Kerala Livestock Development Board Ltd.

SIRE DIRECTORY 2006

sunandini sires

EXOTIC BULLS & MURRAH BUFFALOES INCLUDED
The herd sires featured in this publication are designed to optimize and not necessarily maximize. We breed mainly for fluid milk production trait, but ensuring adaptability to hot humid climate prevailing in tropical environment. Hence we aim to optimize production in the progenies.

Here is what you get in this catalogue:

Details of:

√ Ksheeradhara bulls

Progeny tested proven Sunandini bulls

Exotic bulls

√ Sunandini bulls at random

√ Exotic x Zebu cross F1 bulls

√ Murrah buffalo bulls

Published by:

The Managing Director
Kerala Livestock Development Board Ltd.
Gokulam, Pattom, Thiruvananthapuram - 695 004
Telephone: +91 471 2440920, 2552690 Fax: +91 471 2440673
Email : kldboard@vsnl.com, kldboard@sancharnet.in
“Sunandini” a new breed of cattle, most suited to tropical environment, is evolved in the state of Kerala through crossbreeding of Zebu and Taurus cattle. The sustained genetic improvement of “Sunandini” is ensured through intense selection.

The breeding value of bulls for milk production is estimated through progeny testing under field conditions. Every year about 40 bulls are progeny tested. The bulls proven for high breeding values are selected and mated with superior cows to produce the next generation young bulls. All bulls entering the breeding programme are progeny tested. The “Sunandini” is capable of production on an average 3600 kg. of milk in a standard lactation.

The KLD Board, a Government of Kerala undertaking, produce frozen semen from Sunandini Sires originating from Holstein Friesian (HF), Jersey and Brown Swiss lines.

The Board also produce semen from bulls of exotic breeds - HF & Jersey and Murrah buffalo. The exotic bulls are of excellent breeding value and are either imported or born from imported embryos.

The KLD Board produce 3 million doses of frozen semen annually. The semen is packed in French medium or mini straws. The Board, pioneers of frozen semen production in the country, employs the most advanced production technique and quality control to ensure that every dose meets with the highest possible standards.

The KLD Board is the sole supplier of frozen semen in the state of Kerala. Annually 1.6 million artificial inseminations are done through a network of 2922 Artificial Insemination Centers. The Board supplies exotic, crossbred and buffalo semen to several states outside Kerala.

“Sunandini Sires 2006” presents the details of outstanding proven Sunandini bulls (both F1 and interseminated), proven exotic bulls of high genetic merit and superior Murrah buffalo bulls. A random list of other bulls available with the KLD Board is also given for ready reference. Frozen semen from all these category of bulls are available for sale.

Details of Bull Semen in Posters & Booklet form are available at all Artificial Insemination centres in Kerala.

Details available on our website www.livestockkerala.org

For prices, orders & further details, please contact

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KLD Board
Mudavoor P O
Muvattupuzha - 686 669
Kerala, India
Telefax: +485 2812563, 2812763
e-mail:kldbmvp@sancharnet.in

The Manager(AH)
KLD Board
Kulathupuzha P O
Kollam – 691 310
Kerala, India
Telefax: +475 2317547
e-mail:kldbkulathupuzha@hotmail.com
Method employed for Breeding Value estimation

\[ BV = 2 \left( \frac{n}{n + k} \right) \left[ (\bar{X}_1 - \bar{X}_3) + 0.2 (\bar{X}_2 - \bar{X}_3) \right] \]

Where:
- \( BV \) = Estimated Breeding value of milk production
- \( X_1 \) = Least square mean of corrected daughters’ lactation
- \( X_2 \) = Least square mean of three best centres
- \( X_3 \) = Population least square mean
- \( n \) = Number of daughters.
- \( k \) = \( \frac{4 - h^2}{h^2} \)
- \( h^2 \) = Heritability for milk production.

Abbreviation used

- \( R^2 \) = Reliability of the progeny test
- \( HF \) = Holstein Friesian
- \( JY \) = Jersey
- \( BS \) = Brown Swiss
- \( CH \) = Crossbred Holstein Friesian
- \( CJ \) = Crossbred Jersey
- \( CB \) = Crossbred Brown Swiss
- \( SA \) = Sahiwal
- \( KJ \) = Kankrej
- \( ND \) = Non – descript
- \( F \) = Farm
- \( GG \) = Genetic Group
- \( M \) = Mattupatti
- \( D \) = Dhoni
- \( K \) = Kulathupuzha
KA 5390 / 5075 (Code No.: 2272)

Harvey

Proven Sunandini Bull

BV :+543.3
R² : 0.66
No. of Daughters : 29
BV compared to average of all bulls tested: +414.1

1st Lactation yield of best 3 daughters
PM4435 KT60711 PM6542
4283 kg 4211 kg 4113 kg

Production Indices
Estimated best lactation yield of daughters (based on top 10 daughters) : 4421 kg
Estimated Best peak yield of progeny : 23.0 kg

Pedigree performance
Dam Sire’s dam Dam’s dam
2827 kg 2622 kg NA

Graham

Proven Sunandini Bull

BV :+469.6
R² : 0.84
No. of Daughters : 77
BV compared to average of all bulls tested: +340.4

1st Lactation yield of best 3 daughters
PM6431 KT59840 PM12970
5068 kg 4899 kg 4623 kg

Production Indices
Estimated best lactation yield of daughters (based on top 10 daughters) : 5037 kg
Estimated Best peak yield of progeny : 26.8 kg

Pedigree performance
Dam Sire’s dam Dam’s dam
NA 8946 kg NA

KSHEERADHARA BULLS

KA 5569 (Code No: 2281)

Genetic Group : CJ
Date of Birth : 27.01.1996
Farm : Dhoni
Sire’s sire : JK1917 (Mahadev) - CJ
Sire : K2354/KA2962 - CJ
Sire’s dam : K1231 - CB
Dam’s sire : KA1466 - CJ
Dam : KA4265/4070 - CJ
Dam’s dam : KA3460 - CJ

Genetic Group : CH
Date of Birth : 03.04.1996
Farm : Kulathupuzha
Sire’s sire : Thomas Secret - HF
Sire : H621 (Admiral) - HF
Sire’s dam : IV Ana Nugget Dipper - HF
Dam’s sire : NA
Dam : PG1660 - ND
Dam’s dam : NA

Photograph on right: Graham

Photograph on right: PM4435, daughter of Harvey

A Kerala Livestock Development Board publication
**KA 5250 / 5660**

**Bevan**

**Proven Sunandini Bull**

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<tbody>
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<tr>
<td>Farm</td>
<td>Mattupatti</td>
</tr>
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</tr>
</tbody>
</table>

**BV**

- **+513.4**
- **R²** : 0.67
- No. of Daughters : 30
- BV compared to average of all bulls tested: +384.2

