



**An Exposure Visit to
WADI & HONEY BEE KEEPING PROJECT**

(BAIF- Dhruva Campus, Vasda, Gujarat)

(Under NABARD-Tribal Development Fund, WADI Project)

Organized By



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INTRODUCTION:

As this is the second year of **NABARD-TDF-VRUTTI-WADI Project**, (Currently implemented in 12 villages of Bankhedi block of Hoshangabad district of Madhya Pradesh) in which 200 tribal farmers were selected for wadi (Small orchard) development. During the meeting some of the farmers from new villages asked about the after production activities i.e. marketing, processing, supply chain & other income generation activities which could be taken simultaneously along with WADI. Therefore to win their trust & to build up their confidence, we decided to take them on an exposure visit where these after production activities & income generation activities are carrying out.

After having several discussion with our project team, BAIF Dhruva campus (Vasda, dist. Valsad, Gujarat) was finalized for 2 days exposure visit from 27th August 2013 to 28th August 2013 under wadi project.

OBJECTIVE:

- ✓ To visit existing WADI for winning the trust of tribal farmers & building their confidence.
- ✓ To visit processing, marketing and other after production activities done by wadi villagers.
- ✓ To see the development work could be done with the help of WADI
- ✓ To visit and learn income generation activities started by farmers & self help group.

Participants:

Twenty progressive farmers comprising of male and female from 7 villages were taken for an exposure arranged from 27th August, 2013 to 28th August, 2013. A detailed list is attached in annexure 1.

Observation:

Initially Mr. Sureshbhai (Supervisor, Dhruva campus) explained the wadi model to the participants. He told about the WADI concept and how it came into existence. He told that this concept was the brainchild of Late Mr. Manibahi Desai who was the founder of BAIF. He explained the concept by showing one of model established in campus itself that we had distributed cashew and mango plant to the tribal farmers under wadi project. The purpose of the project



A WADI MODEL

was to provide regular income to the tribal farmer's families, to provide nutritional and health security to the poor farmer and to provide access to the market. To check the migration he also started labour payment to the farmers for the activities like pit digging, planting, staking and hunting, basin formation, watering, mulching etc. done by them in their wadi.

As this area is surrounded by hills therefore farmers were not able to store the water for winter and summer season hence we started soil and water conservation activities like check dam, contour trench, Nala Bunding, Gully Plugging, etc.

Activities we saw there are

Honey Bee Keeping:

Under The Mango Tree is the organization who started Honey Bee keeping project in partnership with BAIF. They started this in 2009 with Tutarkehda village. Earlier there were only 5 farmers but now there are 32 farmers and 55 boxes of honey bee. There we interacted with the farmers who got benefited with this project. 3 bee boxes can be kept in one care of land. One of the farmer Mr. Manibhai who is working as MT (Master Trainer) is having 7 boxes (Max. in his village) with him.

About the Bee Box: Bee box is rectangular in shape and made up of wood. It has 8 wooden frames inside it. Each frame contains 2 wires parallel to the horizontal wall of it. These



Honey Bee Frame

frames are used by bees to prepare the comb. 150-300 gram honey can be collected from an individual frame during the season. It is kept on the wooden floor called **Dharatal**. This box is covered by one wooden cap to protect the bees and their comb from the direct sunlight, wind, rain & natural enemies etc. At the base of the wooden box there is one sieve which has oval shape hole within it, is used by bees to go inside and coming out back. 2-2.5 kg of honey can be collected from one box during the season. Normally honey can be collected

during 3 seasons in a year.

Honey Extractor: One instrument is used for extracting the honey from the bees comb without damaging it called as honey extractor. It is in drum shape made up of iron and has one outlet at its base for collecting the honey in bowl. It also has one handle which is connected with the fan inside it, which is used for blowing the air to extract the honey from the comb. Other



Honey Extractor

instruments used for honey bee keeping are **Bee veil**- to transfer the bees from the natural habitat to the box (In-vivo to In-vitro), **Mouth Protecting Net**- to protect the individual from any damage etc.

After that we went to the field area where these boxes are installed. There we saw filled boxes with bees, their egg and little amount of honey in that. Our farmers were also handled the frame without any fear. Handling the filled frame created a major impact on our farmers. Earlier they were very scared about the honey bee keeping but the moment they handled it they became more confident.



Women Farmer Handling Bee Frame

Boxes were of two types- a) Single Chamber b) Dual Chamber



Dual Chamber Box

Single Chamber Box: it has single chamber for all the activities like honey production, egg laying etc. it is usually in practice.

Dual chamber Box: it has two chambers in which 8-8 frames were kept. Size of the upper chamber frames (Small) very with size of lower chamber frames (Larger). Small frames are used for honey production only.

We were told that much work is not required in honey bee keeping. We have to take care of it at several stages like during the growth & division phase, during honey collection, for regular cleaning, protection from the insect (Ant) and other enemies etc.

Major Benefits

Increase in Yield- As honey bee is the natural pollinator for most of the crop and yield of any crop or produce is depends upon the pollination (transfer of pollen grain to stigma). It has seen that yield of the crop where honey bee boxes are installed has increased by 40 %. In some of the crops like Almond, Cauliflower, Cashew, Onion, Cucumber, Apple, Blueberry etc. 90% -100% pollination is depends upon the honey bee. As told by the WADI farmers earlier they were harvesting cashew worth rupees 10,000 only in a season but after incorporating honey bee boxes in the field they are now able to harvest cashew worth rupees 23,000 in a season.

