

## Capacity Development: Field day report

**Activity title:** Promoting cactus (*Opuntia ficus-indica*) as drought resilient feed resource under different agro-ecological production systems across India. Project 3: sub project 2

**Action site:** Bhuj, Gujarat (India)

**Sub activity:** Introduction of Cactus (*Opuntia ficus-indica*) as a multi-purpose

**Source of funding:** ICAR – W3/Bilateral

**Activity leader:** Dr. Mounir Louhaichi

**IGFRI focal Point:** Dr. Devi Dayal

**Key national partner:** Central Arid Zone Research Institute ( CAZRI), Regional Research Station Kukma, , Bhuj, Gujarat

**Objective:** Increase cactus awareness, dissemination and adoption for improved drought resilience, and to enhance capacity building of all partners.

**Target audience:** Smallholder farmers, livestock keepers and extension agents

**Activity mapped to CRP:** CGIAR Research Program on Livestock

**Lead Center:** International Center for Agricultural Research in the Dry Areas (ICARDA)

**Flagship:** Feed and Forage

## Field day agenda

**Date : 29 August 2018**

**Location : Village Sangamner, Taluqa- Bhachau, Gujarat, India**

10:30 AM to 11:00 AM	<b>Welcome and Introduction</b>  Mr. Sachin Patel
11:00 AM to 11:30 AM	<b>Cactus plantation and use</b>  Dr. Ramniwas KVK  Dr. Devi Dayal
11:30 AM to 12:30 PM	Cactus video-films showing
12:30 PM to 01:00 AM	<b>Discussion</b>  Discussion about the importance of cactus, practices in cactus plantations, cactus use as a feed crop, cactus as a tool to generate income. Discussion with Farmers Dr. Devi Dayal
01:00 PM to 1:30 AM	<b>Lunch</b>

## Minutes

CAZRI organized a Cactus Field Day on 29.08.2018 at Village- Sangamner, Taluqa- Bhachau, Gujarat where about 76 farmers including 23 women and 53 male, who are interested to grow Cactus on their farm as fodder crop, participated in the meeting. Sh. Naveen Bhai Chhabaiya, Deputy Sarpanch was the Chief Guest of the function and Sh. Mohan Bhai Chhabaiya, Samaj Pramukh was the Guest of Honour. Mr. Sachin Patel, Project Associate, CAZRI welcomed the Chief Guest and the farmers. Dr. Ramniwas KVK, CAZRI elaborated the importance of Cactus as fodder crop for Kachchh region. He also told that this Cactus is a multipurpose plant; besides fodder crop, it has many uses as fruit crop, vegetable crop and as medicinal crop. It is a drought tolerant plant and has a better Water Use Efficiency than any other conventional drought tolerant fodder crops, i.e. to produce 1 kg dry matter; it needs 267 kg of water against 400 kg water required for pearl millet and 1000 kg water required for Lucerne. This Cactus is very easy to establish in arid conditions and is highly palatable and digestible for animals. It also helps in soil and water conservation.

Dr Devi Dayal, Head, CAZRI in detail discussion told that this cactus can be planted on even highly degraded soil with very less amount of water. Cactus can be harvested very easily as fodder by breaking its cladode from stem. After chopping the cladode, mix small pieces with some dry fodder like wheat, pearl millet or sorghum straw (1:3) for feeding. About 10-15 kg chopped thorn less cactus may be fed to one cow/buffalo per day. It can be also fed to sheep, goat and camel. This fodder has very high amount of carbohydrate, mineral and water, but is deficient in protein. Therefore, protein supplement is required with cactus feeding. As the growth of cactus is very high during February to June, its green fodder is available when there is acute shortage of the green fodder during summer season. A total of 64 accessions of the cactus are being maintained and evaluated at CAZRI. Out of these, based on growth and yield of green-fodder in dry climate of Kachchh, 5 accessions are being given to farmers for demonstration as fodder crop. Three video-films showing cactus cultivation, its harvesting/chopping and how to feed animal was shown to the farmers.

The question-answer session was also organized. The farmers asked following questions:

1. When the cactus should be planted?

Ans. Feb.-March and Sept-Oct. are the best time for cactus plantation in Kachchh region.

