	1	5	5	5	2	1	1	8.9	26	23.5
38	RLM 146	84.8	7.1	18.1	0.6	5.5	3.0	19.3	46	2.10	15.7	3	0	1	5	1	1	5	5	5	2	1	1	7.7	25.7	27.8
39	RLM 147	83.6	3.7	19.8	0.5	4.6	2.6	19.8	42	1.95	3.9	3	0	1	5	1	1	5	5	3	2	1	1	5.3	21.7	36.8
40	RLM 148	67.2	4.1	14.4	0.5	2.5	2.0	14.2	42	2.00	8.7	4	0	0	5	1	1	5	5	3	2	1	1	7.2	24	38.1
41	RLM 149	86.4	4.0	22.0	0.6	7.6	6.6	21.9	35	1.90	4.3	2	0	1	5	1	1	7	5	5	2	1	1	9.1	28.7	29.4
42	RLM 150	92.8	3.7	25.8	0.6	8.1	5.2	23.9	37	1.95	7.1	2	0	1	5	1	1	7	3	5	2	1	1	11.4	31.3	30
43	RLM 152	84.0	6.8	19.7	0.9	5.2	2.4	11.8	40	2.10	9.0	1	0	1	5	1	1	3	5	5	2	1	1	8.8	21	16.7
44	RLM 153	82.9	3.4	19.8	1.1	5.1	3.7	21.3	46	2.05	8.3	3	1	0	5	1	1	5	5	5	2	1	1	7.7	25.7	44.4
45	RLM 154	87.6	4.9	22.0	1.2	6.6	4.5	21.1	42	2.15	11.7	3	0	0	5	1	1	3	5	3	2	1	1	6	20.7	30
46	RLM 155	85.4	3.7	18.5	0.6	5.5	2.9	17.3	43	2.05	6.5	3	0	0	5	1	1	7	5	5	2	1	1	6.9	29	33.3
47	RLM 156	79.3	3.4	15.9	0.5	5.1	2.4	17.2	42	2.15	4.7	3	1	0	5	1	1	7	5	3	2	1	1	6.4	26	36.4
48	RLM 157	83.2	2.5	19.0	0.7	5.4	3.7	19.9	42	1.95	3.7	3	1	0	5	1	1	3	5	3	2	1	1	6.6	24	37.5
49	RLM 158	81.1	2.5	17.1	0.6	4.6	8.6	18.4	42	1.85	6.8	3	0	1	5	1	1	7	5	5	2	1	1	6.2	36.3	30
50	RLM 160	85.9	2.6	18.2	0.7	4.0	2.7	19.9	43	1.90	6.5	3	1	1	5	1	1	7	5	5	2	1	1	6.1	18.3	31.2
51	RLM 161	79.9	4.4	27.8	0.8	9.2	2.4	20.5	48	2.00	13.8	4	0	0	5	1	1	7	5	5	2	1	1	4.3	27.3	35.7
52	RLM 162	91.4	3.7	31.1	1.0	7.5	2.6	22.5	47	1.90	21.4	4	0	0	5	1	1	5	5	5	2	1	1	5.4	23	40
53	RLM 165	94.8	3.9	24.7	0.7	1.8	3.8	21.1	38	1.90	9.2	2	0	1	5	1	1	7	5	5	6	1	1	4.8	29.7	43.7
54	RLM 166	83.8	4.1	19.0	0.6	5.6	4.9	19.7	37	2.00	6.4	2	1	1	5	1	1	3	5	5	6	1	1	5.1	34	50
55	RLM 167	92.5	2.6	16.2	0.5	9.2	5.7	26.1	37	1.95	4.2	2	1	1	5	1	1	7	5	5	2	1	1	6.1	26.7	19
56	RLM 168	86.9	3.1	20.4	0.6	7.7	3.6	23.3	37	2.00	9.4	2	1	0	5	1	1	5	5	5	2	1	1	3.9	23.7	20.8
57	RLM 170	95.7	2.4	25.7	0.7	3.8	8.2	17.6	39	2.05	5.1	2	0	0	5	1	1	3	3	5	6	1	1	6.4	38.7	17.6
58	RLM 171	91.5	2.5	22.0	0.7	6.4	4.1	21.9	37	1.85	3.8	4	0	0	5	1	1	3	5	3	2	1	1	3.6	18.7	18.2
59	RLM 172	86.1	2.5	20.0	0.6	6.0	5.2	21.9	37	2.10	4.4	2	0	0	5	1	1	5	5	5	6	1	1	5.6	32.3	33.3
60	RLM 173	87.8	3.7	18.9	0.5	6.0	2.7	23.5	44	1.90	5.1	4	0	0	5	1	1	7	3	5	2	1	1	2.6	26	18.7
61	RLM 174	87.8	3.1	17.1	0.5	7.3	3.0	23.1	46	1.85	4.3	4	0	0	5	1	1	5	5	5	7	1	1	2.4	31.7	50
62	RLM 175	85.2	2.5	20.2	0.7	4.2	2.9	22.0	45	2.70	4.8	4	1	0	5	1	1	7	5	5	6	1	1	2	50	62.5
63	RLM 176	84.6	2.6	19.8	0.5	6.1	3.5	20.6	43	1.90	4.4	3	0	0	5	1	1	5	5	5	2	1	1	3.5	24	37.5
64	RLM 177	89.5	1.5	19.1	1.1	4.3	3.1	21.3	44	1.95	3.9	4	0	0	5	1	1	7	5	3	6	1	1	0.4	37	33.3

65	RLM 178	90.5	2.3	22.0	1.3	7.2	5.3	21.0	42	2.20	4.7	4	0	0	5	1	1	7	5	5	7	1	1	0.4	26.3	28.6
66	RLM 179	87.9	2.5	19.2	0.9	5.7	2.7	20.7	47	1.95	5.5	4	0	0	5	1	1	5	5	5	2	1	1	1.9	25.7	25
67	RLM 180	87.8	3.1	19.8	1.0	5.6	3.0	22.1	44	1.80	8.9	3	0	0	5	1	1	3	5	3	2	1	1	7.2	26	25
68	RLM 181	86.4	4.2	18.6	0.6	4.6	4.5	20.9	45	1.80	11.9	3	1	1	5	1	1	3	5	3	2	1	1	1	18.3	33.3
69	RLM 182	87.7	3.4	21.0	0.7	6.6	2.8	19.6	45	1.90	8.1	3	1	0	5	1	1	5	5	3	2	1	1	1.4	19.5	13.3
70	RLM 183	82.1	3.1	17.9	0.5	3.4	1.9	19.8	43	1.75	13.3	4	0	0	5	1	1	7	5	5	2	1	1	2.7	26	16.7
71	RLM 185	78.8	6.4	20.1	0.5	5.2	4.9	18.9	43	1.80	7.2	3	1	1	5	1	1	3	5	5	2	1	1	2.4	20.7	16.7
72	RLM 186	84.9	5.1	19.8	0.7	5.4	2.7	18.7	43	1.80	15.1	3	0	0	5	1	1	5	5	3	2	1	1	1.8	23	25
73	RLM 187	82.7	3.7	16.7	0.5	4.9	2.2	16.5	42	1.85	15.1	3	0	1	5	1	1	5	5	5	2	1	1	2.5	28.7	10
74	RLM 189	89.2	3.1	22.7	0.7	10.4	2.9	25.0	35	2.05	8.2	2	1	1	5	1	1	7	5	5	2	1	1	3.4	35	35
75	RLM 190	92.5	2.3	19.7	0.5	8.5	2.8	22.6	35	1.90	10.1	2	1	1	5	1	1	3	5	5	2	1	1	5.6	38.7	27.3
76	RLM 191	96.1	2.2	20.0	0.5	7.4	3.3	22.1	34	2.10	7.1	2	1	1	5	1	1	3	5	5	2	1	1	3.9	27.3	10
77	RLM 192	96.4	3.4	19.6	0.7	8.9	4.5	25.0	34	2.00	7.8	2	0	0	5	1	1	3	5	5	2	1	1	4.7	24	13.6
78	RLM 193	94.8	3.2	22.1	0.6	8.8	4.4	23.4	37	2.00	6.0	4	0	0	5	1	1	3	5	5	2	1	1	6.9	24.3	14.3
79	RLM 194	88.1	4.1	18.6	0.6	10.4	2.8	25.2	37	1.90	6.9	4	0	0	5	1	1	3	5	5	2	1	1	4.1	29.3	20.8
80	RLM 195	97.7	3.4	23.9	0.8	9.3	6.5	26.5	37	1.80	6.9	4	0	0	5	1	1	5	5	5	2	1	1	4	23.3	15
81	RLM 196	91.5	3.4	24.1	0.5	6.2	3.7	21.6	42	1.95	6.9	4	0	0	5	1	1	7	5	5	2	1	1	4.2	22.3	17.4
82	RLM 197	91.0	2.1	23.9	0.7	7.6	3.7	25.9	36	1.50	8.0	2	0	1	5	1	1	3	5	5	6	1	1	2.9	26.3	0
83	RLM 199	92.6	3.1	27.3	0.6	5.7	3.9	19.3	31	1.90	6.3	2	0	0	5	1	1	3	5	5	6	1	1	3.4	34.7	25
84	RLM 200	87.1	2.0	16.2	0.4	8.0	3.0	23.2	37	2.00	6.7	2	0	1	5	1	1	3	5	5	2	1	1	3.8	39.7	8.3
85	RLM 201	88.9	1.3	16.5	0.5	8.2	3.4	21.6	36	1.90	7.6	3	1	1	5	1	1	3	5	5	7	1	1	4.9	27.3	55.5
86	RLM 202	89.6	2.1	24.0	0.9	8.2	4.9	21.6	40	1.80	5.1	3	0	0	5	1	1	7	5	5	2	1	1	3.5	28.3	30
87	RLM 203	84.6	2.5	19.9	0.6	4.9	2.9	22.9	56	1.65	5.8	3	0	0	5	1	1	3	5	5	2	1	1	0	28	22.2
88	RLM 204	92.8	3.4	25.1	0.6	6.3	4.9	21.6	42	2.05	5.6	3	0	0	5	1	1	3	5	5	2	1	1	4.5	32.7	23.8
89	RLM 205	87.8	2.6	21.7	0.5	6.2	3.1	21.3	41	1.80	7.5	1	0	0	5	1	1	3	5	5	2	1	1	3.1	21.7	36.8
90	RLM 206	81.0	1.7	17.0	0.5	7.6	6.1	22.0	35	1.90	7.1	4	0	0	5	1	1	3	5	5	2	1	1	6.5	22.7	10
91	RLM 207	94.8	2.7	17.5	0.5	6.9	2.6	20.0	36	2.05	4.8	2	0	0	5	1	1	3	5	5	2	1	1	3.9	27.3	36.8
92	RLM 208	81	2.7	17.9	0.5	7.3	6.1	22.0	44	1.90	7.2	4	0	0	5	1	1	3	5	5	2	1	1	2.6	23.3	28.6
93	RLM 209	76.1	1.9	20.8	0.6	6.8	4.5	21.1	44	1.65	3.6	4	0	0	5	1	1	7	5	5	6	1	1	0	29.7	57.1
94	RLM 210	82.9	2.5	19.1	0.5	7.6	3.1	22.1	43	1.90	5.8	4	0	0	5	1	1	3	5	5	2	1	1	3.7	26	46.1
95	RLM 215	85.4	3.5	20.0	0.6	3.5	2.2	16.9	43	1.70	13.1	4	0	0	5	1	1	5	5	5	2	1	1	2.5	21.3	62.5
96	RLM 216	87	3.4	19.1	0.5	4.4	2.1	17.1	43	1.90	7.1	4	0	0	5	1	1	5	5	5	2	1	1	4.6	29.3	29.4
97	RLM 217	76.2	2.7	18.2	0.4	5.3	3.2	17.1	41	1.90	5.5	4	0	0	5	1	1	3	5	5	2	1	1	4.3	23.3	42.1
98	RLM 218	78.0	2.8	19.8	0.5	5.8	3.7	20.2	42	1.85	4.9	2	0	1	5	1	1	3	5	5	2	1	1	3.1	20	40

99	RLM 219	79.7	3.5	20.6	0.6	4.6	2.7	18.6	44	1.80	7.1	2	0	0	5	1	1	3	5	5	2	1	1	4.4	19.3	20
100	RLM 220	86.8	2.7	19.5	0.6	7.2	4.1	21.5	36	1.90	5.3	2	0	0	5	1	1	3	5	5	2	1	1	6.4	23.7	46.7
101	RLM 221	74.5	4.6	17.4	0.6	8.6	3.1	24.3	37	2.05	8.5	2	1	1	5	1	1	5	5	5	2	1	1	5.2	27	28.6
102	RLM 222	82.4	4.9	23.6	0.6	6.6	4.7	24.5	37	1.90	17.2	2	1	0	5	1	1	5	5	5	2	1	1	13.4	24	22.2
103	RLM 224	88.0	3.1	23.2	0.6	5.2	4.2	22.2	42	2.45	9.5	2	1	0	5	1	1	3	5	5	2	1	1	1.6	26.7	50
104	RLM 225	97.7	4.3	26.1	0.8	7.7	4.7	25.2	41	2.10	11.6	2	1	1	5	1	1	3	5	5	2	1	1	1.9	40.7	31.2
105	RLM 226	78.4	4.1	25.4	0.5	8.8	2.7	18.2	44	2.10	8.8	4	0	1	5	1	1	7	5	5	2	1	1	3.7	27	27.3
106	RLM 227	102.8	3.2	25.0	0.5	7.9	2.2	28.8	44	2.35	6.1	2	0	0	5	1	1	7	5	5	2	1	1	2.6	35.7	6.2
107	RLM 228	102.1	3.0	22.6	0.6	9.4	4.8	26.9	48	2.00	7.8	2	1	0	5	1	1	3	5	5	6	1	0	0	22.7	33.3
108	RLM 229	94.2	3.2	22.7	0.5	8.6	4.35	28.1	44	2.15	8.6	2	0	0	5	1	1	5	5	5	2	1	1	0.4	29	55.6
109	RLM 230	82.8	3.2	24.0	0.8	9.5	3.9	22.6	43	2.15	6.8	1	0	0	5	1	1	3	5	5	7	1	1	1.4	32.3	55.6
110	RLM 231	96.7	2.2	25.1	0.9	7.4	4.9	22.1	44	2.45	7.8	1	0	0	5	1	1	3	5	5	2	1	1	0	27	43.7
111	RLM 232	97.9	2.2	24.0	0.5	9.2	5.7	25.5	44	2.25	8.5	1	0	0	5	1	1	3	5	5	2	1	1	1.3	22.7	58.3
112	RLM 233	105.4	3.3	28.1	1.1	9.7	6.35	26.2	40	2.05	16.5	1	0	0	5	1	1	3	5	5	2	1	1	3.2	28.3	41.2
	Mean	**87.9**	**3.2**	**21.1**	**0.7**	**6.7**	**3.9**	**21.7**	**41.2**	**2.00**	**7.8**													5.26	27.4	31.409

Little millet – Descriptors studied

1. Plant height : From ground level to the tip of the inflorescence at dough stage.
2. No. of basal tillers : Number of tillers at ground level or from the basal nodes.
3. Flag leaf length (cm) : Measured from ligule to leaf tip at flowering.
4. Flag leaf length (cm) : Measured across the centre of leaf at flowering.
5. Flag leaf sheath length (cm) : Measured from internode at ligule at flowering
6. Peduncle length (cm) : Measured from top most node to the base of the inflorescence.
7. Length of inflorescence (cm) : Measured from node of lowest raceme to tip of last raceme.
8. Days to 50% flowering : Counted as days from sowing to 50% of plants to flower.
9. Thousand grain weight (g) : Weight of random samples of 1000 seeds from the total harvest of an accession.
10. Grain yield per plant (g) : Mean of five random plants yield.
11. Growth habit : 1. = Erect 2 = Erect geniculate 3 = Decumbent 4 = Prostrate
12. Plant pigmentation : 0 = Absent 1 = Present
13. Culm branching : 0 = Absent 1 = Present
14. Ligule pubescence : 3 = Essentially glabrous 5 = Medium pubescent 7 = Strongly pubescent
15. Leaf blade pubescence : 3 = Essentially glabrous 5 = Medium pubescent 7 = Strongly pubescent
16. Sheath pubescence : 3 = Essentially glabrous 5 = Medium pubescent 7 = Strongly pubescent
17. Degree of lodging at maturity : 3 = Slight 5 = Medium 7 = Extensive
18. Inflorescence compactness : 3 = Open 5 = Medium 7 = Compact
19. Inflorescence shape : 3 = Diffused 5 = Arched 7 = Globose / Elliptic
20. Grain colour : 1. = Dark grey 2 = Brown 3 = Light brown 4 = Grey
    5. = Golden yellow 6 = Straw white / Creamy 7 = Black
21. Grain shape : 1. = Elliptical / Ellipsoidal 2 = Ovate
22. Uniformity in the lines of germplasm : 0 = Absent 1 = Present
23. Grain smut (SI) : 1 = Resistant 2 = Moderately resistant 3 = Susceptible
24. Sheath blight (%) : 1 = Resistant 2 = Moderately resistant 3 = Susceptible
25. Shoot fly (%) : 1 = Resistant 2 = Moderately resistant 3 = Susceptible

Table 17. Pooled variability analysis of Little Millet landraces for Yield, Its traits and Biotic Stresses (Average of 2009-10 and 2010-11)

Character	Range		Mean	Standard Deviation	CV (%)
	Min.	Max.			
Plant height (cm)	67.2	105.4	88.07	6.80	7.7
No. of basal tillers	1.3	7.1	3.56	1.08	30. 4
Flag leaf length (cm)	14.4	31.1	21.47	3.09	14.4
Flag leaf width (cm)	0.4	1.4	0.67	0.18	26.7
Flag leaf sheath (cm)	1.8	10.4	6.27	1.90	30.3
Peduncle length (cm)	1.5	8.6	3.67	1.34	36.4
Inflorescence length (cm)	11.8	28.8	21.12	2.81	13. 3
Days to 50% flowering	33.5	50.5	41.77	4.11	9.8
Grain yield per plant (g)	2.4	21.4	7.59	3.41	44. 9
1000 grain weight (g)	1.35	2.70	1.97	0.20	10.0
Grain smut (SI)	1.8	15.2	6.92	2.51	36.2
Sheath blight (%)	18.3	50.0	27.45	5.98	21.8
Shoot fly (%)	8.6	51.9	26.10	8.64	33.1

Table 18. Quantitative Grouping of 112 Landraces of Little Millet (2009-10 & 2010-11)

S.No.	Character	Group	Frequency	Percent
1.	Plant height	Dwarf (80 cm)	13	11.6
		Semi dwarf (80.1 to 95 cm)	83	74.1
		Tall (> 95 cm)	16	14.3
2.	Number of basal tillers	Low (up to 3)	32	28.6
		Medium (up to 5)	71	63.4
		High (Above 5)	9	8.0
3.	Flag leaf length	Low (up to 20 cm)	42	37.5
		Medium (20.1 to 25 cm)	54	48.2
		High (Above 25 cm)	16	14.3
4.	Flag leaf width	Low (up to 0.5 cm)	21	18.7
		Medium (up to 1.0 cm)	84	75.0
		High (Above 1.0 cm)	7	6.3
5.	Flag leaf sheath length	Low (up to 5.0 cm)	29	25.9
		Medium (5.1 to 8.0 cm)	61	54.5
		High (Above 8.0 cm)	22	19.6
6.	Peduncle length	Low (up to 3.0 cm)	45	40.2
		Medium (3.1 to 6.0 cm)	60	53.6
		High (Above 6.0 cm)	7	6.2
7.	Length of Inflorescence	Low (up to 20 cm)	40	35.7
		Medium (20.1 to 25.0 cm)	61	54.5
		High (Above 25.0 cm)	11	9.8

8.	Days to 50% flowering	Early (up to 35)	7	6.3
		Medium (35.1 to 45)	83	74.1
		Late (>45)	22	19.6
9.	1000 grain weight	Low (up to 1.8 g)	32	28.6
		Medium (up to 2.0 g)	54	48.2
		High (Above 2.0 g)	26	23.2
10.	Grain yield per plant	Low (up to 5.0 g)	25	22.3
		Medium (5.1 to 10.0 g)	68	60.7
		High (Above 10.0 g)	19	17.0
11.	Growth habit	Erect	09	8.04
		Erect geniculate	44	39.3
		Decumbent	29	25.9
		Prostrate	30	26.8
12.	Plant pigmentation	Absent	89	79.5
		Present	23	20.5
13.	Culm branching	Absent	83	74.1
		Present	29	25.9
14.	Ligule pubescence	Essentially glabrous	112	100.0
		Medium pubescent	-	-
		Strongly pubescent	112	100.0
15.	Leaf blade pubescence	Essentially glabrous	112	100.0
		Medium pubescent	-	-
		Strongly pubescent	-	-
16.	Sheath pubescence	Essentially glabrous	112	100.0
		Medium pubescent	-	-
		Strongly pubescent	-	-
17.	Degree of lodging at maturity	Slight	47	41.9
		Medium	33	29.5
		Extensive	32	28.6
18.	Inflorescence compactness	Open	04	3.6
		Intermediate	108	96.4
		Compact	-	-
19.	Inflorescence shape	Diffused	19	16.9
		Arched	93	83.1
		Globose / Elliptic	-	-
20.	Grain colour	Dark grey	-	-
		Brown	-	-
		Light brown	78	69.6
		Grey	-	-
		Golden yellow	-	-
		Straw white / Creamy	12	10.7
		Black	22	19.6
21.	Grain smut	Resistant	13	11.6
		Moderately Resistant	56	50.0
		Susceptible	43	38.4
22.	Sheath blight	Resistant	8	7.1
		Moderately Resistant	100	89.3
		Susceptible	4	3.6
23.	Shoot fly infestation	Resistant	13	11.6
		Moderately Resistant	70	62.5
		Susceptible	29	25.9

3.4.3 Barnyard millet

Out of 68 land races of barnyard millet, only 49 land races were found viable and were evaluated for characterization based on descriptors during 2009-10 and 2010-11 at College of Agriculture, Rewa (M.P.). Variability analysis of barnyard millet land races for yield, its component characters and biotic stresses are presented in Table 19 amd 20. Large variation in all the characters except flowering period was recorded. Among biotic stresses, incidence of grain smut (SI) ranging from 0.0 to 15.3 was recorded. Highest CV was recorded in grain smut incidence, number of basal tillers and grain yield per plant, where as lowest CV was in days to 50% flowering.

Quantitative grouping of land races are presented in Table 21. It is apparent from the data that 83.7% land races were erect and 16.3% have prostrate growth habit. Twenty seven land races were semi-dwarf and 15 were tall. Low tillering capacity wa recorded in 61.2% land races. Majority of the land races were medium maturing, medium inflorescence length, medium grain yield per plant and medium test weight. Plant pigmentation was present in 40 land races (81.64%) and culm branching was found in 43 land races (87.76%). Green inflorescence colour was recorded in 47 land races, where as two land races were light purple. Inflorescence shape in all the land races was pyramidal. Similarly, degree of lodging at maturity was observed in all the land races. Inflorescence compactness was intermediate in 75.5% land races. Branching of lower raceme was not observed in any land race. Spikelet arrangement in one side of the rachis was observed in 8 land races, where as it was around the rachis in rest of the land races. Slender shape of lower raceme was observed in 47 (95.6%) land races. Eight land races were resistant, 16 moderately resistant and 25 were susceptible to grain smut. No insect incidence was observed in any land race.

Table 19. Performance of barnyard millet land races against morphological characters, yield and biotic stresses.

