

# BLOOD FARMS

## Production of PMSG in South America

March 2021 - March 2022

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**A follow-up investigation carried out by**



**Supported by international Animal Welfare Organisations**

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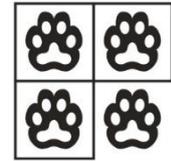
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## I. Introduction

In September 2015, AWF|TSB published images of blood being forcefully collected from pregnant mares for the very first time. This caused a public uproar in both Germany and Switzerland. The images showed panicked mares being moved into restraint boxes with brute force. The general public had never previously heard about this cruel practice, and even most veterinarians did not know where the PMSG hormone comes from or how it is produced. The authorities did not have much information available, and until the present day, there are no exact figures on the import and use of PMSG in the European Union and Member States, only rough estimations.

Pregnant mare serum gonadotropin (PMSG), also called equine chorionic gonadotropin (eCG), is a hormone found in the blood of mares during early pregnancy. Their blood is processed in a laboratory to produce a white powder, the pure PMSG hormone. This hormone is used in industrial animal breeding to increase the fertility and reproduction performance of farmed animals - in particular pigs, but also cattle, sheep, and goats. The use of PMSG in intensive pig farming is very common all over the world. It is used for the induction and synchronisation of oestrous in sows in order to facilitate work processes, so that all sows of one group can be artificially inseminated at the same time and give birth on the same day. PMSG is also used to shorten the period between farrowing and therefore reduce “unproductive days”. Furthermore, PMSG may also be used for superovulation (larger litter sizes) and the induction of puberty. The main purpose of PMSG is to keep production costs low and to boost productivity and efficiency in industrial farming, in particular in piglet production.

Official figures from Germany confirm that the hormone is used systematically in piglet production. In 2019, there were 1.8 million breeding sows in Germany<sup>1</sup>. About 6.4 million doses of PMSG were administered to sows over a timespan of three years (between 2016 and 2019)<sup>2</sup>, which makes approximately 2.1 million doses per year. This high number shows that PMSG is not only used to treat individual animals in case of fertility problems but is used systematically in whole groups. There is no medical indication for the frequent application of PMSG in farmed animals. The practice only serves economic interests by stimulating and accelerating physiological processes in animals, which is not a viable reason for the use of drugs. Furthermore, when PMSG is used to treat fertility problems, they are often problems that have been caused by the system, namely by poor husbandry conditions in intensive farming. Hence, PMSG is one of the driving forces behind industrial farming.

Our follow-up investigations in Argentina and Uruguay showed that the abuse of mares for PMSG production has continued since the first publication in 2015. We found large numbers of injured, sick, and emaciated mares, all left without veterinary treatment, as well as numerous horse carcasses, skulls and bones. Based on our comprehensive investigations, we assume that as many as 30 % of the mares drop out of the production every year: They either die in the pastures due to the consequences of high blood loss, of late abortion or of untreated diseases or wounds, or they are sent to slaughter when they no longer become pregnant. A statement of two Uruguayan blood farmers quoted in a scientific report suggests that the mares are deliberately kept in a poor body condition so that they produce more PMSG: *“Where considerable differences in feed availability and intake occur in the extensively managed groups of mares between years, overall eCG production is invariably higher in leaner years when the mares are in light-to-poor condition in early gestation”* (G. Maruri and M. Bocking, personal communication).<sup>3</sup>

<sup>1</sup> Statistisches Bundesamt (Destatis): [www.schweine.net/markt/strukturdaten.html](http://www.schweine.net/markt/strukturdaten.html)

<sup>2</sup> [kleineanfragen.de/bundestag/19/11226-pregnant-mare-serum-gonadotropin-produktion-zulassung-und-einsatz.txt](http://kleineanfragen.de/bundestag/19/11226-pregnant-mare-serum-gonadotropin-produktion-zulassung-und-einsatz.txt)

<sup>3</sup> S. WILSHER, Factors influencing equine chorionic gonadotrophin production in the mare, EQUINE VETERINARY JOURNAL, 2011

Video footage we obtained in 2018 at the Uruguayan blood farm Biomega showed extremely violent handling and systematic abuse of mares during blood collection. The employees pulled their tails and ears, hit them over their heads and backs with ropes, wooden sticks, fists and flags. They also stabbed wooden sticks into their genitals to move the frightened mares into the restraint boxes. Severely injured or emaciated mares were not excluded from blood collection. Footage recorded at the Argentinian blood farm Syntex the same year showed very similar abuse. Although Syntex had dismissed the employees shown in our video from 2015 and was put under monitoring by the Argentinian veterinary authority SENASA, the cruel handling of the mares continued in 2018. They were beaten with different tools, including metal rods with hooks, also on their heads. Mares walking on three legs went through the blood extraction process. Instead of investing money into animal welfare, Syntex had heavily invested into increased security measures and – what is telling – into visual protection.

In Uruguay and Argentina, more than 10.000 mares are brutally abused to produce PMSG. The untamed, semi-wild mares are subjected to violence, they are at risk of injury and suffer from repeated traumatisation. Up to 10 litres of blood are taken from pregnant mares once or twice a week - about 25 % to 30 % of the mares' total blood volume - over a period of eleven to twelve weeks. Such a high blood loss can lead to hypovolemic shock, anaemia, emaciation, weakened immune system or even death. The volume and frequency of blood taken is much greater than international standards recommend even for non-pregnant horses, where the recommendations vary between 10 % to 15 % of the total blood volume and only once per month<sup>4</sup>. The foals are systematically aborted because PMSG can only be found in the mares' blood during early pregnancy, from day 40 until day 130 or 140. The foals are an unwanted by-product and there is no economic interest in maintaining the pregnancy to term. Aborting the foals makes it possible to impregnate the mares twice a year instead of only once, making the business more profitable. The abortions are done around day 110 of gestation, which holds a high risk of complications for the mares, no matter if the abortions are done manually (Uruguay) or medicinally (Argentina).

As a reaction to the criticism from Europe, in June 2017 the Uruguayan ministry of agriculture (MGAP) introduced a new legislation on blood collection from horses in an attempt to regulate the blood business and improve treatment of the mares involved. The accompanying manual of good animal welfare practices for blood production is an integral part of the legislation. However, the manual mainly sets out recommendations rather than binding requirements, and there are considerable loopholes. For example, a legal limit for the volume and frequency of blood extractions is still missing. Foals can still be aborted until day 105 of pregnancy. It is not defined how abortions have to be carried out, so they can still be done manually and without administration of painkillers. The frequency of health inspections of the mares is not regulated either. While the Uruguayan government does now collect a lot of data, it does not provide effective supervision of the activities carried out on blood farms. Argentina has not introduced, to this day, any legislative measures to protect the mares used for PMSG production, and the activity continues to be carried out in a legal vacuum. The veterinary authority SENASA allegedly carries out audits at Syntex blood farm, but as there are no binding rules, there is also no legal basis for sanctions.

