

Monitoring AI network using INAPH and analytics

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Why AI

- Why Artificial Insemination?
 - Genetic Improvement !!!!
 - Better Reproduction Management !!!

Both aspects require individual animal wise information

Right now most of AI networks delivers none – bull does better job

Monitoring AI network

- Progress reporting
- Checking quality of operations
- Identifying problems
- Deriving important reproduction parameters
- Possibilities if system is used for recording AI, Milk production, Veterinary treatment and Ration Balancing information.

Any computer system will give **Outputs based on **Inputs** we provide
GIGO**

Data recorded while registration



Animal Registration



Tag Number:

Animal Details

Eartag Number:

Registration Date:

Sex : ☐ Male ☐ Female

Species: ☐ Cattle ☐ Buffalo

Breed(s):

Age(Year and Months): -

Date of Birth:

Blood Level:

Sire ID:

Dam ID:

Sire's Sire ID:

Dam's Sire ID:

Number of Calving:

Last Calving Date:

Pregnancy Status: ☐ Yes ☒ No

Pregnancy Months:

Milking Status ☐ In Milk ☒ Dry

Immediate Milk Recording? : ☐ Yes

Registering Organisation:

Get Breed

Reset

Owner Details

Owner Details

Previous Owner Details

Owner Name	Gender	Affiliated Agency	Village Institution	Farmer Association Number	Below Poverty Line	Mobile Number	Landline Number

Location Details

Hamlet:

Village:

District:

Tehsil:

State:

Register

Modify

Reset

Data recorded while AI



Artificial Insemination



Tag Number :

AI status of the Animal

Village	Owner	Species	Last Insemination Date	Last Bull/Semen ID	Last PD Date	Current Lactation Number	No. of Actual AIs	No. of Total AI

Fill Artificial Insemination Details

Date of Insemination

23-02-2017

Semen/Bull ID

Semen Batch Number(###-##)

Number of Wasted Semen Doses

Type of Call

Nominated AI

☐ Yes

Amount Received (Rs)

Reciept Number

+ Save

Modify

Delete

Reset

Data recorded while PD



Pregnancy Diagnosis



Tag Number :

AI status of the Animal

Bull ID	Village	Owner	Species	Last Insemination Date	Number of Days after Last Insemination	Current Lactation Number	No of Actual AI	AI Type

Last Pregnancy Diagnosis Details

Modify	PD Date	PD Status	Natural Service	Other Service Provider

Fill Pregnancy Diagnosis Details

Date of Pregnancy Diagnosis:

Pregnancy Diagnosis Result: ☐ Pregnant ☐ Non-Pregnant

Natural Service ? : ☐ Yes ☒ No

Other Service Provider ? : ☐ Yes ☒ No

Service Provider Name:

+ Save

Modify

Delete

Reset

Data recorded while calving

Tag Number :  *

Related Animal Details for Last Insemination

BullID	Village	Owner	Species	Last Insemination Date	Gestation Days	Current Lactation Number	Number Of Abortions

Related Animal Details for Last Calving

Modify	Animal Tag ID	Insemination Date	Calving Date	CalvingType	Ease Of Calving

Date of Calving * Calving Type * Ease of Calving *

Remarks

Natural Service ? : ☐ Yes ☒ No

Other Service Provider ? : ☐ Yes ☒ No

Service Provider Name:

Calf1

 Register

Tag Number *

Sex ☐ Male ☒ Female *

Weight (Kg)

Genetic Defects:

Big Head (Hydrocephalus)
Coat Free/Barebody (Alopecia)
Cryptorchid [Testicle(s) unable
Free Martinism
Genertic defects in calf

Calf1's Organization *

Generating Progress report

- Region-District-Tehsil wise
- Officer – Supervisor- AIT wise
- Month wise
- Bull wise



AIMS Review Report



Search **Report**

☒ Role Wise

☐ Location Wise

☐ Bull Wise

☒ Role Wise Summary Report

☐ Location Wise Summary Report

OR

OR

☐ Role Wise Detail Report

☐ Location Wise Detail Report

From Date 23-02-2017

To Date 23-02-2017

Species

AI Type

Generate >>



EN



AIMS Review Report



Search Report

1 of 1 | 100%

Find | Next



NDDB-SAG-PT PROJECT AIMS Review Report (Rolewise -> Summary)

