

Spent Malt Based Business Model for Improved Livelihoods for Women in Watersheds



ICRISAT
INTERNATIONAL CROPS RESEARCH
INSTITUTE FOR THE SEMI-ARID TROPICS

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Background

In the semi-arid tropics, it is often noticed that, women dairy farmers are in severe financial stress due to challenges they face in animal care and management, such as: low availability of fodder, poor animal nutrition, and decreased milk productivity. Apart from establishing watersheds, it is also extremely important to provide women farmers with nutritional cattle feed to improve milk yields which would result in income increase and secure livelihoods.

Watershed initiative:

ICRISAT and SABMiller India (SKOL) entered into a Memorandum of Agreement (MoA) in August 2009 for collaborative activities on: rainwater conservation and harvesting, increasing water use efficiency for agricultural production and sustainable development by initiating a watershed project in four villages namely: Fasalvadi, Chakriyal, Venkatakishtapur, and Shivampet. This later expanded to 10 villages in a phased manner.

The overall goal of this initiative was to develop sustainable water resource and management practices in the surrounding areas of the factory while improving the livelihoods of 5754 households with a total population of 30,738.

Promoting rainwater conservation, harvesting structures and building capacity of farmers in the 10 villages has been the primary aim of the initiative.

Balanced nutrient management of soil through the supply of micronutrients as inputs and promotion of kitchen gardens to address the issue of malnutrition in women and children was initiated as part of the project.

After the success of the watershed project, ICRISAT, in consultation with SABMiller and consortium partners, initiated the supply of spent malt from the Charminar Breweries in December 2011 to women Self Help Groups (SHGs). The spent malt was supplied as cattle feed to increase milk yield and fat content, for sale and self-consumption. This initiative as a business model aimed at strengthening livelihood opportunities and financial security of women .



Spent Malt loaded into vans



Spent malt as a supplement

- ◆ Spent malt is a byproduct of the brewing industry, consisting of malt and grain residues containing carbohydrates, proteins and other nutrients.
- ◆ The nutritional value of one Kg spent malt includes: 205 mg of Iron, 2098 mg of Calcium, 1602 mg of Magnesium, 52 mg of Zinc, 248 mg of copper, 30 mg of Manganese, 2655 mg of Sulphur, 671 mg of Sodium, 96 mg of Aluminum, along with 3.64 % of Nitrogen, 0.47% of Phosphorus and 0.16 % of Potassium.
- ◆ Spent malt is considered be a good source of protein, water soluble vitamins and is readily consumed by animals.



SAB Miller to help women in Fasalvadi



The Priyadarshini womens' SHG has undertaken the responsibility of transportation and distribution of spent malt in the village of Fasalvadi. As part of the program, training on care, handling and maintenance of spent malt was given to women SHGs; in addition, beneficiary farmers were trained on precautions to be taken while feeding the animals. This was the first project initiated in the year 2011.

As many as 58 beneficiary farmers, are utilizing spent malt (1440 kg per day) and feeding 395 milch animals.

- ◆ Total milk production in the village is about 1574 liters a day. After using spent malt as animal feed, farmers have observed increased milk production of 1 liter per animal per day with improved fat content.
- ◆ The increased gross income from milk production is ₹ 17,800 a day with a daily net income of ₹ 12,800. In total, there has been an increase in monthly net income of ₹ 3,84,000 in the village, with an average net income of ₹ 6,620 per family.
- ◆ Till November 2016, Priyadarshini women's SHG sold 2484 tons of spent malt making a net profit of ₹ 1,36,199 over a period of 59 months after meeting the expenses of transportation, handling, storage rent and labor charges for distribution .

SABMiller India-ICRISAT Watershed Project


Spent Malt Use for Improving Milk Productivity and Livelihoods

Group: Priyadarshini women SHG

- ◆ Number of beneficiary farmers utilizing the spent malt: 58
- ◆ Spent malt used (1437 Kg/day) to feed 391 milch animals
- ◆ Use of spent malt increased milk production by 1 liter/animal/per day with improved fat content
- ◆ Increased gross income on milk production is about Rs 12565/- per day with a net income of Rs.8973/- per day in the village
- ◆ Village is getting increased net income of Rs.269175 per month with an average net income of Rs.4640/- per family
- ◆ Priyadarshini women's SHG sold 1,57,0318 kg of spent malt making a net profit of Rs.72,014/- during a period of 40 months after meeting the expenses