After repeated media reports about severe mistreatment of blood mares, four out of five European pharmaceutical companies stopped the import of PMSG from South America in 2017/18, namely MSD Animal Health/Intervet, Ceva Santé Animale, IDT Biologika and Zoetis. The Spanish company Laboratorios Hipra remains silent to this day and it can be assumed that they still import PMSG from South America.

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<sup>4</sup> <https://www.mdpi.com/2076-2615/11/5/1466>

In 2018, the Argentinian company Syntex lost all their European clients who previously purchased the pure PMSG powder for further processing, so they decided in 2019 to export their final product to Europe<sup>5</sup>. For sale in Europe, the name of the product was changed from Novormon to Fixplan. Ireland was the first country in Europe to have granted marketing authorisation for Fixplan in March 2021. Following this, several other European countries granted marketing authorisation in the context of a “decentralised procedure”, including Germany and France. Authorisations in some Member States are still pending, such as Italy and Poland. Ireland is the so-called “Reference Member State” in the decentralised procedure, which means that Ireland plays a leading role. The Irish authorities evaluated the application dossier and wrote an assessment report. The other EU Member States, so-called “Concerned Member States” base their marketing authorisations on Ireland’s report. The recently updated public assessment report<sup>6</sup> mentions the following countries as “Concerned Member States”: Belgium, Germany, Spain, France, Hungary, Italy, Netherlands, Poland, Portugal and the United Kingdom. The report refers to the European Pharmacopoeia, stating that “*the active substance is equine serum gonadotrophin for veterinary use, an established substance described in the European Pharmacopoeia*”. It is worth mentioning here that the PMSG monograph was suspended from the European Pharmacopoeia in July 2022<sup>7</sup>. The origin of Fixplan is not traceable, since neither the country of production, Argentina, nor the manufacturer Syntex are mentioned in the public assessment report or in the product information<sup>8</sup>. The only company mentioned is the applicant resp. marketing authorisation holder, Syn Vet-Pharma Ireland Limited, based in Waterford. In 2020, Syntex announced they were starting a new company in Europe - which will be part of the Syntex Group - with headquarters in Ireland, from where agreements will be made with local distributors<sup>9</sup>. In Germany, the pharmaceutical company *Serumwerk Bernburg* started the distribution of Fixplan in summer 2022.

Since 2016, political debates have taken place in the European Union and in Member States. In April 2016, the German conference of ministers of agriculture decided that the production of PMSG should comply with EU or German animal welfare standards. The ministers further asked the federal government to examine the possibility of a ban on both the import and use of PMSG. The same year, the European Parliament decided to extend animal welfare standards of the EU to cover imports of veterinary products such as PMSG. As a consequence, the new EU regulation on veterinary medicinal products - Regulation (EU) 2019/6 - indicates that EU animal welfare standards should be included in the Good Manufacturing Practice (GMP) by 2025<sup>10</sup>. In 2019, the European Commission recognised it was concerned about the mistreatment of horses farmed to produce PMSG in third countries, but declined to impose an import ban on PMSG, as it believed that dialogue and cooperation were more adequate tools to improve the welfare conditions of the horses involved<sup>11</sup>. Since then, the European Commission has launched the *European Green Deal* and its new Food Policy *Farm to Fork*, which aim for a shift towards more plant-based diets, for reduction of greenhouse gas emissions and improvement of animal welfare. The systematic use of fertility hormones like PMSG to enhance productivity in industrial

<sup>5</sup> <http://motivar.com.ar/2019/04/syntex-podra-producir-y-comercializar-productos-en-la-ue/>

<sup>6</sup> [www.hpra.ie/img/uploaded/swedocuments/Public\\_AR\\_VPA23174-002-001\\_12052022114225.pdf](http://www.hpra.ie/img/uploaded/swedocuments/Public_AR_VPA23174-002-001_12052022114225.pdf)

<sup>7</sup> [www.edqm.eu/en/-/ph.-eur.-commission-suspends-the-monograph-on-gonadotrophin-equine-serum-for-veterinary-use](http://www.edqm.eu/en/-/ph.-eur.-commission-suspends-the-monograph-on-gonadotrophin-equine-serum-for-veterinary-use)

<sup>8</sup> [www.hpra.ie/homepage/veterinary/veterinary-medicines-information/find-a-medicine/item?pano=VPA23174/002/001&t=Fixplan%2000%20IU/ml%20lyophilisate%20and%20solvent%20for%20solution%20for%20injection](http://www.hpra.ie/homepage/veterinary/veterinary-medicines-information/find-a-medicine/item?pano=VPA23174/002/001&t=Fixplan%2000%20IU/ml%20lyophilisate%20and%20solvent%20for%20solution%20for%20injection)

<sup>9</sup> <https://motivar.com.ar/2020/12/ya-tenemos-los-primeros-productos-registrados-en-europa-2/>

<sup>10</sup> Recital 68 of Reg. 2019/6 provides that “*the good manufacturing practice for the purpose of this Regulation should take into account the **Union and international standards of animal welfare** when active substances are prepared from animals*” and Article 93 states that “*the Commission shall, by means of **implementing acts**, adopt measures on good manufacturing practices for veterinary medicinal products and active substances (...)*”.

<sup>11</sup> [https://www.europarl.europa.eu/doceo/document/E-9-2019-004569-ASW\\_EN.html](https://www.europarl.europa.eu/doceo/document/E-9-2019-004569-ASW_EN.html)

farming goes against the objectives laid down by such texts. In a resolution of 20th October 2021 on a *Farm to Fork Strategy*, the European Parliament called on the Commission and Member States to stop the import and domestic production of PMSG<sup>12</sup>. However, the Commission has not taken any action to this day.

In March and December 2021 as well as in March 2022, AWF|TSB investigation teams carried out new undercover observations at South American blood farms in order to document the situation and see if it had improved. We wanted to know whether the new Uruguayan animal welfare manual and the alleged supervision by competent authorities have had any impact in the field. The conditions of the investigations were difficult, as the blood farmers had invested a lot of money to stop the public gaining insight into their businesses. Nevertheless, video footage was successfully obtained at one Argentinian and one Uruguayan blood farm, and blood mares were found and filmed in vast and remote fields. The new footage shows that pregnant mares are still abused, left without adequate nutrition and care, and that abortions are still carried out systematically. It is evident that the blood farmers cannot be persuaded to invest money in animal welfare, on the contrary, they try to hide their lucrative business.

Data obtained from the Uruguayan customs shows just how profitable this business is. In 2021, the company Syntex Uruguay S.A. exported 770 grams of PMSG to the EU with a total value of 9 million US dollars. France is the destination for further distribution in the EU. 100 grams of PMSG are currently worth about 1.4 million US dollars. PMSG is one of the most expensive powders there is.

