

BREED IMPROVEMENT PLANS AND STRATEGIES IN PAKISTAN

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LIVESTOCK SECTOR PROFILE

Livestock contributes 55.1% to the agriculture sector

Share in National GDP is 11.5 %

Small dairy holders dominate and possess more than 90 % (93-97 %) of Livestock owning 1-5 adult cows or buffaloes

Only 3-7 % livestock owners fall under bigger farms

Rural population engaged in livestock 35 m

Farmer's income from livestock 40 %

Annual growth (2010-11) 3.7 % (1.2 % Agriculture)

Livestock Genetic Resources in Pakistan

POPULATION

- **Buffaloes** **27.3 million**
- **Cattle** **29.6 million**
- **Goats** **53.8 million**
- **Sheep** **26.5 million**

Cattle & Buffalo Breeds

Cattle

Dairy Cattle

- | | | | |
|-----------|--------------|--------------|----------|
| 1.Sahiwal | 2.Red Sindhi | 3.Cholistani | 4.X-bred |
|-----------|--------------|--------------|----------|

Dual Purpose Cattle

- | | | | |
|--------------|-----------|---------|------------|
| 1.Tharparker | 2.Kankrej | 3.Achai | 4.Gabriali |
|--------------|-----------|---------|------------|

Beef/Draught Type Cattle

- | | | | | |
|------------|---------|----------|----------|----------|
| 1.Bhagnari | 2.Dajal | 3.Dhanni | 4.Lohani | 5.Rojhan |
|------------|---------|----------|----------|----------|

Buffaloes

- | | | |
|-------------|---------|------------|
| 1.Nili-Ravi | 2.Kundi | 3.Azakheli |
|-------------|---------|------------|

DAIRY BREEDS

Production Potential

Breeds	Av Lactation milk yield Kgs	Peak yield Kgs/day
Sahiwal cows	1500-2200	33.170
Red Sindhi cows	1500-2000	--
Cholistani cows	1400-2000	26.00
Tharparker cows (D.P)	1000-1400	--
Kankrej cows (D.P)	900-1300	--
Nili-Ravi buffalo	1800-2400	32.00
Kundi buffalo	1600-2200	--

Pakistani Sheep

Total Number of breeds =28 +

Thin-tail = 21+, Fat-tail = 07

Mostly dual purpose (mutton+carpet wool)

Weight of Adult Male =35--45 kg

Average dressed carcass = 45--55%

Average annual fleece weight=2--5 kg

Pakistani Goats

Total Number = 25 +

Milch type (Beetal, D.D.Panah, Kamori)

Mostly dual purpose (mutton & milk)

Average milk yield (milch type) = 2-3 lit/day

Average milk yield (other) = < 1.3 lit/day

Weight of Adult Male = 25-45 kg

Average dressed carcass = 45-55%

LIVESTOCK PRODUCTION SYSTEMS

- 1. Rural Subsistence Small Holdings (55-60%)**
- 2. Rural Market Oriented Small Holdings (20-25%)**
- 3. Rural Commercial Medium Size Farming (10-15%)**
- 4. Peri-urban Commercial Large Size Farming (6-8%)**

LIVESTOCK PRODUCTION SYSTEMS

SHEEP & GOATS

1. Nomadic (30-40%)
2. Transhumant (35-45%)
3. Sedentary (10-15%)
4. Subsistence House holdings (5-20%)

Breeding Policy

Buffalo: Development of local buffalo breeds

Cattle: Development and conservation of dairy cattle breeds

Development and conservation of draught[beef cattle breeds

Crossbreeding within local breeds or with exotic breeds or synthetics and or exotic imports

Sheep/Goat:

Development and conservation of small ruminants

Dairy Cattle Breeding Policy Objectives

- Improvement in milk production of dairy cattle breeds (Sahiwal and Cholistani) through selection
- Improvement in Reproductive of cattle through reduction in age at first calving and calving interval
- Grading up of non descript cows under subsistence production systems with Sahiwal, cholistani and Dhanni in their respective home-tracts
- Maintaining the desired exotic level of exotic inheritance (between 50-75 %) in dairy crossbred cattle for their optimum performance
- Availability of good quality indigenous animals for draught and beef purpose
- Regulation of breeding services including private initiatives
- Conservation and development of recognized cattle breeds such as Rojhan, Dajal, Lohani, Kankraj and Tharparkar through inter-provincial initiatives.

Breed Improvement Strategy

Selection within breeds

Slowest genetic improvement but permanent, cumulative and multiplicative

Selection between breeds or lines (grading up)

substitution of inferior animals with superior breed

Crossbreeding

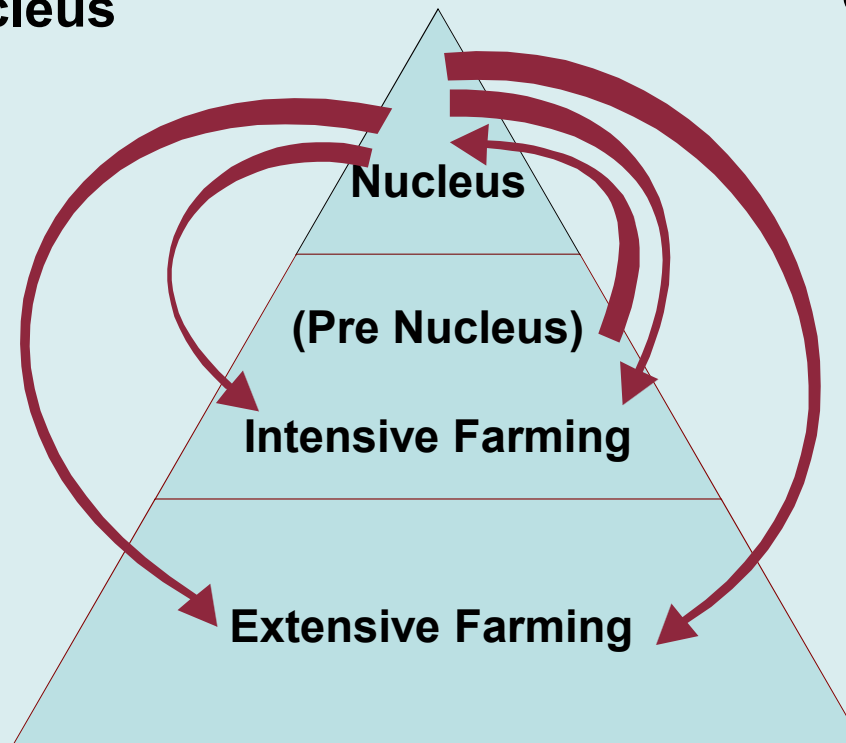
Inter se mating of animals of newly developed composites

Rotational and terminal systems

Within breed Genetic Improvement Strategy

Close Nucleus

Open Nucleus



Constituents of a Breeding Program

- Choice of breeding goal
- Breeding plan
- Registration and Recording
- Genetic Evaluation
- Selection and bull allotment
- Monitoring
- Dissemination of superior germ plasm

Research Centre for Conservation of Sahiwal Cattle (RCCSC), Jhang



Breeding Program for the Development and Conservation of Sahiwal Breed

**Research Centre for Conservation of Sahiwal Cattle
(RCCSC) Jhang**

Livestock and Dairy Development Department,
Government of the Punjab



Breeding Goals in Ruminants

Objectives/Products	Criteria	Further specification
Milk	Quantity	Milk production
	Composition	Fat & protein percentage
Beef	Growth rate	At different ages
	Carcass quality	Fat content, bone/meat ratio
	Meat quality	Tenderness, Juiciness
Wool	Quantity	Wool production
	Fibre quality	Length, diameter



Objectives

- Maintenance of nucleus herd of superior germ plasm of Sahiwal cattle.
- Registration and documentation of institutional and private Sahiwal cattle farms/herds.
- Performance recording for genetic evaluation and herd management.
- Identification of superior germ plasm.
- Publishing and dissemination of sire/cow summaries.
- Conducting research on conservation and genetics.
- Collaboration with national and international institutions involved in breed development programmes.

