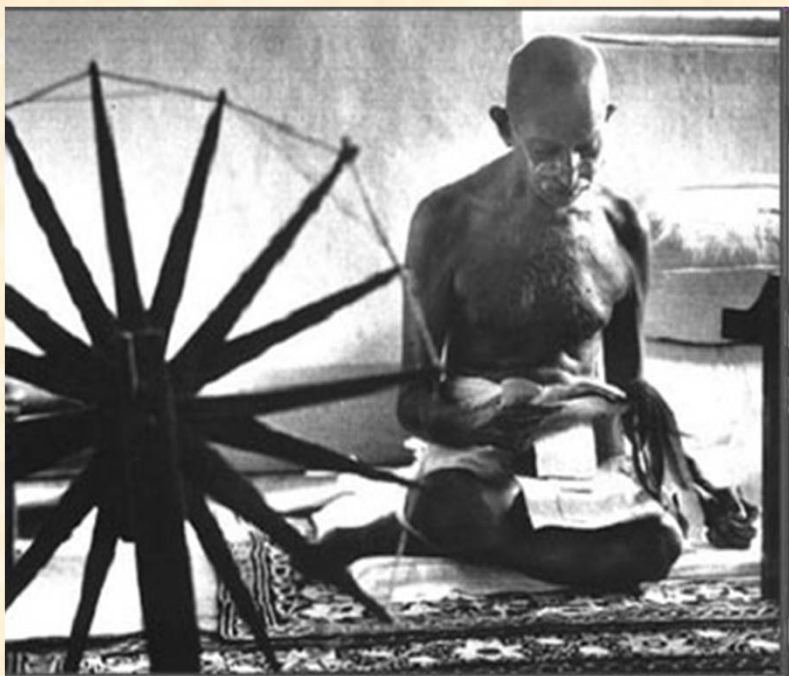


BAIF Model of AI Delivery



Dr. J. R. Khadse,
Research Director
BAIF Development Research Foundation Pune, India



BAIF – A vision of Mahatma Gandhi



“We cannot retain independence in Delhi unless our farmers achieve economic independence in every village like Urulikanchan.”

Mahatma Gandhi

BAIF's Mission

To create opportunities of **gainful self-employment** for the rural families, especially disadvantaged sections, ensuring **sustainable livelihood, enriched environment, improved quality of life and good human values.**