S.No	Entry No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	RBM 22	90.7	1.0	29.4	3.3	6.0	12.6	3.9	36	3.68	7.28	1	1	1	5	1	2	5	2	0	2	0	1	8.30
2	RBM 26	75.3	1.0	16.4	2.9	6.5	9.7	4.2	37	2.77	3.17	1	1	1	5	1	2	7	3	0	2	0	1	12.25
3	RBM 27	86.6	1.2	18.2	2.2	7.9	14.3	3.6	37	2.71	4.38	1	1	1	5	1	2	7	3	0	2	0	1	9.95
4	RBM 28	84.4	1.2	23.2	2.2	5.0	12.5	3.1	37	3.02	6.67	1	1	1	5	1	2	7	3	0	2	0	1	9.20
5	RBM 30	92.1	1.6	23.4	1.9	5.7	14.8	3.3	37	3.51	8.04	1	1	1	5	1	2	5	3	0	2	0	1	9.90
6	RBM 31	97.8	1.1	22.2	2.3	6.3	13.9	3.7	37	3.34	7.11	1	1	1	5	1	2	5	3	0	2	0	1	7.15
7	RBM 32	97.0	1.8	25.3	2.1	7.9	16.0	3.9	37	3.49	11.28	1	1	1	5	1	2	5	3	0	2	0	1	7.10
8	RBM 33	93.3	1.6	25.0	2.3	10.0	11.8	3.0	37	3.38	6.81	1	1	1	5	1	2	5	3	0	2	0	1	8.15
9	RBM 34	80.3	1.1	24.6	2.8	7.9	13.8	5.2	36	3.49	5.68	3	0	1	5	1	2	3	3	0	1	0	1	11.80
10	RBM 35	88.1	1.6	24.2	2.2	7.2	15.2	2.8	35	3.54	8.08	1	1	1	5	1	2	5	3	0	2	0	1	7.40
11	RBM 36	89.1	1.3	23.5	2.4	7.3	14.0	2.7	35	3.42	5.34	1	1	1	5	1	2	5	3	0	2	0	1	9.15
12	RBM 37	88.6	2.0	12.9	2.6	5.2	12.8	4.8	35	3.70	10.35	3	0	1	5	1	2	3	3	0	1	0	1	10.00
13	RBM 38	92.2	2.2	23.8	2.2	5.5	12.9	3.3	37	3.64	6.44	1	1	1	5	1	2	5	3	0	2	0	1	9.75
14	RBM 39	91.0	2.1	16.9	2.1	3.8	11.0	4.0	37	3.43	9.95	1	1	1	5	1	2	5	3	0	2	0	1	5.20
15	RBM 44	79.1	1.3	17.2	2.5	3.8	13.8	5.1	39	3.09	6.39	1	1	1	5	1	2	5	3	0	2	0	1	10.05
16	RBM 46	92.1	1.9	25.2	2.3	4.5	14.0	4.3	40	2.77	6.20	1	1	1	5	1	2	5	3	0	2	0	1	11.55
17	RBM 47	83.2	3.5	22.5	2.2	4.4	12.8	4.1	38	3.39	7.51	1	1	1	5	1	2	5	3	0	2	0	1	8.35

18	RBM 48	88.0	1.1	22.2	2.4	4.9	14.1	4.4	40	3.56	5.01	1	1	1	5	1	2	5	3	0	2	0	1	10.45
19	RBM 50	90.8	2.1	23.0	2.4	5.1	15.3	4.5	42	3.29	6.03	1	1	1	5	1	2	5	3	0	2	0	1	15.30
20	RBM 51	93.0	1.5	26.0	2.4	5.7	14.5	2.9	37	3.34	4.90	1	1	1	5	1	2	5	3	0	2	0	1	6.40
21	RBM 52	101.2	1.5	23.0	2.1	3.3	14.4	4.5	38	3.23	6.22	1	1	1	5	1	2	5	3	0	2	0	1	9.50
22	RBM 53	92.0	1.5	21.8	1.6	3.4	16.7	4.3	38	3.21	5.92	1	1	1	5	1	2	5	3	0	2	0	1	14.25
23	RBM 54	94.0	3.8	19.2	1.1	3.9	16.6	4.1	38	2.96	9.00	1	1	1	5	1	2	5	3	0	2	0	1	8.25
24	RBM 55	96.7	1.6	22.9	1.8	5.7	17.6	5.0	38	3.11	6.17	1	1	1	5	1	2	5	3	0	2	0	1	6.60
25	RBM 56	95.2	2.6	17.2	1.4	4.7	14.3	4.1	38	3.31	9.54	1	1	1	5	1	2	5	3	0	2	0	1	7.70
26	RBM 57	77.7	1.5	12.2	2.4	3.2	12.5	5.2	38	3.12	3.70	3	0	1	5	1	2	3	3	0	1	0	1	0.00
27	RBM 58	75.7	1.8	11.1	2.4	2.6	14.5	5.8	39	3.05	5.58	3	0	1	5	1	2	3	3	0	1	0	1	1.70
28	RBM 59	92.0	1.6	21.9	1.6	4.0	16.2	3.7	38	3.55	5.92	1	1	1	5	1	2	5	3	0	2	0	1	8.65
29	RBM 62	101.1	1.8	21.9	1.2	6.1	16.1	5.0	38	3.13	5.98	1	1	1	5	1	2	5	3	0	2	0	1	9.00
30	RBM 63	107.1	2.1	22.0	1.4	4.0	17.5	4.5	38	3.22	7.92	1	1	1	5	1	2	5	3	0	2	0	1	8.30
31	RBM 64	115.1	2.5	25.5	1.7	3.2	16.3	4.6	38	3.10	7.09	1	1	1	5	1	2	5	3	0	2	0	1	6.65
32	RBM 65	108.2	2.4	24.0	1.5	5.9	18.0	4.7	38	3.24	5.94	1	1	1	5	1	2	5	3	0	2	0	1	9.35
33	RBM 66	109.2	2.1	24.8	1.4	5.7	15.7	3.9	38	3.32	5.18	1	1	1	5	1	2	5	3	0	2	0	1	10.05
34	RBM 67	104.7	2.0	18.9	1.0	7.1	14.6	4.3	38	3.15	5.78	1	1	1	5	1	2	5	3	0	2	0	1	10.10
35	RBM 68	100.7	2.9	21.1	1.4	5.3	16.2	4.1	38	3.39	7.37	1	1	1	5	1	2	5	3	0	2	0	1	8.60
36	RBM 69	111.3	1.9	20.1	1.1	3.4	15.4	4.3	38	3.26	6.05	1	1	1	5	1	2	5	3	0	2	0	1	8.50

37	RBM 70	118.1	1.6	24.0	1.5	5.0	19.2	4.7	38	3.03	7.03	1	1	1	5	1	2	5	3	0	2	0	1	12.70
38	RBM 71	119.5	2.3	21.8	1.7	3.5	16.4	4.0	37	3.24	4.47	1	1	1	5	1	2	5	3	0	2	0	1	8.95
39	RBM 72	119.9	2.3	19.1	1.2	3.3	16.3	4.6	37	3.26	9.42	1	1	1	5	1	2	5	3	0	2	0	1	10.50
40	RBM 73	128.9	2.4	21.6	1.6	6.6	17.3	4.4	38	3.34	4.59	1	1	1	5	1	2	5	3	0	2	0	1	9.40
41	RBM 74	106.9	1.6	20.0	1.2	5.3	14.9	3.1	38	3.35	3.84	1	1	1	5	1	2	5	3	0	2	0	1	13.85
42	RBM 75	101.8	1.7	21.9	1.5	3.0	15.9	3.5	38	3.11	2.86	1	1	1	5	2	2	7	3	0	2	0	1	13.60
43	RBM 76	93.2	1.9	23.7	1.6	3.1	16.7	3.7	36	2.63	3.45	1	1	1	5	2	2	7	3	0	2	0	1	8.65
44	RBM 77	96.6	2.4	9.9	2.0	3.9	11.8	4.9	39	3.36	3.96	3	0	0	5	1	2	3	3	0	1	0	1	0.00
45	RBM 78	92.8	2.0	11.1	2.1	2.7	14.7	5.9	39	3.57	4.12	3	0	0	5	1	2	3	3	0	1	0	1	0.00
46	RBM 80	65.0	2.6	15.7	1.3	2.7	9.9	1.8	45	3.75	5.56	1	0	0	5	1	2	7	1	0	2	0	1	12.95
47	RBM 81	76.3	4.6	13.0	2.1	3.1	14.0	5.2	37	3.50	13.20	3	0	0	5	1	2	3	3	0	1	0	1	0.00
48	RBM 82	81.1	3.5	11.1	1.9	3.7	13.7	5.3	39	3.53	10.43	3	0	0	5	1	2	3	3	0	1	0	1	0.00
49	RBM 84	74.0	3.5	16.2	1.1	6.1	12.0	2.7	39	3.00	8.20	1	1	1	5	1	2	5	3	0	2	0	1	9.00
	Mean	94.5	2.0	20.5	1.9	5.0	14.6	4.1	38	3.28	6.55													8.45

Barnyard millet – Descriptors studied

1. Plant height : From ground level to the tip of the inflorescence at dough stage.
2. No. of basal tillers : Total number of tillers in the plant.
3. Flag leaf length (cm) : Measured from ligule to leaf tip at flowering.
4. Flag leaf length (cm) : Measured across the centre of leaf at flowering.
5. Peduncle length (cm) : Measured from the base of the inflorescence to the first node.
6. Length of inflorescence (cm) : Measured from node of the lowest raceme to tip of last raceme.
7. Length of lower raceme (cm) : Length of the raceme situated at the base of the inflorescence.
8. Days to 50% flowering : Counted as days from sowing to 50% of plants to flower.
9. Thousand grain weight (g) : Weight of random samples of 1000 seeds from the total harvest of an accession.
10. Grain yield per plant (g) : Mean of five random plants yield.
11. Growth habit : 1. = Erect 2 = Decumbent 3 = Prostrate
12. Plant pigmentation : 0 = Absent 1 = Present
13. Culm branching : 0 = Absent 1 = Present
14. Inflorescence compactness : 3 = Open 5 = Intermediate 7 = Compact
15. Colour of inflorescence : 1. = Green 2 = Light Purple 3 = Dark purple
16. Inflorescence shape : 1 = Cylindrical 2 = Pyramidal 3 = Globose to Elliptical
17. Degree of lodging at maturity : 3 = Low 5 = Intermediate 7 = High
18. Shape of lower raceme : 1 = Straight 2 = Curved 3 = Cylindrical
19. Branching of lower raceme : 0 = Absent 1 = Present
20. Spikelet arrangement : 1. = One side of rachis 2 = Arranged around rachis
21. Shattering arrangement : 0 = Absent 1 = Present
22. Uniformity of individual plant maturity : 0 = Absent 1 = Present
23. Grain smut : 1 = Resistant 2 = Moderately resistant 3 = Susceptible

Table 20 Pooled variability analysis of Barnyard Millet landraces for Yield, Its Component Characters and Biotic Stresses (Average of 2009-10 and 2010-11)

S. No.	Character	Range		Mean	Standard Deviation	CV (%)
		Minimum	Maximum			
1	Plant height (cm)	65.1	128.9	94.48	13.31	14.09
2	No. of basal tillers	1.0	4.6	2.03	0.77	38.19
3	Flag leaf length (cm)	9.9	29.5	20.47	4.62	22.58
4	Flag leaf width (cm)	1.0	3.4	1.94	0.54	27.65
5	Peduncle length (cm)	2.6	10.0	5.00	1.68	33.53
6	Inflorescence length (cm)	9.8	19.2	14.62	2.05	14.00
7	Lower raceme length (cm)	1.8	5.9	4.15	0.86	20.62
8	Days to 50% flowering	35.0	45.0	38.12	1.61	4.23
9	1000 grain weight (g)	2.6	3.8	3.28	0.26	7.86
10	Grain yield per plant (g)	2.9	13.2	6.55	2.20	33.61
11	Grain smut (SI)	0.0	15.3	8.45	3.73	44.15

Table 21. Quantitative Grouping of 49 Landraces of Barnyard Millet (2009-10 & 2010-11)

S.No.	Character	Group	Frequency	Percent (%)
1	Plant height (cm)	Dwarf	27	14.3
		Semi-dwarf	15	55.1
		Tall	30	30.6
2	Basal tillers	Low	30	61.2
		Medium	13	26.5
		High	6	12.3
3	Flag leaf length	Low	7	14.3
		Medium	37	75.5
		High	5	10.2
4	Flag leaf width	Low	12	24.5
		Medium	32	65.3
		High	5	10.2
5	Peduncle length	Low	20	40.8
		Medium	28	57.1
		High	1	2.1
6	Length of Inflorescence	Low	2	4.1
		Medium	29	59.2
		High	18	36.7
7	Length of lower raceme	Low	6	12.3
		Medium	36	73.4
		High	7	14.3
8	50% flowering	Early	3	6.1
		Medium	43	87.8
		Late	3	6.1

9	Grain yield (g)	Low	12	24.5
		Medium	33	67.3
		High	4	8.2
10	1000 grain weight	Low	8	16.4
		Medium	28	57.1
		High	13	26.5
11	Growth habit	Erect	41	83.67
		Decumbent	00	00.00
		Prostrate	08	16.33
12	Plant pigmentation	Absent	09	18.36
		Present	40	81.64
13	Culm branching	Absent	06	12.24
		Present	43	87.76
14	Colour of inflorescence	Green	47	95.92
		Light purple	02	4.08
		Dark purple	00	00.00
15	Inflorescence shape	Cylindrical	00	00.00
		Pyrimicidal	49	100.00
		Globose/Elliptical	00	00.00
16	Inflorescence compactness	Open	08	16.33
		Intermediate	37	75.51
		Compact	04	8.16
17	Degree of lodging at maturity	Low	00	00.00
		Intermediate	49	100.00
		High	00	00.00
18	Shape of lower raceme	Straight	01	2.04
		Curved	01	2.04
		Slender	47	95.62
19	Branching of Lower raceme	Absent	49	100.00
		Present	00	00.00
20	Spikelet arrangement	One side of rachis	08	16.33
		Arranged around rachis	41	83.67
21	Grain Smut	Resistant	8	16.3
		Moderately Resistant	16	32.7
		Susceptible	25	51.0

3.4.4 Foxtail millet

Seventy nine land races were sown for evaluation and characterization as per descriptors during 2009-10 and 2010-11 at College of Agriculture, Rewa (M.P.). Only seventy two land races were germinated. Range, mean, standard deviation and CV (%) of various parameters are presented in the Table 22 and 23. Large variation in plant height, flag leaf length, width, inflorescence length, flowering period, grain yield per plant and 1000 grain weight was recorded. Among biotic stresses, incidence of Helminthosporium leaf blight (0 to 3 G), rust (0.0 to 2.0) and sheath blight (0.0 to 60.9%) were recorded. Highest CV was noted in grain yield per plant, where as lowest was in days to 50% flowering. Moderate CV was recorded in rest of the characters.

Quantitative grouping of land races for different morphological, phonological and biotic stresses are presented in Table 24. Maximum land races were semi-dwarf (65.3%), low tillering capacity (48.6%), medium in maturity (79.2%), medium grain yield per plant (59.7%) and medium test weight (76.4%). Plant pigmentation at flowering was not observed in any land race. Green leaf colour, actively green senescence, essentially glabrous leag blade and sheath pubescence was observed in all the land races. Medium degree of lodging at maturity was recorded in all the screened land races. Inflorescence lobes were short in 52.8% and inflorescence bristles were very short in majority of the land races. Compact and pyramidal inflorescence shape and oval grain shape were recorded in all the land races. On the basis of fruit (grain) colour, 32 were red, 5 black, 21 white and 14 were yellow. Apical sterility in panicle was absent in 65 (90.3%) land races.Helminthosporium leaf blight and rust incidence was in traces, while 13 land races were resistant, 24 moderately resistant and 35 susceptible for sheath blight.

Table 22. Performance of foxtail millet land races against morphological characters, yield and biotic stresses.

S.No.	Entry No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	RFM 21	93.8	1.3	29.0	2.6	13.8	15.5	6.8	35.5	2.1	4.85	0	1	1	1	5	1	3	1	5	2	7	1	2	0	1	0	31.9
2	RFM 22	88.5	1.0	30.4	2.8	17.8	16.3	8.6	38.0	2.2	5.3	0	1	1	1	5	1	3	1	5	2	7	1	2	0	0	0	25.7
3	RFM 23	89.5	1.1	32.3	2.2	14.2	15.9	8.1	37.0	2.3	4.5	0	1	1	1	5	1	3	1	5	2	7	1	2	0	2	0	24.9
4	RFM 24	88.3	1.0	26.2	2.1	17.6	12.5	8.1	34.5	2.5	4.4	0	1	1	1	5	1	3	1	5	2	7	1	2	0	2	0	29.0
5	RFM 25	92.0	1.0	29.6	2.0	19.0	12.3	8.8	36.0	2.4	5.1	0	1	1	1	5	1	3	1	5	2	7	1	2	0	0	0	37.9
6	RFM 27	74.8	1.0	24.5	2.0	18.2	10.7	8.6	36.0	2.4	4.3	0	1	1	1	5	1	3	1	5	2	7	1	2	0	0	0	40.1
7	RFM 29	76.4	1.0	26.3	1.7	17.2	11.5	7.2	35.5	2.4	4.8	0	1	1	1	5	1	3	1	5	2	7	1	2	0	0	0	0.00
8	RFM 30	73.6	1.1	25.8	1.6	15.6	11.5	8.2	35.5	2.2	4.95	0	1	1	1	5	1	3	1	5	2	5	4	2	0	0	0	31.5
9	RFM 31	83.3	1.0	27.1	2.2	16.0	12.6	7.8	35.5	2.5	4.4	0	1	1	1	5	1	3	1	5	2	7	4	2	0	1	0	53.8
10	RFM 32	83.7	1.3	25.0	2.1	14.5	11.7	6.6	35.5	2.3	5.4	0	1	1	1	5	1	3	1	5	2	7	4	2	0	1	0	52.2
11	RFM 33	80.7	1.0	22.3	1.8	15.8	9.5	8.3	35.5	2.5	3.95	0	1	1	1	5	1	3	1	5	2	7	4	2	1	1	0	57.7
12	RFM 35	80.8	1.0	23.3	1.7	15.0	11.1	8.8	35.0	2.3	4.9	0	1	1	1	5	1	3	1	5	2	7	1	2	0	1	0	40.7
13	RFM 36	79.9	1.3	24.0	1.8	14.6	11.8	8.8	34.0	2.6	4.55	0	1	1	1	5	1	7	1	5	2	7	3	2	0	1	0	60.9
14	RFM 37	82.5	1.0	19.9	1.8	15.4	9.1	7.8	33.5	2.2	5.7	0	1	1	1	5	1	7	1	5	2	7	1	2	0	1	0	37.8
15	RFM 38	82.2	1.0	24.8	1.8	16.0	10.7	8.8	33.5	2.4	5.0	0	1	1	1	5	1	9	1	5	2	7	3	2	0	1	1	53.7
16	RFM 39	82.0	1.0	24.3	1.9	12.8	12.2	7.9	34.5	2.1	4.7	0	1	1	1	5	1	9	1	5	2	7	3	2	0	2	1	38.6
17	RFM 40	88.7	1.7	26.0	2.0	14.6	13.1	8.9	34.5	2.1	6.15	0	1	1	1	5	1	9	1	5	2	7	3	2	0	2	1	26.9
18	RFM 42	79.2	1.0	24.4	1.8	12.8	9.7	8.5	35.5	2.5	5.25	0	1	1	1	5	1	3	1	5	2	7	2	2	0	1	1	47.5
19	RFM 43	91.0	1.7	29.0	1.9	14.6	12.1	8.3	36.0	2.2	5.7	0	1	1	1	5	1	3	1	5	2	7	1	2	0	0	0	44.3
20	RFM 44	89.5	1.2	24.3	2.2	17.6	14.5	9.0	35.5	2.3	6.6	0	1	1	1	5	1	3	1	5	2	7	1	2	0	1	0	26.4
21	RFM 45	108.8	1.0	32.3	2.5	17.8	16.4	9.9	38.0	2.3	9.45	0	1	1	1	5	1	3	1	5	2	7	1	2	0	2	1	32.7
22	RFM 47	111.1	1.0	31.9	2.3	15.4	18.2	11.4	38.0	2.1	4.95	0	1	1	1	5	1	3	1	5	2	7	3	2	1	2	1	55.9
23	RFM 48	94.9	1.0	28.5	2.1	17.8	12.3	9.0	36.5	1.9	5.1	0	1	1	1	5	1	3	1	5	2	7	4	2	1	2	1	44.3
24	RFM 50	96.8	1.0	27.4	2.2	13.6	13.6	8.1	38.0	2.1	7.6	0	1	1	1	5	1	3	1	5	2	7	1	2	1	2	0	41.6
25	RFM 51	118.7	1.0	30.7	2.4	14.2	15.0	7.3	39.5	1.9	9.3	0	1	1	1	5	1	3	1	5	2	7	1	2	1	2	1	35.1

26	RFM 52	77.6	1.0	31.9	2.4	12.8	15.3	10.2	39.5	1.9	5.3	0	1	1	1	5	1	3	1	5	2	7	2	2	1	2	1	22.2
27	RFM 53	86.8	1.0	33.1	2.5	20.6	17.8	11.2	39.5	2.3	4.35	0	1	1	1	5	1	3	1	5	2	7	1	2	0	1	1	37.2
28	RFM 54	79.8	1.0	27.2	2.2	10.6	17.8	7.5	39.0	2.5	4.1	0	1	1	1	5	1	3	1	5	2	7	1	2	0	2	1	43.0
29	RFM 55	74.7	1.0	37.3	2.7	16.4	17.0	10.9	38.0	2.1	5.0	0	1	1	1	5	1	7	1	5	2	7	3	2	0	1	0	42.8
30	RFM 56	74.8	1.0	28.0	2.1	16.0	14.4	9.5	37.5	2.3	5.1	0	1	1	1	5	1	7	1	5	2	7	1	2	0	2	0	50.9
31	RFM 57	90.2	1.0	30.6	2.2	12.6	14.7	8.7	39.5	2.9	8.7	0	1	1	1	5	1	9	1	5	2	7	1	2	0	3	2	29.9
32	RFM 58	86.3	1.0	27.4	2.1	9.4	17.5	8.4	38.0	2.1	6.75	0	1	1	1	5	1	9	7	5	2	7	3	2	0	3	1	46.3
33	RFM 59	83.5	1.0	35.9	2.3	4.8	17.6	3.7	43.0	2.3	5.9	0	1	1	1	5	1	9	7	5	2	7	2	2	0	2	1	22.2
34	RFM 60	87.3	1.0	28.9	2.4	18.6	14.5	7.3	36.5	2.4	4.1	0	1	1	1	5	1	9	1	5	2	7	1	2	0	1	0	37.5
35	RFM 62	92.6	1.0	35.8	2.6	13.2	17.2	8.4	36.5	2.5	4.3	0	1	1	1	5	1	3	1	5	2	7	4	2	0	0	0	21.2
36	RFM 63	78.2	1.3	30.6	2.6	14.8	17.5	9.8	36.5	2.7	4.3	0	1	1	1	5	1	3	1	5	2	7	1	2	0	0	0	44.2
37	RFM 64	88.1	1.0	33.0	2.7	13.2	17.4	7.5	37.5	2.3	6.3	0	1	1	1	5	1	3	1	5	2	7	3	2	0	0	0	33.4
38	RFM 65	77.0	1.7	37.3	2.7	7.2	18.4	7.1	36.0	2.0	7.3	0	1	1	1	5	1	3	1	5	2	7	1	2	0	1	0	20.8
39	RFM 66	100.7	1.0	28.4	2.1	16.8	14.9	9.1	36.5	2.5	8.1	0	1	1	1	5	1	3	1	5	2	7	1	2	0	2	0	21.3
40	RFM 67	98.3	1.3	26.1	1.5	17.0	14.9	9.1	35.0	2.5	8.7	0	1	1	1	5	1	9	1	5	2	7	1	2	0	2	0	35.8
41	RFM 68	80.0	1.2	28.0	1.8	18.0	15.1	8.9	35.5	2.3	5.85	0	1	1	1	5	1	9	1	5	2	7	1	2	0	0	0	33.0
42	RFM 69	87.5	1.0	28.5	2.0	15.6	11.5	8.7	36.0	2.2	4.7	0	1	1	1	5	1	9	1	5	2	7	4	2	0	0	0	44.5
43	RFM 70	89.0	1.5	24.2	1.8	13.8	10.0	7.6	36.0	1.9	5.25	0	1	1	1	5	1	9	1	5	2	7	1	2	0	2	1	29.5
44	RFM 71	87.3	1.7	24.1	2.1	16.6	12.0	8.9	36.0	2.0	4.95	0	1	1	1	5	1	3	1	5	2	7	1	2	0	0	0	36.2
45	RFM 72	94.0	1.0	27.1	2.1	15.0	11.9	7.5	36.0	2.9	5.55	0	1	1	1	5	1	3	1	5	2	7	3	2	0	0	0	27.6
46	RFM 73	93.3	2.0	25.1	2.1	16.2	12.1	7.7	36.5	2.1	4.7	0	1	1	1	5	1	3	1	5	2	7	2	2	0	2	1	32.8
47	RFM 74	79.4	1.1	30.1	2.1	13.0	12.4	7.6	36.0	2.2	4.7	0	1	1	1	5	1	3	1	5	2	7	1	2	0	2	1	26.2
48	RFM 75	96.6	1.4	26.7	2.1	17.0	13.8	7.7	36.0	2.4	5.4	0	1	1	1	5	1	3	1	5	2	7	1	2	0	2	1	26.2
49	RFM 76	90.8	1.0	28.3	2.2	11.4	11.2	6.5	35.5	2.4	8.3	0	1	1	1	5	1	7	1	5	2	7	3	2	0	0	0	33.3
50	RFM 77	88.8	1.0	32.7	2.0	13.8	16.1	6.6	37.0	2.1	6.75	0	1	1	1	5	1	9	1	5	2	7	4	2	0	3	2	31.4
51	RFM 78	90.4	1.1	25.0	2.0	14.6	12.2	7.6	35.0	2.2	6.45	0	1	1	1	5	1	9	1	5	2	7	4	2	0	3	1	27.5
52	RFM 79	98.4	1.0	27.5	2.1	17.0	15.0	7.9	34.0	2.1	9.75	0	1	1	1	5	1	9	1	5	2	7	3	2	0	2	2	20.8
53	RFM 80	92.6	1.2	26.2	2.0	17.8	12.2	7.1	34.0	2.0	7.3	0	1	1	1	5	1	9	1	5	2	7	3	2	0	2	0	33.6

54	RFM 81	99.7	1.9	23.0	2.1	14.6	12.2	6.8	34.5	2.3	8.7	0	1	1	1	5	1	3	1	5	2	7	4	2	0	3	1	22.6
55	RFM 82	94.1	1.4	24.9	2.0	14.2	11.5	6.8	36.0	1.8	7.95	0	1	1	1	5	1	3	1	5	2	7	4	2	0	2	0	18.1
56	RFM 83	99.4	1.3	26.6	1.9	15.8	12.3	7.3	36.5	2.4	8.4	0	1	1	1	5	1	3	1	5	2	7	4	2	0	2	0	17.6
57	RFM 84	90.5	1.3	22.7	1.8	14.2	12.9	7.5	37.0	2.3	7.7	0	1	1	1	5	1	3	1	5	2	7	1	2	0	2	0	15.6
58	RFM 85	85.4	1.5	18.9	1.5	12.4	10.2	7.8	36.0	2.9	7.6	0	1	1	1	5	1	7	1	5	2	7	3	2	0	1	1	18.2
59	RFM 86	83.5	1.2	22.1	1.8	14.8	9.5	7.7	36.5	2.5	6.45	0	1	1	1	5	1	7	1	5	2	7	1	2	0	2	0	21.7
60	RFM 87	80.5	1.4	19.4	1.5	14.6	9.5	8.5	36.0	2.2	7.15	0	1	1	1	5	1	7	1	5	2	7	3	2	0	2	0	18.6
61	RFM 88	87.3	2.1	20.0	1.4	13.4	9.3	8.6	36.5	2.7	8.2	0	1	1	1	5	1	7	1	5	2	7	2	2	0	2	1	17.2
62	RFM 89	86.8	1.2	26.3	2.1	14.8	10.3	7.7	36.5	2.4	8.55	0	1	1	1	5	1	7	1	5	2	7	4	2	0	0	0	22.3
63	RFM 90	98.7	1.5	24.9	2.0	13.6	15.3	8.8	35.5	2.8	8.05	0	1	1	1	5	1	7	1	5	2	7	3	2	0	2	0	17.3
64	RFM 91	104	1.1	25.0	1.8	16.0	13.2	8.7	36.0	2.2	10.7	0	1	1	1	5	1	7	1	5	2	7	3	2	0	2	1	22.6
65	RFM 92	113	1.3	28.9	2.4	14.2	15.1	8.5	36.0	2.2	11.7	0	1	1	1	5	1	7	1	5	2	7	4	2	0	3	1	22.4
66	RFM 93	129	1.6	33.9	2.4	18.8	17.4	8.1	36.5	1.8	9.15	0	1	1	1	5	1	7	1	5	2	7	3	2	0	2	1	14.8
67	RFM 94	122	1.0	35.8	2.5	16.4	17.6	8.2	36.0	2.2	8.45	0	1	1	1	5	1	7	1	5	2	7	2	2	0	1	0	16.2
68	RFM 95	131	1.3	30.9	2.2	20.6	18.3	8.7	36.5	2.3	15.8	0	1	1	1	5	1	7	3	5	2	7	3	2	0	2	1	18.3
69	RFM 96	125	1.1	33.3	2.6	15.2	16.9	7.8	35.5	2.2	10.5	0	1	1	1	5	1	9	3	5	2	7	3	2	0	2	1	10.8
70	RFM 97	125	2.1	37.2	2.6	14.4	20.5	8.7	36.0	2.1	11.4	0	1	1	1	5	1	9	0	5	2	7	3	2	1	2	1	18.8
71	RFM 98	127	1.0	35.6	2.6	16.8	17.8	9.1	34.0	2.4	10.3	0	1	1	1	5	1	9	1	5	2	7	3	2	0	2	0	21.6
72	RFM 99	124	1.0	35.9	2.8	17.4	19.2	9.0	34.0	1.9	9.45	0	1	1	1	5	1	9	0	5	2	7	1	2		1	1	22.4
	Mean	92.5	1.2	28.0	2.1	15.1	13.9	8.2	36.3	2.3	6.68	0	1	1	1	5	1	5.5	1	5	2	7	2.3	2	0	1.4	0.5	31.1