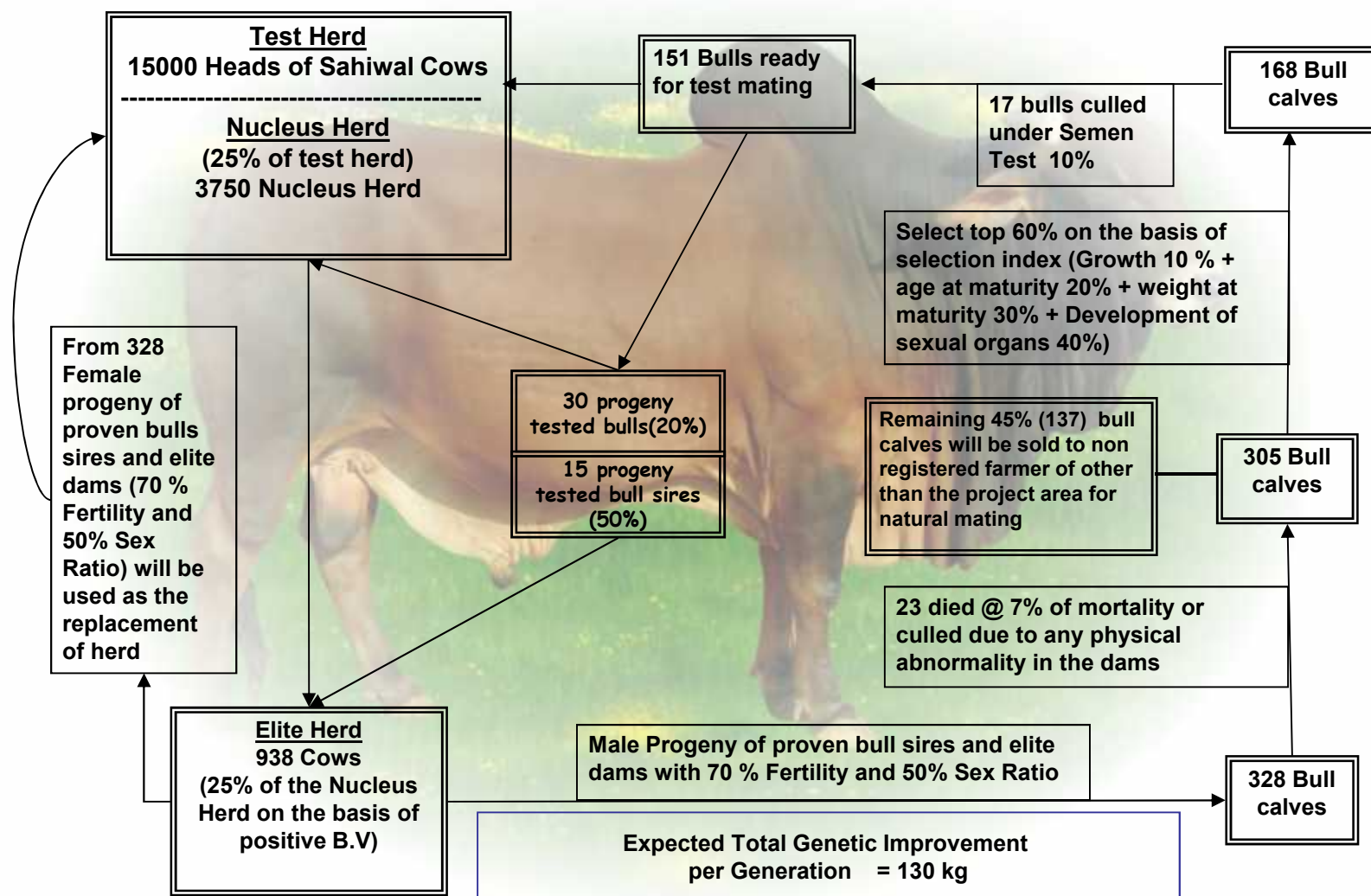


Incentives to Registered Breeders

- A) **Free of cost:-**
 - » **Artificial Insemination**
 - » **Vaccination**
 - » **De-worming of calves**
- B) **Provision of Sahiwal bulls to herders where AI is not possible**
- C) **Purchase of male calves out of elite cows at premium price**
- D) **Prizes to winners of milk and breed competition**
- E) **Special stipend of Rs. 0.60m for cows yielding milk \geq 18 kg/day.**



BREEDING PLAN





Project Area of RCCSC Jhang

DISTRICTS

1. Jhang

Chiniot

2. Toba Tek Singh

3. Faisalabad

Nankana Sahib

Hafizabad

Sargodha

4. Khanewal

Vehari

5. Okara

Sahiwal

Pakpattan

6. Multan

Muzaffargarh

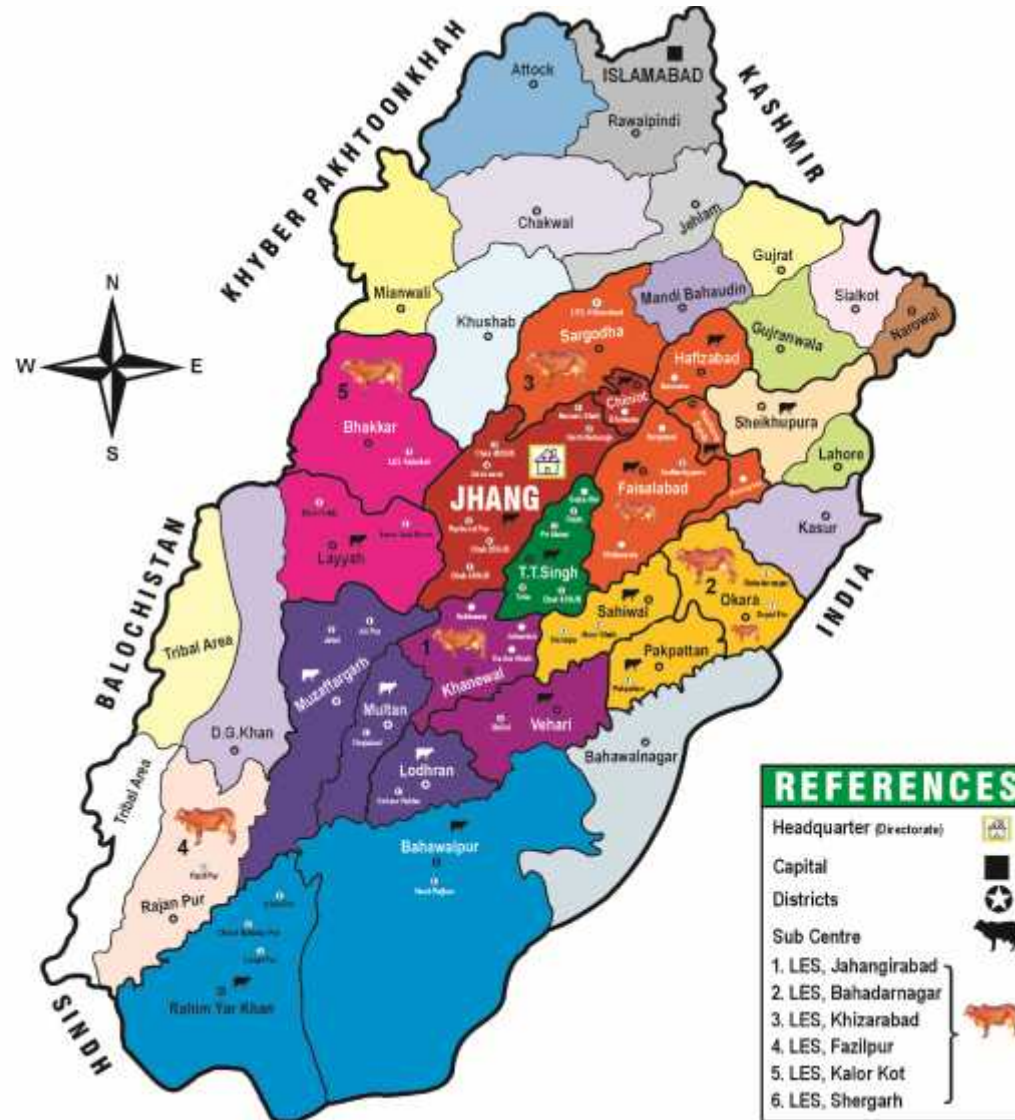
Lodhran

7. Bahawalpur

Rahim Yar Khan

8. Bhakkar

Bhakkar



REFERENCES

- Headquarter (Directorate)
- Capital
- Districts
- Sub Centre
- 1. LES, Jahangirabad
- 2. LES, Bahadarnagar
- 3. LES, Khizarabad
- 4. LES, Fazilpur
- 5. LES, Kalor Kot
- 6. LES, Shergarh



Financial Resource

Development Phase-I	= Rs. 102.6 Mill.
Gestation Period	= Five years (2003-04 to 2007-08)
Under SNE budget	= Rs. 15.5 Mill. Yearly
Development Phase-II	= Rs. 76.7 Mill.
Gestation Period	= Rs. Three years (2008-09 to 2010-11)
Under SNE budget	= Rs. 20.0 Mill. Yearly



Registration of Sahiwal Cows

7 Govt. Nucleus Farms

(2500 cows)

- Jahangirabad, Khanewal
- Bahadurnagar, Okara
- Khizarabad, Sargodha
- Kaloor Kot, Bhakar
- Fazalpur, Rajanpur
- Shergarh, Okara
- University of Agriculture Faisalabad

33 Private Nucleus Farms

(1250 cows)

- Jhang 6
- Khanewal 6
- Toba Tek Singh 3
- Sahiwal 4
- Okara 1
- Faisalabad 2
- Hafizabad 2
- Layyah 1
- Rahim-Yar Khan 5
- Pakpattan 1
- Sheikhpura & Nankana Sahib 2

Testing Farms/Herds	Cows
1196	10550



RCCSC Cows/Bulls Evaluation

Cows		
Year	No.	Lactation Records
2010-11	6963	28146

Bulls		
Year	No.	Positive EBVs
2010-11	342	286



Selection of Sahiwal Bulls (2004 to 2012)

Total Purchased at CRC Jehangirabad	795
Issued to Breeders	354
At Semen Production Unit Qadirabad	194
Under progeny testing at SPU	128
Not selected for PT at SPU	16
Waiting bulls for PT at SPU	50

[Detail of Purchased Bulls Phase-I](#)

[Detail of Purchased Bulls Phase-II](#)