Effect on Fruit Quality: It was told that quality of the fruits (Size, Appearance etc.) were found good in which pollination is done by honey bee as compared to the other in which pollination is done by other agents.

Honey Collection: The direct benefit from the honey bee keeping is collection of honey from the boxes during the season. One farmer can collect up to 2-3 kg of honey from the single box. Initially yield may be low but it will start increasing gradually. One of the farmers (Mr. Sureshbhai) in Nanikoshwadi village is having 12 boxes in his field and he has collected 21 kg of honey from that.

Wax Collection: Another direct benefit from the honey bee is wax. Wax is prepared by melting the bee comb in hot water. Yield of the wax from single box is 1-2 kg only in a year. As it is prepared by the damaged or insect eaten comb, therefore yield is low.

Honey Bee Box Selling: One can also sell the empty and filled boxes to the other farmers who have not adopted this project. It was seen there that farmers (who also work as carpenter) are selling the boxes at the rate of 1250/box. Mr. Sureshbhai from Nahikoshwadi village had sold bees worth Rs. 3000.

Precautions

1. As bees don't like the any smell (good or bad) therefore we should not go with any smell while taking care of boxes.
2. We should not create any fumes (Chulha or fire) in nearby area where the boxes are installed.
3. We should not wear any black colour dress while taking care of boxes. We should cover our hair also.
4. We should also protect the box and bees from the insect (ants) & other enemies.
5. We should avoid opening of the boxes after 10 AM. Whichever the activity we want to perform we should facilitate it between 7 to 10 AM or during wee hours.

Concept NAHARI (A Restaurant run by SHG Member)

This initiative was taken by SHG female members under WADI-TDF project. Initially they started saving some amount on monthly basis. They started with 100 Rs. They were 10 members in a group. They registered it in 2006 and it is 7th year of their SHG group. They have now saved 80,000 Rs. During the 3rd year they started a local restaurant for the farmers with a concept that they all can have breakfast there before going for



Farmers having Food at NAHARI



Farmers interacting with the NAHARI SHG Member

the work. They serve the indigenous grown food (Nagali, Chawal Chapati) in traditional style. They charge Rs. 60 for each plate. Earlier they started this activity in kaccha house, after running successfully for 2 years BAIF organization prepared a pakka house for them. It has not only created employment opportunity for them but also increases their household income. They distribute profit after deducting all the expenses among the members who have participated in preparing food. All members do not come on same day.

Grafting done by WADI Farmers:

This activity is started by WADI beneficiary's family as an income generation activity. Trainings were given to them on grafting. They started doing this at their field itself. Almost all families are preparing grafted (V-shape) mango saplings. BAIF is buying back these saplings from the farmers and supplying to the new wadi beneficiaries family.



Grafted Mango Saplings Prepared by Farmers

Processing Activities

We have also seen processing unit run by wadi beneficiary families. They are adding value (processing) to mango, cashew, lemon, & other vegetables and preparing pickles, dried cashew, Papad from Nagali, Sharbat from Kokam etc. and selling with the brand name of "VRINDAVAN" from their retail outlet. They have established collection centre at cluster level for collecting and storing the raw produce.



Collection Centre



Processing & Packing centre

We visited one of their processing unit established at BAIF campus where they are processing Cashew, Mango, Lemon, Aonla Kokam etc. & making pickles with different flavours (Sweet & Salt), mango pulp, dried cashew with different flavours (plain salted, dietnut), sharbat (juice) etc. They are also preparing mixed pickles. Packaging is also done there in different size of pack (from travelling to family pack).

They have given training to the local villager (male & female) and now they all are performing processing activity. After deducting all the expenses they distribute profit among their farmer member according to the quantity of the produce given by them for processing.

Group Based Learning Activity:

After the exposure and field visit we did group based activity to know their feedback and learning level. We divided the whole team in different hybrid (Male & Female) groups and some questions were given to them related to the activities they saw during the field and exposure visit. 3 questions were given to each group to write their answers on chart after discussing within the group with the time limit of 40 min.



Farmers doing group based activity

After writing all the answers one of their team member presented their group understanding and other groups were suppose to ask the questions to that particular group.

Results/ Outcomes:

This exposure visit was very good. It has created huge impact on our farmers and their mindset. They were very worried about the after production activities and honey bee keeping but after seeing all these activities they were very confident. They have also seen no. of income generation activities there it has also build their confidence about the employment opportunity they will be getting after few year. Interaction with the women farmer (SHG Member) also made them confident.

Annexure: - 1

Sr. No.	Name	Age	Gender
1	Mr. Baliram Singh	28	Male
2	Ms. Vaijantibai	32	Female
3	Ms. Maltibai	30	Female
4	Mr. Indarsingh	45	Male
5	Ms. Sakunbai	32	Female
6	Ms. Savitabai	30	Female
7	Mr. Kshidamilal	40	Male
8	Mr. Hemraj	32	Male
9	Mr. Veersingh	40	Male
10	Mr. Virendra Singh	42	Female
11	Mr. Bhuralal	45	Male
13	Mr. Jagat Singh	30	Male
13	Mr. Dashrath	35	Male
14	Ms. Shantibai	55	Female
15	Ms. Gangotribai	40	Female
16	Mr. Paras Jain	26	Male
17	Mr. Bholaram	23	Male
18	Mr. Dilip Patel	24	Male
19	Mr. Mahesh Nagar	35	Male
20	Mr. Ramkailash Yadav	40	Male

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