

PROCEEDINGS OF GOVERNMENT OF KARNATAKA

Sub: Revision of Karnataka Cattle and
Buffaloe Breeding Policy 2010.

- Ref: 1) G.O. No: ಪಸಂಮೀ 1 ಸಲೆವಿ 2011,
dated 03.03.2011.
2) G.O. No: ಪಸಂಮೀ 27 ಪಪಾಯೋ
2014, dated 26.03.2011.
3) G.O. No: AHF 44 AHP 2015,
dated 24.02.2015.
4) Letter No: PD/KLDA/Breeding
Policy /2015-16, dated 16.04.2015.

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Preamble:

Government of Karnataka in its order read at (1) above has formulated Karnataka Cattle and Buffaloe Breeding Policy (as amended in 2010). Further, as per this policy and as per Government Order read at (2) above, it was ordered to restrict the exotic level of inheritance in the cross breed cattle to around 50% and to use cross breed cattle semen straws for Artificial Insemination of cross breed cattle. Accordingly, all Veterinary Institutions providing artificial insemination, Cooperative Milk Producing Societies, BAIF centre and private artificial insemination volunteers were instructed to strictly follow the instructions narrated in the said Government Order.

As per the Karnataka Cattle and Buffaloe Breeding Policy (as amended in 2010), pure local breed cattle should not be crossed with other breeds to conserve local breed cattle and exotic semen may be used to upgrade non-descript cattle. But to increase milk production, local non-descript animals may be crossed with local breeds of other states. By this, there is no need to depend on exotic semen only to improve local non-descript cattle. Local breed cattle of other states are also more adjustable for our environment and its maintenance is easy than exotic breeds. In the present Breeding policy, these things were not proposed. Hence, an Expert Committee was framed vide Government Order read at (3) above, to give their recommendations for conservation of local breeds and also revision of Breeding Policy.

Accordingly, the Expert Committee has examined these issues and submitted its report. The main recommendations of the committee are as follows:

- i. To conserve and develop local breeds such as Deoni, Amruth Mahal, Malnad Gidda, Hallikar, etc. The cattle of these breeds should not be crossed with other breeds.

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- ii. The local breeds of other states viz., Sahiwal, Tharparkar and Ghir are to be encouraged in the state. By using certified milk yielding semen of these breeds, milk yield of non-descript local cattle may be increased.
- iii. While using exotic semen, the gene level shall be restricted to 50% and semen containing 50% exotic genes should be used for Artificial Insemination in cross breed cattle compulsorily. Also it is ideal to develop cross breed containing HF gene in Bengaluru and surrounding districts and cross breed containing Jersey gene in the remaining districts.
- iv. While using cross breed semen, similar genetic cross breed semen used for the mother cattle should be used for the female cattle born to that mother cattle. But Inbreeding should be avoided. For example, if a local non-descript cattle is crossed with HF and Sahiwal cross breed semen, then the female cattle born to this cattle should also be crossed with HF and Sahiwal cross breed semen. By this, production of indefinite cross breed cattle may be avoided.

As per the recommendations of the Expert Committee, the Project Director, Karnataka Livestock Development Agency, Bengaluru has submitted proposal to revise the Karnataka Cattle and Buffalo Breeding Policy (as amended in 2010) vide letter read at (4) above. Accordingly, after careful examination of the recommendations, it was decided to revise the Breeding Policy. Hence, this order.

GOVERNMENT ORDER No: AHF 44 AHP 2015,
BENGALURU, DATED 21.05.2015.

As described in the preamble, Karnataka Cattle and Buffalo Breeding Policy 2010 is hereby revised. The salient features of the Breeding Policy 2015 is as follows:

1. The indigenous breeds are categorized as local (viz., those which are available in the State like Deoni, Hallikar, Amrit mahal, Malnad Gidda, Khillari and Krishna Valley in cattle and Pandarapuri, Dharwari in buffaloes) and outside (viz., those which are available in other States of the Country like Sahiwal, Tharparkar, Gir, Ongole, in cattle and Surti, Murrah in buffaloes).
2. Local descript indigenous breeds having high milk yield and those with excellent draft abilities, shall be upgraded in their respective breeding

...3)

tracts, through straight or selective breeding only. They shall not be cross bred with other breeds.