#### **Videos of the investigations:**

Film 2015: <https://youtu.be/8EwPv7fLUGg>

Film 2017: <https://youtu.be/WQLRaycU1oQ>

Film 2018: <https://youtu.be/Rc1rhfMVIO8>

Film 2019: <https://youtu.be/n2XoJizPTuc>

Film 2022: <https://youtu.be/3OX4qu1zJzw>

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<sup>12</sup> [https://www.europarl.europa.eu/doceo/document/TA-9-2021-0425\\_EN.html](https://www.europarl.europa.eu/doceo/document/TA-9-2021-0425_EN.html) (point 130)

## II. Syntex S.A.

### 1. Information on the company

<b>Company name:</b>	Syntex S.A.
<b>EU approval no:</b>	1205 (Section: Plants or establishments manufacturing intermediate products <sup>13</sup> )
<b>Name of blood farm:</b>	Syntex
<b>Number of mares:</b>	2500 - 3000
<b>Place:</b>	Province of Buenos Aires, Argentina
<b>Address:</b>	complete address and GPS coordinates can be requested at AWF TSB and are made available to official institutions for inspection purposes
<b>Key Principal:</b>	Alejandro Darío Abentin

#### **Background information:**

Syntex S.A. has its headquarters and laboratory in Buenos Aires and exports its products to more than 30 countries on five continents. The company runs a farm near Ayacucho, where it keeps horses and cattle, i. a. for the production of PMSG and heparin. It also has a branch in Uruguay called Syntex Uruguay S.A., which operates a blood farm in the Departamento Florida.

According to Syntex' website, the company elaborates active ingredients from biological and semi-synthetic origins for the veterinary and human pharmaceutical industry. The **website of Syntex** declares the following: "At Syntex, PMSG is obtained in compliance with the **highest quality and animal welfare standards.**"<sup>14</sup> "All our processes are certified by INTA (National Institute for Agricultural and Cattle Raising), Health Canada (the Canadian regulatory health board), and are **periodically audited by SENASA** (the National Service for Agro Food, Health and Quality in Argentina) on **compliance with good manufacturing practices (GMP)**. All our products comply with **quality standards set by the pharmacopoeias of Europe, America and Japan**, where some of our export markets are located."<sup>15</sup>

It is important to note, however, that the good manufacturing practices and the European Pharmacopoeia do **not include any animal welfare standards**, they only set standards for quality, efficacy and safety of medicinal products. Furthermore, the European Pharmacopoeia Commission, the warrantor of medicines' quality standards in Europe, **suspended the PMSG monograph** from July 2022 until further notice<sup>16</sup>.

In September 2015, we published footage of the blood extraction process, covertly recorded at Syntex, which showed the **severe abuse of horses**<sup>17</sup>. Among other media, the German newspaper *Süddeutsche Zeitung* reported about this cruel business<sup>18</sup>. The **first reaction from Syntex was to deny** that the footage was taken at their farm: "Lately, Syntex S.A. Argentina has been involved in an investigation performed by a German newspaper that focused on **animal mistreatment in facilities placed in Uruguay**, dedicated to the production of Equine Chorionic Gonadotrophin (eCG or PMSG) hormone produced by pregnant mares (...). Such article

<sup>13</sup> [Establishment list - TRACES NT \(europa.eu\)](https://www.europa.eu/establishment-list-traces-nt)

<sup>14</sup> [www.syntexar.com/uso-de-la-ecg-reproduccion-animal?lang=en](http://www.syntexar.com/uso-de-la-ecg-reproduccion-animal?lang=en)

<sup>15</sup> [SYNTEX | Tecnología | Desarrollo | Investigación \(syntexar.com\)](https://www.syntexar.com/SYNTEX|Tecnología|Desarrollo|Investigación)

<sup>16</sup> [www.edqm.eu/en/-/ph.-eur.-commission-suspends-the-monograph-on-gonadotrophin-equine-serum-for-veterinary-use](https://www.edqm.eu/en/-/ph.-eur.-commission-suspends-the-monograph-on-gonadotrophin-equine-serum-for-veterinary-use)

<sup>17</sup> [www.youtube.com/watch?v=945zwN5-d30](https://www.youtube.com/watch?v=945zwN5-d30)

<sup>18</sup> [www.sueddeutsche.de/wirtschaft/handel-grausamer-bluttransfer-1.2668283](https://www.sueddeutsche.de/wirtschaft/handel-grausamer-bluttransfer-1.2668283)

also included a video **showing animals, supposedly property of Syntex S.A. Argentina, submitted to practices banned in our Animal Welfare manual but that, unfortunately, are frequent in many farms in the region.** (...) our internal regulations and practices regarding Animal Welfare have absolutely nothing to do with the practices shown in the material published on the media during the last days.”<sup>19</sup> Shortly thereafter, the company **acknowledged that the footage was indeed filmed on its property:** “In a malicious way, some people recorded five hours of activities from which they extracted and edited a scene no longer than one minute. In the belief that the animal mistreatment is never justified, we took note of this video and will **take greater precautions to avoid that such a fact may happen again** at Syntex S.A.”<sup>20</sup>

In November 2015, Argentinian TV (Deutsche Welle) broadcasted a report about PMSG production, including a short interview with Syntex’ manager at that time, Dr. Ignacio Videla Dorna, who recognised that the **induction of abortion is a normal part of the procedure performed to mares.** According to **Syntex’ own manual from 2015** blood is taken from the mares **two or three times per week**, between day 40 and 120 of pregnancy. **Abortions are carried out after approx. 100 days of gestation.**

In November 2019, our Argentinian partner organisation Fundación Franz Weber filed a **criminal complaint** to the Public Prosecutor's Office in Ayacucho **against the company Syntex S.A. for animal cruelty.** In March 2021, the Argentinian newspaper “La Nación” published an article about the violent treatment of mares and the ongoing investigation by the Public Prosecutor<sup>21</sup>. In December 2021, the Attorney General of Dolores closed the case, despite the fact that the Judge had issued a resolution in the favour of the NGO and confirmed that the complaint is accurate and serious (see the summary in annex I).

As documented in detail in this report, the production conditions and animal husbandry at the blood farm of Syntex have **not changed since the legal complaint.** Syntex has not invested money in animal welfare, but only in visual protection and defence against NGO inspections.

