

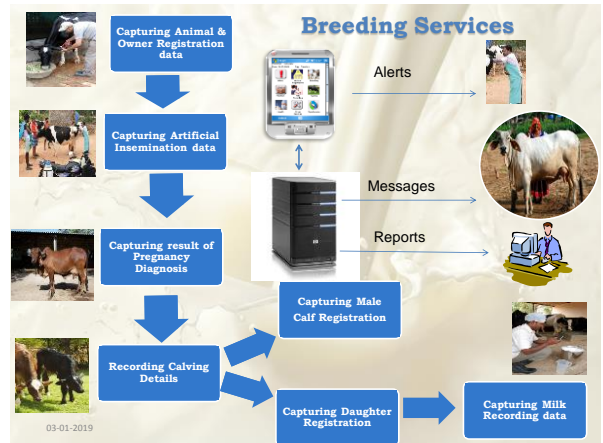


Tools and Technology

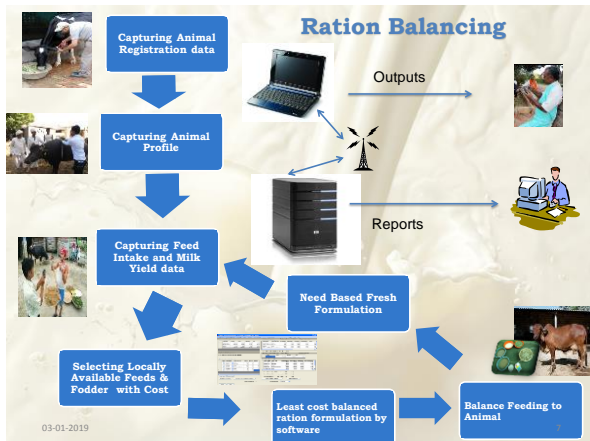
- Client Server Technology
- Tools:
 - Microsoft .NET Technology
 - I Notify sync middleware for Sync process
 - SMS Engine
 - SSRS for Analytical Reports
 - Android JDK 7.0
 - Crystal Report
- Servers:
 - Database Server: MS SQL Server 2012
 - Application Server: IIS Server 8.0
- Security
 - Firewall

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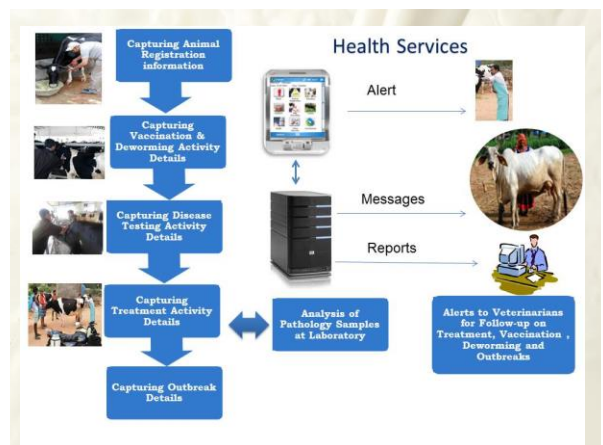


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Animal Identification



- A Unique 12 Digit Barcoded Ear Tag to identify, register and track each Animal



- Provision for Ear Tag Change as well as Animal Movement, Sales, Death, etc. without loosing Animal History

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Unique Bull / Semen Identification

12 digit unique ID



SS unique Bull ID

SAG-HFSH-1340

XXX-XXAA-9999

Semen Station Code

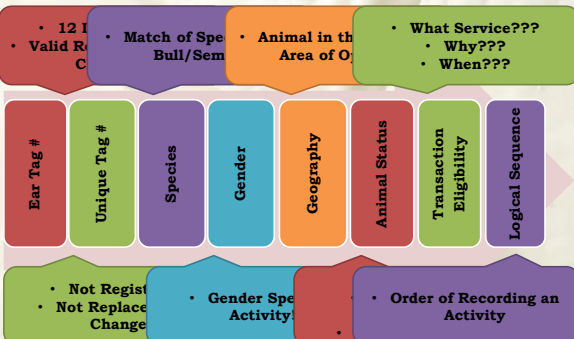
Breed Combination

Running Serial Number

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Activity Recording & Validation Checks



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INAPH is a bunch of Applications

Admin Application

To create Masters

Main Application

To capturing field data.

LAB Application

for Analysis of Milk, Fodder and pathology samples

Web based Reporting Tool:

Analysing data and monitoring field activity.

