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## Turkey

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### **Udder Excitement about New Bovine Genetics Import Regulations in Turkey**

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**Report Highlights:**

In March 2017, Turkey's Ministry of Food, Agriculture, and Livestock (MinFAL) added new categories to their genetic imports requirements which broadened the variety of dairy cattle genetics which can be imported into Turkey. For the United States, this now permits bull semen in the Top 200 list for both proven and genomic bulls at any time in the past ten years to qualify for export. Producers in Turkey will be able to make more genetic progress and have higher producing, more efficient and economical dairy cattle by using this broader range of elite bulls.

## **Turkish Bovine Genetics Import Requirements Updated**

In January 2016, Turkey's Ministry of Food, Agriculture, and Livestock (MinFAL) added new categories to their genetic imports requirements which broadened the variety of dairy cattle genetics which can be imported into Turkey. In March 2017, MinFAL made additional adjustments. For the United States, this now permits bull semen in the Top 200 list for both proven and genomic bulls at any time in the past ten years to qualify for export. Producers in Turkey will be able to make more genetic progress and have higher producing, more efficient and economical dairy cattle by using this broader range of elite bulls.

The demand for livestock genetics is high in Turkey, and Turkey remains the top bovine semen importer in the world after the United States. Last year, imports grew by 6 percent when Turkey imported 4,692,391 units of semen. Germany is the top supplier of bovine genetics to Turkey with 1,878,534 units of semen to Turkey worth \$4 million in 2016, followed by the United States with 548,317 units worth \$2 million. Due to Turkish farmers' drive for improvements in the cattle population, the demand for a wider range of high quality genetics is increasing, and it is expected that exports of U.S. bovine semen to Turkey will reach \$3 million in 2017.

In order to meet demand from the producers in Turkey for a broader range of livestock genetics, MinFAL published a new import requirement in March 2017 which expands the number of bulls from which their genetics qualify to be imported. For the United States, now Top 200 lists are accepted for proven and genomic bulls.

The inclusion of additional genomic young (GTPI) bulls is advantageous for dairy breeders in Turkey and it will allow the dairy cattle population to make more rapid genetic progress with more genetic diversity. In the past, a very limited scope of genetics could be imported into Turkey, with high milk production being the main technical criteria. In order to improve their business, farmers need bulls with other traits, in addition to milk yield, to improve specific traits in their herd such as Productive Life or Udder Composite.

As background, in 2016, [new changes](#) in the rules allowed that U.S. semen can be brought into Turkey from bulls as long as they were on the U.S. Top 100 bulls list in any of the past ten years. There is also a requirement that the country's average milk yield is at least 8,500 kg. Many countries with advanced dairy sectors, including the United States, meet this criteria. Now in 2017, with this recent update to the regulation, the lists have been expanded to the top 200 in any of the past ten years.

### **Resources for Industry:**

- The Historic Bull Lists are available on the U.S. National Association of Animal Breeders (NAAB) website. Top 200 PTAM Lists can be found here:  
[http://www.naab-css.org/db/Top%20200%20PTAM/PTAM%20200%20table\\_list.html](http://www.naab-css.org/db/Top%20200%20PTAM/PTAM%20200%20table_list.html)
- Top 200 Genomic Young Sires list is published by U.S. Holstein Association and is accessible here:  
<http://www.naab-css.org/db/Top%20Genomic/Top%20Genomic%20201612.pdf>
- MinFAL has published a clear summary list of exactly which documents are needed for importation on their [website](#) and attached in the Annex of this report.

ANNEX

New import requirements published in March 2017 include the update that top 200 lists are accepted for proven and genomic bulls from the United States, as well as summary list of exactly which documents are needed for importation. The updated text below is accessible with the following link. This is the Turkish Government's translation of the requirements.

[http://www.tarim.gov.tr/HAYGEM/Belgeler/Talimatlar/2017%20YILI/UPDATED\\_March2017-THE MANDATE ON THE PRINCIPLES-PROCEDURES TO BE FOLLOWED FOR IMPORTS OF SPERM OVA AND EMBRYOS.docx](http://www.tarim.gov.tr/HAYGEM/Belgeler/Talimatlar/2017%20YILI/UPDATED_March2017-<u>THE MANDATE ON THE PRINCIPLES-PROCEDURES TO BE FOLLOWED FOR IMPORTS OF SPERM OVA AND EMBRYOS.docx</u>)

## **THE MANDATE ON THE PRINCIPLES AND PROCEDURES TO BE FOLLOWED FOR THE IMPORTS OF SPERM, OVA AND EMBRYOS**

The export shall be carried out from the countries considered to be acceptable by the Directorate General of Livestock within the framework of technical and health requirements determined by the Ministry of Food, Agriculture and Livestock of the Republic of Turkey (MoFAL). ICAR (International Committee for Animal Recording) shall be granted permission by the Member States for the imports of sperm, ova and embryos.

