Evolution of Frieswal®
"The First Synthetic Cattle Breed of India": A Success Story







ICAR-Central Institute for Research on Cattle

Grass Farm Road, Meerut Cantt.
Meerut, Uttar Pradesh – 250001

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PREFACE

Frieswal® is one among the important crossbred cattle developed in the country for higher milk production. The Frieswal®was developed under the Frieswal® Project of All India Coordinated Research Project on Cattle implemented by the ICAR-Central Institute for Research on Cattle, Meerut in collaboration with the Military Dairy Farm, Ministry of Deference. The Frieswal® Project was the largest breeding programme implemented in the country involving the large crossbred cattle base of more than 20000 maintained at 42 Military Dairy Farms located at different agro-climatic regions. The prime objective of the project was to evolve a national crossbred cattle involving HF and Sahiwal named 'Frieswal®' with 62.5 per cent exotic inheritance level, yielding 4000 Kg of milk with 4% butter fat in a lactation of 300 days under good management conditions.

With the systematic crossbreeding and planned mating among the Holstein Friesian (HF) and Sahiwal crosses, the Frieswal® cattle was evolved to yield an average of 3628 Kg of milk in a mature standard lactation length of 305-days which is higher than the average performance of any other crossbred cattle reported in the country so far. The Frieswal® cattle has also proved its genetic potential by lactation yield more than 7000 Kg with a highest daily peak yield of more than 41 Kg. Moreover, the Frieswal® is the only crossbred cattle in the country which was evolved utilizing a huge population of 20675 animals with accurate pedigree records and production records of more than 62000 lactations. Further, a sizable number of 229 elite Frieswal® cows are presently maintained by the ICAR-CIRC, Meerut at National Dairy Research Institute, Karnal and 93 at CIRC, Meerut experimental herd in addition to nearly 100 genetically superior Frieswal® bulls are being maintained in the Male Germplasm Unit of ICAR-CIRC, Meerut. This highly valuable germplasm needs to be retained for its dissemination to the farmer herds for increasing the national milk production.

The efforts of ICAR-Central Institute for Research on Cattle has led to declaration of registration and gazette notification of Frieswal® as 54th breed of cattle and First synthetic breed of cattle in the nation. The Institute is also thriving hard for inclusion of the Frieswal® cattle in the National Cattle Breeding Programme for which the proposals have already been sent to the Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India.

This Evolution of Frieswal® the National Milch Breed of Cattle: A Success Story attempts to document the evolution of the Frieswal® and achievements made under the project. It is assumed that it will narrate the success of the largest breeding program of cattle carried out in the country with joint efforts of Indian council of Agriculture Research, MoA and Miltrary Dairy farms, Ministry of Defence. The authors would like to express their sincere thanks to all the contributors who have directly or indirectly involved in the development of Frieswal® cattle.

Ashok Kumar Mohanty
Director

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Introduction

Cattle farming in India have long tradition and always recognized as an integral part of rural livelihood of the country. Traditionally, cattle in the country were evolved mainly for agricultural operation and manure production but not for milk production and hence most of them were genetically low milk producers. Hence, crossbreeding programme was started to improve the milk production potential of low producing indigenous cattle in which the temperate dairy breeds like Holstein Friesian, Jersey, Brown Swiss etc. were used to upgrade or cross the non-descript indigenous cows. Many crossbreeding experiments were conducted with different combinations of *Bos indicus* and *Bos tauras* dairy breeds for developing crossbred dairy cattle best suited to the tropical climatic conditions of the country for higher milk production.

Cross Breeding of Cattle in India: The crossbreeding experiments were conducted in India since 1875, through which, the Taylor breed was developed by crossing the exotic Shorthorn breed of cattle with the local cattle at Patna. Later Ayrshire, Jersey and Friesian breeds of bulls were also used for breeding native cows at southern part of India (Nilgiri region) by European planters. Crossbreeding programmes involving Ayrshire breed with Hariana, Sahiwal and Red Sindhi and Holstein Friesian with Red Sindhi were started at various institutes in the country. Allahabad Agricultural Institute, Naini also started crossbreeding as early as 1924 by crossing Gir, Kankrej, Hariana and Sahiwal breeds of cows with Holstein Friesian, Brown Swiss, Jersey and Guernsey bulls.