## **2. Summary of previous investigations**

The blood extraction process at Syntex’ farm was documented in **April 2015** and again in **January 2018.** The **hazardous installations**, the incapacity of the staff, the panic of the mares and their brutal handling remained unchanged. What changed were the **methods of abuse.**<sup>22</sup> While in 2015 sticks and wooden boards were used to force the mares into the restraint boxes, in 2018 **metal rods with pointed hooks** were used instead. The treatment of the horses was still cruel. **Employees were screaming and shouting a lot**, many of them **hit the horses** not only with metal rods, but also with their fists and hands on the head and face. The **frightened and panicked mares fought in defence** as the cannula was inserted into their jugular vein, which indicates pain and distress. Some horses **fell down in the box** and were beaten to make them stand up again, others **reared up** trying to escape the abuse. The extracted blood volume was not adjusted to the mares’ body weight. We observed several mares having difficulty keeping their balance after their release. **Blood was taken regardless of the mares’ condition**, even if they **walked on three legs**, were injured or emaciated. The few existing foals were also moved through the raceways, which posed a **high risk of injuries** for them.

<sup>19</sup> Email to a journalist, signed by Syntex’ manager, 13.10.2015

<sup>20</sup> Letter to a journalist, signed by Syntex SA, October 2015

<sup>21</sup> <https://www.lanacion.com.ar/sociedad/crueldad-animal-la-justicia-investiga-la-extraccion-de-sangre-a-yeguas-prenadas-nid18032021/>

<sup>22</sup> <https://www.youtube.com/watch?v=Rc1rhfMVI08>

The holding pens in front of the extraction building were **very overcrowded**, without access to food, and they did **not offer any weather protection**. Oral dietary supplements, nor hay or water after the blood collection were available. The high density caused a lot of stress and sometimes even panic among the horses. They were biting and kicking each other. We observed not only **injured and emaciated horses** with clearly visible ribs and hip bones, but also some with **inflamed eyes** and ocular discharge, which can result in blindness if left untreated. Due to the amount of injured and lame horses, we had to assume that there is **no veterinary supervision or treatment**. Furthermore, one night, we found around 15 mares in a small, roofed pen with no food or water, left unattended. There were aborted fetuses lying on the ground. Syntex still carried out **systematic abortions** with insufficient supervision.



*Employee hitting a mare with metal rod (2018)*



*Mare rearing up in panic (2018)*



*Aborted fetuses lying on the ground (2018)*



*Mares kept in small pen without water or food (2018)*

The abuse of mares producing the valuable hormone PMSG continued, **despite Syntex' own animal welfare manual<sup>23</sup>**, which had existed since 2013 and was updated in 2017, and **despite monitoring and auditing** by the Argentinian veterinary authority SENASA and by foreign pharmaceutical companies.

<sup>23</sup> Care and use of animals for production and testing (Version of 12.06.2017, MNL-QA-04-02, Syntex Quality Assurance)

### 3. Description of the blood farm

The blood collection site of Syntex is located in a **very remote and rural area**. The farm consists of a laboratory/office building, a large extraction building, which was closed-up completely after 2015, and several smaller houses including a guard's building. Next to the extraction building there are open holding pens, and further away on a pasture there is a small, roofed pen area, which is called "nursery paddock" by Syntex (where abortions take place). The large tanks, which are located close to the extraction building, are covered by a roof. Inside the extraction building, there are raceways leading to wooden boxes. In total, there are **16 restraint boxes for blood extraction**. The farm is surrounded by vast pastures and open fields, some of which are fenced-in with **barbed wire, posing a risk of injury** for the horses. There are **high security measures** like camera monitoring, flood lights, a night guard with dogs, etc.



*Aerial view of the Syntex blood farm*

### 4. Observations at the Syntex blood farm

**Tuesday, 1 March 2022**

Today, no activities/interactions with horses can be observed at the blood farm, possibly due to the holiday carnival. We spot a large group of horses in a **pasture without shade**, standing in the blazing sun. Most of the mares seem to be **exhausted and do not eat**. There are no shelters visible on the farm property apart from one roofed pen, called "nursery paddock" by Syntex. Some cows with calves share a pasture with a small group of approx. four horses. There is a **cow who possibly died while giving birth**, which shows the **insufficient care and supervision for animals** at Syntex. In addition to PMSG, Syntex produces **heparin<sup>24</sup>**, a liver-derived substance that inhibits blood clotting and is extracted from **cattle and pigs**.

<sup>24</sup> <https://www.heparinsyntex.com/>



*Exhausted mares without sun protection*



*Cow possibly died while giving birth*

### Wednesday, 2 March 2022

At 9:00, a group of at least 60 mares stand in the **overcrowded holding pen area** in front of the extraction building, **without shelter and food**. They have been released after blood extraction. The high **density causes stress among horses**, which manifests itself in the horses trying to **bite or kick each other** and turning their ears backwards. Two workers on foot move another herd towards the extraction building by **using leather whips, which is inappropriate** according to Syntex' own animal welfare manual: *"Staff training on efficient and humane methods for herd management, **without the use of prods, whips, striking, shouting** or any other action **causing animal stress.**"*

At 9:20, two gauchos on horseback open the gates of the pen area and move the first herd back to their pasture. We observe a white and a chestnut mare, who are moving their heads up and down. This indicates **lameness or injury** in a front leg.

At 10:00, the second group of mares is chased around in the holding pen by two workers. One of them **shouts** at the mares, **which intimidates** these semi-wild animals. They run away because they are **frightened**. The other employee uses a red **leather whip**, which he frequently cracks on the floor to move the herd towards the entrance of the extraction building. The whip cracking **increases the horses' stress and fear**. The whole procedure looks very chaotic. In this group as well, we observe a grey-white mare who is limping, moving up her hips higher than normal. She is **severely lame and can only bear minimal weight on the right hind leg**. A worker walks past her without paying attention to her serious lameness. A bay mare in the same group moves her head up and down when trotting, **indicating lameness and pain** in a front leg. According to the definition in Syntex' own animal welfare manual, *"an animal is in **good conditions** of well-being if (according to scientific evidence) it is **healthy, comfortable, well nourished, safe** and can express innate forms of behavior and if it **does not suffer unpleasant sensations of pain, fear or restlessness.**"* Both lame horses are **moved into the extraction building instead of being separated** from the group and **treated by a veterinarian**. This confirms once again that such manuals, which are not legally binding, do not contribute to improving animal welfare.



Horses in overcrowded pen



Worker using a leather whip

#### Thursday, 3 March 2022

When we return to the blood farm at 9:00, we observe a group of approx. eleven horses in what Syntex calls “**nursery paddock**”, where according to Syntex’ manual animals receive care and are under supervision when they are in the interruption process (abortion) or receive medical treatment. We note that most of these horses are male. Several are **lightly emaciated**, one white horse in particular. The animal has visible hip bones and ribs as well as a slight cavity under the tail (BCS 1)<sup>25</sup>. The horses do **not have any food available** in addition to the dry, low-nutrient weed growing in the “nursery paddock”, although according to Syntex there should be feeding stations and food available at all times. Furthermore, the horses appear to have **no shade** (if they have access to the roofed pen area, they are not using it). It is unclear to us why these horses are kept in the “nursery paddock”, since they are not mares undergoing abortion and we do not see any obvious injuries. They might have been sorted out for slaughter. Their **circle branding** on the left hip is not only suspicious (possible slaughter brand mark) but would also have **caused great pain** when it was applied.