**1st Lactation yield of best 3 daughters**

<table>
<thead>
<tr>
<th>KT46637</th>
<th>KT54367</th>
<th>KT46628</th>
</tr>
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<tbody>
<tr>
<td>5356 kg</td>
<td>5045 kg</td>
<td>4845 kg</td>
</tr>
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**Production Indices**

- Estimated best lactation yield of daughters (based on top 10 daughters) : 5121 kg
- Estimated Best peak yield of progeny : 28.2 kg

**Pedigree performance**

<table>
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<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>3604 kg</td>
<td>NA</td>
<td>4329 kg</td>
</tr>
</tbody>
</table>

**Photograph on right: KT61330, daughter of Jonan**

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**KA 5753 (CodeNo.: 2267)**

**Jonan**

**Proven Sunandini Bull**

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<tr>
<th>Genetic Group</th>
<th>CJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth</td>
<td>29.05.1995</td>
</tr>
<tr>
<td>Farm</td>
<td>Kulathupuzha</td>
</tr>
</tbody>
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**BV**

- **+400.2**
- **R²** : 0.72
- No. of Daughters : 39
- BV compared to average of all bulls tested: +271.0

**1st Lactation yield of best 3 daughters**

<table>
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<tr>
<th>KT61330</th>
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<th>PM4782</th>
</tr>
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<td>4183 kg</td>
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**Production Indices**

- Estimated best lactation yield of daughters (based on top 10 daughters) : 4478 kg
- Estimated Best peak yield of progeny : 22.5 kg

**Pedigree performance**

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<tr>
<th>Dam</th>
<th>Sire’s dam</th>
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<tr>
<td>3615 kg</td>
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**KSHEERADHARA BULLS**

**KA 5573**

**Jonan**

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**BV**

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<td>NA</td>
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</table>
KA 5740 (CodeNo.: 2337)
Nikhil

Proven Sunandini Bull

BV : +393.4
R² : 0.75
No. of Daughters : 44
BV compared to average of all bulls tested: +264.2

1st Lactation yield of best 3 daughters

<table>
<thead>
<tr>
<th>PM11119</th>
<th>ID17811</th>
<th>ID17848</th>
</tr>
</thead>
<tbody>
<tr>
<td>4960 kg</td>
<td>4545 kg</td>
<td>3946 kg</td>
</tr>
</tbody>
</table>

Production Indices
Estimated best lactation yield of daughters (based on top 10 daughters) : 4738 kg
Estimated Best peak yield of progeny : 26.3 kg

Pedigree performance

<table>
<thead>
<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>4552 kg</td>
<td>NA</td>
<td>2533 kg</td>
</tr>
</tbody>
</table>

Photograph on right: KA6454, half-sib of Nikhil

KSHEERADHARA BULLS

KA 5141
Robin

Proven Sunandini Bull

BV : +357.7
R² : 0.75
No. of Daughters : 44
BV compared to average of all bulls tested: +228.5

1st Lactation yield of best 3 daughters

<table>
<thead>
<tr>
<th>PM2889</th>
<th>KT60002</th>
<th>PM2832</th>
</tr>
</thead>
<tbody>
<tr>
<td>5034 kg</td>
<td>4202 kg</td>
<td>4125 kg</td>
</tr>
</tbody>
</table>

Production Indices
Estimated best lactation yield of daughters (based on top 10 daughters) : 4577 kg
Estimated Best peak yield of progeny : 26.6 kg

Pedigree performance

<table>
<thead>
<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>3650 kg</td>
<td>NA</td>
<td>NA</td>
</tr>
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</table>

A Kerala Livestock Development Board publication
**KA 5483 (CodeNo.: 2202)**

**Amir**

**Proven Sunandini Bull**

- **BV:** +383.3
- **R²:** 0.71
- **No. of Daughters:** 36
- **BV compared to average of all bulls tested:** +254.1

**1st Lactation yield of best 3 daughters**

<table>
<thead>
<tr>
<th>Bull</th>
<th>PM4263</th>
<th>PM6831</th>
<th>PM5280</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>3943 kg</td>
<td>3851 kg</td>
<td>3815 kg</td>
</tr>
</tbody>
</table>

**Production Indices**

Estimated best lactation yield of daughters:
- (based on top 10 daughters) 4348 kg
- Estimated Best peak yield of progeny 21.3 kg

**Pedigree performance**

<table>
<thead>
<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>3573 kg</td>
<td>2400 kg</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Date of Birth:** 12.01.1996

**Farm:** Dhoni

**Code No.:** 2243

**Proven Sunandini Bull**

- **BV:** +383.3
- **R²:** 0.71
- **No. of Daughters:** 36
- **BV compared to average of all bulls tested:** +254.1

**1st Lactation yield of best 3 daughters**

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**Proven Sunandini Bull**

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**Proven Sunandini Bull**

- **BV:** +351.5
- **R²:** 0.81
- **No. of Daughters:** 64
- **BV compared to average of all bulls tested:** +222.3

**1st Lactation yield of best 3 daughters**

<table>
<thead>
<tr>
<th>Bull</th>
<th>KT60944</th>
<th>KT61214</th>
<th>KT61372</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>5027 kg</td>
<td>4472 kg</td>
<td>4273 kg</td>
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**Production Indices**

Estimated best lactation yield of daughters:
- (based on top 10 daughters) 5089 kg
- Estimated Best peak yield of progeny 26.6 kg

**Pedigree performance**

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<thead>
<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
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<tbody>
<tr>
<td>4676 kg</td>
<td>2105 kg</td>
<td>3672 kg</td>
</tr>
</tbody>
</table>

**Genetic Group:** CH

**Date of Birth:** 21.11.1996

**Farm:** Dhoni

**Code No.:** 2243

**Proven Sunandini Bull**

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- **R²:** 0.81
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<th>Bull</th>
<th>KT60944</th>
<th>KT61214</th>
<th>KT61372</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>5027 kg</td>
<td>4472 kg</td>
<td>4273 kg</td>
</tr>
</tbody>
</table>

**Production Indices**

Estimated best lactation yield of daughters:
- (based on top 10 daughters) 5089 kg
- Estimated Best peak yield of progeny 26.6 kg

**Pedigree performance**

<table>
<thead>
<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>4676 kg</td>
<td>2105 kg</td>
<td>3672 kg</td>
</tr>
</tbody>
</table>
KA 4941
Prasad

Proven Sunandini Bull

BV : +349.0
R² : 0.68
No. of Daughters : 32
BV compared to average of all bulls tested: +219.8

1st Lactation yield of best 3 daughters

ID18799   KT56079   UI30355

4964 kg   4782 kg   4710 kg

Production Indices

Estimated best lactation yield of daughters (based on top 10 daughters) : 5222 kg
Estimated Best peak yield of progeny : 26.3 kg