(Oct 2015)

Project Initiated in Kothapally Village



Fasalvadi farmers had an exposure visit to Adarsha Watershed at Kothapally, during which, farmers from Kothapally came to know about the spent malt initiative and its benefits realized by Fasalvadi women. The women SHGs in Kothapally requested ICRISAT to discuss with SABMiller India and establish a spent malt initiative. Through a cross breeding initiative for animal breed improvement, dairy farmers in Kothapally were already producing 2100 liters with 1900 liters of surplus milk per day. As much as 600 liters a day was supplied to Reliance milk procurement center in Kothapally. In addition private vendors also procured 1000 liters of milk per day.

Tejasri womens' SHG in Adarsha watershed, Kothapally village in Ranga Reddy district initiated the activity on 17 June 2013. They provided 1710.7 tons of spent malt (till October 2016) and earned a net profit of ₹ 2,38,418 over a period of 40 months.


As many as 76 beneficiary farmers are utilizing the spent malt (1400 kg per day) and feeding 336 milch animals.

- ♦ The total milk production in the village is about 2100 liter per day and with use of spent malt as animal feed, farmers have observed increased milk production of 2 liter per animal per day along with improved fat content.
- ♦ The increased gross income on milk production is about ₹ 29,590 a day with a net income of ₹ 24,530 per day in the village. In total, the village is receiving an increased net income of ₹ 7,36,080 per month with an average net income of ₹ 9,685 per family.



Asian Paints Lends a Helping Hand

Asian Paints Limited, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and the Government of Telangana, initiated a project in the year 2014 to improve rural livelihoods through integrated watershed development program in six villages (Bhanur, Kardhnur, Kyasaram, Nandigama, Ghanapur and Pati) of Sangareddy district, Telangana State.



In Bhanur and Kyasaram villages, ICRISAT and SABMiller India along with Rural Education and Agriculture Development (READ), an NGO initiated supply of spent malt as cattle feed from Charminar Breweries to women SHG, to strengthen livelihood opportunities and financial security of women. This has helped dairy farmers to increase milk yield and fat content.

Besides farming, many women actively participate in SHGs in both the villages. The Mrugasira SHG in Bhanur and Sri Bhavani SHG in Kyasaram were capacitated and linked with SABMiller factory to supply spent malt to villagers. The Gram Panchayat's encouragement to such groups has provided them with financial stability and has allowed women to earn extra income for their families.

Increased income for SHGs

Two women SHGs in Bhanur and Kyasaram handling the spent malt as income generating activity

Spent Malt as a micro-enterprise for transforming lives of women from rural livelihoods

Number of beneficiaries, milch animals and increased milk yield from using spent malt in watershed villages of Bhanur and Kyasaram in 2015

Village	Name of SHG group	Beneficiaries using spent malt	Total milch animals	Average milk yield in L/D/ animal before spent malt	Average milk yield in L/D/ animal after spent malt	Milk increase L/D/ animal	Additional income (₹/month)
Bhanur	Mrugasira	37	177	4.5	5.4	1	150000 - 200000
Kyasaram	Sri Bhavani	46	292	3.34	4	1	250000 - 300000

ICRISAT and READ NGO encouraged the two groups from Bhanur and Kyasaram to distribute spent malt to dairy farmers. The spent malt is purchased from the factory at ₹ 1.73 per kg and is sold to the farmer at ₹ 3.50 per kg. The net income generated is between ₹ 6000 - ₹ 7000 for the member undertaking the activity. The member contributes ₹ 500 per month to the group while the other members contribute ₹ 100 per month to the group savings. Similar activities have been initiated in Nandigama village by Nandi group SHG targeting 20 beneficiary farmers with 250 kg per day of spent malt feeding 90 milch animals.

The activity has enabled women in these areas to find alternate source of livelihood and reduced dependency on agricultural activities for their income. The increased income for the family has helped them to educate their children and to cover basic costs like medical, tuition and better their standards of living.

