

Seeds of Truth

The Story of Seed Banks in Medak

India has a wealth of traditional landraces of food grains. Studies have documented more than 2 lakh varieties of rice and literally thousands of varieties of millets. The arid and semi-arid regions of India have engendered the evolution of a rich and diverse varieties of millets that are capable of withstanding the harsh soil and climatic conditions that mark these regions; and ensure that the farming households who grow them have sufficient to eat even under the most situations. Millets are grown as part of mixed farming systems which contain a range of pulses, oilseeds, vegetables and a host of uncultivated foods. These along with the millets ensure that most of the food and nutritional needs of a rural household or community are met from their own lands.

The advent of Green Revolution brought sweeping changes in the Indian agricultural scenario. In a bid to augment the production of food grains in the country, intensive agricultural methods were adopted; mono-cropping, and the extensive use of hybrid/HYV seeds and chemical pesticides and fertilizers became the reigning mantras of the policy-makers. With easy credit, market support and other incentives, farmers were pushed to adopt these systems; so much so, that in many regions, the traditional landraces of food grains almost completely disappeared. While some farmers, especially the large ones; and those living in well-irrigated pockets like Punjab, Haryana and Coastal Andhra Pradesh reaped the benefits of green revolution, the vast majority of the small and marginal farmers in the arid and semi-arid regions—which comprise of 60% of the total area under cultivation in India—suffered in the long run. These farmers became increasingly dependent on the markets and agricultural extension services in order to access the basic agricultural inputs and in the process forgot their traditional knowledge; these farmers completely surrendered sovereignty over their food and farming in the process. One of the tragic outcomes of the advent of this system of agriculture is that women, who played the role of decision-makers in the traditional systems were relegated to the role of mere spectators in the new income-oriented style of farming.

The small and marginal farmers in Medak—most of the Dalits—faced a similar situation. The district of Medak experiences semi-arid agro-climatic conditions, and the agriculture in this region is entirely dependent on the monsoon. While both red and black soils are found in the region, the soils, in general, are harsh. However, this region has developed a well-honed system of cropping called *Panendu Pantalu**. This was a well-developed system of farming that combined risk reduction with optimum use of scarce resources; and included at least twelve different types of crops including forage crops, oilseeds, pulses and millets, which together ensured that the soil fertility was maintained and that the poor had access to a balanced diet (***A list of crops grown during the Kharif and Rabi seasons is given at the end of the article***). As in the rest of the country, the advent of Green Revolution changed all that. The easy access of cheap rice in PDS prompted many farmers to leave their lands fallow for several seasons together; resulting in extreme degradation of lands. Those who were cultivating were induced by glossy advertisements and the market-agricultural extension services- duo to take to cash crops like cotton, sugarcane and maize; which demanded a lot of irrigation and the heavy use of chemical inputs. Subsequently, these developments paved the way for the advent of Bt Cotton also. All these processes ensured the near-

* *Panendu Pantalu* is a mixed farming system wherein 12 or more food crops are planted in rows of various combinations. These include several varieties of Jowar, Ragi, Bajra, Little Millet, Foxtail Millet, Barnyard Millet, Kodo Millet and Proso Millet; Lentils, Red gram, black gram, green gram, horse gram, field beans, linseed, sesame, safflower, sunflower, brinjal, okra and uncultivated greens like hibiscus, *Gangavare koora*, and so on. The combination is usually unique to each farmer, who decides it based on her specific requirements. These requirements are determined by a range of factors like weather conditions, seed availability, needs of the household, and so on.

complete decimation of the traditional systems of agriculture; and contributed to the immense suffering of these small and marginal farmers. The neglect of mixed farming systems meant that the rural populace did not have access to crops like pulses, which in turn meant that they suffered from protein deficiency, leading to the undermining of their ability to work. Most tragically, a wealth of traditional wealth was completely neglected; where once more than 80 varieties of millet, grain, pulses and lentils grew, today only about 20 or 25 remain. The women felt that it was mostly the men who were seduced by the possibility of a 'developmental leap' and were more eager to try out HYV/hybrids and newer varieties of inputs.