Foxtail millet – Descriptors studied

29. Plant height : From ground level to the tip of the inflorescence at dough stage.
30. No. of basal tillers : Number of tillers at ground level or from the basal nodes.
31. Flag leaf length (cm) : Measured from ligule to leaf tip at flowering.
32. Flag leaf length (cm) : Measured across the centre of leaf at flowering.
33. Peduncle length (cm) : Measured from top most node to the base of the inflorescence.
34. Ear length (cm) : From base to tip of ear on the main tiller at dough stage.
35. Panicle exertion (cm) : measured from the exposed point of the peduncle from the leaf sheath up to base of the panicle
36. Days to 50% flowering : From sowing to stage when the ears have emerged on 50% of the main tillers
37. Thousand grain weight (g) : Weight of random samples of 1000 seeds from the total harvest of an accession.
38. Grain yield per plant (g) : Mean of five random plants yield.
39. Plant pigmentation at flowering : 0 = Non-pigmented (green) 1 = Pigmented
40. Leaf colour : 1. = Green 2 = Yellow 3 = Purple 4 = Deep purple
41. Leaf blade pubescence : 3 = Essentially glabrous 5 = Medium pubescent 9 = Strongly pubescent
42. Sheath pubescence : 3 = Essentially glabrous 5 = Medium pubescent 9 = Strongly pubescent
43. Degree of lodging at maturity : 3 = Very slight 5 = Medium 7 = Extensive
44. Senescence : 1 = Actively green 2 = Dead
45. Inflorescence lobes : 0 = Absent 3 = Short 7 = Long 9 = Large and thick
46. Inflorescence bristle spikelet : 0 = Absent 1= Very short 3 = Short but ovious 5 = Medium 7 = Long 9 = Carrying a
47. Lobe compactness : 3 = loose 5 = Medium 7 = Compact 9 = Spongy
48. Inflorescence shape : 1 = Cylindrical 2 = Pyramidal 3 = Obovate
49. Inflorescence compactness : 3 = loose 5 = Medium 7 = Compact 9 = Spongy
50. Fruit colour : 1. = Red 2 = Black 3 = White 4 = Yellow
51. Grain shape : 1. = Oval 2 = Elliptical
52. Apical sterility in panicle : 0 = Absent 1 = Present
53. Helminthosporium leaf blight : 1 = Resistant 2 = Moderately resistant 3 = Susceptible
54. Rust : 1 = Resistant 2 = Moderately resistant 3 = Susceptible
55. Sheath blight (%) : 1 = Resistant 2 = Moderately resistant 3 = Susceptible

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Table 23 Variability Analysis of Foxtail Millet landraces for Yield, Its Component Characters and Biotic Stresses (Average of 2009-10 and 2010-11)

S. No.	Character	Range		Mean	Standard Deviation	CV (%)
		Minimum	Maximum			
1	Plant height (cm)	73.6	131.2	92.50	14.39	15.56
2	No. of basal tillers	1.0	2.1	1.20	0.29	23.86
3	Flag leaf length (cm)	18.9	37.3	28.04	4.49	18.90
4	Flag leaf width (cm)	1.4	2.8	2.11	0.34	15.88
5	Peduncle length (cm)	4.8	20.6	15.11	2.64	17.47
6	Inflorescence length (cm)	9.1	20.5	13.90	2.88	20.73
7	Panicle exertion (cm)	3.7	11.4	8.22	1.14	13.84
8	Days to 50% flowering	33.5	43.0	36.25	1.61	4.45
9	Grain yield per plant (g)	3.9	15.8	6.68	2.30	34.37
10	1000 grain weight (g)	1.8	2.9	2.26	0.25	12.98
11	Helminthosporium leaf blight (G)	0.0	3.0	1.43	0.92	64.07
12	Rust (G)	0.0	2.0	0.47	0.58	122.98
13	Sheath blight (%)	0.0	60.9	31.10	12.41	142.41

Table 24 Quantitative Grouping of 72 Landraces of Foxtail Millet

S. No.	Character	Group	Frequency	Percent (%)
1.	Plant height	Dwarf (80 cm)	12	16.7
		Semi dwarf (80.1 to 100 cm)	47	65.3
		Tall (> 100 cm)	13	18.0
2.	Number of basal tillers	Low (up to 1)	35	48.6
		Medium (1.1 to 1.5)	28	38.9
		High (Above 1.5)	9	12.5
3.	Flag leaf length	Low (up to 25.0 cm)	21	29.2
		Medium (25.1 to 35 cm)	43	59.7
		High (Above 35.0 cm)	8	11.1
4.	Flag leaf width	Low (up to 2.0 cm)	29	40.3
		Medium (2.1 to 2.5 cm)	32	44.4
		High (Above 2.5 cm)	11	15.3
5.	Peduncle length	Low (up to 10.0 cm)	3	4.2
		Medium (10.1 to 15.0 cm)	34	47.2

		High (Above 15.0 cm)	35	48.6
6.	Ear length	Low (up to 10.0 cm)	7	9.7
		Medium (10.1 to 15.0 cm)	39	54.2
		High (Above 15.0 cm)	26	36.1
7.	Panicle exertion	Low (up to 8.0 cm)	30	41.7
		Medium (8.1 to 10.0 cm)	38	52.8
		High (Above 10.0 cm)	4	5.5
8.	Days to 50% flowering	Early (up to 35)	14	19.4
		Medium (35.1-40)	57	79.2
		Late (>40)	01	1.4
9.	Grain yield per plant	Low (up to 5.0 g)	23	31.9
		Medium (5.1 to 10.0 g)	43	59.7
		High (Above 10.0 g)	6	8.4
10.	1000 grain weight	Low (up to 2.0 g)	10	13.9
		Medium (2.1 to 2.5 g)	55	76.4
		High (Above 2.5 g)	07	9.7
11.	Plant pigmentation at flowering	Absent	72	100.0
		Present	0	0.0
12.	Leaf colour	Green	72	100.0
		Yellow	0	0.0
		Purple	0	0.0
		Deep purple	0	0.0
13.	Leaf blade pubescence	Essentially glabrous	72	100.0
		Medium pubescent	0	0.0
		Strongly pubescent	0	0.0
14.	Sheath pubescence	Essentially glabrous	72	100.0
		Medium pubescent	0	0.0
		Strongly pubescent	0	0.0
15.	Degree of lodging at maturity	Slight	0	0.0
		Medium	72	100.0
		Extensive	0	0.0
16.	Senescence	Actively green	72	100.0
		Dead	0	0.0
17.	Inflorescence lobes	Absent	0	0.0
		Short	38	52.8
		Long	16	22.2
		Long and thick	18	25.0
18.	Inflorescence bristles	Absent	2	2.8
		Very short	68	94.4
		Short but ovious	2	2.8
		Medium	0	0.0

		Long	0	0.0
		Carrying a spikelet	0	0.0
19.	Lobe compactness	Loose	0	0.0
		Medium	72	100.0
		Compact	0	0.0
		Spongy	0	0.0
20.	Inflorescence shape	Cylindrical	0	0.0
		Pyramidal	72	100.0
		Obovate	0	0.0
21.	Inflorescence compactness	Loose	0	0.0
		Medium	1	1.4
		Compact	71	98.6
		Spongy	0	0.0
22.	Fruit colour	Red	32	44.4
		Black	5	6.9
		White	21	29.2
		Yellow	14	20.0
23.	Grain shape	Oval	0	0.0
		Elliptical	72	100.0
24.	Apical sterility in panicle	Absent	65	90.3
		Present	7	9.7
25.	Helminthosporium leaf blight	Resistant	66	91.7
		Moderately Resistant	6	8.3
		Susceptible	0	0.0
26.	Rust	Resistant	72	100.0
		Moderately Resistant	0	0.0
		Susceptible	0	0.0
27.	Sheath blight	Resistant	13	18.1
		Moderately Resistant	24	33.3
		Susceptible	35	48.6

3.5 Low cost management of biotic stresses in Small millets

3.5.1 Kodo millet

3.5.1.1 Identification of resistant sources : Incidence of head smut caused by *Sorosporium paspali-thunbergii* (2.1 to 39.1%) and sheath blight caused by *Rhizoctonia solani* (13.7 to 49.5%) was recorded in 428 screened land races of kodo millet.Fourteen land races namely RPS 539,575,581,583,590,804,818,820,830,859, 886,898,910 & 977 were found resistant to head smut under artificial inoculations. Forty eight land races were shown resistant reaction sheath blight. Two land races namely RPS 575 and RPS 830 were resistant to head smut and sheath blight. Only one insect shoot fly (*Atherigona* species) was observed infecting kodo millet. Incidence of shoot fly showing dead heart ranging from 2.1 to 60.7% was recorded. Forty eight land races were shown resistant reaction against shoot fly. Two land races namely RPS 583 and RPS 910 were resistant to both head smut and shoot fly (Table 25).

Table 25. Resistant sources of kodo millet identified against important biotic factors

Biotic factor	Causal organism	Resistant sources
Kodo millet		
Head smut	*Sorosporium paspali thunbergii*	RPS 539,575,581,583,590,804,818,820,830,859, 886,898,910 & 977
Sheath blight	*Rhizoctonia solani*	RPS502,503,508,510,516,529,531,535,543,548, 550,556,566,575,577,579,585,593,607,609,621,629 ,634,646,649,661,662,689,691,694,695,708,739,75 3,755,787,789,814,830,867,881,883,918,919,923,9 29,956,961
Shoot fly	*Atherigona* species	RPS515,583,612,628,642,685,763,806,810,811, 822,823,834,842,846,871,872,901,902,904,905,909 ,910,914,915,917,918,921,925,927,929,930,933,93 4,938,939,941,943,944,945,946,948,951,953,967,9 68,970 & 974

3.5.1.2 Low cost management of important biotic stresses in kodo millet

One fungicide carboxin, two insecticides namely Thio methaxam and Monocrotophos, NSKE, Vermicompost, Neem cake and one bio agent *Trichoderma viride* were tested alone and in different combinations as seed dresser, foliar spray and soil application for the management of important biotic stresses of Kodo millet (Table 27) . Average head smut incidence and shoot fly incidence ranging from 0.25 to 24.15% and 7.8 to 43.8%, respectively were recorded. Reduction in head smut incidence varied from 31.9 to 98.9% was recorded. Maximum smut control was recorded in seed treatment (ST) with carboxin + Thio-Methaxam (T_3) followed by ST with Carboxin alone and ST with both the chemicals followed by NSKE spray. Maximum control (82.2%) of shoot fly infestation was recorded in seed treatment with Carboxin + Thio-Methaxam + one foliar spray of Monocrotophos @ 1.5 ml per liter of water (T_5) followed by seed treatment with Carboxin (2 g/ kg seed) + Thio-Methaxam (2 g / kg seed) + one foliar spray of NSKE (T_4). Highest grain yield was also recorded in the same treatments.

3.5.2 Little millet

3.5.2.1 Identification of resistant sources : One hundred twelve land races of little millet were screened against important diseases and insect-pests during two consecutive years. Grain smut caused by *Macalpinomyces sharmae* and sheath blight caused by *Rhizoctoniz solani* was observed. Susceptibility index (SI) of grain smut varied from 1.8 to 15.2 with a mean of 6.92 was recorded. Twenty six land races namely RLM 148, 171,173,174,175,176,177, 178,179, 182,185,199, 202, 203, 207, 208,209,210,217,218,227,228, 229,230,231 and 232 were found resistant to grain smut. Sheath blight incidence ranging from 18.3 to 50.0% with a mean of 24.45% was recorded. None of the land races were found completely free from sheath blight. However, six land races namely RLM 103,161,171,181,182,219 were shown resistant reaction against sheath blight. Two land races namely RLM 171 and RLM 182 were shown resistant reaction against both the diseases. Shoot fly (*Atherigona* species) ranging from 8.6 to 51.9% with a mean of 26.1% was recorded. Only two land races namely RLM 197 and RLM 200 were found resustant to shoot fly (Table 26).

Table 26. Resistant sources of little millet identified against important biotic factors

Biotic factor	Causal organism	Resistant sources
Kutki (Little millet)		
Grain smut	*Macalpinomyces sharmae*	RLM 148, 171,173,174,175,176,177,178,179,182, 185,199,202,203,207,208,209,210,217,218,227,228 , 229,230,231,232
Sheath blight	*Rhizoctonia solani*	RLM 103,161,171,181,182,219
Shoot fly	*Atherigona* species	RLM 197 and 200

3.5.2.2 Low cost management of important biotic stresses in little millet.

For the management of biotic stresses in little millet , one fungicide Carboxin, two insecticides namely Thio methaxam and Monocrotophos, NSKE, Vermicompost, Neem cake and one bio agent *Trichoderma viride* were tested alone and in different combinations as seed dresser, foliar spray and soil application using susceptible variety JK 8 (Table 28). Average susceptibility index (SI) of grain smut varied from 5.6 to 14.6 was recorded in different treatments. Reduction in susceptibility index (SI) of grain smut ranging from 27.4 to 61.4% was recoded with highest in seed treatment with Carboxin (2 g/ kg seed) + Thio-Methaxam (2 g / kg seed) + one foliar spray of NSKE (T_4). Results are at par with only seed treatment with Carboxin, seed treatment with Carboxin + Thio-Methaxam or seed treatment with both the chemicals + one foliar spray of Monocrotophos @ 1.5 ml per liter of water (T_5). Shoot fly incidence varied from 14.4 to 41.1% was recorded. Maximum reduction was recorded in seed treatment with Carboxin (2 g/ kg seed) + Thio-Methaxam (2 g / kg seed) + one foliar spray of Monocrotophos @ 1.5 ml per litre of water (64.9%) followed by seed treatment with Carboxin (2 g/ kg seed) + Thio-Methaxam (2 g / kg seed) + one foliar spray of NSKE (59.1%) with highest grain yield in the same treatments 1113.35 kg/ha and 1086.00 kg/ha, respectively

Table 27. Influence of low cost management practices on biotic stresses and grain yield in Kodo millet (2009-10 and 2010-11))

Treatments	Head smut incidence (%)			% reduction in head smut	Shoot Fly Incidence (%)			% reduction in Shoot fly	Grain yield (kg/ha)			% increase in yield
	2009	2010	Mean		2009	2010	Mean		2009	2010	Mean	
T_1	0.6 (3.62)	0.3(1.81)	0.45	98.1	39.9(39.16)	36.3(37.03)	38.10	13.0	2105	2430	2267.5	23.6
T_2	7.1(15.40)	17.8(24.89)	12.45	48.4	18.9(25.73)	15.4(21.48)	17.15	60.8	2190	2360	2275.0	23.9
T_3	0.0(0.00)	0.5(2.42)	0.25	98.9	18.3(25.32)	14.4(22.26)	16.35	62.7	2225	2630	2427.5	32.3
T_4	0.7(3.89)	0.3(1.91)	0.50	97.9	15.4(23.09)	13.4(21.46)	14.40	67.1	2257	2670	2463.5	34.2
T_5	1.3(6.23)	0.7(3.78)	1.00	95.8	6.8(15.09)	8.8(17.26)	7.80	82.2	2315	2850	2582.5	40.7
T_6	14.3(22.84)	18.6(25.47)	16.45	46.8	26.2(30.78)	28.8(32.38)	27.50	37.2	1982	2240	2111.0	15.0
T_7	7.3(15.67)	7.9(16.26)	7.60	68.5	22.5(28.31)	18.7(25.58)	20.60	52.9	2110	2330	2220.0	20.9
T_8	14.4(22.30)	13.2(21.27)	13.80	42.8	24.1(29.39)	22.4(28.25)	23.25	46.9	2013	2170	2091.5	13.9
T_9	8.1(16.51)	6.9(15.05)	7.50	68.9	22.5(28.31)	17.9(24.98)	20.20	53.9	2058	2440	2249.0	22.6
T_{10}	22.4(28.24)	25.9(30.57)	24.15	-	47.7(43.68)	39.9(39.17)	43.80	-	1760	1910	1835.0	-
SEM±	0.633	0.908	-		0.398	0.632	-		47.23	32.00	-	
CD (5%)	1.880	2.698	-		1.182	1.877	-		140.33	95.09	-	
CV(%)	14.1	18.9	-		4.1	7.0	-		6.7	3.9	-	

Figures in parentheses are arc sin transformed values

Table 28 Influence of low cost management practices on biotic stresses and grain yield in Little millet (2009-10 and 2010-11))

Treatments	Susceptibility index of grain smut			% reduction in head smut	Shoot Fly Incidence (%)			% reduction in Shoot fly	Grain yield (kg/ha)			% increase in yield
	2009	2010	Mean		2009	2010	Mean		2009	2010	Mean	
T_1	7.9	4.5	6.2	57.5	36.7(37.26)	29.5(32.89)	33.1	19.5	948.1	1080.0	1014.05	14.4
T_2	11.2	8.5	9.8	32.9	22.0(27.95)	16.4(23.68)	19.2	53.3	940.7	1050.0	995.35	12.3
T_3	7.8	4.1	5.9	59.6	19.2(25.99)	14.7(22.52)	16.9	58.9	1014.8	1100.0	1057.40	19.3
T_4	7.4	3.9	5.6	61.4	17.5(24.72)	16.2(23.66)	16.8	59.1	1037.0	1135.0	1086.00	22.5
T_5	7.9	3.8	5.8	60.3	14.9(22.64)	13.9(21.43)	14.4	64.9	1066.7	1160.0	1113.35	25.6
T_6	9.3	5.5	7.4	49.3	24.6(29.72)	24.9(29.90)	24.7	39.9	1000.2	970.0	985.10	11.1
T_7	9.6	6.1	7.8	46.6	23.7(29.03)	17.5(24.72)	20.6	49.9	985.4	1000.0	992.70	12.0
T_8	11.6	8.0	9.8	32.9	28.5(32.24)	23.3(28.84)	25.9	36.9	918.5	950.0	934.25	5.4
T_9	12.1	9.2	10.6	27.4	31.2(33.92)	26.3(30.85)	28.7	30.2	911.1	960.0	935.55	5.5
T_{10}	16.2	13.1	14.6	-	46.9(43.25)	35.3(36.39)	41.1	-	844.6	928.0	886.30	-
SEM±	-	-	-		0.774	1.079			16.111	20.959	-	
CD (5%)	-	-	-		2.300	3.206	-		47.870	62.275	-	
CV(%)	-	-	-		7.57	11.8	-		5.00	6.1	-	

Figures in parentheses are arc sin transformed values

3.5.3 Barnyard millet

3.5.3.1 Identification of resistant sources : Grain smut caused by *Ustilago trichophora* was only the disease , which was observed in 49 land races of barnyard millet. Susceptibility index (SI) of grain smut varied from 0.0 to 15.3 with a mean of 8.45 was recorded. Six land races namely RBM 57, 58, 77, 78, 81 and 82 were found resistant to grain smut (Table 29).

Table 29. Resistant sources of barnyard millet identified against grain smut

Biotic factor	Causal organism	Resistant sources
Sawan (Barnyard millet)		
Grain smut	*Ustilago trichophora*	RBM 57, 58, 77, 78, 81, 82

3.5.4 Foxtail millet

3.5.4.1 Identification of resistant sources : Incidence of leaf blight (*Cochliobolus setariae= Helminthosporium setariae)*, rust (*Uromyces setariae)* and sheath blight (*Rhizoctonia solani*) was recorded in 72 land races of foxtail millet. Low incidence of leaf blight ranging from 0 to 3 G with a mean of 1.43 G and rust ranging from 0 to 2 G with a mean of 0.47 G was recorded in all the screened land races. Sheath blight incidence varied from 0.0 to 60.9% with a mean of 31.1% was recorded. Thirteen land races namely RFM 29, 82, 83, 84, 85, 87, 88, 90, 93,94, 95, 96 and 97 were found resistant to sheath blight (Table 30).

Table 30. Resistant sources of foxtail millet identified against sheath blight

Biotic factor	Causal organism	Resistant sources
Kakun (Foxtail millet)		
Sheath blight	*Rhizoctonia solani*	RFM 29, 82, 83, 84, 85, 87, 88, 90, 93,94, 95, 96 and 97

3.6 Nutritional studies

Small millets are rich in nutrient composition and are comparable with other cereals. Hence, these millets are now known as **Nutri-cereals.** Diverse land races of Kodo millet (24), little millet (12), foxtail millet (10) and barnyard millet (10) analyzed for protein content. Protein content ranging from 10.3 to 13.8%, 11.3 to 14.8%, 12.4 to 14.3% and 11.8 to 13.2% was estimated in kodo millet, little millet, foxtail millet and barnyard millet, respectively. One folder entitled "*Paustic evam aushadhiya Guno Se Bharpoor Laghu Dhanya Fasalein*" in hindi was prepared and distributed to farmers in various training programmes and farmers day. One day workshop on *Awareness on conservation of Biodiversity* was organized on 18.01.2011 at College of Agriculture, Rewa, Diversified land races of small millets were displayed in exhibition .

Table 31. Protein estimation in promising land races of kodo millet, little millei, barnyard millet and foxtail millet.

S.No.	Entry	Protein (%)	S.No.	Entry	Protein (%)
Kodo millet					
1	RPS 503	12.8	13	RPS 710	12.2
2	RPS 507	12.3	14	RPS 712	10.8
3	RPS 552	11.2	15	RPS 715	11.4
4	RPS 556	10.3	16	RPS 749	13.4
5	RPS 566	11.6	17	RPS 754	12.6
6	RPS 620	10.4	18	RPS 769	12.6
7	RPS 635	10.4	19	RPS 780	10.9
8	RPS 639	11.2	20	RPS 798	10.4
9	RPS 649	11.8	21	RPS 859	13.8
10	RPS 658	12.2	22	RPS 911	12.8
11	RPS 671	11.6	23	RPS 967	11.6
12	RPS 688	10.4	24	RPS 977	108
Little millet					
1	RLM 106	11.6	7	RLM 142	14.8
2	RLM 114	11.4	8	RLM 147	12.4
3	RLM 120	12.4	9	RLM 155	14.2

4	RLM 122	11.8	10	RLM 165	12.4
5	RLM 129	13.6	11	RLM 209	12.2
6	RLM 135	12.2	12	RLM 233	13.4
Barnyard ,millet					
1	RBM 22	12.2	6	RBM 75	13.2
2	RBM 32	11.8	7	RBM 81	12.8
3	RBM 37	12.6	8	RBM 84	11.8
4	RBM 44	11.8	9	RBM 62	12.4
5	RBM 52	13.2	10	RBM 69	12.2
Foxtail millet					
1	RFM 24	12.4	6	RFM 80	12.8
2	RFM 42	12.4	7	RFM 85	14.2
3	RFM 51	13.6	8	RFM 88	13.6
4	RFM 70	12.8	9	RFM 93	12.2
5	RFM 72	14.3	10	RFM 99	12.4

3.7 Documentation, conservation and registration of economic land races of Small millets.

Land races of collected small millets are maintained at Germplasm unit, AICSMIP, College of Agriculture, Rewa (M.P.) and submitted / registered for long term storage at NAGS, All India Coordinated Small Millets Project Coordinating Cell, UAS, Bangalore and NBPGR, New Delhi for long term storage after proper documentation (Annexure- V, V Iand VII).

Table 32. Land races of small millets maintained and conserved.

Crop	Maintained and conserved		
	Germplasm Unit, AICSMIP, College of Agriculture, Rewa	NAGS, AICSMIP, PC Unit, Bangalore	NBPGR, New Delhi
Kodo millet	428	400	-
Little millet	112	105	112 submitted
Barnyard millet	49	45	49 registered
Foxtail millet	72	55	69 registered
Total	**661**	**605**	**230**

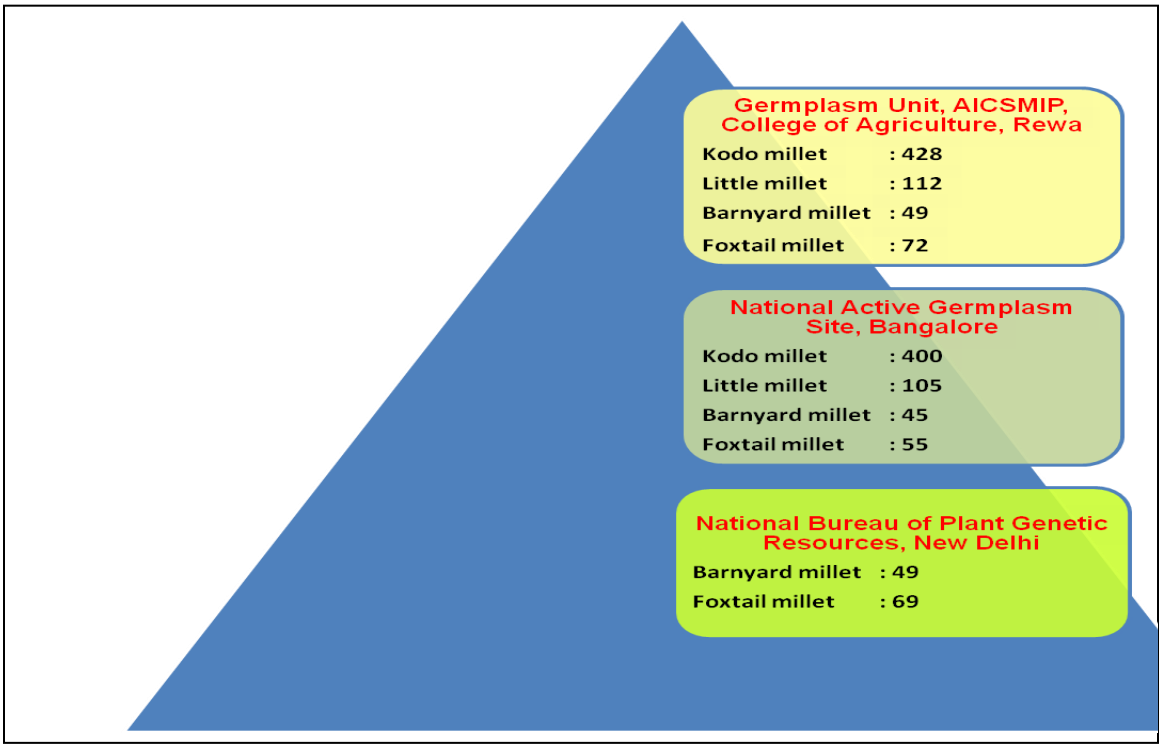

Fig. 22. Conservation of economic land races of small millets

4. Summary

4.1. **Collection of Small millets land races**

Seven hundred fifty nine land races of different small millets were collected from diverse geographic ecosystem of Rewa , Satna , Sidhi , Singrauli , Shahdol, Umaria and Anuppur districts of Madhya Pradesh.. Maximum collections were made from Shahdol district (186) followed by Rewa (179), Satna (127), Singrauli (96), Sidhi (83), Umaria (64) and Anuppur (24) district. Four hundred seventy nine land races of kodo millet, 133 of little millet, 79 of foxtail millet and 68 of barnyard millet were collected.

4.2. **Information on consumption pattern and ITKs of Small millets**

Small millets are mainly consumed as rice (bhat), chapatti, kheer and popped grains. Kodo rice is a heavy diet for hard working peoples. Tribal people also used kodo rice in preparation of pays, which is a cooked and fermented product. The grains have excellent storage property and can be stored for several years without fear of damage from store grain pests under ordinary storage conditions. Medicinally kodo millet is styptic and is used in inflammation, diseases of liver, ulcer, dysentery and heat the body of both human and cattles. The rice of kodo (Kudai) and little millet is consumed by the diabetic peoples. All the Small millets specially little millet , barnyard millet and foxtail millet are also a good source of green fodder at early stage of crop growth for cattles. The straw of kodo millet may be used in construction of earthen houses, earthen bins, pots and local mattresses in rural areas.

4.3 Survey for important biotic stresses

Average incidence of head smut locally known as *kando or karia* varied from 0.0 to 7.0 % and *Striga* spp. ranging from 0.0 to 14.5% was recorded in kodo millet in the districts of Rewa, Sidhi, Singarauli, Satna, Umaria and Shahdol. Problem of Matona (kodo poisoning) was also

reported from Pokhara village of Sidhi district and Kudari village of Umaria. Little millet crop was found free from diseases. Shoot fly incidence in the early stages of crop growth was found in little millet as well as in kodo millet and results in severe damage to the crop.

