



HARNESSING CIRCULARITY: SMALL LOCAL PROCESSING CAN UNLOCK ECONOMIC AND ECOSYSTEM MULTIPLIERS

A TRIBAL ENTERPRISE RE-SHAPING LOCAL FOOD, WORK, AND VALUE IN MANYAM DISTRICT

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JAGATHIPALLI BURJAGUDA (VILLAGE) | SEETHAMPETA MANDAL | MANYAM DISTRICT | ANDHRA PRADESH

ECO-INTENSIFICATION OF TRIBAL ECONOMIES

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In the hilltop village of Jagathipalli (JP) Burjaguda, going downhill was once unavoidable for even the smallest processing need. Paddy and ragi travelled nearly ten kilometres along curving roads, sometimes on foot and mostly by auto. Processing facilities lay elsewhere, and with every trip, money and material quietly moved out of the village. What came back was rice and flour, along with a long-accepted sense of dependence. Home to about 26 households, the village depends largely on rainfed farming, wage labour, NREGS and desi poultry, with podu and rainfed lands spread over roughly 52 acres, where Mango Cashew Pineapple Jackfruit form the backbone of household production and consumption and down the hill 20 acres of low land which they cultivate Paddy in Kharif.

The rice mill in JP Burjaguda did not emerge in isolation. It grew out of conversations held across Manyam's tribal mandals in late 2022, where farmers and village leaders began tracing the everyday movement of food and money from their habitations in a Local Circular Economy exercise facilitated by WASSAN. The picture was familiar but disturbing: grain grown in the village was processed outside, value addition happened beyond the Gram Panchayat, and households bought back what they needed to consume. Rice, oil, pulses, and millets followed the same route. These are out for processing and back for consumption, leaving behind the precious process residues - bran, husk, oil cake and others that are good feed material for livestock, poultry or fish.



This understanding shifted the focus. The issue was no longer only about production, but about where processing happens and who controls it. Local processing was seen as the missing link, capable of reducing transport costs, retaining by-products for livestock, and circulating money within the village. Enterprise began to be understood as a village-level service, not just as an individual business.

It was in December 2023 that this thinking was translated into action. When on behalf of FPO Adinarayana, a Community Resource Person, approached Savara Ganesh about setting up a rice processing unit under the **HFDC Bank Parivartan** programme, the decision was clear but demanding; he has to deposit Rs 10,000 as security with the FPO and take responsibility for a facility meant to serve many households, not just one. The capital cost was subsidised by the program and owned by the FPO. The shed for the processing unit is contributed by the entrepreneur. FPO supports maintenance and repairs on a regular basis. The team has trained local youth on the maintenance and repairing. The FPO is overseeing these services going smoothly to the enterprises.

JP Burjaguda is home to about 26 hilltop households, with farming spread across both uplands and patches of lowlands down the hill. Nearly ten families cultivate around 20 acres of lowland paddy, producing roughly 50 bags (4000 kg; one bag = 80kg) per household each year. Of these, about 20 bags are retained for household consumption, while the rest are sold to local traders.

Earlier, even the rice meant for home consumption had to be carried downhill for milling. Every three months, families pooled bags, paid transport charges, waited, and returned, spending Rs 150 for every three bags for transport, just to access a basic service. The process residues were left to the mill owner in-lieu of the service. Generally, no cash processing fee was paid; the bran and broken rice were left with the mill owner as service charges. Only when farmers took these residues back was a processing fee of Rs 5 per kg for the final product(rice) charged.

With the establishment of the rice processing cum flour mill in the village, this movement reversed. Over the year, nearly 1,000 bags from about 50 households from this village and nearby four hill-top villages were processed locally. What once leaked out as transport cost, close to Rs 50,000 annually, remained within the village economy.

Value that Stays, Value that Circulates

The milling unit operates through a by-product-based payment system. For every 80 kg bag of paddy, the mill yields *thoudu* (bran) and *nuka* (broken rice). These are not waste; they are resources for another enterprise; these are retained by the mill owner.

What earlier went unnoticed now holds value at the village. Thoudu and Nuka support feed for poultry dairy and piggery farmers. He sells these to livestock rearers, income that earlier accrued to millers outside the Gram Panchayat. Today, this value circulates locally. Around Rs 0.80 lakh annually earned by Ganesh through milling of 1000 bags of 50 households in these four villages.