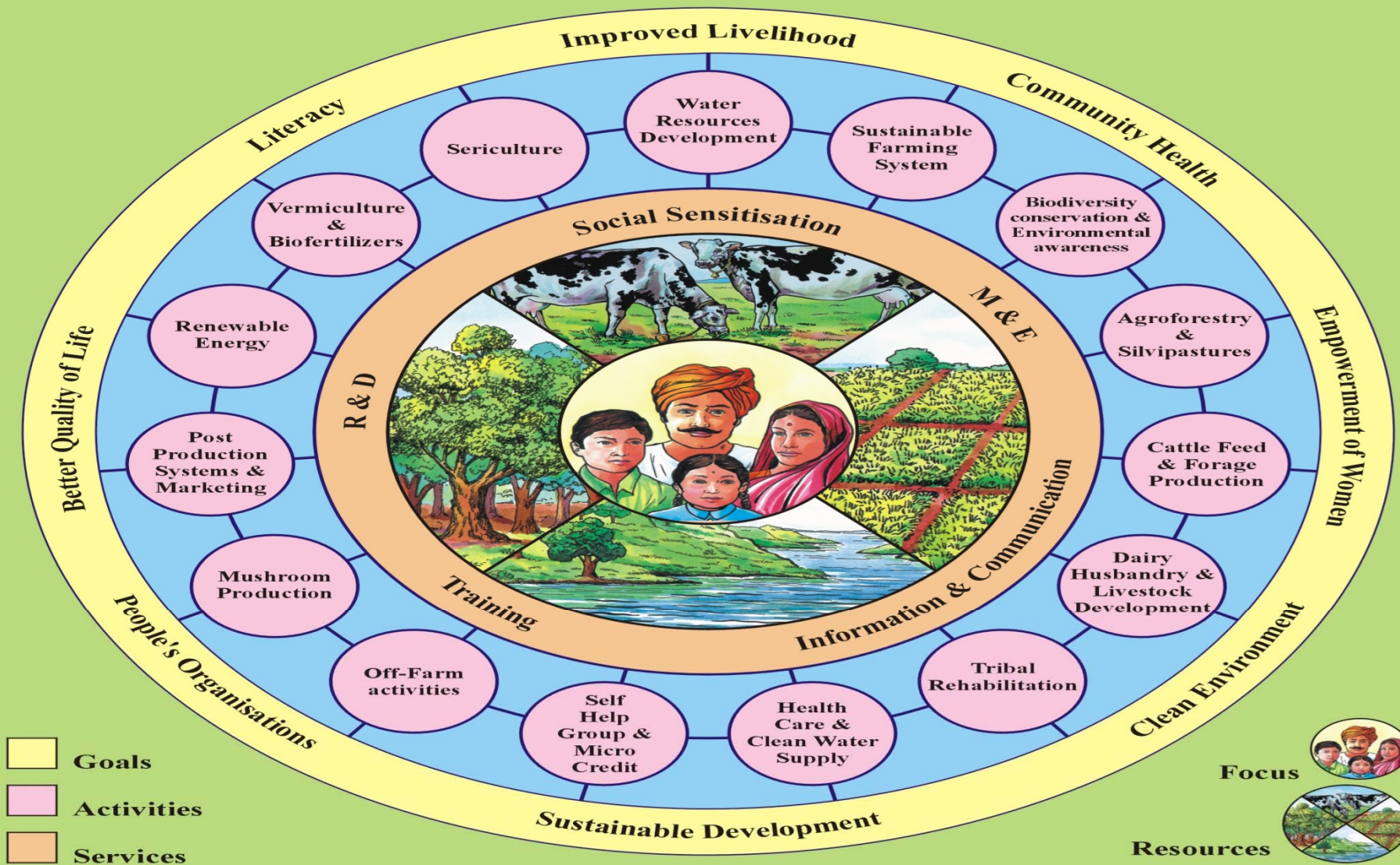
This is being achieved through development, research, effective use of local resources, extension of appropriate technologies and up gradation of skills and capabilities with community participation.

BAIF is a non-political, secular and professionally managed organization.



Dr. Manibhai Desai

BAIF'S HOLISTIC PROGRAMME APPROACH





BAIF: Approach

- Assets multiplication rather than distribution
 - Focus on bio-resources especially cattle and buffaloes;
 - Resource development through genetic improvement;
 - Family oriented than Programme oriented;
 - Comprehensive and integrated.
- Not mass production, but production by the masses.
- Appropriate field applications of latest Technological development.
- R&D
 - Collaborations with National / International Institutes.