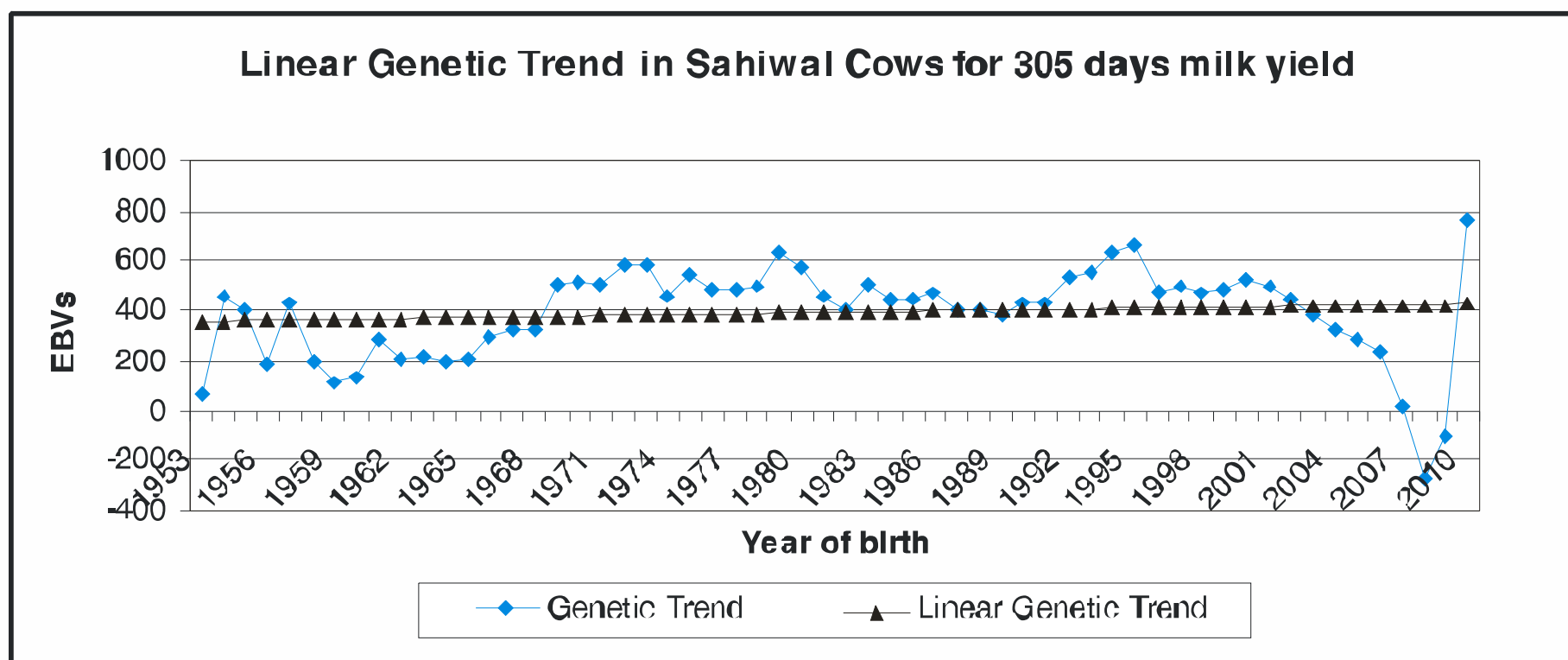


Sahiwal Bulls Batches under Progeny Testing

Bull Batch	No. of Bulls
• <u>Sahiwal Bulls Batch-15 (2004-2006)</u>	10
• <u>Sahiwal Bulls Batch-16 (2006-2007)</u>	7
• <u>Sahiwal Bulls Batch-17 (2007-2008)</u>	15
• <u>Sahiwal Bulls Batch-18 (2007-2008)</u>	17
• <u>Sahiwal Bulls Batch-19 (2007-2008)</u>	8
• <u>Sahiwal Bulls Batch-20 (2008-2009)</u>	11
• <u>Sahiwal Bulls Batch-21 (2009-2010)</u>	7
• <u>Sahiwal Bulls Batch-22 (2010-2011)</u>	12
• <u>Sahiwal Bulls Batch-23 (2010-2011)</u>	10
• <u>Sahiwal Bulls Batch-24 (2010-2011)</u>	10
• <u>Sahiwal Bulls Batch-25 (2011-2012)</u>	9
• <u>Sahiwal Bulls Batch-26 (2011-2012)</u>	12
Total Bulls	128



Monitoring of Breeding Programme



Dissemination of Superior Germ Plasm

23 Proven bulls having semen at SPU Qadirabad = 80000 doses

Popular Sahiwal Proven Bulls



S-186



S-110



S-307



Research Activities at RCCSC

Sr. No.	Title
1	30 Embryo Transfer Trial (20.6.2005 to 17-06-2011)
2	Effect of breeding index on performance of Sahiwal Heifers
3	Genetic studies on performance of elite Sahiwal Cows (2004-05 to 2009-10)
4	Biometrical studies on Sahiwal Bull Calves (2004-05 to 2010-11)
5	Sahiwalization of Non Descript Cattle (2005-06 to 2010-11)
6	A study on udder index in Sahiwal Cows (2007-08)

Embryo Transfer Trials

• Total Trials	34
• Embryoes Recovered	138
• Embryoes transferred as fresh	56
• Embryoes Freezed	82
• Embryoes Transferred as freezed	30
• Embryoes in hand(Freezed)	52
• Embryoes in hand (RCCSC)	11
• Embryoes with (RV&FC)	41
• ET Calves born	15
• Pregnant recipients	4





Birth of ET Calves

Sr. No.	Tag. No	Date of Birth	Class	Donor	BLY/Days	Sire	Recipient
1	51/06*	05.04.2006	FS	89/93	3759/349	S-115	64/00
2	78/06	13.07.2006	FS	44/2.1**	2905/331	S-110	117/94
3	85/06	25.08.2006	FS	89/93	3759/349	S-110	84/00
4	112/06	02.09.2006	MS	89/93	3759/349	S-110	28/01
5	69/08	04.07.2008	FS	102/3.9 ***	3916/305	S-115	90/04
6	10/10	18.01.2010	FS	70/99	3131/306	S-186	8/04
7	16/10	29.01.2010	FS	70/99	3131/306	S-186	123/06
8	69/10	30.05.2010	FS	28/97	3206/340	S-266	10/07
9	5/11	23.01.2011	FS	77/01	2298/305	S-278	71/07
10	10/11	03.02.2011	MS	83/03	2772/335	S-266	81/07
11	42/11	21.04.11	FS	83/03	2772/335	S-266	25/01
12	77/11	19.07.11	MS	83/03	2772/335	S-266	70/01



RCCSC Publications

1. Pamphlet on Project Introduction (Urdu)
2. Folder on Project Introduction (English)
3. RCCSC Incentives (مراعاتی پیکيج)
4. Annual Report (2003-04 to 2004-05)
5. Annual Report (2005-06)
6. Annual Report (2006-07)
7. Annual Report (2007-08)
8. Project Performance Report (2003-04 to 2007-08)





9. Annual Report (2008-09)



10. Book on Melajat (Urdu)



11. Annual Report (2009-10)



12. Annual Report (2010-11)



13. Sahiwal Cattle Pamphlet



14. Sahiwal Breed Sticker



15. RCCSC Breeders Directory



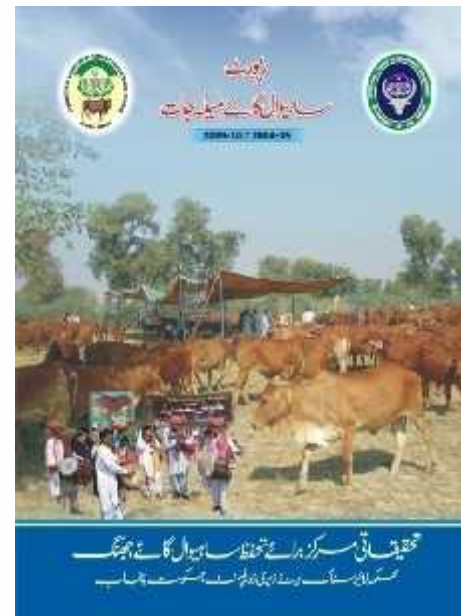
Publications in progress

16. RCCSC Sire Summary



Sahiwal Cattle Fairs Conducted During 2009-10 & 2010-11 (Phase-II)

1. Kacha Khuh (Khanewal) on 25-11-2009
2. Bahadurnagar (Okara) on 17-12-2009
3. Doogle Adda, Gojra, Distt. T.T.Sing on 23-03-2010
4. Chowk Bahadurpur, Distt. Rahim Yar Khan on 09-03-2010
5. Chak Noor Muhammad, Distt. Pakpattan on 17-03-2010
6. Agriculture University Farm, Faisalabad on 25-03-2010
7. Faisal Stadium, Distt. Muzaffar Garh on 09-06-2010
8. RCCSC, Head Quarter, Jhang on 17-06-2010
9. Agriculture University Farm, Faisalabad on 25-03-2011
10. RCCSC Head Quarter Jhang on 11.6.2011



Total cattle fairs conducted during both phases = 34



Lessons learned

- Shortage of Technical Staff-Professionals prefer vet practice rather R&D
- Contractual staff/ job insecurity-hinder accurate data recording in field conditions
- Smallholders-Costly progeny testing, problem in 100 % AI and performance recordings
- Confidence of Sahiwal breeders in the RCCSC proven bulls is the only encouragement for the team of Research centre.



