



Potentials of ITC'S In Development of Dairy Sector

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Introduction

Dairy farming dominates the livestock sector and is a cardinal pillar of agriculture. Dairy production and agriculture are intertwined, each being dependent on the other, and both are crucial for overall food and nutritional security of the nation. Dairy is an integral part of livelihood activity for most of the farmers and help sustaining farm activity. Besides, it is supplementary and complementary to agriculture in the form of critical inputs, contributing to health and nutrition of the household, supplementing incomes, offering employment opportunities. Livestock contributes about 4.5 per cent to India's GDP and 25.8 per cent towards total agriculture GDP. Dairying plays an important role in improving the nutritional status and has a sustainable employment generation potential (Anonymous, 2019).

Despite of lot of innovations in dairy technology, Indian dairy sector is suffering from poor infrastructure and human resources. As on 31 March 2017, the number of veterinary institutions stood at 65242. Majority of State Department of Animal Husbandry are facing insufficient human resources problem resulting in poor and inadequate veterinary services to the dairy farmers. Only 34,500 veterinarians are employed for field services against the requirement of 67,000. Similarly, against the requirement of 7500 veterinary scientists for teaching and research, only 3050 are available. Availability of para-veterinarians and other supporting staff is only 52,000 against the requirement of 2,59,000. As per the recommendation of the National Commission on Agriculture, one veterinary



institution covering 5,000 cattle units (one cattle unit =1 cow/1 buffalo) but there is complete shortage of workforce.

Thus, despite the pluralistic extension approach the existing dairy public extension system have limited out reach. So, it's high time to think of some alternatives that can work in a complementary manner with the present dairy extension delivery services to enhance their activities. Under this situation the best possible alternative is nothing but Information and Communication Technology (ICT). It is an umbrella term that includes any communication equipment or applications, including radio, television, cellular phones, computer and network hardware and software, satellite systems, etc., as well as various services and related applications, such as video conferencing and distance learning.

- ❖ New developments in information and communication technology, wide spread of internet access and mobile communications appear to offer solutions to meet the information needs in dairy sector
- ❖ ICTs has a great potentiality to disseminate timely and relevant dairy information
- ❖ Use of appropriate ICTs will increase knowledge of the dairy farmers and enable them to obtain more output
- ❖ Thus, ICT as a new paradigm for dairy development is rapidly emerging in India (Bharat, 2021)

Potentials of ICTs In Dairy Sector

1. **Saves time, money, efforts:** Scientists can prepare and update electronic versions of messages and on-farm research results themselves and load into computers, which saves money and time to reach curious end users instantly.
2. **Reduce distortion:** Through ICTs information can be directly posted on the internet, which will be available to extension functionaries and farmers at the district, subdivision, and block and village level without any distortion. All the concerned authorities will get the information immediately, and queries and clarifications will also be addressed quickly without involving a chain of extension functionaries.
3. **Information rich and interactive**
ICTs appeals to the curious extension workers and analytical farmers and allows them to search and locate information they need.
4. **Instant international reach**
ICTs eliminate the time and distance barrier in providing the latest information on any particular dairy farming problems from any part of the world. Through ICTs discussions can take place with the best scientist and experts in the field.



5. Continuous availability

Information through ICTs can be is availability all the time (Phand, 2021).

ICT Initiatives in Dairy Sector

1. Web Portals for dairy information
2. Mobile phone-based services (Tripathi *et al.*, 2019)

1. Web Portals for Dairy Information

❖ E Pashu Haat

- It is a web portal launched on 27th November, 2016 by the Department of Animal Husbandry & Dairying, Government of India
- Objective is to boost dairy productivity and increase farmers' income by connecting breeders and farmers in India by organizing the livestock market. It allows farmers and entrepreneurs find information about animals, buy animals, frozen semen and embryos
- **Services provided**
 - E-Trading market portal for livestock germplasm and additional related services
 - Connect farmers with breeders - central, state, co-operative and private agencies
 - Real time authentic certified information on availability of germplasm
 - Centralized repository of information for central and state governments
- **Details of the portal**
 - It provides direct access to the farmers/ breeders to various organizations/sources where in frozen semen, embryos and livestock certifications are available
 - It connects farmers to 56 semen stations (20 states), 4 CHRS (4 States) and 7 CCBFs (6 states) in the country
 - Details like, animal / frozen semen ID, progeny particulars (sire directory), rates and other terms & conditions will be available on designated pages of the portal
 - Farmers can directly get the details like address, contact numbers, photo gallery etc. of individual Institutes / Agriculture universities in States
- **Additional services**

Trainings required, e-training modules, Animal Certificate Services, Animal Certification Verification Services, Animal Nutritional Advisory Service, Good Care Practices – Clean Milking practices, Animal Health Card Services, Cattle Fodder Service, Veterinary Services,



Artificial Insemination Services, Connect to Transport Services, Disease Screening and Testing Services, SMS/ Voice Call/ and Mail Reminder Services, Information about local events /fairs/haats/ Seminars