Pedigree performance

Dam   Sire’s dam   Dam’s dam

3640 kg   NA   3006 kg

Genetic Group : CB
Date of Birth : 15.03.1995
Farm : Dhoni
Code No. : 2138

Sire’s sire : K1969 (Bhasi) - CB
Sire : K2423 (Chamu) - CB
Sire’s dam : K1079 - CB
Dam’s sire : KA1466 - CB
Dam : KA4228 - CB
Dam’s dam : KA2588 - CB

KSHEERADHARA BULLS

KA 5844 (2336)
Shearer

Proven Sunandini Bull

BV : +351.7
R² : 0.82
No. of Daughters : 69
BV compared to average of all bulls tested: +222.5

1st Lactation yield of best 3 daughters

KT63796   ID21539   PM3541

4931 kg   4180 kg   4029 kg

Production Indices

Estimated best lactation yield of daughters (based on top 10 daughters) : 4691 kg
Estimated Best peak yield of progeny : 26.1 kg

Pedigree performance

Dam   Sire’s dam   Dam’s dam

3659 kg   2136 kg   NA

Genetic Group : CJ
Date of Birth : 09.10.1996
Farm : Dhoni

Sire’s sire : JC 484 - CJ
Sire : KA1381 - CJ
Sire’s dam : KT188 - CB
Dam’s sire : NA
Dam : AL55791 - CJ
Dam’s dam : NA

Photograph on right: PM354, daughter of Shearer

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### KA 5482 (Code No.: 2331)
**Platini**

**Proven Sunandini Bull**

- **BV**: +341.7
- **R²**: 0.77
- **No. of Daughters**: 49
- **BV compared to average of all bulls tested**: +212.5

**1st Lactation yield of best 3 daughters**

<table>
<thead>
<tr>
<th>Sire's sire</th>
<th>Sire</th>
<th>Dam's sire</th>
<th>Dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>K937 - CJ</td>
<td>KA 1343 - CJ</td>
<td>KA1579 (Kochan) - CB</td>
<td>KT37019 - CJ</td>
</tr>
</tbody>
</table>

**Pedigree performance**

<table>
<thead>
<tr>
<th>Dam</th>
<th>Sire's dam</th>
<th>Dam's dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>3380 kg</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Production Indices**

- Estimated best lactation yield of daughters (based on top 10 daughters): 4855 kg
- Estimated Best peak yield of progeny: 24.5 kg

**Photograph on right:** KT62192, daughter of Platini

### KA 5080/5084 (Code No.: 2168)
**Lonan**

**Proven Sunandini Bull**

- **BV**: +322.6
- **R²**: 0.78
- **No. of Daughters**: 52
- **BV compared to average of all bulls tested**: +193.4

**1st Lactation yield of best 3 daughters**

<table>
<thead>
<tr>
<th>Sire's sire</th>
<th>Sire</th>
<th>Dam’s sire</th>
<th>Dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>K937 - CJ</td>
<td>KA 1343 - CJ</td>
<td>KA1579 (Kochan) - CB</td>
<td>KT37019 - CJ</td>
</tr>
</tbody>
</table>

**Pedigree performance**

<table>
<thead>
<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>3535 kg</td>
<td>NA</td>
<td>2974 kg</td>
</tr>
</tbody>
</table>

**Production Indices**

- Estimated best lactation yield of daughters (based on top 10 daughters): 4646 kg
- Estimated Best peak yield of progeny: 24.5 kg

**Photograph on right:** KT62192, daughter of Platini
KA 5701 (Code No.: 2339)
Rambo

Proven Sunandini Bull

<table>
<thead>
<tr>
<th>BV</th>
<th>+311.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>R²</td>
<td>0.78</td>
</tr>
<tr>
<td>No. of Daughters</td>
<td>54</td>
</tr>
<tr>
<td>BV compared to average of all bulls tested</td>
<td>+182.2</td>
</tr>
</tbody>
</table>

1st Lactation yield of best 3 daughters

<table>
<thead>
<tr>
<th>KT63791</th>
<th>PM61917</th>
<th>PM9920</th>
</tr>
</thead>
<tbody>
<tr>
<td>5208 kg</td>
<td>4480 kg</td>
<td>3871 kg</td>
</tr>
</tbody>
</table>

Production Indices

Estimated best lactation yield of daughters (based on top 10 daughters): 4777 kg
Estimated Best peak yield of progeny: 27.5 kg

Pedigree performance

<table>
<thead>
<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>3218 kg</td>
<td>3262 kg</td>
<td>NA</td>
</tr>
</tbody>
</table>

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KSHEERADHARA BULLS

KA 5425
(Code No: 2104)

Proven Sunandini Bull

<table>
<thead>
<tr>
<th>BV</th>
<th>+303.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>R²</td>
<td>0.75</td>
</tr>
<tr>
<td>No. of Daughters</td>
<td>45</td>
</tr>
<tr>
<td>BV compared to average of all bulls tested</td>
<td>+174.0</td>
</tr>
</tbody>
</table>

1st Lactation yield of best 3 daughters

<table>
<thead>
<tr>
<th>ID15129</th>
<th>ID15137</th>
<th>PM508</th>
</tr>
</thead>
<tbody>
<tr>
<td>4150 kg</td>
<td>4096 kg</td>
<td>3845 kg</td>
</tr>
</tbody>
</table>

Production Indices

Estimated best lactation yield of daughters (based on top 10 daughters): 4560 kg
Estimated Best peak yield of progeny: 22.3 kg

Pedigree performance

<table>
<thead>
<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>3807 kg</td>
<td>2400 kg</td>
<td>2324 kg</td>
</tr>
</tbody>
</table>

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**KA 5769 (Code No.: 2290)**  
**Keith**

**Proven Sunandini Bull**

- **BV**: +302.2  
- **R²**: 0.71  
- **No. of Daughters**: 37  
- **BV compared to average of all bulls tested**: +173.0

1st Lactation yield of best 3 daughters:

<table>
<thead>
<tr>
<th>ID16692</th>
<th>ID16271</th>
<th>PM5889</th>
</tr>
</thead>
<tbody>
<tr>
<td>4393 kg</td>
<td>4281 kg</td>
<td>4132 kg</td>
</tr>
</tbody>
</table>

**Production Indices**

- Estimated best lactation yield of daughters (based on top 10 daughters): 4666 kg  
- Estimated Best peak yield of progeny: 23.5 kg

**Pedigree performance**

<table>
<thead>
<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>3936 kg</td>
<td>2609 kg</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Photograph on right: PM 5889, daughter of KA 5769**

---

**KSHEERADHARA BULLS**

**KA 4983**

**Proven Sunandini Bull**

- **BV**: +300.0  
- **R²**: 0.65  
- **No. of Daughters**: 28  
- **BV compared to average of all bulls tested**: +170.9

1st Lactation yield of best 3 daughters:

<table>
<thead>
<tr>
<th>KT60140</th>
<th>ID15160</th>
<th>KT46907</th>
</tr>
</thead>
<tbody>
<tr>
<td>3767 kg</td>
<td>3379 kg</td>
<td>3050 kg</td>
</tr>
</tbody>
</table>

**Production Indices**

- Estimated best lactation yield of daughters (based on top 10 daughters): 3901 kg  
- Estimated Best peak yield of progeny: 20.4 kg

**Pedigree performance**

<table>
<thead>
<tr>
<th>Dam</th>
<th>Sire’s dam</th>
<th>Dam’s dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>3426 kg</td>
<td>NA</td>
<td>3337 kg</td>
</tr>
</tbody>
</table>

**Genetic Group**: CJ  
**Date of Birth**: 02.08.1996  
**Farm**: Kulathupuzha  
**Code No.**: 2162  
**Sire’s sire**: JK1916 - CJ  
**Sire**: K2356 - CJ  
**Sire’s dam**: K2126 - CJ  
**Dam’s sire**: NA  
**Dam**: KT38999 - CJ  
**Dam’s dam**: NA

**Genetic Group**: CJ  
**Date of Birth**: 24.05.1994  
**Farm**: Kulathupuzha  
**Code No.**: 2162  
**Sire’s sire**: K1702 (Sunil) - CJ  
**Sire**: KA920 - CJ  
**Sire’s dam**: KT0703 - CB  
**Dam’s sire**: JK1951 - CJ  
**Dam**: KA2668 - CH  
**Dam’s dam**: KA1238 - CH

---

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KSHEERADHARA BULLS

KA 6030
Chris

Holstein Friesian
Date of Birth: 17.07.1997

Sire: Raiden
Dam: Sirene

Dam’s yield: 10374 kg
Location: Mattupatti

KA 8942
Dell

Holstein Friesian
Date of Birth: 15.11.2004

Sire: 311
Dam: 4803-8881

Dam’s yield: 7042 kg
Location: Mattupatti

KA 8734
Ballack

Holstein Friesian
Date of Birth: 16.11.2004

Sire: ABS6085
Dam: 592

Dam’s yield: 6126 kg
Location: Mattupatti

KA 8735
Castro

Holstein Friesian
Date of Birth: 29.11.2004

Sire: ABS6085
Dam: 613

Dam’s yield: 6077 kg
Location: Mattupatti
KSHEERADHARA BULLS

KA 8733
Dunlop

Holstein Friesian
Date of Birth: 17.09.2004
Sire : ABS6085
Dam : 489
Dam’s yield: 5712 kg
Location: Mattupatti

KA 8739
Bismark

Holstein Friesian
Date of Birth: 28.12.2004
Sire : ABS6085
Dam : 575
Dam’s yield: 5627 kg
Location: Mattupatti

KA 8736
Argon

Holstein Friesian
Date of Birth: 02.09.2004
Sire : Bigoneia
Dam : 476
Dam’s yield: 5604 kg
Location: Mattupatti

KA 6072
Anzil

Jersey
Date of Birth: 01.01.1997
Sire : Brook 493
Dam : 30672064
Dam’s yield: 6762 kg
Location: Mattupatti
## Ksheeradhara Bulls

<table>
<thead>
<tr>
<th>Bull Number</th>
<th>Breed</th>
<th>Date of birth</th>
<th>Location</th>
<th>Sire</th>
<th>Dam</th>
<th>Dam's yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>KA 5627</td>
<td>HF</td>
<td>13.06.1996</td>
<td>M</td>
<td>PRELUDE</td>
<td>OLIVE</td>
<td>11063</td>
</tr>
<tr>
<td>KA 4783</td>
<td>HF</td>
<td>28.08.1991</td>
<td>M</td>
<td>HG110923</td>
<td>2248389</td>
<td>5649</td>
</tr>
<tr>
<td>KA 6728</td>
<td>JY</td>
<td>17.06.1997</td>
<td>M</td>
<td>48201</td>
<td>2981702</td>
<td>7828</td>
</tr>
<tr>
<td>KA 6729</td>
<td>JY</td>
<td>20.09.1997</td>
<td>M</td>
<td>WLDBARBA</td>
<td>29817104</td>
<td>7489</td>
</tr>
<tr>
<td>KA 6725</td>
<td>JY</td>
<td>20.09.1997</td>
<td>M</td>
<td>JASBRAGEN</td>
<td>29817103</td>
<td>6715</td>
</tr>
<tr>
<td>KA 6080</td>
<td>JY</td>
<td>17.08.1994</td>
<td>M</td>
<td>JASBYG</td>
<td>19948107</td>
<td>6573</td>
</tr>
<tr>
<td>KA 4429</td>
<td>JY</td>
<td>11.03.1993</td>
<td>M</td>
<td>47084</td>
<td>29187052</td>
<td>6550</td>
</tr>
<tr>
<td>KA 6929</td>
<td>JY</td>
<td>24.09.1994</td>
<td>M</td>
<td>JASROLEX</td>
<td>52508087</td>
<td>5718</td>
</tr>
</tbody>
</table>
EXOTIC JERSEY BULLS

**KA 8790**
*Davinci*

- **Sire**: 2764
- **Dam**: 3328
- **Dam’s yield**: 3905 kg
- **Location**: Mattupatti
- **Date of Birth**: 15.09.2004

**Jersey**

**KA 8792**
*Cafu*

- **Sire**: 125
- **Dam**: 3371
- **Dam’s yield**: 3844 kg
- **Location**: Mattupatti
- **Date of Birth**: 22.11.2004

**KA 8791**
*Cage*

- **Sire**: 125
- **Dam**: 3601
- **Dam’s yield**: 3809 kg
- **Location**: Mattupatti
- **Date of Birth**: 25.11.2004

**KA 8789**
*Deco*

- **Sire**: 125
- **Dam**: 3703
- **Dam’s yield**: 3766 kg
- **Location**: Mattupatti
- **Date of Birth**: 13.07.2004
SUNANDINI BULLS AT RANDOM

KA 8645
Sire: KA4514
Dam: KA4108
Date of Birth: 25.06.2004
Dam’s yield: 4859 kg Dhoni

KA 8213
Sire: KA1464
Dam: KT59280
Date of Birth: 02.05.2003
Dam’s yield: 4629 kg Dhoni

KA 8202
Sire: KA2957
Dam: ID17988
Date of Birth: 05.03.2003
Dam’s yield: 4741 kg Mattupatti

KA 6735
Sire: KA1757
Dam: KA4062
Date of Birth: 02.05.2003
Dam’s yield: 4595 kg Kulathupuzha

KA 8036
Sire: KA4146
Dam: KA4247
Date of Birth: 19.08.2003
Dam’s yield: 4558 kg Mattupatti

