

The Dairy Intervention in Jharkhand

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With Financial Support from an UN development agency in the year 2003, Gram Nidhi, a livelihood promotion Institution, undertook a study in the state of Jharkhand and identified Dairy as one of the potential sub-sectors which, if developed, could promote a large number of rural livelihoods there. The key constraint identified during the study was the high cost of production of milk and consequent low profit margin per litre of milk produced. As a result, despite high demand for milk and milk products, Jharkhand farmers were reluctant to take up dairy as an income generating activity.

The study revealed that low animal productivity was one of the major problem the farmers of Jharkhand are facing. Average yield per animal in the state was 0.49 litres per day, whereas the national average was 2.78 lpd. Per capita milk availability in Jharkhand was only 50 gms against the recommended requirement of 220 gms per capita. Thus Jharkhand lagged far behind in the dairy sub-sector despite having high market potential. The factors responsible included: poor genetic potential of milk yield of the available breeds; limited availability of fodder due to lack of irrigation facilities in the state; poor/missing infrastructure and support system. Except in a few pockets, individual milk producers reached only a limited portion of the market, since there were no functioning milk cooperatives and established milk routes. Farmers had received no proper training in entrepreneurial skills in general and knowledge about dairy in particular. The effective available credit from banks was extremely limited. The result of all these factors was the high cost of production of milk, which came to as much as Rs7-7.25 /litre.

The State Dairy (COMFED popularly know by its brand name SUDHA) paid Rs.9.50-10.50, based on fat and SNF content/kg for cow milk. SUDHA is the largest Dairy in Jharkhand, selling more than 60 thousand litres of milk per day to meet the local demand in and around Ranchi. Data from SUDHA Dairy showed that, due to the undeveloped dairy sector in Jharkhand, they were not able to procure more than 6,000-9, 000 liters of milk from Jharkhand. They met the shortfall in demand by procuring milk from milk surplus states like Bihar, Orissa and Anand, the milk centre in Gujarat.

Under the same UN project, based on the study Gram Nidhi undertook an action research project to develop a model for possible intervention in the Dairy SubSector for promoting livelihoods in Jharkhand. The project was for 12 months with manpower and project costs of Rs.15 lakhs, with the possibility for arranging further funding from the same donor or new donors.

The Project Manager of Jharkhand, Sanjay Sinha placed Rohit Kumar a young, energetic graduate from a premier management Institute based in Bhopal, as leader of the dairy action research in Ranchi and the work started in January 2004.

Designing the intervention

Gram Nidhi, with its experience in dairy sector, planned an interven in this sector in Jharkhand the way it had done in Andhra Pradesh. In AP Gram Nidhi has already collaborated with APDDCF as a channel for marketing where as the Input support in the form of credit and technical support to the farmers were provided by Gram Nidhi. After three long years of continuous work with the farmers in AP Gram Nidhi came up with a model that could be

replicated elsewhere for promoting a large number of sustainable livelihoods and at the same time can generate revenue.

Rohit initiated dialogues with SUDHA Dairy (The State dairy cooperative federation), which promoted the AMUL pattern of cooperatives, for the purpose of marketing and they agreed to be a partner in marketing support. They proposed to intervene in Mandar and Burmu blocks where they had their coverage. After quite a number of visits to the villages, the Gram Nidhi team found that taking dairy as a source of livelihood was not a viable option for farmers as the costs of inputs were too high to make the activity profitable. Those practicing dairy were of the opinion that dairy was not contributing to their livelihood but rather it was only pleasure and religious faith that pushed them to keep at least one milch animal at their place, besides meeting their household requirements at the most at certain months of the year. The scenario was such that someone who had taken dairy on a large scale was even planning to downscale the activity, as it was not remunerative at all.