Recommendations

- Breeding programmes based on international accepted standards for every documented breed in the country should be manufactured and implemented.
- Private sector should lead the Breeding programmes and public sector should set standards and supervise for quality control.
- National Livestock Genetic Resources Improvement Authority should be established.



Thank You

Proven Sahiwal Bulls



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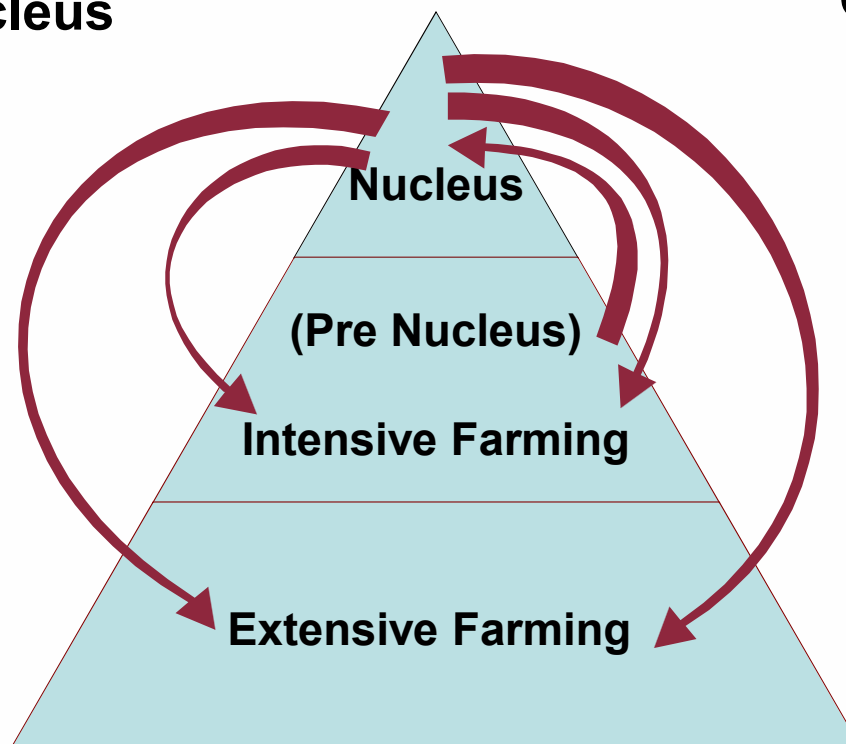




RCCSC Breeding Strategy

Close Nucleus

Open Nucleus



Research Centre for Conservation of Sahiwal Cattle (RCCSC), Jhang



Staff Position Phase-I

Sr. #.	Name of Post	BS	Sanctioned Strength	Filled		Vacant	Place of Posting
				Regular	Contract		
1.	Director	19	1	0	0	1	Look after
2.	Research Officer	18	2	2	0	0	RCCSC, Jhang
3.	Assistant Research Officer	18	2	2	0	0	//
4	Veterinary Officer (HQ)	17	1	0	0	1	//
5	Veterinary Officer (B)	17	11	3	1	7	//
6	Admn: Officer	17	1	0	0	1	//
7	Office Superintendent	16	1	1	0	0	//
8	Office Assistant	14	1	0	0	1	//
9	Stenographer Cum C. Operator	12	1	1	0	0	//
10	Cameraman Cum Video Operator	11	1	1	0	0	//
11	Lab. Technician	11	1	1	0	0	//
12	Computer Operator	10	4	0	3	0	//
13	Accountant	10	1	1	0	1	//
14	Cashier	7	1	0	0	1	//
15	Senior Clerk	9	2	2	0	0	//
16	Stock Recorder	9	26	4	15	7	Sub-Centers
17	Junior Clerk	7	2	2	0	0	RCCSC, Jhang
18	Vehicle Driver	5	6	2	2	2	//
19	Lab. Attendant	2	1	1	0	0	//
20	Naib Qasid	2	13	3	9	1	//
21	Cattle Attendant	2	8	5	2	1	//
22	Chowkidar	2	3	1	1	1	//
23	Sweeper	2	3	0	3	0	//
24	Mali	2	1	0	1	0	//
Total			94	32	37	25	



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Staff Position Phase-II

Sr. #.	Name of Post	BS	Sanctioned Strength	Filled		Vacant	Remarks
				Regular	Contract		
PHASE-II							
1.	Deputy Director (HQ)	18	1	0	0	1	Twice advertised but sufficient candidates were not appeared in Interview hence cancelled
2.	Research Officer (PR) Zone-II	18	1	1	0	0	
3.	Asst. Research Officer (ARO)	18	1	0	0	1	
4.	Assistant Director (HQ)	18	1	1	0	0	
5.	Veterinary Officer	17	4	1	0	3	
6.	Office Superintendent	16	1	0	0	1	Service rules not yet framed
6.	Computer Operator	12	5	0	5	0	
7.	Cameraman	11	1	0	1	0	
8.	Stock Recorder	9	24	0	22	2	Recruited but 2 did not join
9.	Store Keeper	9	1	0	0	1	Service rules not yet framed
10.	Junior Clerk	7	1	0	1	0	
11.	Bill Clerk	7	1	0	1	0	
12.	Assistant Store Keeper	7	1	0	0	1	Recruited but Resigned
13.	Electrician	6	1	0	1	0	
14.	Vehicle Drivers	4	10	0	6	4	Four vehicles were not purchased due to non release of funds, hence 4 drivers were not recruited
15.	Truck Drivers	4	1	0	1	0	
16.	Tubewell/Generator Driver	2	1	0	1	0	
17.	Naib Qasid	1	2	0	2	0	
18.	Cattle Attendant	1	8	0	8	0	
19.	Mali	1	1	0	1	0	
20.	Sanitary Worker	1	1	0	1	0	
Total			68	3	51	14	



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PURCHASE & DISTRIBUTION OF SAHIWAL BULL CALVES

Phase-I

Year	Opening Balance	Increased/purchased from			O/M Return from SPU	Total	Decreased by					Total	Closing Balance
		Govt.	Private	Sub Total			Shifted SPU	Issued to breeders	Auctioned/ culled	Died	O/M Free distributed		
2004-05	0	61	8	69	0	69	7	0	2	4		13	56
2005-06	56	63	36	99	0	155	27	21	0	3		51	104
2006-07	104	75	30	105	0	209	44	45	2	2		93	116
2007-08	116	100	27	127	0	243	36	108	1	9		154	89
2008-09	89	0	0	0	7	96	7	47		13		67	29
2009-10	29	0	0	0	19	48	0	18	15	2	10	45	3
2010-11	3	0	0	0	7	10	0	8	1	0	1	10	0
Total		299	101	400	33	433	121	247	21	33		433	0



Research Centre for Conservation of Sahiwal Cattle (RCCSC), Jhang



PURCHASE & DISTRIBUTION OF SAHIWAL BULL CALVES

Phase-II													
Year	Opening Balance	Increased/purchased from			O/M Return from SPU	Total	Decreased by					Total	Closing Balance
		Govt.	Private	Sub Total			Shifted SPU	Issued to breeders	Auctioned/ culled	Died	O/M Free distributed		
2008-09	0	51	0	51	0	51	0	0	0	0		0	51
2009-10	51	106	83	189	0	240	25	50	0	11		86	154
2010-11	154	105	49	154	1	309	48	95	2	6	11	162	147
2011-12	147	0	0	0	0	147	0	0	0	0	0	0	147
Total Phase II		262	132	394	1	395	73	145	2	17	11	248	147
Grand Total		561	233	794	34	828	194	392	23	50	11	681	147





Sahiwal Bulls Batche 15 (2004-2005 & 2005-2006)



SPU Code	S-348
Brand No.	SC 139/01
Date of Birth	26.12.01
Sire No.	S-124 BV +222.60
Dam No.	KD 25/11
Dam's Milk Yield/EBVs (kg)	3270 BV 83.97



SPU Code	S-349
Brand No.	SC 34/02
Date of Birth	16.3.02
Sire No.	S-115 BV +140.58
Dam No.	KD 27/28
Dam's Milk Yield/EBVs (kg)	2900 BV 56.27



SPU Code	S-350
Brand No.	SC 64/02
Date of Birth	22.5.02
Sire No.	S-100 BV +31.42
Dam No.	KD 70/37
Dam's Milk Yield/EBVs (kg)	3994/306 BV 63.29



SPU Code	S-351
Brand No.	SC 85/02
Date of Birth	22.5.02
Sire No.	S-100 BV +31.42
Dam No.	KD 92/46
Dam's Milk Yield/EBVs (kg)	3525 BV 116.06



SPU Code	S-353
Brand No.	SC 50/03
Date of Birth	20.4.03
Sire No.	S-115 BV +140.58
Dam No.	KD 14/16
Dam's Milk Yield/EBVs (kg)	2341 BV 11.36



SPU Code	S-367
Brand No.	KC-90/04
Date of Birth	15.1.04
Sire No.	S-209 Proven
Dam No.	KD-94/11
Dam's Milk Yield/EBVs (kg)	2259 BV +34



SPU Code	S-368
Brand No.	KC-70/04
Date of Birth	8.1.04
Sire No.	S-209 Proven
Dam No.	KD-58/93
Dam's Milk Yield/EBVs (kg)	2305 BV +44



SPU Code	S-369
Brand No.	JC-80/04
Date of Birth	24.4.04
Sire No.	S-306
Dam No.	J-12/12
Dam's Milk Yield/EBVs (kg)	2067 BV +58



