VETWARE PRIVATE LIMITED

DAIRY ANIMAL PRODUCTIVITY ENHANCEMENT / GENETIC IMPROVEMENT PROGRAMS

With

HERDMAN

(ANIMAL DATA RECORDING SYSTEM)

Validated Under projects supported by

National Bank for Agricultural and Rural Development, Mumbai India Country Development Marketplace Award -World Bank, New Delhi

Extensively tested at

Chitale Dairy / NDRI / Hatsun / Prabhat / and Commercial farms all over India

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Herdman Networking Solutions:

Herdman has been developed in modular form so that in different phases additional modules could be added: The modules are:

- 1. **Core Module** including Master entries, Breeding, production, health lifetime records, reports and herd performance analysis
- 2. **AI-Breeding Services**
- 3. Milk Production Recording and analysis
- 4. **Health Module:** Data on vaccination, disease diagnosis, treatment, sickness episodes, etc. can be stored and analyzed.
- 5. **Tele-**veterinary Services
- 6. **Dashboard-** Service tracking, Staff field tracking, Body Condition Scoring
- 7. Service charges online deduction
- 8. SMS / notification services

Salient Features of Herdman:

- The program enables maintaining of lifetime animal records of **cows** and buffaloes
- The records of cow and buffalo are maintained in the same database, but the data analysis and report generation can be undertaken separately.
- The data analysis capability for different breeds of cow
- The program can be custom designed for different breeds by defining parameters
- The data can be analyzed as fertility and production indices
- Generates daily action lists for smooth farm / service management
- The software is window-based and provides the computing and analysis and networking strength of VB.Net and SQL-Server (Oracle) as database.
- It is icon / menu driven hence even a moderately literate farmer can operate the software without any difficulty.
- The records of all categories of animals, such as, calves, heifers, adults, breeding bulls and working bullocks can be maintained.
- The records of culled, sold or died animals maintained in archive files that can be retrieved easily to analyze the data

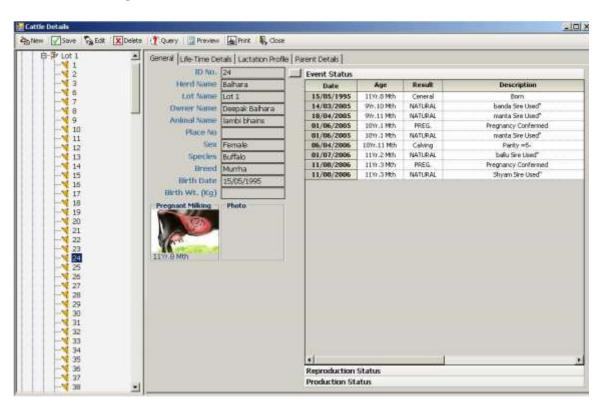
What Data can be maintained? Following categories of data can be maintained:

All estrus and AI events with details such as insemination / skip / natural service, sire
details for all the parities and the AI technician details. Details of treatment given at
the time of AI

- Based on heat synchronization protocols, the program predicts estrus due
- The results of the pregnancy tests / abortion, etc
- Drying off, udder examination report and treatment records at the time of drying-off
- Calving and relevant details.
- Milk records with composition reports
- All sickness events and treatment records
- Feeding details in respect of each animal
- Animal movement records, sold, culled, died, etc.
- Medicine, semen straw, feed and fodder inventory
- Metabolic profiling records

Customized to divert needs: The program can be custom-designed: The program has been provided with facility of fixing the economic and management default values so that the program can installed as per the need of the dairy set up. Thus the program has flexibility of deployment in diverse dairy management set up.

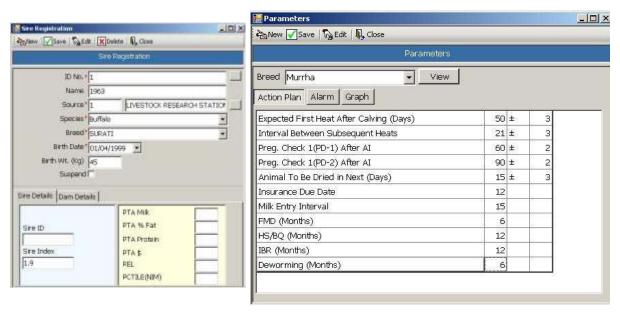
Core Animal Registration Module:



The animals can be registered after creating herds and lots. This makes the animal data access easy and the animals can also be maintained in groups of interest.