While designing the dairy intervention in Jharkhand, Gram Nidhi concluded there were only two available options: either reduce cost of production of milk or increase price realized /litre of milk. Increasing price in this model was not possible as SUDHA Dairy was paying the national rate; moreover, Jharkhand was one among several states where price was kept high compared to some other states. The other option, i.e. cost reduction in the form of fodder cultivation, etc., could be taken up but they soon realized that for this, a scale was required which could be attained only if there were cattle induction on a large scale. But the question remained - why would a farmer opt for dairy if it were not remunerative? On the whole, on one side, dairy was a sector where market was not a problem, production was a problem, and hence a large number of sustainable livelihoods could be promoted due to this wide gap between demand and supply. On the other side, people did not take up dairy, as it was not remunerative for them at all. Designing a model which could bring down this gap was the challenge for Gram Nidhi .

During this point some trainees from XISS, Ranchi, did a market survey where they studied the consumers' preferences for different types of milk. They found that the home segment had a strong preference for farm-fresh cow milk compared to pouched milk supplied by SUDHA. Although they were getting adulterated milk from *khatahs*, they were buying it as they had no other option. For pure farm fresh milk they were ready to pay a higher price.

This study gave a spin to the entire action research: The action research team felt that the farmers could be offered a better price if they were directly linked with the home segment and this way it will be remunerative for the farmers to take up Dairy in a big way. To promote a large number of sustainable livelihoods in Jharkhand through dairy, it was very important to show the farmers that dairy was a remunerative business. For this, it was necessary to offer them a better price, which would have a demonstration effect: more farmers would come in, which would help in up-scaling, and then working on inputs would be possible. Based on this assumption, the team felt that Gram Nidhi could handhold the villagers to form a cooperative and help them establish a market channel for farm-fresh milk.

Identification of potential dairy clusters and selection of villages

This was a question of selling farm-fresh milk, and since milk had a very short shelf life, the preference was for the selection of villages close to the city (Market). To fulfill this criterion

three dairy clusters were identified – Kanke, Ormanjhi and Aero drum area, all close to the main city. Ormanjhi was rejected for the action research being the farthest among the three potential clusters. Aero drum area was a good dairy cluster but was too close to the city and the farmers could manage their sales in the city on their own. Finally, Kanke comprising three potential dairy villages, namely Boreya, Hochar and Sukurhuttu, was selected.

Once the cluster was selected, the next question was which village? Preliminary visits were made in all the three villages. Among those, Sukurhuttu was not given priority, as it was having relatively less potential. Hochar was very good in terms of average daily milk production, but SUDHA Dairy was already operating there. Some private dairies had already cheated dairy farmers of Hochar, so there was a lot of resistance on the part of the villagers to go for this new concept of Gram Nidhi. It was not possible to work there at this point. Boreya was finally selected for reasons like good connectivity by road, interest of farmers and a fairly good production of milk (though not as high as Hochar).

Introduction to the village: Boreya

Village Boreya is around 15 km from Ranchi city, well connected by road to the main town. It was a big village with two main hamlets, namely Boreya and Arsandey. The village had around 480 households, 40% belonging to the tribals, followed by *Sahus*, *Tiwaris*, Muslims and then *Mahtos*. Other groups, like *Nayak* and *Kesari*, accounted for a very small number. The average family size ranged from 4-6 members. The village was quite well off, both in material and non-material parameters. Literacy level was quite good but higher education had been pursued by only a small number as people go for employment at a very early age. The majority of the houses were pucca; the earthen houses that existed belonged to tribal families and some other deprived sections. However, land holding is pretty good. Since agriculture was rain fed, paddy was mainly grown in the kharif season; in the Rabi season, the main crop was vegetable, which is sold in the nearby markets.

Talking about the occupation status in the village nearly 65% of the people belonged to the service class. Workers were mostly working with BAU(Birsha Agriculture University), Ranchi Veterinary college (RVC), Bacon factory and government offices. Dairy was not the primary activity, though a few households had taken it on a large scale. However as per the estimation, nearly 30% of the households had dairy as the secondary source of income.

Caste dynamics played an important role in the village. Although the tribal population was the highest in this village , it was the *Tiwari*(A Brahmin Caste) who ruled the village, followed by the *Sahus*. The tribal, *Nayak*, Muslim and *Kesari* communities had no say in the decision making of the village. The village activities were basically governed by village politics dominated by the upper caste .