Back in Europe, we show the footage to two German veterinarians for assessment. Professor Stephanie Krämer is a specialist in animal welfare and Professor Michael Röcken is of the Clinic of Equine Surgery, both at Justus Liebig University in Giessen. They notice that all of the horses have conspicuously **short tails**, which will **weaken their natural defence mechanism against insects**. Nor is it of much use for them to stand head to tail for mutual relief. The horses also have **oversized numbers and letters branded** onto them. Branding (in which temperatures can **reach 800°C** at certain points) is no longer permitted in Germany. The **branded areas are also very sensitive to pain** (skin directly on top of bony structures such as hips and spine).

At 10:41, two gauchos move a group of at least 60 mares into the holding pen area in front of the extraction building. One employee is on horseback and uses a light-brown **leather whip** to move the animals, the other walks and runs behind them and uses a red leather whip, which he **cracks frequently**. They chase the horses around, the procedure **looks chaotic and unprofessional** and the mares are very **frightened**. They seem to separate the large group of horses and move one part of the group to the entrance of the building. The pen is **again overcrowded**. We observe three **clearly emaciated mares** with prominent pelvis and spine (BCS 1-2). A chestnut horse is lame and does **not equally bear weight on the left hind leg**. There are several mares with **nostrils looking strained and dilated**, probably caused by **heat stress and/or agitation**. The horses are **standing in full sun**. While there are a few water troughs in the pen area, the video recordings do not show if they contain water, and we do **not observe any horses drinking**.

At 12:00, the horses are moved back to the fields behind the blood farm.

<sup>25</sup> Body Condition Scoring of the Syntex SA Quality Assurance (Manuel number MNL-QA-04-02), with a scale from 0 to 5



Clearly emaciated horse in the “nursery paddock”



Strained & dilated nostrils (possible heat stress)



Inappropriate use of leather whip

### Saturday, 5 March 2022

At 7:00, we film large groups of horses and also cattle and calves in the vast pastures surrounding the blood farm. We observe a pinto far away from the buildings, who is lame (LS grade 2)<sup>26</sup>. Her head moves up and down while she is walking, which indicates **front leg lameness**. Such horses or injured/sick animals in general **need to be separated** from the herd and be kept close to the farm to be **under veterinary supervision**.

We do not observe any activities at the blood farm today. The holding pens next to the extraction building are empty. The horses are in the open fields behind the farm, in groups of different sizes. There is a small group of mares in the same pasture as a herd of cows and calves. At least **four mares have foals** with them. It is very likely that these foals are the result of failed abortions. One mare and her foal are breathing heavily, flaring their nostrils, and a dark-bay mare is sweating excessively. Inner restlessness, nervousness and stress, but also painful conditions can promote sweating even during less strenuous physical activities. The **heavy breathing** may be a consequence of **health problems or heat stress due to the lack of shade** in the pasture. We observe a **severely lame** chestnut (LS grade 4-5), her lameness is obvious at walk. Just a few footsteps away, there is a **skeleton of a dead animal**. This animal was obviously left to die alone **without euthanasia** and not under veterinary supervision. A dark-bay mare in another pasture is **severely emaciated** (BCS 0-1) and has a bad coat, which indicates poor health. Several mares in this larger herd have **long hooves** which have not been trimmed for a while. These mares are clearly used for PMSG production, as shown by the four-digit numbers hot-branded on their hindquarters. We do not see any foals in this herd.

<sup>26</sup> AAEP (American Association of Equine Practitioners) LAMENESS SCALE (scale from 0 to 5)  
<https://aaep.org/horsehealth/lameness-exams-evaluating-lame-horse>



*Few foals mean many abortions*



*Vast pasture without weather protection*



*Lame chestnut is not separated or under supervision*



*Dark-bay mare in poor body condition (BCS 0-1)*

In another **swampy large pasture** without natural or man-made shelter, approx. 100 metres behind the blood farm, we discover a group of **seven horses of which five are seriously injured and lame**. Three of them can **only bear minimal weight** on one leg and **two horses walk on three legs**. They all have **untreated wounds** on their legs/fetlocks, which are **infected** and possibly even infested by maggots. Due to their severe injuries, we describe these horses in detail:

- One bay mare has a **swollen carpal joint and lower leg**, which is infected due to **untreated wounds**. She is **severely lame** (LS grade 5). Her **body condition is poor** (BCS 1-2) and she has skin lesions on her hips.

According to Dr. Krämer and Dr. Röcken, this mare is **severely lame** and displays conspicuous skin changes on the distal carpal joint (front tarsus). There is also **diffuse swelling** there, of the kind known as a **phlegmon** (bacterial, diffusely suppurating **inflammation** of the skin and connective tissue). And there is an obvious **circular skin injury**, which is very likely the cause. The horse also displays skin abrasions around the tuba coxae (hip joints). These changes can occur if a horse has difficulty lying down or standing up. There is **no visible evidence to suggest that the animal has received veterinary care** (necessary therapy: anti-inflammatories (phenylbutazone) + antibiotics + moist wound dressing combined with reduced movement). It is difficult to deduce from the video when the injury occurred; but the abrasions around the hip bones do give an indication and we can assume that the **injury is not acute; it is several days old**. The mare is also **badly nourished**. The ribs and the bones of the hips are clearly protruding.



- A second bay mare **stands on three legs**. It seems she has been **lame (LS grade 5)** in the right hind leg for a longer period of time, as she has weak muscles in the croup and thigh. There is an **open wound** on her fetlock of the right hind leg. She is clearly **malnourished (BCS 0-1)** and her coat looks dull and shaggy.

According to Dr. Krämer and Dr. Röcken, this mare is **severely lame** at the right rear. Because the muscles of the croup and quadriceps area (thigh muscles) are clearly atrophied (depleted), we can assume that the **problem has existed for a long time (the muscle atrophy suggests weeks)**. When the mare stands still, she assumes a relieving posture. A **gaping wound is visible** in the fetlock area. There are also **skin changes around the back** (and the spine is clearly visible), in the sacrum area and at the root of the tail. The skin injuries could have been caused by falls (due to weakness?) or mechanically (abrasions/injuries in blood collection box?). If we were to give it a **body condition score** out of 5, it would be **between 0 and 1**. There are **clear signs of malnutrition**; the coat looks dull and ragged. Furthermore, the mare displays **pronounced pain in the face** (horse grimace scale). The skin around the cheeks is drawn in (tense masticatory muscles), the eyes are narrowed, the nostrils are raised and the ears are set back starkly. The mare is showing the other horses that they should keep their distance. **Lameness is a clear sign of pain**, so a painkiller should definitely be administered; this would also have an anti-inflammatory effect. Steps should also be taken to improve the mare's general condition (take blood count as a basis, give vitamins and trace element supplements; feed rations appropriate to its condition = high-quality feed; worming if necessary).