Species: All

Date Range : 01-01-2017 TO 23-02-2017

AI Type : Test

Names		Artificial Insemination						Followed Up AIs					Pregnancies with AIs				
Role	Name	1st AI	2nd AI	3rd AI	>3 AI	Actual AI	Total AI	1st AI	2nd AI	3rd AI	>3 AI	Total AI	1st AI	2nd AI	3rd AI	>3 AI	Total AI
AI Technician	sbrkamleshmp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total :-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





INAPH - Management Information System

(NDDDB)

Welcome ananileshn! [Logout](#)

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[Milk Recording \(PT\)](#)
[Nutrition \(RBS\)](#)
[Health](#)
[Management](#)
[Migration](#)

Update the User Details and Owner Details from "Migration >> User details, Owner details" menu

Artificial Insemination Followup Report

Parameter Section:

Organization:

☐ User:

gidpravins (NAVA VANKA)
godambikapitrn ()
godamnrtg (RABOD)
godarjunas (Kanabi Pali)

☒ Village:

Abdasan
Abhankuva
Abhapur
Acharal

AIType:

Test
Nominated
General

Date From: Date UpTo:
[View Detail](#)
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[Reset](#)
Daughters: ☐ Elite: ☐

Report Section:

Total Records: 137568

SrNo	UserID	UserName	Supervisor	StateName	DistrictName	TehsilName	Village	HamletName	OwnerName	UID
1	sbrakeshvp	Patel Rakesh Virsangbhai	sbrameshsp	GUJARAT	Sabar Kantha	Idar	Abdasan	ABDASAN	PATEL ISHVARBHAI JITABHAI	
2	sbrakeshvp	Patel Rakesh Virsangbhai	sbrameshsp	GUJARAT	Sabar Kantha	Idar	Abdasan	ABDASAN	PATEL ISHVARBHAI JITABHAI	
3	godmukeshcp	Parmar Mukeshumar Chhatrasing	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ATHAMNA FALIYA	arjunbhai harishbhai	
4	godmukeshcp	Parmar								

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Date From: 01-Jan-2016 Date Up to: 31-Dec-2016 View Detail Export Reset Daughters: ☐ Elite: ☐
(Date Format: dd-MMM-yyyy)

Report Section:

Total Records: 137568

SrNo	UserID	UserName	Supervisor	StateName	DistrictName	TehsilName	Village	HamletName	OwnerName	UID
1	sbrakeshvp	Patel Rakesh Virsangbhai	sbrameshsp	GUJARAT	Sabar Kantha	Idar	Abdasan	ABDASAN	PATEL ISHVARBHAI JITABHAI	
2	sbrakeshvp	Patel Rakesh Virsangbhai	sbrameshsp	GUJARAT	Sabar Kantha	Idar	Abdasan	ABDASAN	PATEL ISHVARBHAI JITABHAI	
3	godmukeshcp	Parmar Mukeshumar Chhatrasing	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ATHAMNA FALIYA	arjunbhai harishbhai	
4	godmukeshcp	Parmar Mukeshumar Chhatrasing	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ATHAMNA FALIYA	arjunbhai harishbhai	
5	godmukeshcp	Parmar Mukeshumar Chhatrasing	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	ARVINBHAI CHANDUBHAI	
6	godmukeshcp	Parmar Mukeshumar Chhatrasing	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	RANKALI FALIYA	cauhan ravjibhai sanabhai	
7	godmukeshcp	Parmar Mukeshumar Chhatrasing	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	CHAIHANHA MOHANABHAI CHHAGANABHAI	
8	godmukeshcp	Parmar Mukeshumar Chhatrasing	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	CHAIHANHA NARAVATABHAI BHUPATABHAI	
9	godmukeshcp	Parmar Mukeshumar Chhatrasing	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	CHAIHANHA NARAVATABHAI BHUPATABHAI	
10	godjivatlp	Parmar Jivatsinh Laxmansinh	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	RICHHA FALIYA	chanchalben naravatsinh	
11	godjivatlp	Parmar Jivatsinh Laxmansinh	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	chandaben dhanabhai	
12	godjivatlp	Parmar Jivatsinh Laxmansinh	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	chandaben dhanabhai	
13	godjivatlp	Parmar Jivatsinh Laxmansinh	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	chandaben dhanabhai	
14	godjivatlp	Parmar Jivatsinh Laxmansinh	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	chandubhai somabhai chauhan	
15	godjivatlp	Parmar Jivatsinh Laxmansinh	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	chandubhai somabhai chauhan	
16	godjivatlp	Parmar Jivatsinh Laxmansinh	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	chandubhai somabhai chauhan	
17	godjivatlp	Parmar Jivatsinh Laxmansinh	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	CHANDUBHAISOMABHAI	
18	godjivatlp	Parmar Jivatsinh Laxmansinh	godsurendracg	GUJARAT	Panch Mahals	Kalol	Adadra	ADADARA GAMTAL	CHANDUBHAISOMABHAI	