SPU Code	S-375
Brand No.	WC-20/04
Date of Birth	24.1.04
Sire No.	1401 Pedigreed
Dam No.	W-29/06 Pedigreed
Dam's Milk Yield/EBVs (kg)	2809



SPU Code	S-378
Brand No.	KC-68/03
Date of Birth	22.5.03
Sire No.	S-115
Dam No.	KD-28/1.1
Dam's Milk Yield/EBVs (kg)	2734/306



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Sahiwal Bulls Batche 16 (2006-2007)



SPU Code	S-366
Brand No.	KC-41/04
Date of Birth	4.03.04
Sire No.	S-306
Dam No.	KD-42/23
Dam's Milk Yield/EBVs (kg)	2660/371 BV +47



SPU Code	S-376
Brand No.	JGC-6/03
Date of Birth	9.10.03
Sire No.	JG-5/1.7
Dam No.	JG-9/99
Dam's Milk Yield/EBVs (kg)	3800/306



SPU Code	S-379
Brand No.	KC-56/04
Date of Birth	15.4.04
Sire No.	S-307
Dam No.	KD-60/00
Dam's Milk Yield/EBVs (kg)	1635/306 BV +46



SPU Code	S-383
Brand No.	JC-74/04
Date of Birth	17.7.04
Sire No.	S-110 Proven
Dam No.	J-102/39
Dam's Milk Yield/EBVs (kg)	3515/306 BV + 10



SPU Code	S-386
Brand No.	JGC-3/04
Date of Birth	30.12.04
Sire No.	JG-5/1.7
Dam No.	JG-2/02
Dam's Milk Yield/EBVs (kg)	4000/306



SPU Code	S-389
Brand No.	WC-3/05
Date of Birth	4.1.05
Sire No.	14/21
Dam No.	W-4/21
Dam's Milk Yield/EBVs (kg)	2700/306



SPU Code	S-406
Brand No.	WC-11/03
Date of Birth	25.12.03
Sire No.	J-14 (Shahzade)
Dam No.	J-1/2.5 (Nagni)
Dam's Milk Yield/EBVs (kg)	3938/306



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Sahiwal Bulls Batche 17 (2006-2007)



SPU Code S-374
 Brand No. BC-51/04
 Date of Birth 24.5.04
 Sire No. S-100 Proven
 Dam No. S-79/97 Elite
 Dam's Milk Yield EBVs (kg) 2945 BV+602



SPU Code S-382
 Brand No. JC-69/04
 Date of Birth 28.9.04
 Sire No. S-100 Proven
 Dam No. J-7/13
 Dam's Milk Yield EBVs (kg) 2163 BV +29



SPU Code S-385
 Brand No. JC-83/04
 Date of Birth 28.8.04
 Sire No. S-100 Proven
 Dam No. J-12/04+BV+251
 Dam's Milk Yield EBVs (kg) A.4344



SPU Code S-388
 Brand No. WC-11/04
 Date of Birth 13.10.04
 Sire No. 14/21
 Dam No. W-28/46
 Dam's Milk Yield EBVs (kg) 2645/305



SPU Code S-387
 Brand No. JC-22/05
 Date of Birth 28.02.05
 Sire No. S-100
 Dam No. 75/94
 Dam's Milk Yield EBVs (kg) 3440/305



SPU Code S-393
 Brand No. BC-97/04
 Date of Birth 18.11.04
 Sire No. S-325
 Dam No. 14/96
 Dam's Milk Yield EBVs (kg) 3525/405



SPU Code S-400
 Brand No. JC-71/05
 Date of Birth 29.6.05
 Sire No. S-209
 Dam No. 87/95
 Dam's Milk Yield EBVs (kg) 2793/305



SPU Code S-403
 Brand No. JC-68/04
 Date of Birth 28.8.04
 Sire No. S-100 Proven
 Dam No. J-7/13
 Dam's Milk Yield EBVs (kg) 2163BV +29



SPU Code S-404
 Brand No. JGC-2/05
 Date of Birth 16.02.05
 Sire No. S-100
 Dam No. 1/01
 Dam's Milk Yield EBVs (kg) 2935/305



SPU Code S-408
 Brand No. JGC-17/05
 Date of Birth 09.10.05
 Sire No. S-209
 Dam No. 6/98
 Dam's Milk Yield EBVs (kg) 1783/305



SPU Code S-409
 Brand No. JGC-6/05
 Date of Birth 2-11-05
 Sire No. S-209
 Dam No. 14/02
 Dam's Milk Yield EBVs (kg) 3050/305



SPU Code S-410
 Brand No. BC-4/05
 Date of Birth 4.1.05
 Sire No. B209
 Dam No. 87/95
 Dam's Milk Yield EBVs (kg) 2793/305



SPU Code S-423
 Brand No. MC-3/05
 Date of Birth 5-6-05
 Sire No. S-124
 Dam No. 13/97
 Dam's Milk Yield EBVs (kg) 2655/305



SPU Code S-424
 Brand No. MC-8/05
 Date of Birth 14.8.05
 Sire No. S-124
 Dam No. 14/97
 Dam's Milk Yield EBVs (kg) 2987/303



SPU Code S-428
 Brand No. JC-40/05
 Date of Birth 25-3-05
 Sire No. Tall walk
 Dam No. 4/98
 Dam's Milk Yield EBVs (kg) 2850



Research Centre for Conservation of Sahiwal Cattle (RCCSC), Jhang



Sahiwal Bulls Batche 18 (2006-2007)



SPU Code S-366
Brand No. KC-2/04
Date of Birth 11.01.04
Sire No. S-298/03
Dam No. KC 92/46
Dam's Milk Yield EBVs (kg) 2766 BV +117



SPU Code S-367
Brand No. WC-10/04
Date of Birth 05.10.04
Sire No. S-311
Dam No. W 7/36
Dam's Milk Yield EBVs (kg) 2745/05



SPU Code S-395
Brand No. JC-6/05/4/02
Date of Birth 10.01.05
Sire No. S-311
Dam No. 16/1.9
Dam's Milk Yield EBVs (kg) 2683 BV 104



SPU Code S-398
Brand No. JC 44/05
Date of Birth 16.04.05
Sire No. S-219
Dam No. 117/93
Dam's Milk Yield EBVs (kg) 3214 BV 54



SPU Code S-401
Brand No. JC 9/04
Date of Birth 21.09.04
Sire No. S-018
Dam No. 21/86
Dam's Milk Yield EBVs (kg) 3577 BV 63



SPU Code S-482
Brand No. BC 18/04
Date of Birth 25.11.04
Sire No. S-326
Dam No. 79/53
Dam's Milk Yield EBVs (kg) 2706 BV 5



SPU Code S-485
Brand No. JGC-3/04
Date of Birth 25.07.04
Sire No. S-209
Dam No. 11/01
Dam's Milk Yield EBVs (kg) 3230



SPU Code S-412
Brand No. KC 10/04
Date of Birth 19.09.04
Sire No. S-100
Dam No. 1/1.2
Dam's Milk Yield EBVs (kg) 3715BV 47



SPU Code S-418
Brand No. BC-6/05
Date of Birth 08.06.05
Sire No. S-312
Dam No. 98/00
Dam's Milk Yield EBVs (kg) 1886 BV 376



SPU Code S-419
Brand No. BC-74/05
Date of Birth 07.09.05
Sire No. S-325
Dam No. 95/99
Dam's Milk Yield EBVs (kg) 2623 BV 164



SPU Code S-426
Brand No. WC-22/05
Date of Birth 17.12.05
Sire No. Shezada J-14
Dam No. WJ-18/49
Dam's Milk Yield EBVs (kg) 2858



SPU Code S-427
Brand No. JNC-42/05
Date of Birth 24.05.05
Sire No. Tail Wala
Dam No. 711.4
Dam's Milk Yield EBVs (kg) 2900



SPU Code S-429
Brand No. JNC-41/05
Date of Birth 12.04.05
Sire No. Tail Wala
Dam No. 13/1.6
Dam's Milk Yield EBVs (kg) 3709



SPU Code S-430
Brand No. JNC-22/05
Date of Birth 26.09.05
Sire No. S-35
Dam No. 3/03
Dam's Milk Yield EBVs (kg) 2666



SPU Code S-435
Brand No. BC-110/05
Date of Birth 20.12.05
Sire No. S-320
Dam No. 47/00
Dam's Milk Yield EBVs (kg) 2540 BV 138



SPU Code S-438
Brand No. JNC-48/06
Date of Birth 15.01.06
Sire No. S-188
Dam No. 15/00
Dam's Milk Yield EBVs (kg) 3630



SPU Code S-442
Brand No. WC-11/06
Date of Birth 03.04.06
Sire No. Lunda
Dam No. J-11/27
Dam's Milk Yield EBVs (kg) 3865



Research Centre for Conservation of Sahiwal Cattle (RCCSC), Jhang



Sahiwal Bulls Batche 19 (2007 to 2008)

