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# Literature review: Modern Computerized Dairy Farming

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**Abstract:**

Across the globe, the trend toward fewer, larger dairy operations continues. Dairy operations today are characterized by narrower profit margins than in the past, largely because of reduced governmental involvement in regulating agricultural commodity prices. Consequently, small changes in production or efficiency can have a major impact on profitability. The resulting competition growth has intensified the drive for efficiency resulting in increased emphasis on business and financial management. Furthermore, the decision making landscape for a dairy manager has changed dramatically with increased emphasis on consumer protection, continuous quality assurance, natural foods, pathogen-free food, zoonotic disease transmission, reduction of the use of medical treatments, and increased concern for the care of animals. These changing demographics reflect a continuing change in the way in which dairy operations are managed. In large part, many of these changes can be attributed to tremendous technological progress in all facets of dairy farming, including genetics, nutrition, reproduction, disease control, and management. W. Nelson Philpot (2003) captured this change effectively in describing modern dairy farms as "technological marvels." Conceivably, the next "technological marvel" in the dairy industry may be in Precision Dairy Farming.

Dairy farming, as a matter of fact, is giant corporate sector, towards which many I.T. Software companies are diverted their attention. A big section of younger generation has been dared to utilize the new technologies in agricultural sector. Many software companies have centralized their attention towards marginal as well as medium farmers. The farmers those who have Cow/ Buffaloes from 25-50 and have never utilized any sort of technological tool in their dairy business, use of computer can be useful for milk production as well as marketing of milk. In conventional dairy farming, milk production can be obtained by using large number of persons or huge manpower. But since the issues like importance of cleanliness, offering balanced ration to the animals during appropriate physiological state etc have come up, the use of new technological tools are rising. At the time the traditional aspects of managements were taking behind.

Almost all sectors have come to know the Importance of Computer. Today, in every sector Computer is being utilized for same or another work. We have the technological tools with us viz Mobile Applications, Software, Internet facility but we have to decide how we can utilize these tools in our dairy business.

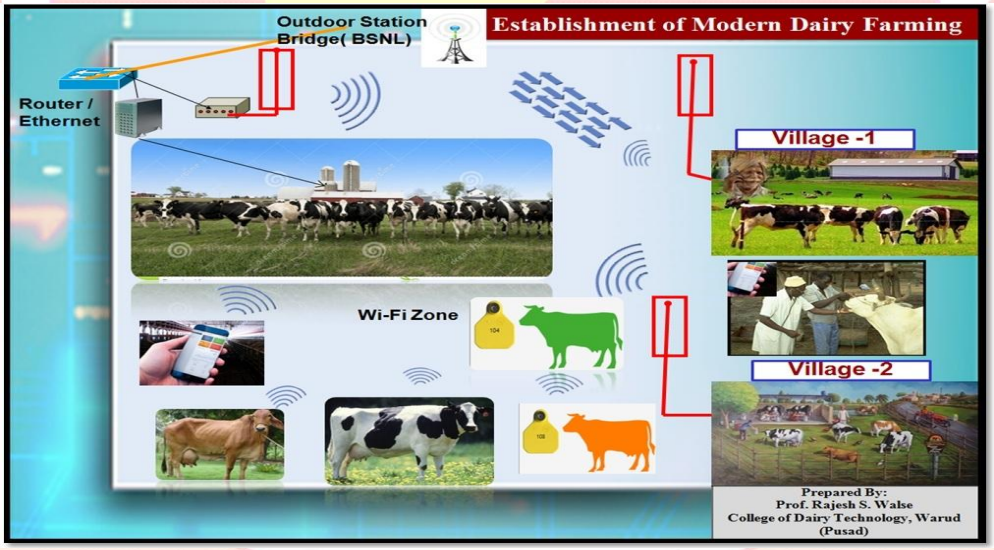
All sorts of information of dairy farm, agriculture farm, Goat farm can be stored in Software of Computer from basic facilities to milk production records, Planning of needs and fodder, Health management of livestock, information related to reproduction, new born calves, information of newly bought Cows and Buffaloes, Vaccination, Medication, Parturition record, Birth records, various tests regarding animal health, Production Management, Advanced and précised animal feeding facility, small Bulk milk cooler Monitoring system, Health status, information of all these aspects can be compiled and stored in the Computer can be used for effective dairy management.

Record keeping in this way certainly help to improve milk production of dairy farms as this helps in proper management of dairy farm.