3. Only local non descript cattle can be upgraded through cross breeding with high yielding breeds in the following order of priority:
 - a. Local descript indigenous breeds in their breeding tracts.
 - b. Outside indigenous descript breeds, with proven lactation yields which are higher than the yields of local indigenous descript breeds.
 - c. Exotic breeds like HF and Jersey, subject to the condition that the exotic level shall be maintained at 50%.
4. The indigenous breeds are given priority above the exotic breeds as even though the exotic breeds presently have high lactation yields but the indigenous breeds are easier to maintain, more disease resistant, better suited for local environment and survive in low input conditions as well. Indigenous breeds also have A2 protein in milk which is considered nutritionally superior vis-à-vis the A1 protein milk of exotic breeds. Because of these and certain other characteristics like better emotional connect, the indigenous breeds are found to be the preferred choice of especially those farmers who are involved in small size dairies run by their own family labour as against commercial dairies run by hired labour (which may prefer exotic breeds). A comparative statement regarding milk yield, disease resistance, etc. characteristics of various breeds for cattle and buffalo is given in Annexure-1 and 2 respectively.
5. Back crossing to the exotic breeds for maintaining 50% exotic level should be avoided but back crossing with high yield indigenous cattle semen can be undertaken so as to restore pure indigenous exotic level over a period of generations. For maintaining exotic level at 50%, inter-se mating of the crossbred cattle should be undertaken with crossbred semen only, so as to maintain the exotic level of 50%. Those crossbred cows which already have a exotic level of more than 50% should be avoided for back crossing. Rather, such cows shall be inseminated with CB semen of 50% exotic level so that over a number of generations, the exotic level would come closer and closer to the 50% level. Further, for inter-se mating, it has to be ensured that the progeny should also be inseminated with semen of same gene-pool mix which was used for insemination of its mother. For eg., if a CB HF cow is inseminated with HF-Sahiwal CB semen, then, the progeny of such cow should also be inseminated with semen of HF-Sahiwal CB only. This will ensure that mosaic breeds are not produced.

6. Core areas of the indigenous breeds shall also be identified. A core area shall consist of a group of villages within a vicinity of 25-50 sq. Km having large percentage of indigenous descript cattle population. The core areas shall be supported for development of indigenous cattle only in their breeding tract under various government programs like provisioning AI, induction of cattle using bank loan with or without subsidy, etc. Such measures would ensure propagation of indigenous breeds only within the core areas. The core areas would, thereby, provide an atmosphere for upgradation of the indigenous cattle through selection of elite animals. Further, the core areas would be expanded and new ones would be identified over a period of time as and when the indigenous cow population improves as a result of the breeding policy.
7. Along with strengthening of the doorstep delivery of AI services, natural mating system shall also be supported by providing various services like screening bulls for notified diseases, training and support for breeders, etc.
8. The breeding, either through AI or natural mating, shall be tracked through ear tagging of animals and maintenance of suitable records in manual or computerized database so as to ensure compliance to Breeding Policy as well as to facilitate upgrading through selection of elite animals.

By Order and in the name of
Governor of Karnataka

 21/5/15
(D.S. SUDARSHAN KUMAR)

Under Secretary to Government,
Animal Husbandry and Fisheries Department
[Animal Husbandry]

 21/5/15

To:

- 1) Commissioner, Animal Husbandry and Veterinary Services, Bengaluru.
- 2) Director, Animal Husbandry and Veterinary Services, Bengaluru.
- 3) Project Director, Karnataka Livestock Development Agency, Bengaluru.
- 4) Personal Secretary to Hon'ble Minister for Animal Husbandry.
- 5) Personal Secretary to the Secretary to Government, Animal Husbandry and Fisheries Department.
- 6) Section Guard File : Spare copies.

Annexures to Government Order No: AHF 44 AHP 2015, dated 20.05.2015.

Annexure-I:
Cattle breeds

Sl. No.	Name of the Breed	Type of breed (milk/ draught/ dual)	Indigenous (local/ outside state)/ Exotic	Breeding Tract	Age at first calving (days)	Calving interval (days)	Lactation milk yield (Kg)	Lactation length (days)	Fat Gm%	SNF Gm%	lavour of milk (low/ high)	Disease resistance & survival in low input conditions (low/ medium/ high)	Emotional connect (low/ medium/ high)	Nutritively better A2 protein milk (Yes/ No)
1	Deoni	Dual	Indigenous (local)	Entire State*	1401.9 ± 26.74 894 to 1450	465.1 395 to 517	1120.5 ± 62.89 636 to 1890	299.0 ± 7.83 169 to 475	4.5 to 5.0	8.5 to 9.5	High	High	High	Yes
2	Amritmahal	Draught	Indigenous (local)	Tumkuru, Mandya, Hassan, Chikmagalur, Chitradurga	1337.6 ± 115.52	577.6 ± 24.32	572 ± 24	299 ± 10			High	High	High	Yes
3	Hallikar	Draught	Indigenous (local)	Tumkuru, Mandya, Mysuru, Kolar, Chikmagalur, Hassan, Chitradurga, Ramanagara, Bangalore Rural	1370 ± 45.6 915 to 1800	598.9 ± 27.36 517 to 669	542 ± 61 227 to 1134	285 ± 10 210 to 310			High	High	High	Yes
4	Malnad Gidda	Milk	Indigenous (local)	Shimoga, Chikmagalur, Udipi, Dakshina Kannada, Uttara Kannada, Kodagu	1365	515	218.33	250			High	High	High	Yes
5	Khillari	Draught	Indigenous (local)	Vijayapura, Dharwad, Belagavi	1427.5 1050 to 1930	450	384.1 240 to 515	228 190 to 275			High	High	High	Yes

