

Documentary Research

a. Innovations:

Sanitary napkin making machine: An option for women entrepreneurship:

Sanitary napkins, a universally needed product, have a very low penetration in India due to high price and the traditional trend of using cheaper but unhygienic old cloth pieces. The innovator has developed a machine that produces quality sanitary napkins at a low cost.

One can prepare sanitary napkins with industry standard raw materials while cutting down the cost in production. It requires three to four persons to produce two pads per minute. Costing less than half of conventional options, this machine produces sanitary pads @ Rs.1 to Rs. 1.50 per pad approximately.⁸

The innovator prefers to sell the napkin making machinery only to self-help groups of women. He has also designed a napkin vending machine such that one can put a coin and get a pad. With the support from the Micro Venture Innovation Fund scheme of NIF, the innovator has been able to install over fifty units in seven states.⁸



View of Sanitary napkin making machine

Manual milking machine:

Safe milking of cows/buffaloes is a requirement across rural India and this product is an efficient step in that direction. It is a low cost, manually operated device that helps farmers to milk the animal hygienically and also reduces drudgery in the process.

The machine has simple controls and can be easily operated by women as well. The creation of suction and low vacuum makes it suitable for other applications also. NIF has been giving marketing support to the innovator. As a result, this machine has also been sold to customers in Philippines, Uganda and Ethiopia apart from India.⁸



View of Manual Milking Machine

Maruti jhoola- the health care chair:

Modern life with its fast pace and sedentary lifestyle has created the need for solutions incorporating relaxation and invigoration. Maruti Jhoola is a unique health chair with multiple capabilities, functions and settings for various postures and seating dynamics.⁸

It is ergonomically designed and serves the purpose of seating as well as exercising, with a capacity to accommodate a person weighing 120 kgs. It can double up as a hammock or a jhoola. The health chair has established itself as useful for people suffering from arthritis and joint ailments. To facilitate marketing an entrepreneur has been engaged. Earlier, lot of cost was spent on packaging and transportation of the chair. It is now being redesigned and the cost may come down.⁸



View of Maruti jhoola the health care chair

Power generation through sewage:

There is a search going around the world for solutions that harness alternate energy sources to generate electricity. The innovator has developed a system that generates energy from slow moving sewage or any other source of flowing water.⁸

In this arrangement, electricity is generated when the slow moving sewage/water is passed through a cylindrical drum. The helical blades inside the drum rotate it and generate power. The capacity of the existing pilot unit is 30 kVA. This technology can have a tremendous impact on the generation of power from low velocity, high volume discharge of effluents

from industries and civil sewage processing plants. NIF has been actively following up with national and international entities for partnership in taking this innovation forward. NIF has also filed a patent for the technology in the innovator's name. Public agencies such as municipal authorities can particularly help in testing its utility.⁸

Improved multicrop thresher:

Farmers across India require a reliable machine that achieves threshing with minimal grain breakage, clean output for a variety of crops. The innovator has developed a versatile thresher that can meet these needs.

The modified thresher reduces setup time to less than 15 minutes to switch over from one crop to another, and achieves minimal breakage. Its latest variant can also handle groundnut apart from threshing other cereals and pulses.

The innovator has been provided working capital for his enterprise from the Micro Venture Innovation Fund of NIF. More than a hundred farmers have bought his thresher.⁸



View of Improved multicrop thresher

Bullet Santi-motorcycle based multipurpose plough:

Like other drought prone regions, Amreli region, from where the innovator belongs, has severe labor shortage, few farm animals or mechanized implements to conduct farming operations. To address this need, the innovator designed a unique unit: the 'Bullet Santi'.

Using the chassis, drive and power of an Enfield Bullet motorcycle, the innovator has retrofitted an attachment with two wheels at the rear with a tool bar to fit various farm implements. This helps in ploughing, weeding and sowing seeds. Being a unique local solution, the machine has proved to be cost effective and fuel efficient. Bullet Santi can plough an acre of land in half an hour consuming only two liters of fuel. Innovator got a patent in India and USA. Given the fact, many other users and innovators copied this technology, he has appreciated the concept of 'Technology Commons' implying no restrictions for other innovators to copy and adapt. But commercial firms will need license from members of the 'Technology Commons'.

8. Source: Part 3 : Innovations For Madhya Pradesh

Field Survey:

Technologies in Rajaborari

- ✓ Operate or drive old bike (rajdoot) by kerosene oil (mitti ka tel/ ghaslet): This technology is run by Mr. Ashfak Ali, Rehatgaon, Timarni



View of Motor-cycle ride by kerosene oil

- ✓ Use of hand machine (hanthkargha/ khaddig machine) for preparing the cloth (school uniform etc.)



View of hand machine in Handloom

- ✓ In Rajaborari, people also use hand machine (bankher/pankha) for cleaning of wheat: Through this machine, approximate 50kg wheat is cleaned in 10 minutes.



View of cleaning of wheat through hand Machine

- ✓ Use solar system for electricity in satsang colony and DEI University in Rajaborari: Due to less electricity, the satsang colony of Rajaborari use solar panels for generating electricity. Colony also provides solar street light facility in Rajaborari village because no street light and line are provided by the government.



View of Rajaborari colony and use of solar

- ✓ Use of fire wood for making food: in all villages in Rajaborari, maximum villagers or all villagers use the fire wood for making food because it is generally available as compared to LPG or the other source. Most of the villagers are below poverty line and they have no capital also to afford and maintain LPG connections and being a forest village, woods are easily provided and without capital.