

Bull production through Progeny Testing (PT) and Pedigree Selection (PS)

G Kishore

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Importance of Animal Breeding

- Breeding builds potential of next generation
- Bull is half the herd

Major Objective of PT Projects

- Genetic Improvement of major breeds of cattle and buffaloes through use of HGM bulls
 - Production of HGM and disease free bulls of major dairy breeds through PT under field conditions
 - Procuring and Rearing them following standard protocols
 - Distribution to graded semen stations for production of disease free semen

Major Steps in PT

- Identify Test Bulls
- Conduct test AI in the villages
- Store doses of test bulls under long term storage



Major Steps in PT (cont...)



- Produce adequate number of daughters from each bull and follow the daughters
- Breed the daughters and follow them till calving
- Record the daughters for milk for full lactation



Major Steps in PT (cont...)

- Based on daughters' production records, estimate Breeding Values (BV) of the bulls and recorded cows/buffaloes and rank them on BVs
- Breed top ranked cows/buffaloes with semen of top ranked bulls to produce next generation of bulls



Major Steps in PT (cont...)

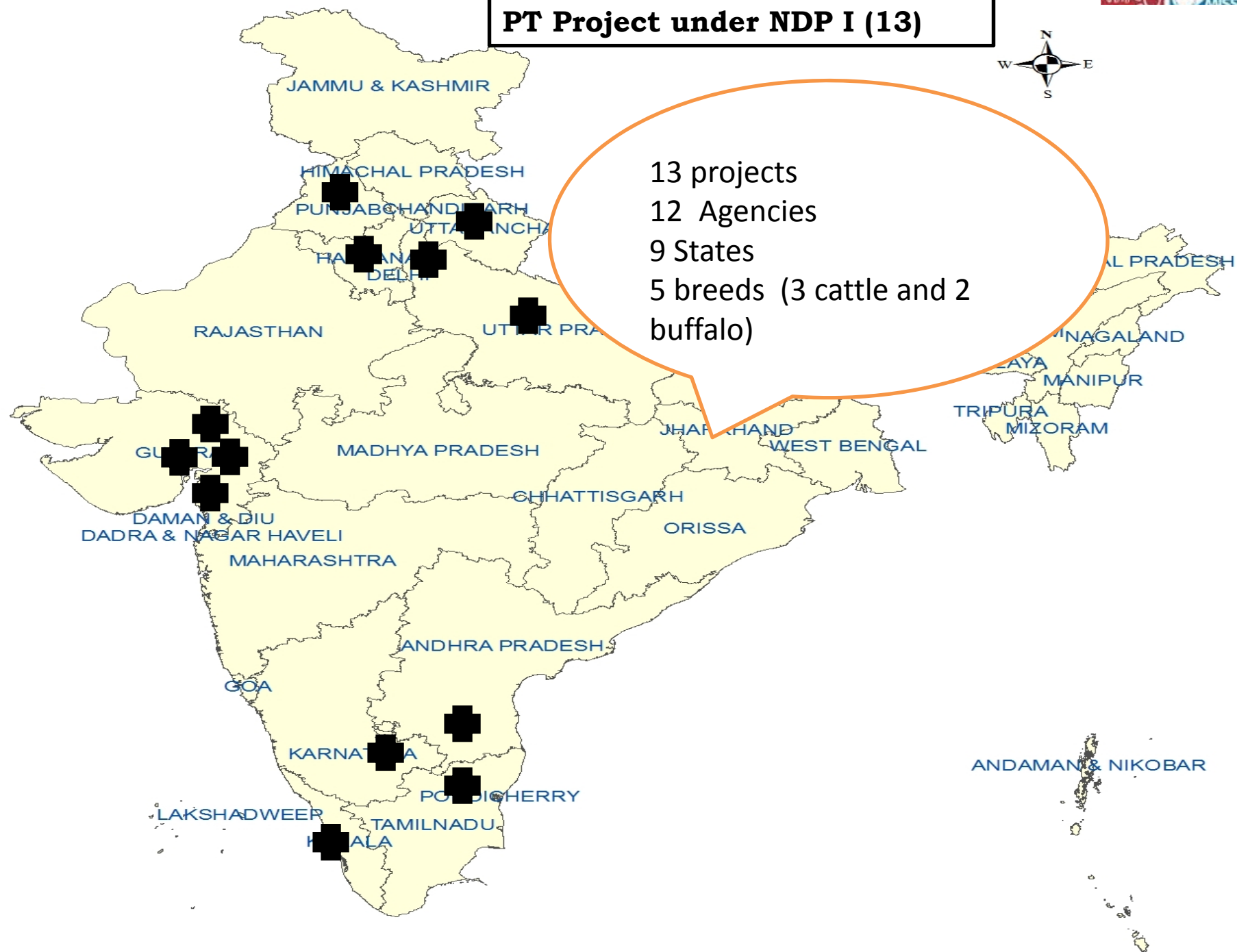
- Rear these bulls and put them under test when they mature and continue the cycle
- Distribution of bulls to semen stations