Success Stories

Increased milk production due to spent malt helping women farmers cope up with uncertainties



Yadamma has earned extra income from the sale of spent malt to 59 farmers in Fasalvadi village in Sangareddy district


Dairy farmers in Fasalvadi village, Sangareddy District, Telangana State, were requesting the project staff to provide spent malt from the factory. As a consequence, A Yadamma from Priyadarshini Self Help Group was contacted. The project staff decided to promote a business model for the women SHG not only to increase their income, but also to sustain the initiative after the completion of the project. Therefore, in 2011 ICRISAT staff, SABMiller India and Rural Education and Agriculture Development (READ) initiated supply of spent malt from the Charminar Breweries through the SHG. The move gave Yadamma an opportunity to increase her monthly income and has also helped 59 farmers in her village to gain extra income through increased milk productivity.

She currently supplies 3 tons of spent malt every two days to 59 farmers, who come to her doorstep to collect the fresh malt. The business has been receiving positive response as she does not need to travel long distances to collect the malt. She buys the malt at ₹ 1.75 per kg and sells it at ₹ 2.50 per kg. By the end of the month, she earns an extra income of ₹ 11,000 excluding her contribution of ₹ 1000 towards the SHG group.



Yadamma's husband has also used the spent malt to feed buffaloes and has doubled his net additional income in the process

Her husband, A Mallaiah, who depends primarily on rainfed agriculture has also benefitted from the business. His income and milk yields have increased as a result of feeding the malt to six milk yielding buffaloes of which four are Murrah buffaloes and two are local breed buffaloes. He now earns a net additional income in the range of ₹ 10,575 to 22,575/month.



Farmer Name: A Mallaiah
Number of Buffaloes owned: 15
Number of Milking Buffaloes: 6
Amount of malt purchased: 50 kg per day
Expenses incurred: ₹2625 per month
Milk yield before malt for Murrah breed: 24 liters per day
Milk yield after malt: 32 liters per day
Milk yield before malt for local breed: 5 liters per day
Milk yield after malt for local breed: 8 liters per day
Selling price of milk: ₹40-50 per liter
Net additional income per month: ₹10,575-22,575 per month

In the same village, P Mallaiah who is the committee member of the local watershed project, has also been benefitted by the use of malt on two Murrah and three local milking buffaloes he owns. The benefits he receives are as follows:



Farmer Name: P Mallaiah
Number of Buffaloes owned:10
Number of Milking Buffaloes:5
Amount of malt purchased: 20 kg per day
Expenses incurred: ₹1500 per month
Milk yield before malt for Murrah breed: 12 liters per day
Milk yield after malt: 14 liters per day
Milk yield before malt for local breed: 6 liters per day
Milk yield after malt for local breed: 9 liters per day
Selling price of milk: ₹40-50 per liter
Net additional income per month: ₹4700-11400 permonth

Spent malt provides added benefits to over 70 farmers in Kothapally village



Spent malt business for Anusuja has helped her earn extra income and has benefitted more than 70 farmers in Kothapally village

Anusuja runs Tejashri SHG in Kothapally village. The introduction of spent malt business two years ago by ICRISAT staff, SABMiller India and the NGO, Rural Education and Agriculture Development (READ) has been extremely beneficial to Anusuja and as many as 70 farmers and their families in the village.

Anusuja buys 2 tons of malt a day and spends as much as ₹ 2,500 on transportation charges. After buying the malt at ₹ 1.73 per kg, she sells the product at ₹ 3 per kg to farmers who line up outside her house in the early hours. At the end of the month, through her effort, she manages to gain an income of ₹ 10,000 per month and contributes ₹ 1000 towards the group finances.

More than 70 farmers have received immense benefits after using the malt and the increase in milk yield per animal has ranged from 1 liter a day to 3 liters a day depending on the amount of malt fed to the animal. In total, the village has received increased net income of ₹ 7,36,080 per month with an average net income of ₹ 9,685 per family.



Transforming a change in Self Help Groups with spent malt

For Sunitha M, from Bhanur village in Sangareddy district, Telangana, life has taken a positive turn after the SHG she heads managed to initiate the supply of spent malt. The malt is a special feed used for cattle to help increase milk productivity. Due to the constant support from ICRISAT, Asian Paints and READ NGO in the year 2014, Sunitha who heads Mrugasira SHG, currently supplies three tons of spent malt per day to 37 farmers, who come to her doorstep to collect fresh malt.

Sunitha's family has five members and her husband practices agriculture. Due to the dependence on rainfed agriculture which could sometime lead to losses, motivated Sunitha to take up the spent malt initiative to earn extra income for her family. Sunitha also needs to support her daughter's medical expenses as she has been crippled with polio from tender age.