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AIInfo.csv - Microsoft Excel

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	A	B	C	D	E	F	G	H	I	J
1	UserID	UserName	Supervisor	StateName	DistrictName	TehsilName	Village	VillageCode	Hamlet	OwnerName
2	bnsmailas	Sunasara Ismail Abharam	bnspdtanta	GUJARAT	Banas Kantha	Danta	Aderan (Danta)	'2446903737507942	ADERAN(MAKADI)	agalodiya asarf raje
3	bnsmailas	Sunasara Ismail Abharam	bnspdtanta	GUJARAT	Banas Kantha	Danta	Aderan (Danta)	'2446903737507942	ADERAN(MAKADI)	dhuka salmaben yasin
4	bnsmailas	Sunasara Ismail Abharam	bnspdtanta	GUJARAT	Banas Kantha	Danta	Aderan (Danta)	'2446903737507942	ADERAN(MAKADI)	duka gulam abdul
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16	bnslaljidp	Patel Lalji Dhuda	bnshap	GUJARAT	Banas Kantha	Kankrej	Adhgam	'2446903743508549	ADHGAM	Parmar Dharsi Reva
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22	bnslaljidp	Patel Lalji Dhuda	bnshap	GUJARAT	Banas Kantha	Kankrej	Adhgam	'2446903743508549	ADHGAM	Patel Dinesh Raja
23	bnslaljidp	Patel Lalji Dhuda	bnshap	GUJARAT	Banas Kantha	Kankrej	Adhgam	'2446903743508549	ADHGAM	Patel Galdas Reva
24	bnslaljidp	Patel Lalji Dhuda	bnshap	GUJARAT	Banas Kantha	Kankrej	Adhgam	'2446903743508549	ADHGAM	patel ghada aamatha
25	bnslaljidp	Patel Lalji Dhuda	bnshap	GUJARAT	Banas Kantha	Kankrej	Adhgam	'2446903743508549	ADHGAM	patel jenti mega