Online

Offline

- Android Smart Phone
- Netbook based

Web based

MIS Reports

Analytical Reports

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Admin Application

INMIS - Information Network for Animal Productivity and Health
Information Network For Animal Productivity And Health

Today's Date: 25-09-2014 Day: Wednesday Logout Exit

Generic Modules

- Organization
- Reports
- Village Distribution
- AI Centre
- User Profile Management
- Access Privilege
- Item Master
- Item Transaction
- Laboratory
- General AI To Test AI
- General AI To Nonmated AI
- Animal Database
- User - Synchronization List
- SNIS Regulation
- User Synchronization Report
- Out view hierarchy
- SNIS Settings
- SNIS Report
- SNIS Health Information

Domain Specific Modules

Breeding

- Semen Station
- Bull master
- Test, Issue Distribution Plan
- Genetic Defects

Nutrition

- Feed Analysis and Test Mapping
- Feed Sub class
- Man Feed Library
- District Feed Library
- Maintenance Requirement

Health

- Disease
- Examination Date
- Design Frequency
- Vaccination
- Pathology Sample List
- Medicine Route Master

Targets

- Target Parameter Creation
- Target Parameter Recording

Breeding Value Estimation

- Breeding Value Estimation
- Breeding Value Update
- BM Component Analysis Range
- Growth Monitoring Master

Milk Production

- Transparency Requirement
- Growth Requirement
- Dry Matter Requirement Range
- Concentrate Forage Ratio

Medicine

- Medicine
- Sanction
- Action Taken
- Infection Source
- Medicine Form Master

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Location/Geography Hierarchy

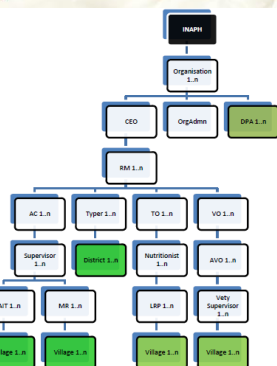


As per GOI, 2011 census.

State	35
District	648
Taluka	6,072
Rev Village	6,12,426
Hamlet	1,693,646

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Access Hierarchy



- Five Level of Access Hierarchy
- Multiple villages to one Field Users.
- Same Village can be assigned to multiple Field Users.
- Role** (AI tech, LRP, Milk Recorder, Health worker, Analyst etc) and **Hierarchy Based Access Control**.
- Organization level** administration managed at local EIA level through Admin Application.



Main App for Netbook and Laptop

INMIS - Information Network for Animal Productivity and Health

Today's Date: 25-09-2014 Day: Wednesday Logout Exit

Animal Identification Registration

- Animal Registration
- Animal Identification
- Animal Movement (AI, AI, AI, AI)
- Animal Movement (AI, AI, AI, AI)
- Animal Movement (AI, AI, AI, AI)
- Animal Movement (AI, AI, AI, AI)

Breeding

- Artificial Insemination (AI)
- Artificial Insemination (AI)
- Artificial Insemination (AI)
- Artificial Insemination (AI)
- Artificial Insemination (AI)
- Artificial Insemination (AI)

Health

- Individual Services
- Individual Services
- Individual Services
- Individual Services
- Individual Services
- Individual Services

Nutrition

- Ration Balancing
- Ration Balancing
- Ration Balancing
- Ration Balancing
- Ration Balancing
- Ration Balancing

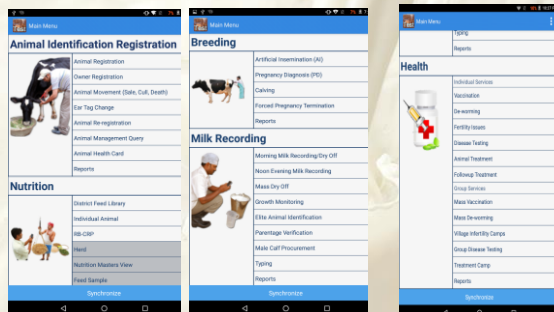
Propriety Testing (Milk Recording)

- Propriety Testing (Milk Recording)
- Propriety Testing (Milk Recording)
- Propriety Testing (Milk Recording)
- Propriety Testing (Milk Recording)
- Propriety Testing (Milk Recording)
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Miscellaneous Reports

- Miscellaneous Reports
- Miscellaneous Reports
- Miscellaneous Reports
- Miscellaneous Reports
- Miscellaneous Reports
- Miscellaneous Reports