Project Implementation

Concept sharing with the villagers: Once Boreya was selected as the village for intervention; some resource persons were identified and approached at the first level. As the response was positive, Rohitr and his team conducted a series of meetings in which farmers seemed to agree with the concept and formed a male co-operative. But it was an institution by name only. The producers were ready to sell their milk through the institution but not ready to

invest time and effort in it. The institution was formed but it was found that it completely lacked the spirit of co-operation essential for its growth and sustenance. While working with the male cooperative in Boriya, Gram Nidhi team discovered that some women's SHGs existed there. That available platform was approached and they agreed to form an institution that will take up the responsibility of running the dairy cooperative.

At this point the Dairy Development Department, having learned that Gram Nidhi was doing something in dairy, approached Gram Nidhi and extended a collaborative hand. It offered to work on cost reduction of inputs; one possible path was the state loan-cum-subsidy scheme, which aimed at reducing the cost of cattle through provision of subsidy. This idea was shared with the women too, people got enthusiastic that they will be able to get cattle at 50% subsidy. Many people without cattle also showed interest in joining the cooperative in the lure that once they become member of the cooperative they would be able to avail the cattle subsidy. There was a lot of confusion among the members as to whether the cooperative was meant for selling milk or getting cows through Dairy Development Department (DDD). This confusion was however sorted out by clearly mentioning that the overall aim of the project was income-generation through improving the local dairy industry and one way to achieve the same is to get better price for their produce and also to improve the herds through the DDD subsidy scheme.

Formation of Shree Madan Mohan Mahila Doodh Sahakari Samiti (SMMMDS): The women's cooperative was formed in the name of SMMMDS in the month of April 2004; it was named Shree Madan Mohan because the dominant Tiwari family of Boreya used this name everywhere.

Collaboration with Ranchi Kshetriya Grameen Bank (RKGB): In April 2004, DDD conducted a training session for the members of SMMMDS, which was attended by some bank officials, along with the Chairman of RKGB. The chairman at this point was approached for lending cows to the villagers under the government scheme. Though, Initially resistant to the idea of promoting dairy, he finally agreed to go ahead after being convinced by the Managing Director of Gram Nidhi, with whom he had a good work relationship. The Managing Director of Gram Nidhi convinced him of good work on Dairy in the future.

Milk collection and distribution: Finally after the concept sharing operations started in the month of May'04. Milk was sold in the name of 'DoodhGanga'. The initial volume of 16 litres per day increased to 80 liters per day by the end of the month. The membership also increased to 45 members by the end of the month. Milk was distributed in steel canes but the logistics involved in distribution in canes were difficult and time consuming. The steel canes purchased were heavy, too heavy when filled with milk for one person to lift and distribute milk at door step. Search for an alternative started at this point to make the distribution system more efficient.

There was also a concern that was raising as Gram Nidhi could not manage to involve the community in the day to day activities of milk procurement and distribution. Gram Nidhi was carrying out all the activities with the help of contractual employees. Community participation was missing even with the women cooperative. The members did not take responsibility despite their promises during concept sharing.

Election of Board members: The board elections were held in the month of May 2004 so that some lead members could be identified and trained to take up the responsibilities. A board of nine members was formed. One of the very active members of the cooperative, Sushma Devi, was not elected but offered the post of accountant in the cooperative. She could not be continued in that position, however, as she was found guilty of misappropriations. These incidences made her play against the interest of the cooperative. Her actions badly affected community participation, since she had played a crucial role in community mobilization for cooperative formation. As she was from the *Sahu community*, she also tried to use her caste power to close down the cooperative though did not succeed in doing so.

Packaging in bottles: The cans purchased could not be used as there were two problems with them – first, when capped, cans became air tight and the milk did not fall; and second, it could not even be used for transportation purpose, as its heavy weight made its carriage difficult. The alternatives for milk distribution were two – either bottle the milk or use plastic pouches. A pouch-filling machine was a costly affair, nor was it budgeted. The second option was bottling the milk. For bottles, there were two options – either use a glass bottle or use food grade plastic bottles (preferably PEARLPET). The probability of breakage was high in the case of the former, so PEARLPET bottles were purchased. Bottling the milk reduced the distribution time and the whole process became relatively simpler.