Large scale crossbreeding experiments were conducted by the Military Dairy Farms in an organized way by breeding the indigenous cattle with European dairy breeds. The first Military Dairy Farm was established at Allahabad in 1889. From 1891 Military Farms (MFs) also started crossing the exotic breeds like Holstein-Friesian (HF), Jersey, Ayrshire, Brown Swiss, Guernsey etc. with non-descript cattle as well as well-defined Indigenous breeds like Haryana, Gir, Tharparkar, Red Sindhi and Sahiwal etc. Since 1907, Ayrshire cattle were used for crossbreeding and during 1922, breeding with Ayrshire was discontinued due to poor growth, compromised milk production and high mortality in the higher crosses. Subsequently, Holstein Friesian (HF) bull/ semen doses were imported for crossing. During 1910, crossbreeding experiments were initiated at Imperial Dairy Research Institute, Bangalore and in 1920 crossbreeding of Sahiwal was undertaken at Pusa Agricultural Institute, Bihar. At Allahabad Agricultural Institute, Naini crossbreeding experiments were conducted since 1924 involving Brown Swiss, Holstein Friesian, Jersey and Guernsey exotic breeds and Gir, Kankrej, Sahiwal, Red Sindhi and Hariana which resulted in the development of Jersind (62.5 Jersey and 37.5 Red Sindhi) crossbred in 1953 and Brown Sind (62.5% Brown Swiss and 37.5% Red Sindhi) in 1955.

Holstein Friesian as best exotic breed: The results of the experiments revealed that Holstein crosses with indigenous milch breeds like Sahiwal and Tharparkar were most suitable for increasing the milk production. Consequently, the Military Farms had Friesian x Sahiwal crossbreds with very low to a very high HF blood level. During 1960s various bilateral crossbreeding projects such as Indo-Danish Project at Hessarghatta, Karnataka (1961), Indo-Swiss project at Kerala (1963), Indo-German project at Mandi, Himachal Pradesh and Almora, Uttar Pradesh (1963) were taken up. Simultaneously, systematic crossbreeding research programme was initiated by the Indian Council of Agricultural Research (ICAR) with launch of a project on “Behaviour Pattern of Zebu Crossbreds

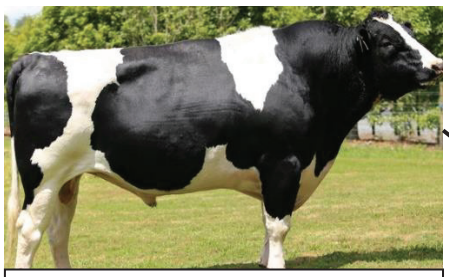
with Exotic Dairy Breeds" on First April 1968 at IVRI, Izatnagar and Hisar Centre of PAU Ludhiana (presently, CCS HAU Hisar). The project used Hariana cows and Holstein Friesian, Brown Swiss and Jersey exotic bulls for crossbreeding in different combinations with specified mating plans. Exactly one year later the project was upgraded as All India Co-ordinated Research Project (AICRP) on cattle. The crossbreeding experiments revealed two major results that the Holstein Friesian breed was the best suited exotic breed for Indian condition for developing the new crossbreds with increased milk production and the crossbreds with 62.5% exotic inheritance outperform the crossbreds with high or low exotic inheritance levels.

Genesis of Frieswal® Project – An Ambitious project of Indian Council of Agricultural Research (ICAR)

In order to exploit the large genetic base of crossbred cattle maintained at the Military farms, Indian Council of Agriculture Research (ICAR) initiated the Frieswal® Project under the All India Co-ordinated Research Project on Cattle on 23rd May, 1985 in collaboration between the ICAR-Central Institute for Research on Cattle, Meerut (Formerly Project Directorate on Cattle) and Military Farms of Ministry of Defence, Government of India. This project was conceived to take advantage of the achievements made in the AICRP on Cattle and other crossbreeding experiments at the Military farms. The aim was to evolve a crossbred cattle involving 62.5% HF and 37.5% Sahiwal named 'Frieswal®' (ICAR, 2002), yielding 4000 Kg of milk with 4% butter fat in a lactation of 300 days under good managemental conditions. Earlier as Project Directorate on Cattle (PDC) and later on as Central Institute for Research on Cattle (CIRC), Meerut, the institute actively collaborated with the Military Farms, Ministry of Defence to evolve a National milch breed of crossbred cattle "Frieswal®" by crossing the Holstein Friesian with Sahiwal cattle. In order to study the performance of the Frieswal® cattle in the farmers' herds and to improve their milk production, the Field Progeny Testing Project (FPT) was initiated under the AICRP on Cattle in the year 1992. The genetic evaluation of Frieswal® bulls are being done on the basis of their daughters reared under the field conditions of Ludhiana in Punjab, Pune in Maharashtra, Thrissur in Kerala and Pantnagar in Uttarakhand through associated herd progeny testing program. The Frieswal®Project was started under the All India Coordinated Research Programme on Cattle on 23rd May 1985.