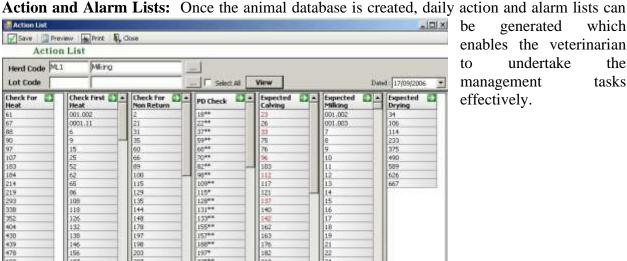
The 'Master Parameter' menu p[provides creation of master entries which can be accessed each time an animal is registered. The animal, parent, other details, such as, previous and current parity breeding, production and health records can be entered without any hassle. The missing parity or lactation data does not hamper analysis of the data.

Custom designing of Herdman: The software can be custom designed for use in the farm. The Farm manager can define the breeding, production, health targets and action parameters suitable and applicable to the farm.



The parameters can be defined for different breeds of animals. Such a facility is available only in Herdman.

Data entry at multi-level: Multi-level data entry is possible. For example in case there are distinct staff carrying out a particular activity, the data entry is possible from a single form. The animal form can be accessed from many levels.



generated which enables the veterinarian undertake the management tasks effectively.

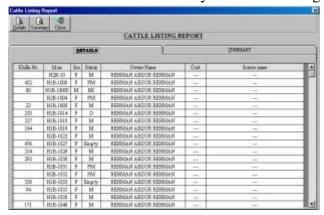
Registers:

erd Name:	-Milking							Date :-12/12/2006
dno	Birth Date	Name	Age	Place No	Owner	Sire	Dam	Status
224	15/08/1996	kundi patali	10 Yr. 4 Mth		003		- 54	Milking
234	15/02/2000	1 No. farasa	6Yr 1D Mth		003			Pregnant Milking
233	15/12/1998	kundi jhoti r	BYrs	1 2	003	-		Pregnant Milking
232	15/01/1997	tall horn	9Yr.11 Mth		003	1 2	1.5	Milking
231	15/12/1999	ihoti nasal v	7Yrs		003			Pregnant Dry
230	15/02/2000	kundi	6Yr 1D Mth	-	003	1 2	-	Pregnant Milking
229	15/02/2000	round horn	6Yr.10 Mth	7.50	003	10.00	100	Pregnant Dry
228	15/05/1997	kali kandi	9Yr.7 Mth		003		-	Pregnant Milking
227	15/02/2000	lambe thun	6Yr.10 Mth		003		100	Pregnant Milking
215	15/07/1995	bichakani it	11Yr.5 Mth		003	11.18	1	Milking
225	15/01/1997	pakka chad	9Yr.11 Mth		003	100		Milking
237	15/11/2000	moti	6Yr 1 Mth	19	003	19	59	Milking
			1	Balhara I Bullwise	D airy Fa			Date 12/12/20
Idno	Dar		95/06/2005		Age		cres Married	
						Ist Lactati	on Viold	Ť

Reports: All types of 'Reports' can be generated, which include administrative as well as technical. There is also facility for custom-designing of the reports as per your need.

Age

Ist Lactation Yield



Dam

Birth Date

Idno

001.222

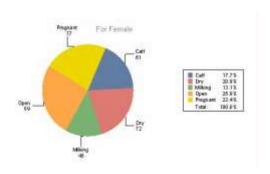
'Herdman' is capable of generating several reports that are either for the current date or for the desired period. Reports such as, administrative, milk production, breeding, due for calving, semen utilization, heifer, calves, etc., can be generated with a click. Every report also provides a summary report of the herd or lot for various attributes. You can comply the reports to your administrator with just a click of mouse.

