

**Traditional Seeds**

**Evaluation and Demonstration Trials**

**Outcome of Rainfed Kharif 2008 and 2009**

**in Kachchh District**

**Prepared By:**

**SATVIK**

Promoting Ecological Farming



**Traditional Seeds Evaluation and Demonstration Trials  
Outcome of Rainfed Kharif 2008 and 2009  
in Kachchh District**

**June - 2010**

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Outcome of Rainfed Kharif 2008 and 2009 in Kachchh District

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## Introduction

Kachchh district of Gujarat has its peculiarities for seeds of the crops grown in the region. These seeds which are known as traditional varieties excels in qualities for their tastes, colour, nutritional aspects, luster, disease and pests reactions and many more aspects. Because of these qualities these varieties are still under cultivation though not commercially and are being preserved and maintained by the farmers for their own use in interior areas. On the one side these traditional varieties cannot compete with modern varieties in production and are loosing place in modern agriculture and are being slowly and slowly replaced by high yielding varieties. A time may come in future when these varieties will not be cultivated at all and extinct. With that all valuable material will be lost. On the other side modern varieties are also not doing well under Kachchh conditions because of want of high inputs. The farmers are in confusion in picking right varieties. Under the circumstances they want to switchover on traditional varieties which do well under limited input conditions of which information is available with them. It is therefore essential to collect, conserve, evaluate and document the material in proper form so that it can be saved for future use.

### **Purpose of the report :**

Kachchh District itself is very vast and its agro ecological condition are different in different regions. The rainfall pattern is also varied and accordingly sowings are timely done or delayed. No single variety can do well under such conditions. Therefore more than one locations data in the region, performance over two years and varied sowing times have been averaged while bringing out this information which will help the farmers in selection of variety for their location.

### **Methodology :**

For the collection and conservation of seeds of traditional varieties of the crops – Bajra, Jowar, Moong, Moth, Guwar, Til and Castor, vast survey of Kachchh district was done in the year 2007. Farmers and

villagers which were growing and maintaining seeds of these crops for last 50-60 years were identified. Seeds from standing crop as well as from their stores were collected. A descriptor of each of the variety as explained by farmers themselves was prepared. Thus about 63 traditional varieties of different crops were collected. Above varieties seeds are being used for experimentation and conservation.

For experimentation on farmers field farmers and villages in all the 5 agro ecological situation of Kachchh district 1. Abdasa – Lakhapat, 2. Coastal Kachchh including Mandvi, Mundra and Anjar Taluka, 3. Central Kachchh including Bhuj and Nakhatrana Talukas, 4. Wagad including Bhachau and Rapar Talukas and 5. Island chain including Pachchham Khadir and Bela were identified.

In each region two farmers were selected. The selected farmers planted the trials themselves by following their own cultivation practices. Observations on yield and other aspects were also recorded by them with the assistance of project staff. Disease, pests and drought tolerance observations were recorded by project staff.

For statistical analysis of trials, villages were considered as replications and varieties as treatments. Data analysis was done by following randomized block design model. The conclusion of two years experimentation (year 2008 and 2009) are as follows.

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## 1 Pearl Millet (Bajara)

18 varieties including one check of Bajra were planted in all the 5 regions of Kachchh in both the years. Timely and Late sowings were done in different talukas depending on setting of monsoon rains. Observations on grain, fodder yield and other aspects were recorded. The analysis of data revealed following better varieties...

Region	Taluka	Grain	Fodder
Western	Abdasa Lakhapat Nakhatrana	4, 9, 5	14, 12, 18
Central	Bhuj Mandvi Mundra Anjar	8, 3, 1	2, 6, 8, 10, 12, 16
Eastern	Rapar Bhachau	15, 13, 16	8, 15, 3

Local Variety No. 2, 8, 12, 14, 16 and 18 have been noted drought tolerant and Aergot and Downy Mildew tolerant.

### Recommendations :

Based on the performance Local Variety No. 3, 4, 8, 9, 15, 16, 7, 10, 13 may be used in Demonstration Trials for whole of Kachchh region.