PT Project under NDP I (13)



13 projects
12 Agencies
9 States
5 breeds (3 cattle and 2
buffalo)



PT Project approvals under NDP I

Sr. No.	State	Breed	EIA	Dt. Approval	Outlay (In Lakhs)
1	Karnataka	HF Pure	Karnataka Milk Federation	27-Jun-12	2055
2	Tamil Nadu	CB Jersey	Tamil Nadu Cooperative Milk Producers' Federation Limited	11-Sep-12	3928
3	Gujarat	Murrah	Sabarmati Ashram Gaushala	11-Sep-12	2176
4		CB HF		11-Sep-12	1062
5		Mehsana	Banaskantha Milk Union	16-Nov-12	1211
6		Mehsana	Mehsana Milk Union	16-Nov-12	1265
7	Punjab	Murrah	Punjab Livestock Development Board	18-Dec-12	1865
8	Andhra Pradesh	CB Jersey	Andhra Pradesh Livestock Development Agency	11-Feb-13	1792
9	Uttar Pradesh	Murrah	Animal Breeding Research Organisation	11-Mar-13	1502
10	Haryana	Murrah	Haryana Livestock Development Board	19-Aug-13	2472
11	Uttarakhand	CB HF	Uttarakhand Livestock Development Board	19-Aug-13	1290
12	Uttar Pradesh	CB HF	BAIF Development Research Foundation	25-Feb-14	1625
13	Kerala	CB HF	Kerala Livestock Development Board	25-Feb-14	1485
Total					23728

Targets set for bull production – PT Projects



State	Breed	EIA	Cumulative End of Sub Project Target
Karnataka	PT- HF Pure	Karnataka Milk Federation	232
Tamil Nadu	PT - CB Jersey	Tamil Nadu Cooperative Milk Producers' Federation Limited	247
Gujarat	PT - Murrah	Sabarmati Ashram Gaushala	194
	PT - CB HF		223
	PT - Mehsana	Banaskantha Milk Union	115
	PT - Mehsana	Mehsana Milk Union	105
Punjab	PT - Murrah	Punjab Livestock Development Board	152
Andhra Pradesh	PT - CB Jersey	Andhra Pradesh Livestock Development Agency	160
Uttar Pradesh	PT - Murrah	Animal Breeding Research Organisation	114
Haryana	PT - Murrah	Haryana Livestock Development Board	221
Uttarakhand	PT- CB HF	Uttarakhand Livestock Development Board	81
Uttar Pradesh	PT- CB HF	BAIF Development Research Foundation	111
Kerala	PT- CB HF	Kerala Livestock Development Board	52
Total			2007

Major Objective of PS Projects

Improving the genetic potential of indigenous breeds of cattle and buffaloes for milk production in their native tract

- Establishment of AI network and developing infrastructure for performance and pedigree recording in native tract of the breeds
- Producing genetically superior quality bulls

Major Activities of PS Projects (Contd..)



- Establishment of around 50 AI centers to cover 150 best villages in the native tract of the breed
- Milk recording of animals, identification of elite animals and nominated AI of elite animals for bull production



Major Activities of PS Projects (Contd..)