A number of technical reports can also be generated. For example, you can generate a report for animals that are to be pregnancy examined.

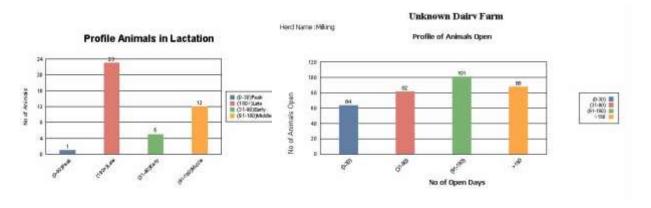
Unknown Dairy Farm Damwise Daughter Register

Date :-12/12/2006

Idno	Sire	Birth Date	Age	1st Lactation Vield
0010.1	banda	05/06/2005	1 Yr.6 Mth	3.5
001.222	+ :	+	:-:	100







Well Known Dairy

Monthwise Conception during the period Dec-2005 to Dec-2006

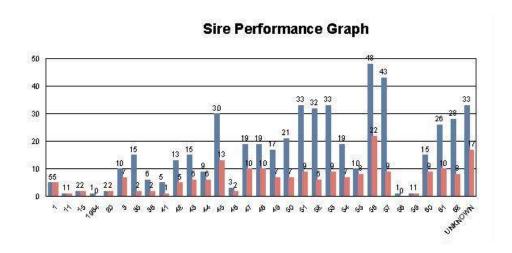
April-2006

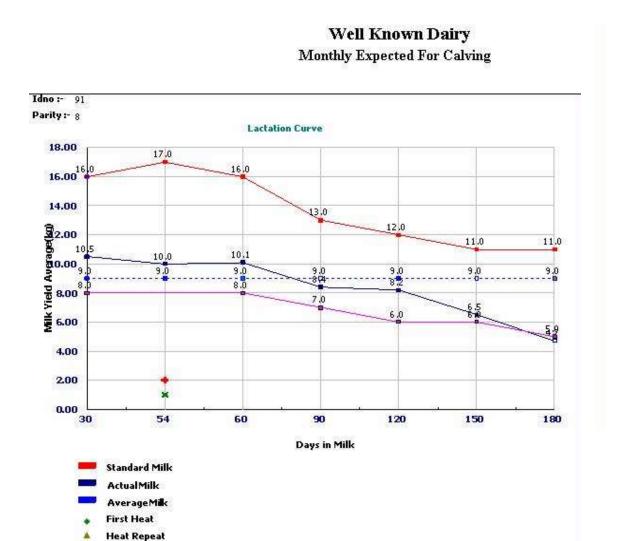
Idno	Conception Date	No Of A.I	Sire Name			
Kanthi(243)	26/04/2006	1	UNKNOWN			
Gokul(18)	12/08/2006	1	UNKNOWN			
Gyani(135)	16/01/2006	3	UNKNOWN			
Heeral(242)	20/06/2006	1	UNKNOWN			
Hema(154)	21/12/2005	1	UNKNOWN			
Hemu(168)	30/01/2006	2	UNKNOWN			
Hemu(168)	30/01/2006	2	UNKNOWN			
Jaanaki(46)	23/03/2006	1	UNKNOWN			
Jalpari(239)	15/04/2006	1	UNKNOWN			
Madhura(5)	05/07/2006	4	UNKNOWN			
Kalpana(150)	10/02/2006	7	UNKNOWN			
Chandramukhi(20	07/04/2006	3	UNKNOWN			
Koyal(257)	25/07/2006	1	UNKNOWN			
Krishna(201)	23/12/2005	1	UNKNOWN			
Kumkum(235)	11/09/2006	1	UNKNOWN			
Kunthi(125)	31/12/2005	2	UNKNOWN			
Latori(138)	05/02/2006	1	UNKNOWN			