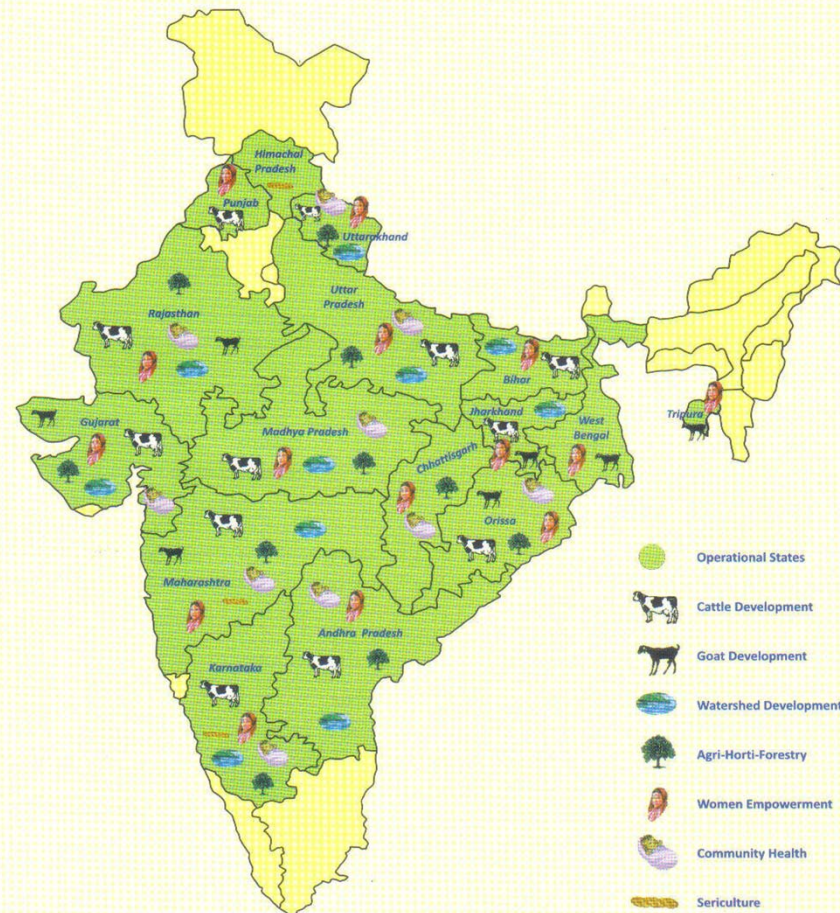


BAIF in India.....



1. Maharashtra: BAIF-MITTRA
2. Karnataka : BIRD-K
3. Andra Pradesh : BIRD-AP
4. Gujarat : GRISERV /DHRUVA
5. Rajasthan :RRIDMA
6. Madhya Pradesh :SPESED
7. Chattisgad
8. Uttar Pradesh :BIRD-UP
9. Uttarakhanda :BIRD-UK
10. Bihar :BIRD- BIHAR
11. Orissa
12. Punjab
13. Jharkhand : BIRVA
14. West Bengal
15. Himachal Pradesh
16. Tripura

BAIF'S PROGRAMMES IN INDIA





BAIF: Innovations



Genetic Improvement of breeding stock

- Introduction of various strains of HF and Jersey from world over.
- Developed our own HF and Jersey strain to meet our breeding goals.
- Strict Quality Control measures for Frozen Semen.
- Development of Buffalo semen extender.
- High selection intensity to choose HGM breeding stock.
- Use of ET for bulls and bull mothers production.
- Field Performance Recording and Progeny Testing for bull selection.

Field Dairy Animal Improvement Programme

- Evolution of service delivery system/ models
- Strong Management Systems
- Emphasis on Animal Nutrition Management
- Integration of other Critical Components



Field Dairy Animal Improvement Programme

Evolving Effective Service Delivery Systems / Models

Initial Phase: Vets as AI Service Provider

- To Standardize Door Step Service delivery system
- To demonstrate it works
- To win confidence of participant
- To provide strong technical back stopping

Mid Phase: Agriculture Graduates

- To upscale
- To develop a cadre of future supervisors
- To reduce costs

Present: Well trained AI Technicians

- To further scale up
- Availability at all times in vicinity
- Increase the coverage in far flung areas
- Reduce cost further



BAIF Model

Cattle Development Programme



Coverage

- Focus on poor farmers
- 12-15 villages
- 1500-2000 breedable cattle & buffaloes
- 1000-1500 families

Activities

- A.I. at doorsteps
- Close follow up and monitoring
- Extension & awareness about cattle management, Dairy, etc

Support Activities

- Feed supplement
- Forage development
- Preventive Health Care

Quality

- Dedicated Central Research Station for field programme
- Focus on quality process