Having taken Compliance Certificate for Import, the importers shall make an application along with the following documents in order to get a control certificate for each import they will make:

- 1) Letter of Application** (The document signed and stamped by a person authorized for the relevant issue by an authority or by a notary public). The content of file and the attachments shall be indicated as attachment to the letter of application.
- 2) Proforma Invoice**- It shall be translated into Turkish and shall be in the form of 1 original document and 3 copies (Proforma invoice must be the same as the information in the original invoice in the case of bill of entry form submission).

- Date of issuance for the proforma invoice shall be maximum 6 months before the pedigree issuance date.

- 3) DNA Profile**- the DNA profile of the sperm shall be submitted in each import permission request.

**The microsatellite markers used for the conformation of parents for cattle are as follows:**

Locus	Fragment size (bp)	
	Allel 1	Allel 2
TGLA227		
BM2113		
TGLA53		
ETH10		
SPS115		

TGLA126		
TGLA122		
INRA23		
ETH3		
ETH225		
BM1824		

In the table, the microsatellite markers chosen among those recommended by ISAG (International Society for Animal Genetics) for the determination of parents, and observed via a commercial kit produced by a company called Applied Biosystems are given.

Fragment sizes (Allel 1 and Allel 2 values) obtained for imported bulls via using StockMarks® Bovine Genotyping kit shall be requested from the exporter company and shall be submitted to the MoFAL in order to compare DNA profile.

DNA testing shall not be required for other species (sperm belonging to buffalos, rams and male goats).

**4) Certificate of Origin** – It shall be translated into Turkish and shall be in the form of 1 original document and 3 copies (The document which is drawn up and approved by competent official authorities of the exporter country, and which indicates the country/region/state of origin). Certificate of origin shall not be required if the country/region (state) of origin for the material to be imported is indicated in the veterinary health certificate.

**5) Sample or Proforma Veterinary Health Certificate** - It shall be translated into Turkish and shall be in the form of 1 original document and 3 copies (Approved document sample which will cover the same issues and information in the approved original veterinary health certificate to be submitted to the respective Customs Directorate and will be obtained from official veterinary service of the exporter country, which will draw up the original veterinary health certificate before the export).

**6) Control Certificate-** It is the document in 3 copies including the stamp of the person/institution, the name of the authorized person and signed with wet signature, and drawn up in accordance with the sample published in the Communiqué on Products Subject to Import Control of the Ministry of Food, Agriculture and Livestock. The sample is given in the Annex.

7) The original copy and 1 copy of the document which is drawn up by the Ministry of Agriculture, Producing Laboratory and Breeders' Associations/ Cooperatives, and states that the imported sperm, ova and embryos are used in artificial insemination and embryo transfer applications in the exporter country.

8) 1 approved pedigree and 2 copies pertaining to the sperm, ova and embryos to be imported and drawn up by Breeders' Associations / Cooperatives shall be submitted. This document shall cover information on dam & sire and yield. Pedigree issuance date shall be maximum 6 months before the application date and abbreviations used in the pedigree shall be in compliance with the international norms.

9) The texts in all documents drawn up by non-Turkish entities shall be submitted after they are

translated into Turkish by a **certified translation agency/translator**.

10) The name of the bull, its eartag number, breed and sex shall be indicated in the document regarding the DNA testing submitted to the Directorate General of Livestock; in addition, it shall cover the information such as the names, eartag numbers and breeds of dam & sire. Information concerning the breeds of dam & sire shall not be required in the DNA documents if the information in question is covered in the pedigree. All costs pertaining to examinations for DNA testing shall be borne by the respective company. It shall be sufficient to include a copy of the document regarding the DNA testing in the file. The original copy shall be submitted to the authorized laboratory during the import process.

11) The importer companies shall make a distributorship agreement with the foreign company for the products they sell in the national market; they shall renew the agreement before the expiration date and shall submit the letter of agreement to the Ministry. The distributorship agreement shall cover the information such as the name of the company, duration of the agreement (if any), the name of the animals in the scope of this agreement and the identification number of those animals.

12) The import application of the entities that do not comply with the abovementioned issues shall not be accepted.

13) The Proforma Invoice and the Pedigree **submitted to the Ministry** shall maintain their validity until the Control Certificate is completed.

14) The importer companies shall make the sale of the accepted sperm along with the analysis report.