4.4 Evaluation of land races of Small millets :

Four hundred twenty nine land races of kodo millet, 112 of little millet, 72 of foxtail millet and 49 of barnyard millet were evaluated for morphological, phonological characters during two consecutive years at College of Agriculture, Rewa (M.P.). Significant variations were found in plant height, number of basal tillers, inflorescence length, shape, flowering and maturity period. Large variation was also recorded in grain yield per plant and 1000 grain weight. Low level of variation was recorded in grain shape and colour. Significant differences were noted in the reaction of host plant against important diseases and insect-pest. Smut and sheath blight was observed the major disease in almost all the millets, where as shoot fly was only the insect damaging the crop significantly. Quantitative grouping of land races of small millets were done on the basis of various characteristics. Land races were also categorized ob the basis of disease reaction as resistant, moderately resistant and susceptible.

4.5. Management of biotic stresses in Small millets

Fourteen land races of kodo millet namely RPS 539,575,581,583,590,804,818, 820, 830,859, 886,898,910 & 977 were found resistant to head smut, where as 48 were resistant to sheath blight and shoot fly . two land races namely RPS 583 and 910 were resistant to both head smut and shoot fly. Twenty six land races of little millet shown resistant reaction against grain smut, where as 6 were resistant to sheath blight and 02 were resistant to shoot fly. Thirteen land races of foxtail millet namely RFM 29, 82,83,84,85,87,88,90,93,94,95,96,97 were found resistant to sheath blight disease. Six land races of barnyard millet

namely RBM 57, 58, 77, 78, 81, 82 were found resistant to grain smut disease.

Head smut and shoot fly were major biotic stresses of kodo millet and limits the crop production significantly. Maximum smut control was recorded in seed treatment (ST) with carboxin + Thio-Methaxam (T_3) followed by ST with Carboxin alone and ST with both the chemicals followed by NSKE spray. Maximum control (82.2%) of shoot fly infestation was recorded in seed treatment with Carboxin + Thio-Methaxam + one foliar spray of Monocrotophos @ 1.5 ml per liter of water (T_5) followed by seed treatment with Carboxin (2 g/ kg seed) + Thio-Methaxam (2 g / kg seed) + one foliar spray of NSKE (T_4). Highest grain yield was also recorded in the same treatments. Similarly grain smut and shoot fly were found important biotic stresses. Reduction in susceptibility index (SI) of grain smut ranging from 27.4 to 61.4% was recoded with highest in seed treatment with Carboxin (2 g/ kg seed) + Thio-Methaxam (2 g / kg seed) + one foliar spray of NSKE (T_4). Results are at par with only seed treatment with Carboxin, seed treatment with Carboxin + Thio-Methaxam or seed treatment with both the chemicals + one foliar spray of Monocrotophos @ 1.5 ml per liter of water (T_5). Shoot fly incidence varied from 14.4 to 41.1% was recorded. Maximum reduction was recorded in seed treatment with Carboxin (2 g/ kg seed) + Thio-Methaxam (2 g / kg seed) + one foliar spray of Monocrotophos @ 1.5 ml per litre of water (64.9%) followed by seed treatment with Carboxin (2 g/ kg seed) + Thio-Methaxam (2 g / kg seed) + one foliar spray of NSKE (59.1%) with highest grain yield in the same treatments 1113.35 kg/ha and 1086.00 kg/ha, respectively .

4.6 Nutritional studies and strategies for its popularization .

Protein content ranging from 10.3 to 13.8%, 11.3 to 14.8%, 12.4 to 14.3% and 11.8 to 13.2% was estimated in kodo millet, little millet, foxtail millet and barnyard millet, respectively. One folder entitled "*Paustic evam aushadhiya Guno Se Bharpoor Laghu Dhanya Fasalein*" in hindi was prepared and distributed to farmers in various training programmes and

farmers day. One day workshop on *Awareness on conservation of Biodiversity* was organized on 18.01.2011 at College of Agriculture, Rewa, Diversified land races of small millets were displayed in exhibition .

4.7 Documentation, conservation and registration of economic land races of Small millets.

Land races of collected small millets are maintained at Germplasm unit, AICSMIP, College of Agriculture, Rewa (M.P.) and submitted / registered for long term storage at NAGS, All India Coordinated Small Millets Project Coordinating Cell, UAS, Bangalore and NBPGR, New Delhi for long term storage after proper documentation.

Crop	Maintained and conserved		
	Germplasm Unit, AICSMIP, College of Agriculture, Rewa	NAGS, AICSMIP, PC Unit, Bangalore	NBPGR, New Delhi
Kodo millet	428	400	428 submitted
Little millet	112	105	112 submitted
Foxtail millet	72	55	69 registered
Barnyard millet	49	45	49 registered
Total	**661**	**605**	**658**

5. Future plan of work

1. Economic land races of different small millets may be utilized for the development of new varieties having characteristics essential for various geographic regions along with inbuilt resistance against important biotic tresses.
2. Regular field survey for important biotic stresses may be carried out for planning management practices.
3. More collections of land races of Small millets from other part of the state.
4. Evaluation of economic land races of different small millets for other nutritional parameters and value addition.
5. Awareness of small millets among the peoples for its nutritional and medicinal value.
6. Documentation, conservation and registration of more economic land races of Small millets for long term storage.

Details of Budget provision and utilization
Budget head C-1(341)

Particulars	Sanctioned provision	Expenditure				
		2008-09	2009-10	2010-11	2011-12	Total
Stipend (SRF)	5,76,000	0.0	2,49,753	197760	51530	4,99,043
TA & POL	1,20,000	31,475	12,484	4268	11416	59,643
Recurring Cont.	1,60,000	13,116	1,43,436	37746	975	1,95,273
Non-recurring Cont.	1,00,000	42,058	25,382	0	0	67,440
Institutional charges	95,600	0	0	0	0	0
Total	**10,51,600**	**86,649**	**4,31,055**	**2,39,774**	**63,921**	**8,21,399**

CERTIFICATE

Certified that the information furnished in the report is based on the bonafied work carried out under the project and the same has been critically analyzed and interpreted by the under signed. No part of the data of the project has been utilized for non-official purpose.

Date :

Principal Investigator

Signature :
Name : Dr. A.K.Jain
Designation : Senior Scientist
Department of Plant pathology
College of Agriculture, Rewa

Dean
College of Agriculture, Rewa:

Director Research services
J.N.K.V.V. Jabalpur

Annexure –I.

Details of Kodo millet land races collected from tribal areas of M.P.

S. No.	Collection No.	Accession No Alloted	Collections					
			Farmers name	Village	Block	Distt	State	Date of collection
1	KM-1	RPS 501	Dhirendra Kumar Mishra	Hinauta	Sirmour	Rewa	M.P.	06.11.2008
2	KM-2	RPS 502	Shesh Tiwari	Shahpur	Sirmour	Rewa	M.P.	06.11.2008
3	KM-3	RPS 503	Ganga Prasad Saket	Karmai	Sirmour	Rewa	M.P.	06.11.2008
4	KM-4	RPS 504	Govind Prasad Kushwaha	Karmai	Sirmour	Rewa	M.P.	06.11.2008
5	KM-5	RPS 505	Ram Bahor Sahu	Karmai	Sirmour	Rewa	M.P.	06.11.2008
6	KM-6	RPS 506	Shuklesh Prasad Tiwari	Obara	Sirmour	Rewa	M.P.	06.11.2008
7	KM-7	RPS 507	Field	Obara	Sirmour	Rewa	M.P.	06.11.2008
8	KM-8	RPS 508	Pradeesp Kumar Rawat	Bara	Sirmour	Rewa	M.P.	06.11.2008
9	KM-9	RPS 509	Ram Balak Adiwasi	Bara	Sirmour	Rewa	M.P.	06.11.2008
10	KM-10	RPS 510	Bhai Lal adiwasi	Bara	Sirmour	Rewa	M.P.	06.11.2008
11	KM-11	RPS-511	Ram Milan Vishakarma	Bara	Sirmour	Rewa	M.P.	06.11.2008
12	KM-12	RPS 512	Kailash Singh	Geruar	Sirmour	Rewa	M.P.	06.11.2008
13	KM-13	RPS 513	Ram Singh	Geruar	Sirmour	Rewa	M.P.	06.11.2008
14	KM-14	RPS 514	Field	Bhitwa	Sirmour	Rewa	M.P.	06.11.2008
15	KM-25	RPS 515	Motilal Yadava	Budhawa	Raipur Kurchulian	Rewa	M.P.	07.11.2008
16	KM-26	RPS 516	Bahori Kol	Geruar	Raipur Kurchulian	Rewa	M.P.	07.11.2008
17	KM-27	RPS 517	Brij Bhan Saket	Banjari	Raipur Kurchulian	Rewa	M.P.	07.11.2008
18	KM-28	RPS 518	Ram Bahore Yadava	Pokhara	Raipur Kurchulian	Rewa	M.P.	07.11.2008
19	KM-29	RPS 519	Suresh Yadava	Pokhara	Raipur Kurchulian	Rewa	M.P.	07.11.2008
20	KM-30	RPS 520	Dharam Das Yadava	Pokhara	Raipur Kurchulian	Rewa	M.P.	07.11.2008
21	KM-31	RPS 521	Dev Sharan Singh	Charhai Pat	Raipur Kurchulian	Rewa	M.P.	07.11.2008
22	KM-32	RPS 522	Field	Charhai Pat	Raipur Kurchulian	Rewa	M.P.	07.11.2008

23	KM-33	RPS 523	Bhim Sen Yadava	Duari	Raipur Kurchulian	Rewa	M.P.	07.11.2008
24	KM-34	RPS 524	Shiv Nath Saket	Duari	Raipur Kurchulian	Rewa	M.P.	07.11.2008
25	KM-35	RPS 525	Kishore Saket	Duari	Raipur Kurchulian	Rewa	M.P.	07.11.2008
26	KM-36	RPS 526	Ram Milan Saket	Gaura	Raipur Kurchulian	Rewa	M.P.	07.11.2008
27	KM-37	RPS 527	Ram Sunder Nai	Jarha	Raipur Kurchulian	Rewa	M.P.	07.11.2008
28	KM-38	RPS 528	Ram Kumar Yadava	Jarha	Raipur Kurchulian	Rewa	M.P.	07.11.2008
29	KM-39	RPS 529	Ravendra Singh	Dehar	Mauganj	Rewa	M.P.	07.11.2008
30	KM-40	RPS 530	Dhanesh Mishra	Dehar	Mauganj	Rewa	M.P.	07.11.2008
31	KM-41	RPS 531	Ram Prasad Lonia	Gauri	Mauganj	Rewa	M.P.	07.11.2008
32	KM-42	RPS 532	Gangu Yadava	Khutaha	Mauganj	Rewa	M.P.	07.11.2008
33	KM-43	RPS 533	Raviraj Prasad Kori	Khutaha	Mauganj	Rewa	M.P.	07.11.2008
34	KM-44	RPS 534	Ramadhar Patel	Khaira	Mauganj	Rewa	M.P.	07.11.2008
35	KM-45	RPS 535	Ram Kishor Patel	Khaira	Mauganj	Rewa	M.P.	07.11.2008
36	KM-46	RPS 536	Ram Niwas	Khaira	Mauganj	Rewa	M.P.	07.11.2008
37	KM-47	RPS 537	Baboo Saket	Rajigvan	Mauganj	Rewa	M.P.	07.11.2008
38	KM-48	RPS 538	Field	Rajigvan	Mauganj	Rewa	M.P.	07.11.2008
39	KM-49	RPS 539	Ramawtar Patel	Laua	Rewa	Rewa	M.P.	08.11.2008
40	KM-50	RPS 540	Ram Niwas Patel	Laua	Rewa	Rewa	M.P.	08.11.2008
41	KM-51	RPS 541	Shiv Prasad patel	Sagara	Rewa	Rewa	M.P.	08.11.2008
42	KM-52	RPS 542	Ram Prasad Patel	Sagara	Rewa	Rewa	M.P.	08.11.2008
43	KM-53	RPS 543	Ramawtar Saket	Khamaria	Rewa	Rewa	M.P.	08.11.2008
44	KM-54	RPS 544	Chhote lal saket	Palhan	Sirmour	Rewa	M.P.	08.11.2008
45	KM-55	RPS 545	Munna Saket	Nanda	Sirmour	Rewa	M.P.	08.11.2008
46	KM-56	RPS 546	Ram Pratap Saket	Umari tola	Sirmour	Rewa	M.P.	08.11.2008
47	KM-57	RPS 547	Ramanuj Saket	Umari Tola	Sirmour	Rewa	M.P.	08.11.2008
48	KM-58	RPS 548	Babulal saket	Sirhana	Sirmour	Rewa	M.P.	08.11.2008
49	KM-59	RPS 549	Kalika Prasad Singrole	Padri	Sirmour	Rewa	M.P.	08.11.2008
50	KM-60	RPS 550	Bansh Dhari Kol	Padri	Sirmour	Rewa	M.P.	08.11.2008
51	KM-61	RPS 551	Kalloo Prasad Saket	Padri	Sirmour	Rewa	M.P.	08.11.2008
52	KM-62	RPS 552	Field	Chachai	Sirmour	Rewa	M.P.	08.11.2008

53	KM-63	RPS 553	Ram Kali saket	Maraila	Sirmour	Rewa	M.P.	08.11.2008
54	KM-64	RPS 554	Field	Maraila	Sirmour	Rewa	M.P.	08.11.2008
55	KM-65	RPS 555	Shri Niwas Sharma	Padri	Sirmour	Rewa	M.P.	08.11.2008
56	KM-66	RPS 556	Raja ram Verma	Koni	Java	Rewa	M.P.	08.11.2008
57	KM-67	RPS 557	Keshav Prasad Vishwakarma	Rajgarh	Sirmour	Rewa	M.P.	08.11.2008
58	KM-68	RPS 558	Field	Rajgarh	Sirmour	Rewa	M.P.	08.11.2008
59	KM-69	RPS 559	Ram Kripal Sondhiya	Kararia	Sirmour	Rewa	M.P.	08.11.2008
60	KM-70	RPS 560	Field	Dulahara	Sirmour	Rewa	M.P.	08.11.2008
61	KM-93	RPS 561	Ram Siya saket	Ambi	Gangeb	Rewa	M.P.	13.11.2008
62	KM-94	RPS 562	Ram lal Vishwakarma	Ambi	Gangeb	Rewa	M.P.	13.11.2008
63	KM-95	RPS 563	Bhaiya Lal	Nagma	Gangeb	Rewa	M.P.	13.11.2008
64	KM-96	RPS 564	Ram Sharan sahu	Sarai	Mauganj	Rewa	M.P.	13.11.2008
65	KM-97	RPS 565	Field	Sarai	Mauganj	Rewa	M.P.	13.11.2008
66	KM-98	RPS 566	Samay Lal Adiwasi	Naudhiya	Mauganj	Rewa	M.P.	13.11.2008
67	KM-99	RPS 567	Field	Naudhiya	Mauganj	Rewa	M.P.	13.11.2008
68	KM-100	RPS 568	Field	Naudhiya	Mauganj	Rewa	M.P.	13.11.2008
69	KM-101	RPS 569	Surendra Prasad Chaturvedi	Kheeri	Mauganj	Rewa	M.P.	13.11.2008
70	KM-102	RPS 570	Shri Prasad patel	Mundaria	Mauganj	Rewa	M.P.	13.11.2008
71	KM-103	RPS 571	Habib	Patehara	Hanumana	Rewa	M.P.	13.11.2008
72	KM-104	RPS 572	Kalicharan	Patehara	Hanumana	Rewa	M.P.	13.11.2008
73	KM-105	RPS 573	Ram Khelawan Prajapati	Ledara	Hanumana	Rewa	M.P.	13.11.2008
74	KM-106	RPS 574	Prahlad Prajapati	Teekat	Hanumana	Rewa	M.P.	13.11.2008
75	KM-107	RPS 575	Siya Sharan Prajapati	Ledara	Hanumana	Rewa	M.P.	13.11.2008
76	KM-108	RPS 576	Ambika Prasad Patel	Pidaria	Hanumana	Rewa	M.P.	13.11.2008
77	KM-109	RPS 577	Ram Jatan Yadava	Pidaria	Hanumana	Rewa	M.P.	13.11.2008
78	KM-110	RPS 578	Munshi Patel	Pidaria	Hanumana	Rewa	M.P.	13.11.2008
79	KM-111	RPS 579	Shri Niwas Yadava	Kidambergarh	Hanumana	Rewa	M.P.	13.11.2008
80	KM-112	RPS 580	Field	Kidambergarh	Hanumana	Rewa	M.P.	13.11.2008
81	KM-113	RPS 581	Moti lal Kumhar	Kidambergarh	Hanumana	Rewa	M.P.	13.11.2008
82	KM-114	RPS 582	Ram Bahor Yadava	Gada	Hanumana	Rewa	M.P.	13.11.2008

83	KM-115	RPS 583	Maniraj Singh	Gada	Hanumana	Rewa	M.P.	13.11.2008
84	KM-116	RPS 584	Kaloo Raidas	Badwar	Rewa	Rewa	M.P.	15.11.2008
85	KM-117	RPS 585	Balmik Raidas	Badwar	Rewa	Rewa	M.P.	15.11.2008
86	KM-160	RPS 586	Ram Pratap Pal	Barayakala	Mauganj	Rewa	M.P.	29.11.2008
87	KM-161	RPS 587	Babloo	Misirgvan	Hanumana	Rewa	M.P.	29.11.2008
88	KM-162	RPS 588	Shesh Mani Sen	Misirgavan	Hanumana	Rewa	M.P.	29.11.2008
89	KM-163	RPS 589	Munagi Mishra	Baraundi	Hanumana	Rewa	M.P.	29.11.2008
90	KM-164	RPS 590	Ramanuj Patel	Malaigma	Hanumana	Rewa	M.P.	29.11.2008
91	KM-165	RPS 591	Banwari Lal Adiwasi	Shivgarh	Hanumana	Rewa	M.P.	29.11.2008
92	KM-166	RPS 592	Gulab Prasad Prajapati	Shivgarh	Hanumana	Rewa	M.P.	29.11.2008
93	KM-167	RPS 593	Mithai Lal sahu	Shivgarh	Hanumana	Rewa	M.P.	29.11.2008
94	KM-168	RPS 594	Ram Rakccha Sen	Shivgarh	Hanumana	Rewa	M.P.	29.11.2008
95	KM-169	RPS 595	Bhai Lal Adiwasi	Ghoghum	Hanumana	Rewa	M.P.	29.11.2008
96	KM-170	RPS 596	Brij Lal Kol	Ghoghum	Hanumana	Rewa	M.P.	29.11.2008
97	KM-171	RPS 597	Nathuram Vishwakarma	Ghoghum	Hanumana	Rewa	M.P.	29.11.2008
98	KM-172	RPS 598	Field	Raghunath Garh	Hanumana	Rewa	M.P.	29.11.2008
99	KM-173	RPS 599	Shiv Dayal Patel	Kailash Pur	Hanumana	Rewa	M.P.	29.11.2008
100	KM-174	RPS 600	Neeraj Patel	Kailash Pur	Hanumana	Rewa	M.P.	29.11.2008
101	KM-175	RPS 601	Brij Lal Kol	Kailash Pur	Hanumana	Rewa	M.P.	29.11.2008
102	KM-176	RPS 602	Munna Kol	Kailash Pur	Hanumana	Rewa	M.P.	29.11.2008
103	KM-177	RPS 603	Field	Kailash Pur	Hanumana	Rewa	M.P.	29.11.2008
104	KM-178	RPS 604	Durasi Yadava	Jaminiha	Hanumana	Rewa	M.P.	29.11.2008
105	KM-179	RPS 605	Ram Prasad Patel	Bongaha	Hanumana	Rewa	M.P.	29.11.2008
106	KM-180	RPS 606	Buddha Sen saket	Bongaha	Hanumana	Rewa	M.P.	29.11.2008
107	KM-181	RPS 607	Sunder Lal Dwivedi	Isara pahar	Hanumana	Rewa	M.P.	29.11.2008
108	KM-182	RPS 608	PannaLal saket	Peeper Khand	Mauganj	Rewa	M.P.	29.11.2008
109	KM-183	RPS 609	Bhoora Harijan	Keoti	Gangeb	Rewa	M.P.	30.11.2008
110	KM-184	RPS 610	Mahaveer Yadava	Keoti	Gangeb	Rewa	M.P.	30.11.2008
111	KM-185	RPS 611	Ram Vishal Prajapati	Keoti	Gangeb	Rewa	M.P.	30.11.2008
112	KM-186	RPS 612	Gajraj Singh	Rojhonhi	Gangeb	Rewa	M.P.	30.11.2008

113	KM-187	RPS 613	Shesh mani saket	Rojhonhi	Gangeb	Rewa	M.P.	30.11.2008
114	KM-188	RPS 614	Chhote lal Kol	Rojhonhi	Gangeb	Rewa	M.P.	30.11.2008
115	KM-189	RPS 615	Veeran Prajapati	Rojhonhi	Gangeb	Rewa	M.P.	30.11.2008
116	KM-190	RPS 616	Munna Yadava	Sarai	Gangeb	Rewa	M.P.	30.11.2008
117	KM-191	RPS 617	Jagannath Yadava	Sarai	Gangeb	Rewa	M.P.	30.11.2008
118	KM-192	RPS 618	Ram Nath Adiwasi	Sarai	Gangeb	Rewa	M.P.	30.11.2008
119	KM-193	RPS 619	Jantu Adiwasi	Sarai	Gangeb	Rewa	M.P.	30.11.2008
120	KM-194	RPS 620	Raghu Adiwasi	Sarai	Gangeb	Rewa	M.P.	30.11.2008
121	KM-195	RPS 621	Mahaveer Prajapati	Sarai	Gangeb	Rewa	M.P.	30.11.2008
122	KM-196	RPS 622	Sandeep Prajapati	Kolgarha	Gangeb	Rewa	M.P.	30.11.2008
123	KM-197	RPS 623	Rakesh Singh	Sonversa	Gangeb	Rewa	M.P.	30.11.2008
124	KM-198	RPS 624	Rampal Dahurha	Sonversa	Gangeb	Rewa	M.P.	30.11.2008
125	KM-199	RPS 625	Lal Mani Saket	Sisba	Gangeb	Rewa	M.P.	30.11.2008
126	KM-200	RPS 626	Ram Bhan Saket	Sisba	Gangeb	Rewa	M.P.	30.11.2008
127	KM-201	RPS 627	Indra Mani Tiwari	Patai	Sirmour	Rewa	M.P.	30.11.2008
128	KM-202a	RPS 628	Sufal Saket	Baans	Gangeb	Rewa	M.P.	30.11.2008
129	Km 202b	RPS 629	Rakesh Saket	Baans	Gangeb	Rewa	M.P.	30.11.2008
130	KM-203	RPS 630	Mohan Kol	Kankar	Teonthar	Rewa	M.P.	30.11.2008
131	KM-204	RPS 631	Matuk dhari Adiwasi	Kankar	Teonthar	Rewa	M.P.	30.11.2008
132	KM-205	RPS 632	Sadhu Lal Gautam	Barhat	Teonthar	Rewa	M.P.	30.11.2008
133	KM-206	RPS 633	Bankelal Yadav	Barhat	Teonthar	Rewa	M.P.	30.11.2008
134	KM-207	RPS 634	Jag Mohan saket	Laad	Teonthar	Rewa	M.P.	30.11.2008
135	KM-208	RPS 635	Sandeep yadava	Laad	Teonthar	Rewa	M.P.	30.11.2008
136	KM-209	RPS 636	Ram baran yadava	Laad	Teonthar	Rewa	M.P.	30.11.2008
137	375	RPS 637	Ram Suman Patel	Dihiya	Naigarhi	Rewa	M.P.	01.12.2008
138	376	RPS 638	Ram Lakhan Patel	Lalganj	Naigarhi	Rewa	M.P.	01.12.2008
139	377	RPS 639	Ram Bharose saket	Shivrajpur	Naigarhi	Rewa	M.P.	01.12.2008
140	378	RPS 640	Ram Siya Yadav	Patharaura	Naigarhi	Rewa	M.P.	01.12.2008
141	379	RPS 641	Sukharam saket	Pathraura	Naigarhi	Rewa	M.P.	01.12.2008
142	380	RPS 642	Shambhu Nath Pandey	Sumedakala	Naigarhi	Rewa	M.P.	01.12.2008

143	381	RPS 643	Amar nath Shukla	Sumedakala	Naigarhi	Rewa	M.P.	01.12.2008
144	382	RPS 644	Lallu ram gautam	Atraika	Naigarhi	Rewa	M.P.	01.12.2008
145	383	RPS 645	Chhotakawa Yadava	Atraika	Naigarhi	Rewa	M.P.	01.12.2008
146	384	RPS 646	Ram nath Patel	Maihari	Naigarhi	Rewa	M.P.	01.12.2008
147	385	RPS 647	Lok Nath Patel	Maihari	Naigarhi	Rewa	M.P.	01.12.2008
148	386	RPS 648	Lakshmi Prasad	Fatua	Naigarhi	Rewa	M.P.	01.12.2008
149	387	RPS 649	Shambhu Vishwakarma	Fatua	Naigarhi	Rewa	M.P.	01.12.2008
150	388	RPS 650	Genda Lal	Bhaluha	Naigarhi	Rewa	M.P.	01.12.2008
151	389	RPS 651	Ram Charan Sahu	Bhaluha	Naigarhi	Rewa	M.P.	01.12.2008
152	KM-15	RPS 652	Balmik	Vijaypur	Majhagavan	Satna	M.P.	06.11.2008
153	KM-16	RPS 653	Babu Chaudhary	Shukwah	Rampur baghelan	Satna	M.P.	06.11.2008
154	KM-17	RPS 654	Samay lal Chaudhary	Shukwah	Rampur Baghelan	Satna	M.P.	06.11.2008
155	KM-18	RPS 655	Gajadhar Kol	Jariha	Majhagavan	Satna	M.P.	06.11.2008
156	KM-19	RPS 656	Chhotelal Tiwari	Jariha	Majhagavan	Satna	M.P.	06.11.2008
157	KM-20	RPS 657	Mohan Prajapati	Jariha	Majhagavan	Satna	M.P.	06.11.2008
158	KM-21	RPS 658	Nanhe Kol	Bijahari	Majhagavan	Satna	M.P.	06.11.2008
159	KM-22	RPS 659	Langra Kol	Bijahari	Majhagavan	Satna	M.P.	06.11.2008
160	KM-23	RPS 660	Sukhalal Rawat	Jahmunia	Majhagavan	Satna	M.P.	06.11.2008
161	KM-24	RPS 661	Laloo Rawat	Jahari	Majhagavan	Satna	M.P.	06.11.2008
162	KM-71	RPS 662	Ramashray Adiwasi	Karha	Majhagavan	Satna	M.P.	09.11.2008
163	KM-72	RPS 663	Ram Nihore Adiwasi	Karha	Majhagavan	Satna	M.P.	09.11.2008
164	KM-73	RPS 664	Shiv Dhani Verma	Karha	Majhagavan	Satna	M.P.	09.11.2008
165	KM-74	RPS 665	Ram Karan Raidas	Chhitai Mote	Majhagavan	Satna	M.P.	09.11.2008
166	KM-75	RPS 666	Bholua Raidas	Chhitiya Mote	Majhagavan	Satna	M.P.	09.11.2008
167	KM-76	RPS 667	Girdhari Mawasi	Jhanda	Sohawal	Satna	M.P.	09.11.2008
168	KM-77	RPS 668	Field	Jhanda	Sohawal	Satna	M.P.	09.11.2008
169	KM-78	RPS 669	Kamlesh Mawasi	Jhanda	Sohawal	Satna	M.P.	09.11.2008
170	KM-79	RPS 670	Braj Lal Adiwasi	Didone	Sohawal	Satna	M.P.	09.11.2008
171	KM-80	RPS 671	Dadul Rawat	Didone	Sohawal	Satna	M.P.	09.11.2008
172	KM -81	RPS 672	Ashok Singh	Kathauta	Majhagavan	Satna	M.P.	09.11.2008

