

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	Welcome and Introduction Mr. Sachin Patel
11:00 AM to 11:30 AM	Cactus plantation and use Dr. Ramniwas KVK Dr. Devi Dayal
11:30 AM to 12:30 PM	Cactus video-films showing
12:30 PM to 01:00 AM	Discussion 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	Lunch

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?

Ans. About 10-15 kg green cactus per day can be fed to an adult cow.

Sh. Naveen Bhai Chhabaiya, Deputy-Sarpanch, told that this Cactus may become a “wonder plant” in future for Kachchh region as it is used as fruit, fodder, vegetable and medicinal purposes.

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.



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Bhuj August 29th 2018

Participants list

Sr. No.	Farmers Name & Address	Mobile No.	Sign.
1)	કચ્છના મનુજ રાજાનગર	૯૮૦૬૪૬૦૩૯૯	કચ્છના મનુજ
૨	ભાંગેલા બાલભાઈ વઘુ રાજાનગર.	૯૫૬૪૪૩૬૪૬૩	ભાંગેલા
૩	પેલેખુભાઈ રાજા રાજાનગર	૯૯૦૪૩૫૨૭૭૨	પેલેખુ
૪	સાગીયા રાજા રાજાનગર		સાગીયા રાજા
૫	ગોળાલાલ રાજા રાજાનગર	૯૪૨૬૪૫૨૭૭૫	ગોળાલાલ
૬	રાજાભાઈ રાજાનગર	૯૭૨૫૩૬૦૦૦	રાજાભાઈ
૭	ભાંગેલા વઘુ રાજાનગર.	૯૯૭૬૩૭૩૭૨	ભાંગેલા
૮	રાજાભાઈ રાજા	૯૯૭૬૬૬ ૭૯૫૬૪	રાજાભાઈ
૯	પરજીતભાઈ રાજા	૯૭૨૬૩૬૭૩	પરજીતભાઈ
૧૦	Hershih. P. Sengamner	9574801532	Hershih.
11	nohembhui. D. Sengamner.	9427121583	nohembhui.
12	રાજાભાઈ રાજાનગર રાજા	9825951341	રાજા. S. રાજા
13	વઘુલાલ રાજાનગર રાજા	9922026478	વઘુલાલ
14	ભાંગેલા મનુજ રાજા	૯૯૨૫૬૬૫૦૩૫	B.M.P
15	ભાંગેલા રાજાનગર રાજા	૯૯૨૫૬૬૫૦૩૫	ભાંગેલા



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16	ભારતભાઈ બાલુભાઈ દેસાઈ સોમનગર	8154013310	
17	સુમીરભાઈ બાલુભાઈ દેસાઈ સંમનગર 2	9426141417	સુમીર દેસાઈ
18	દેવજીભાઈ	9993 ૯૩ ૯૩ ૯૩ ૯૩	
19	રમલાબેન સમલાભાઈ તિલકાઈ	98242 59592	સમલાબેન તિલકાઈ
20	સમલાબેન સમલાભાઈ ભોજાઈ		સમલાબેન ભોજાઈ
21	રમલાબેન ભુલશાહભાઈ તિલકાઈ		Reemilaben
22	ગવરીબેન દર્શીભાઈ દાભાઈ	993 ૯૯૯૯૯૯	ગવરીબેન દર્શીભાઈ
23	ઉર્ષાબેન ધર્મશાહભાઈ તિલકાઈ	9805439949	U.I.P.
24	મગુલાબેન હમીશભાઈ	9239520920	મગુલાબેન
25	રમલાબેન હાગભાઈ		રમલાબેન
26	લલાબેન હાપાભાઈ		લલાબેન
27	બુઝાબેન શશવંતભાઈ		બુઝાબેન
28	મગુલાબેન સમલાભાઈ		મગુલાબેન
29	ઉર્ષાબેન પ્રવિણભાઈ		U.I.P.
30	મગુલાબેન શર્માભાઈ		J.R. Dhote



