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“Can agroecological farming feed the world?  
Farmers’ and academia’s views”

## Digital innovation for enhancing dairy productivity

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### Abstract

Livestock sector is very dynamic in developing countries as there is high demand for animal products due to rapid urbanisation, population growth and income growth. This poses a wonderful opportunity for small and marginal farmers to get benefit as they own major proportion of livestock in developing countries. Despite India being a number one in milk production in the world with milk production of 209 Mil tonnes, the dairy productivity found exceptionally low with 1700 kilograms per lactation compared to more than ten thousand kilograms per lactation in USA and Israel. India achieved remarkable milk production through greater number of dairy animals (190 million cattle) than improving dairy productivity. Increased milk production is highly associated with absolute greenhouse gas emission unless efficiency of production increased, and number of dairy animals decreased. There is need to understand the prevailing issues of low productivity in dairy animals which can support to build strategies for improving efficiency in dairy production. The proposed study is the first step to identify the core issue of unproductive dairy animals in rural villages. Data collected from 5504 dairy animals of sixty villages in Tamilnadu, southern state of India. Data collections were done on reproduction status of animals, lactation stage of animals, prevalence of diseases and availability of feed and fodder resources. The results indicated that only 38 % of animals were in milking and 24 % of animals were in pregnant stage among the adult cows. This indirectly indicates the issue of long intercalving period and low fertility rates in dairy animals. Approximately 18 % of animals found with repeat breeder issue, not conceived even after 4 inseminations. Precise Livestock Farming using digital innovations are promising to fill the gap in data and information and to develop evidence-based interventions for enhancing dairy productivity and decrease greenhouse gas emission.

**Keywords:** Dairy productivity, digital innovation, smart dairy