- A thin appaloosa has **three open wounds**, two on the fetlock of the right hind leg, one on the fetlock of the left front leg. The fetlock of the right hind leg is **heavily swollen**, indicating an infection. The wound is **possibly infested by maggots**. The mare does not bear weight on her hind leg, which is a **sign of pain**. The **puncture site is visible** at the jugular vein, thus blood must have been extracted from the mare only recently.

According to Dr. Krämer and Dr. Röcken, this young mare is not very muscular, but her state of nourishment is still tolerable. If they were to give her a body condition score out of 5, it would be between 1 and 2. The mare has **circular injuries** in the areas below the front left and rear right fetlocks. An **incipient phlegmon** can already be seen around the latter. The mare is assuming a relieving posture. Her **movements suggest severe pain**. The injuries appear to be relatively recent (a few days old). **Puncture marks are visible** on the neck; they already appear scarred.

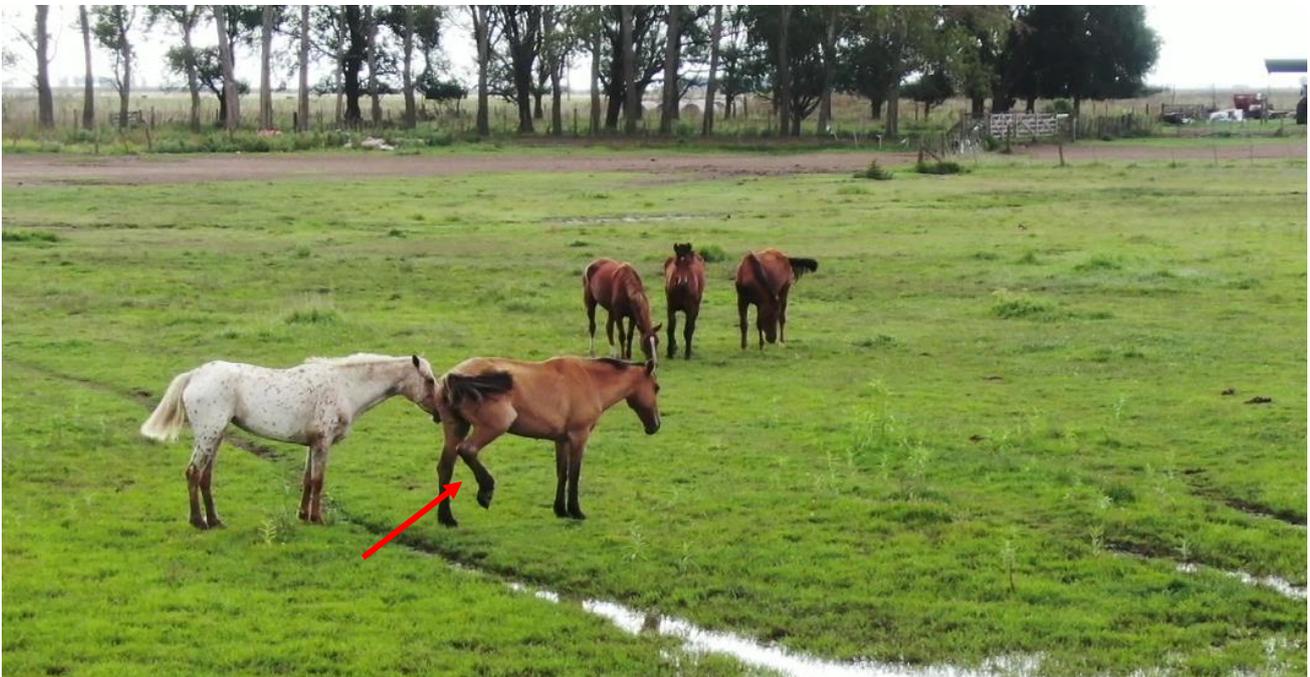


- A light-chestnut has an **open wound** on the fetlock which is **swollen** (right front leg) as well as an **injury on the hock joint** (left hind leg). Her **lameness (LS grade 5)** is a consequence of the painful injury on the front leg, which is possibly infested by maggots. She can only **bear minimal weight in motion and rest** on the front leg. Punctures at the jugular vein are visible on both sides of the neck, with **blood residue still visible at the left puncture site**. This is an indication that blood has been drawn recently.

According to Dr. Krämer and Dr. Röcken, this mare displays **severe diagonal lameness**, which she has adopted to relieve the original cause of lameness on her right foreleg. Here too, there is an **inflammatory change around the fetlock** in the sense of an increase in circumference (swelling involving build-up of inflammatory fluid). In addition, there is an **injury around the hock**. This hock injury is probably secondary in nature and a result of the difficulty the mare has in lying down. The **horse's movements are highly non-physiological** and are a **result of pain**. Puncture marks can be seen on the neck. Anatomically, the jugular vein runs beneath these points; it is used for injections and blood collection in horses, due to its size. The blood extraction which is very likely to have been done would have been no more than 24-48 hours ago, because there are even remnants of blood still visible. The **lameness is definitely older: at least a week**. The **swelling caused by a phlegmon** can develop very quickly (within a few hours), but the way the horse is moving suggests that the swelling has already been around for some time. The veterinary experts believe that **blood was taken from this horse in this condition, since the injuries appear to be older than the puncture site** (unless phenylbutazone was injected as an anti-inflammatory; this has to be administered strictly intravenously and you would choose the same access point on the jugular vein as for taking blood, so it is difficult to know what has happened, but **we do not think the mare had been treated**. In that condition, she should have been taken to a sick pen).



- A dun horse **stands on three legs** (LS grade 5). The mare cannot bear weight on her hind leg and repeatedly pulls it up, which is a sign of pain. The video recordings do not show what kind of injuries she has.