But the entire range of activities from collecting milk at the village level, to weighing, recording, testing and packaging was done by Gram Nidhi contractual employees (LPAs) with the support of one or two coop members. Lack of community participation was serious even at this point . The assumption Gram Nidhi team took was that as the business became lucrative, farmers would slowly become active and would participate in managing the dairy business on their own, both in terms of logistics arrangements and in handling the financial aspects. The Kumar team also recommended that the farmers be given a price higher than the normal market rate @11.50 /l and that Gram Nidhi bear the initial overhead cost of doing the whole business. Their thinking was based on the assumption based on a calculation enclosed in Annexure I. Given that farmers were getting an assured price with no extra burden of sales (which Gram Nidhi was doing on behalf of the cooperative) the people continued to pour milk to the cooperative and the volume reached 300l/day.

Formation of coop in Hochar: When the farmers at Hochar (neighboring village of Boreya) saw all these benefits, they invited Gram Nidhi to come and guide them on the same venture. This was indeed an opportunity at the time when a regular, continuous flow of milk was required. Concept sharing was followed by a series of meetings, and finally an exposure visit to Boreya led to the formation of another cooperative at Hochar. The difference between the cooperative formations in Boreya and Hochar was that Boreya was a pushed effort of Gram Nidhi whereas in Hochar the community came forward on their own after seeing the benefits of other farmers. The team had already learned lots of lessons from the Boreya experience; so all the mistakes committed there were corrected in Hochar. Hochar was a good dairy cluster and could assure milk supply on a continued basis. The volumes in Hochar were gradually rising and more farmers tied up with DoodhGanga on a continuous basis.

Introduction of pouch filling system: With increasing volume, the number of bottles increased and so did the time and effort required for cleaning them. Moreover, every day DoudhGanga received a number of complaints that the plastic bottles were not cleaned properly. The DDD Officer advised replacing the bottles by pouches. He presented one or two

examples in which the coop started with a manual pouch-filling machine and when the volume increased, it could purchase a semi-automatic machine. He helped in identifying shops where food-grade plastics were available and demonstrated the pouch-filling process.

The Social issues that affected the project:

Problem of leadership: The three main board members of Boreya, i.e. President, Secretary and Treasurer, were quite keen to participate in the activities of the cooperative and at first acted united while taking any decision or carrying out any activity. But the friendship did not last long. There were continuous conflicts between the three. With old JRG-Ops, the President and the Treasurer played all kinds of politics against the Secretary, with the result that the Board had to be dissolved. Another factor was that the leading members, being non-producers, clearly tried to play their influence through politics. The power game was so much into the scene that it affected the performance of the cooperative negatively.

Ownership Issues: One underlying fact for a lot of hindrance to the operations was the ownership issue. People in Boreya considered that the cooperative was an entity that solely belonged to Gram Nidhi, as any decision relating to system change, logistics, manpower planning and implementation was taken by that organization. Moreover, people were not convinced about certain ideas such as cash security, fat-based system of payment, HR planning, etc. Those members who were working only gave time for the stipend/fees they were paid, for which they considered themselves employees and not members. They did not involve themselves in the decision-making process nor did they attend meetings, as the cost of reaching the urban centre from the village was high. Moreover, the majority of the decisions were taken by Gram Nidhi without notice and put into effect immediately, Rohit was a dominating executive in that sense. The element of ownership was seriously lacking. This needed serious rethinking about the intervention and its continuance. Clear instructions were given by the seniors of the organization to Rohit that until the community took on the responsibility, in terms of both logistics and finances, the project could not be continued much longer. However, they sent warnings to the community time and again that if they did not participate more actively, the operations in the village would be closed. But, to no avail.