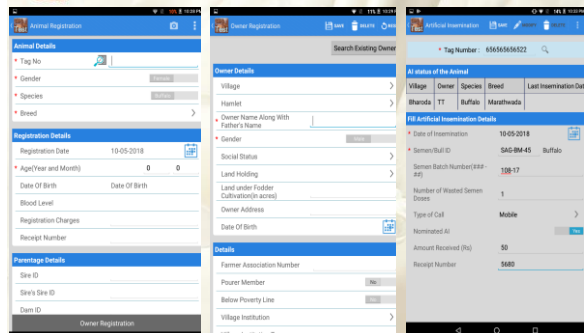
Main App for Android Smartphone



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Event recording from field



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Reports

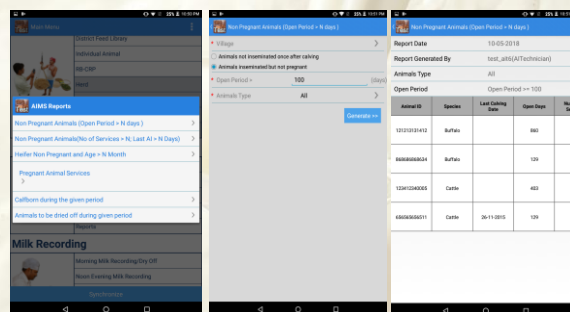


- Role and Hierarchy based Reporting covering one or more Functional Areas.
- Provides Decision Supports as well as Operational Support based on the requirements.
- Provide Alerts to take action in Real Time.
- Web based Reporting on Common INAPH Portal at <http://inaph.nddb.coop>

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Operational report from Smartphone



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Alerts For Follow up Activities

Alerts on netbook

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Alerts on Mobile

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MIS:- Management Information System

INAPH - Management Information System

Registration Breeding (AI) Milk Recording (PT) Nutrition (RBS) Health Management

Animal Registration Breeding (AI) Milk Recording (PT) Nutrition (RBS) Health Management

Animal Status Artificial Insemination Milk Recording

Ear Tag Change Pregnancy Diagnosis Animal Milk Yield

Elite Animal Declaration Calving Animals Dried-Off

Animal Movement Breeding Summary Test Dose Distribution Plan

User Profile & Area of Operation Artificial Insemination Followup Daughters' Follow-up

INAPH Sire Directory Growth Monitoring

Parentage Verification

Elite Animals' Follow-Up

Growth Monitoring Follow-Up Report

Animal Details for Genomic Sample Collection

Bullwise Daughters' Follow-up

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INAPH - Management Information System

Home Registration Breeding (AI) Milk Recording (PT) Nutrition (RBS) Health Management Migration

Parameter Section

Organization: NDDB - Baram Karkh (Breed Development Project) [Select All] * Village: [Select All] Species: [Select All]

Animal Status: [Select All]

365 Days Yield: [100] Peak Yield: [5] Lactation No: [1] Lactation No To: [1]

Date From: [25-Jan-2017] Date To: [22-Apr-2018] View Data Export Reset Daughters Location Filter

Display Section

S.No.	AnimalID	AnimalName	OwnerName	AnimalType	AnimalStatus	Milk	Breed	Days	RecordNo	RecordingDt	MilkDays	DayYieldKgs	FatPercentage
1	Baram Karkh (Dewar)	RAYA	RAYA	patel bababehn individual	340017642183	Alive	Y	Kankrej	Cattle	25-Dec-2012	9	15.95	3.80
2	Baram Karkh (Dewar)	RAYA	RAYA	Patel Bababehn individual	340017642183	Alive	Y	Kankrej	Cattle	05-Dec-2012	10	15.13	4.00
3	Baram Karkh (Dewar)	RAYA	RAYA	patel bababehn individual	340017642183	Alive	Y	Kankrej	Cattle	16-Aug-2012	107	13.07	4.20
4	Baram Karkh (Dewar)	RAYA	RAYA	patel bababehn individual	340017642183	Alive	Y	Kankrej	Cattle	12-Jan-2013	9	12.97	4.50
5	Baram Karkh (Dewar)	RAYA	RAYA	Patel Bababehn individual	340017642183	Alive	Y	Kankrej	Cattle	13-Jan-2013	108	13.07	4.20
6	Baram Karkh (Dewar)	RAYA	RAYA	Patel Bababehn individual	340017642183	Alive	Y	Kankrej	Cattle	03-Jan-2013	110	13.07	4.20
7	Baram Karkh (Dewar)	RAYA	RAYA	Patel Bababehn individual	340017642183	Alive	Y	Kankrej	Cattle	09-Dec-2012	112	13.07	4.20