## Pearl Millet (Bajara)

Year	Sowing Time	Abdasa	Mandvi	Mundra	Anjar	Rapar
2008	Timely Sown		Maska			
2008	Late Sown	Kala Talav				
2009	Timely Sown					
2009	Late Sown			Chasra	Budharmora	Mangadh
Best Performing Cultivar for Grain in Decending order		4	8			15
		9	3			13
		5	1			16
		7	10			10
		8	16			18
		6	7			9
		16	4			12
		1	13			4
		3	2			1
		2	9			5
		13	18			6
		18	12			7
		10	6			3
		15	5			17
		17	14			2
		12	17			8
		14	15			14
Best Performing Cultivar for Fodder in Decending order		14	2	10	13	8
		12	6	16	12	15
		18	16	8	8	3
		16	9	7	7	14
		9	5	17	9	7
		4	17	6	4	9
		5	18	2	15	16
		17	1	5	2	2
		10	10	1	18	12
		8	15	12	6	4
		13	14	15	10	17
		15	3	9	16	6
		7	8	4	14	13
		3	4	3	1	18
		6	13	14	17	5
		1	12	18	3	10
		2	7	13	5	1



## 2 Sorghum (Jowar)

11 varieties were planted in both the years in all the 5 regions of Kachchh district. The results of timely and late sown trials for identifying fodder varieties are as under.

Region	Taluka	Fodder
Western	Abdasa Lakhapat Nakhatrana	7,5,9
Central	Bhuj Mandvi Mundra Anjar	4,3,2,7,10
Eastern	Rapar Bhachau	8,10,1

Fodder Varieties 8 and 1 have been identified as drought tolerant.

### Recommendations :

Local Variety No. 1, 3, 4, 7, 8, 9 and 10 may be used in Demonstration Trials for fodder.

## Sorghum (Jowar)

Year	Sowing Time	Abdasa	Bhuj	Mandvi	Bhachau	Rapar
2008	Timely Sown		Umedpar	Gundiyali		
2008	Late Sown	Kala Talav			Ner	
2009	Timely Sown	Naliya				Nagtar
2009	Late Sown					
Best Performing Cultivar for Grain in Decending order						
Best Performing Cultivar for Fodder in Decending order		7	4	7	8	10
		5	3	10	10	1
		9	2	3	9	7
		10	1	2	7	5
		8	7	8	3	4
		1	8	5	4	8
		2	10	9	1	2
		4	5	1	5	3
		3	9	4	11	9
		11	11	11	2	11

### 3 Green Gram (Moong)

18 varieties were planted in more than 20 trials in the year 2008 and 2009 on farmers field. Their results were as under..

Region	Taluka	Grain	Fodder
Western	Abdasa Lakhapat Nakhatrana	8, 16, 17	
Central	Bhuj Mandvi Mundra Anjar	4, 6, 15, 17	1, 2, 4, 17
Eastern	Rapar Bhachau	16, 13, 17	17, 13, 4

Local Variety No. 16, 2 have been noted drought tolerant, Pink Pod Borer and Spnrix moth, Larva Tolerant.

#### Recommendations :

Moong desi variety 4, 15, 16, 17 may be used for Demonstration Trials purpose in all over the Kachchh district.



## Green Gram (Moong)

Year	Sowing Time	Nakhatrana	Bhuj	Mandvi	Mundra	Rapar
2008	Timely Sown		Lodai	Gundiyali		
2008	Late Sown					
2009	Timely Sown	Vang (MK)		Maska (MR)		
2009	Late Sown				Chasra	Mangadh
Best Performing Cultivar for Grain in Decending order		17	4	15		16
		16	6	17		13
		8	1	16		17
		4	2	18		4
		13	5	8		12
		14	17	14		5
		2	8	13		15
		6	18	10		11
		15	16	11		1
		3	3	12		18
		18	10	6		8
		11	13	4		14
		12	15	5		3
		5	7	3		7
		10	14	7		10
		7	12	2		2
		1	11	1		6
Best Performing Cultivar for Fodder in Decending order				2	1	17
				17	4	13
				18	12	4
				13	13	16
				12	16	11
				15	10	15
				5	11	18
				16	8	8
				11	5	14
				14	3	1
				1	15	5
				10	14	12
				7	7	3
				3	2	7
				6	17	10
				4	18	2
				8	6	6

## 4 Moth Bean (Moth/Korad)

6 moth traditional varieties were planted in all the regions of Kachchh district in the year 2008 and 2009. Their suitability for grain and fodder purpose in different regions were as...

Region	Taluka	Grain	Fodder
Western	Abdasa Lakhapat Nakhatrana	5, 4, 2	2, 4, 1
Central	Bhuj Mandvi Mundra Anjar	5, 2, 1, 6	2, 4, 5
Eastern	Rapar Bhachau	2, 5, 1	4, 5, 6

Local Variety No. 4, 5, 6, 2 have been noted drought tolerant.

### Recommendation :

Local Variety No. 1, 2, 5, 6 may be used in Demonstration Trials programme.



