

## Incubator for rural innovations

From Bullet motorcycles modified to function as ploughs to high-yielding cardamom varieties, SRISTI in Ahmedabad is helping hundreds of grassroots inventors and innovators to conserve biodiversity and develop eco-friendly solutions to local problems

Mansukhbhai Jagani is an ordinary farmer. Like many other farmers, Mansukhbhai is not well educated; he studied only up to class 5. But when the drought situation in his home state of Gujarat made it impossible to afford bullocks for his plough, this young man hit upon an idea that is now transforming the region.

The idea is as brilliant as it is simple. Using his Bullet motorcycle, he developed a machine system called Santi for a small farm or holding, complete with attachments for tilling, weeding and sowing. Farmers across the district have caught on to the idea, and there are now close to 40 Santis in use across drought-stricken Amreli district.

Apart from being extremely efficient, it is affordable. The attachment to a diesel-powered Royal Enfield Bullet costs only Rs 14,000-18,000, making it a much cheaper option than other mechanical ploughs. It weeds, ploughs and sows an acre of farmland at about Rs 8, a fraction of the cost of maintaining a pair of bullocks.

Mansukhbhai's plough is merely one of the projects supported by Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI), an Ahmedabad-based voluntary agency that supports such innovations in sustainable technologies. SRISTI was set up in 1993 to "strengthen the capacity of grassroots inventors, innovators and ecopreneurs engaged in conserving biodiversity and developing eco-friendly solutions to local problems".

The man behind the organisation is Dr Anil Kumar Gupta, a professor at the Indian Institute of Management, Ahmedabad, who has been championing the cause of thousands of unknown, and in most cases poor, creative individuals scattered all over India. Being far removed from the modern organised world of business, many of them are unaware of their worth, as well as the rights and opportunities available to them.

Dr Gupta firmly believes that "a key resource is the knowledge of the poor". It was this

belief that led him to start the Honey Bee network in the early-1990s, to serve as a database of information on grassroots innovations. Thirteen years on, there are 12,000 entries, including several from Mongolia, Vietnam, Uganda, Kenya, Colombia, Ecuador and North America.

The database is a veritable treasure chest of traditional knowledge, folklore, ideas, techniques and product innovations. The Honey Bee newsletter is today published in six Indian languages plus English and Spanish and is distributed in 75 countries.

The Honey Bee network soon turned into a movement with a view to tap into India's vast knowledge reserves. Various other organisations have been set up under the SRISTI umbrella. GIAN (Grassroots Innovation Augmentation Network) founded in 1997 seeks to bring notable inventions to the attention of venture capitalists and financiers while the NIF (National Innovation Foundation) in association with CSIR (Council for Scientific and Industrial Research) seeks to evaluate and prioritise these worthwhile ideas.

And there is obviously no shortage of them. Ideas like the high-yield cardamom variety developed by Sebastian Joseph and his son Regimon in Kerala's Idukki district, which is now planted in over 80% of farms. And the oil expeller developed by Kalpesh Gujjar of Gujarat, which efficiently crushes almost all varieties of oil-producing seeds. GIAN has helped Gujjar secure a grant for improvements to this expeller and it is likely to be mass-produced soon.

Meanwhile, Mansukhbhai's motorcycle continues to plough the fields of Amreli. He is busy making improvements to it, such as fitting a reverse gear. With SRISTI's support, he has won national recognition, which is worth much more than commercial success for these grassroots innovators.

Dr Gupta continues to teach at IIM, making sure that his students graduate with a keen awareness of the Indian reality and a desire to help. A few of them recently got together to set up a \$1 million micro-credit fund for village entrepreneurs. According to Dr Gupta, "The rate at which we keep receiving these innovations makes me confident that India will soon become the largest incubator of innovations worldwide."

**Contact:** B/h Pharmacy College Mess,  
Boys Hostel Campus,  
Navrangapura  
Ahmedabad - 380 009  
Gujarat, India  
Phone: (91-79) 7912792  
Fax: (91-79) 7913293

E-mail: [info@sristi.org](mailto:info@sristi.org)

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