173	KM-82	RPS 673	Bhaiya Lal Jaiswal	Kathauta	Majhagavan	Satna	M.P.	09.11.2008
174	KM -83	RPS 674	Suraj Jaiswal	Kathauta	Majhagavan	Satna	M.P.	09.11.2008
175	KM-84	RPS 675	Juvraj Singh Gond	Phutaha	Majhagavan	Satna	M.P.	09.11.2008
176	KM -85	RPS 676	Roop karan Singh Gond	Phutaha	Majhagavan	Satna	M.P.	09.11.2008
177	KM-86	RPS 677	Guman Singh	Bhargavan	Majhagavan	Satna	M.P.	09.11.2008
178	KM -87	RPS 678	Govind Singh Gond	Bhargavan	Majhagavan	Satna	M.P.	09.11.2008
179	KM-88	RPS 679	Jagannath Singh Gond	Bhargavan	Majhagavan	Satna	M.P.	09.11.2008
180	KM -89	RPS 680	Sadhu Singh	Bhargavan	Majhagavan	Satna	M.P.	09.11.2008
181	KM-90	RPS 681	Babu Satnami	Hiraundi	Majhagavan	Satna	M.P.	09.11.2008
182	KM -91	Rps 682	Achhelal Satnami	Hiraundi	Majhagavan	Satna	M.P.	09.11.2008
183	KM-92	RPS 683	Mahesh Prasad	Hiraundi	Majhagavan	Satna	M.P.	09.11.2008
184	KM 210	RPS 684	Dadulal yadava	Michkurin	Majhagavan	Satna	M.P.	03.12.2008
185	KM-211	RPS 685	Darbari lal Kol	Michkurin	Majhagavan	Satna	M.P.	03.12.2008
186	KM-212	RPS 686	Balmik Kol	Michkurin	Majhagavan	Satna	M.P.	03.12.2008
187	KM-213	RPS 687	Bansi Lal Verma	Kailaspur	Majhagavan	Satna	M.P.	03.12.2008
188	KM-214	RPS 688	Govind Verma	Kailaspur	Majhagavan	Satna	M.P.	03.12.2008
189	KM-215	RPS 689	Pappu Yadava	Sua Pahari	Majhagavan	Satna	M.P.	03.12.2008
190	KM-216	RPS 690	Ram Kesh Adiwasi	Jillaha	Majhagavan	Satna	M.P.	03.12.2008
191	KM-217	RPS 691	Dadulal adiwasi	Jillaha	Majhagavan	Satna	M.P.	03.12.2008
192	KM-218	RPS 692	Indra Mani sahu	Jillaha	Majhagavan	Satna	M.P.	03.12.2008
193	KM-219	RPS 693	Laloo Adiwasi	Sadan	Majhagavan	Satna	M.P.	03.12.2008
194	KM-220	RPS 694	Kaloo Adiwasi	Malgosa	Majhagavan	Satna	M.P.	03.12.2008
195	KM-221	RPS 695	Ramlal Yadava	Malgosa	Majhagavan	Satna	M.P.	03.12.2008
196	KM-222	RPS 696	Rampal Yadava	Choraha	Majhagavan	Satna	M.P.	03.12.2008
197	KM-223	RPS 697	Anusuiya Yadava	Choraha	Majhagavan	Satna	M.P.	03.12.2008
198	KM-224	RPS 698	Ram chand Yadava	Padwania	Majhagavan	Satna	M.P.	03.12.2008
199	KM-225	RPS 699	Parsadilal harijan	Pathara	Majhagavan	Satna	M.P.	03.12.2008
200	KM-226	RPS 700	Digvijay Singh	Lallapur	Majhagavan	Satna	M.P.	03.12.2008
201	KM-227	RPS 701	Pramod Garg	Lallapur	Majhagavan	Satna	M.P.	03.12.2008
202	KM-228	RPS 702	Chhanna Pal	Hardua	Majhagavan	Satna	M.P.	03.12.2008

203	KM-229	RPS 703	Hari Shankar pal	Hardua	Majhagavan	Satna	M.P.	03.12.2008
204	KM-234	RPS 704	Bhaiya lal Vishwakarma	Kuwan Kuberi	Ram Nagar	Satna	M.P.	04.12.2008
205	254	RPS 705	Pancham Singh	Kuberi	Ram Nagar	Satna	M.P.	04.12.2008
206	255	RPS 706	Ram Prasad	Kuberi	Ram Nagar	Satna	M.P.	04.12.2008
207	257	RPS 707	Babulal	Kaithaha	Ram Nagar	Satna	M.P.	04.12.2008
208	258	RPS 708	Ramawtar Singh	Kaithaha	Ram Nagar	Satna	M.P.	04.12.2008
209	304	RPS 709	Rajendra	Kothar	Amarpatan	Satna	M.P.	04.12.2008
210	306	RPS 710	Pokaran	Kothar	Amarpatan	Satna	M.P.	04.12.2008
211	254	RPS 711	Ramadhar Kewat	Lalitput	Amarpatan	Satna	M.P.	04.12.2008
212	256	RPS 712	Ramadeen sahu	Singhoul	Amarpatan	Satna	M.P.	04.12.2008
213	315	RPS 713	Ram swaroop	Rigra	Maihar	Satna	M.P.	04.12.2008
214	325	RPS 714	Ram sahay patel	Rigra	Maihar	Satna	M.P.	04.12.2008
215	KM-118	RPS 715	Babulal Rawat	Kathautaha	Sidhi	Sidhi	M.P.	15.11.2008
216	KM-119	RPS 716	Videshi Kol	Kathautaha	Sidhi	Sidhi	M.P.	15.11.2008
217	KM-120	RPS 717	Jagdish sahu	Baniadol	Sidhi	Sidhi	M.P.	15.11.2008
218	KM-121	RPS 718	Bansh roop Yadava	Panwar	Sidhi	Sidhi	M.P.	15.11.2008
219	KM-122	RPS 719	Chhote Kushwaha	Pidaria	Sihawal	Sidhi	M.P.	15.11.2008
220	KM-123	RPS 720	Ram Kishan Kushawaha	Pidaria	Sihawal	Sidhi	M.P.	15.11.2008
221	KM-124	RPS 721	Rajkumar Kushawaha	Pidaria	Sihawal	Sidhi	M.P.	15.11.2008
222	KM-125	RPS 722	Diwakar Kushwaha	Pidaria	Sihawal	Sidhi	M.P.	15.11.2008
223	KM-126	RPS 723	Ram Sharan Koshta	Kochita	Sidhi	Sidhi	M.P.	15.11.2008
224	KM-127	RPS 724	Santosh Yadav	Koluha	Sidhi	Sidhi	M.P.	15.11.2008
225	KM-128	RPS 725	Raghunath Yadava	Bagaiha	Sidhi	Sidhi	M.P.	15.11.2008
226	KM-129	RPS 726	Harik Chand Saket	Pokhara	Sihawal	Sidhi	M.P.	15.11.2008
227	KM-130	RPS 727	Kallu Kumhar	Pokhara	Sihawal	Sidhi	M.P.	15.11.2008
228	KM-131	RPS 728	Raj Bahor Prajapati	Pokhara	Sihawal	Sidhi	M.P.	15.11.2008
229	KM-132	RPS 729	Rarash Ram Shivdas	Pokhara	Sihawal	Sidhi	M.P.	15.11.2008
230	KM-133	RPS 730	Budhhasen Rawat	Dholutola	Sihawal	Sidhi	M.P.	15.11.2008
231	KM-134	RPS 731	Raj Bahadur	Jholutola	Sihawal	Sidhi	M.P.	15.11.2008
232	KM-135	RPS 732	Bihari Yadava	Taraka	Sihawal	Sidhi	M.P.	15.11.2008

233	KM-136	RPS 733	Sunil Kumar Dwivedi	Taraka	Sihawal	Sidhi	M.P.	15.11.2008
234	KM-137	RPS 734	Lalta Prasad Dwivedi	Taraka	Sihawal	Sidhi	M.P.	15.11.2008
235	KM-230	RPS 735	Ramashray Yadava	Budhagauna	Rampur Naikin	Sidhi	M.P.	04.12.2008
236	KM-231	RPS 736	Badri Pal	Budhagauna	Rampur Naikin	Sidhi	M.P.	04.12.2008
237	KM-232	RPS 737	Chandra Shekhar Shukla	Amilai	Rampur Naikin	Sidhi	M.P.	04.12.2008
238	KM-233	RPS 738	Amar Singh rathore	Kandwari	Rampur Naikin	Sidhi	M.P.	04.12.2008
239	KM-235	RPS 739	Shiv Prasad Gond	Kandwari	Rampur Naikin	Sidhi	M.P.	04.12.2008
240	KM-269	RPS 740	Pardeshi Gond	Chamaradol	Majholi	Sidhi	M.P.	05.12.2008
241	KM-270	RPS 741	Dadulla Baiga	Chamaradol	Majholi	Sidhi	M.P.	05.12.2008
242	KM-271	RPS 742	Narmada Singh Baiga	Bodari	Majholi	Sidhi	M.P.	05.12.2008
243	KM-272	RPS 743	Lok Nath Prajapati	Bodari	Majholi	Sidhi	M.P.	05.12.2008
244	KM-273	RPS 744	Jai Ram Baiga	Badakadol	Majholi	Sidhi	M.P.	05.12.2008
245	KM-274	RPS 745	Har Pratap Baiga	Badakadol	Majholi	Sidhi	M.P.	05.12.2008
246	KM-275	RPS 746	Babulal Singh Gond	Umaria	Kusumi	Sidhi	M.P.	05.12.2008
247	KM-276	RPS 747	Uma Kant Gupta	Baheradol	Kusumi	Sidhi	M.P.	05.12.2008
248	KM-277	RPS 748	Govind Prasad	Baheradol	Kusumi	Sidhi	M.P.	05.12.2008
249	KM-278	RPS 749	Lal man Bias	Ramgarh	Kusumi	Sidhi	M.P.	05.12.2008
250	KM-279	RPS 750	Rajesh Dwivedi	Ramgarh	Kusumi	Sidhi	M.P.	05.12.2008
251	KM-280	RPS 751	Ram Lakhan Kewat	Ramgarh	Kusumi	Sidhi	M.P.	05.12.2008
252	KM-281	RPS 752	Jagdish Singh Gond	Bastua	Kusumi	Sidhi	M.P.	05.12.2008
253	KM-282	RPS 753	Ram Singh Gond	Bastua	Kusumi	Sidhi	M.P.	05.12.2008
254	KM-283	RPS 754	Surendra Singh	Baharwar	Kusumi	Sidhi	M.P.	05.12.2008
255	KM-285	RPS 755	Jagdish Gupta	Chandohidol	Majholi	Sidhi	M.P.	05.12.2008
256	KM-286	RPS 756	Surya mani Gupta	Chandohidol	Majholi	Sidhi	M.P.	05.12.2008
257	KM-287	RPS 757	Neelesh Singh	Chandohidol	Majholi	Sidhi	M.P.	05.12.2008
258	KM-288	RPS 758	Vidya Bhushan Tiwari	Rampur	Majholi	Sidhi	M.P.	05.12.2008
259	KM-289	RPS 759	Vyas Muni Dwivedi	Chamrauti	Majholi	Sidhi	M.P.	05.12.2008
260	KM-290	RPS 760	Mahadev Sahu	Manjhigavan	Majholi	Sidhi	M.P.	05.12.2008
261	KM-291	RPS 761	Rajiv lochan Mishra	Makhor	Majholi	Sidhi	M.P.	05.12.2008
262	250	RPS 762	Kunda Kumar	Chulhi	Sidhi	Sidhi	M.P.	05.12.2008

263	252	RPS 763	Vijay Singh Chauhan	Tendua	Sidhi	Sidhi	M.P.	05.12.2008
264	257	RPS 764	Vishwa nath Kol	Padkhuri	Sidhi	Sidhi	M.P.	05.12.2008
265	283	RPS 765	Lalan Singh	Rojaha	Churahat	Sidhi	M.P.	05.12.2008
266	260	RPS 766	Ramesh Kol	Nebuha	Sidhi	Sidhi	M.P.	05.12.2008
267	316	RPS 767	Ramawtar parauha	Karasta	Sihawal	Sidhi	M.P.	05.12.2008
268	255	RPS 768	Shravan Kumar Badhai	Lehchua	Rampur Naikin	Sidhi	M.P.	05.12.2008
269	KM -138	RPS 769	Field	Kusbair	Chitrangi	Singrauli	M.P.	16.11.2008
270	KM-139	RPS 770	Field	Kusbair	Chitrangi	Singrauli	M.P.	16.11.2008
271	KM-140	RPS 771	Manik ram yadav	Khirwa	Chitrangi	Singrauli	M.P.	16.11.2008
272	KM-141	RPS 772	Lalji Yadav	Khirwa	Chitrangi	Singrauli	M.P.	16.11.2008
273	KM-142	RPS 773	Ram Prasad Bais	Piperkhad	Chitrangi	Singrauli	M.P.	16.11.2008
274	KM-143	RPS 774	Manik Ram saket	Persohar	Chitrangi	Singrauli	M.P.	16.11.2008
275	KM-144	RPS 775	Teji Lal saket	Pondi Bargavan	Chitrangi	Singrauli	M.P.	16.11.2008
276	KM-145	RPS 776	Ramesh Sahu	Dudhamania	Chitrangi	Singrauli	M.P.	16.11.2008
277	KM-146	RPS 777	Ram Nath Dubey	Bagaiya	Chitrangi	Singrauli	M.P.	16.11.2008
278	KM-147	RPS 778	Banak Dhari Singh Gond	Jamtiwa	Chitrangi	Singrauli	M.P.	16.11.2008
279	KM-148	RPS 779	Ram Karan Gond	Kapurdai	Chitrangi	Singrauli	M.P.	16.11.2008
280	KM-149	RPS 780	Salig Singh Yadav	Kapurdai	Chitrangi	Singrauli	M.P.	16.11.2008
281	KM-150	RPS 781	Ram Swaroop Kol	Kapurdai	Chitrangi	Singrauli	M.P.	16.11.2008
282	KM-151	RPS 782	Lal Kumar Singh	Sanmania	Chitrangi	Singrauli	M.P.	16.11.2008
283	KM-152	RPS 783	Sipahi Lal	Amilahawa	Chitrangi	Singrauli	M.P.	16.11.2008
284	KM-153	RPS 784	Babulal	Gerui	Chitrangi	Singrauli	M.P.	16.11.2008
285	KM-154	RPS 785	Janardan Singh	Servatola	Chitrangi	Singrauli	M.P.	16.11.2008
286	KM-155	RPS 786	Dal Pratap Singh	Servatola	Chitrangi	Singrauli	M.P.	16.11.2008
287	KM-156	RPS 787	Anand Bahadur Singh	Sakaria	Chitrangi	Singrauli	M.P.	16.11.2008
288	KM-157	RPS 788	Lalan ASingh	Sakaria	Chitrangi	Singrauli	M.P.	16.11.2008
289	KM-158	RPS 789	Kamata Prasad	Sigtaha	Chitrangi	Singrauli	M.P.	16.11.2008
290	KM-159	RPS 790	Ram Singh Gond	Babdi	Chitrangi	Singrauli	M.P.	16.11.2008
291	KM-292	RPS 791	Lohar Jaiswal	Sarai	Deosar	Singrauli	M.P.	06.12.2008
292	KM-293	RPS 792	Surya Mani Jaiswal	Sarai	Deosar	Singrauli	M.P.	06.12.2008

293	KM-294	RPS 793	Jagdhari Singh	Ufaradol	Deosar	Singrauli	M.P.	06.12.2008
294	KM-295	RPS 794	Rajesh Kumar Jaiswal	Dhummadol	Deosar	Singrauli	M.P.	06.12.2008
295	KM-296	RPS 795	Jag Jeevan Singh	Jattha Tola	Deosar	Singrauli	M.P.	06.12.2008
296	KM-297	RPS 796	Ranmat Singh	Jattha Tola	Deosar	Singrauli	M.P.	06.12.2008
297	KM-298	RPS 797	Mohar Singh	Khanua Tola	Deosar	Singrauli	M.P.	06.12.2008
298	KM-299	RPS 798	Dharamjeet Singh	Gajra Bahara	Deosar	Singrauli	M.P.	06.12.2008
299	KM-300	RPS 799	Matuk Dhari Singh	Jamgarhi	Waidhan	Singrauli	M.P.	06.12.2008
300	KM-301	RPS 800	Ram Naresh Yadav	Rampa	Waidhan	Singrauli	M.P.	06.12.2008
301	KM-302	RPS 801	Bacchu Singh	Rampa	Waidhan	Singrauli	M.P.	06.12.2008
302	KM-303	RPS 802	Raj mani Sen	Koilkho	Waidhan	Singrauli	M.P.	06.12.2008
303	KM-304	RPS 803	Buddhiman Singh	Asni	Waidhan	Singrauli	M.P.	06.12.2008
304	KM-305	RPS 804	Sangeeta Singh	Madhi	Waidhan	Singrauli	M.P.	06.12.2008
305	KM-306	RPS 805	Savita Singh Chandel	Madhi	Waidhan	Singrauli	M.P.	06.12.2008
306	KM-307	RPS 806	Attilal Bais	Zeer	Waidhan	Singrauli	M.P.	06.12.2008
307	KM-308	RPS 807	Lalla Yadav	Bindul	Waidhan	Singrauli	M.P.	06.12.2008
308	KM-309	RPS 808	Harbansh Gond	Pondi Path	Waidhan	Singrauli	M.P.	06.12.2008
309	KM-310	RPS 809	Hanslal Bais	Pondi Path	Waidhan	Singrauli	M.P.	06.12.2008
310	KM-311	RPS 810	Field	Rauhal	Waidhan	Singrauli	M.P.	06.12.2008
311	KM-312	RPS 811	Ram Dhani Singh	Langhadol	Waidhan	Singrauli	M.P.	06.12.2008
312	KM-236	RPS 812	Swami Deen Sahu	Sejahari	Beohari	Shahdol	M.P.	04.12.2008
313	KM-237	RPS 813	Buddha Sen Sahu	Sejahari	Beohari	Shahdol	M.P.	04.12.2008
314	KM-238	RPS 814	Amar Singh Panika	Sejahari	Beohari	Shahdol	M.P.	04.12.2008
315	KM-239	RPS 815	Sunil Singh Gond	Sejahari	Beohari	Shahdol	M.P.	04.12.2008
316	KM-240	RPS 816	Ram Lakhan Gond	Sejahari	Beohari	Shahdol	M.P.	04.12.2008
317	KM-241	RPS 817	Suraj Baiga	Karondia	Beohari	Shahdol	M.P.	04.12.2008
318	KM-242	RPS 818	Ram Jiyawan Baiga	Karondia	Beohari	Shahdol	M.P.	04.12.2008
319	KM-243	RPS 819	Ganesh Prasad Gupta	Bhamaraha	Beohari	Shahdol	M.P.	04.12.2008
320	KM-244	RPS 820	Lal Mani Verma	Khadhauli	Beohari	Shahdol	M.P.	04.12.2008
321	KM-245	RPS 821	Raj Mani Kahar	Naudhiya	Beohari	Shahdol	M.P.	04.12.2008
322	KM-246	RPS 822	Vinod Rajak	Naudhiya	Beohari	Shahdol	M.P.	04.12.2008

323	KM-247	RPS 823	Dhannu Sahu	Naudhiya	Beohari	Shahdol	M.P.	04.12.2008
324	KM-248	RPS 824	Hira lal Kol	Jamodi	Beohari	Shahdol	M.P.	04.12.2008
325	KM-249	RPS 825	Jhalla Kol	Jamodi	Beohari	Shahdol	M.P.	04.12.2008
326	KM-250	RPS 826	Ram Das Prajapati	Jamodi	Beohari	Shahdol	M.P.	04.12.2008
327	KM-251	RPS 827	Ram Raies Prajapati	Jamodi	Beohari	Shahdol	M.P.	04.12.2008
328	KM-252	RPS 828	Dilip Singh	Jamodi Godan	Beohari	Shahdol	M.P.	04.12.2008
329	KM-253	RPS 829	Jailal Gond	Khaira	Beohari	Shahdol	M.P.	04.12.2008
330	KM-254	RPS 830	Amrit Lal	Khaira	Beohari	Shahdol	M.P.	04.12.2008
331	KM-255	RPS 831	Sita Saran Kol	Dhandhukui	Beohari	Shahdol	M.P.	04.12.2008
332	KM-256	RPS 832	Babulal Sen	Dhandhukui	Beohari	Shahdol	M.P.	04.12.2008
333	KM-257	RPS 833	Sone Lal Kol	Tikhawa	Beohari	Shahdol	M.P.	04.12.2008
334	KM-258	RPS 834	Kashi Prasad Napit	Tikhawa	Beohari	Shahdol	M.P.	04.12.2008
335	KM-259	RPS 835	Chhotelal Singh	Tikhawa	Beohari	Shahdol	M.P.	04.12.2008
336	KM-260	RPS 836	Hari Lal Saket	Charkhari	Beohari	Shahdol	M.P.	04.12.2008
337	KM-261	RPS 837	Rama saket	Charkhari	Beohari	Shahdol	M.P.	04.12.2008
338	KM-262	RPS 838	Dal Pratap Singh	Kharpa	Beohari	Shahdol	M.P.	04.12.2008
339	KM-263	RPS 439	Ram Kishor Sahu	Kharpa	Beohari	Shahdol	M.P.	04.12.2008
340	KM-264	RPS 840	Ram Bahori Kol	Bagdari	Beohari	Shahdol	M.P.	04.12.2008
341	KM-265	RPS 841	Ram Manohar Sahu	Kharpa	Beohari	Shahdol	M.P.	04.12.2008
342	KM-266	RPS 842	Ram Kumar Sahu	Dadra Tola	Beohari	Shahdol	M.P.	04.12.2008
343	KM-267	RPS 843	Dinesh Singh Gond	Bagdari	Beohari	Shahdol	M.P.	04.12.2008
344	KM-268	RPS 844	Ram Daman Singh	Pasgarhi	Beohari	Shahdol	M.P.	04.12.2008
345	KM-313	RPS 845	Chhote Lal Gond	Goora	Beohari	Shahdol	M.P.	13.12.2008
346	KM-314	RPS 846	Rasile Singh	Barkachha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
347	KM-315	RPS 847	Ramu Singh	Barkachha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
348	KM-316	RPS 848	Santosh Kumar Chaturvedi	Barkachha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
349	KM-317	RPS 849	Ram Kishore Pal	Barkachha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
350	KM-318	RPS 850	Ram Prasad Patel	Barachha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
351	KM-319	RPS 851	Munna Kol	Barachha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
352	KM-320	RPS 852	Raju Chaudhary	Barachha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008

353	KM -321	RPS 853	Raj Mani patel	Barachha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
354	KM-322	RPS 854	Ram Kinker Patel	Barachha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
355	KM-323	RPS 855	Mustafa	Maraua	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
356	KM-324	RPS 856	Gorelal patel	Kalleh	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
357	KM-325	RPS 857	Kamala Prasad sahu	Kalleh	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
358	KM-326	RPS 858	Rampati sahu	Kalleh	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
359	KM-327	RPS 859	Sangha baiga	Kalleh	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
360	KM-328	RPS 860	Dadole Prasad sahu	Jhiria Tola	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
361	KM-329	RPS 861	Ram Kesh Patel	Bhattu	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
362	KM-330	RPS 862	Tula ram Shukle	Bhattu	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
363	KM-331	RPS 863	Ram chand Tiwari	Bhattu	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
364	KM-332	RPS 864	Munne lal baiga	Bhattu	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
365	KM-333	RPS 865	Shiv Kali baiga	Bhattu	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
366	KM-334	RPS 866	Shri Niwas Gond	Vijaha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
367	KM-335	RPS 867	Sunil Baiga	Vijaha	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
368	KM-336	RPS 868	Ram Prasad Yadav	Jora	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
369	KM-337	RPS 869	Bhola Singh Gond	Jora	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
370	KM-338	RPS 870	Rajendra Napit	Semara	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
371	KM-339	RPS 871	Sunder Panika	Karki	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
372	KM-340	RPS 872	Babulal Gond	Nagodwah	Jai Singh Nagar	Shahdol	M.P.	13.12.2008
373	KM-341	RPS 873	Dhirendra baiga	Barha	Gohparu	Shahdol	M.P.	13.12.2008
374	KM-342	RPS 874	Swami Yadav	Jarwahi	Budhar	Shahdol	M.P.	14.12.2008
375	KM-343	RPS 875	Man Singh Gond	Nibuha	Budhar	Shahdol	M.P.	14.12.2008
376	KM-344	RPS 876	Lalua Gond	Nibuha	Budhar	Shahdol	M.P.	14.12.2008
377	KM-345	RPS 877	Mani Ram Pav	Channodi	Budhar	Shahdol	M.P.	14.12.2008
378	KM-346	RPS 878	Kunwaria Yadav	Dongaria Tola	Budhar	Shahdol	M.P.	14.12.2008
379	KM-347	RPS 879	Ram Karan	Channodi	Budhar	Shahdol	M.P.	14.12.2008
380	KM-348	RPS 880	Nand Lal Singh	Kasuari	Budhar	Shahdol	M.P.	14.12.2008
381	KM-349	RPS 881	Joga Gond	Kasuari	Budhar	Shahdol	M.P.	14.12.2008
382	KM-350	RPS 882	Ram Prasad	Bartola Hathigala	Budhar	Shahdol	M.P.	14.12.2008

383	KM-351	RPS 883	Mol Sanya	Bargavan thara	Budhar	Shahdol	M.P.	14.12.2008
384	KM-352	RPS 884	Jawahir Pav	Bargavan thara	Budhar	Shahdol	M.P.	14.12.2008
385	KM-353	RPS 885	Ram Singh	Bargavan thara	Budhar	Shahdol	M.P.	14.12.2008
386	KM-354	RPS 886	Atma ram	Bargavan Bhanantola	Budhar	Shahdol	M.P.	14.12.2008
387	KM-355	RPS 887	Nan Singh	Deori	Budhar	Shahdol	M.P.	14.12.2008
388	KM-356	RPS 888	Ram Swaroop Yadav	Dholuku	Budhar	Shahdol	M.P.	14.12.2008
389	KM-357	RPS 889	Chhote Singh	Girwa	Budhar	Shahdol	M.P.	14.12.2008
390	KM-358	RPS 890	Kamala Singh Kol	Hardi	Sohagpur	Shahdol	M.P.	14.12.2008
391	KM-359	RPS 891	Shyam Lal Kol	Kathautiya	Sohagpur	Shahdol	M.P.	14.12.2008
392	KM-360	RPS 892	Radhe Shyam	Bhanpur	Sohagpur	Shahdol	M.P.	14.12.2008
393	KM-361	RPS 893	Hanuman Deen Gond	Mau	Beohari	Shahdol	M.P.	16.12.2008
394	KM-362	RPS 894	Mangal Deen Gond	Jora	Jai Singh Nagar	Shahdol	M.P.	16.12.2008
395	KM-363	RPS 895	Pushpendra Baiga	Kanadi Khurd	Jai Singh Nagar	Shahdol	M.P.	16.12.2008
396	KM-364	RPS 896	Jagdish Baiga	Kanadi Khurd	Jai Singh Nagar	Shahdol	M.P.	16.12.2008
397	KM-365	RPS 897	Ram Bhajan Gond	Aunta	Jai Singh Nagar	Shahdol	M.P.	16.12.2008
398	KM-366	RPS 898	Sanjay Kumar Yadav	Bairiah	Jai Singh Nagar	Shahdol	M.P.	16.12.2008
399	KM-367	RPS 899	Rameshwar Singh Gond	Bairiah	Jai Singh Nagar	Shahdol	M.P.	16.12.2008
400	KM-368	RPS-900	Lalli Kewat	Maseera	Jai Singh Nagar	Shahdol	M.P.	16.12.2008
401	235	RPS 901	Jamuna Prasad Yadav	Baruka	Sohagpur	Shahdol	M.P.	16.12.2008
402	237	RPS 902	Ajay Singh	Maika	Sohagpur	Shahdol	M.P.	16.12.2008
403	238	RPS 903	Sonai Baiga	Baruka	Sohagpur	Shahdol	M.P.	16.12.2008
404	240	RPS 904	Jhiria Bai	Nipania	Sohagpur	Shahdol	M.P.	16.12.2008
405	246	RPS 905	Jeevan Prasad Pandey	Sevnara	Gohparu	Shahdol	M.P.	16.12.2008
406	280	RPS 906	Shiv Prasad Gond	Diya Peeper	Sohagpur	Shahdol	M.P.	16.12.2008
407	322	RPS 907	Shivtiya	Raurapani	Sohagpur	Shahdol	M.P.	16.12.2008
408	329	RPS 908	Ram Kumar Sahu	Raurapani	Sohagpur	Shahdol	M.P.	16.12.2008
409	333	RPS 909	Pawan Kol	Pathara	Sohagpur	Shahdol	M.P.	16.12.2008
410	336	RPS 910	Kushal Ram Sahu	Raurapani	Sohagpur	Shahdol	M.P.	16.12.2008
411	345	RPS 911	Maje Lal Singh	Bhawarha	Sohagpur	Shahdol	M.P.	16.12.2008

