



POLICY

HORSES WITH DISORDERS OF SEXUAL DEVELOPMENT

1. Definition.

For the purposes of this Policy, 'Disorders of Sexual Development' ("DSD") is the term used to describe the situation where a horse has a congenital condition resulting in the atypical development of chromosomal, gonadal or anatomical sex. This can manifest in a variety of ways, including:

- 1.1. the presence of ambiguous external genitalia;
- 1.2. abnormal size or stature for the horse's apparent phenotype;
- 1.3. a phenotypical female behaving like a male or vice-versa;
- 1.4. contradiction between the animal's phenotype and samples collected from it such as a phenotypical female that has elevated levels of testosterone;
- 1.5. a female that fails to cycle or show oestrus;
- 1.6. infertility.

2. Determination.

To determine whether a horse has a DSD, one or more of the following may be undertaken by NZTR:

- 2.1. a review of the horse's complete medical history;
- 2.2. a behaviour assessment;
- 2.3. a general physical examination including of the external genitalia;
- 2.4. a transrectal ultrasound exam;
- 2.5. an endocrine analysis, including for anti-Müllerian hormone (AMH), and blood and urine samples for testosterone concentrations; and
- 2.6. a chromosomal analysis (karyotype), and genetic (PCR) analyses for the SRY and Amelogenin (AMEL) genes, or other genomic analyses if available and as required.

3. Guidelines

The following is a guide to identifying and processing any case where a DSD may be suspected.

All cases will be promptly notified to the International Federation of Horseracing Authorities (IFHA) for information purposes, so that the industry as a whole can understand the possible implications of such cases and have a better understanding of them.

Once the examinations suggested in Section 2 have concluded, the following further procedures will be considered to assist in determining if the horse has a DSD:

- Vaginal speculum examination (if indicated);
- Exploratory laparoscopy (if indicated); and
- Histopathology of excised gonadal tissue (if indicated).

4. Presence of DSD

When NZTR becomes aware that a horse within its stud book may have a DSD, it will determine what tests have been conducted and/or are required to verify the nature of the DSD and, if it is satisfied the horse has a DSD, it may:

- 4.1. advise the Stud Book Authority in its country of birth of the identity of the horse and the investigation process and results;
- 4.2. if the horse is imported, suitably amend the horse's passport to indicate the difference;
- 4.3. amend the horse's records in the stud book with the new gender category;
- 4.4. determine whether the horse's previous race record (if applicable) should stand or be amended;
- 4.5. impose any restrictions it considers appropriate on the horse's eligibility to participate in races restricted to fillies and mares only, or in other specified race types; and
- 4.6. impose any restrictions it considers appropriate on the horse's eligibility to receive a weight allowance given to fillies and mares.

Gender Categories:

In order to assist in categorizing DSDs, the following categories may be used by NZTR to ensure consistency across racing jurisdictions:

- Male (DSD) – for example, an animal showing ambiguous external genitalia and which demonstrates elevated concentrations of testosterone to which the animal has been exposed during its growth and development;
- Female (DSD) – for example, an animal that fails to show oestrus or is infertile or with apparent female external genitalia but with abnormal internal reproductive organs, but demonstrating testosterone concentrations consistent with that for a female;
- Gelding (DSD) – as for male (DSD), but with the testosterone-producing gonads surgically removed, and post-surgical testosterone concentrations in blood and urine consistent with that for a gelding.

5. Restrictions that may be imposed:

The following restrictions may be imposed by NZTR in such cases in its sole discretion:

- May prohibit a horse which is categorized as a female from participating in races restricted to only female horses due to the effects of increased testosterone levels in the horse in comparison to thoroughbred female horses without DSD;
- May prohibit the horse from racing;

- May prohibit the horse from breeding;
- May refuse to register, or may cancel, the registration of the horse.

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