Sunitha says that average milk production in the village has increased from 5 liters per animal before the intervention to about 6.5 liters per animal after the intervention. She buys the malt from the factory at ₹ 1.73 per kg and sells it to the farmers at 3.50 per kg. She adds ₹ 500 per month to the group expenses while the other group members add ₹ 100 per month. Sunitha now makes an extra income of ₹ 6000-7000 on an average per month. She says that if more farmers buy from her, then her income would increase and she could contribute more towards group expenses.

In the initial stages, it took great efforts for Sunitha to earn any money and she would make losses of about ₹ 2000-3000 in the first month. It also took immense patience and persistence from her to convince farmers about the benefits of spent malt. Only after constant backing from Asian Paints, ICRISAT and READ NGO and after several meetings with the sarpanch, farmers were slowly convinced about the benefits of using the new cattle feed .

Sunitha's efforts have paid off as spent malt use, has increased milk production by 1.5litres per animal per day



The only problem Sunitha faces is with the demand increase. She says that farmers are requesting for more malt to be supplied and she requests the factory to increase the malt supply.

Also for Uma, from Kyasaram village situated close to Bhanur, the SHG Sree Bhavani group has seen immense success with the sale of spent malt and 47 farmers have benefitted from the malt, with average milk productivity increasing by 1 to 1.5 liters per animal.



Conclusion

- ◆ As part of the spent malt distribution chain, more than 200 farmers have benefited from malt as cattle feed which has increased the average range of milk yield by 1-1.5 liter per animal along with increased fat content.
- ◆ In Fasalvadi village, an additional average net income of ₹ 0.32 million per month has been added to the village economy.
- ◆ In Kothapally village an additional average net income of around ₹ 0.736 million per month has been added to the village economy.
- ◆ Additional average net income of ₹ 0.36 million per month in Kyasaram and ₹ 0.215 million in Bhanur is added to the village economy.
- ◆ Increased self-esteem of women is observed in all four villages through this business model to supply spent malt.
- ◆ On an average families having milch animals increased their net income by ₹ 6600 per month.
- ◆ Through this initiative village economy is boosted by adding ₹ 2.58 million to ₹ 8.8 million a year. It is a winning proposition for all stake holders. It has not only economically empowered women but also enhanced their social status, self-esteem and entrepreneurial skills to improve their livelihood.



Way forward

- ◆ To improve and increase supply of spent malt to target villages on a more regular basis as the demand increases.
- ◆ To further increase the number of beneficiaries by showcasing the benefits of the malt.
- ◆ To target more villages surrounding the SABMiller factory.
- ◆ To setup more women empowered SHGs to improve livelihoods of women in rural areas.
- ◆ To reduce cost of transporting malt to help increase profits to SHGs.

Summary

It is often noticed that dairy farmers are under severe financial stress due to poor animal nutrition, decreased milk productivity and low availability of fodder. After observing these factors, ICRISAT, in consultation with SABMiller and consortium partners, has initiated supply of spent malt from the Charminar Breweries in December 2011 to farmers from Fasalvadi village to strengthen livelihood opportunities and financial security of women Self Help Groups (SHGs).

After the huge success of the Adarsha watershed project in Kothapally village, it was decided to initiate the supply of spent malt to SHGs in Kothapally village and increase benefits of dairy farmers in the village.

After the success of the malt based business in both these villages, Asian Paints, ICRISAT and SABMiller India along with the NGO Rural Education and Agriculture Development (READ) has initiated supply of spent malt from the Charminar Breweries to villagers with the aim of strengthening livelihood opportunities and financial security of women SHGs in Bhanur and Kyasaram villages.

As part of the spent malt distribution chain, more than 200 farmers have benefited from the supply of the malt and the average range of milk yield has increased by 1-1.5 liter per animal along with increased fat content, depending on the quantity of malt fed.

An additional average net income in the range of ₹ 0.215 million to ₹ 0.73 million per month has been added to the economy of these villages due to use of spent malt and increased milk yields.

*For further details,
please contact*

Research Program Director, Asia
E-mail: s.wani@cgiar.org
Ph: 040 3071 3466
ICRISAT, Patancheru-502 324
www.icrisat.org