KA 7036
Sire: KA2560
Dam: AL80869
Date of Birth: 13.03.2000
Dam’s yield: 4509 kg Kulathupuzha

KA 5754
Sire: PG388
Dam: ID9601
Date of Birth: 22.05.1996
Dam’s yield: 4543 kg Kulathupuzha

KA 7847
Sire: KA2678
Dam: PM1579
Date of Birth: 21.08.2002
Dam’s yield: 4506 kg Kulathupuzha
SUNANDINI BULLS AT RANDOM

**KA 8349**
*Lazy*

Sire: KA2802
Dam: AL1579
Date of Birth: 01.12.2003
Dam’s yield: 4506 kg Kulathupuzha

**KA 7816**
*Braun*

Sire: KA3308
Dam: ID16478
Date of Birth: 25.02.2002
Dam’s yield: 4491 kg Mattupatti

**KA 6738**
*Irani*

Sire: KA4836
Dam: KA451
Date of Birth: 06.03.1998
Dam’s yield: 4456 kg Kulathupuzha

**KA 7161**
*Jack*

Sire: KA2142
Dam: KT39478
Date of Birth: 23.02.2000
Dam’s yield: 4387 kg Kulathupuzha

**KA 6211**
*Hector*

Sire: KA2711
Dam: KT36167
Date of Birth: 08.07.1997
Dam’s yield: 4395 kg Kulathupuzha

**KA 7520**
*Ebony*

Sire: KA3530
Dam: KT48038
Date of Birth: 03.11.2001
Dam’s yield: 4377 kg Mattupatti

**KA 6156**
*Spence*

Sire: KA2417
Dam: KA2181
Date of Birth: 09.04.1998
Dam’s yield: 4479 kg Dhoni

**KA 6512**
*Hamam*

Sire: KA4836
Dam: Al68030
Date of Birth: 18.07.1998
Dam’s yield: 4478 kg Kulathupuzha

**KA 8349**
*Lazy*

Sire: KA2802
Dam: AL1579
Date of Birth: 01.12.2003
Dam’s yield: 4506 kg Kulathupuzha

**KA 7816**
*Braun*

Sire: KA3308
Dam: ID16478
Date of Birth: 25.02.2002
Dam’s yield: 4491 kg Mattupatti

**KA 6738**
*Irani*

Sire: KA4836
Dam: KA451
Date of Birth: 06.03.1998
Dam’s yield: 4456 kg Kulathupuzha

**KA 7161**
*Jack*

Sire: KA2142
Dam: KT39478
Date of Birth: 23.02.2000
Dam’s yield: 4387 kg Kulathupuzha

**KA 6211**
*Hector*

Sire: KA2711
Dam: KT36167
Date of Birth: 08.07.1997
Dam’s yield: 4395 kg Kulathupuzha

**KA 7520**
*Ebony*

Sire: KA3530
Dam: KT48038
Date of Birth: 03.11.2001
Dam’s yield: 4377 kg Mattupatti

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SUNANDINI BULLS AT RANDOM

**KA 7855  
Baton**
Sire: KA3475  
Dam: ID13287  
Date of Birth: 08.09.2002  
Dam’s yield: 4372 kg Mattupatti

**KA 8688  
Abey**
Sire: KA4145  
Dam: AL83440  
Date of Birth: 29.10.2004  
Dam’s yield: 4327 kg Mattupatti

**KA 8537  
Lakmi**
Sire: KA2973  
Dam: KT55224  
Date of Birth: 06.06.2004  
Dam’s yield: 4334 kg Dhoni

**KA 8322  
Kulathupuzha**
Sire: KA1464  
Dam: KT54364  
Date of Birth: 06.07.2003  
Dam’s yield: 4245 kg Kulathupuzha

**KA 6454  
Satire**
Sire: KA4310  
Dam: KA4547  
Date of Birth: 08.03.1998  
Dam’s yield: 4234 kg Dhoni

**KA 7851  
Hibiscus**
Sire: KA2793  
Dam: ID17560  
Date of Birth: 22.08.2002  
Dam’s yield: 4189 kg Kulathupuzha

**KA 4329  
Hadlee**
Sire: KA541  
Dam: AL54949  
Date of Birth: 18.12.1991  
Dam’s yield: 4191 kg Kulathupuzha

**KA 8212  
Nelder**
Sire: KA1464  
Dam: KT54730  
Date of Birth: 18.05.2003  
Dam’s yield: 4188 kg Dhoni
Sunandini Bulls at Random

**KA 6619 Dunn**
- Sire: KA2562
- Dam: KT47854
- Date of Birth: 22.07.1999
- Dam’s yield: 4173 kg Mattupatti

**KA 6513 Ibex**
- Sire: KA2036
- Dam: AL72825
- Date of Birth: 14.07.1998
- Dam’s yield: 4122 kg Kulathupuzha

**KA 6805 Abin**
- Sire: KA2142
- Dam: KA4078
- Date of Birth: 22.09.1999
- Dam’s yield: 4186 kg Mattupatti

**KA 7705 Linus**
- Sire: KA3530
- Dam: KA4078
- Date of Birth: 27.04.2002
- Dam’s yield: 4186 kg Kulathupuzha

**KA 7856 Bubka**
- Sire: KA4219
- Dam: KT53617
- Date of Birth: 11.10.2002
- Dam’s yield: 4084 kg Mattupatti

**KA 7353 Arthur**
- Sire: KA2845
- Dam: ID12866
- Date of Birth: 25.12.2000
- Dam’s yield: 4064 kg Mattupatti

**KA 7859 Bayer**
- Sire: KA2793
- Dam: KT42009
- Date of Birth: 18.10.2002
- Dam’s yield: 4054 kg Mattupatti

**KA 5848/5077 Garner**
- Sire: KA1354
- Dam: ID8794
- Date of Birth: 06.10.1996
- Dam’s yield: 3993 kg Kulathupuzha
KA 7642
Brinks
Sire:
KA3344
Dam:
KA5645
Date of Birth:
03.11.2001
Dam’s yield: 3974 kg Mattupatti

KA 7842
Crysler
Sire:
KA3308
Dam:
KT50188
Date of Birth:
29.05.2002
Dam’s yield: 3967 kg Mattupatti

KA 7857
Lux
Sire:
KA3576
Dam:
KT45277
Date of Birth:
01.10.2002
Dam’s yield: 3951 kg Kulathupuzha

KA 8709
Anhad
Sire:
KA4514
Dam:
KT60782
Date of Birth:
01.12.2004
Dam’s yield: 3932 kg Mattupatti

KA 8525
Jeevan
Sire:
KA4152
Dam:
KT56852
Date of Birth:
29.03.2004
Dam’s yield: 3924 kg Kulathupuzha

KA 6960
Lindal
Sire:
KA2036
Dam:
KA2914
Date of Birth:
14.12.1999
Dam’s yield: 3922 kg Kulathupuzha