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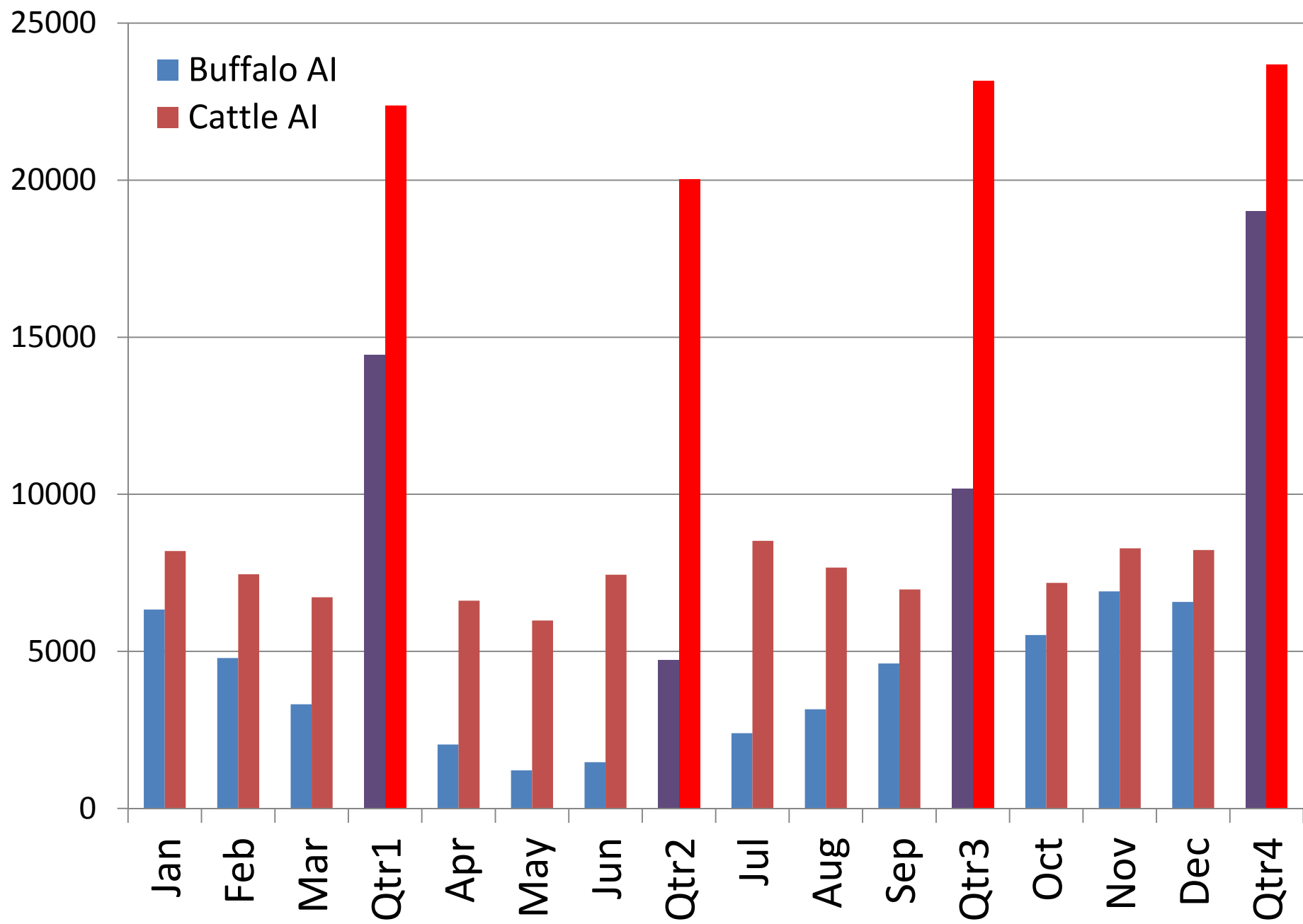
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Excel sheet – Every AI has

- AIT Name
- Location – State-District- Tehsil-Village-Hemlet
- Farmer Name – UID-Mobile No.
- Animal ID - DOB – Lact No. – Last Cal Dt. – AI Dt – Heat cycle Dt. - AI Number in this Lact
- AI bull ID – Batch No.
- PD Dt. – PD Result
- Calving Dt- Calving type – ease of calving – Calf tag ID
- Animal's sire and dam ID
- And many more details retrieved from database

Progress of AI in the year 2016			
Quarter - Month	Buffalo AI	Cattle AI	Total AI
Jan	6333	8193	14526
Feb	4786	7452	12238
Mar	3314	6723	10037
Qtr1	14433	22368	36801
Apr	2035	6612	8647
May	1213	5982	7195
Jun	1473	7439	8912
Qtr2	4721	20033	24754
Jul	2394	8520	10914
Aug	3156	7665	10821
Sep	4616	6970	11586
Qtr3	10166	23155	33321
Oct	5519	7178	12697
Nov	6910	8279	15189
Dec	6575	8225	14800
Qtr4	19004	23682	42686
Grand Total	48324	89238	137562