Linkages

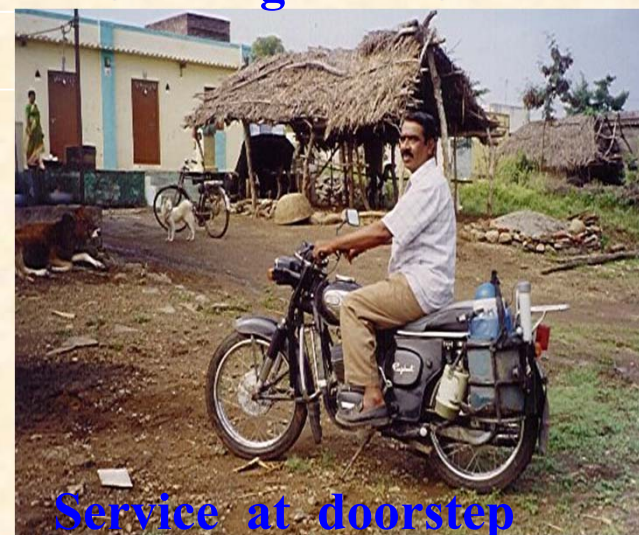
- Linkages with ongoing Govt. schemes
- Market linkages with Dairy Cooperative, private players

PO formation

- Strengthening of existing POS
- Development of local Organisation



Coverage of a Centre



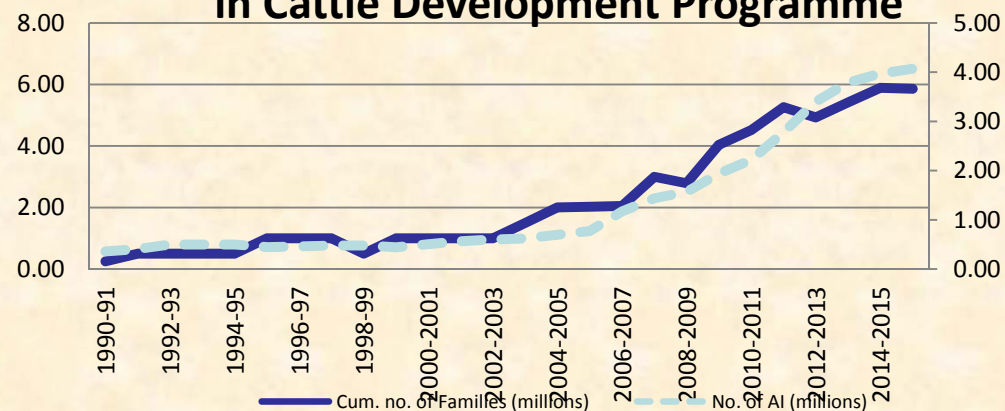


Coverage of Cattle Development Programme



c	Districts	Centres	Villages (Cum.)	Families (Cum.)	Total Insem. (2015-16)
Maharashtra	19	265	3653	64464	240606
Gujarat	23	291	2237	305335	193256
Karnataka	15	176	2648	127855	153445
Rajasthan	19	405	7786	237728	417593
UP	76	1237	42404	3221180	1626042
Uttarakhand	9	108	3270	294639	100337
Bihar	14	246	5459	236747	282547
Jharkhand	24	1010	21387	997146	515142
MP	22	171	2432	62627	97401
Telangana	7	90	1258	87679	89903
AP	4	40	518	48358	49765
Odisha	10	100	1920	35542	81622
Punjab	8	128	813	143280	159611
Total	250	4267	95785	5862580	4007270

Year wise No. of AI & No. of Families covered in Cattle Development Programme





BAIF Facilities and Infrastructure



Well equipped Central Research Station

- R&D farm (160 ha)
- Bull Mother Farm and Bull Station
- Ultra modern Frozen Semen Station
- Various laboratories: Animal Nutrition