Caste dynamics. Power and Money

The main caste groups in Boreya were the Scheduled tribes followed by Tiwari, Sahu, Mahto and Muslims. Other than that, other caste people were small in number. Tiwaris have been the dominant people followed by the Sahu, then by Teli and finally Mahto. Caste dynamics has played a very important role in DoodhGanga operations out there and one of the reasons for poor functioning of the cooperative has been the caste dynamics of the village.

The Tiwaris were the dominant people in the village and no decision could be taken without their consent. Next to Tiwaris (represented by Gopal Narayan Tiwari), were the Sahus, in terms of power. Most of the cooperative members were Sahus, who had their own interests in the cooperative. They were not as loud or as disturbing as the Tiwaris but out of nine elected board members, four were Sahus, and they manoeuvred constantly for power. Sushma, who was removed from the post of accountant, also tried to use her Sahu power at that time and finally succeeded when the DoodhSagar dairy started.

The Mahtos were supportive, but when it came to caste issues, they united. Tribals were the most disadvantaged group; people hardly interacted with them. Interaction with tribals occurred when the tribal was relatively rich. Money was one thing that affected not only the social status but also one's influence and one's hold.

Discontinuing Boreya: The problems at Boreya were growing more complex day by day and handling operations became difficult. Everyday, some new problem came up. Problems related to ownership and leadership soured relationships all up the line. There were conflicts between members themselves. Nobody was ready to take responsibility for the operation of the cooperative. Everybody wanted to cut their connection with DoodhGanga as they had other better alternatives. A large number of cases of adulteration with water, starch and urea were reported. Under these circumstances, it was difficult to move ahead in Boreya. Gram Nidhi called a meeting during which producers took the opportunity to express their dissatisfaction. As a result, Gram Nidhi decided to close down Boreya. After Boreya was discontinued, the project as a whole was reviewed; the most vital problem was clearly the financial crunch. Gram Nidhi was left with just Rs.50000 and with that squeeze, the coop had to be made financially sustainable. That meant the costs had to be ruthlessly cut. The overheads at Boreya were brought to zero, as it was completely closed down.

Village politics: Gopal Narayan Tiwari

Tiwaris, who had been rulers once upon a time, were the dominant people in the village. They had a temple in the village in the name of Madan Mohan, which could be visited exclusively by the Tiwaris, and the entry of other caste groups was strictly prohibited. Any decision, big or small, could be taken only with the consent of one of the ruling Tiwari family that belonged to Mr. Gopal Narayan Tiwari, son of a Congress party leader.

When Gram Nidhi entered the village, it first approached Mr. Gopal Narayan Tiwari and shared the concept with him. Since Mr. Tiwari himself had 15-20 cows, it was definitely in his favour. He gave a green signal for it and at the same time also convinced some big producers to join the troop. He gave his house on rent to start the activities there. But quietly he pursued his interest in ruling the cooperative. His wife became a member. When she did not win in elections, he did not give up. Every new day, he created some problems, one being erratic supply of milk to the cooperative to show that the cooperative was entirely dependent on him. He also did not let activities like washing the bottles go on smoothly and used all possible methods to make the cooperative dependent on him and his family. Those were the motivations credited to him by the Gram Nidhi team. When the milk agent system was discontinued, he was the first one to withdraw support for the cooperative and accept the new system. He supplied 40 litres of milk per day but could not continue at that level as he was himself facing loss by supplying it to local traders. Consequently he came back to DoodhGanga within 10days.

The cooperative was not strong and the spirit was always missing. Tiwari explored that as an opportunity and succeeded in dividing the leading members. Finally, when his house was vacated and the village point of transactions was shifted to a new place, he withdrew his support, with a resulting substantial reduction in the daily volume of available milk. When things were being shifted from Boreya, he and his family created a lot of problems and made all possible attempts to make the issue very political. However, winding up was accomplished but not in a peaceful manner.

This time, an entrepreneur who had a good reputation and good business turnovers was identified. He agreed to Gram Nidhi's terms and conditions and was ready to start by Jan'05. At the same time, Gram Nidhi was focusing on Hochar. They decided, in the review, to allow the coop three months, i.e. till March'05, to become financially sustainable and to provide it another three months support to enable it to grow.