Bull wise AI

Bull	AI during period
ABC-CB-696	2182
ABC-CB-697	2159
ABC-HG-20772	107
ABC-HK-20770	169
ABC-SM-740	150
ALM-HG-40008	272
ALM-HS-40001	527
ALM-HS-40003	303
ALM-HS-40006	408
ALM-HS-40011	204
ALM-HS-40019	1100
ALM-HS-40056	1222
ROH-RM-026	1684
ROH-RM-027	83
ROH-RM-028	5
ROH-RM-029	13
ROH-RM-030	1511
ROH-RM-031	1055

Comparing Quality of work

- Follow up %
- Conception rate
 - Seasonal influence
 - AIT effect
 - Bull effect
- Calving rates
 - Gestation periods
- Male: Female ratios
- Abortion%

Follow up of AI by users

User Name	Not followed	PD -Ve	PD +ve	Total to be followed	Follow up %
Amol Raoso Dhethe	8	25	25	58	86.21
Balkrishna Narayan Jagtap	7			7	0.00
Bharat Prabhakar Kuber	5	19	34	58	91.38
Dattatray Popat Mane	9	11	10	30	70.00
Digamber Adappa Swami	6	17	13	36	83.33
Kailas Chandrakant Bhadule	2	31	76	109	98.17
Mahendra Tukaram Koli	1	5	8	14	92.86
Mahesh Subhash Lokare	14	5	17	36	61.11
Mehboob Latif Mujavar	41	51	59	151	72.85
Nitinkumar Madhukar Ingawale	21	54	41	116	81.90
Popat Gajendra Nagtilak		13	6	19	100.00
Prakash Subrav Gaikwad	25	10	7	42	40.48
Rahul Chandrakant Yelpalle	2	7	14	23	91.30

