

## **SUCCESS STORIES WITH RESPECT TO MARKETING OF SOME DAIRY NUTRITION TECHNOLOGIES**

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Insufficient nutrient supply is the second major constraint after poor genetic merit of dairy animals, in increasing milk production in tropics. In fact, most of these countries are facing severe feed shortage. As per a recent estimate, the present deficit in India is 11, 28 and 35 % with regard to dry fodder, green fodder and concentrates respectively. Feed alone accounts for 60-70 % of the total cost of milk production.

The bulk of bovine feeds in India are the poor quality crop residues, besides other agro-industrial byproducts. Thus, the efficient management of limited feed resources is of paramount importance in optimizing productivity from livestock and increasing milk production in tropics. Enormous research efforts have been made by the animal nutritionists to develop feeding technologies, which increase the efficiency of nutrient utilization within the ruminant system, leading to higher productivity. But unlike agriculture, no proper extension network exists in India for the effective transfer of livestock production technologies to the field. While most of these technologies have failed to reach the end user, a few feeding technologies have managed to reach the dairy farmers through commercial manufacture by feed industry.

The straw-based densified feed blocks, as Total Mixed Ration or TMR, is one such innovative feed technology for bovines which has been commercialized. This multi-beneficial technology, not only provides a balanced complete feed for 24 hours to the animal, but makes the storage and transportation of the feed much easier, which can also be used during natural calamities to save the animal or to establish feed banks. Since the block provides all the nutrients required by the animal in a balanced form, it has a favourable effect on animal's health, milk production as well as reproduction. Not only are the complete feed blocks available in the market, even the machinery for making blocks is being marketed. The technology has the potential to bring about revolution in milk production, as it can push the milk production up by 10-12% at a reasonable cost.

Today, bypass protein feed is the cheapest feeding technology available to increase milk production from dairy animals. The basic merit of this technology is that it saves feed amino acids from getting wasted as urea and converts these amino acids via glucose (in liver) into milk lactose (in mammary gland), resulting in more milk volume, since lactose controls the osmotic pressure of milk. Bypass protein feed is now commercially available in the market. A kg of bypass protein feed can cost a Rupee more to a farmer, but can yield an extra one Kg of milk from the animal.

Mineral mixture supplements for dairy animals have been available in the market since long, but farmers were quite unaware of the benefits of this feed technology. However, recent surveys conducted by research stations/ NGOs, coupled with on-farm trials at farmer's door steps, have amply demonstrated/ highlighted the benefits of these supplements in terms of increasing productive and reproductive efficiencies of the animals. Today, many farmers use and have become conscious of this technology, as a corrective measure against anestrus conditions prevailing in many dairy animals.