In January 2005, Gram Nidhi decided that the team must withdraw soon. Given the situation, the best way to withdraw was to link the farmers with SUDHA or a private Dairy, even if they would get a lower price; but SUDHA / private Dairy would offer them regular, assured price and would take up the mammoth task of milk marketing. Gram Nidhi organized a meeting and explained to the farmers that it would get out of the marketing process, and the only alternative was to sell to local traders or sell to SUDHA.

When the farmers agreed to sell their milk to SUDHA, an exposure visit to that Dairy was arranged for the cooperative members by the SUDHA staff. Finally they got convinced to pour milk in the SUDHA collection centre from 1st Feb 2005. The team was quite happy that they could now get out of the task of milk marketing and had been able to link the farmers with SUDHA.

But, to the surprise of the team, after 5 days the farmers sent word that they had decided not to sell their milk to SUDHA as a new entrepreneur had agreed to pay them Rs.11/litre, where

SUDHA pays between Rs.9-Rs10.30 /litre and is strict about the /kg fat and SNF . The private entrepreneur would not be so stringent in his terms of collection.

The team has to decide what they should do now. Should they work with SUDHA to convince the farmers that SUDHA is the best alternative for them, or should they leave the farmers on their own? If none of the approaches so far have worked, what can the team do to develop the dairy sub sector and promote livelihoods in Jharkhand? What are the learning's from this intervention that will be worth considering for any future livelihood interventions?

Annexure I-Analysis of the overheads of Proposed DoodhGanga Cooperative Limited

	Jan	Feb	March	April	May	June	July	Aug	Sept
Milk volume in liters	200	250	300	350	400	450	500	550	600
VPOT COST									
Purchase cost of milk	69000	86250	103500	120750	138000	155250	172500	189750	207000
Transportation Cost	10000	10000	10000	10000	10000	10000	10000	10000	10000
Packaging Cost	6750	8437.5	10125	11812.5	13500	15187.5	16875	18562.5	20250
Cost of 'VPOT operations	6000	6000	6000	6000	6000	6000	6000	6000	6000
Rent (VPOT)	800	800	800	800	800	800	800	800	800
Miscellaneous	1000	1000	1000	1000	1000	1000	1000	1000	1000
Printing and Stationary Cost	1000	1000	1000	1000	1000	1000	1000	1000	1000
Wastage at VPOT	3450	4312.5	5175	6037.5	6900	7762.5	8625	9487.5	10350
Total 'VPOT cost (Rs)	98000	117800	137600	157400	177200	197000	216800	236600	256400
Total 'VPOT revenue (Rs)	88500	110625	132750	154875	177000	199125	221250	243375	265500
Net revenue to VPOT (Rs)	-9500	-7175	-4850	-2525	-200	2125	4450	6775	9100

MPOT COST

Vendor Cost	6000	7500	9000	10500	12000	13500	15000	16500	18000
Wastage	2212.5	2765.625	3318.75	3871.875	4425	4978.125	5531.25	6084.375	6637.5
Printing & Stationary Cost	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rent	1500	1500	1500	1500	1500	1500	1500	1500	1500
MPOT COST (Rs)	9212.5	11265.63	13318.75	15371.88	17425	19478.13	21531.25	23584.38	25637.5
MPOT Revenue (Rs)	13500	16875	20250	23625	27000	30375	33750	37125	40500
Net revenue to MPOT (Rs)	4287.5	5609.375	6931.25	8253.125	9575	10896.88	12218.75	13540.63	14862.5

Gram Nidhi COST

Employee (Number)	3	3	3	2	2	2	1	1	1
Cost	15000	15000	15000	10000	10000	10000	5000	5000	5000
Market Development	4000	2000	2000	2000	2000	2000	0	0	0
Overhead deficit	9500	7175	4850	2525	200		0	0	0
Total Liability	53525	0	0	0	0	0	0	0	0
Training and capacity building	2500	2500	2500	2500	2500	2500	2500	2500	2500
Gram Nidhi COST (Rs)	82025	24175	21850	14525	12200	12000	5000	5000	5000