KA 8259
Asif
Sire:
KA4145
Dam:
KA5644
Date of Birth:
25.12.2003
Dam’s yield: 3919 kg Mattupatti
SUNANDINI BULLS AT RANDOM

KA 7862
Abin

Sire:
KA6240

Dam:
KA5644

Date of Birth:
18.07.2002

Dam’s yield: 3919 kg Kulathupuzha

KA 8240
Babuji

Sire:
KA3530

Dam:
KT35563

Date of Birth:
08.11.2003

Dam’s yield: 3917 kg Mattupatti

KA 8068
Bhiman

Sire:
KA4219

Dam:
ID17617

Date of Birth:
05.11.2002

Dam’s yield: 3890 kg Mattupatti

KA 8519
Cyel

Sire:
KA4146

Dam:
KA6521

Date of Birth:
23.09.2004

Dam’s yield: 3874 kg Mattupatti

KA 7277
Hassan

Sire:
KA2730

Dam:
KA4277

Date of Birth:
07.01.2001

Dam’s yield: 3806 kg Kulathupuzha

KA 8183
Afsal

Sire:
KA3308

Dam:
PM1533

Date of Birth:
17.12.2002

Dam’s yield: 3899 kg Mattupatti

KA 8068
Bhiman

Sire:
KA4219

Dam:
ID17617

Date of Birth:
05.11.2002

Dam’s yield: 3890 kg Mattupatti

KA 8519
Cyel

Sire:
KA4146

Dam:
KA6521

Date of Birth:
23.09.2004

Dam’s yield: 3874 kg Mattupatti

KA 7277
Hassan

Sire:
KA2730

Dam:
KA4277

Date of Birth:
07.01.2001

Dam’s yield: 3806 kg Kulathupuzha

KA 8183
Afsal

Sire:
KA3308

Dam:
PM1533

Date of Birth:
17.12.2002

Dam’s yield: 3899 kg Mattupatti

KA 6614
Shapiro

Sire:
KA2802

Dam:
AL57076

Date of Birth:
15.03.1999

Dam’s yield: 3798 kg Dhoni

KA 8344

Sire:
KA4146

Dam:
ID17300

Date of Birth:
07.12.2003

Dam’s yield: 3862 kg Dhoni

KA 8344

Sire:
KA4146

Dam:
ID17300

Date of Birth:
07.12.2003

Dam’s yield: 3862 kg Dhoni

KA 6614
Shapiro

Sire:
KA2802

Dam:
AL57076

Date of Birth:
15.03.1999

Dam’s yield: 3798 kg Dhoni
SUNANDINI BULLS AT RANDOM

KA 8356  
Kafu

Sire: KA4152
Dam: ID15563
Date of Birth: 28.02.2004
Dam’s yield: 3790 kg Kulathupuzha

KA 7972
Bhupathi

Sire: KA4152
Dam: KA6287
Date of Birth: 24.03.2003
Dam’s yield: 3781 kg Mattupatti

KA 8692  
Harsha

Sire: KA5496
Dam: ID18305
Date of Birth: 03.10.2004
Dam’s yield: 3769 kg Kulathupuzha

KA 7977
Eyad

Sire: KA4219
Dam: KA5819
Date of Birth: 01.04.2003
Dam’s yield: 3753 kg Mattupatti

KA 7836  
Karan

Sire: KA2957
Dam: AL81856
Date of Birth: 13.04.2002
Dam’s yield: 3752 kg Kulathupuzha

KA 8194
Akhtar

Sire: KA2793
Dam: PTM92202
Date of Birth: 19.12.2002
Dam’s yield: 3736 kg Mattupatti

KA 8642

Sire: KA5569
Dam: ID16766
Date of Birth: 22.06.2004
Dam’s yield: 3741 kg Kulathupuzha

KA 6283
Gadus

Sire: KA4000
Dam: KA4769
Date of Birth: 05.02.1998
Dam’s yield: 3717 kg Kulathupuzha
SUNANDINI BULLS AT RANDOM

**KA 7480**
*Boxer*
- **Sire:** KA6229
- **Dam:** ID15852
- **Date of Birth:** 16.04.2001
- **Dam’s yield:** 3704 kg Mattupatti

**KA 7046**
*Larsen*
- **Sire:** KA4836
- **Dam:** KT27193
- **Date of Birth:** 09.11.1999
- **Dam’s yield:** 3688 kg Kulathupuzha

**KA 6518**
*Ictus*
- **Sire:** KA2036
- **Dam:** KT40986
- **Date of Birth:** 04.09.1998
- **Dam’s yield:** 3664 kg Kulathupuzha

**KA 7495**
*Collin*
- **Sire:** KA6229
- **Dam:** KT44491
- **Date of Birth:** 31.07.2001
- **Dam’s yield:** 3660 kg Mattupatti

**KA 8062**
*Hillock*
- **Sire:** KA3475
- **Dam:** AL86949
- **Date of Birth:** 12.09.2002
- **Dam’s yield:** 3682 kg Kulathupuzha

**KA 7837**
*Jungle*
- **Sire:** KA2957
- **Dam:** AL81852
- **Date of Birth:** 05.05.2002
- **Dam’s yield:** 3680 kg Kulathupuzha

**KA 8701**
*Lee*
- **Sire:** KA4215
- **Dam:** OIC4117
- **Date of Birth:** 03.11.2004
- **Dam’s yield:** 3646 kg Kulathupuzha

**KA 7854**
*Arul*
- **Sire:** KA3475
- **Dam:** ID57010
- **Date of Birth:** 01.09.2002
- **Dam’s yield:** 3644 kg Mattupatti

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SUNANDINI BULLS AT RANDOM

KA 8667
Dalmia
Sire: KA4152
Dam: KT58987
Date of Birth: 04.08.2004
Dam’s yield: 3630 kg Mattupatti

KA 6794
Hamlet
Sire: KA3369
Dam: KA5832
Date of Birth: 15.08.1999
Dam’s yield: 3619 kg Kulthupuzha

KA 8663
Fieda
Sire: KA4555
Dam: OIC4038
Date of Birth: 01.08.2004
Dam’s yield: 3604 kg Kulathupuzha

KA 5073
Ivan
Sire: KA1354
Dam: ID9004
Date of Birth: 24.04.1996
Dam’s yield: 3577 kg Kulathupuzha

KA 8261
Brigu
Sire: KA4145
Dam: KA6061
Date of Birth: 28.12.2003
Dam’s yield: 3616 kg Mattupatti

KA 6515
Ibis
Sire: KA4310
Dam: KT38527
Date of Birth: 27.04.1998
Dam’s yield: 3614 kg Kulthupuzha

KA 8667
Dalmia
Sire: KA4219
Dam: KA6428
Date of Birth: 05.12.2002
Dam’s yield: 3560 kg Kulathupuzha