Frieswal project inaugurated by Gen A S Vaidya (Chief of Army Staff) on 23rd May. 1985 in the presence of Dr. R. M. Achrya (DDG (AS), ICAR) and Brig. Dilbag Singh (DDGMF)



Holstein Friesian



Sahiwal



Frieswal® (62.5 ± 5% HF)

Genetic make- up of Frieswal® Cattle

Objectives of Frieswal® Project

The Frieswal® project was initiated with the following two objectives:

1. To study the genetic and phenotypic variances of cross-breeds (3/8 to 5/8) and associated milk characteristics related to growth, reproduction and survival, as well as the covariances among all these characteristics, with a view to developing suitable criteria for improving milk production.
2. To undertake progeny testing of about 100 bulls, select the best based on genetic merit and then use these on the military farms and in other crossbreeding programmes.

Rationality of the Frieswal® Project at Military Dairy Farm: The Military Farms were the single largest source of crossbred cattle with proper pedigree and recording systems, required for systematic execution of any breeding programme. Before inception of Frieswal® project, Military Farms had Friesian x Sahiwal crossbreds with very low to a very high HF blood level at its 42 Military farms. In order to stabilize the inheritance level around 62.5%, proven crossbred bulls of high genetic merit were required. In order to produce the required number of crossbred bulls it was necessary to fix the genetic value of the resultant new strain. The Frieswal® Project

Farm	Adults	YS-II	YS-I	Calves	Total
Meerut	671	290	149	112	1222
Agra	432	149	89	77	747
Lucknow	481	216	81	102	880
Bareilly	264	80	59	75	478
Jabalpur	493	181	171	92	937
Namkum	348	148	105	63	664

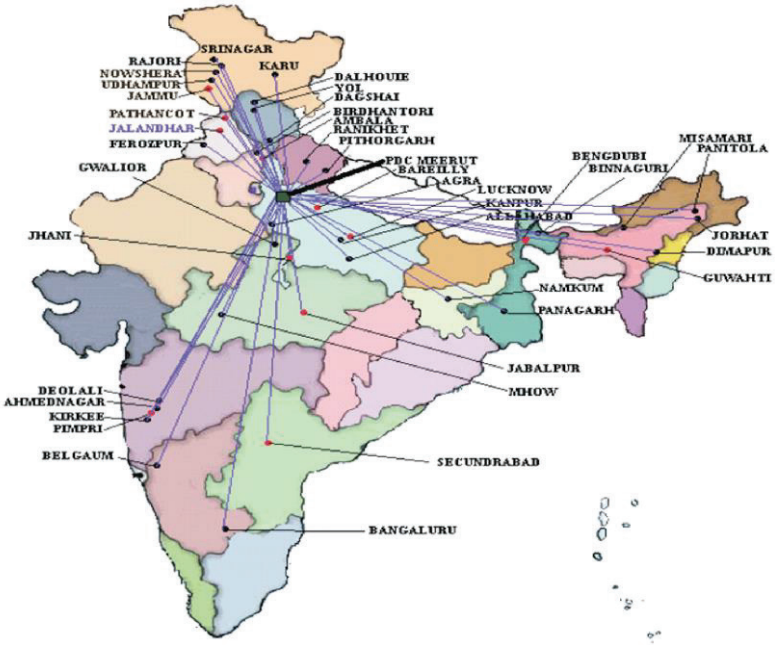
Female Herd strength of Frieswal cattle at Various Military Farms as on 31.03.2018

was launched to achieve these two and was conceived as a part of the All India Co-ordinated Research project on Cattle with headquarter located at Military Farm, Meerut Cantt.. The goal of the project was to develop a national milch breed of crossbred cattle (Frieswal®) by utilizing the heterogeneous crossbred population with varying Friesian inheritance generated at Military Farms (Bhat, 1988). The livestock resources and infrastructure of 37 Military farms and technical expertise from ICAR-CIRC, Meerut, have helped to evolve the crossbred national milch breed-Frieswal®.Selection of elite animals were made for nominated mating to produce young bulls for progeny testing. Further, by establishing progeny testing network across 37 Military Farms and four field progeny testing units viz., GADVASU Punjab, KVASU Kerala, BAIF, Maharashtra and GBPUA&T, Uttarakhand, idea was to cover all agro-climatic zones of the country, making the evolved strain suitable for use in any part of the country.