15) It shall be compulsory for importer companies to submit the document indicating that the sperm is usable to the distributor and implementing entities during the selling process. The document shall be obtained after the analysis.

16) The importer companies shall be responsible for notifying all the sales they conducted or those they conducted via distributors until they reach the end user within a year in the form of quarterly reports.

17) In order to conduct the sale of the frozen sperm they imported, the importer companies shall have recourse to the Directorate General of Livestock along with the analysis results indicating that they are acceptable, letter of conformity written to the Customs, bill of entry and with a copy of the control certificate. The distribution, sale and use of the sperm shall not be allowed until the Ministry publishes the name of the bull in its website.

18) The documents pertaining to the country, to which the imports will be made, shall be drawn up in English and in the country's national language if its official language is not English, and shall be submitted to the Directorate General of Livestock along with their translations made by certified translators.

19) Application files and their attachments submitted by importer companies for the purpose of import shall not be returned to the owners.

20) The original copy of the receipt or the copy of the bank wire transfer slip certified by the Central

Working Capital Accountancy as a proof that the application fee for import permission is deposited into the account of Central Working Capital Enterprise shall be submitted.

21) The documents related to import shall be put into a file or folder.

22) Additional information and documents required by the Ministry shall be provided by the companies.

## **TECHNICAL CRITERIA**

### **1- CATTLE SPERM IMPORTS**

#### **A) IMPORTS OF UNSEXED CATTLE SPERM**

1) The copy and the translated copy of the document which is drawn up and approved by the Ministry of Agriculture, Producing Laboratory and Breeders' Associations/ Cooperatives of the exporter country; which complies with the ICAR records and indicates that the milk yield average of the national population for 305 days shall be minimum 8.500 kg in black and white Holstein and 8.000 kg in red Holstein breed, 7.000 kg in Brown-Swiss; 6.000 kg in Simmental, Montbeliarde (European Red and Red Gene Carrier Breeds) and Jersey.

2) The document indicating the INTERBULL registration number of the bulls whose sperm will be imported (for dairy breeds and breeds with dual purpose-milk & meat),

3) In the pedigree of the bull whose sperm will be imported, the following information shall be sought;

- a. Breeding value (on the basis of milk) of the bulls whose sperm was imported shall be minimum +1000 in Holstein breed (black& white and red Holstein) and + 500 in Brown-Swiss, Montbeliarde, Simmental and Jersey breeds.
- b. In these breeds, the precision for breeding value shall be minimum 80%.
- c. In these breeds, breeding value on the basis of fat and protein shall be minimum – 0.5.
- d. The pedigree issuance date shall be maximum 6 months before the application date.
- e. Feet - leg and udder index value shall be positive in Holstein breed. The application shall be made along with the original document covering such information approved by the entity that issued the pedigree and its translated copy by a certified translation agency/translator if these indexes about physical traits are not included in the pedigree. Information relating to milk shall be definitely included in the pedigree and those values shall be marked in pedigree copies.
- f. TL/BLF and TV/CVF symbols indicating that the bulls of Holstein breed are free from BLAD and CVM, and other symbols indicating that they are not genetic carriers of Brachyspina disease (TY/BYF), Recessive Gene Carrier (RDC), Black/Red Gene Carrier (BRC), Variant Red Gene Carrier (VRC), Black Gene Carrier (BKC), Haplotype (HH1, HH2, HH3 for Holstein; BH1 for Brown Swiss and JH1 for Jersey), FH2 for Simmental and similar diseases and genetic defects shall be included in the pedigree. Document approved by competent authority shall be submitted if the symbols indicating that they are not genetic carriers of such diseases and genetic defects are not included in the pedigree. Red Gene Carrier status shall not be required for red Holstein breed.

- g. The document which is approved by the exporter country (the Ministry of Agriculture, Producing Laboratory and Breeders' Associations/ Cooperatives and the laboratory which conducted the analysis), and states that the bulls of Angus breed are free from Arthrogryposis Multiplex (AMF), Neuropathic Hydrocephalus (NHF) and Contractural Arachnodactyly (CAF) diseases shall be submitted.
- h. The original pedigree and 2 copies pertaining to the progeny-proven bulls shall be included in the sperm imports of beef breeds (in terms of daily live weight gain, calving ease and similar data).
- i. The original pedigree and 2 copies pertaining to the progeny-proven bull shall be included in the pedigrees of dual-purpose breeds if they are assessed in terms of beef production (in terms of daily live weight gain, calving ease, etc.).

4) All the values stated above shall be calculated according to the bull's own breed.