KA 6200/6345
Gilchrist
Sire: KA1710
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Date of Birth: 28.06.1997
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EXOTIC X INDIAN BREED, F1 BULLS

**KA 6223 Shotto**

**Date of Birth:** 28.08.1997  
**Sire:** H2239 (CM Ferdinand)  
**Sire’s Sire:** 1773417 (WC Mark)  
**Sire’s Dam:** 1192360 (CRB Bell)  
**Dam:** AL93419 (ND)  
**Sire Dam’s yield:** 11931 kg  
**Location:** Dhoni

**KA 8168 Troger**

**Date of Birth:** 03.05.2000  
**Sire:** HF54  
**Sire’s Sire:** T.Purma  
**Sire’s Dam:** 47826-0947  
**Dam:** S316 (Sahiwal)  
**Sire Dam’s yield:** 10993 kg  
**Location:** Dhoni

**KA 8161 Robbert**

**Date of Birth:** 26.07.2000  
**Sire:** HF54  
**Sire’s Sire:** T.Purma  
**Sire’s Dam:** 47826-0947  
**Dam:** S353 (Sahiwal)  
**Sire Dam’s yield:** 10993 kg  
**Location:** Dhoni

**KA 8163 Senapathi**

**Date of Birth:** 19.11.2001  
**Sire:** HF53  
**Sire’s Sire:** Norriela KE  
**Sire’s Dam:** KEV Way  
**Dam:** S353 (Sahiwal)  
**Sire Dam’s yield:** 10056 kg  
**Location:** Dhoni
KA 7716
Abbot

Date of Birth: 20.08.1999
Sire : B. Noah
Dam : Sahiwal
Sibs’ average yield: 9151 kg
Location: Mattupatti

KA 7713
Benz

Date of Birth: 27.01.1999
Sire : Lester
Dam : Sahiwal
Sibs’ average yield: 8846 kg
Location: Mattupatti

KA 6222
Rupert

Date of Birth: 01.09.1997
Sire’s Sire : J630622 (ANT Brass)
Sire : J68 (MBB Top)
Sire’s Dam : J3207189 (MBF Flower)
Dam : S353 (Sahiwal)
Sire Dam’s yield: 10119 kg
Location: Dhoni

KA 5569
Graham

Date of Birth: 03.04.1996
Sire’s Sire : Thomas Secret
Sire : H621 (Admiral)
Sire’s Dam : 13739 (IV Anna Nugget Dipper)
Dam : PG1660 (ND)
Sire Dam’s yield: 8946 kg
Location: Kulathupuzha

EXOTIC X INDIAN BREED, F1 BULLS

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MURRAH BUFFALO BULLS

KA 0162/6121
Shafeeque

Sire: S/1
Dam: RRP/14
Date of Birth: 20.03.2001
Dam’s yield: 4077 kg Dhoni

KA 0126/8122
Ostein

Sire: M/1
Dam: M697/R-617
Date of Birth: 20.07.2001
Dam’s yield: 3982 kg Dhoni

KA 0122/6697
G

Sire: S/2
Dam: RRP/15
Date of Birth: 20.05.2001
Dam’s yield: 4063 kg Dhoni

KA 0423/8125
Nazeer

Sire: KT/2
Dam: RRP/751
Date of Birth: 05.01.2001
Dam’s yield: 3730 kg Dhoni

KA 0509
Pankaj

Sire: GT/1
Dam: RRP/902
Date of Birth: 20.01.2001
Dam’s yield: 3665 kg Dhoni

KA 0174
Nikkate

Sire: S/3
Dam: RRP/178
Date of Birth: 10.04.2001
Dam’s yield: 3617 kg Dhoni

KA 0176/8124
F

Sire: T/1
Dam: RRP/46
Date of Birth: 30.06.2001
Dam’s yield: 3636 kg Dhoni

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Some Elite Cows in Field Performance Recording Area

Sunandini Cows

ID 15323
Yield: 6740 Kg
PT Centre: Kattapana

ID 21468
Yield: 6715 Kg
PT Centre: Kochara II

ID 19746
Yield: 6715 Kg
PT Centre: Kochara II

ID 19259
Yield: 5726 Kg
PT Centre: Kochara II

ID 19054
Yield: 5376 Kg
PT Centre: Kattapana

ID 19054
Yield: 5376 Kg
PT Centre: Kattapana

KT 55484
Yield: 5266 Kg
PT Centre: Peringala

KT 55962
Yield: 5189 Kg
PT Centre: Manarcaud

Yield: 5130 Kg
PT Centre: Perumpanachy
Sunandini Cows

Some Elite Cows in Field Performance Recording Area

PM 11119
Yield: 4960 Kg
PT Centre: Charumoodu

PM 14088
Yield: 4790 Kg
PT Centre: Kandallur

ID 20034
Yield: 4746 Kg
PT Centre: Kochara II

ID 19080
Yield: 4719 Kg
PT Centre: Katttapana

PM 22640
Yield: 4727 Kg
PT Centre: Kanamangalam

KT 64483
Yield: 4668 Kg
PT Centre: Ayerkunnun

KT 54793
Yield: 4611 Kg
PT Centre: Kumaranellur

KT 66943
Yield: 4582 Kg
PT Centre: Kelukavala
Sunandini Cows

Some Elite Cows in Field Performance Recording Area

KT 52198
Yield: 4574 Kg
PT Centre: Kurichy

KT 62305
Yield: 4537 Kg
PT Centre: Manarcaud

KT 61917
Yield: 4497 Kg
PT Centre: Kunamangalam

KT 61895
Yield: 4474 Kg
PT Centre: Ayerkunnum

PM 24420

PM 14637

PM 6542
Yield: 4480 Kg
PT Centre: Puthupalli

PM 5889
Yield: 4343 Kg
PT Centre: Kandallur

Yield: 4283 Kg
PTCentre Arunutimangalam

Yield: 4132 Kg
PT Centre: Chenithala

A Kerala Livestock Development Board publication
The Mattupatti sperm station started with 22 Brown Swiss bulls imported from Switzerland. In tune with the requirements of the breeding programme, crossbred bulls of 50%, 75% and 62.5% exotic inheritance were raised in due course. By the time, the Kulathupuzha station was set up, the demand was more for crossbred bull semen and hence this station kept only crossbred bulls from the very beginning. With the naming of the breed “Sunandini”, the station has been maintaining only the Sunandini bulls. The Dhoni bull station kept only Jersey bulls in the beginning but later the Sunandini bulls dominated the herd. To meet the demand from the dairy farmers, and in accordance with the recommendations of the expert committee on breeding policy, the Board introduced Holstein Friesian bulls into the breeding programme during the 1980s. The strength of different breeds of bulls maintained by the Board as on 31.03.06 is 272.