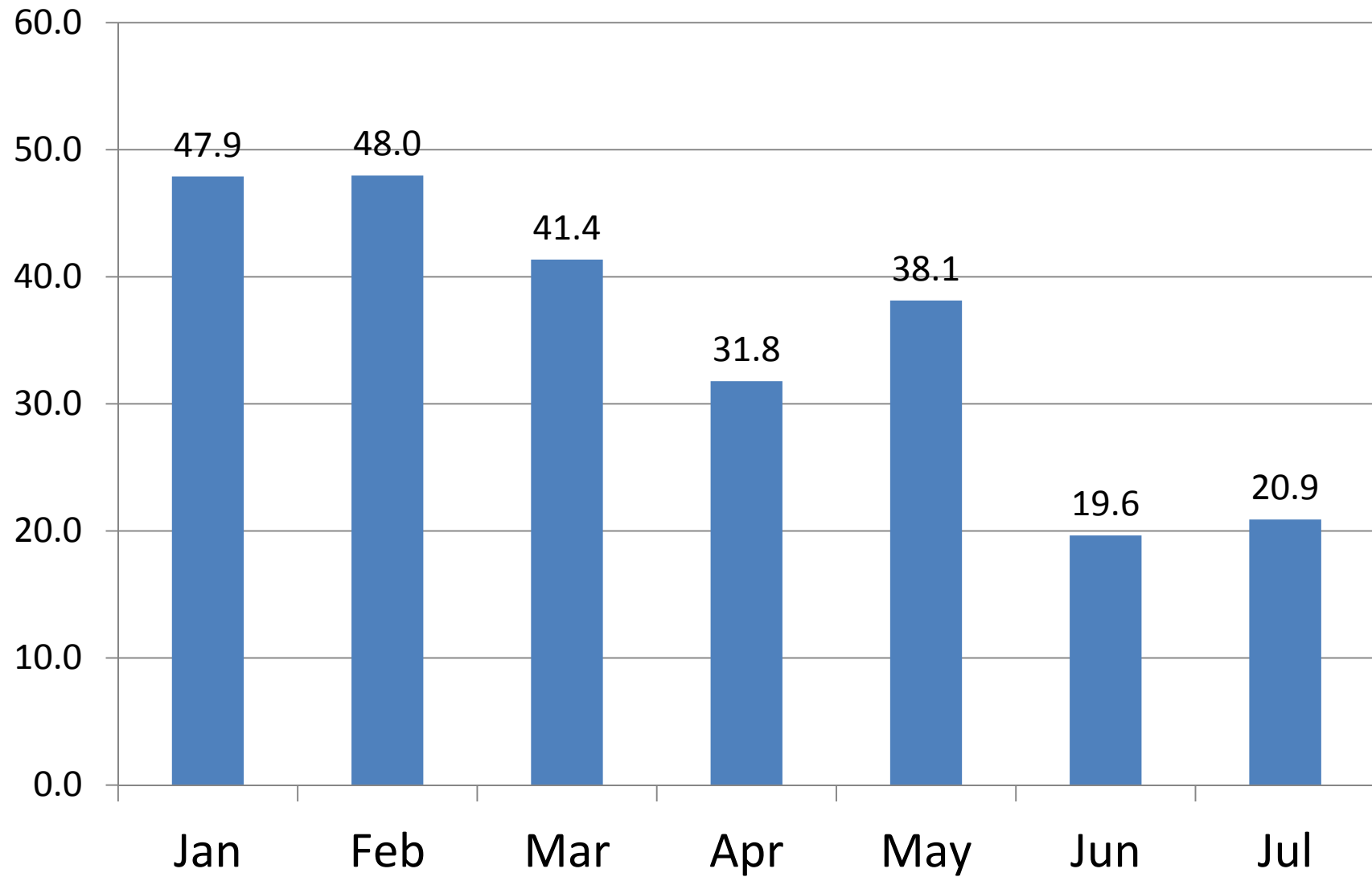
Bull wise CR

Bull	Pregnancies	Total AI	CR
BAF-2871	199	533	37.3
BAF-2882	422	1105	38.2
BAF-PB-67	59	103	57.3
PNE-2927	20	111	18.0
SAG-BP-09	22	57	38.6
SAG-BP-10	14	26	53.8
Grand Total	770	2000	38.5

Bull wise CR

Bull	Preg	AI	CR%
DSU-MB-072	193	694	28
DSU-MB-081	231	648	36
DSU-MB-082	395	1013	39
DSU-MB-083	303	749	40
DSU-MB-085	233	686	34
DSU-MB-086	279	851	33
DSU-MB-088	195	553	35
DSU-MB-089	229	533	43
DSU-MB-091	391	1176	33
DSU-MB-092	516	1401	37
DSU-MB-093	384	1052	37
DSU-MB-094	387	1020	38

Month wise CR



No. of Calvings having different gestation periods – a cattle project

Gestation period days	Single Female	Single Male Still Birth	Twin	Grand Total
<260 or (blank)	29	54		83
260-269	18	65		83
270-279	537	812	2	1357
280-289	129	230	2	361
290-299	13	51		64
300-309	5	31		36
310-319	1	11		12
320-329	2	11		13
330-339		8		8
340-350	1	5		6
>350	1	7		8
Total for Tehsil	736	1285	2	2031

Tehsil wise abortion%

Row Labels	Abortion	Single Female	Single Male	Still Birth	Twin	Total calvings	Abortion %
Anekal	32	438	649		2	1121	2.9
Bangalore North	115	736	1285	2	8	2146	5.4
Chikkaballapura	250	1407	2416	1	7	4081	6.1
Chintamani	73	456	735	3	2	1269	5.8
Devanahalli	122	1326	2199	7	9	3663	3.3
Dod Ballapur	100	1243	1338	1	6	2688	3.7
Gauribidanur	79	352	452			883	8.9
Hosakote	44	434	975	3	4	1460	3.0
Kolar	86	373	818		3	1280	6.7
Sidlaghatta	117	606	895	1		1619	7.2
Grand Total	1018	7371	11762	18	41	20210	5.0

Finding out problems

- Animals with irregular estrous cycles
- Animals with longer heat periods
- Repeat breeder Animals – requiring infertility treatment
- Farmer having more repeat breeder animals
- Village or area having more number of repeat breeders
- AI/T with less conception rates – requiring refresher training
- Bull with less conception rates – required to take steps at SSs