5) Daughter proofs of the bull to be imported for 305 days shall cover the 1<sup>st</sup> lactation yields, and all lactation yields shall be minimum 8.500 kg/305 days in black & white Holstein and 8.000 kg/305 days in Red Holstein breed, and they shall be drawn up in such a way to indicate the 1<sup>st</sup> lactation yields and yields of other lactations (if any) separately. This document shall be approved by entities authorized to issue this document.

6) The documents submitted to the Ministry shall be approved by authorized institutions (the Ministry of Agriculture, Producing Laboratory and Breeders' Associations/ Cooperatives and the testing laboratory which conducted the analysis in the exporter country).

7) Evaluation method and reference values are included in the report samples in the examination of sperms to be conducted for quality control.

## **B) IMPORTS OF SEXED FEMALE SPERM**

1) The copy and the translated copy of the document which is drawn up and approved by the Ministry of Agriculture, Producing Laboratory and Breeders' Associations/ Cooperatives of the exporter country; which complies with the ICAR records and indicates that the milk yield average of the national population for 305 days shall be minimum 8.500 kg in black & white Holstein and 8.000 kg in Red Holstein breed, 7.000 kg in Brown-Swiss; 6.000 kg in Simmental, Montbeliarde (European Red and Red Gene Carrier Breeds) and Jersey, shall be submitted.

2) In the pedigree of the bull whose sperm will be imported, the following information shall be sought;

- a. Breeding value (on the basis of milk) of the bulls whose sperm was imported shall be minimum +1300 in Holstein breed (black & white and Red Holstein) and + 1000 in Brown-Swiss, Montbeliarde, Simmental and Jersey breeds.
- b. In these breeds, the precision for breeding value shall be minimum 80%.
- c. In these breeds, breeding value on the basis of fat and protein shall be minimum – 0.5.
- d. Feet - leg and udder index values shall be positive in Holstein breed. The application shall be made along with the original document covering such information approved by the entity that issued the pedigree and its translated copy by a certified translation agency/translator if these

indexes about physical traits are not included in the pedigree. Information relating to milk shall be definitely included in the pedigree and those values shall be marked in pedigree copies. Production data for the bull to be imported shall cover the 1<sup>st</sup> lactation yields in the form of minimum 8.500 kg /305 days in Holstein, and 8.000 kg /305 days in Red Holstein breed, and they shall be drawn up in such a way to indicate the 1<sup>st</sup> lactation yields and yields of other lactations (if any) separately. This document shall be approved by entities authorized to issue this document.

- e. TL/BLF and TV/CVF symbols indicating that the bulls of Holstein breed are free from BLAD and CVM, and other symbols indicating that they are not genetic carriers of Brachyspina disease (TY/BYF), Recessive Gene Carrier (RDC), Black/Red Gene Carrier (BRC), Variant Red Gene Carrier (VRC), Black Gene Carrier (BKC), Haplotype (HH1, HH2, HH3 for Holstein; BH1 for Brown Swiss and JH1 for Jersey), FH2 for Simmental and similar diseases and genetic defects shall be included in the pedigree. Document approved by competent authority shall be submitted if the symbols indicating that they are not genetic carriers of such diseases and genetic defects are not included in the pedigree. Red Gene Carrier status shall not be required for red Holstein breed.
- f. Sexed sperm imports shall not be allowed for beef breeds.

3) The documents submitted to the Ministry shall be approved by authorized institutions (the Ministry of Agriculture, Producing Laboratory or Breeders' Associations/ Cooperatives or the testing laboratory which conducted the analysis in the exporter country).

4) Evaluation method and reference values are included in the report samples in the examination of sperms to be conducted for quality control.

### **C) CATTLE SPERM IMPORTS ACCORDING TO GENOMIC BREEDING VALUE**

The following criteria shall be applied in the sperm imports of bulls whose breeding values were estimated on the basis of genomic information since the information about their daughters cannot be used in the evaluation yet:

1) In the birth year of the bull, the lactation milk yield average of the national population for 305 days shall be minimum 8.500 kg in black & white Holstein and 8.000 kg in Red Holstein breed, 7.000 kg in Brown-Swiss; 6.000 kg in Simmental, Montbeliarde (European Red and Red Gene Carrier Breeds) and Jersey according to the ICAR database.

2) In the pedigree drawn up for bulls whose **daughter proofs are not known**, milk yield of the mother of the bull in the first lactation shall be minimum 15% of the country average in the year that yield is obtained. The fact that the mother of the bull meets this requirement shall be indicated using the dam yield in the pedigree and the country average in the ICAR database.