2. What should be spacing for planting cactus as fodder crop?

Ans. A spacing of 2x2m or 3x 1.50 m may be adopted for better fodder yield.

3. Can cactus be fed to buffalo?

Ans. Yes. It can be fed to buffalo as well.

4. How much green fodder can be obtained from one ha plantation?

Ans. As per our results, after one year plantation, about 20-30 t green fodder per ha can be obtained.

5. Can it be planted in any type of soil?

Ans. The soils having water stagnation are not suitable for cactus plantation.

6. How much green cactus can be fed to cow?

Sh. Mohan Bhai Chhabaiya, Samaj-Pramukh, emphasized on to take maximum benefit of this Cactus crop as fodder in the Kutch region, and the meeting was concluded.



A). Farmers meeting on cactus field day





B). Head, CAZRI addressing the farmers



C). Showing video-film on cactus feeding

## Authors

Dr. Devi Dayal CAZRI

Collaborator Scientists:

Dr. Mounir Louhaichi ( ICARDA)

Dr. Sawsan Hassan (ICARDA)

Personal information including Name, Phone number, Business Title, Email, Images and GPS points included in this report have been authorized in writing or verbally by the data subject.



**Promoting cactus (*Opuntia ficus-indica*) as drought resilient feed resource under different agro-ecological production systems across India**

**Bhuj August 29<sup>th</sup> 2018**

**Participants list**

Sr. No.	Farmers Name & Address	Mobile No.	Sign.
1)	સગીન મનુજ રાગીન નેર	૯૮૦૮૪૮૦૩૯૭	સગીન મનુજ
2	ગિરિજા બાલભાઈ વઢી રાગીન નેર.	૯૫૬૪૪૩૬૪૬૩	ગિરિજા
3	ફેલિપ્પા ફિરફ અંબા સુમી રાગીન નેર	૯૮૦૪૩૫૨૭૭૨	ફેલિપ્પા
4	સિદ્ધાંત રામજી રાગીન નેર		સિદ્ધાંત રામજી
5	ગેરીયાલ સુભાષ રાગીન નેર	૯૪૨૬૪૫૨૭૭૫	ગેરીયાલ
6	રમણભાઈ સુભાષભાઈ રામજી	૯૭૨૫૩૮૦૨૦	રમણભાઈ
7	સુભાષ ભાઈ રામજી રાગીન નેર.	૯૮૭૮૩૪૩૮૨	સુભાષ
8	મલ્લિક મલ્લિક	૯૮૭૭૮૭૭૭	મલ્લિક
9	પરશંત નાથ રાગીન નેર	૯૭૮૨૭૩૮૭૩	પરશંત નાથ
10	Heardhik. P. Sengamner	9571801532	Heardhik
11	nohembhui. D. Sengamner.	9427121583	nohembhui
12	સુભાષભાઈ સુભાષભાઈ ગિરિજા	9825951341	સુભાષભાઈ
13	પરશંત નાથભાઈ ભાઈભાઈ	9825951341	પરશંત નાથ
14	બી.મ.પી. માર્ગ સુમી	૯૮૨૫૬૬૦૩૫	B.M.P
15	ભાઈભાઈ ભાઈભાઈ રાગીન નેર.	૯૮૨૫૬૬૦૩૫	ભાઈભાઈ





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Sr.No.	Farmers Name & Address	Mobile No.	Sign
16	ભારતભાઈ બાબુભાઈ દેવભાઈ સોગમોર	8154013310	
17	સુમોદભાઈ બાબુભાઈ દેવભાઈ સોગમોર 2	9426141417	સુમોદભાઈ
18	દેવજીભાઈ	88 93 73 73 73 73	દેવજીભાઈ
19	રમણભાઈ સમીભાઈ લિંબડાઈ	98242 59592	સમીભાઈ લિંબડાઈ
20	સમીભાઈ સમીભાઈ લિંબડાઈ		સમીભાઈ લિંબડાઈ
21	સમીભાઈ સમીભાઈ લિંબડાઈ		સમીભાઈ લિંબડાઈ
22	ગવરીભાઈ દરભાઈ દાભાઈ	893 88 88 88 88	ગવરીભાઈ દરભાઈ
23	ઉમીભાઈ દરભાઈ લિંબડાઈ	880 88 88 88 88	U.I.P.
24	મગીભાઈ સમીભાઈ	883 88 88 88 88	મગીભાઈ
25	સમીભાઈ દરભાઈ		સમીભાઈ
26	સમીભાઈ દરભાઈ		સમીભાઈ
27	સમીભાઈ દરભાઈ		સમીભાઈ
28	સમીભાઈ દરભાઈ		સમીભાઈ
29	સમીભાઈ દરભાઈ		સમીભાઈ
30	સમીભાઈ દરભાઈ		J.R. Dhok