Portal address-<https://epashuhaat.com/>

❖ **Dairy Knowledge Portal**

➤ NDDDB launched this portal to disseminate information on animal breeding, health, nutrition and dairy technology

Portal address- <https://www.dairyknowledge.in/>



❖ **Buffalopedia**

➤ It is developed by Central Institute for Buffalo Research (CIRB), Hisar with the aim to provide an internet accessible interactive multimedia



instructional resource that allows different stake holders in buffalo farming to use resources across the country in an integrated, interactive learning manner on the internet

- It provides a platform for both information retrieval and knowledge sharing among different stakeholders in buffalo farming from anywhere in the world
- It aims at providing information on buffalo breeds, housing, nutrition, health care, reproduction and different government schemes
- It also provides expert advises on various aspects of buffalo breeding and management by sending email to the concerned experts



➤ **Different icons**

All about buffalo- provides information on different breeds of buffalo, population in India, world distribution of different buffalo breeds, classification of different buffalo breeds, buffalo behaviour and utility

Buffalo e-library- provide a storehouse of information on all aspects of buffalo- including physiology, reproduction, husbandry, housing, disease condition etc

Farmers hindi corner- under this information on various topics related to buffalo management are provided in hindi

Ask an expert- provides expert advises on various aspects of buffalo breeding and management by sending email to the concerned experts

Portal address- <https://buffalopedianew.cirb.res.in/>



Mobile Apps in dairy sector

There are various mobile apps in dairy sectors providing information on various dairy related aspects. Some of these are classified based on their utility-

1. Dairy Apps on Balanced Ration and Cattle Feed

Pashu Poshan App

- Pashu Poshan app is an android-based software developed and launched by National Dairy Development Board (NDDB) on 7 July, 2015
- The application is available on both web and android platforms, can be accessed by registering on the INAPH portal (<http://inaph.Nddb.Coop>)



- To use this application, the farmer needs to provide complete animal profile which includes-breed, age, animal identification number, milk production quantity, fat content in milk
- It recommends balanced diet for cows and buffaloes to boost farmers income by raising milk yield and cutting feed cost
- App available at:

https://play.google.com/store/apps/details?id=coop.nddb.pashu_poshan



2. Dairy Apps on Health Care Management

IVRI – Disease control App

- IVRI-Disease control app is designed and developed by ICAR-IVRI, Izatnagar and IASRI, New Delhi which provides information of diseases of livestock, poultry and dogs
- It provides pictures depicting the symptoms for identification, diagnosis, treatment and control of the disease
- This app provides information about the-
 - Exotic and emerging diseases
 - Various diagnostic facilities offered by ICAR-IVRI
 - Various diagnostic laboratories in India
 - Important organizations involved in Disease Control
 - Government schemes and guidelines for Disease Control in India
- App available at:

https://play.google.com/store/apps/details?id=com.icar.ivri.iasri.diseasecontrolapp&hl=en_IN&gl=US



3. Dairy Apps on General Dairy Management

IVRI – Dairy Manager App

- IVRI-Dairy manager app is designed and developed by ICAR-IVRI, Izatnagar, NDRI -Karnal and IASRI, New Delhi
- This is an educational app providing information on breeds and housing, feeding and clean milk production
- This is an educational app providing information on-
 - Breeds and housing
 - Feeding
 - Calf and general management
 - Clean milk production
 - Animal identification and Vices in dairy animals
- It has educational videos on clean milk production and neonatal calf management for enhancing the knowledge and skills of personnel involved in dairy farming
- App available at:

https://play.google.com/store/apps/details?id=com.ivri.iasri.dmapp&hl=en_IN&gl=US





4. Dairy Apps on Vaccination and Artificial Insemination

IVRI – Vaccination Guide

- IVRI-Vaccination Guide app is designed and developed by ICAR-IVRI, Izatnagar and IASRI, New Delhi to educate about vaccination in domestic animals, poultry and pets
- This app provides
 - Basic information about vaccination in livestock, poultry and pets
 - Specific information about vaccination related to all major bacterial and viral diseases
- For each of the disease, following information is provided-
 - The causative agent
 - Types of vaccine available
 - Serotype used for the vaccines
 - Vaccination schedule
 - Commercially available vaccines
 - Government and private institutions involved in vaccine production in country
- App available at:

https://play.google.com/store/apps/details?id=com.icar.ivri.iasri.vcguideapp&hl=en_IN&gl=US



5. Dairy Products Marketing Apps

Country Delight App

- Country Delight is a mobile app that aids in convenient online milk delivery to the door steps of the customers
- Milk is sourced directly from the farmers and delivered to customers without any intervention of middlemen
- Currently, it serves in Delhi, Gurgaon, Mumbai, Bangalore, Noida, Jaipur, Chennai and Hyderabad



- Country Delight Products: Farm-fresh milk, dairy products, egg, fresh vegetables and fruits
- App available at:

https://play.google.com/store/apps/details?id=app.mycountrydelight.in.countrydelight&hl=en_IN&gl=US