	Lac	ation	n Reco	ord for	Milking	Well K Animal				սց-2006	to Dec	2006		
Herd Name:	Buffiele									1	Print Date	- 12/12	2006	
16 No.	Caking Date			Days.										Totalkg.)
			30	60	50	120	150	180	210	240	279	365	>305	100000000000000000000000000000000000000
				Milk Yektig.)										
Anarksh(129)	18/10/2006	55	1810	2398	H.A	AK	H.A.	N.A.	N.A	N.A	NA	NA	N.A.	420.8
Bahy(134)	10/10/2006	63	789	2107	198	A.K	H.A.	N.A	H.A.	N.A	N.A.	N.A.	N.A.	309.4
Bipula(206)	22/09/2006	81	88.1	1985	1579	S.A	N.A.	N.A	N.A	N.A	NA	N.A.	N.A	444.6
Chada(170)	16/08/2006	118	1821	2238	2040	2024	4.5	N.A	H.A	H.A	N.A.	NA.	N.A.	816.9
Gyuni(135)	23/11/2006	19	140.4	MA	N.A	N.A.	N.A.	W.A	H.A	N.A	NA	N.A.	NA	140.4
Hema(154)	11/10/2006	62	30.6	63.4	36	H.A	H.A.	N.A	N.A	N.A.	NA	N.A	NA	97.7
Herns (168)	02/12/2006	10	498	B.A	H.A	A.K	N.A.	H.A	H.A	A.K	NA	NA	N.A	49,8
eraProfluct40	11/11/2006	31	A.K	H.A	H.A	A.K	H.A.	N.A.	N.A	N.A.	NA	NA	NA	N.A
Kamali(228)	27/08/2006	107	129.0	1687	2105	124.1	N.A.	N.A	N.A	N.A.	NA	NA	NA	632.4
Kashi(137)	31/10/2006	42	1606	96.9	H.A.	N.A.	N.A.	N.A.	N.A	N.A	NA	NA	NA.	257.6
Eaviths(104)	23/08/2006	111	1670	2410	2058	1779	H.A	N.A	M.A.	R.A.	NA	N.A.	N.A	791.7
Eurito(125)	21/11/2006	21	114.6	B.A	H.A	N.A.	N.A	H.A	H.A	N.A	NA	N.A.	NA	114.6
Lateri(138)	02/12/2006	10	49.6	B.A	N.A.	N.A	N.A.	H.A	H.A	A.H.	NA	NA	N.A.	49.6
Madin(145)	10/11/2006	32	1146	10.7	N.A	N.A.	N.A	N:A	N.A	A.H	NA	NA	NA	125.2
Marrie (199)	12/09/0006	117	1199	1799	2015	1926	10 A	WA	10 A	10 A	N.A.	MA	N 6	694 3

Semen Straw Inventory Management: Herdman' also automatically maintains the semen straw or bull records. Very time a straw from a bull is used, the records for straw and the bulls are updated and once the animal is confirmed pregnant, the pregnancy is added in the record of the bull. Herdman also produces the bull performance report for the farm. Consolidation of such report from all the farms / village enables calculation of bull indices.

Thus, the Farm Manager can analyze fertility data and take decision on use of different bulls in the farm.