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31	સુપ્રસા જોગ અંબેશભાઈ ધોલુ Sargamner	9723457698	P.S. Chalku
32	રસીલા જોગ જગદીશભાઈ	9723457698	અમર. જી
33	જોશના જોગ પાંડિતભાઈ		જી. પ.
34	ભુમિકા જોગ પરેશભાઈ	90668 14225	B.P. P
35	વિમળા જોગ હરીભાઈ		વિમળા જોગ
36	જગદીશ ભીમજી દેસાઈ	9723457698	જગદીશ
37	ડીનાલાલ વાલજી દોશી	9723457698	R.V. P
38	ભીમજી દેવદાસજી રોળ	9586755488	ભીમજી રોળ
39	પરેશ પ્રદીપભાઈ દેવરાજભાઈ	9723457698	પરેશ
40	ખીમાડગી ભુમિકાજોગ કે.		Kh. Bh.
41	ચંચાળજોગ બાબુભાઈ દિવાડની		C. B. D
42	પરેશ દેવરાજભાઈ માવજી ભા. ર		પરેશ દેવરાજભાઈ
43	રવિ. જી. નાઈ	9723457698	રવિજીભાઈ
44	જડુજોગ વેંતીભાઈ		જડુજોગ, જી.
45	સવીતાજોગ દેવજીભાઈ		સવીતાજોગ





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46	મીનાબેન ધોરભાઈ		મીનાબેન S
47	કલ્પનાબેન ડીશીશભાઈ.		કલ્પનાબેન ડીશીશ
48	અશોકકાપાલાલ	૯૫૮૮૮૮૮૮૮૮૮૮૮૮	અશોકકાપાલ
49	રાજેશ કીર્તીભાઈ ધોળુ.	9824123430	Rajesh
50	સુદામા દેસરાજ પટેલ - દેસાઈ ભરત કાપાભાઈ	૯૭૨૭૫૩૩૮૨૨	દેસાઈ ભરત કાપા
51	દેસાઈ પ્રમીલ કાપાભાઈ	૯૪૨૭૫૪૪૨૭	Prm
52	નાકાભાઈ મયુર શેખે	9638040141	Mayur
53	લિખાબાઈ અંકેશ શાહ	9099320113	Likha
54	શામલાઈ મંયન શેખે	866282816	Shamla
55	ભોખાભાઈ મયુર જે	8128179783	Boh
56	શામલાઈ શાહ	9574098745	Shamla
57	પાડાઈ અંકેશ શેખે	9624195597	Padai
58	દોળુ અંકેશ કે	9723451694	Dolu
59	દરિયાલ ભાલજી ભાઈ	૯૫૩૭૩૮૮૮૮૮૮૮૮૮	Deriyal
60	મનસુખભાઈ કાપાભાઈ પટેલ	EE282CC958	Man



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61	પટેલ કૌશિક નવીનભાઈ	9998931354	
62	સિંઘાણી ચિંતાન પિનીદભાઈ	9687484331	
63	બાઈલીય દિપેશ દેવભાઈ	9874573373	
64	પટેલ રાજ પ્રવીણભાઈ	9879296742	
65	દોડી કમલ મણભાઈ	9537394999	
66	સુરેશ કુમાર	756772072	
67	અરવિન્દ સિંઘે તેતરવાલ	9924990645	
68	સીતારામ જાડ	9413267809	
69	વિપિન રાજ	9649660673	
70	રામનિવાસ	9558559418	
71	અશોક કુમાર મીના	7802048565	
72	મીરાં ભરત વૈશ્ણવ	9879245229	
73	સાહી મુસ્તાફ રીસ	6351872468	
74	અખ્તાર ની. ખાલોય	9978862175	
75	સાહી ન સાલ ભલે	9998007763	