Farm	Adults	YS-II	YS-I	Calves	Total
Allahabad	292	113	50	67	522
Ambala	1370	622	228	260	2480
Jalandhar	921	486	201	203	1811
Ferozpur	276	122	57	29	484
Pathankot	413	25	83	55	576
Belgaum	349	154	68	52	623
Deolali	443	163	90	62	758
Secunderabad	522	199	105	75	901
Pimpri	1039	319	234	150	1742
Jhansi	381	103	52	55	591
Ahmednagar	379	118	57	39	593
Binnaguri	287	132	63	63	545
Missamari	413	173	102	52	740
Bengdubi	424	206	110	88	828
Guwahati	422	206	77	48	753
Panagarh	117	61	33	21	232
Udhampur	90	20	09	08	127
Jammu	551	151	123	74	899
Nowshera	336	96	62	46	540
Total	11714	4533	2458	1968	20673

YS-I is young stock below 15 months; YS II is young stock above 15 months

Number of Elite cows at various Military farms as on 31.03.2018

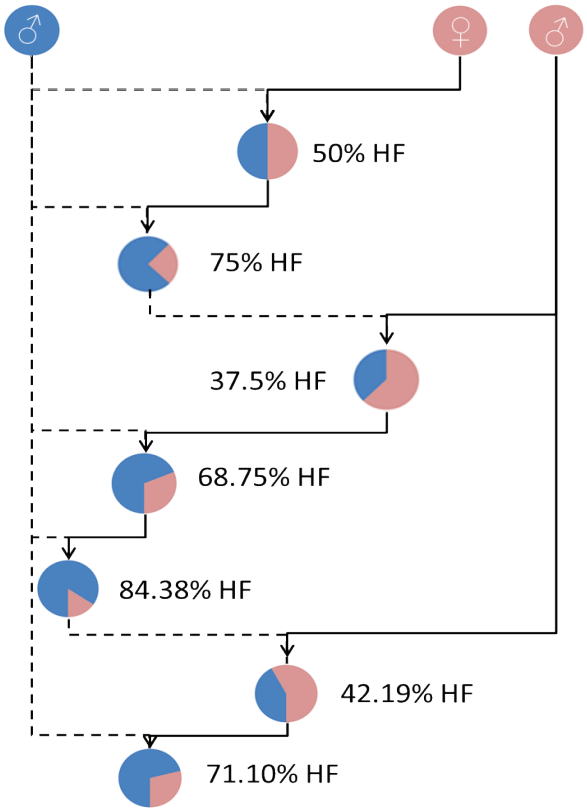


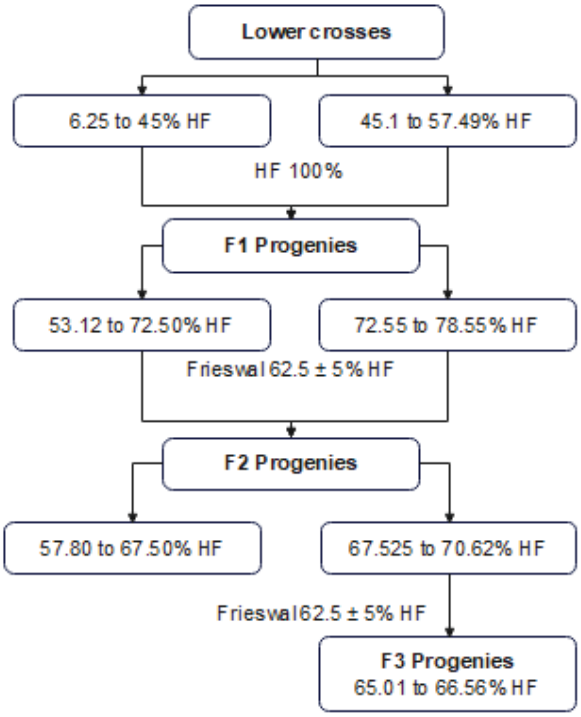
Location of 42 Military Farms in different agro-climatic regions of the country

Site of Implementation: The first phase of Frieswal® project started on 4th September 1984 with the inclusion of 1000 crossbred cattle available at Military Farm, Meerut. Later in the second phase, approximately 4000 cattle maintained at Jalandhar, Bareilly, Dehradun, Ambala and Lucknow Farms were covered under the project In the third phase rest of the farms were covered and finally 42 Military Farms were included under the project (Figure 1). The Bull Mother Farm of the Frieswal® cattle was started at the Project Directorate on Cattle, Meerut right from beginning wherein the male calves selected from different Military Farms are reared as young bulls for testing.

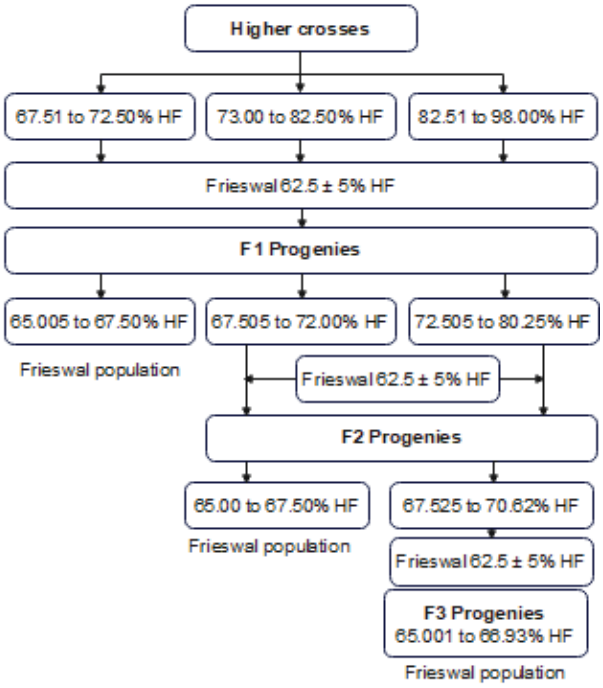
Breeding policy for Frieswal® Animals:

Till 1980, crossbreeding was followed in the MFs wherein the Sahiwal animals were bred with the Holstein Friesian males to maintain the HF inheritance ranging from 3/8 to 5/8. The mating plan followed till 1980 is given below. To upgrade the lower HF crosses, 9,79,975 frozen





Upgradation of lower crosses



Down gradation of higher crosses

semen doses of high genetic merit HF bulls were imported from USA, France and Canada. HF Semen doses were also procured from the stations at Hesaraghatta, Salon and Rishikesh. The imported frozen semen doses of Holstein Friesian bulls were used for inseminating the Sahiwal cows and subsequently the crossbreds produced were mated either with the HF semen or with the semen of Sahiwal bulls to maintain the desired blood levels of the crossbreds. Later on 2009, breeding with Holstein Friesian and Sahiwal were discontinued and only Frieswal® bull were used for mating. At the start of the Frieswal® Project, Military Farms had crossbreds of varying HF blood level ranging from 6.25 to 98.00 per cent which formed the base population to develop the Frieswal® breed of cattle. For this, the crossbreds were divided into different genetic groups based on the HF blood level. Systematic and planned mating program was

followed to stabilize the HF blood level within the range of 62.5 ± 5.0 %. The lower crosses were upgraded with the pure HF semen followed by the use of the semen of Frieswal® bulls (fig 3) while the higher crosses were downgraded to the desired blood level of Frieswal® cattle by using the semen of Frieswal® bulls. The detailed mating plans followed for stabilizing the lower and higher crosses to 62.5 ± 5% HF blood level are depicted in figures.

Criteria of selection of Animals: The male calves were produced through nominated mating of elite females with the proven bulls were included in breeding program. The 300-days milk yield and peak yield were considered as the main criteria for identification of the elite cows. For production of male calves for test mating, the elite cows having 3/8 HF blood level were inseminated by using proven HF semen and the 5/8 elite Frieswal® cows were inseminated using the ranked Frieswal® semen. The male calves born out of such mating were reared at the Military Farms up to three months of age. For test mating, male calves from different Military Farms were selected based on their morphological characters, conformation traits, growth rate and general health status for transfer to the Bull Rearing Unit (BRU), Meerut for rearing as young bulls.

Lactation	300-days milk yield (Kg)	Peak yield (Kg)
First	4000	20.0
Second	4500	22.5
Third and above	5000	25.0

Semen collection from Frieswal® Cattle

The young male calves are maintained under proper management conditions till they attain the age of maturity. They are put under regular exercise and trained for semen collection. The bulls with better libido, semen quality, freezability and storage quality are continued for semen collection. From each bull, a minimum of 15000 doses are frozen of which 4000 distributed for breeding, 1000 are kept for gene bank and the rest 10000 are stored for future use.



Semen collection from Frieswal bulls



Frieswal Field Progeny Testing Units

Testing of Frieswal® bulls

A total of 401 bulls have been inducted under the program for their genetic evaluation in farm / field conditions. According to the availability of test bulls, 25-30 bulls are inducted in a set for their genetic evaluation at both farm and field conditions. Based on the performance of their daughters, the bulls are evaluated for their genetic worth and the top ranked bulls are used for nominated with the elite females for young bull production.

Morphological characters of Frieswal® cattle

The main body colour is black and white of varying proportions ranging from 10 to 90 per cent. Frieswal® animals with full black or tan and white are also observed. The colour of the skin is black or black and brown. In majority of the animals the tail switch is white. Black coloured muzzle is observed in nearly 96% of heifers and 90% of cows. Hoof is also black in colour. The Frieswal® cows are predominantly large (56%) while 36% are found to be medium in size. Frieswal® animals are docile in nature (83%). Symmetrical udder is noticed in 90% of cows and 100% in heifers. The dewlap is medium in 87% of animals while 93% of animals have small naval flap. The average body weight at birth, 3, 6, 18, 24 months and weight at first calving are 26.51, 66.69, 117.95, 257, 323 and 412 Kg, respectively.