**Modern Computerized working**

One must have WiFi facility in and around the zone of dairy farm. All the Cows/ Buffalo information can be accessed by Unique Identification Number through this and Animal identification tags the information of each animal is stored in the Computer. There is no need to fill up or compile the same information of Cows/ buffaloes again and again. Changes whenever required can be incorporated.

Through the Animal Identification Tags & Readers (Ear Tags one can have the information of animals in the farm by forwarding such information to Computer server and can take care of the animals.




Evaluation of records in this regard is undertaken by cloud technology. The information reaching through server to the farmers is needed to be understood. Many a times such information is supposed to pass to the veterinary doctor all this information through wireless networking will reach to the server of service provider. Important thing is that such information can be obtained by using Unique Identification number with the help of Mobile Android application or S.M.S. At present the network of Computer has reached almost all the villages. Those who have 25-50 Cows/ buffaloes can freely download *Open Source* software (Fig 1.1 to Fig 1.4) by using Google search engine by typing keyword like "D*ownload free Modern Dairy Farm Management Software"*. Some of the companies, on trial basis allows to use

such kind of software, while many of the companies provide direct online access after registration, for online use of these software's.

**Potential benefits of Computerized Dairy Farming**:


A Precision Dairy Farming technology allows dairy producers to make more timely and informed decisions, resulting in better productivity and profitability . Real time data can be used for monitoring animals and creating exception reports to identify meaningful deviations. In many cases, dairy management and control activities can be automated. Alternatively, output from the system may provide a recommendation for the manager to interpret. Information obtained from Precision Dairy Farming technologies is only useful if it is interpreted and utilized effectively in decision making. Integrated, computerized information systems are essential for interpreting the mass quantities of data obtained from Precision Dairy Farming technologies. This information may be incorporated into decision support systems designed to facilitate decision making for issues that require compilation of multiple sources of data. Historically, dairy producers have used experience and judgment to identify outlying animals. While this skill is invaluable and can never be fully replaced with automated technologies, it is inherently flawed by limitations of human perception of a cow's condition. Often, by the time an animal exhibits clinical signs of stress or illness, it is too late to intervene.

Dairy farmers, in this way can use Computer software in their modern dairy farm to improve milk production by precise feeding, proper weeding and better planning which in turn result in fetching maximum profit.

{Freely available website for better management of dairy farming for Cow / buffaloes}