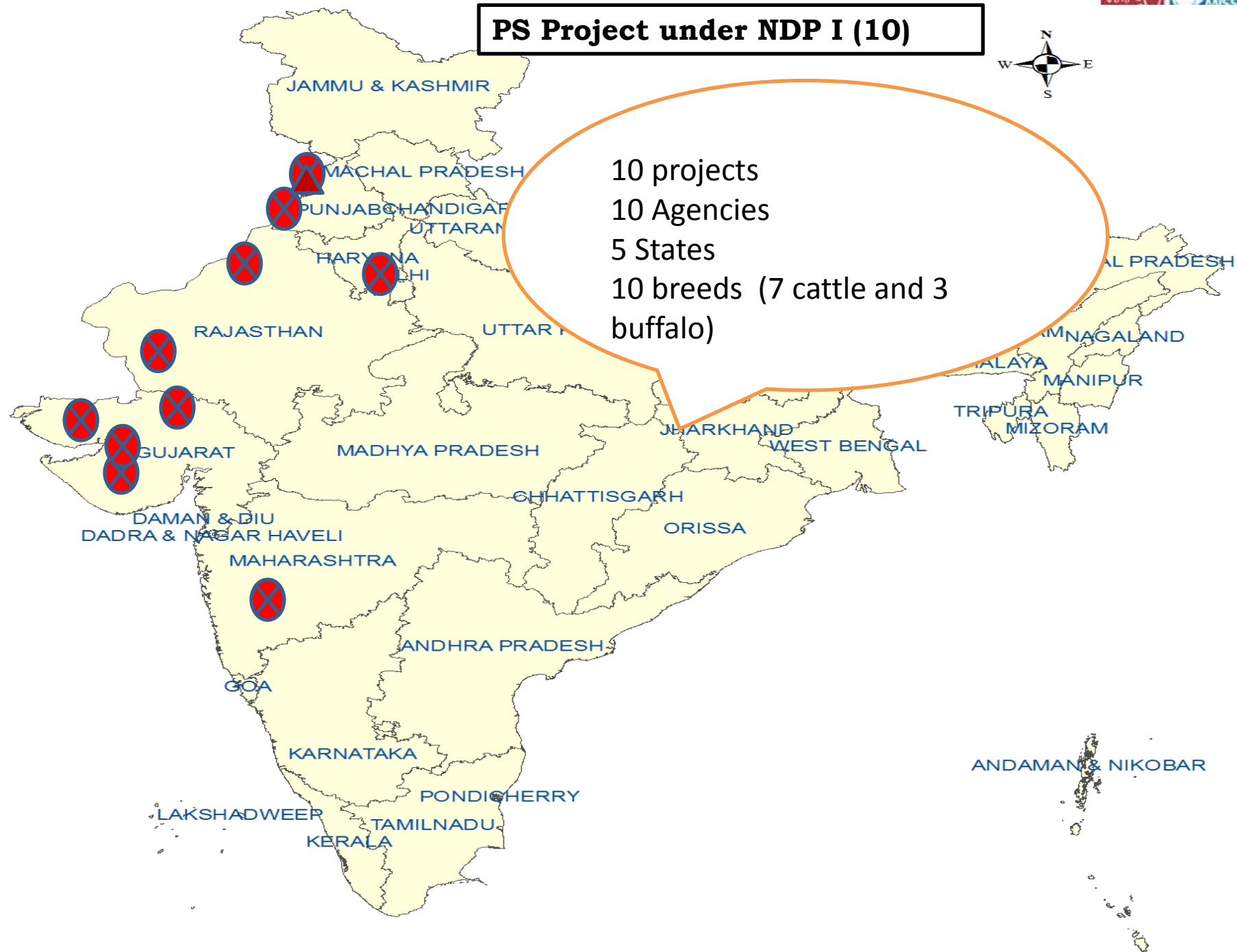
- Extension meetings, calf rallies, fertility camps to support AITs
- Production of next generation bulls and their procurement



PS Project under NDP I (10)



10 projects
10 Agencies
5 States
10 breeds (7 cattle and 3 buffalo)