Frieswal® cow



Frieswal® bull



Frieswal® herd

In bulls, the predominant coat colour is black with white patches. The muzzle colour is black. The presence or absence of white spot or star on the forehead is a unique character of the Frieswal® bulls. The poll is predominantly covered with long hair in nearly 40% of the bulls. The body weight of adult male animal is about 631.73 Kg and a maximum weight of approx. 700 Kg is attained at 75 months of age.

Frieswal® Semen production and utilization

Since inception of the project, a total of 53.38 lakh frozen semen doses were produced of which 30.88 lakh doses were utilized while the rest of around 22.50 lakh are available for future breeding of the crossbred bulls in the country. A total of 15.05 lakh semen doses were distributed to the Military Farms for insemination while 4.72 lakh doses were distributed to various FPT units and 8.26 lakh doses were supplied to other stakeholders.

Details of semen doses produced and supplied

Details	Nos (Lakh)
Frozen Semen Doses Produced	53.38
Frozen Semen Doses utilised	30.88
Military Farms (37 MF)	15.05
Field Progeny testing Project under AICRP on Cattle (4 Units - GADVASU, KVASU, BAIF, GBPUA&T)	4.72
Other Stakeholders (SAUs/ SVUs, State AH Depts., State Livestock Development Boards, Gaushalas, NGOs, commercial dairy farmers, para-vets and AI workers)	8.26
Gene Bank and Experiments	0.08
Testing, write-off	2.75

Frieswal® Semen quality parameters

Frozen semen samples from breeding bulls are evaluated for semen quality parameters like post thaw motility, incubation test, acrosome integrity, hypoosmotic swelling test (HOST), sperm concentration and microbial load. Post thaw semen quality is evaluated in randomly selected two cryopreserved straws per bull (0.25 ml, French mini), thawed at 37°C for 30 seconds. The percent progressive motility following thawing at 0, 60, 120 minutes of incubation at 37°C are evaluated. The plasma membrane integrity (%) is determined by hypoosmotic swelling test (HOST) and the average sperm concentration per straw (0.25 ml) is also determined routinely. The mean bacterial load is also recorded.

The quality control parameters of frozen- thawed Frieswal bull semen as per CMU guidelines

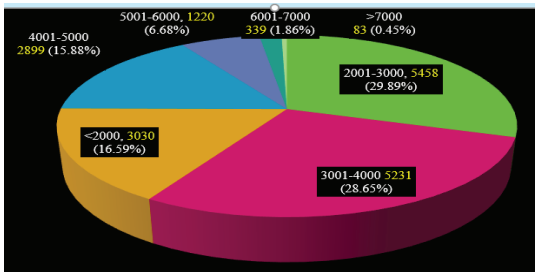
Semen attributes	
PTM (%)	≥50
Motility after incubation for 120 min (%)	≥20
HOST (%)	≥40
Acr-Int (%)	≥65
Concentration (million/straw)	20
CFU/ml	<5000

PTM: Post-thaw motility; HOST: Hypoosmotic swelling test; Acr-Int: Acrosome integrity ; CFU: Colony forming unit.

Performance of Frieswal® cows at Military Farms (1985 – 2019)

The average performance of Frieswal® cows for various production and reproduction traits are given in the following table. The highest lactation milk yield was recorded as 8962 Kg with the highest daily peak yield of 41 Kg. The age at first calving was 965 days (31.72 months). The average fat% was 3.9 while the average lactation length was 322 days.

Trait	No.	Mean ± SE
Lactation Milk Yield (Kg) (Highest Lactation MY)	53793	3321.74 ± 14.29 (8962 Kg)
300-Days Lactation MY (Kg)	48000	3628.00 ± 12.32
Daily Peak Yield (Kg) (Highest Peak Yield)	53793	15.11± 0.06 (41 kg)
Average Fat %	2000	3.9 (3.6-4.2)
Lactation Length (Days)	53793	322.02 ± 0.78
Age at first calving (Days)	19480	965.36 ± 2.18
Service Period (Days)	33004	119.76± 1.81
Dry Period (Days)	33004	164.59± 2.17
Calving Interval (Days)	33004	440.30± 2.12



Distribution of Frieswal® cows

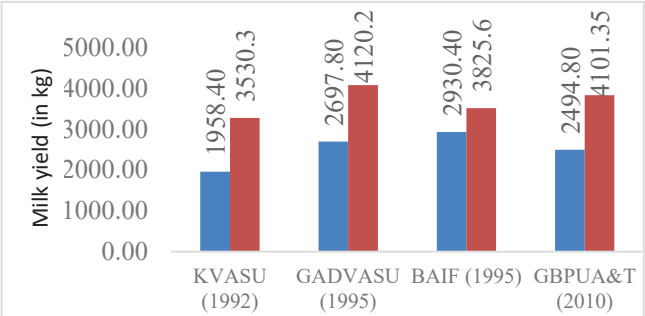
The categorization of Frieswal® cows according to the lactation milk yield revealed that nearly 25% of them have produced the targeted lactation yield of 4000 Kg while 28.65% produced milk yield ranging from 3001-4000 Kg and around 30% yielded within the range of 2001-3000 Kg.