Animal Reproduction and ET
Animal Biotechnology

- Animal Genetics
- Production Units: Feed Supplements

Cattle Feed
Biofertilisers
Biopesticides

- Strong team of 400 professionals





Central Research Station



TECHNOLOGY

Scouting
Adaptation
Dissemination

INPUTS

Standardization
Production
Supply

CAPACITY BUILDING

In-house
Participants
Others

Dairy Animals and Goats

genetic improvement /
breeding / reproduction /
nutrition / health /
management

Forage production

forages/croppingsystems/for
estry

Allied subjects

vermicompost / sericulture /
bioenergy / waste recycling

Frozen semen and allied equipment/material

Vaccines/diagnostics
Feeds/supplements
Seeds/planting material
Biofertilizers
Advisory services

Induction/orientation of staff
Refresher courses
Technical trainings
Contractual trainings
Exposures



BAIF: Contributions and Impacts



Contribution

- Ushered white revolution in country during 1980s (Genetic improvement through A.I. breeding)
- Contribute about 12% domestic frozen semen production covering 20 pure and mix breeds
- Spread of Operations
 - Districts 250
 - Centres 4267
 - Villages (cum) over 95000
 - Families (cum) 5.8 million



Procurement & supply of AI inputs



- Assessing the future requirement from the state societies
- Production as per demand
- Requirement like (LN2, gloves, Sheaths, storage containers etc.
 - Purchase from reputed manufactures
 - Agreement with LN2 suppliers
 - Searching multiple suppliers
- frequency of distribution
 - Monthly basis to all CDC's
 - Bimonthly to society semen depot
 - As & when required in between
- Replacement mechanism of cryo containers
 - Repair of container
 - Procurement of new as per demand



Coverage of costs and Revenue management



- **Engagement of AITs**
 - Regular Employees
 - Contractual Employees
 - Incentive Based AI Technicians
- **AI charges**
 - Rs.20 to Rs.120 per AI depending on the sponsorship and support
 - Self sustainable CDCs Rs. 120 to 150/ AI
- **Sustainability**
 - Corpus fund development during sponsor period
 - Affordable charges after project period
 - Overhead and management service charges met through interest of corpus fund
 - Value addition and incentive to CDC I/C e.g Mineral mixture, fodder seed, etc
- **Coverage of Programme Costs**
 - Sponsorship: Government /Dairy Processors, Farmer Organisations
 - Limited, Sponsorship and Corpus Development
 - Revenue Model



Various Models in Operation at Present



Engagement of AITs

- Self Employed Youths AI Technicians

Coverage of Programme Costs

- Sponsorship: Government / Other Agencies,
Dairy Processors
Farmer Organisations
- Limited, Sponsorship and Corpus Development
- Revenue Model

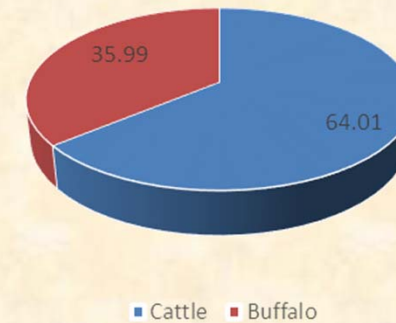


AI activity

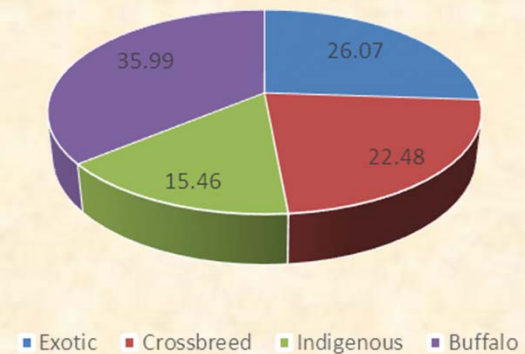


- Since inception all 4267 CDCs are mobile
- During 2015-16
 - Total 4267 CDC's were in operation
 - 250 districts
 - 13 states
 - 40.07 lakhs AI
- AIPCM: 78

Species wise AI done



Categorywise AI done





Monitoring Mechanism



- BAIF field programs is divided into 4 regions
 - East, west, north & south
- Each region consists of 4 State Societies
 - Each zone headed by Regional Director
 - State society head Chief Program Executive
 - Regional office
 - One supervisor for 20-30 CDC's