6	Krishna Valley	Dranghi	Indigenous (local)	Vijayapura, Dharwad, Belagavi	1183.4 ± 18.34	450.6 ± 5.56	2325.5 ± 17.84	318.3	4.5 to 5.0	9.0 to 9.5	High	High	High	Yes
7	Sahiwal	Milch	Indigenous (outside)	Entire State	940 to 1520	390 to 550	1600 to 2750	285 to 375	4.5 to 5.0	9.0 to 9.5	High	High	Medium	Yes
8	Tharparkar	Milch	Indigenous (outside)	Entire State	1230.9 ± 1101 to 1561.5	431.00 ± 407.6 to 571.6	1748.76 ± 912.6 to 2147.0	285.98 ± 240.3 to 377.20	4.5 to 5.0	9.0	High	High	Medium	Yes
9	Gir	Milch	Indigenous (outside)	Entire State	1552 ± 1200 to 1800	516 ± 440 to 600	2110 ± 600 to 3300	308 ± 250 to 375	4.5 to 5.0	9.0	High	High	Medium	Yes
10	Ongole	Milch	Indigenous (outside)	Entire State	1473 ± 1150 to 1820	500.4 ± 11.26 ± 420 to 720	688.2 ± 32.24 ± 475 to 1000	232.8 ± 10.63 ± 160 to 270	3.0 to 5.0	7.8 to 8.8	High	High	Medium	Yes
11	Holstein Friesian	Milch	Exotic	Areas of the state having temperate climate viz., Bengaluru, Kolar, Chikmagalur, Tumakuru, Mandya, Hassan, Mysore, Ramanagara & other districts#	704 to 740	580 ± 10	6700 ± 6000 to 7300	305 ± 5	3.5 to 5.0	8.5	Low	Low	Low	No

Annexure-2:
Buffaloe breeds

Sl. No.	Name of the Breed	Type of breed (milk/draft/ctual)	Indigenous (local/ outside state)/ Exotic	Breeding Tract	Age at first calving (days)	Calving interval (days)	Lactation milk yield (kg)	Lactation length (days)	Fat Gm%	SNF Gm%	Flavour of milk (low/ high)	Disease resistance & survivability in low input conditions (low/ medium/ high)
1	Murrah	Milch	Indigenous (outside)	Areas of the state having sufficient availability of feed/fodder and water viz., Bengaluru, Mysore, Mandya, Kolar, Chikkaballapura, Belagavi, Dharwad, Udupi, Dakshina Kannada*	1319.0	452.9	1751.8	298.7	7.0 to 8.0	9.0 to 10.0	High	High
2	Surti	Milch	Indigenous (outside)	Entire State	1692.7	534.7	1285.43	344.7	7.0 to 7.5	9.0 to 9.15	High	High
					1050 to 1770	430 to 564	1208 to 2208	342 to 405				

* Murrah breed may also be propagated in other areas of the State where the dairy farmers have sufficient provision for feed/fodder and water.

Sudharshan Kumar
(D.S. SUDARSHAN KUMAR) 21/5/15
Under Secretary to Government,
Animal Husbandry and Fisheries Department
[Animal Husbandry]
21/5/15

12	Holstein Friesian (50% exotic level)	Milch	Exotic	Areas of the state having temperate climate viz., Bangalore, Kolar, Chikballapur, Tumakuru, Mandya, Hassan, Mysore, Ramanagara & other districts#	1028 ± 5	419 ± 6	2381 ± 45	305			Low	Low	Low	No
13	Jersey	Milch	Exotic	Entire State	720 to 780	400	5250	300 ± 5	4.0 to 5.0	8.5 to 9.0	Low	Low	Low	No
14	Jersey (50% exotic level)	Milch	Exotic	Entire State	89 ± 5	451 ± 8	1747 ± 66	305			Low	Low	Low	No

* Though the Deoni breed is predominantly found in Kalburgi, Yadgir and Bidar districts but due to its excellent milk producing and environment adaptability characteristics, it is suitable for propagation in the entire State.

HF breed may also be propagated in other areas of the state where the dairy farmers have provision for adequate feed/fodder, water and temperature management - especially the commercial dairy farmers.