Animal with irregular estrous cycle

AnimalTagId	Species	AnimalTagId	Species	Length of estrous cycle
340006145752	Cattle	26-05-2016	26-05-2016	NA
340006145752	Cattle	12-06-2016	12-06-2016	17
340006145752	Cattle	28-07-2016	28-07-2016	46
340006145752	Cattle	26-08-2016	26-08-2016	29
340006145752	Cattle	11-09-2016	11-09-2016	16
340006145752	Cattle	11-10-2016	11-10-2016	30

Long heat periods

AnimalTagId	Species	HeatCycleDt	InseminationDt	Heat period
340070061541	Buffalo	19-11-2016	22-11-2016	3
340070061288	Buffalo	26-01-2016	29-01-2016	3
340022198593	Buffalo	22-01-2016	25-01-2016	3
340047010971	Buffalo	04-02-2016	07-02-2016	3
340027083420	Buffalo	27-10-2016	30-10-2016	3
340041620730	Buffalo	07-08-2016	10-08-2016	3
340085932518	Buffalo	27-10-2016	30-10-2016	3
340027080431	Buffalo	27-10-2016	30-10-2016	3
340082630652	Buffalo	13-09-2016	16-09-2016	3
340004198421	Buffalo	16-02-2016	19-02-2016	3

Repeat breeder

AnimalTagId	Species	InseminationDt	Alnumber
340023296521	Buffalo	09-03-2016	17
340023296521	Buffalo	26-01-2016	16
340023296521	Buffalo	09-01-2016	15



INAPH Individual Animal History Sheet

22-Feb-2017

Animal TagID: 340023296521

Registration Dt: 07-Mar-2012

Birth Date: 07-Mar-2009

Organization:

Owner: Nayak Shanabhai Nanbhai

Breed: Murrah

Species: Buffalo

Hamlet: RABOD GANTAL

Mobile No:

Location:

Status: Alive-F

DamID:

SireID:

Date	Transaction	Description
07-Mar-2012	Registration	User:godamrutgp
07-Mar-2012	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-311 - User:godamrutgp
03-Jun-2012	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-326 - User:godamrutgp
03-Jun-2012	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-251 - User:godamrutgp
09-Nov-2012	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-316 - User:godamrutgp
11-Feb-2013	AI	Lactation:1 - AIType:Test - BullID:ROH-RM-003 - User:godamrutgp
24-Mar-2013	AI	Lactation:1 - AIType:Test - BullID:ROH-RM-001 - User:godamrutgp
24-Jun-2013	PD	PDStatus:N - User:godamrutgp
26-Nov-2013	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-343 - User:godamrutgp
07-Jan-2014	AI	Lactation:1 - AIType:Test - BullID:ROH-RM-008 - User:godamrutgp
28-Jan-2014	AI	Lactation:1 - AIType:Test - BullID:ROH-RM-008 - User:godamrutgp
21-Apr-2014	AI	Lactation:1 - AIType:Test - BullID:ROH-RM-017 - User:godamrutgp
21-Jul-2014	PD	PDStatus:N - User:godamrutgp
04-Nov-2014	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-379 - User:godamrutgp
03-Dec-2014	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-369 - User:godamrutgp
15-Jan-2015	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-363 - User:godamrutgp
24-Feb-2015	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-370 - User:godamrutgp
24-May-2015	PD	PDStatus:N - User:godamrutgp
27-Oct-2015	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-397 - User:godamrutgp
09-Jan-2016	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-391 - User:godamrutgp
26-Jan-2016	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-391 - User:godamrutgp
09-Mar-2016	AI	Lactation:1 - AIType:Test - BullID:SAG-BM-394 - User:godamrutgp
23-Jun-2016	PD	PDStatus:N - User:godamrutgp