 <table border="1"> <tr><td>SPU Code</td><td>S-431</td></tr> <tr><td>Brand No.</td><td>JC-1796</td></tr> <tr><td>Date of Birth</td><td>30/2/08</td></tr> <tr><td>Sire No.</td><td>S-328</td></tr> <tr><td>Dam No.</td><td>2497</td></tr> <tr><td>Dam's Milk Yield/LVs (kg)</td><td>2102/305</td></tr> </table>	SPU Code	S-431	Brand No.	JC-1796	Date of Birth	30/2/08	Sire No.	S-328	Dam No.	2497	Dam's Milk Yield/LVs (kg)	2102/305	 <table border="1"> <tr><td>SPU Code</td><td>S-432</td></tr> <tr><td>Brand No.</td><td>JC-1908</td></tr> <tr><td>Date of Birth</td><td>13/02/08</td></tr> <tr><td>Sire No.</td><td>S-110</td></tr> <tr><td>Dam No.</td><td>4288</td></tr> <tr><td>Dam's Milk Yield/LVs (kg)</td><td>2857/305</td></tr> </table>	SPU Code	S-432	Brand No.	JC-1908	Date of Birth	13/02/08	Sire No.	S-110	Dam No.	4288	Dam's Milk Yield/LVs (kg)	2857/305	 <table border="1"> <tr><td>SPU Code</td><td>S-437</td></tr> <tr><td>Brand No.</td><td>BC-65/05</td></tr> <tr><td>Date of Birth</td><td>19/05/05</td></tr> <tr><td>Sire No.</td><td>S-312</td></tr> <tr><td>Dam No.</td><td>3301</td></tr> <tr><td>Dam's Milk Yield/LVs (kg)</td><td>2788/463</td></tr> </table>	SPU Code	S-437	Brand No.	BC-65/05	Date of Birth	19/05/05	Sire No.	S-312	Dam No.	3301	Dam's Milk Yield/LVs (kg)	2788/463	 <table border="1"> <tr><td>SPU Code</td><td>S-447</td></tr> <tr><td>Brand No.</td><td>JC-3306</td></tr> <tr><td>Date of Birth</td><td>10/07/04</td></tr> <tr><td>Sire No.</td><td>S-332</td></tr> <tr><td>Dam No.</td><td>2985</td></tr> <tr><td>Dam's Milk Yield/LVs (kg)</td><td>2969/312</td></tr> </table>	SPU Code	S-447	Brand No.	JC-3306	Date of Birth	10/07/04	Sire No.	S-332	Dam No.	2985	Dam's Milk Yield/LVs (kg)	2969/312
SPU Code	S-431																																																		
Brand No.	JC-1796																																																		
Date of Birth	30/2/08																																																		
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Dam's Milk Yield/LVs (kg)	2969/312																																																		
 <table border="1"> <tr><td>SPU Code</td><td>S-454</td></tr> <tr><td>Brand No.</td><td>BC-88/06</td></tr> <tr><td>Date of Birth</td><td>9/10/06</td></tr> <tr><td>Sire No.</td><td>S-328</td></tr> <tr><td>Dam No.</td><td>B-396</td></tr> <tr><td>Dam's Milk Yield/EBVs (kg)</td><td>2948/345</td></tr> </table>	SPU Code	S-454	Brand No.	BC-88/06	Date of Birth	9/10/06	Sire No.	S-328	Dam No.	B-396	Dam's Milk Yield/EBVs (kg)	2948/345	 <table border="1"> <tr><td>SPU Code</td><td>S-388</td></tr> <tr><td>Brand No.</td><td>(BC-11) Fc-10) WG-11/04</td></tr> <tr><td>Date of Birth</td><td>13/10/04</td></tr> <tr><td>Sire No.</td><td>1421</td></tr> <tr><td>Dam No.</td><td>VV-28/46</td></tr> <tr><td>Dam's Milk Yield/EBVs (kg)</td><td>2845/305</td></tr> </table>	SPU Code	S-388	Brand No.	(BC-11) Fc-10) WG-11/04	Date of Birth	13/10/04	Sire No.	1421	Dam No.	VV-28/46	Dam's Milk Yield/EBVs (kg)	2845/305	 <table border="1"> <tr><td>SPU Code</td><td>S-434</td></tr> <tr><td>Brand No.</td><td>BC-61/06</td></tr> <tr><td>Date of Birth</td><td>12/4/06</td></tr> <tr><td>Sire No.</td><td>S-110</td></tr> <tr><td>Dam No.</td><td>B-72/96</td></tr> <tr><td>Dam's Milk Yield/EBVs (kg)</td><td>2781/296</td></tr> </table>	SPU Code	S-434	Brand No.	BC-61/06	Date of Birth	12/4/06	Sire No.	S-110	Dam No.	B-72/96	Dam's Milk Yield/EBVs (kg)	2781/296	 <table border="1"> <tr><td>SPU Code</td><td>S-455</td></tr> <tr><td>Brand No.</td><td>JC-106/06</td></tr> <tr><td>Date of Birth</td><td>23/0/06</td></tr> <tr><td>Sire No.</td><td>S-328</td></tr> <tr><td>Dam No.</td><td>J-76/99</td></tr> <tr><td>Dam's Milk Yield/EBVs (kg)</td><td>2140/239</td></tr> </table>	SPU Code	S-455	Brand No.	JC-106/06	Date of Birth	23/0/06	Sire No.	S-328	Dam No.	J-76/99	Dam's Milk Yield/EBVs (kg)	2140/239
SPU Code	S-454																																																		
Brand No.	BC-88/06																																																		
Date of Birth	9/10/06																																																		
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Dam's Milk Yield/EBVs (kg)	2845/305																																																		
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Sahiwal Bulls Batche-20 (2008 to 2009)

 <p>SPU Code S-440 Brand No. BC-4796 Date of Birth 08-03-06 Sire No. S-321 Dam No. 7295 Dam's Milk Yield EBVs (kg) 2366/295</p>	 <p>SPU Code S-446 Brand No. JC-9406 Date of Birth 24-06-06 Sire No. S-316 Dam No. 7299 Dam's Milk Yield EBVs (kg) 2091/296BV+595</p>	 <p>SPU Code S-453 Brand No. BC-11876 Date of Birth 30-11-06 Sire No. S-320 Dam No. B-5093 Dam's Milk Yield EBVs (kg) 4423/299BV+546</p>	 <p>SPU Code S-456 E.T. Bull Brand No. JC11296 Date of Birth 20-09-06 Sire No. S-118 Dam No. J4893 Dam's Milk Yield EBVs (kg) 3759/04 BV+167</p>
 <p>SPU Code S-458 Brand No. WC-29/06 Date of Birth 26-02-06 Sire No. Jaja Dam No. J-4/1.04 Dam's Milk Yield EBVs (kg) 920/3058BV+90</p>	 <p>SPU Code S-459 Brand No. WC-57/06 Date of Birth 14-01-07 Sire No. Shamas Dam No. Naseebo Dam's Milk Yield EBVs (kg) 3143/305</p>	 <p>SPU Code S-461 Brand No. JC-188/06 Date of Birth 23-08-06 Sire No. S-330 Dam No. 3690 Dam's Milk Yield EBVs (kg) 2311/258BV+152</p>	 <p>SPU Code S-462 Brand No. JC-157/06 Date of Birth 05-12-06 Sire No. S-100 Dam No. J-297 Dam's Milk Yield EBVs (kg) 3418/361BV+188</p>
 <p>SPU Code S-463 Brand No. JC-13/07 Date of Birth 24-01-07 Sire No. S-107 Dam No. J-42/95 Dam's Milk Yield EBVs (kg) 2737/3388BV+23</p>	 <p>SPU Code S-464 Brand No. JC-18/07 Date of Birth 30-01-07 Sire No. S-187 Dam No. J-70/95 Dam's Milk Yield EBVs (kg) 3276/362BV+441</p>	 <p>SPU Code S-471 Brand No. WC-72/07 Date of Birth 23-02-07 Sire No. 5321 Dam No. J-22/1.0 Dam's Milk Yield EBVs (kg) 4600/300</p>	





Sahiwal Bulls Batche-21 (2009 to 2010)



SPU Code	S-465
Brand No.	WC-55/07
Date of Birth	11/01/07
Sire No.	SHEZADA
Dam No.	3/19
Dam's Milk Yield/ EBVs (kg)	4310/305



SPU Code	S-467
Brand No.	KC-42/06
Date of Birth	25/02/06
Sire No.	S-110
Dam No.	KD-81/4.3
Dam's Milk Yield/ EBVs (kg)	2373/305



SPU Code	S-468
Brand No.	JC-59/07
Date of Birth	15/05/07
Sire No.	S-110
Dam No.	J-58/00
Dam's Milk Yield/ EBVs (kg)	1st Calver



SPU Code	S-469
Brand No.	JC-41/07
Date of Birth	02/04/07
Sire No.	S-188
Dam No.	J-21/95
Dam's Milk Yield/ EBVs (kg)	3192/305



SPU Code	S-470
Brand No.	JC-66/07
Date of Birth	26/05/07
Sire No.	S-110
Dam No.	J-94/01
Dam's Milk Yield/ EBVs (kg)	1st Calver



SPU Code	S-475
Brand No.	JC-128/07
Date of Birth	06/12/07
Sire No.	S-209
Dam No.	47/00
Dam's Milk Yield/ EBVs (kg)	2078/305



SPU Code	S-479
Brand No.	JGC-22/08
Date of Birth	30/01/08
Sire No.	S-350
Dam No.	3/05
Dam's Milk Yield/ EBVs (kg)	2600/305





Sahiwal Bulls Batche-22 (2010 to 2011)