412	346	RPS 912	Tarachand	Pathara	Sohagpur	Shahdol	M.P.	16.12.2008
413	367	RPS 913	Madari	Aswari	Gohparu	Shahdol	M.P.	16.12.2008
414	KM-369	RPS 914	Ram Dayal Kewat	Gobardhta	Manpur	Umaria	M.P.	16.12.2008
415	KM-370	RPS 915	Rajendra Kol	Khutar	Manpur	Umaria	M.P.	16.12.2008
416	KM-371	RPS 916	Babulal Kol	Khutar	Manpur	Umaria	M.P.	16.12.2008
417	KM-372	RPS 917	Ram Deen Gond	Khutar	Manpur	Umaria	M.P.	16.12.2008
418	KM-373	RPS 918	Lallu Singh	Deori	Manpur	Umaria	M.P.	16.12.2008
419	KM-374	RPS 919	Ram Kripal Patel	Naugavan	Manpur	Umaria	M.P.	16.12.2008
420	KM-375	RPS 920	Murat Ram Pal	Naugavan	Manpur	Umaria	M.P.	16.12.2008
421	KM-376	RPS 921	Sheetal Chaudhary	Chapdor	Manpur	Umaria	M.P.	16.12.2008
422	KM-377	RPS 922	Sadhulal Chaturvedi	Chapdor	Manpur	Umaria	M.P.	16.12.2008
423	KM-378	RPS 923	Sanat Kumar Chaturvedi	Chapdor	Manpur	Umaria	M.P.	16.12.2008
424	KM-379	RPS 924	Siya Prasad Gond	Gangital	Manpur	Umaria	M.P.	16.12.2008
425	KM-380	RPS 925	Phool Singh Gond	Gangital	Manpur	Umaria	M.P.	16.12.2008
426	KM-381	RPS 926	Chhote lal yadav	Gangital	Manpur	Umaria	M.P.	16.12.2008
427	KM-382	RPS 927	Dhani Ram yadav	Kudari	Manpur	Umaria	M.P.	16.12.2008
428	KM-383	RPS 928	Sanjeet Baiga	Semaria	Manpur	Umaria	M.P.	17.12.2008
429	KM-384	RPS 929	Gudda Kol	Dhanbar	Kerkeli	Umaria	M.P.	17.12.2008
430	KM-385	RPS 930	Sonaiya Kol	Dhanbar	Kerkeli	Umaria	M.P.	17.12.2008
431	KM-386	RPS 931	Nanku Kol	Dhanbar	Kerkeli	Umaria	M.P.	17.12.2008
432	KM-387	RPS 932	Mathura Singh rathore	Rampur	Kerkeli	Umaria	M.P.	17.12.2008
433	KM-388	RPS 933	Raja ram rathore	Rampur	Kerkeli	Umaria	M.P.	17.12.2008
434	KM-389	RPS 934	Dinesh Singh	Rampur	Kerkeli	Umaria	M.P.	17.12.2008
435	KM-390	RPS 935	Dhamali Kol	Rampur	Kerkeli	Umaria	M.P.	17.12.2008
436	KM-391	RPS 936	Jai Singh Rathore	Pathar	Kerkeli	Umaria	M.P.	17.12.2008
437	KM-392	RPS 937	Molai Kol	Pathar	Kerkeli	Umaria	M.P.	17.12.2008
438	KM-393	RPS 938	Gajadhar Kol	Pathar	Kerkeli	Umaria	M.P.	17.12.2008
439	KM-394	RPS 939	Raj Kumar Kol	Pathar	Kerkeli	Umaria	M.P.	17.12.2008
440	KM-395	RPS 940	Domai Sahu	Uchehara	Kerkeli	Umaria	M.P.	17.12.2008
441	KM-396	RPS 941	Buddhu Singh Gond	Badagaon	Kerkeli	Umaria	M.P.	17.12.2008

442	KM-397	RPS 942	Phool Chand Singh	Uchehara	Kerkeli	Umaria	M.P.	17.12.2008
443	KM-398	RPS 943	Anand Singh	Uchehara	Kerkeli	Umaria	M.P.	17.12.2008
444	KM-399	RPS 944	Girbar Singh	Badagaon	Kerkeli	Umaria	M.P.	17.12.2008
445	KM-400	RPS 945	Kavita Bai	Badagaon	Kerkeli	Umaria	M.P.	17.12.2008
446	KM-401	RPS 946	Tejiya Kol	Sastara	Kerkeli	Umaria	M.P.	17.12.2008
447	KM-402	RPS 947	Rampal Kol	Sastara	Kerkeli	Umaria	M.P.	17.12.2008
448	KM-403	RPS 948	Ramesh Kol	Sastara	Kerkeli	Umaria	M.P.	17.12.2008
449	KM-404	RPS 949	Ram Jiyawan	Sastara	Kerkeli	Umaria	M.P.	17.12.2008
450	KM-405	RPS 950	Ramawtar Gond	Sarvai Khurd	Pali	Umaria	M.P.	17.12.2008
451	KM-406	RPS 951	Ram Viswas Singh	Salaiya	Pali	Umaria	M.P.	17.12.2008
452	KM-407	RPS 952	Onkar Singh Gond	Salaiya	Pali	Umaria	M.P.	17.12.2008
453	KM-408	RPS 953	Daulat Singh	Salaiya	Pali	Umaria	M.P.	17.12.2008
454	KM-409	RPS 954	Rituraj Singh	Salaiya	Pali	Umaria	M.P.	17.12.2008
455	KM-410	RPS 955	Danu Singh Gond	Chhindaha	Pali	Umaria	M.P.	17.12.2008
456	KM-411	RPS 956	Nan Singh Gond	Chhindaha	Pali	Umaria	M.P.	17.12.2008
457	KM-412	RPS 957	Mahendra Singh	Chhindaha	Pali	Umaria	M.P.	17.12.2008
458	KM-413	RPS 958	Chain Singh	Chhindaha	Pali	Umaria	M.P.	17.12.2008
459	KM-414	RPS 959	Satya Bhan Singh	Chhindaha	Pali	Umaria	M.P.	17.12.2008
460	KM-415	RPS 960	Nepal Singh	Sarvai Kala	Pali	Umaria	M.P.	17.12.2008
461	KM-416	RPS 961	Dhyan Singh	Sarvai Kala	Pali	Umaria	M.P.	17.12.2008
462	KM-417	RPS 962	Ram Prasad Gond	Bannodha	Pali	Umaria	M.P.	17.12.2008
463	KM-418	RPS 963	Sarovar Yadav	Bannodha	Pali	Umaria	M.P.	17.12.2008
464	KM-419	RPS 964	Shyam Lal Singh	Mundaria	Pali	Umaria	M.P.	17.12.2008
465	287	RPS 965	Shobh Nath Verma	Shukwah	Pali	Umaria	M.P.	17.12.2008
466	220	RPS 966	Dadan Singh Marabi	Pathelhi	Rajendragram	Anuppur	M.P.	19.12.2008
467	221	RPS 967	Ranu Gond	Pathelhi	Rajendragram	Anuppur	M.P.	19.12.2008
468	222	RPS 968	Dharam Singh Baiga	Dhandhutola	Rajendragram	Anuppur	M.P.	19.12.2008
469	2123	RPS 969	Bhodal Baiga	Sakara	Rajendragram	Anuppur	M.P.	19.12.2008
470	225	RPS 970	Budhawaria Bai	Dhandhutola	Rajendragram	Anuppur	M.P.	19.12.2008
471	226	RPS 971	Kuwar Singh	Gadhi Dader	Rajendragram	Anuppur	M.P.	19.12.2008

472	224	RPS 972	Dadu baiga	Nipania	Rajendragram	Anuppur	M.P.	19.12.2008
473	227	RPS 973	Pooran Lal Gupta	Nipania	Rajendragram	Anuppur	M.P.	19.12.2008
474	230	RPS 974	Bheekam Baiga	Sakara	Rajendragram	Anuppur	M.P.	19.12.2008
475	232	RPS 975	Bheem singh Gond	Pathaitee	Rajendragram	Anuppur	M.P.	19.12.2008
476	274	RPS 976	Rama Gond	Chhailan Tola	Rajendragram	Anuppur	M.P.	19.12.2008
477	276	RPS 977	Chhotelal	Piparha	Rajendragram	Anuppur	M.P.	19.12.2008
478	297	RPS 978	Amit lal saket	Upari	Rajendragram	Anuppur	M.P.	19.12.2008
479	266	RPS 779	Rakesh Singh Gond	Muntukona	Rajendragram	Anuppur	M.P.	19.12.2008

Annexure -II

Details of Little millet land races collected from tribal areas of M.P.

S. No.	Collection No.	Accession No Alloted	Collections					
			Farmers name	Village	Block	Distt	State	Date of collection
1.	LM-5	RLM 101	Ram Nandan Singh Gond	Charhai	Raipur Kurchulian	Rewa	MP	07.11.2008
2.	LM-11	RLM 102	Ram Khelawan Prajapati	Teekat	Hanumana	Rewa	MP	13.11.2008
3.	LM-12	RLM 103	Prahalad Prajapati	Ledara	Hanumana	Rewa	MP	13.11.2008
4.	LM-13	RLM 104	Siya Saran Prajapati	Ledara	Hanumana	Rewa	MP	13.11.2008
5.	LM-14	RLM 105	Ram Jatan Yadav	Pidaria	Hanumana	Rewa	MP	13.11.2008
6.	LM-15	RLM 106	Rajneesh Adiwasi	Pidaria	Hanumana	Rewa	MP	13.11.2008
7.	LM-16	RLM 107	Ram Bahor Yadava	Gada	Hanumana	Rewa	MP	13.11.2008
8.	LM-17	RLM 108	Hari Prasad Yadav	Gada	Hanumana	Rewa	MP	13.11.2008
9.	LM-18	RLM 109	Jai Gurudev	Khatkari	Hanumana	Rewa	MP	13.11.2008
10.	LM-32	RLM 110	Rishi Nath Prajapati	Khatkari	Hanumana	Rewa	MP	13.11.2008
11.	LM-33	RLM 111	Shesh Mani Sen	Misirgavan	Hanumana	Rewa	MP	29.11.2008
12.	LM-34	RLM 112	Banwasi Lal Adiwasi	Bhawaraha	Hanumana	Rewa	MP	29.11.2008
13.	LM-35	RLM 113	Manfer Kol	Shivgarh	Hanumana	Rewa	MP	29.11.2008
14.	LM-36	RLM 114	Gulab Prasad Prajapati	Shivgarh	Hanumana	Rewa	MP	29.11.2008
15.	LM-37	RLM 115	Ram Rakccha Sen	Shivgarh	Hanumana	Rewa	MP	29.11.2008
16.	LM-38	RLM 116	Nathu Ram Vishwakarma	Ghogham	Hanumana	Rewa	MP	29.11.2008
17.	LM-39	RLM 117	Field	Raghunathgarh	Hanumana	Rewa	MP	29.11.2008
18.	LM-40	RLM 118	Munna Lal Kil	Kailashpur	Hanumana	Rewa	MP	29.11.2008
19.	LM-41	RLM 119	Rama Shankar Yadav	Jamunihia	Hanumana	Rewa	MP	29.11.2008
20.	LM-42	RLM 120	Budhha Sen saket	Bongaha	Hanumana	Rewa	MP	29.11.2008
21.	LM-1	RLM 121	Gajadhar Kol	Jariha	Majhagavan	Satna	MP	06.11.2008
22.	LM-2	RLM 122	Chhotelal Tiwari	Jariha	Majhagavan	Satna	MP	06.11.2008
23.	LM-3	**RLM 123**	Langara Kol	Bijahari	Hanumana	Rewa	MP	06.11.2008

24.	LM-4	**RLM 124**	Ram Jiyawan	Vijaypur	Majhagavan	Satna	MP	06.11.2008
25.	LM-6	**RLM 125**	Dadul Rawat	Hiraundi	Majhagavan	Satna	MP	09.11.2008
26.	LM-7	RLM 126	Ram Karan Singh Gond	Kathauta	Majhagavan	Satna	MP	09.11.2008
27.	LM-8	RLM 127	Mangal Sharan Jaiswal	Kathauta	Majhagavan	Satna	MP	09.11.2008
28.	LM-9	RLM 128	Ram Roop Singh Gond	Phutaha	Majhagavan	Satna	MP	09.11.2008
29.	LM-10	RLM 129	Acchelal satnami	Hiraundi	Majhagavan	Satna	MP	09.11.2008
30.	LM-43	RLM 130	Ram Lakhan Gond	Sejahari	Beohari	Shahdol	MP	04.12.2008
31.	**LM-44**	**RLM 131**	Satendra Kumar Baiga	Karondia	Beohari	Shahdol	MP	04.12.2008
32.	**LM-45**	**RLM 132**	Ganesh Prasd Gupta	Bhamaraha	Beohari	Shahdol	MP	04.12.2008
33.	**LM-46**	**RLM 133**	Laxman Prasad Dwivedi	Naudhiya	Beohari	Shahdol	MP	04.12.2008
34.	LM-47	RLM 134	Kodaiyya Kol	Jamodi	Beohari	Shahdol	MP	04.12.2008
35.	LM-48	RLM 135	Ram Das Prajapati	Jamodi	Beohari	Shahdol	MP	04.12.2008
36.	**LM-49**	**RLM 136**	Dilip Singh	Khaira	Beohari	Shahdol	MP	04.12.2008
37.	**LM-50**	**RLM 137**	Jai lal Gond	Khaira	Beohari	Shahdol	MP	04.12.2008
38.	**LM-51**	RLM 138	Shankar Singh Gond	Khaira	Beohari	Shahdol	MP	04.12.2008
39.	**LM-52**	RLM 139	Bahadur Singh	Khaira	Beohari	Shahdol	MP	04.12.2008
40.	**LM-53**	RLM 140	Sita Saran Kol	Dhandhu kui	Beohari	Shahdol	MP	04.12.2008
41.	**LM-54**	RLM 141	Ram Lakhan Gond	Dhandhu kui	Beohari	Shahdol	MP	04.12.2008
42.	**LM-55**	RLM 142	Dinesh Sahu	Tikhawa	Beohari	Shahdol	MP	04.12.2008
43.	**LM-56**	RLM 143	Vishnu Kol	Tikhawa	Beohari	Shahdol	MP	04.12.2008
44.	**LM-57**	RLM 144	Hari lal saket	Charkhari	Beohari	Shahdol	MP	05.12.2008
45.	**LM-58**	RLM 145	Ram Dulare	Kharpa	Beohari	Shahdol	MP	05.12.2008
46.	**LM-59**	**RLM 146**	Ram Kishore Sahu	Kharpa	Beohari	Shahdol	MP	05.12.2008
47.	LM-60	RLM 147	Rameshwar Singh	Bagdari	Beohari	Shahdol	MP	05.12.2008
48.	LM-61	RLM 148	Dinesh Singh Gond	Bagdari	Beohari	Shahdol	MP	05.12.2008
49.	LM-62	RLM 149	Ram daman Singh	Pasgarhi	Beohari	Shahdol	MP	05.12.2008
50.	LM-63	RLM 150	Raj Bahor Singh	Pasgarhi	Beohari	Shahdol	MP	05.12.2008
51.	LM-86	**RLM 151**	Ram Prasad Patel	Baraccha	J.S. Nagar	Shahdol	MP	13.12.2008
52.	LM-87	**RLM 152**	Rajesh Chaudhari	Barachha	J.S. Nagar	Shahdol	MP	13.12.2008
53.	LM-88	RLM 153	Ram Badh Patel	Maraua	J.S. Nagar	Shahdol	MP	13.12.2008

54.	LM-89	RLM 154	Rajeswar Patel	Kalleh	J.S. Nagar	Shahdol	MP	13.12.2008
55.	LM-90	RLM 155	Ram nath Patel	Kalleh	J.S. Nagar	Shahdol	MP	13.12.2008
56.	LM-91	RLM 156	Kamala Prasad sahu	Kalleh	J.S. Nagar	Shahdol	MP	13.12.2008
57.	LM-92	RLM 157	Phamphu Nath baiga	Bhattu	J.S. Nagar	Shahdol	MP	13.12.2008
58.	LM-93	RLM 158	Sunil Baiga	Vijaha	J.S. Nagar	Shahdol	MP	13.12.2008
59.	LM-94	**RLM 159**	Srinivas Gond	Vijaha	J.S. Nagar	Shahdol	MP	13.12.2008
60.	LM-95	RLM 160	Ram Naresh Yadava	Jora	J.S. Nagar	Shahdol	MP	13.12.2008
61.	LM-96	RLM 161	Rajendra napit	Semara	J.S. Nagar	Shahdol	MP	13.12.2008
62.	LM-97	RLM 162	Babulal Gond	Banrakha tola	J.S. Nagar	Shahdol	MP	13.12.2008
63.	LM-98	**RLM 163**	Jeekat	Channodi	Budhar	Shahdol	MP	14.12.2008
64.	LM-99	**RLM 164**	Gend Lal Singh	Kasauri	Budhar	Shahdol	MP	14.12.2008
65.	LM-100	RLM 165	RajaRam Gond	Kasauri	Budhar	Shahdol	MP	14.12.2008
66.	LM-101	RLM 166	Mol Sanya	Bargavan thara	Budhar	Shahdol	MP	14.12.2008
67.	LM-102	RLM 167	Ram Singh	Bargavan	Budhar	Shahdol	MP	14.12.2008
68.	LM-103	RLM 168	Ram Swaroop Yadava	Dholuku	Budhar	Shahdol	MP	14.12.2008
69.	LM-104	**RLM 169**	Hanuman Deen Gond	Mau	Beohari	Shahdol	MP	16.12.2008
70.	LM-105	RLM 170	Daddi baiga	Kanadi khurd	J.S. Nagar	Shahdol	MP	16.12.2008
71.	LM-106	RLM 171	Rameswar Singh Gond	Bairiah	J.S. Nagar	Shahdol	MP	16.12.2008
72.	LM-108	RLM 172	Ram Sushil Namdev	Thegaraha	J.S. Nagar	Shahdol	MP	16.12.2008
73.	LM-109	RLM 173	Sanjay Kumar yadava	Bairiah	J.S. Nagar	Shahdol	MP	16.12.2008
74.	LM-110	RLM 174	Sarju Singh Gond	Shivpuri	J.S. Nagar	Shahdol	MP	16.12.2008
75.	4	RLM 175	Jamuna Prasad yadava	Baruka	Sohagpur	Shahdol	MP	-
76.	22	RLM 176	Bishali Rajaka	Mau	Beohari	Shahdol	MP	-
77.	23	RLM 177	Kalia yadava	Tikki	J.S. Nagar	Shahdol	MP	-
78.	34	RLM 178	Nanha baiga	Raurapani	Sohagpur	Shahdol	MP	-
79.	**36**	**RLM 179**	Satte	Pathara	Sohagpur	Shahdol	MP	-
80.	41	RLM 180	Asharam	Aswari	Gohparu	Shahdol	MP	-
81.	LM-111	RLM 181	Siya Prasad Gond	Gangital	Manpur	Umaria	MP	16.12.2008
82.	LM-112	RLM 182	Phool Singh Gond	Gangital	Manpur	Umaria	MP	16.12.2008
83.	LM-113	RLM 183	Jagdish Prajapati	Pathar	Kerkali	Umaria	MP	17.12.2008

84.	LM-114	**RLM 184**	Ausar Singh Gond	Badagaon	Kerkali	Umaria	MP	17.12.2008
85.	LM-115	RLM 185	Acchelal Singh Gond	Akmania	Kerkali	Umaria	MP	17.12.2008
86.	LM-116	RLM 186	Dhyan Singh	Sarvai kala	Pali	Umaria	MP	17.12.2008
87.	LM-117	RLM 187	Saraval Yadav	Bannodha	Pali	Umaria	MP	17.12.2008
88.	**LM-22**	**RLM 188**	Manik Ram Yadava	Khirawa	Chitarangi	Singrauli	MP	16.11.2008
89.	LM-23	RLM 189	Manik Ram Saket	Parsohar	Chitrangi	Singrauli	MP	16.11.2008
90.	**LM-24**	**RLM 190**	Tej Mani Saket	Parsohar	Chitrangi	Singrauli	MP	16.11.2008
91.	LM-25	RLM 191	Ram Nath Dubey	Bagaiya	Chitrangi	Singrauli	MP	16.11.2008
92.	LM-26	RLM 192	Banakdhari Singh Gond	Jamtiwa	Chitrangi	Singrauli	MP	16.11.2008
93.	LM-27	RLM 193	Ram Sharan Adiwasi	Kapurdai	Chitrangi	Singrauli	MP	16.11.2008
94.	LM-28	RLM 194	Ram Swaroop Kol	Kapurdai	Chitrangi	Singrauli	MP	16.11.2008
95.	LM-29	RLM 195	Sahdev Singh Gond	Sakariya	Chitrangi	Singrauli	MP	16.11.2008
96.	LM-30	RLM 196	Kamata Prasad	Sigtaha	Chitrangi	Singrauli	MP	16.11.2008
97.	LM-31	RLM 197	Ram Singh Gond	Babdi	Chitrangi	Singrauli	MP	16.11.2008
98.	**LM-79**	**RLM 198**	Bachhu Singh	Rampa	Waidhan	Singrauli	MP	06.12.2008
99.	LM-80	RLM 199	Atti lal bais	Jeer	Waidhan	Singrauli	MP	06.12.2008
100.	LM-81	RLM 200	Balchand Gond	Pondi path	Waidhan	Singrauli	MP	06.12.2008
101.	LM-82	RLM 201	Hans Lal Bais	Pondi path	Waidhan	Singrauli	MP	06.12.2008
102.	LM-83	RLM 202	Harbansh Gond	Rauhal	Waidhan	Singrauli	MP	06.12.2008
103.	LM-84	RLM 203	Ram Naresh	Rauhal	Waidhan	Singrauli	MP	06.12.2008
104.	LM-85	RLM 204	Ram Dhani Singh	Laghadal	Waidhan	Singrauli	MP	06.12.2008
105.	LM-73	RLM 205	Rajesh Kumar Jaiswal	Dhummadol	Deosar	Singrauli	MP	06.12.2008
106.	LM-74	RLM 206	Jag Jeevan Singh	Jattha tola	Deosar	Singrauli	MP	06.12.2008
107.	LM-75	RLM 207	Birbal Singh	Jattha tola	Deosar	Singrauli	MP	06.12.2008
108.	LM-76	RLM 208	Ranmat Singh	Jattha tola	Deosar	Singrauli	MP	06.12.2008
109.	LM-77	RLM 209	Mohar Singh	Khanua tola	Deosar	Singrauli	MP	06.12.2008
110.	**LM-78**	**RLM 210**	Dharam Jeet Singh	Gajra Bahara	Deosar	Singrauli	MP	06.12.2008
111.	**33**	**RLM 211**	Bashir Mohammad	Khaira	Deosar	Singrauli	MP	
112.	**LM-19**	**RLM 212**	Diwakar Kushawaha	Padaria	Sihawal	Sidhi	MP	15.11.2008
113.	**LM-20**	**RLM 213**	Gend mani Yadava	Bagaiha	Sidhi	Sidhi	MP	15.11.2008

114.	**LM-21**	**RLM 214**	Shesh mani Yadava	Bagaiha	Sidhi	Sidhi	MP	15.11.2008
115.	LM-64	RLM 215	Punjab Baiga	Chamaradol	Majholi	Sidhi	MP	05.12.2008
116.	LM-65	RLM 216	Narmada Singh Baiga	Bodari	Majholi	Sidhi	MP	05.12.2008
117.	LM-66	RLM 217	Loknath Prajapati	Bodari	Majholi	Sidhi	MP	05.12.2008
118.	LM-67	RLM 218	Santo Prajapati	Bodari	Majholi	Sidhi	MP	05.12.2008
119.	LM-68	RLM 219	Nandlal Baiga	Bodari	Majholi	Sidhi	MP	05.12.2008
120.	LM-69	RLM 220	Bhaiya lal Baiga	Badkadol	Majholi	Sidhi	MP	05.12.2008
121.	**LM-70**	**RLM 221**	Har Pratap Baiga	Badkadol	Majholi	Sidhi	MP	05.12.2008
122.	LM-72	RLM 222	Ram Narayan Gupta	Chandohidal	Majholi	Sidhi	MP	05.12.2008
123.	**LM-71**	**RLM 223**	Umakant Gupta	Baheradol	Kusumi	Sidhi	MP	05.12.2008
124.	1	RLM 224	Kuwar Singh	Pathaiti	Rajendragram	Anuppur	MP	15.12.2008
125.	2	RLM 225	Ganpati Yadav	Chachandi	Rajendragram	Anuppur	MP	15.12.2008
126.	3	RLM 226	Kumba Baiga	Chachandeeh	Rajendragram	Anuppur	MP	15.12.2008
127.	5	RLM 227	Bhola Prasad Yadava	Nipania	Rajendragram	Anuppur	MP	15.12.2008
128.	9	RLM 228	Bahori Baiga	Gadhi dadar	Rajendragram	Anuppur	MP	15.12.2008
129.	10	RLM 229	Dharam Singh Baiga	Dhandhutola	Rajendragram	Anuppur	MP	15.12.2008
130.	**13**	**RLM 230**	Shukharatu Baiga	Nipania	Rajendragram	Anuppur	MP	15.12.2008
131.	6	RLM 231	Aitwari Baiga	Chachandeeh	Rajendragram	Anuppur	MP	15.12.2008
132.	20	RLM 232	Ram Bhajan Gond	Patheli	Rajendragram	Anuppur	MP	15.12.2008
133.	27	RLM 233	Sitahi	Amarkantak	Rajendragram	Anuppur	MP	15.12.2008

Annexure -III

Details of Foxtail millet land races collected from tribal areas of M.P.