3) The pedigree pertaining to the father of the bull whose sperm will be imported shall be thorough. Particularly, the number of daughters and the number holdings these daughters are kept shall be indicated in the pedigree as these numbers are taken as the basis for breeding value estimation. An additional document indicating such information shall be obtained from the Ministry of Agriculture or Breeders' Associations/ Cooperatives of the exporter country if national pedigree system does not provide such information.

4) Reliability level ( $R^2$ ) of the breeding value estimation for milk yield shall be minimum 0.64. Reliability level ( $R^2$ ) of other (Feet-Legs, Udder Features and Calving Ease) traits shall be minimum 0.64.

5) The document indicating the INTERBULL registration number of the bulls whose sperm will be imported (for dairy breeds and breeds with dual purpose) shall be provided.

6) TL/BLF and TV/CVF symbols indicating that the bulls of Holstein breed are free from BLAD and CVM, and other symbols indicating that they are not genetic carriers of Brachyspina disease (TY/BYF), Recessive Gene Carrier (RDC), Black/Red Gene Carrier (BRC), Variant Red Gene Carrier (VRC), Black Gene Carrier (BKC), Haplotype (HH1, HH2, HH3 for Holstein; BH1 for Brown Swiss, FH2 for Simmental and JH1 for Jersey), and similar diseases and genetic defects shall be included in the pedigree. Document approved by competent authority (the Ministry of Agriculture, Producing Laboratory or Breeders' Associations/ Cooperatives or the testing laboratory which conducted the analysis in the exporter country) shall be submitted if the symbols indicating that they are not genetic carriers of such diseases and genetic defects are not included in the pedigree. Red Gene Carrier status shall not be required for red Holstein breed.

7) The pedigree issuance date shall be maximum 6 months before the application date.

8) Evaluation method and reference values are included in the report samples in the examination of sperms to be conducted for quality control.

#### **D) SEXED FEMALE SPERM IMPORTS ACCORDING TO GENOMIC BREEDING VALUE**

The following criteria shall be applied in the sperm imports of bulls whose breeding values were estimated on the basis of genomic information since the information about their daughters cannot be used in the evaluation yet:

1) In the birth year of the bull, the lactation milk yield average of the national population for 305 days shall be minimum 8.500 kg in black & white Holstein and 8.000 kg in Red Holstein breed, 7.000 kg in Brown-Swiss; 6.000 kg in Simmental, Montbeliarde (European Red and Red Gene Carrier Breeds) and Jersey according to the ICAR database.

2) In the pedigree drawn up for bulls whose **daughter proofs are not known**, milk yield of the mother of the bull in the first lactation shall be minimum 15% of the country average in the year that yield is obtained. The fact that the mother of the bull meets this requirement shall be indicated using the dam yield in the pedigree and the country average in the ICAR database.

3) The pedigree pertaining to the father of the bull whose sperm will be imported shall be thorough. Particularly, the number of daughters and the number holdings these daughters are kept shall be indicated in the pedigree as these numbers are taken as the basis for breeding value estimation. An additional document indicating such information shall be obtained from the Ministry of Agriculture or Breeders' Associations/ Cooperatives of the exporter country if national pedigree system does not provide such information.

4) Reliability level ( $R^2$ ) of the breeding value estimation for milk yield shall be minimum 0.64. Reliability level ( $R^2$ ) of other (Feet-Legs, Udder Features and Calving Ease) traits shall be minimum 0.64.

5) The document indicating the INTERBULL registration number of the bulls whose sperm will be imported (for dairy breeds and breeds with dual purpose) shall be provided.

6) TL/BLF and TV/CVF symbols indicating that the bulls of Holstein breed are free from BLAD and CVM, and other symbols indicating that they are not genetic carriers of Brachyspina disease (TY/BYF), Recessive Gene Carrier (RDC), Black/Red Gene Carrier (BRC), Variant Red Gene Carrier (VRC), Black Gene Carrier (BKC), Haplotype (HH1, HH2, HH3 for Holstein; BH1 for Brown Swiss, FH2 for Simmental and JH1 for Jersey), and similar diseases and genetic defects shall be included in the pedigree. Document approved by competent authority (the Ministry of Agriculture, Producing Laboratory or Breeders' Associations/ Cooperatives or the testing laboratory which conducted the analysis in the exporter country) shall be submitted if the symbols indicating that they are not genetic carriers of such diseases and genetic defects are not included in the pedigree. Red Gene Carrier status shall not be required for red Holstein breed.

7) The pedigree issuance date shall be maximum 6 months before the application date.

8) Evaluation method and reference values are included in the report samples in the examination of sperms to be conducted for quality control.