Households running desi poultry units, including 13 families supported through night shelters in this hilltop village feed directly from the mill. Farmers from as far as Palakonda, Kotturu, nearly 30 km away, regularly collect nuka and thoudu for livestock. What began as a rice mill has quietly evolved into a node connecting crops, livestock, and livelihoods recycling the nutrients.

He also purchases paddy from other farmers, nearly 60 bags a year and processes these in his mill, selling them in packed bags for marriage ceremonies in the hilltop villages.



When Millets Returned to the Plate



Ganesh, also a traditional artisan by practice, travelled once to Paderu, in Alluru Seetheramaraju district, 200 kms away from his village and sourced local millet seeds. He distributed these to two farmers in the village in 2023-24 and in 2024-25 six farmers for multiplication. Over the past two years, these farmers have cultivated millets on three acres. He also established seed enterprise for promotion of local and traditional seed varieties.

Earlier, households purchased millets from outside markets

for consumption. Today, they buy directly from these six farmers and process ragi flour at the village mill.

Every month about 30 households process around 60 kg of ragi flour; Consumption rises sharply during summer, with ragi ambali- porridge becoming a staple. He procures ragi from the six farmers and processes it and sells it to local shops at mandal headquarters on an average of 10 kgs/ month with the cost of Rs 50 per Kg. During festivals - Christmas, Sankranti, Dasara, Ugadi process rice flour reaches 100 kg per festival.

Strengthening Local Circular Economy (LCE) will have multiplier effect

Circularity of nutrients and income within the landscapes strengthens the ecosystem and also will have a multiplier effect on the local income. Following a participatory LCE exercise, representatives from women groups, Gram Panchayats, farmers and others identified several small processing facilities that helped them retain the incomes and residual produce within the villages. So much transport costs and so much effort saved in moving the produce!

List of enterprises established under the **HDFC Parivarthan Program**. The following are the details of the processing units established and the progress of these units.

This is the progress (revenue generated and service provided) in one year.

Type of Machine	No. Of Entrepreneurs	Total Qty processed-in Tons	Machine wise-No. of villages accessing service	No. of times farmers accessed service	Total income
Chilli Mill	7	2.1	16	106	45927
Dal mill	2	0.1	2	14	520
Destoner	3	1.6	2	15	3746
Fish Feed mill	1	0.1	2	3	2400
Flour Mill	29	21.9	49	403	246360
Grader	3	9.8	3	13	2606
Gravy mill	7	1.5	4	25	14270
Kandap mill	2	0.0	3	6	750
Mini Rice Mill	20	278.7	43	343	870651
Multigrain thresher	2	0.3	1	4	300
Oil Expeller	5	1.2	8	53	14119
Ragi thresher	2	0.1	1	2	1190
Turmeric Mill	8	1.1	33	100	39097
Grand Total	91	318.6	167	1087	1241936

Overall, 91 such entrepreneurs were identified and small enterprises established by the community servicing 167 villages under the HDFC Parivarthan program. These enterprises together processed 318 tons of various produce locally. Farmers accessed these services 1,087 times, showing strong demand and the usefulness of local processing in remote tribal villages.

In addition to earning Rs. 12.42 lakh as service income, these enterprises helped keep the residue produce which is in good quality for livestock.



For example, the JP Burjaguda rice mill regularly supplies good quality feed locally to 42 households, including poultry, piggery, dairy and fisheries farmers.

Livestock Farmers Using Feed from JP Burjaguda Rice Mill

S. No	Livestock Type	Village Name(s)	No. of Households
1	Desi Backyard Poultry	Jagathipalli Burjaguda	22
		Jagathipalli	3
		Jagathipalli Madhyaguda	6
2	Piggery	Chaparayiguda	4
3	Cattle (Dairy)	Palakonda	2
		Kotturu	3
4	Fisheries	Seethampeta	2
Total Households		7 Villages	42



Three young technicians were also trained in maintaining the machines who provide repair and maintenance services at cost.



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“After the rice processing unit started in our area, getting good quality feed has become easier for us. We have been regularly buying bran from the JP Burjaguda mill, around 100 kg every month. The pigs are growing well. Earlier, we depended on outside markets, but now good-quality feed is available nearby. Seeing our results, two more farmers in our village have started piggery rearing.”

— Savara Chinnarao & Bhuganna, Chaparaiguda Village, Manyam District



We welcome your comments and suggestions. Please write to us

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