

**Speech of Smt. D. Purandeswari, Hon'ble MoS(HRD-HE)**  
**On 03-11-2007 at Bhaskara Auditorium**  
**Birla Science Centre Complex,**  
**Adarsh Nagar Hyderabad**  
**On 'Presenting Of M.S.Swaminathan Award**  
**To Dr.B.S.Prakash'**

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Animal husbandry is one of the rapidly expanding sectors playing as significant role in the rural economy by providing gainful employment to a large member of small, marginal farmers and agricultural labourers thereby improving their economic states. It also provides subsidiary occupation in semi-urban areas and more so for people living in hilly, tribal and drought prone areas, where crop output may not sustain the family. Livestock wealth is considered an index to the country's prosperity. In a country where holdings are small and fragmented and collective and co-operative farming is practically non-existent, cattle form the backbone of the economy. Agriculture and livestock improvement programme go hand in hand for revolutionizing the economy. Livestock has been the mainstay of Indian farmers facing frequent crop failures. Its role in rural economy has grown further and acquired a commercial hue in the past few decades. Animal

husbandry is now deemed to hold the key to alleviate farmers in distress.

India enjoys the distinction of housing the worlds largest and most productive population of milch buffaloes, which are virtual milk machines. Though they constitute less than 50% of the total bovine population, their contribution to milk production is 55%. According to census 2003, India has about 18.5 crore cattle and 9.8 crore buffaloes. India accounts for 57% of the worlds buffalo population and 14% of the cattle population. India possesses 27 acknowledged indigenous breeds of cattle and 7 breeds of buffaloes. As our allied agricultural activity animal husbandry output constitutes about 30% of the country's agricultural output. According to the central statistical organization (CSO), the value of output from livestock and fisheries sectors is about 37.7% of the total agriculture and allied sectors. Even as we get complacent that the problems that we face in livestock is not as entangled and complicated as it is in agriculture, we do have to accept the fact that there are some hidden concerns, that seem to miss our eye and this is where research would seek the participation of scientists like Dr.B.S. Prakash.

Infertility in cattle accounts for major economic losses in dairy farming and dairy industry in our country. An infertile animal is also an economic burden. 10% – 30% of lactation may be affected by infertility and reproductive disorders. Many and complex are the reasons or causes for infertility among cattle. Causes could be malnutrition, infections, congenital defects, management errors, and also ovulatory or hormonal imbalances in the female. Both in cows and buffaloes the sexual cycle or oestrus is once in 18-21 days and lasts for 18 – 24 hours. But in buffaloes the manifestation of this period is so silent that it poses a problem to the farmers. Poor heat deduction can cause increased levels of infertility.

The Indian cattle breeding model of putting to use a mix of indigenous and upgraded breeds, is proving to be a good example for replication across the world. The United Nations Food and Agriculture Organisation is considering tailoring this model for other countries. Unable to discriminate between pure and cross breeds, many countries have indiscriminately promoted the cross breeds to improve productivity. However, we must realize and understand that indigenous breeds prove to be much more sturdier as they are well adapted to local

climatic and geographic conditions. These breeds can actually continue remaining reproductive even with limited inputs of fodder, feed and health care. Exotic breeds like Jersey though they produce 25 litres of milk a day, they can survive only in controlled agro-climatic environments.

For non-descript indigenous breed, which produces 500 ml of milk per day, the maintenance could almost be nil. Non-descript crossed with indigenous breed, what we would call up graded, which produces almost 2 litres a day, the maintenance could be Rs.20/- a day. Cross between exotic and indigenous, what call cross breeds, that yield 10 litres a day, the maintenance could be Rs.60/- per day.

FAO has recommended that exotic and cross breeds must be encouraged in well-equipped areas. The emphasis should be on however, encouraging and promoting indigenous breeds with low and medium inputs as they are best suited for developing countries. Efforts need to be made to protect and preserve the indigenous cattle and buffalo in their native tract, which are now facing the threat of

extinction, because of our weakness for the exotic breeds with half knowledge. This is where, probably, freezing of sperms and creation of proper facilities for it like sperm banks would play an important role. Special emphasis should be on maintaining the reproductive status of cows and buffaloes belonging to the small and marginal farmers and weaker sections by conducting fertility camps, and also de-working of milk animals and their calves.

Gender discrimination is a grave concern in livestock too, but probably, the fairer sex, can get complacent with the fact, that they outnumber the males in livestock, atleast, but unfortunately exploitation is the underlying mantra. Uttar Pradesh for example has 17.7 million female buffaloes as against just 4.9 million males and 16.9 million female cattle to 8.2 million males. In Andhra Pradesh there are 10.6 million female buffaloes but just 1.6 million males and 9.3 million female cattle for 4.7 males. It here that artificial insemination is expected to play an important role in the wake of declining male cattle members.

Reproduction is the first system to be affected by malnutrition. A well balanced diet with protein, mineral, and vitamin supplements is

vital for cattle, to increase conception rate, healthy pregnancy, safe parturition, low incidences of infections and healthy calves. Good care of young female calves would help them not only attain puberty on time, but also attain optimum body weight that is suitable for breeding and thereby conception, which is around 230 – 250 kgs. Blindness in new born calves could be averted by feeding the mother with adequate quantity of green fodder.

Global warming, which is posing a threat to our environment and agriculture too, looms large over livestock too. FAO has reported that 1530 million cattle can contribute more to global warming than 900 million cars and commercial vehicles. The gas emanating from livestock flatulence and manure is estimated to contribute to 27% of the global warming. The high methane content is reported to be 23 times more warming than carbon dioxide. The high ammonia concentrations in the urine could contribute to acid rain. Cattle have also been contributing to depletion of forests and water resources. It is estimated that to produce 1 litre of milk 990 litres of water is required. Therefore, to make a moral choice between the holy Cow and holy Ganges is rather difficult particularly in the wake of our melting

Himalayan Glaciers. This problem is particularly grave in India, as our country houses 18% of the world's livestock, as it is an important source of milk, fuel and employment and also as they contribute significantly to rural incomes. India's cattle also need roughly 30 million hectares for feeding and an equal amount of land for other fodder requirements. With our demographics in mind, probably this land could be put to more productive uses. Therefore, it is important to look towards supplementary methods of feeding the cattle.

Even as we need to pay key focus to the above-mentioned areas of concerns, protection of animals from certain diseases and climatic conditions that are common yet important is what the farm is not aware of. For example ticks. Summer months are conducive to the propagation of ticks. These ticks can actually transmit many deadly diseases. Milk production falls considerably when cattle are infested by ticks and the farmers would have to spend a hefty amount as treatment costs. Efficient diagnosis and prompt treatment may help the infected animal, but these animals become immune carriers and the recovered animal may not regain its previous health and its milk production remains a permanent casualty. Protection of dairy animals

from thermal stress is very essential and so is the housing facility of these cattle. The necessity to vaccinate cattle against the two most dreaded diseases – foot and mouth and hemorrhagic septicemia, latest by April, needs to be explained to the farmers. Though at 4%, dairy sector has been growing at a better pace than agriculture, there are challenges in this sector too, that need to be addressed and answered. Cattle health management, feed and fodder supply, environment and animal welfare are issues that need focused attention. With Dr.Vergheese Kurian still at the helm of affairs and scientists like Dr.B.S.Prakash, I am assured our livestock are in safe hands.

Thank you.