The land is leaving. The farmer is leaving. The appetite isn't.

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Three numbers frame every agriculture deal we look at.

The first is land. Between 1991-92 and 2021-22, land under non-agricultural use in India grew from 18.3 million hectares to 26.9 million - 8.6 million hectares gone to buildings, industry and infrastructure, roughly 277,000 hectares a year. Net sown area shrank by about 1.8 million hectares over the same period. Some of the new demand is familiar - housing, highways, industrial corridors. Some of it is new: solar parks and data centers now compete for the same flat, well-connected peri-urban plots that used to grow food. Over those thirty years the population went from 846 million to 1.4 billion. Per person, India today has about 40% less farmland than it did in 1991.

The second number is people. Between the 2001 and 2011 censuses, cultivators - people farming their own land - fell from 127.3 million to 118.8 million. Agricultural labourers rose from 106.8 million to 144.3 million. For the first time since Independence, India had more people working other people's farms than their own. The workforce share in agriculture was 59.1% in 1991 and 54.6% in 2011; projections put it at 49.9% by 2033 and 25.7% by 2050.

The third number is demand. It only goes up. More people, eating more, expecting better. Nobody is projecting fewer mouths.

So the question is not whether Indian agriculture must produce more from less land with fewer hands. It is how. The honest answer starts with an uncomfortable comparison.

Himachal's apple orchards average 7 to 8 tonnes per hectare. New Zealand's do 50 to 70. Same crop, roughly seven to ten times the output from the same hectare. Part of that gap is varieties and rootstock - seed quality, in the broadest sense. Part is mechanisation: India mechanises about 40-45% of farm operations. China is at 57-60%, Brazil 75%, the US 95%.

And yield is only half the leak. What the farm does grow, the supply chain loses. The government's own NABCONS study estimates harvest and post-harvest losses at 6-15% for fruits and 5-12% for vegetables - loss that happens between the farm gate and the shelf, in storage and distribution, not in the consumer's dustbin. The cold-chain gap assessment tells the same story from the other side: a requirement of 34 million tonnes of bulk cold storage and about 62,000 reefer vehicles, against a fraction of that on the ground. We backed Celcius, a cold-chain logistics company, on exactly this thesis - the produce exists, the demand exists, and the value dies in the gap between them.

The numbers, in one place:

Indicator	Baseline	Latest / comparison
LAND		
Land under non-agri use	18.3M ha (1991-92)	26.9M ha (2021-22)
Pace of diversion	-	~277,000 hectares a year
Net sown area	~141-142M ha (1990s)	~140M ha, down 1.8M
Farmland per person	1991 level	~40% lower today
PEOPLE		
Cultivators	127.3M (2001)	118.8M (2011)
Agricultural labourers	106.8M (2001)	144.3M (2011)
Workforce in agriculture	59.1% (1991)	54.6% (2011); 25.7% projected (2050)
OUTPUT AND LOSS		
Apple yield per hectare	Himachal: 7-8 tonnes	New Zealand: 50-70 tonnes
Post-harvest loss (NABCONS)	Fruits: 6-15%	Vegetables: 5-12%
Cold-chain requirement (NCCD)	34M tonnes bulk storage	~62,000 reefer vehicles
MECHANISATION AND LABOUR		
Mechanised farm operations	India: 40-45%	China 57-60%, Brazil 75%, US 95%
Rural daily wage (WB, Apr 2025)	Rs. 450 (ploughing)	Rs. 365-372 (sowing, harvesting)

Sources: Census of India 2001/2011, Directorate of Economics and Statistics, NABCONS (MoFPI) 2022, NCCD, Labour Bureau (Apr 2025), NCAER.

But here is the tension anyone investing in Indian agritech has to sit with. Indian farm labour is cheap. Labour Bureau data from April 2025 puts a ploughing worker in West Bengal at about Rs. 450 a day; sowing and harvesting run Rs. 365-372. When the alternative to a machine is a person at Rs. 400 a day, the machine has to win on real economics, not on a pitch deck.

And "win" is more specific than "replace a worker". Two things actually move the math. The first is time. Labour at Rs. 400 a day is available in February. It is not available in the two-week peak window when the whole district needs hands at once - NREGA and the construction boom have seen to that. A crop lost to a late harvest costs more than a season of wages. Mechanisation that buys timeliness wins even against cheap labour. The second is intensity. Studies of Indian mechanisation show it saves 20-30% of labour time, but more importantly raises cropping intensity 5-20% and productivity 10-15%. Two crops where there was one is worth far more than the wage line it replaces.

That distinction shapes what we look for, and it shows where the white space actually is. Harvesting and threshing for rice and wheat is already 60-70% mechanised. For most other crops it is under 15%. Horticulture and vegetables - the high-value crops where the yield gap is widest and the post-harvest losses

are steepest - still run almost entirely on hands and ambient trucks.

So our filter for agriculture is roughly this. Seed and planting material that closes the yield gap at the input stage, because getting from 8 tonnes to 50 does not come from working harder. Post-harvest and cold-chain infrastructure that stops the 6-15% leak between farm gate and shelf. Enhancement tools and robotics that win on timeliness and intensity against a Rs. 400-a-day reality - priced for that math, not for the demo. And models that fit smallholdings: a two-hectare farm will never own a Rs. 20-lakh machine, but it will rent one. Custom hiring and equipment-as-a-service are not a compromise in India. They are the distribution model.

We are launching Eaglewings Rise Fund II and agriculture is a sector we want to do more in. If you are building in agritech - seeds, cold-chain and post-harvest infrastructure, enhancement tools, robotics, or a model that actually reaches small farmers - write to us. We would rather see a unit-economics sheet than a market map.