#### **E) IMPORTS OF SEXED MALE SPERM**

In the pedigree of the bull whose sperm will be imported, the following information shall be sought:

1) The original pedigree and 2 copies pertaining to the progeny-proven bulls shall be included in the sperm imports of beef breeds (in terms of daily live weight gain, calving ease and similar data).

2) The document which is obtained from the authorized institution and states that the bulls of Angus breed are free from Arthrogryposis Multiplex (AMF), Neuropathic Hydrocephalus (NHF) and Contractural Arachnodactyly (CAF) diseases shall be submitted.

3) The original pedigree and 2 copies pertaining to the progeny-proven bulls shall be included in the pedigree in the case that the application is made along with the pedigree of dual-purpose breeds for beef production (in terms of daily live weight gain, calving ease and similar data).

4) The symbols indicating that the bulls of Brown Swiss breed are not genetic carriers of Haplotype-1 (BH1) and similar diseases & genetic defects shall be included in the pedigree. Document obtained by competent authority shall be submitted if the symbols indicating that they are not genetic carriers of such diseases and genetic defects are not included in the pedigree.

5) The documents submitted to the Ministry shall be approved by authorized institutions (the Ministry of Agriculture, Producing Laboratory or Breeders' Associations/ Cooperatives or the testing laboratory which conducted the analysis in the exporter country).

6) Evaluation method and reference values are included in the report samples in the examination of sperms to be conducted for quality control.

#### **F) SPERM IMPORTS OF BULLS TAKEN PLACE IN THE TOP LIST**

**The requirement stipulating that the milk yield average of national population for 305 days in compliance with ICAR records shall be minimum 8.500 kg in Holstein breed, 8.000 kg in Red Holstein, and 6.000 kg and over in Montbeliarde and Simmental shall be applied to the import application for sexed/unsexed sperms pertaining to the progeny-tested bulls of Holstein, Montbeliarde and Simmental breeds, which have entered the TOP LIST on the basis of the milk yield in their respective countries; TOP 200 in the U.S.A. and Canada, TOP 100 in England and Germany, and TOP 10 in other countries in the last decade.**

1) TL/BLF and TV/CVF symbols indicating that the bulls of Holstein breed are free from BLAD & CVM and, symbols indicating that they are not genetic carriers of genetic defects determined by the Ministry, carriers of Brachyspina disease (TY/BYF), Recessive Gene Carrier (RDC), Black/Red Gene Carrier (BRC), Variant Red Gene Carrier (VRC), Black Gene Carrier (BKC), Haplotype (HH1, HH2, HH3 for Holstein; BH1 for Brown Swiss, FH2 for Simmental and JH1 for Jersey), and similar diseases and genetic defects shall be included in the pedigree. Document approved by competent authority (the Ministry of Agriculture, Producing Laboratory or Breeders' Associations/ Cooperatives or the testing laboratory which conducted the analysis in the exporter country) shall be submitted if the symbols indicating that they are not genetic carriers of such diseases and genetic defects are not included in the pedigree. Red Gene Carrier status shall not be required for red Holstein breed.

2) Technical criteria shall not be required for these bulls in terms of yield traits.

3) Approved document stating that the bull has been included in the list shall be drawn up by the national breeding association. The list covering all the bulls of that year shall be submitted.

4) Pedigree certificate shall be valid for a period of 6 months, and it shall be sufficient to apply along with the control certificate, proforma invoice, proforma health certificate, and the distributorship certificate.

#### **G) SPERM IMPORTS OF BULLS SUBJECTED TO GENOMIC EVALUATION AND TAKEN PLACE IN THE TOP LIST**

**The requirement stipulating that the milk yield average of national population for 305 days in compliance with ICAR records shall be minimum 8.500 kg in Holstein breed, 8.000 kg in Red Holstein, and 6.000 kg and over in Montbeliarde and Simmental shall be applied to the import application for sexed/unsexed sperms pertaining to the progeny-tested bulls of Holstein, Montbeliarde and Simmental breeds, which have entered the TOP LIST on the basis of the milk yield in their respective countries; TOP 200 in the U.S.A. and Canada, TOP 100 in England and Germany, and TOP 10 in other countries in the last decade.**

1) TL/BLF and TV/CVF symbols indicating that the bulls of Holstein breed are free from BLAD & CVM and, symbols indicating that they are not genetic carriers of genetic defects determined by the

Ministry, carriers of Brachyspina disease (TY/BYF), Recessive Gene Carrier (RDC), Black/Red Gene Carrier (BRC), Variant Red Gene Carrier (VRC), Black Gene Carrier (BKC), Haplotype (HH1, HH2, HH3 for Holstein), FH2 for Simmental and similar diseases and genetic defects shall be included in the pedigree. Document approved by competent authority (the Ministry of Agriculture, Producing Laboratory or Breeders' Associations/ Cooperatives or the testing laboratory which conducted the analysis in the exporter country) shall be submitted if the symbols indicating that they are not genetic carriers of such diseases and genetic defects are not included in the pedigree. Red Gene Carrier status shall not be required for red Holstein breed.