Performance of Frieswal® cattle at farmers' herds in registered FPT Units

The performance of the daughters of Frieswal® bulls in the farmers' herds are detailed in the following table. A total of 163530 animals of 79319 farmers were registered under the project. Through the intervention made under this project, the first lactation milk yield of the daughters of Frieswal® bulls has increased to an extent of 30.54 to 80.26% over the period of 34 years.

Details	GADVASU, Ludhiana (1995)	KVASU, Thrissur (1992)	BAIF, Pune (1995)	GBPUA&T, Pantnagar (2010)	Total
Total AI units	33	08	25	08	73
No. of farmers	18031	16985	36405	7898	79319
No. of registered animals	41000	34125	75365	13040	163530
No. AI done	188309	160382	166192	64328	579211
No. of daughters born	27814	14604	21202	12483	76103
No. Progenies with completed first lactation	9457	4181	7438	2557	23633
Milk production at beginning (Kg)	2697.8	1958.4	2930.4	2494.8	2520.35
Milk production as on 2025 (Kg)	4120.2	3530.3	3825.6	4101.35	3894.36
% improvement in milk production (Kg)	**52.72 (1422.4)**	**80.26 (1571.85)**	**30.54 (895.19)**	**64.39 (1606.55)**	**54.5 (1374.01)**

The milk production has increased to a maximum extent at KVASU, Thrissur (80.26%) followed by GBPUAT, Pantnagar (64.39%), GADVASU, Ludhiana (52.72%), BAIF, Pune (30.54%). The overall average increase in the milk production was 1374.01 Kg over the period of more than 34 years showing per cent improvement of 54.5.



Increase in milk yield in different FPT units

Strategies for propagation of Frieswal® cattle

Presently, the bull mother farm of Frieswal® cattle is located at Livestock Research Centre of National Dairy Research Institute, Karnal and ICAR-CIRC, Meerut. In addition, the Frieswal® animals are available at various Government Institutions / Farms of Agriculture or Veterinary Universities, NGOs. The Frieswal® bulls are available in the Male Germplasm Unit or ICAR-CIRC, Meerut. In addition, the semen station of ICAR-CIRC, Meerut maintains around 22.50 lakh frozen semen doses of proven Frieswal® bulls. With these available resources, the Frieswal® cattle can be included in the National cattle breeding programme for improving the milk production potential of the HF crossbred cattle available in the country. Efforts are already been initiated in this line to propagate this superior germplasm to a larger extent throughout the country.

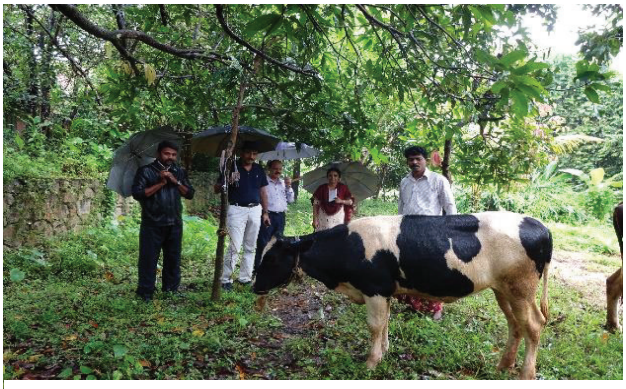
SALIENT ACHIEVEMENTS OF FRIESWAL® PROJECT

- Frieswal®, a National milch breed of cattle yielding 3894 Kg of milk in a mature standard lactation of 300 days with 4% butter fat was evolved.
- The Frieswal® cows have the ability to produce more than 7000 Kg of milk with a maximum daily yield of 41 Kg.
- The Frieswal® project is the largest progeny testing program covering all the agro-climatic regions of the country and conducting crossbreeding experiments for more than 34 years involving a huge population of around 20000 animals maintained at 42 Military Farms.
- The project could convert the mixed genotypes of HF X Sahiwal crossbreds into Frieswal® with a stabilized blood level of 62.5 ± 5% HF inheritance.
- The Frieswal® cows are well adapted to the different agro-climatic conditions of the country as they uniformly performed well in all the Military Farms and hence this superior germplasm can be utilized in the National cattle breeding programme for the genetic improvement of HF crossbred cattle of the country.
- The milk production performance of Frieswal® cattle is slightly higher than the other crossbred cattle developed in the country as mentioned below:

Breed	Karan Swiss	Karan Fries	Sunandini	Frieswal®	Vrindavani
Milk yield (Kg)	3602	3585	3200	3628	3219