PS Project approvals under NDP I

State	Breed	EIA	Dt. Approval	Outlay (In Lakhs)
Already Approved				
Gujarat	Kankrej	Banas Milk Union	27-Jun-12	527.96
	Gir	SAG, Bidaj	11-Sep-12	743.99
	Jaffarabadi	SAG Bidaj	11-Sep-12	743.99
Rajasthan	Rathi	URMUL Trust	11-Mar-13	768.75
	Tharparkar	RLDB	28-Jul-14	596.07
Haryana	Hariana	HLDB	19-Aug-13	509.61
Punjab	Nili Ravi	PLDB	14-Jun-14	668.29
Maharashtra	Pandharpuri	MLDB	25-Feb-14	498.15
Total				5056.81
Proposed Projects				
Punjab/ Rajasthan	Sahiwal			
Gujarat	Banni			

Targets set for bull production – Indigenous breeds

Breed	EIA Name	Cum. For project period
Cattle		
Rathi	URMUL Trust	85
Kankrej	Banas Milk Union	75
Gir	Sabarmati Ashram Gaushala	60
Haryana	Haryana Livestock Dev. Board	42
Tharprakar	Rajasthan Livestock Dev. Board	10
Total		272
Buffalo		
Jaffarabadi	Sabarmati Ashram Gaushala	60
Pandharpuri	Maharashtra Livestock Dev. Board	38
Nili-Ravi	Punjab Livestock Dev. Board	19
Total		117
Grand Total PS		389

SOPs and MS for bull production

Standard Operating Procedures (SOP) and Minimum Standards (MS) as approved by DADF, GoI would be adhered for implementing various Progeny Testing (PT) and Pedigree Selection (PS) programmes



PT Projects: Financial Progress

	In Rs. Lakhs			
Outlay as per PIP	21100.0			
PT Project		Amount released	FUC till June 2014	% utilization
KMF PT	2054.73	347.00	211.88	61.06
SAG HF CBPT	2175.63	499.00	427.64	85.70
SAG Murrah PT	1061.7	150.50	125.11	83.13
Banas Union PT	1211.49	166.00	129.24	77.85
Mehsana Union PT	1265.36	188.80	175.70	93.06
UP Meerut PT	1501.59	226.00	127.48	56.41
HLDB Murrah PT	2471.87	184.00	16.99	9.24
TCMPF Jersey CB PT	3928.33	495.00	377.27	76.22
PLDB Murrah PT	1865.18	133.00	38.19	28.71
APLDA Jersey CB PT	1792.29	245.80	115.84	47.13
ULDB HF CB PT	1289.84	163.78	18.35	11.21
BAIF HF CB PT	1625.06	100.00	0.00	0.00
KLDB HF CB PT	1485.03	125.00	0.00	0.00
Total	23728.1	3023.88	1763.69	58.33

PS Projects: Financial Targets

	In Rs. Lakhs			
Outlay as per PIP	4000.0			
PS Project		Amount released	FUC till June 2014	% utilization
Rathi	768.75	118.00	97.85	82.93
Kankrej	527.96	57.80	49.07	84.90
Gir	743.99	81.10	60.53	74.63
Jaffarabadi	743.99	88.10	69.08	78.42
Haryana	509.61	51.00	14.71	28.84
Tharparkar	596.07	0.00	---	---
Nili Ravi	668.29	0.00	---	---
Pandharpuri	498.15	37.00	0.00	0.00
Total	5056.81	433	291.24	67.26

Major Issues

- Single and Nation wide unique animal ID (INAPH) for different activities- vaccinations, insurance other State and central sector schemes/ programmes
- Continuation of manpower in the projects
- Disease control and vaccination programmes in the project areas
 - Timely vaccination
 - Coverage of large population
 - Monitoring efficacy
- Strengthening of State Livestock Development boards

In Conclusion....

- PT & PS Programmes will provide HGM bulls to meet replacement requirement of all A and B graded semen stations by 2017-18
- PT and PS programmes will build infrastructure for accurate performance and pedigree recording for different breeds of cattle and buffaloes
 - Production and reproduction parameters
 - Milk component
 - Type traits
- Creating a pool of trained manpower to run genetic improvement programmes



Thank You