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INAPH - Management Information System

Home Registration Breeding (AI) Milk Recording (PT) Nutrition (RBS) Health Management Migration

Parameter Section

Organization: NDDB - Baram Karkh (Breed Development Project) [Select All] * Village: [Select All] Species: [Select All]

Animal Status: [Select All]

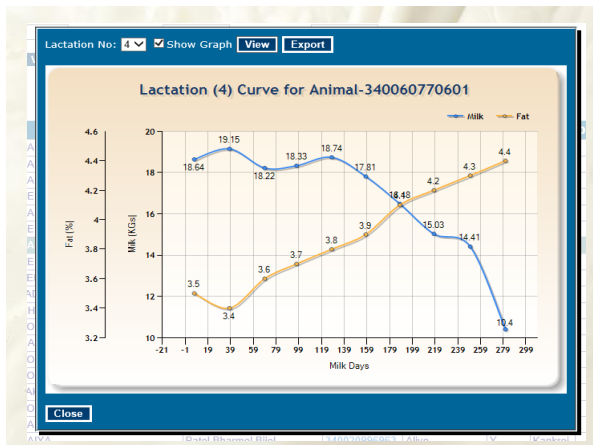
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Analytical Reports

National Dairy Development Board
(NDDB) Information Network for Animal Productivity and Health

Welcome: sag.jc Today's Date: 17 May 2015 Day: Thursday

Health Reports

- 1 Animal Treatment Summary
- 2 Vaccination Dosing Summary
- 3 Disease Feeding
- 4 Disease Pattern
- 5 Disease Specific Efficacy
- 6 Outbreak
- 7 Pathology Sample Summary

Nutrition Reports

- 1 Village wise Ration Balancing Coverage
- 2 RDP Impact
- 3 Month wise Progress Report
- 4 Location wise Progress Report
- 5 User wise Progress Report
- 6 Surplus Deficit Status
- 7 Feed Cost Report
- 8 District Wise Feeding Practices
- 9 RDP Lactation yield and Curve Report
- 10 Feed Sample Regional Summary Report

Analytical Reports

- 1 Bulb Wire Type Details
- 2 Bulbwire Milk Production & Component Analysis
- 3 Reproduction Performance of Bulls - General Screen Doses
- 4 Bulb wire Normalized Mating Report
- 5 Test Dose Analysis Report
- 6 Reproduction Performance of Bulls - Test Semen Doses
- 7 Village Status Report - Production
- 8 Village Status Report - Lactation Wire

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Bull wise Milk Production and component analysis

Max Rows: Welcome: sag.jc Today's Date: 17 May 2015 Day: Thursday

Bullwise Milk Production & Component Analysis

Bull Number	Breed	Status	No. Of Daughters	Avg. Days in Milk	Avg. Milk Yield (kg)	Avg. Fat (%)	Avg. Fat (kg)	Avg. Protein (%)	Avg. Protein (kg)	Avg. Lactone (%)	Avg. Lactone (kg)	Avg. SCC	Avg. MIN
QUR-MHF-38	Mithuna	Animals Under Reco-10/Animals completed Reco-5	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QUR-MHF-36	Mithuna	Animals Under Reco-21/Animals completed Reco-4	25	113.00	562.00	7.40	0.50	3.27	0.26	5.39	0.41	0.00	0.79
QUR-MHF-54	Mithuna	Animals Under Reco-34/Animals completed Reco-4	4	191.00	1547.30	7.40	0.50	2.86	0.24	5.59	0.40	0.00	0.81
QUR-MHF-52	Mithuna	Animals Under Reco-25/Animals completed Reco-21	40	223.00	1365.01	6.80	0.40	3.70	0.26	5.30	0.37	0.00	0.66
QUR-MHF-510	Mithuna	Animals Under Reco-30/Animals completed Reco-4	42	217.00	1228.01	7.30	0.47	3.44	0.21	5.40	0.36	0.00	0.81
QUR-MHF-538	Mithuna	Animals Under Reco-18/Animals completed Reco-4	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QUR-MHF-527	Mithuna	Animals Under Reco-18/Animals completed Reco-21	40	194.00	1010.00	7.40	0.40	3.36	0.23	5.47	0.37	0.00	0.66

