

HUSBANDRY OF ANIMALS DYNAMIC PATH TO PROSPERITY

Why do we associate husbandry with animals, but not crops or other production systems?

Domestication of plants, and more importantly animals marked a major and dramatic turning point for humans: the beginning of an agricultural way of life, resultantly a stable civilization. The domesticated creatures also became integrated into the social and cultural fabric. All across civilisations and religions, domesticated animals came to symbolize order as opposed to the chaos of the untamed world.

Husbands, as yet, had not become hen-pecked. They were robust men of the soil – farmers. Husband originally meant a male

head of a household, and subsequently husbandry did not mean a husband, but referred to farming, livestock farming to be precise. Portia, the rich and beautiful protagonist in Shakespeare's popular play *The Merchant of Venice* meaningfully says, "*Lorenzo, I commit into your hands / The husbandry and manage of my house.*"

Globally more than a billion people depend on livestock value chains for their livelihoods.

Global demand for livestock products is expected to increase by up to 50 percent by

2050, creating further economic opportunities.

Against this background, is it not intriguing that in spite of being one of the fastest growing sectors of our economy at a compound annual growth rate (CAGR) of 8.2% over the past several years, at par with manufacturing and much higher than agriculture, lack of even a basic awareness and recognition have plagued the sector? The sector has generally remained low in political and governance priorities, ever struggling for public investment and affordable access to capital.

From another perspective this public and governance apathy has spurred the sector and its stakeholders to develop a strong entrepreneurial and competitive environment.

Global Leader In Milk Production

We are the global leader in milk production, by a great distance, and have been retaining the leadership position for decades now, and should continue to remain the leader for times to come. The second positioned USA's production is half of ours. In fact, we add more milk each year to our milk pail than what the entire Europe does. Growing steadily at an annual rate of about 6.5%, dairying provides livelihood to nearly nine crore rural households and contributes about 25% to our agriculture and allied sectors' GDP.

The total value of our dairy produce in 2018-19 is estimated at Rs 7,72,705 crore. The combined value

of wheat and paddy in the corresponding period was Rs 4,99,653 crore. The biggest strength of the sector is that more than 60% of the end value of the output flows back to the primary milk producer viz. the farmer. Could we make this claim about any other agricultural product?

Strong Poultry and Aquaculture Sectors

Poultry and Aquaculture stand out in the agriculture sector in general and animal husbandry in particular. It is because they stand on their own feet. They too have been at the margins of political and government attention, and compared to agriculture, dairy etc. close to being ignored. Yet they have consistently, over the years, registered growth so impressive as to leave other sub-sectors of Agriculture and Animal Husbandry trailing far behind. Being low on the political and governance agenda has perhaps been a blessing as it has spurred entrepreneurship and the resultant competitive spirit.

The Indian poultry market, consisting mainly of broilers and eggs, was worth Rs 1,75,000 crore in 2018. It is projected to reach Rs 4,34,000 crore by 2024, growing at a CAGR of above 16%. The growth rates during the last few years for eggs and poultry meat are averaging more than 6% and 9% per annum respectively, in spite of major setbacks due to the corona pandemic forced shutdowns and the later bird-flu outbreaks.

Both these extreme events caused disproportionately high and undeserving setbacks to the poultry industry, but the bounce back has been impressive and exemplary. This was made possible by the largely organised and integrated

structure of the industry which has given it an inherent resilience.

The sector's dependence upon the government to bail it out was much less compared to many other sectors of the economy. In fact, the challenge posed by Covid was converted into an opportunity by the poultry business, spurring new business and market models to reach out to the consumers through delivery of value added products. And it was on account of the innovativeness and entrepreneurship of the industry rather than any hand holding by the government.



Dr Shridhar is a voracious reader and a keen spectator. He often livens up his writings on the serious subjects of agriculture with references to literature, Bollywood and popular culture



Phenomenal Growth of Indian Poultry Sector

A look at the following performance figures over the past two decades of the century beginning 2000s would illustrate the comparative performance of poultry against other subsets of agriculture. Since the year 2000 onwards till the current year, the food grains production, the primary focus of our agriculture and the resultant infusion of government investment, registered a growth of 56%. During the same period, poultry has grown nearly 500%.

India has emerged as one of the fastest growing poultry markets in the world. Poultry has organised and integrated itself into an industry; and hence has grown from a primary farming activity into a business enterprise. Our

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unorganised and backyard poultry sector is one of the potent tools for subsidiary income generation for many landless/ marginal farmers, besides providing nutritional security to the rural poor. This too finds integration into the larger production and supply chain; even the relatively sophisticated transition from live birds to chilled and frozen products. In many stand alone models, backyard poultry is the source of supply of high value free range eggs and organically produced chicken.

Second-Largest Fish Producing Nation

Contributing 7.58% to the global production, India is the second largest fish producing country in the world. The fishery sector contributes 1.24% to our nation's Gross Value Added (GVA) and 7.28% (2018-19) to the agricultural GVA. Fisheries and aquaculture continue to be an important source of food, nutrition, income and livelihood to millions of people. This largely unsung sector has been registering an impressive annual growth rate hovering between 8 to 12% over the past decade. Fish, including fishery products, is the single most valuable agricultural export commodity growing consistently at around 10% in recent times; the total value of our annual exports being about Rs 47,000 crore, equivalent to approximately US\$ 6.75 billion.