This is when a few women from villages like Humnapur, Kalimela and so on, in Medak district decided to increase the cultivation of traditional varieties and to shun what they called the *sarkari vittanalu* (government seeds). The revival of traditional agriculture and the productive potential that had been lying fallow in the fields was not easy. In order to break the vicious cycle of low yields, labor, neglect of their own fields soil erosion and debt, the concept of 'eco-employment' was tested. This is a term coined by DDS, and it envisaged that instead of toiling on the rich farmers' fields for a meagre wage, the women farmers—especially single women, widows, etc—work on their own plots of land, with some start-up support extended by DDS. Together, they undertook extensive land development activities in order to arrest soil run-off; and the application of manure and straw and so on in order to improve the soil quality. A key decision that they took at this juncture was to return to *Satyam Pantalu* (Truth Crops), their traditional crops, and to mixed cropping. It was quickly noticed that this system was also adept at delivering yield rates that were comparable to the more modern systems of agriculture, that on small pieces of land. This was possible due to intensive land management techniques. Different crops matured at different times thus ensuring a continuous stream of food grains. Women who were working as day laborers and led a largely hand-to-mouth existence were in a position to feed their family members well.

However, a critical problem that was faced initially was that of seeds. Years of neglect had almost completely decimated the traditional varieties of seeds; and it was indeed a tough task to procure them in large quantities. Gradually, these traditional varieties were collected from the older farmers who were still practicing these time-tested agricultural systems; parents-in-law, grandparents, relatives who lived far away, neighboring villages and even ICRISAT (International Crop Research Institute for Semi-Arid Tropics)-which has a large seed bank-were approached for these seed varieties.

The women knew the characteristics of seeds intimately; the soils on which they grow, the various varieties, which landraces need minimal rainfall, which add nitrogen to the soil, which of them are adopt at resisting pests, and a host of other things have been researched by these women over years, through hands-on practice and trans-generational wisdom. With this knowledge, some women in every village became *seed keepers*, who store, multiply and distribute seeds. Now, at least 1500 small and marginal households in at 75 villages once again have access to their own traditional seed varieties. As a woman from Humnapur says proudly, “*we do not need the government seed any more*”.

The revival of traditional landraces has brought about a transformation in the lives of some of the poorest and most segregated women in the villages in Zaheerabad region. Dalits, small and marginal farmers and women belonging to these marginalized groups were, for the first time, consulted about the crafting and the implementation of a program that was intimately connected to their lives; for the first time they were given a space where they could articulate their concerns and also find solutions for the same. The revival of traditional landraces ensured that women were once again in the forefront of decision-making, in agriculture. These women decide the food crops that would be grown, how it would be grown, what food their children will eat and so on. Many of them, who started out as landless laborers are today land owners and have earned the respect of the other

members of their respective villages. Several of these women have been internationally recognized and feted for their contribution to providing fuel for the onward march towards food sovereignty of these communities. Above all, many of the households where these interventions have taken shape are in a position to access nutritious food from their own lands, and also earn some cash, thanks to crops like red gram and other pulses, which ensures that their physical and the material needs are well take care of.

List of Crops Grown under the Mixed Farming System in Zaheerabad

Kharif crops	Rabi crops
Jowar (<i>Sorghum vulgare</i>)*	Chick pea (<i>Cicer arietinum</i>)*
Korra (<i>Setaria italica</i>)*	Safflower (<i>Carthamus tinctorius</i>)
Bajra (<i>Pennisetum typhoideum</i>)	Sai jonna (<i>Sorghum vulgare</i>)*
Sama (<i>Panicum miliare</i>)*	Lathyrus (<i>Lathyrus sativus</i>)
Kodi sama (<i>Panicum miliacium</i>)	Lentils (<i>Lens esculentus</i>)
Black gram (<i>Vigna mungo</i>)	Wheat (<i>Triticum vulgare</i>)*
Green gram (<i>Vigna Radiatus</i>)*	Linseed (<i>Linum usitassimum</i>)
Redgram (<i>Cajanus cajan</i>)*	Mustard (<i>Brassica juncea</i>)
Niger (<i>Guzotia abyssinica</i>)	
Voma (<i>Trachyspermum roxburghianum</i>)	
Ragi (<i>Elusine coracana</i>)	
Sesame (<i>Sesamum indicum</i>)	
Vulvalu (<i>Dolichus biflorus</i>)*	
Pundlu (<i>Hibiscus cannabinus</i>)*	
*Each principal variety has several sub-types, and they are an integral part of this system.	