Farmer with more repeat breeder animals

Owner Name	Animal TagId	Species	Insemination Dt	AI number
PATEL DINESHBHAI KISHORBHAI	340056633393	Cattle	07-08-2016	1
PATEL DINESHBHAI KISHORBHAI	340048323490	Cattle	23-06-2016	9
PATEL DINESHBHAI KISHORBHAI	340048323490	Cattle	10-06-2016	8
PATEL DINESHBHAI KISHORBHAI	340048323490	Cattle	09-05-2016	7
PATEL DINESHBHAI KISHORBHAI	340048323490	Cattle	11-04-2016	6
PATEL DINESHBHAI KISHORBHAI	340048323490	Cattle	05-01-2016	5
PATEL DINESHBHAI KISHORBHAI	340022663738	Buffalo	18-03-2016	3
PATEL DINESHBHAI KISHORBHAI	340022586630	Buffalo	07-08-2016	14
PATEL DINESHBHAI KISHORBHAI	340022586630	Buffalo	08-06-2016	13
PATEL DINESHBHAI KISHORBHAI	340022586630	Buffalo	04-04-2016	12
PATEL DINESHBHAI KISHORBHAI	340019880613	Cattle	30-04-2016	4
PATEL DINESHBHAI KISHORBHAI	340019880613	Cattle	20-04-2016	3
PATEL DINESHBHAI KISHORBHAI	340019880613	Cattle	10-03-2016	2
PATEL DINESHBHAI KISHORBHAI	340019880613	Cattle	26-02-2016	1

AIT comparison - CR

Row Labels	Pregnancies	Total AI	CR
Amol Raoso Dhethe	25	70	35.7
Balkrishna Narayan Jagtap	0	7	0.0
Bharat Prabhakar Kuber	34	80	42.5
Dattatray Popat Mane	12	50	24.0
Digamber Adappa Swami	13	50	26.0
Kailas Chandrakant Bhadule	76	146	52.1
Mahendra Tukaram Koli	8	14	57.1
Mahesh Subhash Lokare	17	49	34.7
Mehboob Latif Mujavar	59	181	32.6
Nitinkumar Madhukar Ingawale	42	155	27.1
Popat Gajendra Nagtilak	6	19	31.6
Prakash Subrav Gaikwad	7	54	13.0
Rahul Chandrakant Yelpalle	14	36	38.9
Rajaram Babu Ghadage	7	27	25.9
Rajendra Vitthal Kadam	57	113	50.4
Rajkumar Pandurang Mali	28	61	45.9
Sadhu Tamma Khatal	32	56	57.1

Deriving important population parameters

- Age at first calving
- Inter calving interval
- Service Period
- No. of AI required per calf produced

Age at First Calving

Breed_State	AFC days
Murrah _ Punjab	1252
Murrah Gr. _ Gujarat	1549
Mehsana _ Mehsana dist.	1400
Mehsana _ Banas dist.	1374
Murrah _ UP	1418
JCB_AP	818
HF_Karnataka	1018
JCB_TN	1036
HFCB_Gujarat	1226

Service Period

Project	Proje	Spp	Breed	Obs	Service period Days
MLDB	PS	Buffalo	Pandharpuri	155	115
PLDB	PS	Buffalo	Nili Ravi	57	129
SAG	PS	Buffalo	Jaffarabadi	444	171
GANGMUL	PS	Cattle	Sahiwal	8	76
PLDB	PS	Cattle	Sahiwal	8	83
HLDB	PS	Cattle	Haryana	595	90
Banas	PS	Cattle	Kankrej	3056	131
URMUL	PS	Cattle	Rathi	1151	133
SAG	PS	Cattle	Gir	1139	170
HLDB	PT	Buffalo	Murrah	4041	115
ABRO	PT	Buffalo	Murrah	4687	122
Mehsana	PT	Buffalo	Mehsana	19688	125
PLDB	PT	Buffalo	Murrah	7651	127
Banas	PT	Buffalo	Mehsana	12230	131
SAG	PT	Buffalo	Murrah	35687	147
SAG	PT	Cattle	HFCB	68804	146
TCMPF	PT	Cattle	JCB	45647	148
APLDA	PT	Cattle	JCB	9432	151
KLDB	PT	Cattle	HFCB	1061	155
ULDB	PT	Cattle	HFCB	2989	156
BAIF	PT	Cattle	HFCB	4015	158
KMF	PT	Cattle	HF	32089	160

Possibilities - integrating other data

- Effect of certain rations on CR/SP/ICI
- Effect of vaccination/treatment etc. on CR/Abortions.
- Calving pattern and projected milk production
- Effect of level of milk production on various reproductive parameters

Thank you