The **facial expressions** of these five injured mares with strained, dilated nostrils, ears held stiff and turned backwards and partially closed eyelids **indicate pain and high discomfort**<sup>27</sup>. These animals are clearly suffering. Several have a **low body condition** (BCS 0-2) which could be an indication of **prolonged suffering** and a consequence of the **repeated high blood loss and inadequate nutrition**. These mares clearly belong to Syntex as indicated by the four-digit numbers hot-branded on their left hindquarters. According to Syntex, injured and sick horses must be medically cared for and monitored in the “nursery paddock”. Instead, these horses remain in the swampy pasture, **left to their own devices**. Syntex’ animal welfare manual requires that “*they (=animals) do not suffer stressful feelings (pain, fear, anxiety, etc.), and when they could not be avoided, the necessary methods will be used to minimize them.*”<sup>28</sup> In this case, Syntex prescribes in its manual the following procedures: If animals are sick/injured or an infection is suspected, the veterinarian “*must ensure that the animals will be isolated and examined and treated. If the cost does not allow this, the animals must be*

<sup>27</sup> Horse grimace scale of the AWIN welfare assessment protocol for horses (2015)

<sup>28</sup> Care and use of animals for production and testing (Version of 12.06.2017, MNL-QA-04-02, Syntex Quality Assurance)

*humanely euthanized*". During our investigations, we have **not seen any of these measures** taking place. Syntex violates its own guidelines, in particular: The **veterinarian must provide "care to all animals sick or injured, carry out health registers, advice about the dose of anesthetic, analgesic, antibiotics and other therapeutic agents to ensure the humanitarian care of the animals."**

Dr. Krämer and Dr. Röcken make the following general assessment regarding the group of injured mares: **Humid, swampy areas are generally favourable to pests** such as mosquitoes. These can potentially transmit the eggs of *Dermatobia hominis* (botfly), but they rarely cause as much harm as the larvae of the common blowfly, which can also occur in dry pastures. **Myiasis caused by blowflies can be problematic**, because the fly eggs are often colonised by bacteria, which **can lead to severe inflammatory processes**.

In Germany, appropriate **weather protection** would be mandatory. In the area shown, **the shelter would have to be very large, dry and airy**, as there are so many insects present. The animals would probably not choose to use a small shed. The **injuries** shown in the videos have certainly **existed for a long time** and the wounds have **obviously not been treated**. The severe inflammations, which are recognisable by the sometimes **considerable swelling** and circumferential enlargement of limbs, **demand antibiotic protection** in the first instance. We can only speculate as to whether this has been given. **These animals should not be asked to perform any more** – neither from a moral standpoint nor in terms of German law. Performance in this sense does not mean sporting performance or breeding alone, but rather anything extra done in the provision of physical resources. The animals **need strength to keep themselves alive**, to mature the unborn foals within them and to heal their untreated wounds. But in addition to all that, they are being required to **supply absurd (non-physiological) amounts of blood** under conditions of stress and fear. In our personal view, all this together **amounts to animal abuse and is therefore a criminal offence**. Furthermore, the **extraction and use of PMSG from mare's blood is not necessary** and there is neither a compelling reason to do it, nor a reason that demands legal recognition.

There are **no water troughs** visible in the large pastures. Dirty puddles are the only water source we can see. The fields as well as the holding pens do not offer any natural or man-made shelter and the horses are exposed to all weather conditions. The fact that we have **only seen four foals** leads us to the conclusion that the **majority of the fetuses still get aborted**. The **lack of appropriate animal care** is not only observed with horses, but with dogs and cattle as well. There are **two injured dogs** on Syntex' premises and earlier we found a dead cow.

### III. Laboratorio Biomega S.A.

#### 1. Information on the company

<b>Company name:</b>	Laboratorio Biomega S.A.
<b>Name of blood farm:</b>	Biomega
<b>Number of mares:</b>	approx. 1000 (acc. to owner)
<b>Place:</b>	Departamento Cerro Largo, Uruguay
<b>Address:</b>	complete address and GPS coordinates can be requested at AWF TSB and are made available to official institutions for audit purposes
<b>Owner:</b>	Dr. med. vet. Martin Bocking
<b>Director:</b>	Juan Bocking
<b>Phone Martin Bocking:</b>	made available for audit purposes upon request

#### **Background information:**

Official documents from **2011 and 2013**, put out by the Ministry for Industry, Energy and Mining, and the Ministry for Economic and Financial Affairs, show that the company **Laboratorio Biomega S.A. received tax reductions for their construction project** (VAT exemption as well as property tax and income tax abatement). The production and sale of PMSG is mentioned as the business purpose of Biomega SA. The documents state that the tax subsidies are granted because the company wants to make new products and increase their exports.

In **2016**, the company Biomega S.A. was granted a **subsidy of 94,102 USD, which was half of its investment into the new equipment and software that was required to increase the production capacity of PMSG**, with the objective of satisfying the growing demand of the international market<sup>29</sup>. The subsidy was granted by the support programme PIEP (Proyecto de Internacionalización de la Especialización Productiva), which is **85 % financed by MERCOSUR and 15 % by the Uruguayan Ministry** for Industry, Energy and Mining.

In addition to producing PMSG, **Martin Bocking also breeds racehorses as well as Criollos**. The stud farm is located very close to the blood farm. The new extraction building at the blood farm was built around 2013 according to the official documents, and it is very likely that blood extraction had been done at the stud farm before then. The sign "Biomega SA" is still set up at the entrance gate of the stud farm.

Martin Bocking also rents other pastures where he takes the mares after the blood extraction. These **pastures are within a radius of approx. 10 km, and possibly further, from the blood farm. The mares have to run the whole distance**, even if they are emaciated, weakened, injured or lame.

#### **Statement of Martin Bocking quoted in a scientific report:**

*"Where considerable differences in feed availability and intake occur in the extensively managed groups of mares between years, **overall eCG<sup>30</sup> production is invariably higher in leaner years when the mares are in light-to-poor condition in early gestation**"* (G. Maruri and M. Bocking, personal communication).<sup>31</sup>

This statement suggests that Martin Bocking deliberately keeps his mares in a poor condition and with a low body condition score (BCS), so that they allegedly produce more PMSG.

<sup>29</sup> <http://piep.blue.uy/2016/01/21/biomega/> (link no longer valid)

<sup>30</sup> eCG (equine chorionic gonadotropin) is the same as PMSG (pregnant mare serum gonadotropin)

<sup>31</sup> S. WILSHER, Factors influencing equine chorionic gonadotrophin production in the mare, EQUINE VETERINARY JOURNAL, 2011

## **2. Summary of previous investigations**

Since 2015, AWF and TSB have been investigating the blood business in Uruguay, where thousands of mares are mistreated and exploited for the production of the fertility hormone PMSG<sup>32</sup>. Repeated investigations at Biomega blood farm in 2016 and 2017 showed mares subjected to beatings as well as injured and sick mares left, unattended, to suffer and die<sup>33</sup>.

New legislation was introduced by the Uruguayan Ministry of Livestock, Agriculture and Fisheries (MGAP) in June 2017 in an attempt to regulate and improve PMSG production: Resolución N° 215/017 DGSG, which includes a legally binding animal welfare manual<sup>34</sup>.

