



Fortnightly column

Village Dynamics Insights

Changing agricultural patterns in eastern India

A study in the eastern region of India reveals changing cropping patterns and a gradual move towards farm mechanization, particularly in the states of Bihar and Jharkhand. However, the pace of change is slow and farmers have not been able to shift from low value to high value crops thus restricting the growth in household income. More needs to be done, if this region is to benefit from the growth that is taking place in other regions of India particularly in growing cash crops.

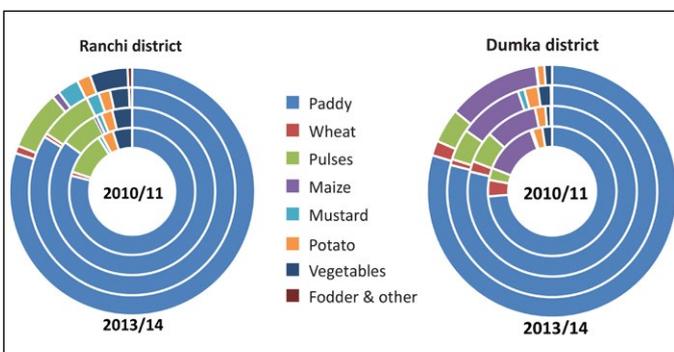
Farmers in these two states are still largely dependent on growing crops for self-consumption, mainly rice, maize and wheat, but there has been some increase in the cultivation of pulse crops, largely due to the fluctuation in rainfall between 2010 and 2014.

At the same time labor patterns are changing with a sharp decline in the use of human and animal labor and a concomitant increase in the use of tractors, threshers and diesel pumps. According to Dr Ranjit Kumar, Principal Scientist Economics, RP-MIP, ICRISAT, there are two factors influencing this trend: The increase in labor wage rates and the emergence of the custom hiring market, where large farmers or third parties are purchasing capital intensive machines like tractors and harvesters and the smallholder farmers are hiring this equipment for specific tasks and periods of time during the crop season.

In Jharkhand, the VDSA survey was conducted in Ranchi and Dumka districts across 2010 to 2014 with 160 households participating in the survey. In Bihar, the two districts involved were Patna and Darbhanga districts, with the survey period and sample size the same.

Shift in cropping pattern

Cultivation of pulse crops has gradually increased over the survey period. There was also an increase in the cultivation of vegetables and other cash crops in Ranchi district, which is close to the state capital and offers a market. On the other hand in Dumka district, away from big city markets, farmers continue to grow staple food crops like rice and maize which are largely for self-consumption.



Share of different crops in gross cropped area (Jharkhand state).



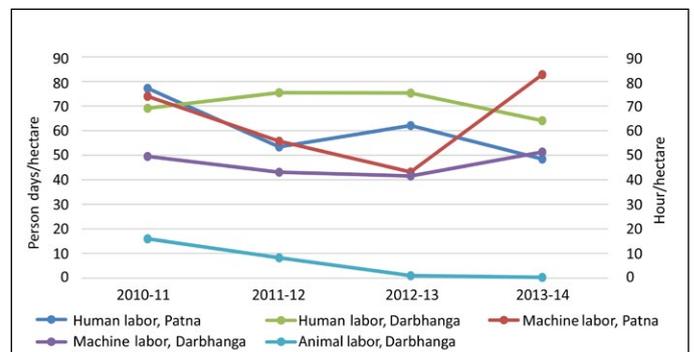
Rice is an important food crop in Jharkhand. It is also brewed to make a local drink.

“Where you don’t have access to ready markets for cash crops farmers are reluctant to grow these crops as they may face a glut in the market during harvest season,” said Dr Ranjit Kumar. The availability of alternative employment in the non-farm sector is also a factor that needs to be addressed to increase household incomes and capture growth.

However, lower rainfall periods triggered a more significant diversion of crop area to pulses and potatoes during this time, though this was a temporary trend. These villages still largely cultivated rice and wheat for self-consumption.

Increasing farm mechanization

In Bihar the survey revealed a marked increase in the use of machinery across the period and a corresponding drop in the use of human and animal labor for ploughing, etc. This trend was higher in the more prosperous villages closer of Patna district which were closer to the state capital, compared to Darbhanga district. This was likely due to the increased availability of machinery closer to the bigger cities and the comparative lack of infrastructure particularly roads in outlying districts such as Darbhanga.



Per hectare use of human, machine and animal labor in VDSA villages, Bihar.

Project:
Village Dynamics
in South Asia

This work is
now incorporated
as part of the



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