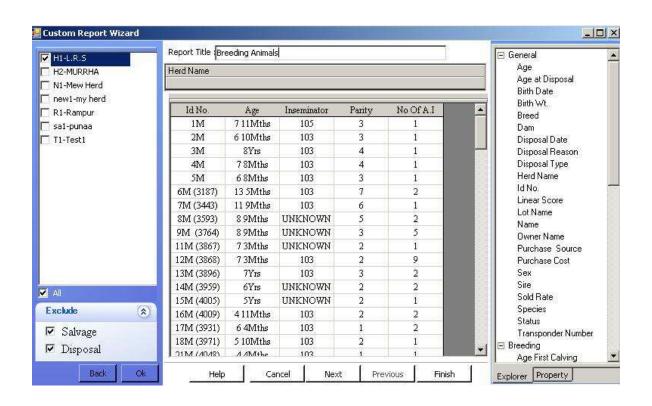


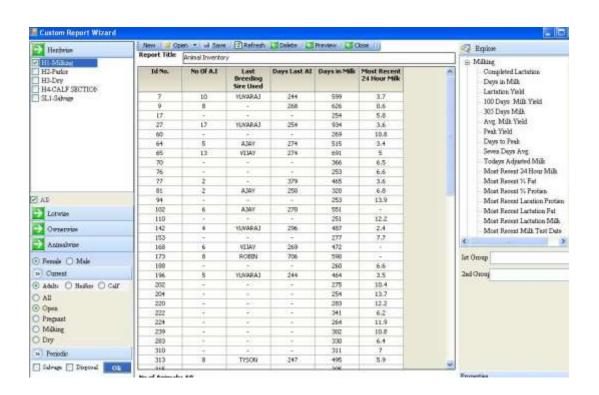


Lactation Curve: the program can generate lactation curve from the milk production data. The curve also depicts other events related to lactation curve such as heat, pregnancy, disease treatment, etc.

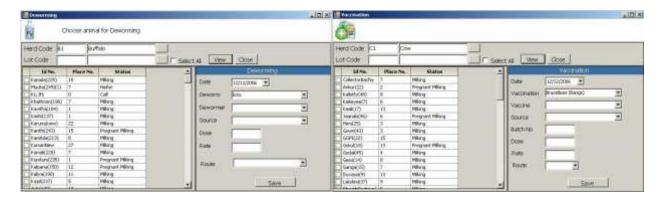
Customized Reports:

Herdman provides facility for customized reports. From amongst more than 180 parameters the veterinarian or manager can select any number of parameters and generate report of his choice. There is also facility to sort data for various parameters. The unique feature of Herdman is sorting of animals' performance based on its outcome such as economic efficiency of the animal. This enables the manager take decisions based on economic performance of the animal. This also allows selection of animals for breeding purposes.



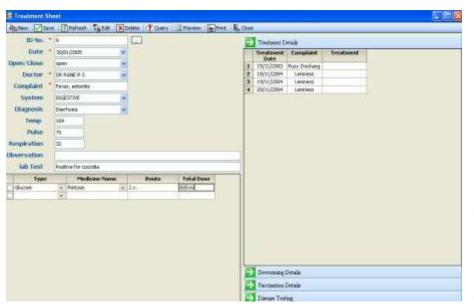


Vaccination and Deworming Records: The records of all vaccination and deworming can be entered as village herds and maintained. The data of production, fertility can be correlated with these parameters.



De-worming and Vaccination entry forms for the village cooperative herds

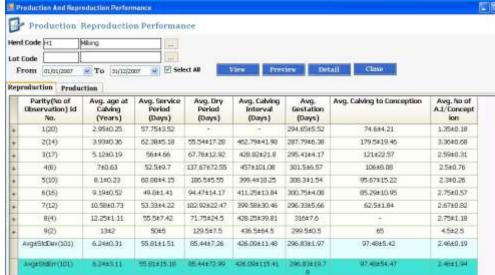
Sick Animal Case papers and treatment records: 'Herdman' maintains lifetime records of all



the treatment carried individual in out animal. The database for different symptoms, systems, and the diseases are in-built so the user has to just select from the combo box. The program also indicates the dose different rates for drugs and the milk withdrawal alarm is also given. The old treatment records can be retrieved with a

click. This also enables calculation of true disease rates in the farm. When antibiotics are used, the software also warns the farmers about the residues within the withdrawal period. Many software currently available do not have this facility.

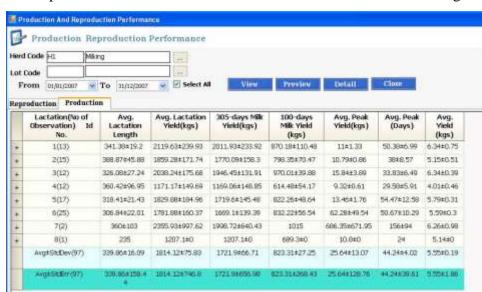
Herd performance indices: The ultimate objective of the animal data management is to



analyze the data to calculate production, breeding and herd indices to indicate how the herd is performing. Herdman calculates production reproduction-based herd indices (as mean + Standard deviation) for each lot or herd. This is the unique feature this software. of

Herd indices, such as, average milk yield per lactation day, average yield per lactating animal, peak yield, days to peak yield, average lactation length, etc., can be calculated.