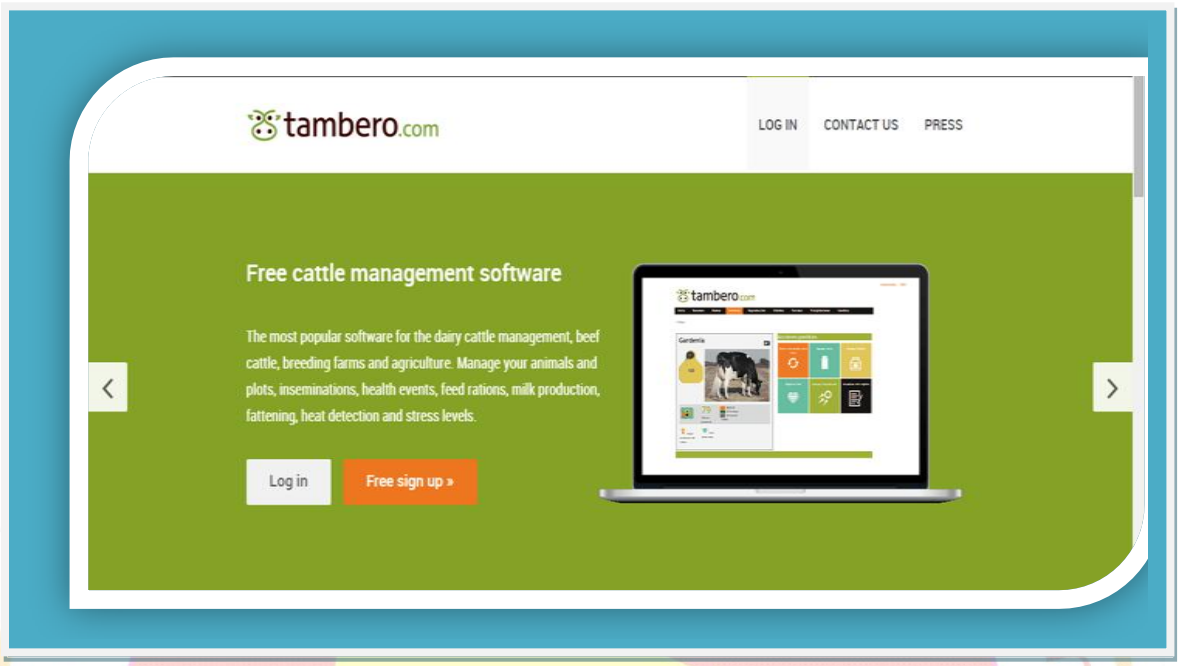
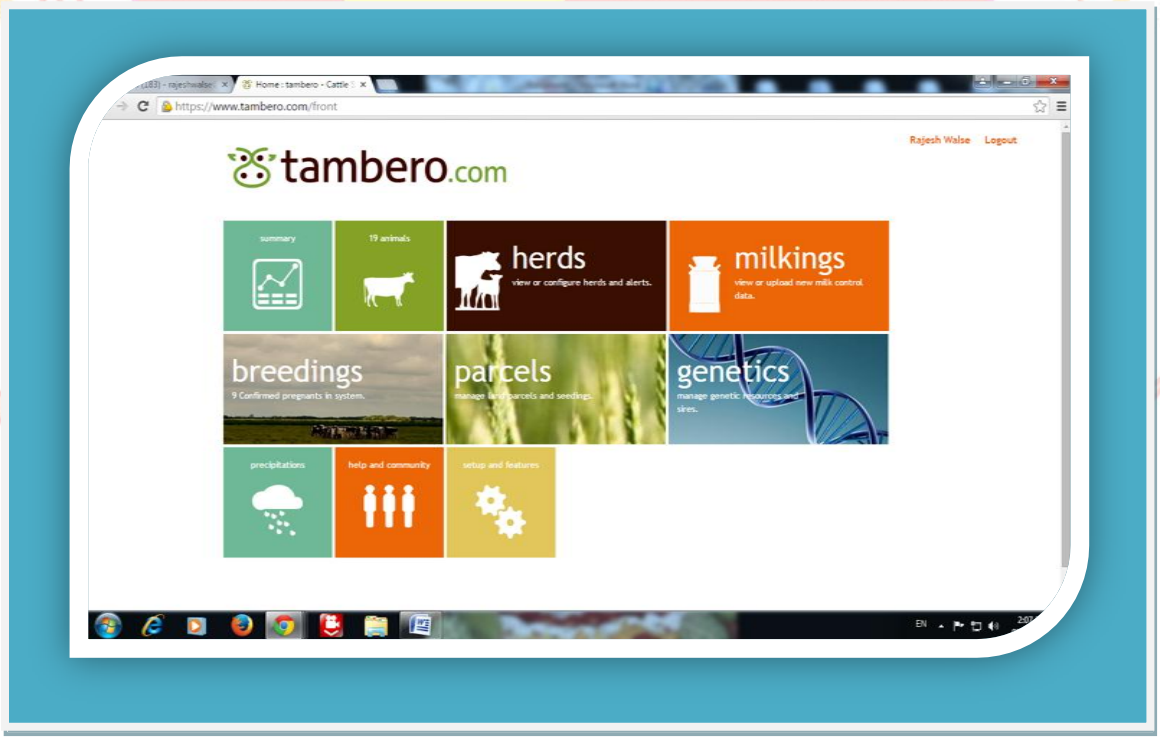
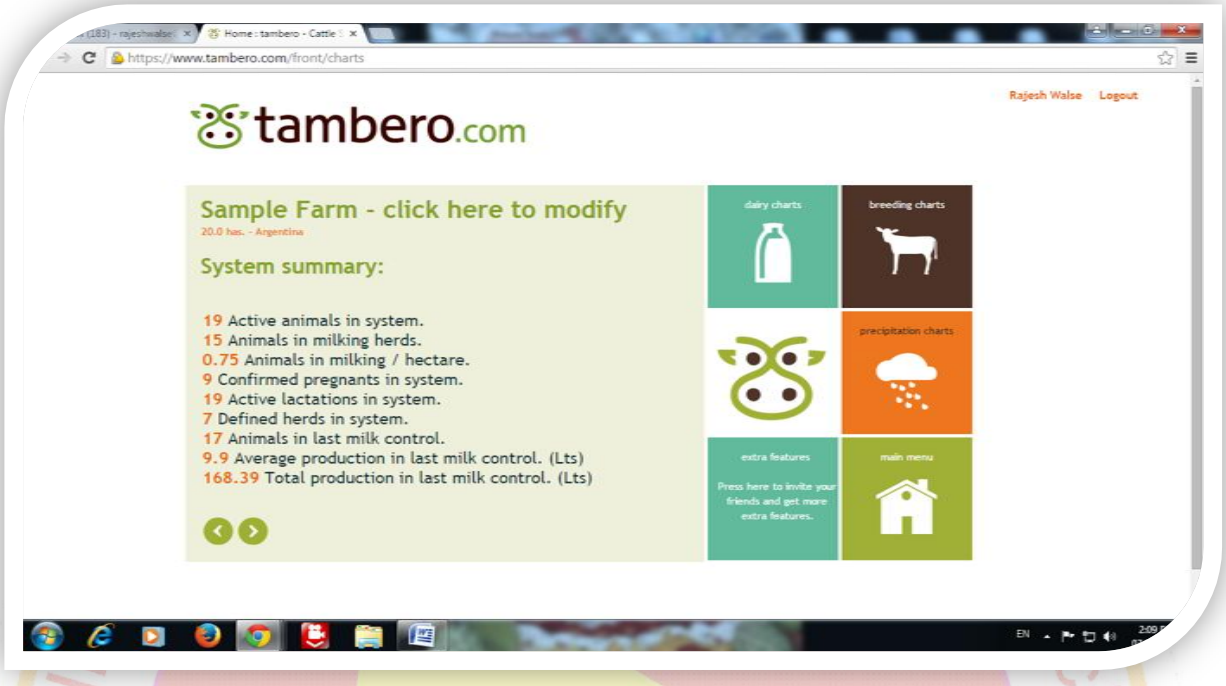