Shrimp Farming

Within Fishery and Aquaculture, Shrimp farming has decisively demonstrated that aquaculture can profitably graduate from livelihood farming to a flourishing business. A decade back we were producing just over one lakh tonnes of shrimp. Today our production is about 9 lakh tonnes. There hardly would be any other examples of such a spectacular growth. Within this decade from being a global nobody, we have emerged as the world leader in shrimp exports, having captured 26% of global trade. It is robust and effective policy, infrastructure support and creation of an enabling environment

ANIMAL HEALTH



Control Zoonotic Diseases

The relationship between animal and human health is inextricable. Covid pandemic is a glaring example. According to WHO and World Animal Health Organisation, 60% of existing human infectious diseases are zoonotic - transmitted to humans from animals. 75% of emerging infectious human diseases have an animal origin. Of the five new human diseases appearing every year, three originate in animals. 80% biological agents with potential bio-terrorist use are zoonotic pathogens. Zoonotic diseases account for nearly two billion cases per year resulting in more than two million deaths – more than HIV/ AIDS and diarrhea combined. One fifth of premature deaths in poor countries are attributed to zoonotic diseases. Hence the strong case for strengthening veterinary institutions and services.

The most effective and economic approach to protecting human health is to control zoonotic pathogens at their source. This would require close institutionalized and harmonized collaboration at local, regional and global level between the veterinary, health and environmental governance. Higher levels of investment, both in financial allocations and policy priorities, in animal health infrastructure would be a sine qua non. Developing countries like ours have much greater stakes in strong One Health systems on account of small agricultural holdings and mixed farming systems resulting in uncomfortably close proximity of animals and humans.

OiE definition of One Health states “human health and animal health are interdependent and bound to the health of the ecosystems in which they exist”. This calls for a strong case for health and disease surveillance to incorporate domestic animals, livestock and poultry too. Humans require a regular diet of animal protein from milk, eggs, meat etc., and protein deficiency is a public health concern. Thus loss of food animals on account of poor health or disease also becomes a public health issue even though there may be no direct disease transmission; and we lose 20% of our animals this way.

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Animal Diseases Impact Economy, Livelihood

In the face of demographic challenges, increased international trade and the effects of climate change, animal health is more fundamental than ever to the development and well-being of human populations around the world. Livestock constitutes 40% of the value of global agriculture, and supports the income and livelihoods of one fifth of the global population, mostly in developing countries. Obviously, animal diseases can significantly impact the economy and livelihood of a vast multitude.

The global burden of animal diseases, though difficult to measure, is huge. It quite evidently leads to a burden of human diseases, impacts food security, dents the economy etc. Covid has demonstrated it also strikes at the basic fabric of society and its lifestyles. A zoonotic micro pathogen brought the entire mankind on its knees and forced it into a self imposed lock-up.



The size of our human and livestock, including poultry populations, is almost the same. A network of nearly two lakh lakh health institutions across different levels in the government sector form the backbone of health governance, further supported by a large number of private health facilities ranging from village medical practitioners to multi-speciality hospitals. On the other hand only 65,000 veterinary institutions tend to the health needs of 130 plus crore animals. This figure includes 28,000 mobile dispensaries and first aid centres i.e. institutions having bare minimum facilities.

Private sector presence in the veterinary services in the country is negligible; close to being non-existent. Unlike a physician, a veterinarian is always on a house call on account of the logistic challenge of transporting the livestock to the hospital. There could not be a stronger case for expanding and reinventing the entire veterinary services sector to aim at reaching each and every livestock farmer, not only for treatment of animal diseases but for prevention, control and surveillance to minimize the threat to human health. Early detection of diseases and infections at animal source can prevent their transmission to humans and also prevent introduction of pathogens into the food chain. So a robust animal health system is the first and a crucial step in human health.



that have made it possible, and certainly not government subsidies.

We are either at the top or near the top in production of almost all the major agriculture and livestock commodities. But we owe this position to our sheer numbers rather than efficient production systems. In absolute terms we are huge, but low productivity plagues us; half the country's population is engaged in agriculture but contributes a meagre less than 16% to the national GDP. This simple fact itself gives a clear idea of how low our productivity is, and what a lost opportunity it amounts to.

The time is more than opportune to reorient our perspective of Animal Husbandry from being a primary livelihood activity to a viable business vocation; accord it recognition as a prime engine of economic growth and prosperity, and not just a food production system. In any case we produce more than we need, so why should we carry the burden of low value food surpluses. It is important to differentiate between food and animal husbandry, and agriculture too. While food is one of the biggest items of household expenditure, the money flows more to value addition rather than livestock and agriculture. The primary producer generally stays marginalised. Agriculture and Animal Husbandry could do well through a paradigm shift in approach from production to value, from quantity to quality; a model already demonstrated effectively by the poultry and the shrimp farming sectors.