2) Technical criteria shall not be required for these bulls in terms of yield traits.

3) Approved document stating that the bull has been included in the list shall be drawn up by the national breeding association. The list covering all the bulls of that year shall be submitted.

4) Pedigree certificate shall be valid for a period of 6 months, and it shall be sufficient to apply along with the control certificate, proforma invoice, proforma health certificate, and the distributorship certificate.

## **2-IMPORTS OF BUFFALO SPERM**

1) The document which is drawn up and approved by the Ministry of Agriculture, Producing Laboratory and Breeders' Associations or Cooperatives of the exporter country; which complies with the ICAR records and indicates that the milk yield average of the national population for 270 days shall be minimum 2000 kg.

2) In the pedigree of the buffalos whose sperm will be imported, the following information shall be sought;

a) Minimum PKM (Mozarella Production) shall be 100 or minimum milk value (milk/latte) shall be +200 olacaktr. It shall be sufficient to provide one of these values.

b) The values pertaining to buffalo bulls must be covered in the pedigree, and if these values are not covered in the pedigree, the application shall be made with the original document approved by the entity that issued or authorized to issue the pedigree (drawn up and approved by the Producing Laboratory and Breeders' Associations or Cooperatives)

c) In our country, the import of sperms pertaining to buffalo bulls, which are considered as river type dairy breed, is allowed.

3) Evaluation method and reference values are included in the report samples in the examination of sperms to be conducted for quality control.

## **3-IMPORTS OF RAM AND MALE GOAT SPERM**

1) 1 signed and stamped pedigree pertaining to the progeny-proven rams and male goats shall be provided.

2) Evaluation method and reference values are included in the report samples in the examination of sperms to be conducted for quality control.

#### **4- IMPORTS OF PUREBRED ARABIAN HORSE SPERM**

1) Dam and sire must be confirmed through blood type and DNA analysis of the stallion to be imported or its parents published in the International Stud Book acknowledged by WAHO, and minimum four generations must have been specified in the pedigree as of the year when the import application was made.

2) The DNA profile of the stallion to be imported shall be submitted to the Ministry of Food, Agriculture and Livestock before the importation. After the import, confirmation shall be provided through the DNA test to be performed in Etlik Central Veterinary Control and Research Institute, which is affiliated to the Ministry of Food, Agriculture and Livestock (MoFAL).

3) Information about the stallion shall be stated on straws (Country code, where the stallion is registered and its registration number in that country, its name, its breed, code of the premises where it was produced, production date, etc.).

4) The stallion whose sperm will be imported shall not have any phenotypic and genotypic defects.

5) It shall be officially certified that the sperm to be imported were used in the artificial insemination applications in the exporter country.

6) The original document and its copy stating that the center, where the stallion sperm was produced, is approved by the official authority of the exporter country.

7) The stallion whose sperm will be imported shall be a proven stallion (It shall be certified that it or minimum its two progenies ranked among the top three in the internationally recognized horse races).

8) 1 original pedigree and its 2 copies pertaining to the stallion whose sperm will be imported shall be submitted by the official competent authority.

9) Evaluation method and reference values are included in the report samples in the examination of sperms to be conducted for quality control.

#### **5-SPERM IMPORTS OF HORSES FOR SPORTIVE ACTIVITIES**

The technical criteria for KWPN, Hannoverian, Oldenburg, Holsteiner, Westphalian, Selle Francais, Irish Sport Horse, Swedish Warmblood, Belgian Warmblood, Dutch Warmblood (English Thoroughbred and Arabian Horse excluded) shall be as follows:

1) It shall be accepted if the stallion, whose sperm will be imported, competed in Dressage, Eventing, Jumping lists published in the website of the World Breeding Federation for Sport Horses (WBFSH-

[www.wbfsh.org/Rankings](http://www.wbfsh.org/Rankings) ) according to success point.