 <p>SPU Code: S-423 Brand No: WC-1405 Date of Birth: 27-05-10 Sex No: Shehzade J-14 Dam No: J-200 Dam's Milk Yield (kg): 320000</p>	 <p>SPU Code: S-462 Brand No: DC-0006 Date of Birth: 19-08-08 Sex No: S-380 Dam No: B-9858 Dam's Milk Yield (kg): 257510.0000</p>	 <p>SPU Code: S-431 Brand No: DC-0000 Date of Birth: 1-10-2011 Sex No: S-323 Dam No: B-388 Dam's Milk Yield (kg): 294924.0000</p>	 <p>SPU Code: S-473 Brand No: JC-8307 Date of Birth: 15/11/07 Sex No: S-13 Dam No: J-3107 Dam's Milk Yield (kg): 302734.9207</p>	 <p>SPU Code: S-474 Brand No: DC-2407 Date of Birth: 26/08/09 Sex No: S-339 Dam No: B-1895 Dam's Milk Yield (kg): 343481.4277</p>	 <p>SPU Code: S-389 Brand No: QSP-E118 Date of Birth: 1/10/10 Sex No: S-114 Dam No: 107 Dam's Milk Yield (kg): 4401</p>
	 <p>SPU Code: S-487 Brand No: JNC-2014 Date of Birth: 12-7-2009 Sex No: S-7 Dam No: 1200 Dam's Milk Yield (kg): 3516306</p>		 <p>SPU Code: S-482 Brand No: JC-1208 Date of Birth: 08/11/08 Sex No: S-349 Dam No: J-1511 Dam's Milk Yield (kg): 28384221</p>	 <p>SPU Code: S-483 Brand No: JC-1303 Date of Birth: 30/11/10 Sex No: S-107 Dam No: J-5499 Dam's Milk Yield (kg): 2715425</p>	 <p>SPU Code: S-489 Brand No: SG-2/08 Date of Birth: 14/04/08 Sex No: S-357 Dam No: J-6455 Dam's Milk Yield (kg): 21151212</p>
 <p>SPU Code: S-490 Brand No: DC-0186 Date of Birth: 11/03/08 Sex No: S-124 Dam No: B-1390 Dam's Milk Yield (kg): 7758</p>	 <p>SPU Code: S-523 Brand No: SC-2150 Date of Birth: 28/12/08 Sex No: S-328 Dam No: LD-1353 Dam's Milk Yield (kg):</p>	 <p>SPU Code: S-504 Brand No: SC-427 Date of Birth: 12/12/07 Sex No: S-328 Dam No: LD-1896 Dam's Milk Yield (kg): 8137</p>			
	 <p>SPU Code: S-505 Brand No: WC-2489 Date of Birth: 17/03/08 Sex No: B-889 Dam No: W-1111 Dam's Milk Yield (kg): 2878</p>				





Sahiwal Bulls Batche-23 (2010 to 2011)

 <p>SPU Code S-484 Brand No. JC-23108 Date of Birth 28/3/2008 Sire No. S-389 Dam No. J-9181 Dam's Milk Yield EBVs (kg) 3052/305 + 1103</p>	 <p>SPU Code S-485 Brand No. JC-2908 Date of Birth 15/3/2008 Sire No. S-110 Dam No. J-8490 Dam's Milk Yield EBVs (kg) 3650/365 + 1572</p>	 <p>SPU Code S-487 Brand No. JC-43108 Date of Birth 18/4/2008 Sire No. S-110 Dam No. J-9202 Dam's Milk Yield EBVs (kg) 2766 + 737</p>	 <p>SPU Code S-497 Brand No. KC-11808 Date of Birth 20/8/2008 Sire No. S-107 Dam No. P-9 Dam's Milk Yield EBVs (kg) 2757/273</p>	 <p>SPU Code S-509 Brand No. BFC-309 Date of Birth 20/11/2009 Sire No. S-107 Dam No. Garvi Dam's Milk Yield EBVs (kg) 3909/305</p>	 <p>SPU Code S-510 Brand No. RFC-409 Date of Birth 30/01/2009 Sire No. S-209 Dam No. B-2005 Dam's Milk Yield EBVs (kg) 4300/305</p>
 <p>SPU Code S-488 Brand No. JC-56108 Date of Birth 25/5/2008 Sire No. S-110 Dam No. J-7098 Dam's Milk Yield EBVs (kg) 2525/305</p>	 <p>SPU Code S-491 Brand No. BC-54108 Date of Birth 9/4/2008 Sire No. S-209 Dam No. B-12/98 Dam's Milk Yield EBVs (kg) 4435/413</p>	 <p>SPU Code S-492 Brand No. BC-69108 Date of Birth 05/01/2008 Sire No. S-375 Dam No. B-36/02 Dam's Milk Yield EBVs (kg) 3199/260</p>	 <p>SPU Code S-512 Brand No. RFC-309 Date of Birth 02/03/2009 Sire No. Sultan Dam No. 29/04 Dam's Milk Yield EBVs (kg) 4100/305</p>		



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Sahiwal Bulls Batche-24 (2010 to 2011)

 <p>SPU Code S-496 Brand No. KC-5706 Date of Birth 13/06/06 Sire No. S-107 Dam No. P-4 Dam's Milk Yield (EBVs) (kg) 2743/235+508</p>	 <p>SPU Code S-499 Brand No. KKC-15908 Date of Birth 06/10/08 Sire No. J-9036 Dam No. KK-314/1.12 Dam's Milk Yield (EBVs) (kg) 2681/482+139</p>	 <p>SPU Code S-505 Brand No. WC-1409 Date of Birth 31/03/09 Sire No. S-186 Dam No. WJ-114.3 Dam's Milk Yield (EBVs) (kg) 2623</p>	 <p>SPU Code S-515 Brand No. RFC-2209 Date of Birth 1-1-09 Sire No. S-188 Dam No. Z/04 Arjunah Dam's Milk Yield (EBVs) (kg) 4500</p>	 <p>SPU Code S-516 Brand No. JC-31709 Date of Birth 17-3-09 Sire No. S-423 Dam No. J-3003 Dam's Milk Yield (EBVs) (kg) 2354+981</p>	 <p>SPU Code S-517 Brand No. FFC-2009 Date of Birth 16-1-09 Sire No. Sultan Dam No. 405 Krishna Dam's Milk Yield (EBVs) (kg) 4200</p>
 <p>SPU Code S-511 Brand No. JC-2209 Date of Birth 23-2-09 Sire No. S-424 Dam No. J-5499 Dam's Milk Yield (EBVs) (kg) 1717+545</p>	 <p>SPU Code S-513 Brand No. WC-1009 Date of Birth 16-3-09 Sire No. S-142 Dam No. J-104.1 Dam's Milk Yield (EBVs) (kg) 5731</p>	 <p>SPU Code S-514 Brand No. JC-3409 Date of Birth 25-3-09 Sire No. S-603 Dam No. J-108/1 Dam's Milk Yield (EBVs) (kg) 2444+727</p>	 <p>SPU Code S-521 Brand No. JC-8809 Date of Birth 25-5-09 Sire No. S-188 Dam No. J-43/95 Dam's Milk Yield (EBVs) (kg) 3253+935</p>		



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Sahiwal Bulls Batche-25 (2011 to 2012)



SPU Code	S-519
Brand No.	JC-45/09
Date of Birth	28-4-09
Sire No.	S-397
Dam No.	J-19/02
Dam's Milk Yield EBVs (kg)	2347+1287



SPU Code	S-522
Brand No.	JC-62/09
Date of Birth	29-5-09
Sire No.	S-186
Dam No.	J-100/00
Dam's Milk Yield EBVs (kg)	2647+1408



SPU Code	S-530
Brand No.	JGC-57/09
Date of Birth	9-11-09
Sire No.	S-186
Dam No.	JG-1/03
Dam's Milk Yield EBVs (kg)	4100



SPU Code	S-531
Brand No.	JC-65/09
Date of Birth	4-6-09
Sire No.	S-281
Dam No.	J-34/2.2
Dam's Milk Yield EBVs (kg)	2552+1119



SPU Code	S-534
Brand No.	KC-79/09
Date of Birth	24-8-09
Sire No.	S-186
Dam No.	KD-117/95
Dam's Milk Yield EBVs (kg)	2488+1068



SPU Code	S-542
Brand No.	BC-121/09
Date of Birth	8-09-09
Sire No.	S-266
Dam No.	B-11/98
Dam's Milk Yield EBVs (kg)	2530+897



SPU Code	S-543
Brand No.	JC-101/09
Date of Birth	17-9-09
Sire No.	S-186
Dam No.	J-114/99
Dam's Milk Yield EBVs (kg)	3089+1736



SPU Code	S-545
Brand No.	JC-108/09
Date of Birth	17-10-09
Sire No.	S-374
Dam No.	J-76/03
Dam's Milk Yield EBVs (kg)	2299+1334



SPU Code	S-550
Brand No.	RFC-1/10
Date of Birth	01-01-10
Sire No.	S-7
Dam No.	R-29/04
Dam's Milk Yield EBVs (kg)	5100



Research Centre for Conservation of Sahiwal Cattle (RCCSC), Jhang



Sahiwal Bulls Batche-26 (2011 to 2012)