*Fig: 1.2* (To start new dairy business with following right path : )

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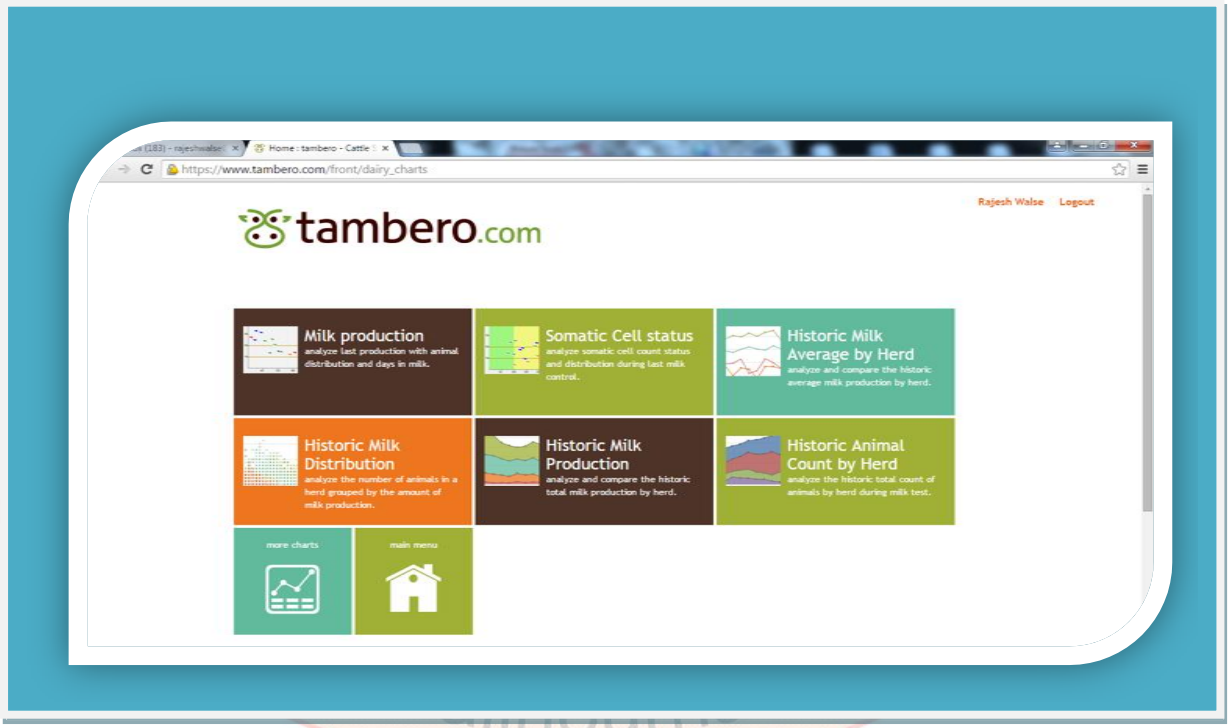
Sample Farm - click here to modify
20.0 has. - Argentina
System summary:
19 Active animals in system.
15 Animals in milking herds.
0.75 Animals in milking / hectare.
9 Confirmed pregnants in system.
19 Active lactations in system.
7 Defined herds in system.
17 Animals in last milk control.
9.9 Average production in last milk control. (Lts)
168.39 Total production in last milk control. (Lts)
dairy charts
breeding charts
precipitation charts
extra features
Press here to invite your friends and get more extra features.
main menu