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Animal History Sheet

INAPH Individual Animal History Sheet

24-Nov-2015

Animal TagID: 340021488202 Registration Dt: 26-Nov-2011 Birth Date: 26-Nov-2011

Organization: NDDB-KMF PT PROJECT Owner: Ramalingappa

Breed: HF Species: Cattle Herdlet: KADALAVENI Mobile No:

Location: Kadalaveni (Gauribidanur, Chikballapur, KARNATAKA)

Status: Alive-F DamID: 340022885792 SireID: KMF-500

Date	Transaction	Description
26-Nov-2011	Registration	User: kolhkar
07-May-2013	AI	Lactation 1 - ATType Test - BullID KMF-545 - User: kolhkar
07-Aug-2013	PD	PDStatus: Y - User: kolhkar
14-Feb-2014	Calving	Lactation 1 - Type Single Male - Ease Normal - Calf M - User: kolhkar
25-Mar-2014	MRR	Lactation 1 - RecordNo: 1 - DayYield 5.45, SampleBottleNo.: SampleBottleNo.: - User: kolhkar
25-Apr-2014	MRR	Lactation 1 - RecordNo: 2 - DayYield 5.78, SampleBottleNo.: SampleBottleNo.: - User: kolhkar
25-May-2014	MRR	Lactation 1 - RecordNo: 3 - DayYield 5.95, SampleBottleNo.: SampleBottleNo.: - User: kolhkar
25-Jun-2014	MRR	Lactation 1 - RecordNo: 4 - DayYield 5.82, SampleBottleNo.: SampleBottleNo.: - User: kolhkar
25-Jul-2014	MRR	Lactation 1 - RecordNo: 5 - DayYield 7.09, SampleBottleNo.: SampleBottleNo.: - User: kolhkar
25-Aug-2014	MRR	Lactation 1 - RecordNo: 6 - DayYield 6.28, SampleBottleNo.: SampleBottleNo.: - User: kolhkar
25-Sep-2014	MRR	Lactation 1 - RecordNo: 7 - DayYield 5.55, SampleBottleNo.: SampleBottleNo.: - User: kolhkar
25-Oct-2014	MRR	Lactation 1 - RecordNo: 8 - DayYield 5.03, SampleBottleNo.: 210233, SampleBottleNo.: 134 - Fat: 4.51 - User: kolhkar
25-Nov-2014	MRR	Lactation 1 - RecordNo: 9 - DayYield 5.35, SampleBottleNo.: 210233, SampleBottleNo.: 190 - Fat: 4.72 - User: kolhkar
15-Dec-2014	AI	Lactation 2 - ATType Test - BullID KMF-596 - User: kolhkar
26-Dec-2014	MRR	Lactation 1 - RecordNo: 10 - DayYield 4.22, SampleBottleNo.: 210233, SampleBottleNo.: 239 - Fat: 4.21 - User: kolhkar
25-Jan-2015	MRR	Lactation 1 - RecordNo: 11 - DayYield 3.39, SampleBottleNo.: 210233, SampleBottleNo.: 290 - Fat: 4.33 - User: kolhkar
18-Mar-2015	AI	Lactation 2 - ATType Test - BullID KMF-600 - User: kolhkar
13-Apr-2015	AI	Lactation 2 - ATType Test - BullID KMF-599 - User: kolhkar
15-Jul-2015	PD	PDStatus: Y - User: kolhkar

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SMS Messages to Farmer

AI	<ul style="list-style-type: none"> Animal Expected to come in heat during <Date1> to <Date2> Animal Non-pregnant, open period Months Heifer Non-pregnant, open periodmonths
PD	<ul style="list-style-type: none"> Animal due for PD, inseminated on <Date1>
Calving	<ul style="list-style-type: none"> Animal expected to calve during next week.
Milk Recording	<ul style="list-style-type: none"> Animal Due for Milk recording Abnormal Variation in Milk recording Lactation record <Total Yld>, <Std.Yld>, <Milk Days>, <Av.Fat%>, <Protein%>, <Lactose%>

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Field Implementation Support

- NDDB Level**
 - Software Development, Maintenance, Enhancement
 - Training to Trainers
 - Training for Analytics
 - Troubleshooting
- User Agency**
 - Training to field users
 - First hand troubleshooting
 - Data Capturing
 - Field Testing

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INAPH Portal

Enhanced INAPH Portal (<http://inaph.nddb.com/>), a single window interface to access all INAPH components with extended interface for farmers.

03-01-2019