 <p>SPU Code S-518 Brand No. KC-30/09 Date of Birth 9-4-09 Sire No. S-424 Dam No. KD-9314.2 Dam's Milk Yield EBVs (kg) 2608</p>	 <p>SPU Code S-523 Brand No. JC-39/09 Date of Birth 11-4-09 Sire No. S-186 Dam No. J-68/02 Dam's Milk Yield EBVs (kg) 2041+689</p>	 <p>SPU Code S-524 Brand No. JC-41/09 Date of Birth 12-4-09 Sire No. S-388 Dam No. J-80/01 Dam's Milk Yield EBVs (kg) 2335+565</p>	 <p>SPU Code S-527 Brand No. JC-88/09 Date of Birth 13-8-09 Sire No. S-281 Dam No. J-6/02 Dam's Milk Yield EBVs (kg) 2765+796</p>	 <p>SPU Code S-528 Brand No. JOC-53/09 Date of Birth 8-12-09 Sire No. S-186 Dam No. 89/09 Dam's Milk Yield EBVs (kg) 3300</p>
 <p>SPU Code S-529 Brand No. JGC-55/09 Date of Birth 1-12-09 Sire No. S-186 Dam No. 1/06 Dam's Milk Yield EBVs (kg) 3200</p>	 <p>SPU Code S-532 Brand No. JC-70/09 Date of Birth 18-6-09 Sire No. S-281 Dam No. J-11/01 Dam's Milk Yield EBVs (kg) 1632+501</p>	 <p>SPU Code S-551 Brand No. BFC-2/10 Date of Birth 2-3-10 Sire No. S-266 Dam No. 40/00 Dam's Milk Yield EBVs (kg) 3500</p>	 <p>SPU Code S-559 Brand No. WC-2/10 Date of Birth 30-1-10 Sire No. J-3/03 Dam No. WJ-34/06 Dam's Milk Yield EBVs (kg) 2580</p>	 <p>SPU Code S-562 Brand No. SC-22/10 Date of Birth 15-3-10 Sire No. S-284 Dam No. 14/00 Dam's Milk Yield EBVs (kg) 4052</p>
 <p>SPU Code S-563 Brand No. WC-9/10 Date of Birth 26-2-10 Sire No. S-328 Dam No. WJ-7/3.0 Dam's Milk Yield EBVs (kg) 3591</p>	 <p>SPU Code S-565 Brand No. SC-1/10 Date of Birth 29-1-10 Sire No. S-328 Dam No. S-24/05 Dam's Milk Yield EBVs (kg) 2720</p>			



Yearly Cow Evaluation



Year of Evaluation	Name of Farm	No of cows evaluated	Elite Cows (No.)	Positive cows (No.)	Negative cows (No.)
2003-05	Jahangirabad	318	22	120	198
	Khizarabad	427	9	215	212
	Bahadurnagar	271	13	131	140
	Total	1016	44	466	550
2005-06	Jahangirabad	249	8	131	118
	Khizarabad	303	-	59	244
	Bahadurnagar	242	5	118	124
	Kalur Kot	108	2	36	72
	Total	902	15	344	558
2006-07	Jahangirabad	365	17	152	253
	Khizarabad	362	-	32	330
	Bahadurnagar	321	16	100	221
	Kalur Kot	182	1	116	110
	Fazil Pur	147	70	144	3
	Total	1377	104	544	917
	Private	278	-	125	153
	G. Total	1655	104	669	1070



Yearly Cow Evaluation

Year of Evaluation	Name of Farm	No of cows evaluated	Elite Cows (No.)	Positive cows (No.)	Negative cows (No.)
2006-07	Jahangirabad	365	17	152	253
	Khizarabad	362	-	32	330
	Bahadurnagar	321	16	100	221
	Kalur Kot	182	1	116	110
	Fazil Pur	147	70	144	3
	Total	1377	104	544	917
	Private	278	-	125	153
	G. Total	1655	104	669	1070
2007-08	Jahangirabad	752	179	409	343
	Khizarabad	724	23	116	608
	Bahadurnagar	627	98	179	348
	Kalur Kot	406	23	131	252
	Fazil Pur	333	162	79	88
	Total	2842	485	914	1639
	Private	278	-	125	153
	G. Total	6415	648	2393	3817



Yearly Cow Evaluation



Year of Evaluation	Name of Farm	No of cows evaluated	Elite Cows (No.)	Positive cows (No.)	Negative cows (No.)
2008-09	Jahangirabad	8375	52	339	307
	Khizarabad	5792	3	235	459
	Bahadurnagar	6823	33	288	349
	Kalur Kot	4273	--	182	304
	Fazil Pur	1124	--	264	104
	Total		26387	88	1308



Yearly Cow Evaluation



Year of Evaluation	Name of Farm	No of cows evaluated	Standing cows	Elite Cows (No.)	Positive cows (No.)	Negative cows (No.)
2009-10	Jahangirabad	1673	341	171	332	9
	Khizarabad	1114	369	1	319	50
	Bahadurnagar	2146	305	1	81	224
	Kalur Kot	1149	166	--	115	51
	Fazil Pur	393	203	--	154	49
	Total		6475	1387	173	1001



RCCSC Bulls Evaluation



Year	Bulls Evaluated	Positive Bulls	Negative Bulls
2003-05	236	97	139
2005-06	273	108	165
2006-07	327	138	189
2007-08	334	170	164
2008-09	215	92	123
2009-10	231	149	82





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|-------------------------------|-----------------|-------------------------|---------------|------------------|----------------------------------|
| 1. Australia | 2. Bangladesh | 3. Brazil | 4. Burundi | 5. Comoros | 6. Congo, Democratic Republic of |
| 7. Cuba | 8. Ecuador | 9. Honduras | 10. India | 11. Indonesia | 12. Jamaica |
| 13. Kenya | 14. Malaysia | 15. Mali | 16. Mauritius | 17. Nepal | 18. New Zealand |
| 19. Pakistan | 20. Philippines | 21. Rwanda | 22. Senegal | 23. Sierra Leone | 24. Sri Lanka |
| 25. Tanzania, United Republic | 26. Thailand | 27. Trinidad and Tobago | 28. Viet Nam | 29. Zambia | |



Research



Research Centre for Conservation of Sahiwal Cattle (RCCSC), Jhang



Expected genetic gain from breeding plan of RCCSC-Phase-II

Selection criterion & breeding objective:		305 day milk yield			
Main alternatives:					
No. of recorded daughters/proven sire	20		No. of proven AI-bulls selected/year	30	
Proportion of young bull semen	0.95		No. of proven bull-sires selected/year	15	
			Proportion of young bulls with proven sires	1.00	
Assumptions and pre-calculations:					
Heritability (h^2)	0.23		Total no. of doses (demand)	35016	
Repeatability (r)	0.42		No. of doses/young bull (to be used)	220	
C^2 -effect, paternal halfsibs (c^2)	0		Total no. of doses, young bulls (demand)	33265	
Recorded population size, cows	15000		No. of young bulls tested/year (demand)	151	
Age at first calving (months)	45		Age of young bull at first service (months)	36	
Calving interval (days)	430		Proportion of cows used as dams	0.90	
No. of cows calving/year	12733		No. of candidate bulldams/young bull calf	20	
Proportion of population in AI	1.00		Period a young bull is used (months)	12	
No. of services/cow calving	2.8		Period a proven bull is used (months)	12	
No. of calvings/recorded daughter	4		Period a proven bull is used as bull-sire	12	
Proportion of semen from other breeds	0		No. of lactations/cow in breeding value	4	
Characteristics of the trait:					
Phenotypic standard deviation, s_p (kg)	465		Replacement rate, proportion	0.2	
Genetic standard deviation, s_A (kg)	223		Culling rate, prop. (cull. rate < repl. rate)	0.2	
Overall mean (kg)	1489		First possible lactation for bulldams (≥ 1)	1	
			Last possible lactation for bulldams (≤ 5)	5	



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Genetic gain by path		Accuracy		<u>Selected</u>	Selection	Genetic	
Path of selection	Fraction	(rTI)	No.	Proportion	intensity (i)	gain (kg)	Ratio
Sire-son (proven sires)	100%	0.7803	15	0.0993	1.7416	303.06	58%
Sire-daughter (proven sires)	5%	0.7803	30	0.1987	1.3951	12.14	2%
Dam-son		0.6405	3020	0.2372	1.3022	186.00	36%
Dam-daughter		0.4154		0.9000	0.1950	18.06	3%
Generation intervals		Years					
Sire-son		10.08					
Sire-daughter		4.54					
Dam-son		6.10					
Dam-daughter		7.47					
Average, four paths ($\bar{a}L/4$)		7.05					
		Total gain per			<u>Total gain per</u>		
Total genetic gain		generation (kg)		In kg	In % of mean		
		129.8		18.4	1.24%		



National Dairy Champions



- **Sahiwal Cow ID: J 53/2.6**
- **Owner Name: LES Jahangirabad Distt: Khanewal**



- **Sahiwal Cow ID: J 37/2.5**
- **Owner Name: LES Jahangirabad Distt: Khanewal**



- **Sahiwal Cow ID: J 8/1.1**
- **Owner Name: LES Jahangirabad Distt: Khanewal**
- **Milk Yield: 41.3 kgs/36hrs**



- **Sahiwal Cow ID: J 4/94**
- **Owner Name: LES Jahangirabad Distt: Khanewal**
- **Milk Yield: - 36.0 kgs/36hrs**



Glimpses of Sahiwal Cattle Fair at RCCSC Jhang on 11-06-2011

