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# SECURING THE LIVESTOCK

The difficulty lies not so much in developing new ideas as in escaping from the old ones.

—John Maynard Keynes

There have been formidable game changers in the past, when the lexicon such as startup or artificial intelligence or FPOs had not entered the discussions on agriculture. Many were simple common sense driven ideas, backed by a passion and commitment as against the technology and management triggered game changers of the present.

### White Revolution

“I am in the business of empowerment. Milk is just a tool for that.” This simple statement of Dr Verghese Kurien captures the essence of the White Revolution, a movement that catapulted a woefully milk deficit India into an undisputed global leader for nearly three decades now. A paltry trickle of 17 million metric tonnes with a per capita per day availability of 130 grams in the year 1950-51, has grown today into a flood of 211 mmt constituting almost one fourth of the global milk production.

### How did we realise this seemingly impossible achievement?

Dairy has consistently grown at over 6% ever since the White Revolution was launched under the impressively named scheme Operation Flood.

### The Success of Amul

The pivot of this model of growth has been the Gujarat Cooperative Milk Marketing Federation (GCMMF), known by its popular moniker Amul. And if amongst the millions that created this organisation credit were to be apportioned to a few, the foremost would undoubtedly be its chief architect late Dr Verghese Kurien supported by Tribhuvan Das Patel.

The two village and 247 litres milk per day cooperative today handles 27 million litres a day, a contribution of 3.64 million farmers making it one of the top ten global dairy companies. Adoption of the Amul example has created a unique dairy cooperative model in the country comprising more than 16 million milk producers in a network of 1,86,000 village milk societies affiliated to 222 district milk unions and 28 state milk federations. This has decidedly been the most impactful intervention in the history of dairy not only in India, but anywhere in the world.

### Shrimp Story

India’s shrimp aquaculture has been another fairy tale. The sector was at the verge of closure in the early 2000s. The White Spot Syndrome Virus (WSSV), a shrimp pandemic spread faster than a wildfire leading to the closure of an enormously large number of hatcheries and farms. To compound matters, around the same time the concerns of environmental cost of shrimp culture too found a voice leading to unreasonable restrictions.

Introduction of the disease resistant, though exotic, shrimp Litopenaeus Vannamei appeared to be an answer to this severe distress. There was stiff opposition from several influential

quarters raising concerns about the environmental and health repercussions of introduction of an alien species. However, the Litopenaeus Vannamei, once introduced, changed the fortunes and revolutionised the sector overnight.

We now boast of an infrastructure of around 600 shrimp hatcheries feeding 1,70,000 hectares of farming generating a production of more than a million tonnes per annum; from a mere 76,000 tonnes in the year 2008-09 when Litopenaeus vannamei entered the shrimp culture. We now command 26% share of the global shrimp trade.

### Sex Sorted Technology

Sexed semen is the technological solution for addressing the problem of male bovines. Sex sorted semen technology has been patented and is available with two US companies viz. Sexing Technology and ABS Global Genus. So far, the use of sexed semen has shown an accuracy of more than 90% in production of only female calves.

GOI has sanctioned and financially supported projects for establishment of stations for production of sexed semen in the states of Gujarat, Haryana, Kerala, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, Punjab and Himachal Pradesh.

The results so far have been quite encouraging, but the acceptability remains low. The reason primarily is the cost which our small and marginal farmers can ill afford. Recognising this problem, the government, under the Accelerated Breed Improvement Programme, has decided to provide subsidy up to 50% of the cost of the sexed semen. The farmer’s liability would be restricted to only Rs 250 per artificial insemination (AI), and even this amount would be refunded if even two AIs do not cause pregnancy. The service is made available at the farmer’s doorstep.

The project targets 90 lakh Artificial Inseminations (AI) over a five-year period. This should result in the birth of 24.12 lakh high milk yielding females, assuming a conception rate with sexed semen as 30% and accuracy as 90% female calves. This further translates into additional 36 million tonnes of milk annually, valued at approximately Rs 1.4 lakh crore at current prices. Isn’t it a supreme irony that a society preferring the male child displays a reverse bias towards a female calf.

Good things come to those who hustle. Therefore, let us celebrate with pride these more than significant initiatives.

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