- 2) The document covering the DNA profiles of the stallion, whose sperm will be imported, and its parents shall be submitted to the MoFAL before the import.
- 3) Information about the stallion such as the country code, where the stallion is registered, the UELN No (Universal Equine Life Number) or microchip number, its name, its breed, code of the premises where it was produced, and production date shall be stated on straws.
- 4) The stallion whose sperm will be imported shall not have any phenotypic and genotypic defects.
- 5) 1 certified copy of the passport in which minimum four generations of the stallion is indicated and the pedigree approved by the country's official competent authority shall be submitted.
- 6) Evaluation method and reference values are included in the report samples in the examination of sperms to be conducted for quality control. This report shall be submitted to the MoFAL after it is approved by reference laboratories or by the universities in the exporter country.

## **6-IMPORTS OF CATTLE EMBRYOS**

- 1) Information such as from which country the embryo will be imported, its breed, its number, in which holdings it will be used, and which entity will conduct the transfer, shall be stated in the application document. If the sale and application will be carried out later, the MoFAL shall be informed of this issue subsequently.
- 2) Concerning the embryos to be imported;
  - a) The copy and the translated copy of the document which is drawn up and approved by the Ministry of Agriculture, Producing Laboratory and Breeders' Associations/ Cooperatives of the exporter country; which complies with the ICAR records and indicates that the milk yield average of the national population for 305 days shall be minimum 8.500 kg in Holstein breed, 7.000 kg in Brown-Swiss; 6.000 kg in Simmental, Montbeliarde (European Red and Red Gene Carrier Breeds) and Jersey.
  - b) 1<sup>st</sup> lactation milk yield of the imported embryo's mother shall be minimum 10.000 kg in Holstein breed, 8.000 kg in Brown-Swiss, 7.000 kg in Simental & Montbeliarde and 6.000 kg in Jersey breeds. Bulls which are used in embryo production shall be progeny and milk yield average of its daughters shall be 10.000 kg in Holstein breed, 8.000 kg in Brown-Swiss, 7.000 kg in Simental & Montbeliarde (European Red and Red Gene Carrier Breeds) and 6.000 kg in Jersey breeds. The document drawn up by the authorized institutions of the exporter country shall be submitted.
- 3) 1 original and 2 copies (for each one) of the donor bull and donor cow pedigrees on which the following information are indicated and marked shall be submitted.
  - a) Breeding value (on the basis of milk) of the father of the imported embryo shall be minimum +1000 in Holstein breed, + 500 in Brown-Swiss, Montbeliarde, Simmental and Jersey breeds. In these breeds, the precision for breeding value shall be minimum 80%, breeding value on the basis of fat and protein

shall be minimum – 0.5.

b) Feet - leg and udder index value shall be positive. The application shall be made with the original document covering such information approved by the entity that issued the pedigree and its translated copy by a certified translation agency if these indexes about physical traits are not included in the pedigree.

c) TL/BLF and TV/CVF symbols indicating that the bulls of Holstein breed are free from BLAD and CVM, and other symbols indicating that they are not genetic carriers of Brachyspina disease (TY/BYF), Recessive Gene Carrier (RDC), Black/Red Gene Carrier (BRC), Variant Red Gene Carrier (VRC), Black Gene Carrier (BKC), Haplotype (HH1, HH2, HH3 for Holstein; BH1 for Brown Swiss, FH2 for Simmental and JH1 for Jersey), and similar diseases and genetic defects shall be included in the pedigree. Document approved by competent authority (the Ministry of Agriculture, Producing Laboratory and Breeders' Associations/ Cooperatives and the laboratory which conducted the analysis in the exporter country) shall be submitted if the symbols indicating that they are not genetic carriers of such diseases and genetic defects are not included in the pedigree.

d) The document which is approved by the exporter country and states that the bulls of Angus breed are free from Arthrogyrosis Multiplex (AMF), Neuropathic Hydrocephalus (NHF) and Contractural Arachnodactyly (CAF) diseases shall be submitted.

4) The document indicating that the embryos to be imported are produced in compliance with the embryo production and freezing criteria specified by International Embryo Transfer Society's (IETS) shall be submitted.

5) Embryo production through the use of genomic sperm (sexed or unsexed) complying with the technical criteria (those included in the national top 100 list within the last decade, and evaluated in terms of milk traits, feet-leg, udder features, calving ease) determined by MoFAL shall be acceptable on condition that the yield traits of the animal the embryo is taken are the same.

## **7-IMPORTS OF SHEEP & GOAT EMBRYOS**

1) 1 signed and stamped pedigree of the progeny-proven ram and male goat,

2) 1 signed and stamped pedigree of the progeny-proven sheep and goat,

3) The document indicating that the embryos to be imported are produced in compliance with the embryo production and freezing criteria specified by International Embryo Transfer Society (IETS) shall be submitted.

4) Quality of the frozen embryos shall be "Excellent" and "Good", and the fact that they do not have any damage stemming from zoonosis shall be certified.