The reproduction-related indices that can be calculated are: mean age for first heat in heifers,



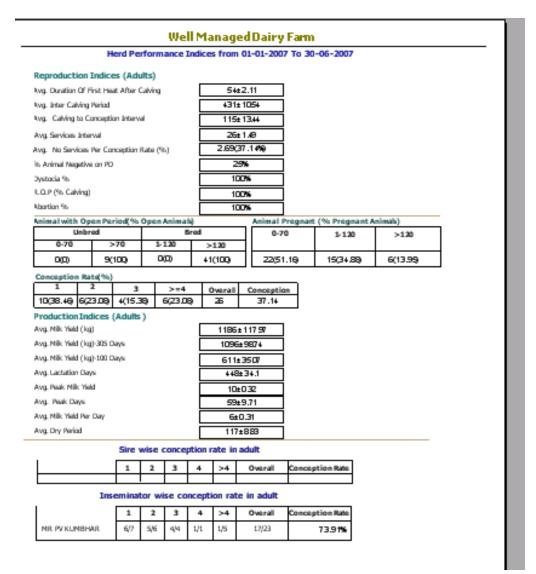
mean age of calving in heifers, mean days after calving to first heat, mean conception rate, mean A.I. per conception, etc.

The village / block or district level data can also be analyzed for other economic parameters.

The analysis as indices facilitate

diagnosis of problems in the herds so that feeding or management or therapeutic intervention decisions can be taken.

Apart from conventional performance indices, the data can also be analyzed for economic indices which are important to plan for cost reduction to help farmers maximize profits.

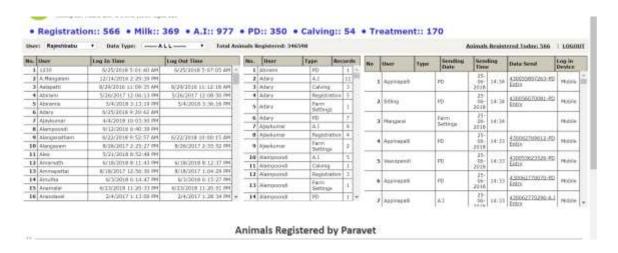


Economic Parameter-based herd performance indices

Digital Vaccination Certificate: Vetware generates vaccination certificate for each farmer which is deposited in the animal file and the owner cell phone. The farmer is also provided alerts when due for vaccination. Maps of complying and non-complying farmers with disease occurrence can be generated.

Dashboard for tracking services, Geo Maps and Analytics:

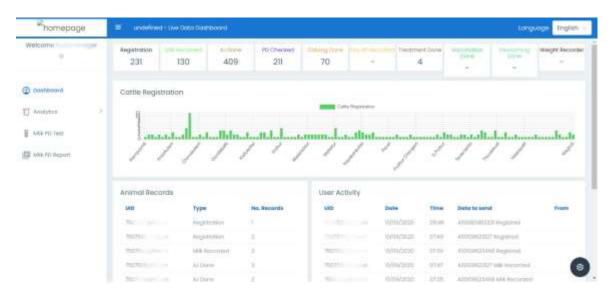
A browser-based dashboard enables the managers to track the service provider works in the field in real-time, calculate km travelled based on Google maps and time spent on field visit. The tracking is based on detection of the GPS location and the scanning of the ear tag of the animals serviced.



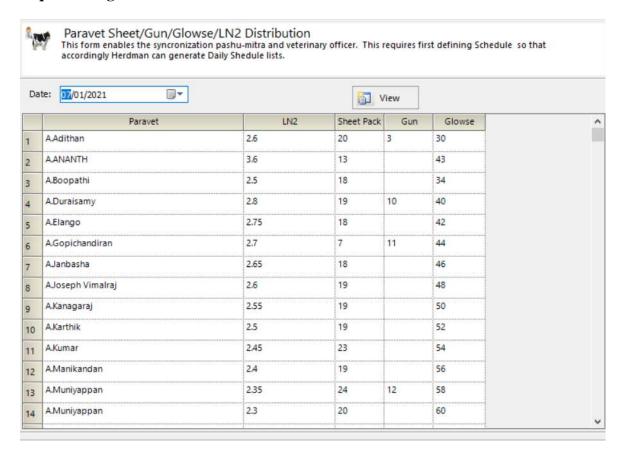
Doctor Services Tracking:



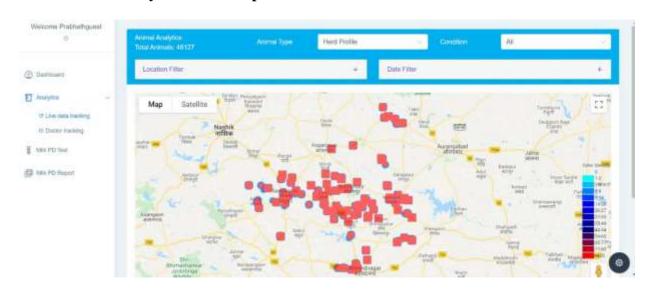
Live-Services Data Tracking:



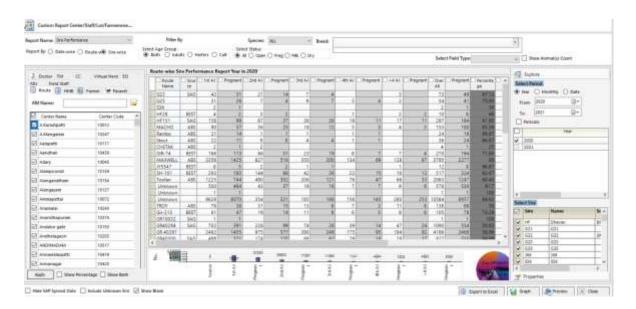
Liquid Nitrogen and Accessories Distribution:



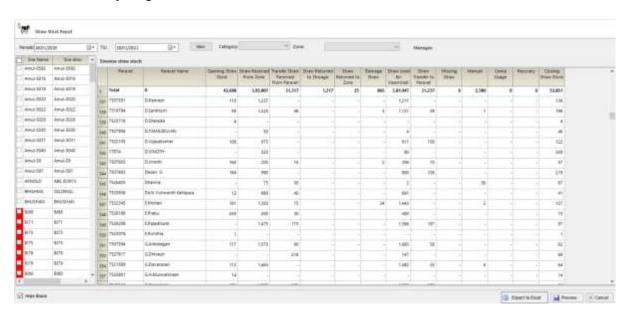
Animal Traceability with GPS maps:



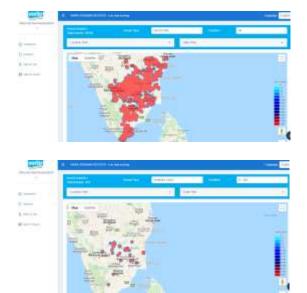
Sire Performance Report:



Stock Inventory Report:

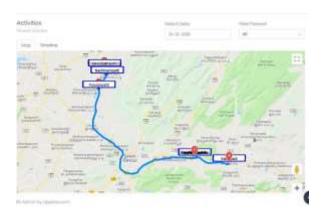


Maps:



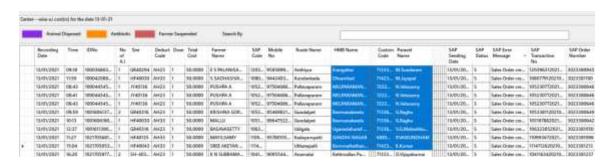
Herd profile- areas where cows / buffaloes / pregnant / open / repeat breeders / dry / advanced pregnant, recently calved cows are located

Vaccinated / un-vaccinated, mastitis treated, drug administered, FMD, etc. The side picture is of areas where enrofloxacin has been used



Tracking of the veterinary service providers work

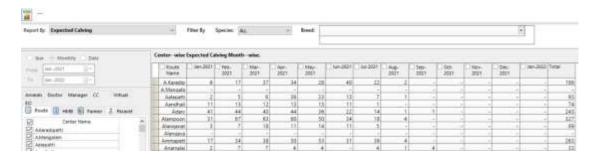
SAP Integrated Report:



Expected Milk Production- Center-wise



Expected Calving Report:



Service Charges Deduction Report: