Hand pump with attachment for filling animal water trough

CONSOLATION

Swayambhoo Sharma (41) hails from Udaipur, Rajasthan. He has done his Higher Secondary (Commerce). His occupation is agriculture and social work and he earns about Rs. 10,000 month. His family consists of his father, wife, daughter and two sons. His daughter is doing her B.Com and his sons are in the 12th standard and 7th standard.

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Badgaon, Jagdish Chowk
Near Pipal Tree
Udaipur Rajasthan

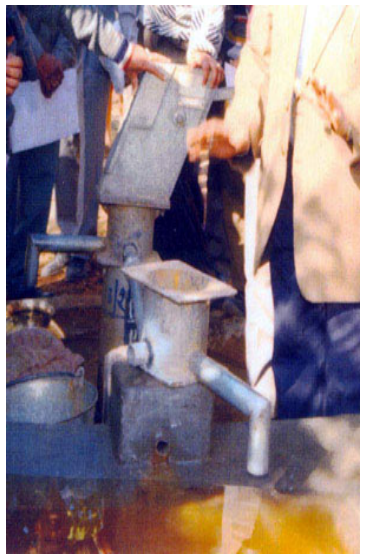
Scout
GIAN- North

Genesis

Lack of surface water sources and falling water table has made availability of clean drinking water a major problem in Rajasthan. For human beings, the need for availability of clean and safe drinking water gets noted and responded to some extent. But for animals this need is much less appreciated.

Formerly the cattle were provided drinking water by cultivators or well holders generally at their wells where a tank was made and fresh water was filled by them. But continuous drought conditions over the last four years have resulted in water scarcity and made it difficult to provide drinking water for the cattle population. Hence an idea that was brought forward was that a pit was dug in front of the hand pumps where the waste water generally flowed and this pit full of water was used by the animals to quench their thirst.

But these became a failure as the animals rejected this water contaminated by dust, garbage, chemical residue of soaps, detergents and other contaminants generated by human beings during their activities around the hand pump. Even if they drank this contaminated water they would fall sick. Swayambhoo Sharma came up with an interesting solution to address the drinking water needs of animals which provided for the continuous supply of clean ground water to fill a watering trough built exclusively for the animals. He developed a prototype in June 2001 and states that he faced no problems in the process of innovation. He spent about a week in making this attachment. He has made about 15 models till date. The cost of this local innovation is only
Rs 2075 and out of 39 hand pumps in the village Madar and adjoining hamlets, this innovative experiment is being used on five hand pumps and the response of the village folk to this idea is very good.His family was supportive throughout the process of innovation and thankful after he succeeded and gained recognition. At the same time he remembers a few people criticizing his work. Those who did not want to contribute to the welfare of animals used to block the second outlet of water by polythene etc. But Swayambhoo relates that he dealt with this obstacle by explaining to these people and then he modified the design by connecting a filter at the second outlet in such a way that it couldn't be blocked.



He proudly declares that all development has been done from his own funds.

The innovation

The arrangement consists of connecting a ½ to ¾ th inch horizontal galvanized iron pipe from the top of the hand pump water chamber to an adjacent water trough. Since this trough is above ground level and up to the level of the hand pump water chamber, every time the villager pumps water for his use up to 20% of the water gets diverted to this tank for animals. The basic trough is six feet by three feet with a height of two feet with nine inches thick walls. Thus apart from meeting his needs, every time the hand pump is used, a villager simultaneously does his bit to provide clean water for the animals.

Advantages

With this attachment no greater cost or extra exertion is required to give clean drinking water to the animals. This device removes drudgery of someone monitoring and filling up the water tank for animals every time it is empty. Women who take care of animals have more time left with them as the tank automatically gets filled with clean water. Further the cost is affordable when one considers the long term benefits of the solution. This solution is superior to current alternatives in quality of water and elegance in delivery. Diversion of fluid with single pumping operation can be used in many industrial operations and plants. Thus the device has potential for multiple applications.

Recognition

"*The low cost tank for animal drinking water linked to hand pump innovated by Mr. Swayambhoo Sharma has been installed at village, Madar, Kavita and Thur, Tehsil Girva, Udaipur. The device has a cost-effective modification in the chamber of hand pumps by which, when any one operates the hand pump to take out water, a portion (25%) of water flows to water tanks connected for stray animals*."

These are the words of Dr. Surendra Kothari, Assoc. Professor and Principal Investigator, Department of Renewable Energy Sources, College of Technology and Engineering, Maharana Pratap University of Agriculture and Technology, Udaipur who had visited the various sites where the innovation had been installed in October, 2004.

CP Talesara, Chairman and Managing Director, Pyrotech Electronic Pvt. Ltd, Udaipur says, *"The innovation made by Swayambhoo Sharma is unique in nature. The same can be used at other places and at the time of scarcity of water in these areas, the tanks are found to be very useful"*

The will to serve

Swayambhoo Sharma is the Deputy Pradhan of Panchayat Samiti Badgaon, Udaipur district. He is known for initiating various welfare activities in and around Udaipur. He has also started cultivating some medicinal plants. Currently he is working on the idea of dual pumps in a single bore well. This is still in the concept stage where the first pump would be a conventional submersible pump and in this arrangement there would be the facility to operate the second pump in the absence of electricity. Ask him about his dream and he states that it is to help society through his social service and similar innovations.