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Sr. No.	Farmer's Name & Address	Mobile No.	Sign
31	સાચીલાલે બંધારાલાલ ઘાટ સાંગમર	9793467698	P.S. Chalu
32	રસીલાલે જગદીશભાઈ	6693665592	અમર.જી
33	જોશનાલે પાલિકાભાઈ	11	જી. પ.
34	ભુમિકાલે પરેશભાઈ	6066874895	B.P.P
35	વિમલાલે હરીભાઈ	11	વિમલાલે
36	જગદીશભાઈ ભીમજી દેસાઈ	66-236-65592	જગદીશભાઈ
37	ડીનમલાલ વાલજી ઘોષ	682399090	R.V.P.P.
38	ભીમલાલ દેવપ્રદેશભાઈ રોય	9586755488	ભીમલાલ
39	પરેશ પ્રદેશભાઈ દેવપ્રદેશભાઈ	66-913-23952	પરેશભાઈ
40	બીમાડની ભુમિકાલે ક.	11	kh.Bh.
41	સંકલે બાલુભાઈ દિલાસની	11	C.B.D
42	પરેશ દેવપ્રદેશભાઈ માવજી ભા. 2	11	પરેશ દેવપ્રદેશભાઈ
43	રવિ. જી. જાડ	66-980-0099	રવિજીભાઈ
44	જડલે જંગીભાઈ	11	જડલેજી.
45	સવરીલાલે દેવજીભાઈ	11	સવરીલાલે



Science for resilient livelihoods in dry areas

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46	મીનાબેન ધીરુભાઈ		મીનાબેન S
47	કલ્પનાબેન ડાહ્યાભાઈ		કલ્પનાબેન ડાહ્યા
48	અશોક ડાહ્યાભાઈ	૯૫૮૯૭૮૯૭૦૦	અશોક
49	રાજેશ કોળીભાઈ ધાણુ	9824123430	Rajesh
50	સુરેશ દેવરામ પટેલ - દેવરામ ભાઈ ડાહ્યાભાઈ	૯૭૨૭૫૩૩૮૨૨	દેવરામ ડાહ્યા
51	દેવરામ પ્રમોદ ડાહ્યાભાઈ	૯૪૨૭૫૪૪૨૭	Devram
52	નાકાબી મયુર શેખ	9638040141	Mayur
53	લિખાબી અંકેશ શાહ	9099320113	Likha
54	હામીયા મંબળ શેખ	8166252816	Hamia
55	મોખાબી મયુર જે	8128179783	Mohabai
56	હામીયા હાદિક	9574098745	Hamia
57	પાડાર અંકેશ શેખ	9624195597	Padar
58	દોણુ અંબેજી કે	9723451694	Dhanu
59	દરિયાલ ભાલજી ભાઈ	૯૫૩૭૩૮૪૮૫	દરિયાલ શેખ
60	મનસુખ ભાઈ ડાહ્યાભાઈ પટેલ	૯૯૨૪૨૮૯૭૪	મન.સી. પટેલ



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61	पटेल डॉ. कृष्ण नवीनलाल	9998931354	
62	सिंजाणी बिलन विनीतलाल	9687484331	
63	बाहील विमल एम.एम.	9874573373	
64	पटेल शश प्रदीप माधव	9879296742	
65	दीप उम मरुतलाल	9537394999	
66	सुरेश कुमार	756772072	
67	अरविन्द सिंह तैरवाल	9924990645	
68	सीताराम जाट	9413267809	
69	विपिन राज	9649660673	
70	रामनिवास	9558559418	
71	अशोक कुमार मीना	7802048565	
72	श्रीशं ललत वैष्णव	9879245229	
73	साही मुख्तार खान	6351872469	
74	अजयलाल जी. जलोप	9978862175	
75	सतीश न. साह मल्ल	9998007763	