https://www.tambero.com/front/dairy_charts
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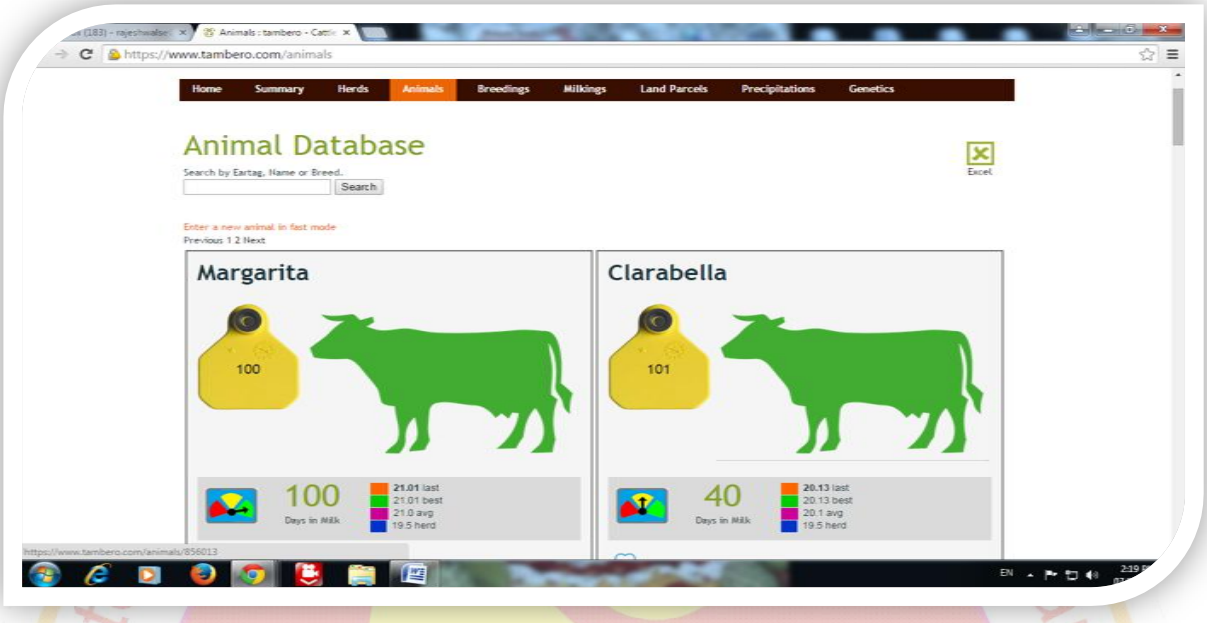
Milk production
analyze last production with animal distribution and days in milk.
Somatic Cell status
analyze somatic cell count status and distribution during last milk control.
Historic Milk Average by Herd
analyze and compare the historic average milk production by herd.
Historic Milk Distribution
analyze the number of animals in a herd grouped by the amount of milk production.
Historic Milk Production
analyze and compare the historic total milk production by herd.
Historic Animal Count by Herd
analyze the historic total count of animals by herd during milk test.
more charts
main menu




## Conclusions:

1. Use of Information technology in the dairy farming management , dairy cattle management, beef cattle, breeding farms and agriculture. Manage your animals and plots, inseminations, health events, feed rations, milk production, fattening, heat detection and stress levels is highly useful for dairy production and increase production in different farming.
2. Improve farm management techniques with our automatic alert system you will know when your animals require dietary changes or produce below the expected level. Best practices are included to facilitate your management, helping you to increase your farm production month after month.

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6. Source https://www.tambero.com/ free cattle management software he most popular software for the dairy cattle management, beef cattle, breeding farms and agriculture. Manage your animals and plots, inseminations, health events, feed rations, milk production, fattening, heat detection and stress levels