Commercial dairy herd of FPT progenies at GADVASU unit



Heifer at KVASU Unit, Thrissur



Heifers Show FPT Unit Pantnagar



Heifers Show at Pantnagar unit



Visit of QRT team to BAIF unit



Frieswal Cow with peak yield of 41 kg



Visit of QRT team to FPT unit Pantnagar

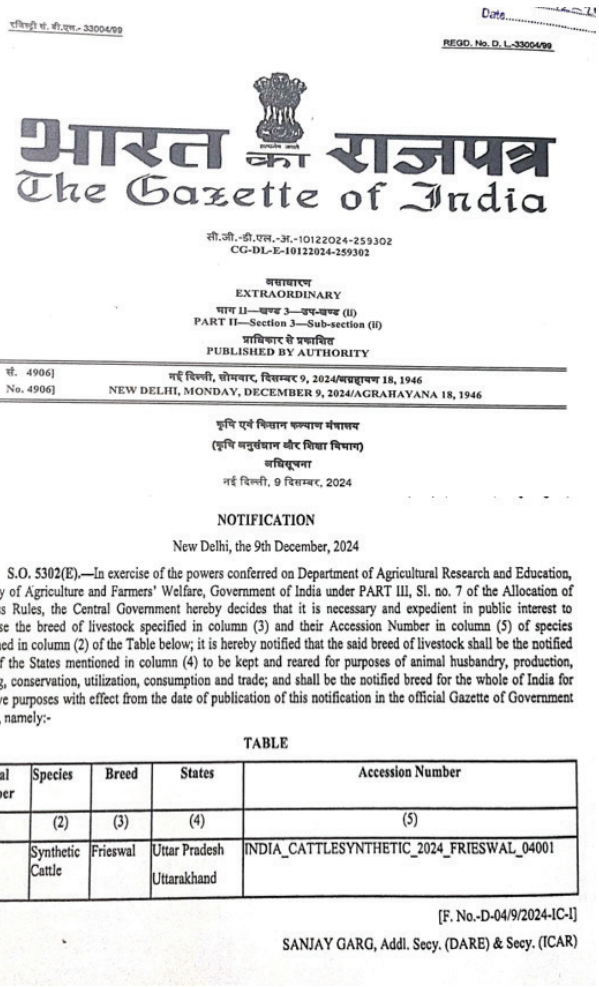


Brainstorming Session on Frieswal way forward



"First Synthetic Cattle Breed of India"

Registration No.
INDIA_CATTLE_2024_FRIESWAL_04001



रजिस्ट्री सं. डी.एल.-33004/99

REGD. No. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

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कृषि एवं किसान कल्याण मंत्रालय
(कृषि अनुसंधान और शिक्षा विभाग)
अधिसूचना
नई दिल्ली, 9 दिसम्बर, 2024

NOTIFICATION

New Delhi, the 9th December, 2024

S.O. 5302(E).—In exercise of the powers conferred on Department of Agricultural Research and Education, Ministry of Agriculture and Farmers' Welfare, Government of India under PART III, Sl. no. 7 of the Allocation of Business Rules, the Central Government hereby decides that it is necessary and expedient in public interest to recognise the breed of livestock specified in column (3) and their Accession Number in column (5) of species mentioned in column (2) of the Table below; it is hereby notified that the said breed of livestock shall be the notified breed of the States mentioned in column (4) to be kept and reared for purposes of animal husbandry, production, breeding, conservation, utilization, consumption and trade; and shall be the notified breed for the whole of India for the above purposes with effect from the date of publication of this notification in the official Gazette of Government of India, namely:-

TABLE

Serial number	Species	Breed	States	Accession Number
(1)	(2)	(3)	(4)	(5)
1.	Synthetic Cattle	Frieswal	Uttar Pradesh Uttarakhand	INDIA_CATTLESYNTHETIC_2024_FRIESWAL_04001

[F. No.-D-04/9/2024-IC-I]

SANJAY GARG, Addl. Secy. (DARE) & Secy. (ICAR)

STORY OF THE CIRC LOGO



Surabhi cow symbolises that the institute is all about cattle. It is probably the most recognised Indian cattle. The golden yellow colour symbolises that the institute is working towards prosperity of the owners of cattle. Terracotta colour background connotes that indigenous cattle are so close to the rural India. The ornaments on the animal symbolise people's affection towards their household cows.

The phrase in Sanskrit, originating in the scriptures, tries to capture the sacredness of the cow in rural Indian people's lives. It also conveys that the institute is about cows:

'You are the purpose of our efforts'

Inspired by:

"त्वं माता सर्वदेवानां त्वं च यज्ञस्य कारणम्।
त्वं तीर्थं सर्वतीर्थानां नमस्तेऽस्तु सदानघे।।

सन्दर्भ- स्कन्द पुराण"

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