S. No.	Collection No.	Accession No Alloted	Collections					
			Farmers name	Village	Block	Distt	State	Date of collection
1	FM-12 A	RFM 21	Brij lal	Muraitha	Hamumana	Rewa	M.P.	29.11.2008
2	FM-13	RFM 22	Bankelal yadava	Barhat	Teothar	Rewa	M.P.	30.11.2008
3	FM-1	RFM 23	Dadu lal Mawasi	Jhanda	Sohawal	Satna	M.P.	09.11.2008
4	FM-2	RFM 24	Babu Satnami	Hiraundi	Majhagavan	Satna	M.P.	09.11.2008
5	FM -3 B	RFM 25	Bhaiya Lal Gond	Kathauta	Majhagavan	Satna	M.P.	09.11.2008
6	FM -4	**RFM 26**	Heera lal Singh Gond	Phutaha	Majhagavan	Satna	M.P.	09.11.2008
7	FM-5	RFM 27	Ram Roop Singh Gond	Phutaha	Majhagavan	Satna	M.P.	09.11.2008
8	FM-6	**RFM 28**	Ujhiyar Singh	Bhargavan	Majhagavan	Satna	M.P.	09.11.2008
9	FM-7	RFM 29	Gore Singh Gond	Bhargavan	Majhagavan	Satna	M.P.	09.11.2008
10	FM -14 C	RFM 30	Dadu Lal Adiwasi	Jillaha	Majhagavan	Satna	M.P.	03.12.2008
11	FM-15 C	RFM 31	Ramkesh Adiwasi	Jillaha	Majhagavan	Satna	M.P.	03.12.2008
12	FM 16	RFM 32	Indra Mani sahu	Jillaha	Majhagavan	Satna	M.P.	03.12.2008
13	FM 16 B	RFM 33	Kashi Prasad Yadav	Motipur	Majhagavan	Satna	M.P.	03.12.2008
14	FM 18	**RFM 34**	Anusuiya Yadav	Chouraha	Majhagavan	Satna	M.P.	03.12.2008
15	FM 19	RFM 35	Ram Lal Yadav	Padwania	Majhagavan	Satna	M.P.	03.12.2008
16	FM 20 A	RFM 36	Ram chand Yadav	Padwania	Majhagavan	Satna	M.P.	03.12.2008
17	FM 21 A	RFM 37	Parsadi Lal Harijan	Pathara	Majhagavan	Satna	M.P.	03.12.2008
18	FM 22 A	RFM 38	Chhatrapal Singh	Lallapur	Majhagavan	Satna	M.P.	03.12.2008
19	FM 23	RFM 39	Jai Kishor Patel	Lallapur	Majhagavan	Satna	M.P.	03.12.2008
20	FM 24	RFM 40	Pramod Garg	Lallapur	Majhagavan	Satna	M.P.	03.12.2008
21	FM 25	**RFM 41**	Ramaresh Pal	Hardua	Majhagavan	Satna	M.P.	03.12.2008
22	FM 26	RFM 42	Bhairav Saket	Hardua	Majhagavan	Satna	M.P.	03.12.2008
23	FM 27	RFM 43	Budhhasen Panika	Sejahari	Beohari	Shahdol	M.P.	04.12.2008

24	FM 28	RFM 44	Heera lal Gond	Sejahari	Beohari	Shahdol	M.P.	04.12.2008
25	FM 29	RFM 45	Ram Jiyavan Baiga	Karondia	Beohari	Shahdol	M.P.	04.12.2008
26	FM 30	**RFM 46**	Ram Das Gupta	Bhamaraha	Beohari	Shahdol	M.P.	04.12.2008
27	FM 31	RFM 47	Laxman Prasad Dwivedi	Naudhiya	Beohari	Shahdol	M.P.	04.12.2008
28	FM 32 A	RFM 48	Vinod Rajak	Naudhiya	Beohari	Shahdol	M.P.	04.12.2008
29	FM 33	**RFM 49**	Pradeep Kumar Verma	Khadhauli	Beohari	Shahdol	M.P.	04.12.2008
30	FM 34	RFM 50	Ram Lakhan Gond	Dhandhu Kui	Beohari	Shahdol	M.P.	04.12.2008
31	FM 35 B	RFM 51	Vishnu Kol	Tikhawa	Beohari	Shahdol	M.P.	04.12.2008
32	FM 36 B	RFM 52	Randu Kahar	Charkhari	Beohari	Shahdol	M.P.	04.12.2008
33	FM 37 A	RFM 53	Ram Bahori Kol	Bagdari	Beohari	Shahdol	M.P.	04.12.2008
34	FM 38	RFM 54	Dadai Kol	Pasgarhi	Beohari	Shahdol	M.P.	04.12.2008
35	FM 41	RFM 55	Ramu Singh	Barkachha	J.S.Nagar	Shahdol	M.P.	13.12.2008
36	FM 42	RFM 56	Mangal Deen Gond	Jora	J.S.Nagar	Shahdol	M.P.	13.12.2088
37	FM 43	RFM 57	Sarju Singh Gond	Shivpuri	J.S.Nagar	Shahdol	M.P.	16.12.2008
38	FM 44	RFM 58	Param Lal Singh Gond	Thegaraha	J.S.Nagar	Shahdol	M.P.	16.12.02008
39	FM 45	RFM 59	Saroval Yadava	Banodha	Pali	Umaria	M.P.	17.12.2008
40	FM 8 B	RFM 60	Chhote Kushawaha	Padaria	Sihawal	Sidhi	M.P.	15.11.2008
41	FM 9	**RFM 61**	Santosh Yadava	Koluha	Sidhi	Sidhi	M.P.	15.11.2008
42	FM 10 A	RFM 62	Shesha Mani Yadav	Bagaiha	Sidhi	Sidhi	M.P.	15.11.2008
43	FM 11 A	RFM 63	Harishchandra Yadava	Pokhara	Sihawal	Sidhi	M.P.	15.11.2008
44	FM 39	RFM 64	Phokali Baiga	Bodari	Majholi	Sidhi	M.P.	15.11.2008
45	FM 40	RFM 65	Ram Lakhan Singh	Bodari	Majholi	Sidhi	M.P.	15.11.2008
46	FM 2 C	RFM 66	Bhaiya Satnami	Hiraundi	Majhagavan	Satna	M.P.	-
47	FM 2 A	RFM 67	Heera Lal	Hiraundi	Majhagavan	Satna	M.P.	-
48	FM 3 A	RFM 68	Field	Kathauta	Majhagavan	Satna	M.P.	-
49	FM 7 A	RFM 69	Field	Bhargavan	Majhagavan	Satna	M.P.	-
50	FM 8 A	RFM 70	Field	Padaria	Sihawal	Sidhi	M.P.	-
51	FM 8 C	RFM 71	Field	Hiraundi	Majhagavan	Satna	M.P.	-
52	FM 10 B	RFM 72	Field	Bagaiha	Sidhi	Sidhi	M.P.	-
53	FM 11 B	RFM 73	Field	Pokhara	Sihawal	Sidhi	M.P.	-

54	FM 11 D	RFM 74	Field	Pokhara	Sihawal	Sidhi	M.P.	
55	FM 11 B	RFM 75	Field	Muraitha	Hamumana	Rewa	M.P.	
56	FM 12 D	RFM 76	Field	Muraitha	Hamumana	Rewa	M.P.	
57	FM 13 A	RFM 77	Field	Barhat	Teothar	Rewa	M.P.	
58	FM 14 A	RFM 78	Field	Jillaha	Majhagavan	Satna	M.P.	
59	FM 14 B	**RFM 79**	Field					
60	FM 15 A	RFM 80	Field	Jillaha	Majhagavan	Satna	M.P.	
61	FM 15 B	RFM 81	Field	Jillaha	Majhagavan	Satna	M.P.	
62	FM 16 A	RFM 82	Field	Jillaha	Majhagavan	Satna	M.P.	
63	FM 17 A	RFM 83	Field	Motipur	Majhagavan	Satna	M.P.	
64	FM 20 B	RFM 84	Field	Padwania	Majhagavan	Satna	M.P.	
65	FM 21 B	RFM 85	Field	Pathara	Majhagavan	Satna	M.P.	
66	FM 21 C	RFM 86	Field	Pathara	Majhagavan	Satna	M.P.	
67	FM 22 B	RFM 87	Field	Lallapur	Majhagavan	Satna	M.P.	
68	FM 26 A	RFM 88	Field	Hardua	Majhagavan	Satna	M.P.	
69	FM 26 B	RFM 89	Field	Hardua	Majhagavan	Satna	M.P.	
70	FM 26 C	RFM 90	Field	Hardua	Majhagavan	Satna	M.P.	
71	FM 26	RFM 91	Field	Hardua	Majhagavan	Satna	M.P.	
72	FM 29 A	RFM 92	Field	Karondia	Beohari	Shahdol	M.P.	
73	FM 29 C	RFM 93	Field	Karondia	Beohari	Shahdol	M.P.	
74	FM 32 B	RFM 94	Field	Naudhiya	Beohari	Shahdol	M.P.	
75	FM 32 C	RFM 95	Field	Naudhiya	Beohari	Shahdol	M.P.	
76	FM 32 D	RFM 96	Field	Naudhiya	Beohari	Shahdol	M.P.	
77	FM 35 A	RFM 97	Field	Tikhawa	Beohari	Shahdol	M.P.	
78	FM 36 A	RFM 98	Field	Charkhari	Beohari	Shahdol	M.P.	
79	FM 36 C	RFM 99	Field	Charkhari	Beohari	Shahdol	M.P.	

Annexure -IV

Details of Barnyard millet land races collected from tribal areas of M.P.

S. No.	Collection No.	Accession No Alloted	Collections					
			Farmers name	Village	Block	Distt	State	Date of collection
1	BM 1	RBM 21	Dadi Adiwasi	Bara	Sirmour	Rewa	M.P.	06.11.2008
2	BM 3	RBM 22	Kalika Prasad Singrole	Padri	Sirmour	Rewa	M.P.	08.11.2008
3	BM 30	RBM 23	Buddha Sen Prajapati	Shiv Garh	Hanumana	Rewa	MP	29.11.2008
4	BM 2	RBM 24	Gajadhar Prajapati	Jariha	Majhagavan	Satna	MP	06.11.2008
5	BM 4	RBM 25	Ram Karan Raidas	Chhitiya Mote	Majhagavan	Satna	M.P.	09.11.2008
6	BM 5	RBM 26	Udal Singh	Bhargavan	Majhagavan	Satna	M.P.	09.11.2008
7	BM 6	RBM 27	Ram Bihari Sen	Bhargavan	Majhagavan	Satna	M.P.	09.11.2008
8	BM 31	RBM 28	Kashi Prasad Yadava	Motipur	Majhagavan	Satna	M.P.	03.12.2008
9	BM 32	RBM 29	Anusuiya Yadava	Chauraha	Majhagavan	Satna	M.P.	03.12.2008
10	BM 33	RBM 30	Ram Lal Yadava	Padwania	Majhagavan	Satna	M.P.	03.12.2008
11	BM 34	RBM 31	Ram Chand Yadava	Padwania	Majhagavan	Satna	M.P.	03.12.2008
12	BM 35	RBM 32	Rajju Yadava	Padwania	Majhagavan	Satna	M.P.	03.12.2008
13	BM 36	RBM 33	Parsadilal Harijan	Pathara	Majhagavan	Satna	M.P.	03.12.2008
14	BM 37	RBM 34	Digvijay Singh	Lallapur	Majhagavan	Satna	M.P.	03.12.2008
15	BM 38	RBM 35	Jai Kishor Patel	Lallapur	Majhagavan	Satna	M.P.	03.12.2008
16	BM 39	RBM 36	Pramod Garg	Lallapur	Majhagavan	Satna	M.P.	03.12.2008
17	BM 40	RBM 37	Dev Raj Garg	Lallapur	Majhagavan	Satna	M.P.	03.12.2008
18	BM 41	RBM 38	Hari Shankar Pal	Hardua	Majhagavan	Satna	M.P.	03.12.2008
19	BM 42	RBM 39	Sripal Saket	Hardua	Majhagavan	Satna	M.P.	03.12.2008
20	BM 7	RBM 40	Babulal Rawat	Kathautaha	Sidhi	Sidhi	MP	15.11.2008
21	BM 8	RBM 41	Santosh Yadava	Koluha	Sidhi	Sidhi	MP	15.11.2008
22	BM 9	RBM 42	Gend mani Yadav	Bagaiha	Sidhi	Sidhi	MP	15.11.2008
23	BM 10 B	RBM 43	Shesh mani Yadav	Bagaiha	Sidhi	Sidhi	MP	15.11.2008

24	BM 11	RBM 44	Udaibhan Singh	Pokhara	Sihawal	Sidhi	M.P.	15.11.2008
25	BM 50	RBM 45	Nandlal Baiga	Bodari	Majholi	Sidhi	MP	05.12.2008
26	BM 51	RBM 46	Ram Gopal Baiga	Badkadol	Majholi	Sidhi	M.P.	05.12.2008
27	BM 56	RBM 47	Matuk Dhari Singh	Jamgarhi	Waidhan	Singrauli	M.P.	06.12.2008
28	BM 57	RBM 48	Budhhiman Singh	Asni	Waidhan	Singrauli	M.P.	06.12.2008
29	BM 58	RBM 49	Savita Singh Chandel	Madhi	Waidhan	Singrauli	M.P.	06.12.2008
30	BM 59	RBM 50	Atti Lal Bais	Zeer	Waidhan	Singrauli	M.P.	06.12.2008
31	BM 60	RBM 51	Lalla Yadava	Bindul	Waidhan	Singrauli	M.P.	06.12.2008
32	BM 61	RBM 52	Bal Chand Gond	Pondipath	Waidhan	Singrauli	M.P.	06.12.2008
33	BM 62	RBM 53	Ram Dhani Singh	Langhadol	Waidhan	Singrauli	M.P.	06.12.2008
34	BM 12	RBM 54	Banshilal Yadava	Khirwa	Chitrangi	Singhrauli	M.P.	06.12.2008
35	BM 13	RBM 55	Manik ram Yadava	Khirwa	Chitrangi	Singhrauli	M.P.	16.11.2008
36	BM 14	RBM 56	Ram Prasad Bais	Piperkhad	Chitrangi	Singhrauli	M.P.	16.11.2008
37	BM 15	RBM 57	Bacharaj Bais	Piperkhad	Chitrangi	Singhrauli	M.P.	16.11.2008
38	BM 16	RBM 58	Rajpati Saket	Persohar	Chitrangi	Singhrauli	M.P.	16.11.2008
39	BM 17	RBM 59	Tej mani Saket	Persohar	Chitrangi	Singhrauli	M.P.	16.11.2008
40	BM 18	RBM 60	Manik Ram Saket	Persohar	Chitrangi	Singhrauli	M.P.	16.11.2008
41	BM 19	RBM 61	Lal mani Saket	Persohar	Chitrangi	Singhrauli	M.P.	16.11.2008
42	BM 20	RBM 62	Ramesh Sahu	Dudhamania	Chitrangi	Singhrauli	M.P.	16.11.2008
43	BM 21	RBM 63	Ram Nath Dubey	Bagaiya	Chitrangi	Singhrauli	M.P.	16.11.2008
44	BM 22	RBM 64	Moh. Aslam	Jamtiwa	Chitrangi	Singhrauli	M.P.	16.11.2008
45	BM 23	RBM 65	Banakdhari Singh Gond	Jamtiwa	Chitrangi	Singhrauli	M.P.	16.11.2008
46	BM 24	RBM 66	Salig Singh Yadav	Kapurdai	Chitrangi	Singhrauli	M.P.	16.11.2008
47	BM 25	RBM 67	Lal Kumar Singh	Sanmania	Chitrangi	Singhrauli	M.P.	16.11.2008
48	BM 26	RBM 68	Sipahi Lal	Amilahawa	Chitrangi	Singhrauli	M.P.	16.11.2008
49	BM 27	RBM 69	Babulal	Gerui	Chitrangi	Singhrauli	M.P.	16.11.2008
50	BM 28	RBM 70	Rai Singh Gond	Sakaria	Chitrangi	Singhrauli	M.P.	16.11.2008
51	BM 29	RBM 71	Ram Singh Gond	Babdi	Chitrangi	Singhrauli	M.P.	16.11.2008
52	BM 52	RBM 72	Jag Jeevan Singh	Jatthatoala	Deosar	Singhrauli	M.P.	06.12.2008
53	BM 53	RBM 73	Birbal Singh	Jatthatola	Deosar	Singhrauli	M.P.	06.12.2008

54	BM 54	RBM 74	Mohar Singh	Khanuatola	Deosar	Singhrauli	M.P.	06.12.2008
55	BM 55	RBM 75	Dharam Jeet Singh	Gajara Bahara	Deosar	Singhrauli	M.P.	06.12.2008
56	BM 43	RBM 76	Satendra Kumar Baiga	Karondia	Beohari	Shahdol	M.P.	04.12.2008
57	BM 44	RBM 77	Sukh Sen Singh	Dhandhukui	Beohari	Shahdol	M.P.	04.12.2008
58	BM 45	RBM 78	Babul al Sen	Dhandhukui	Beohari	Shahdol	M.P.	04.12.2008
59	BM 46	RBM 79	Chhotelal Sen	Tikhawa	Beohari	Shahdol	M.P.	04.12.2008
60	BM 47	RBM 80	Sanjay saket	Charkhari	Beohari	Shahdol	M.P.	05.12.2008
61	BM 48	RBM 81	Ram Dulare Sahu	Kharpa	Beohari	Shahdol	M.P.	05.12.2008
62	BM 49	RBM 82	Dadai Kol	Pasgarhi	Beohari	Shahdol	M.P.	05.12.2008
63	BM 63	RBM 83	Ram Chand Tiwari	Bhattu	J.S.Nagar	Shahdol	M.P.	13.12.2008
64	BM 64	RBM 84	Ram Prasad Yadava	Jora	J.S.Nagar	Shahdol	M.P.	13.12.2008
65	BM 65	RBM 85	Babulal Kol	Khutar	Manpur	Umaria	M.P.	16.12.2008
66	BM 66	RBM 86	Mantin Kol	Pathar	Kerkeli	Umaria	M.P.	16.12.2008
67	BM 67	RBM 87	Rituraj Singh	Sarvai Khurd	Pali	Umaria	M.P.	16.12.2008
68	BM 68	RBM 88	Dhyan Singh	Sarvai kala	Pali	Umaria	M.P.	16.12.2008

National Bureau of Plant Genetic Resources
Pusa Campus, New Delhi-110 012

PASSPORT DATA SHEET

Collector's Name and Address: DR. A. K. JAIN, SENIOR SCIENTIST (PLANT PATHOLOGY)
AICRRP ON SMALL MILLETS, JNKVV, COLLEGE OF AGRICULTURE, REWA 486 001,M.P.,INDIA
akjagcrewa@rediffmail.com , ashwanisci@yahoo.com

Collaborating Institute: Name of Scientist(s) and Address: . Madhya Pradesh State Biodiversity Board, Bhopal
Area surveyed: Rewa , Satna, Shahdol, Umaria, Singrauli, Sidhi and Anuppur districts of Madhya Pradesh, India
Duration of the survey: From 06.11.2008 To: 17.12.2008

S. No	Collector No.	IC. No.	*Crop Name*	***Botanical Name***	Vernacular Name	Cult./ Wild/ Hybrid	Type of material *	Date of collection	Source	Frequency
1	RLM 101		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	07.11.08	Farmers field	Occasional
2	RLM 102		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.11.08	Farmers field	Occasional
3	RLM 103		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.11.08	Farmers field	Occasional
4	RLM 104		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.11.08	Farmers field	Occasional
5	RLM 105		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.11.08	Farmers field	Occasional
6	RLM 106		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.11.08	Farmers field	Occasional
7	RLM 107		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.11.08	Farmers field	Occasional
8	RLM 108		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.11.08	Farmers field	Occasional
9	RLM 109		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.11.08	Farmers field	Occasional
10	RLM 110		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional
11	RLM 111		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional
12	RLM 112		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional
13	RLM 113		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional
14	RLM 114		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional
15	RLM 115		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional
16	RLM 116		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional

17	RLM 117		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional
18	RLM 118		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional
19	RLM 119		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional
20	RLM 120		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	29.11.08	Threshing yard	Occasional
21	RLM 121		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.11.08	Farmers field	Occasional
22	RLM 122		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.11.08	Farmers field	Occasional
23	RLM 126		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	09.11.08	Farmers field	Occasional
24	RLM 127		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	09.11.08	Farmers field	Occasional
25	RLM 128		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	09.11.08	Farmers field	Occasional
26	RLM 129		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	09.11.08	Farmers field	Occasional
27	RLM 130		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	04.12.08	Threshing yard	Occasional
28	RLM 134		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	04.12.08	Threshing yard	Occasional
29	RLM 135		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	04.12.08	Threshing yard	Occasional
30	RLM 138		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	04.12.08	Threshing yard	Occasional
31	RLM 139		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	04.12.08	Threshing yard	Occasional
32	RLM 140		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	04.12.08	Threshing yard	Occasional
33	RLM 141		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	04.12.08	Threshing yard	Occasional
34	RLM 142		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	04.12.08	Threshing yard	Occasional
35	RLM 143		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	04.12.08	Threshing yard	Occasional
36	RLM 144		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
37	RLM 145		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
38	RLM 146		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
39	RLM 147		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
40	RLM 148		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
41	RLM 149		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
42	RLM 150		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
43	RLM 152		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.12.08	Threshing yard	Occasional
44	RLM 153		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.12.08	Threshing yard	Occasional
45	RLM 154		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.12.08	Threshing yard	Occasional
46	RLM 155		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.12.08	Threshing yard	Occasional
47	RLM 156		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.12.08	Threshing yard	Occasional
48	RLM 157		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.12.08	Threshing yard	Occasional

49	RLM 158		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.12.08	Threshing yard	Occasional
50	RLM 160		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.12.08	Threshing yard	Occasional
51	RLM 161		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.12.08	Threshing yard	Occasional
52	RLM 162		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	13.12.08	Threshing yard	Occasional
53	RLM 165		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	14.12.08	Threshing yard	Occasional
54	RLM 166		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	14.12.08	Threshing yard	Occasional
55	RLM 167		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	14.12.08	Threshing yard	Occasional
56	RLM 168		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	14.12.08	Threshing yard	Occasional
57	RLM 170		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
58	RLM 171		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
59	RLM 172		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
60	RLM 173		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
61	RLM 174		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
62	RLM 175		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
63	RLM 176		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
64	RLM 177		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
65	RLM 178		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
66	RLM 179		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
67	RLM 180		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
68	RLM 181		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
69	RLM 182		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.12.08	Threshing yard	Occasional
70	RLM 183		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	17.12.08	Threshing yard	Occasional
71	RLM 185		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	17.12.08	Farmers field	Occasional
72	RLM 186		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	17.12.08	Farmers field	Occasional
73	RLM 187		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	17.12.08	Farmers field	Occasional
74	RLM 189		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.11.08	Farmers field	Occasional
75	RLM 190		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.11.08	Farmers field	Occasional
76	RLM 191		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.11.08	Farmers field	Occasional
77	RLM 192		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.11.08	Farmers field	Occasional
78	RLM 193		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.11.08	Farmers field	Occasional
79	RLM 194		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.11.08	Farmers field	Occasional
80	RLM 195		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.11.08	Farmers field	Occasional

81	RLM 196		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.11.08	Farmers field	Occasional
82	RLM 197		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	16.11.08	Farmers field	Occasional
83	RLM 199		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
84	RLM 200		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
85	RLM 201		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
86	RLM 202		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
87	RLM 203		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
88	RLM 204		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
89	RLM 205		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
90	RLM 206		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
91	RLM 207		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
92	RLM 208		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
93	RLM 209		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
94	RLM 210		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	06.12.08	Threshing yard	Occasional
95	RLM 215		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
96	RLM 216		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
97	RLM 217		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
98	RLM 218		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
99	RLM 219		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
100	RLM 220		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
101	RLM 221		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
102	RLM 222		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	05.12.08	Threshing yard	Occasional
103	RLM 224		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	15.12.08	Threshing yard	Occasional
104	RLM 225		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	15.12.08	Threshing yard	Occasional
105	RLM 226		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	15.12.08	Threshing yard	Occasional
106	RLM 227		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	15.12.08	Threshing yard	Occasional
107	RLM 228		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	15.12.08	Threshing yard	Occasional
108	RLM 229		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	15.12.08	Threshing yard	Occasional
109	RLM 230		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	15.12.08	Threshing yard	Occasional
110	RLM 231		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	15.12.08	Threshing yard	Occasional
111	RLM 232		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	15.12.08	Threshing yard	Occasional
112	RLM 233		Little millet	*Panicum sumatrense*	Kutki	Cultivated	Seed	15.12.08	Threshing yard	Occasional

Collector. No.	Sample Type	Sampling Method	Habitat	Site of Collection				***Latitude***	***Longitude***	***Altitude***	***Remarks***
				Village	Mandal	District	State				
RLM 101	Working	Random	Cultivated area	Charhai	Raipur Kurchulian	Rewa	M.P.	24^0 34'N	81^0 27'E	311	
RLM 102	Working	Random	Cultivated area	Teekat	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 103	Working	Random	Cultivated area	Ledara	Hanuman	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 104	Working	Random	Cultivated area	Ledara	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 105	Working	Random	Cultivated area	Pidaria	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 106	Working	Random	Cultivated area	Pidaria	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 107	Working	Random	Cultivated area	Gada	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 108	Working	Random	Cultivated area	Gada	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 109	Working	Random	Cultivated area	Khatkari	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 110	Working	Random	Cultivated area	Khatkari	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 111	Working	Random	Cultivated area	Misirgavan	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 112	Working	Random	Cultivated area	Bhawarha	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 113	Working	Random	Cultivated area	Shivgarh	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 114	Working	Random	Cultivated area	Shivgarh	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 115	Working	Random	Cultivated area	Shivgarh	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 116	Working	Random	Cultivated area	Ghogham	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 117	Working	Random	Cultivated area	Raghunathgarh	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 118	Working	Random	Cultivated area	Kailashpur	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 119	Working	Random	Cultivated area	Jamunihia	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 120	Working	Random	Cultivated area	Bongaha	Hanumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RLM 121	Working	Random	Cultivated area	Jariha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RLM 122	Working	Random	Cultivated area	Jariha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RLM 126	Working	Random	Cultivated area	Kathauta	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	

RLM 127	Working	Random	Cultivated area	Kathauta	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RLM 128	Working	Random	Cultivated area	Phutaha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RLM 129	Working	Random	Cultivated area	Hiraundi	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RLM 130	Working	Random	Cultivated area	Sejahari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 134	Working	Random	Cultivated area	Jamodi	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 135	Working	Random	Cultivated area	Jamodi	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 138	Working	Random	Cultivated area	Khaira	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 139	Working	Random	Cultivated area	Khaira	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 140	Working	Random	Cultivated area	Dhandhu Kui	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 141	Working	Random	Cultivated area	Dhandhu Kui	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 142	Working	Random	Cultivated area	Tikhawa	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 143	Working	Random	Cultivated area	Tikhawa	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 144	Working	Random	Cultivated area	Charkhari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 145	Working	Random	Cultivated area	Kharpa	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 146	Working	Random	Cultivated area	Kharpa	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 147	Working	Random	Cultivated area	Bagdari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 148	Working	Random	Cultivated area	Bagdari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 149	Working	Random	Cultivated area	Pasgarhi	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 150	Working	Random	Cultivated area	Pasgarhi	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 152	Working	Random	Cultivated area	Barachha	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 153	Working	Random	Cultivated area	Maraua	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 154	Working	Random	Cultivated area	Kalleh	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 155	Working	Random	Cultivated area	Kalleh	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 156	Working	Random	Cultivated area	Kalleh	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 157	Working	Random	Cultivated area	Bhattu	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 158	Working	Random	Cultivated area	Vijaha	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	