Strong Management Systems

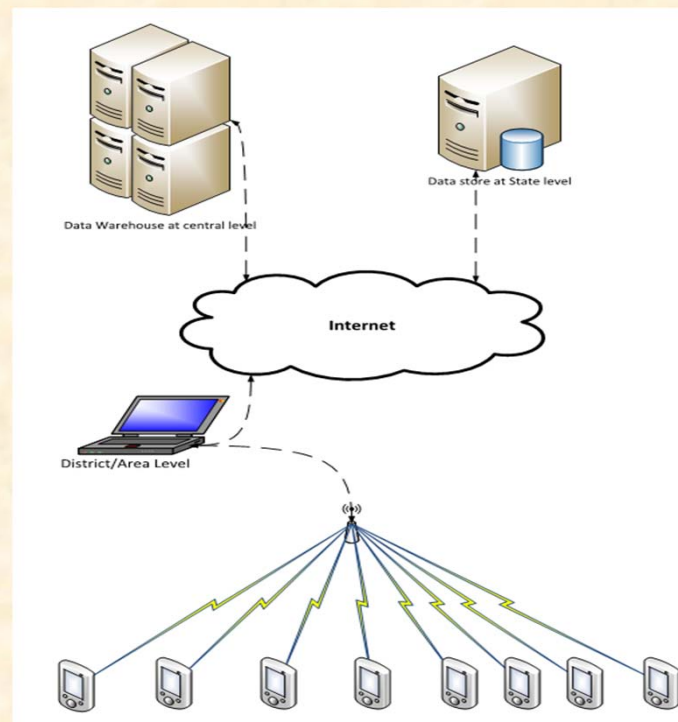


- **Breeding Management**
 - Strict adherence to Breeding Policy
 - Use of appropriate breed, blood level
 - Avoid inbreeding
 - Following SOPs for breeding
 - Regular follow up for pregnancy diagnosis and calving
 - Field semen quality checking
 - Study on bull wise conception rate under field condition
 - Instantaneous reporting on genetic anomalies in calves born
- **Programme Management**
 - Regular and timely supply of inputs
 - Strict M&E by trained and competent supervisors
 - Flaw less MIS at various levels
 - Regular feedback to improve performance
 - Monthly review meetings
 - Refresher trainings



Data capture

- Prescribed format developed since inception
- Reproduction and production data collected through hard copies
- Efforts are being made to capture the data through electronic media
- Total more than 1500 CDCs using handheld devices
- Soft-ware developed with the help of TCS on Android OS





Address to infertility problems



- Identification of problem cases through
 - Personal visits by in-charges
 - Reporting to Veterinarian for guidance
- Infertility camps arranged
 - Especially in sponsored programme
- Critical cases refereed to AH department



Success stories



- Respective state society doing regularly
- Publish in annual reports
- Mostly local language based
- Selected participant awarded on Foundation day occasions
- Share their experiences in forums
 - 50th year celebrations and
 - State society functions
 - Farmer meetings etc.



Breeding policy



- Awareness amongs the AIT for breeding policy
- Followed as per respective state Govt. policy
 - Where BAIF programme in in operations
- Make available semen doses as per local breeds exists in respective state society
- Sire directory with state society and on BAIF website



Issues and problem faced



- Unscrupulous semen production
- Uncontrolled breeding by private AI practitioners
- Not proper recording by such AI workers
- Absence of proper mechanism for coordination among different service providers
- Multiple service provider in same area
- Different AI charges for different service providers



Future plans for continuation of AI delivery activity



- Study the CDC potential for sustainability
- For Identified Weaker CDCs additional support to be sought
- Corpus building from the revenue collected
- Ensuring minimum 4000 CDCs sustainable.
- Use of new technology like open cow detection, silage as enterprise, outbound call center, etc
- Piloting sorted semen use in selected states
- Indigenous breed improvement programme for Sahiwal and Gir



Thank you