Initially, the three bull stations, each with a production capacity of 0.3 million doses of frozen semen per annum were established, considering the capability that existed at that time and the demand from the field. Over the years, the technology of semen processing was improved, infrastructure facilities were expanded and the manpower trained, resulting in the capacity expansion of all the three stations. Each station is now capable of producing 1.2 million doses per annum. Though the production capacity has increased and the potential for further expansion exists, there is no corresponding increase in demand for frozen semen. The demand within the state has almost been static for the past few years.
Embryo Transfer Programme

Multiple Ovulation Embryo Transfer (MOET) in cattle and buffaloes was introduced in the country for production of superior sires. This was taken up as a pilot project at Mattupatti during 1990-91. The first ET calf was born on 31.01.1991 at Mattupatti. During 1992, 50 pure Jersey embryos were imported and transferred to recipient females in Mattupatti. 9 male and 11 female calves were born. Again during 1995, 54 embryos were imported (29 HF & 25 Jersey). The technology was thus standardized and perfected. Elite cows with more than 4000 kg best lactation yield are identified as donors and embryos collected after super ovulation and insemination with nominated proven bull semen. The male calves obtained are inducted into the breeding programme. The major objectives of this project at present are given below.

- To produce and supply embryos of high genetic cows to support the bull production and to supply best males and females born through embryo transfer.
- To produce embryos of high genetic females using imported purebred semen for production of bulls.
- To conduct tailor made MOET programme for various states.
- To produce F1 bulls by super ovulation of Zebu breeds and inseminating with imported semen.
- To study the morphological characteristics of embryos and to standardize evaluation methods for high fertility standards.
- To give training to field veterinarians.
- To undertake applied research in the field of Invitro Fertilization, Bisection of embryos, Karyotyping and marker assisted selection of bulls.
- To assist any approved programme of gene preservation of animals.

Quality Control Division

Quality standards of frozen semen were given top priority by the Project/Board from the very beginning. This has greatly contributed to the success rate of A.I in the field. A quality control lab with facilities to check the various aspects of quality functions was established at Dhoni, independent of the bull station. Frozen semen straw samples are periodically drawn from the three bull stations as per the requirements prescribed under the Minimum Standards Protocol (MSP) prescribed by the Government of India for the production of frozen semen and subjected to quality control tests as per requirements thereof.

Quality control laboratory
The Scheme Sponsored by the Govt. of India, started in 1977, implemented by the KLD Board with cooperation of the Department of Animal Husbandry, Govt. of Kerala, is to accurately assess the milk production potential of crossbred bulls under field conditions of Kerala. The selected bulls are employed in the breeding programme of the State for continuous genetic progress.

We have at present 92 AI centres controlled by 6 units.

<table>
<thead>
<tr>
<th>Units</th>
<th>AI Centres</th>
<th>Milk Rec. Centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mavelikara I &amp; II</td>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td>Vaikom</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>Kottayam</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Kanjirappally</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Kattappana</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>92</strong></td>
<td><strong>52</strong></td>
</tr>
</tbody>
</table>

STARTED WITH: 150 cows (3 Milk Recorders) in 1978, now the Milk Recording Programme is extended to 6 units; 78095 cows are enrolled till end of 31.03.2006 and 61028 completed lactation records are obtained. Here are the details.

FOLLOWED BY: Test AI – One batch of young bull is tested each year. 1020 bulls are tested till 2006 and 31st batch has started on 01.01.2007.

<table>
<thead>
<tr>
<th>Batch no.</th>
<th>No. of bulls</th>
<th>Test inseminations</th>
<th>Average AI per bull</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-XVIII</td>
<td>613</td>
<td>903670</td>
<td>1474</td>
</tr>
<tr>
<td>XIX</td>
<td>38</td>
<td>39611</td>
<td>1042</td>
</tr>
<tr>
<td>XX</td>
<td>25</td>
<td>25756</td>
<td>1030</td>
</tr>
<tr>
<td>XXI</td>
<td>44</td>
<td>43188</td>
<td>982</td>
</tr>
<tr>
<td>XXII</td>
<td>39</td>
<td>47128</td>
<td>1208</td>
</tr>
<tr>
<td>XXIII</td>
<td>39</td>
<td>44906</td>
<td>1151</td>
</tr>
<tr>
<td>XXIV</td>
<td>33</td>
<td>43339</td>
<td>1313</td>
</tr>
<tr>
<td>XXV</td>
<td>27</td>
<td>38742</td>
<td>1435</td>
</tr>
<tr>
<td>XXVI</td>
<td>27</td>
<td>34222</td>
<td>1267</td>
</tr>
<tr>
<td>XXVII</td>
<td>40</td>
<td>52635</td>
<td>1316</td>
</tr>
<tr>
<td>XXIX</td>
<td>41</td>
<td>58672</td>
<td>1431</td>
</tr>
<tr>
<td>XXX</td>
<td>54</td>
<td>5647</td>
<td>Continuing</td>
</tr>
</tbody>
</table>

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We have published

“Sunandhini Sires 1984” Proven CB Bulls from batch 1  8 bulls
“Sunandhini Sires 1985” batches 1, 2 & 3  14 bulls
“Sunandhini Sires 1986” batches 2, 3 & 4  14 bulls
“Sunandhini Sires 1988” batches 4, 5 & 6  20 bulls
“Sunandhini Sires 1990” batches 5, 6 & 7  20 bulls
“Sunandhini Sires 1992” batches 6, 7 & 8  15 bulls
“Sunandhini Sires 1994” batches 8, 9 & 10  14 bulls
“Sunandhini Sires 1996” batches 10, 11 & 12  15 bulls
“Sunandhini Sires 1997” batches 11, 12 & 13  14 bulls
“Sunandhini Sires 1998” batches 13, 14 & 15  15 bulls
“Sunandhini Sires 1999” batches 14, 15 & 16  15 bulls
“Sunandhini Sires 2000” batches 14, 15 & 16  15 bulls
“Sunandhini Sires 2001” batches 16, 17 & 18  15 bulls
“Sunandhini Sires 2003” batches 18, 19 & 20  15 bulls
“Sunandhini Sires 2004” batches 19, 20 & 21  14 bulls
“Sunandhini Sires 2005” batches 20, 21 & 22  14 bulls

Also: we procure male calves from outstanding mothers in the field. 1690 calves have gone to our rearing stations from our PT area. This is excluding the 87 F1 male calves. Out of the total calves selected from the field more than 500 are already under commercial semen production.

Performance of daughters of test bulls
Profitability starts with superior genes...

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OUR PRODUCTS
- Frozen semen of cattle, buffaloes & goats
- Frozen embryos of cattle
- Breeding/fattening stock of pigs & goats
- Superior bull calves
- Fodder seeds of different varieties
- Training on all aspects of livestock development
- Consultancy in animal husbandry projects