RLM 160	Working	Random	Cultivated area	Jora	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 161	Working	Random	Cultivated area	Semara	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 162	Working	Random	Cultivated area	Banrakha tola	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 165	Working	Random	Cultivated area	Kasauri	Budhar	Shahdol	M.P.	23^0 16'N	81^0 42'E	482	
RLM 166	Working	Random	Cultivated area	Bargavan	Budhar	Shahdol	M.P.	23^0 16'N	81^0 42'E	482	
RLM 167	Working	Random	Cultivated area	Bargavan	Budhar	Shahdol	M.P.	23^0 16'N	81^0 42'E	482	
RLM 168	Working	Random	Cultivated area	Dholuku	Budhar	Shahdol	M.P.	23^0 16'N	81^0 42'E	482	
RLM 170	Working	Random	Cultivated area	Kanadi Khurd	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 171	Working	Random	Cultivated area	Bairiah	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 172	Working	Random	Cultivated area	Thegaraha	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 173	Working	Random	Cultivated area	Bairiah	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 174	Working	Random	Cultivated area	Shivpuri	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 175	Working	Random	Cultivated area	Baruka	Sohagpur	Shahdol	M.P.	23^0 19'N	81^0 26'E	464	
RLM 176	Working	Random	Cultivated area	Mau	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RLM 177	Working	Random	Cultivated area	Tikki	J. S. Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RLM 178	Working	Random	Cultivated area	Raurapani	Sohagpur	Shahdol	M.P.	23^0 19'N	81^0 26'E	464	
RLM 179	Working	Random	Cultivated area	Pathara	Sohagpur	Shahdol	M.P.	23^0 19'N	81^0 26'E	464	
RLM 180	Working	Random	Cultivated area	Aswari	Gohparu	Shahdol	M.P.	24^0 20'N	81^0 29'E	462	
RLM 181	Working	Random	Cultivated area	Gangital	Manpur	Umaria	M.P.	22^0 23'N	75^0 38'E	398	
RLM 182	Working	Random	Cultivated area	Gangital	Manpur	Umaria	M.P.	22^0 23'N	75^0 38'E	398	
RLM 183	Working	Random	Cultivated area	Pathar	Kerkeli	Umaria	M.P.	23^0 38'N	80^0 28'E	489	
RLM 185	Working	Random	Cultivated area	Akmania	Kerkeli	Umaria	M.P.	23^0 38'N	80^0 28'E	489	
RLM 186	Working	Random	Cultivated area	Sarvaikala	Pali	Umaria	M.P.	23^0 24'N	80^0 56'E	450	
RLM 187	Working	Random	Cultivated area	Bannodha	Pali	Umaria	M.P.	23^0 24'N	80^0 56'E	450	
RLM 189	Working	Random	Cultivated area	Parsohar	Chitrani	Singrauli	M.P.	24^0 21'N	83^0 23'E	609	
RLM 190	Working	Random	Cultivated area	Parsohar	Chitrangi	Singrauli	M.P.	24^0 21'N	83^0 23'E	609	

RLM 191	Working	Random	Cultivated area	Bagaiya	Chitrangi	Singrauli	M.P.	24^0 21’N	83^0 23’E	609	
RLM 192	Working	Random	Cultivated area	Jamtiwa	Chitrangi	Singrauli	M.P.	24^0 21’N	83^0 23’E	609	
RLM 193	Working	Random	Cultivated area	Kapurdai	Chitrangi	Singrauli	M.P.	24^0 21’N	83^0 23’E	609	
RLM 194	Working	Random	Cultivated area	Kapurdai	Chitrangi	Singrauli	M.P.	24^0 21’N	83^0 23’E	609	
RLM 195	Working	Random	Cultivated area	Sakariya	Chitrangi	Singrauli	M.P.	24^0 21’N	83^0 23’E	609	
RLM 196	Working	Random	Cultivated area	Sigtaha	Chitrangi	Singrauli	M.P.	24^0 21’N	83^0 23’E	609	
RLM 197	Working	Random	Cultivated area	Babdi	Chitrangi	Singrauli	M.P.	24^0 21’N	83^0 23’E	609	
RLM 199	Working	Random	Cultivated area	Zeer	Waidhan	Singrauli	M.P.	24^0 10’N	83^0 18’E	519	
RLM 200	Working	Random	Cultivated area	Pondi Path	Waidhan	Singrauli	M.P.	24^0 10’N	83^0 18’E	519	
RLM 201	Working	Random	Cultivated area	Pondi Path	Waidhan	Singrauli	M.P.	24^0 10’N	83^0 18’E	519	
RLM 202	Working	Random	Cultivated area	Rauhal	Waidhan	Singrauli	M.P.	24^0 10’N	83^0 18’E	519	
RLM 203	Working	Random	Cultivated area	Rauhal	Waidhan	Singrauli	M.P.	24^0 10’N	83^0 18’E	519	
RLM 204	Working	Random	Cultivated area	Langhadol	Waidhan	Singrauli	M.P.	24^0 10’N	83^0 18’E	519	
RLM 205	Working	Random	Cultivated area	Dhummadol	Deosar	Singrauli	M.P.	24^0 11’N	83^0 17’E	365	
RLM 206	Working	Random	Cultivated area	Jattha Tola	Deosar	Singrauli	M.P.	24^0 11’N	83^0 17’E	365	
RLM 207	Working	Random	Cultivated area	Jattha Tola	Deosar	Singrauli	M.P.	24^0 11’N	83^0 17’E	365	
RLM 208	Working	Random	Cultivated area	Jattha Tola	Deosar	Singrauli	M.P.	24^0 11’N	83^0 17’E	365	
RLM 209	Working	Random	Cultivated area	Khanua Tola	Deosar	Singrauli	M.P.	24^0 11’N	83^0 17’E	365	
RLM 210	Working	Random	Cultivated area	Gajra bahar	Deosar	Singrauli	M.P.	24^0 11’N	83^0 17’E	365	
RLM 215	Working	Random	Cultivated area	Chamaradol	Majholi	Sidhi	M.P.	24^0 29’N	82^0 04’E	317	
RLM 216	Working	Random	Cultivated area	Bodari	Majholi	Sidhi	M.P.	24^0 29’N	82^0 04’E	317	
RLM 217	Working	Random	Cultivated area	Bodari	Majholi	Sidhi	M.P.	24^0 29’N	82^0 04’E	317	
RLM 218	Working	Random	Cultivated area	Bodari	Majholi	Sidhi	M.P.	24^0 29’N	82^0 04’E	317	
RLM 219	Working	Random	Cultivated area	Bodari	Majholi	Sidhi	M.P.	24^0 29’N	82^0 04’E	317	
RLM 220	Working	Random	Cultivated area	Badakadol	Majholi	Sidhi	M.P.	24^0 29’N	82^0 04’E	317	
RLM 221	Working	Random	Cultivated area	Pidaratal	Majholi	Sidhi	M.P.	24^0 29’N	82^0 04’E	317	

RLM 222	Working	Random	Cultivated area	Chandohidol	Majholi	Sidhi	M.P.	24^0 29'N	82^0 04'E	317	
RLM 224	Working	Random	Cultivated area	Pathaiti	Rajendragram	Anuppur	M.P.	23^0 05'N	81^0 45'E	505	
RLM 225	Working	Random	Cultivated area	Chachandi	Rajendragram	Anuppur	M.P.	23^0 05'N	81^0 45'E	505	
RLM 226	Working	Random	Cultivated area	Chachandi	Rajendragram	Anuppur	M.P.	23^0 05'N	81^0 45'E	505	
RLM 227	Working	Random	Cultivated area	Nipania	Rajendragram	Anuppur	M.P.	23^0 05'N	81^0 45'E	505	
RLM 228	Working	Random	Cultivated area	Gadhi Dadar	Rajendragram	Anuppur	M.P.	23^0 05'N	81^0 45'E	505	
RLM 229	Working	Random	Cultivated area	Dhandhutola	Rajendragram	Anuppur	M.P.	23^0 05'N	81^0 45'E	505	
RLM 230	Working	Random	Cultivated area	Nipania	Rajendragram	Anuppur	M.P.	23^0 05'N	81^0 45'E	505	
RLM 231	Working	Random	Cultivated area	Chachandeeh	Rajendragram	Anuppur	M.P.	23^0 05'N	81^0 45'E	505	
RLM 232	Working	Random	Cultivated area	Patheli	Rajendragram	Anuppur	M.P.	23^0 05'N	81^0 45'E	505	
RLM 233	Working	Random	Cultivated area	Amarkantak	Rajendragram	Anuppur	M.P.	30^0 28'N	82^0 12'E	1048	

*Type of Material: Seeds, Fruits, Inflorescence, Roots, Tubers, Rhizomes, Suckers, Live Plant, Herbarium, …

The completed sheets for the allotment of IC number should be sent to:
The Head
Division of Plant Exploration and Germplasm Collection
National Bureau of Plant Genetic Resources
Pusa Campus, New Delhi-110 012

Annexure -VI

National Bureau of Plant Genetic Resources
Pusa Campus, New Delhi-110 012

PASSPORT DATA SHEET

Collector's Name and Address: DR. A. K. JAIN, SENIOR SCIENTIST (PLANT PATHOLOGY)
AICRRP ON SMALL MILLETS, JNKVV, COLLEGE OF AGRICULTURE, REWA 486 001,M.P.,INDIA

Collaborating Institute: Name of Scientist(s) and Address: Madhya Pradesh State Biodiversity Board, Bhopal

Area surveyed: Rewa and Shahdol division of Madhya Pradesh, India

Duration of the survey: From 09.11.2008 To: 17.12.2008

S.N	Collector No.	IC. No.	*Crop Name*	*Botanical Name*	Vernacular Name	Cult./ Wild/ Hybrid	Type of material*	Date of collection	Source	Frequency
1	RFM 21	IC 589403	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	29.11.08	Threshing yard	Occassional
2	RFM 22	IC 589404	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	30.11.08	Threshing yard	Rare
3	RFM 23	IC 589405	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Rare
4	RFM 24	IC 589406	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
5	RFM 25	IC 589407	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
6	RFM 27	IC 589408	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
7	RFM 29	IC 589409	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
8	RFM 30	IC 589410	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Occassional
9	RFM 31	IC 589411	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Occassional
10	RFM 32	IC 589412	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Occassional

11	RFM 33	IC 589413	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Rare
12	RFM 35	IC 589414	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Occassional
13	RFM 36	IC 589415	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Occassional
14	RFM 37	IC 589416	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Rare
15	RFM 38	IC 589417	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Occassional
16	RFM 39	IC 589418	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Occassional
17	RFM 40	IC 589419	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Occassional
18	RFM 42	IC 589420	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	03.12.08	Threshing yard	Occassional
19	RFM 43	IC 589421	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
20	RFM 44	IC 589422	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
21	RFM 45	IC 589423	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
22	RFM 47	IC 589424	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Rare
23	RFM 48	IC 589425	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
24	RFM 50	IC 589426	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
25	RFM 51	IC 589427	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
26	RFM 52	IC 589428	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
27	RFM 53	IC 589429	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Rare
28	RFM 54	IC 589430	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Rare
29	RFM 55	IC 589431	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	13.12.08	Farmers store	Occassional
30	RFM 56	IC 589432	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	13.12.08	Farmers store	Occassional
31	RFM 57	IC 589433	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	16.12.08	Farmers store	Occassional
32	RFM 58	IC 589434	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	16.12.08	Farmers store	Occassional
33	RFM 59	IC 589435	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	17.12.08	Farmers store	Rare
34	RFM 60	IC 589436	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Occassional
35	RFM 62	IC 589437	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Rare
36	RFM 63	IC 589438	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Rare
37	RFM 64	IC 589439	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Rare
38	RFM 65	IC 589440	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Rare
39	RFM 66	IC 589441	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
40	RFM 67	IC 589442	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
41	RFM 68	IC 589443	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
42	RFM 69	IC 589444	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional

43	RFM 70	IC 589445	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Occassional
44	RFM 71	IC 589446	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
45	RFM 72	IC 589447	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Rare
46	RFM 73	IC 589448	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Occassional
47	RFM 74	IC 589449	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Occassional
48	RFM 75	IC 589450	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Occassional
49	RFM 76	IC 589451	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	15.11.08	Threshing yard	Occassional
50	RFM 77	IC 589452	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	30.11.08	Threshing yard	Occassional
51	RFM 78	IC 589453	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	- Farmers field	Occassional
52	RFM 80	IC 589454	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Rare
53	RFM 81	IC 589455	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
54	RFM 82	IC 589456	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
55	RFM 83	IC 589457	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Rare
56	RFM 84	IC 589458	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
57	RFM 85	IC 589459	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Rare
58	RFM 86	IC 589460	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Rare
59	RFM 87	IC 589461	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
60	RFM 88	IC 589462	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
61	RFM 89	IC 589463	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
62	RFM 90	IC 589464	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
63	RFM 91	IC 589465	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	09.11.08	Farmers field	Occassional
64	RFM 93	IC 589466	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
65	RFM 95	IC 589467	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
66	RFM 96	IC 589468	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
67	RFM 97	IC 589469	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
68	RFM 98	IC 589700	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional
69	RFM 99	IC 589471	Foxtail millet	*Setaria italica*	Kakun	Cultivated	Seed	04.12.08	Threshing yard	Occassional

Collector. No.	Sample Type	Sampling Method	Habitat	Site of Collection				***Latitude***	***Longitude***	***Altitude*** (Mtrs).	***Remarks***
				Village	Mandal	District	State				
RFM 21	Population	Random	Cultivated area	Muraitha	Hamumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RFM 22	Individual plant	Random	Cultivated area	Barhat	Teothar	Rewa	M.P.	25^0 00'N	81^0 38'E	151	
RFM 23	Individual plant	Random	Cultivated area	Jhanda	Sohawal	Satna	M.P.	24^0 35'N	80^0 46'E	463	
RFM 24	Population	Random	Cultivated area	Hiraundi	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 25	Population	Random	Cultivated area	Kathauta	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 27	Population	Random	Cultivated area	Phutaha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 29	Population	Random	Cultivated area	Bhargavan	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 30	Population	Random	Cultivated area	Jillaha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 31	Population	Random	Cultivated area	Jillaha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 32	Population	Random	Cultivated area	Jillaha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 33	Individual plant	Random	Cultivated area	Motipur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 35	Population	Random	Cultivated area	Padwania	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 36	Population	Random	Cultivated area	Padwania	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 37	Individual plant	Random	Cultivated area	Pathara	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 38	Population	Random	Cultivated area	Lallapur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 39	Population	Random	Cultivated area	Lallapur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 40	Population	Random	Cultivated area	Lallapur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 42	Population	Random	Cultivated area	Hardua	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 43	Population	Random	Cultivated area	Sejahari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 44	Population	Random	Cultivated area	Sejahari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 45	Working	Random	Cultivated area	Karondia	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 47	Individual plant	Random	Cultivated area	Naudhiya	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 48	Population	Random	Cultivated area	Naudhiya	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	

RFM 50	Population	Random	Cultivated area	Dhandhu Kui	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 51	Population	Random	Cultivated area	Tikhawa	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 52	Population	Random	Cultivated area	Charkhari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 53	Individual plant	Random	Cultivated area	Bagdari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 54	Individual plant	Random	Cultivated area	Pasgarhi	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 55	Population	Random	Cultivated area	Barkachha	J.S.Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RFM 56	Population	Random	Cultivated area	Jora	J.S.Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RFM 57	Population	Random	Cultivated area	Shivpuri	J.S.Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RFM 58	Population	Random	Cultivated area	Thegaraha	J.S.Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	
RFM 59	Individual plant	Random	Cultivated area	Banodha	Pali	Umaria	M.P.	23^0 24'N	80^0 56'E	450	
RFM 60	Working	Random	Cultivated area	Padaria	Sihawal	Sidhi	M.P.	24^0 35'N	82^0 14'E	372	
RFM 62	Individual plant	Random	Cultivated area	Bagaiha	Sidhi	Sidhi	M.P.	24^0 24'N	81^0 54'E	272	
RFM 63	Individual plant	Random	Cultivated area	Pokhara	Sihawal	Sidhi	M.P.	24^0 35'N	82^0 14'E	372	
RFM 64	Individual plant	Random	Cultivated area	Bodari	Majholi	Sidhi	M.P.	24^0 29'N	82^0 04'E	317	
RFM 65	Individual plant	Random	Cultivated area	Bodari	Majholi	Sidhi	M.P.	24^0 29'N	82^0 04'E	317	
RFM 66	Population	Random	Cultivated area	Hiraundi	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 67	Population	Random	Cultivated area	Hiraundi	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 68	Population	Random	Cultivated area	Kathauta	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 69	Population	Random	Cultivated area	Bhargavan	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 70	Population	Random	Cultivated area	Padaria	Sihawal	Sidhi	M.P.	24^0 35'N	82^0 14'E	372	
RFM 71	Population	Random	Cultivated area	Hiraundi	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 72	Individual plant	Random	Cultivated area	Bagaiha	Sidhi	Sidhi	M.P.	24^0 24'N	81^0 54'E	272	
RFM 73	Population	Random	Cultivated area	Pokhara	Sihawal	Sidhi	M.P.	24^0 35'N	82^0 14'E	372	
RFM 74	Population	Random	Cultivated area	Pokhara	Sihawal	Sidhi	M.P.	24^0 35'N	82^0 14'E	372	
RFM 75	Population	Random	Cultivated area	Muraitha	Hamumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	
RFM 76	Population	Random	Cultivated area	Muraitha	Hamumana	Rewa	M.P.	24^0 51'N	82^0 10'E	365	

RFM 77	Population	Random	Cultivated area	Barhat	Teothar	Rewa	M.P.	25^0 00'N	81^0 38'E	151	
RFM 78	Population	Random	Cultivated area	Jillaha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 80	Individual plant	Random	Cultivated area	Jillaha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 81	Population	Random	Cultivated area	Jillaha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 82	Population	Random	Cultivated area	Jillaha	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 83	Individual plant	Random	Cultivated area	Motipur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 84	Population	Random	Cultivated area	Padwania	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 85	Individual plant	Random	Cultivated area	Pathara	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 86	Individual plant	Random	Cultivated area	Pathara	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 87	Population	Random	Cultivated area	Lallapur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 88	Population	Random	Cultivated area	Hardua	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 89	Population	Random	Cultivated area	Hardua	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 90	Population	Random	Cultivated area	Hardua	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 91	Population	Random	Cultivated area	Hardua	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RFM 93	Population	Random	Cultivated area	Karondia	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 95	Population	Random	Cultivated area	Naudhiya	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 96	Population	Random	Cultivated area	Naudhiya	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 97	Population	Random	Cultivated area	Tikhawa	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 98	Population	Random	Cultivated area	Charkhari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RFM 99	Population	Random	Cultivated area	Charkhari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	

*Type of Material: Seeds, Fruits, Inflorescence, Roots, Tubers, Rhizomes, Suckers, Live Plant, Herbarium, …

The completed sheets for the allotment of IC number should be sent to:
The Head
Division of Plant Exploration and Germplasm Collection
National Bureau of Plant Genetic Resources
Pusa Campus, New Delhi-110 012

Annexure -VII

National Bureau of Plant Genetic Resources
Pusa Campus, New Delhi-110 012

PASSPORT DATA SHEET

Collector's Name and Address: DR. A. K. JAIN, SENIOR SCIENTIST (PLANT PATHOLOGY)
AICRRP ON SMALL MILLETS, JNKVV, COLLEGE OF AGRICULTURE, REWA 486 001,M.P.,INDIA

Collaborating Institute: Name of Scientist(s) and Address: Madhya Pradesh State Biodiversity Board, Bhopal

Area surveyed: Rewa and Shahdol division of Madhya Pradesh, India

Duration of the survey: From 06.11.2008 To: 13.12.2008

S. N	Collector No.	IC. No.	*Crop Name*	*Botanical Name*	Vernacular Name	Cult./ Wild/ Hybrid	Type of material*	Date of collection	Source	Frequency
1	RBM 22	IC 589354	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.11.08	Farmers field	Occassional
2	RBM 26	IC 589355	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	09.11.08	Farmers field	Occassional
3	RBM 27	IC 589355	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	09.11.08	Farmers field	Occassional
4	RBM 28	IC 589357	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
5	RBM 30	IC 589358	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
6	RBM 31	IC 589359	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
7	RBM 32	IC 589360	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
8	RBM 33	IC 589361	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
9	RBM 34	IC 589362	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
10	RBM 35	IC 589363	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
11	RBM 36	IC 589364	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
12	RBM 37	IC 589365	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
13	RBM 38	IC 589366	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
14	RBM 39	IC 589367	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	03.12.08	Threshing yard	Occassional
15	RBM 44	IC 589368	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	15.11.08	Threshing yard	Rare
16	RBM 46	IC 589369	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	05.12.08	Threshing yard	Rare
17	RBM 47	IC 589370	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.12.08	Threshing yard	Occassional

18	RBM 48	IC 589371	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.12.08	Threshing yard	Occassional
19	RBM 50	IC 589372	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.12.08	Threshing yard	Occassional
20	RBM 51	IC 589373	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.12.08	Threshing yard	Occassional
21	RBM 52	IC 589374	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.12.08	Threshing yard	Occassional
22	RBM 53	IC 589375	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.12.08	Threshing yard	Occassional
23	RBM 54	IC 589376	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
24	RBM 55	IC 589377	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
25	RBM 56	IC 589378	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
26	RBM 57	IC 589379	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
27	RBM 58	IC 589380	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
28	RBM 59	IC 589381	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
29	RBM 62	IC 589382	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
30	RBM 63	IC 589383	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
31	RBM 64	IC 589384	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
32	RBM 65	IC 589385	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
33	RBM 66	IC 589386	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
34	RBM 67	IC 589387	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
35	RBM 68	IC 589388	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
36	RBM 69	IC 589389	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
37	RBM 70	IC 589390	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
38	RBM 71	IC 589391	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	16.11.08	Threshing yard	Occassional
39	RBM 72	IC 589392	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.12.08	Threshing yard	Occassional
40	RBM 73	IC 589393	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.12.08	Threshing yard	Occassional
41	RBM 74	IC 589394	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.12.08	Threshing yard	Occassional
42	RBM 75	IC 589395	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	06.12.08	Threshing yard	Occassional
43	RBM 76	IC 589396	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	04.12.08	Threshing yard	Occassional
44	RBM 77	IC 589397	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	04.12.08	Threshing yard	Occassional
45	RBM 78	IC 589398	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	04.12.08	Threshing yard	Occassional
46	RBM 80	IC 589399	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	05.12.08	Threshing yard	Occassional
47	RBM 81	IC 589400	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	05.12.08	Threshing yard	Occassional
48	RBM 82	IC 589401	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	05.12.08	Threshing yard	Occassional
49	RBM 84	IC 589402	Barnyard millet	*Echinochloa frumentacea*	Sawan	Cultivated	Seed	13.12.08	Threshing yard	Rare

Collector. No.	Sample Type	Sampling Method	Habitat	Site of Collection				Latitude	Longitude	Altitude (mtrs)	Remarks
				Village	Mandal	District	State				
RBM 22	Population	Random	Cultivated area	Padri	Sirmour	Rewa	M.P.	24^0 50'N	81^0 23'E	291	
RBM 26	Population	Random	Cultivated area	Bhargavan	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 27	Population	Random	Cultivated area	Bhargavan	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 28	Population	Random	Cultivated area	Motipur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 30	Population	Random	Cultivated area	Padwania	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 31	Population	Random	Cultivated area	Padwania	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 32	Population	Random	Cultivated area	Padwania	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 33	Population	Random	Cultivated area	Pathara	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 34	Population	Random	Cultivated area	Lallapur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 35	Population	Random	Cultivated area	Lallapur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 36	Population	Random	Cultivated area	Lallapur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 37	Population	Random	Cultivated area	Lallapur	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 38	Population	Random	Cultivated area	Hardua	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 39	Population	Random	Cultivated area	Hardua	Majhagavan	Satna	M.P.	24^0 55'N	80^0 48'E	563	
RBM 44	Population	Random	Cultivated area	Pokhara	Sihawal	Sidhi	M.P.	24^0 35'N	82^0 14'E	372	
RBM 46	Individual plant	Random	Cultivated area	Badkadol	Majholi	Sidhi	M.P.	24^0 29'N	82^0 04'E	317	
RBM 47	Population	Random	Cultivated area	Jamgarhi	Waidhan	Singrauli	M.P.	24^0 10'N	83^0 18'E	519	
RBM 48	Population	Random	Cultivated area	Asni	Waidhan	Singrauli	M.P.	24^0 10'N	83^0 18'E	519	
RBM 50	Population	Random	Cultivated area	Zeer	Waidhan	Singrauli	M.P.	24^0 10'N	83^0 18'E	519	
RBM 51	Population	Random	Cultivated area	Bindul	Waidhan	Singrauli	M.P.	24^0 10'N	83^0 18'E	519	
RBM 52	Population	Random	Cultivated area	Pondipath	Waidhan	Singrauli	M.P.	24^0 10'N	83^0 18'E	519	
RBM 53	Population	Random	Cultivated area	Langhadol	Waidhan	Singrauli	M.P.	24^0 10'N	83^0 18'E	519	
RBM 54	Population	Random	Cultivated area	Khirwa	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 55	Population	Random	Cultivated area	Khirwa	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 56	Population	Random	Cultivated area	Piperkhad	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 57	Population	Random	Cultivated area	Piperkhad	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	

RBM 58	Population	Random	Cultivated area	Persohar	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 59	Population	Random	Cultivated area	Persohar	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 62	Population	Random	Cultivated area	Dudhamania	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 63	Population	Random	Cultivated area	Bagaiya	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 64	Population	Random	Cultivated area	Jamtiwa	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 65	Population	Random	Cultivated area	Jamtiwa	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 66	Population	Random	Cultivated area	Kapurdai	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 67	Population	Random	Cultivated area	Sanmania	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 68	Population	Random	Cultivated area	Amilahawa	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 69	Population	Random	Cultivated area	Gerui	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 70	Population	Random	Cultivated area	Sakaria	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 71	Individual plant	Random	Cultivated area	Babdi	Chitrangi	Singhrauli	M.P.	24^0 21'N	83^0 23'E	609	
RBM 72	Population	Random	Cultivated area	Jatthatoala	Deosar	Singhrauli	M.P.	24^0 11'N	83^0 17'E	365	
RBM 73	Population	Random	Cultivated area	Jatthatola	Deosar	Singhrauli	M.P.	24^0 11'N	83^0 17'E	365	
RBM 74	Population	Random	Cultivated area	Khanuatola	Deosar	Singhrauli	M.P.	24^0 11'N	83^0 17'E	365	
RBM 75	Population	Random	Cultivated area	Gajara Bahara	Deosar	Singhrauli	M.P.	24^0 11'N	83^0 17'E	365	
RBM 76	Population	Random	Cultivated area	Karondia	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RBM 77	Population	Random	Cultivated area	Dhandhukui	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RBM 78	Population	Random	Cultivated area	Dhandhukui	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RBM 80	Population	Random	Cultivated area	Charkhari	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RBM 81	Population	Random	Cultivated area	Kharpa	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RBM 82	Population	Random	Cultivated area	Pasgarhi	Beohari	Shahdol	M.P.	24^0 01'N	81^0 20'E	338	
RBM 84	Individual plant	Random	Cultivated area	Jora	J.S.Nagar	Shahdol	M.P.	23^0 56'N	81^0 27'E	593	

*Type of Material: Seeds, Fruits, Inflorescence, Roots, Tubers, Rhizomes, Suckers, Live Plant, Herbarium, …

The completed sheets for the allotment of IC number should be sent to:

The Head

Division of Plant Exploration and Germplasm Collection

National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi-110 012