## Moth Bean (Moth/Korad)

Year	Sowing Time	Abdasa	Bhuj	Mandvi	Rapar
2008	Timely Sown		Umedpar		
2008	Late Sown	Kala Talav			
2009	Timely Sown			Maska (MR)	Nagtar
2009	Late Sown				Mangadh
Best Performing Cultivar for Grain in Decending order		5	5	1	2
		4	2	6	5
		2	1	2	1
		1	4	5	6
				4	4
Best Performing Cultivar for Fodder in Decending order		2	2	5	4
		4	4	4	6
		1	5	2	5
		5	1	6	2
				1	1



## 5 Cluster Bean (Guwar)

8 Guwar varieties were planted by farmers themselves. Their results for better varieties for grain and fodder as follows ....

Region	Taluka	Grain	Fodder
Western	Abdasa Lakhapat Nakhatrana	1, 4, 7, 8	2, 5, 8
Central	Bhuj Mandvi Mundra Anjar	4, 7, 6	7, 4, 6

All these entries were found Hair Catter Piller free and entries no. 4, 2 and 7 were noted drought tolerant.

Recommendation :

Local Variety No. 1, 4, 6, 7 may be used in Demonstration Trials.

## Cluster Bean (Guwar)

Year	Sowing Time	Abdasa	Nakhatrana	Bhuj	Mandvi	Bhachau	Rapar
2008	Timely Sown			Umedpar	Gundiyali		
2008	Late Sown					Ner	Umaiya
2009	Timely Sown	Naliya			Maska (MR)		Nagtar
2009	Late Sown						Mangadh
Best Performing Cultivar for Grain in Decending order		1	7	4	7	7	6
		4	4	7	6	2	1
		7	8	6	2	1	4
		5	5	8	5	8	5
		8	2	5	4	4	7
		6	1	2	8	5	2
Best Performing Cultivar for Fodder in Decending order		2	6	1	1	6	8
		2		7	7		2
		5		4	1		7
		8		6	6		6
		4		8	8		1
		1		5	2		8
		6		2	5		5
		7		1	4		4

## 6 Sesame (Til)

Though the trials were planted in all the regions of Kachchh district, results were obtained of Western and Central regions. Suitable varieties identified are ....

Region	Taluka	Grain	Fodder
Western	Abdasa Lakhapat Nakhatrana	1, 4, 5	
Central	Bhuj Mandvi Mundra Anjar	1, 4, 5	2, 6, 8, 10, 12, 16

Local Variety No. 5 have been noted drought tolerant, leaf spot free and moderately tolerant to Wilt.

Recommendation :

Local Variety No. 1, 4 and 5 should be used in Demonstration Trials.



## Sesame (Til)

Year	Sowing Time	Abdasa	Bhuj	Mandvi
2008	Timely Sown		Umedpar	Mandvi
2008	Late Sown	Kala Talav		
2009	Timely Sown	Naliya		
2009	Late Sown			
Best Performing Cultivar for Grain in Decending order		1	1	4
		4	5	1
		5	4	2
		6	2	5
		2		

## 7 Castor (Aeranda)

Results of Western and Central regions of Kachchh district trials of Castor using 5 varieties for two years revealed following information.

Region	Taluka	Fodder
Western	Abdasa Lakhapat Nakhatrana	1, 4, 2
Central	Bhuj Mandvi Mundra Anjar	5, 4, 2

All these varieties have been noted drought tolerant in nature.

Recommendation :

Local Variety No. 2, 4 and 5 be used in Demonstration Trials.

## Castor (Aeranda)

Year	Sowing Time	Abdasa	Nakhatrana	Pachchham	Mandvi
2008	Timely Sown				Mandvi
2008	Late Sown	Kala Talav	Vang		
2009	Timely Sown		Vang (MK)		
2009	Late Sown			Tuga (HK)	
Best Performing Cultivar for Grain in Decending order		4	1	5	4
		2	2	4	2
		1	4	2	1
		5	5	1	5



## **Partners Conducted Evaluation Trials and Demonstration Trials :**

- Bhachau Taluka Setus, Samakhiyali
- Vivekanand Research and Training Institute, Mandvi
- Vivekanand Research and Training Institute, Naliya
- Youth For Unity and Voluntary Action, Rapar
- Ujjas Mahila Vikas Sangathan, Mundra
- Sahiyare Jo Sangathan, Nakhatrana
- Cohesion Foundation, Rapar
- Adesar Setu, Adesar
- Pachham Setus, Pachchham
- Bhuj Taluka Setus, Boladi & Kodki
- Shrujan, Bhujodi
- Kutch Fruit, Fodder and Forest Development Trust, Bhuj
- KVK, Mundra

### **Guidance :**

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