However, investigations in January and April 2018 showed that the situation had not improved<sup>35</sup>, despite the new legislation from 2017. Once again, we documented pregnant mares being brutally abused during the blood extraction process. Injured, sick and emaciated mares did not receive any veterinary care and were left to fend for themselves.

Covert footage recorded in 2018 showed **numerous violations** against the Uruguayan animal welfare manual. Some mares were moved together with their foals through the raceway and restraint boxes, which poses a **high risk** of the foals being injured or trampled. The employees were **extremely violent handling the mares and systematically abused** them during the blood extraction process. We would like to point out a few examples, sticking fingers into the mares' eyes and ears, pulling tails forcefully and hitting them over their heads and backs with ropes, wooden and rubber sticks, fists and flags. The workers also stabbed wooden **sticks into their genitals** and tied them up very tight, so their necks were overstretched. The cannulas were pushed in by force, which led us to the assumption that the **workers were unskilled** and did not have any veterinary qualification. **Many horses were panicked**, frightened and very scared of the employees, some **collapsed inside** the boxes or went down on their knees, others trembled, reared up and tried to jump out of the box. They showed **strong signs of pain** and distress. After their release, they appeared to be weak and disoriented, they did not receive any oral dietary supplements or hay after the blood collection. Many mares were emaciated and in a **very poor condition** (BCS 0-1)<sup>36</sup>. Several horses **were lame and had injuries and wounds that had obviously been left untreated** yet they were still used in the blood extraction process. They should have been separated, received appropriate veterinary treatment and given time to recover.

These findings made it clear that the blood farmers **were not interested** in complying with the ministry's animal welfare manual. There are, among others, violations of point 3.1.4. ("*Operators can work from behind the horses with a **raised flag** to facilitate movement, (...) Guide the animals slowly to prevent slips and falls. **Avoid hitting** the animals or **any practice that could cause injury, fear or excitement.**") and point 3.2.3 ("*Animals must be brought into the containment site in flowing and **calm conditions, using methods such as flags. Shouting and electric prods or any other stimuli must be prohibited.**")*")*

<sup>32</sup> Film 2015: [www.youtube.com/watch?v=KG7F4KonJII](http://www.youtube.com/watch?v=KG7F4KonJII)

<sup>33</sup> Film 2017: <https://youtu.be/WQLRaycU1oQ>

<sup>34</sup> [www.gub.uy/ministerio-ganaderia-agricultura-pesca/sites/ministerio-ganaderia-agricultura-pesca/files/documentos/publicaciones/dgsg\\_no\\_215\\_5\\_06\\_manual\\_de\\_buenas\\_practicas\\_ba\\_plasma\\_0\\_1.pdf](http://www.gub.uy/ministerio-ganaderia-agricultura-pesca/sites/ministerio-ganaderia-agricultura-pesca/files/documentos/publicaciones/dgsg_no_215_5_06_manual_de_buenas_practicas_ba_plasma_0_1.pdf)

<sup>35</sup> Film 2018: [Blood farms in South America - behind walls the torture business continues - YouTube](#)

<sup>36</sup> Body Condition Scoring of the Manual de Buenas Prácticas de Bienestar Animal para equinos destinados a la producción de hemoderivados (2017, Uruguayan Ministry of Livestock, Agriculture & Fisheries) with a scale from 0 to 5



Employee pulling tail aside to stab genitals (2018)



Mare rearing up & trying to jump out (2018)



Employee poking a mare in the eye (2018)



Mare going down on her knees (2018)

In the large pastures belonging to Biomega, we found groups of around 100 to 300 horses. Again, several were emaciated and **neglected** (overgrown hooves with cracks), some were even **cachectic with prominent spine, ribs and hip bones (BCS 0)** and others were covered with scars. Groups were moved by gauchos, even mares **hobbling on three legs or with fractured legs** had to run long distances. According to Dr. Wehrend, lame horses must not be moved at all, but provided with veterinary treatment or euthanized. Mares **were left to their own devices** and exposed to the elements in bare pastures, with insufficient food that did not satisfy their special physiological needs. These circumstances are a violation of point 2.3. (“*The horses must be fed an appropriate diet to prevent them suffering from thirst, hunger or undernourishment and to maintain adequate body condition (...)*”) and 2.4.4. (“*If an animal is injured or sick, the veterinarian must quickly diagnose the problem to determine whether the animal should be treated or killed, in accordance with good euthanasia practices*”) of the Uruguayan animal welfare manual.



Cachectic mare with BCS 0 (2018)



Mare with possibly broken leg (2018)

### 3. Description of the blood farm

Bocking's blood farm is **situated in a remote area** next to a small lake. It is surrounded by large open pastures that are fenced off. There are two small tree plantations around the site itself. The farm consists of only one building, which looks modern and new (built in 2013 according to official documents). Close to this white container building, there are two big tanks under a shelter and two smaller tanks on trailers. The **holding pens offer no water troughs as well as no protection from sun and rain**, except for one pen which has trees. A wooden raceway leads up from the pen area to the extraction building. Inside the building, there is a long raceway leading to **ten restraint boxes**. The back of the building which faces the lake, and the lateral side which faces the pen area, are open. Tarpaulins have been erected to obstruct the view of the restraint boxes and raceway. The security measures of Biomega include camera monitoring, flood lights and an alarm system. Mares belonging to Biomega wear **ear tags**.



*Aerial view of the Biomega blood farm*

### 4. Observations at the Biomega blood farm

**Monday, 29th March 2021**

We arrive at the blood farm at 15:45. Since our last visit in 2018 tarpaulins have been erected, obviously with the intention of avoiding observation. At first, **it is raining and stormy**, and the horses all turn their backside against the wind. Later, the sun comes out and the horses search for shade underneath a small tree, which is by far insufficient shelter. In the pasture, where the mares are gathered after the blood extraction, there is **still no appropriate weather protection and no water**. The blood bags hanging on the fence lead us to the assumption that blood extraction has taken place today. Some mares repeatedly shake their head when coming out of the building, which is an indication of blood extraction.



*New visual protection at Biomega blood farm*



*No protection from the rain, wind and sun*



*Blood bags and buckets*

A large group of 100 or more blood mares, recognizable by their ear tags, are grazing in a corn field approximately 1 km away from the blood farm. There are a few foals among the mares, likely the result of **failed abortion**. Several mares are **emaciated** (BCS 1). One has a large scar on the point of hip, possibly from struggling during the blood collection, and the rump of another mare is **covered in scars**.



*Emaciated blood mares*



*Mare with ear tag covered in scars*

At 16:00, many horses are coming out of the blood farm, chased by an employee. The worker throws the flag, more than once, at some mares. The **unprofessional handling frightens** the sensitive, semi-wild animals. Some mares are **lame** and a few are accompanied by foals of different ages. Their behaviour after the release varies from running to walking away slowly, **looking weak and disoriented**, possibly due to the high blood loss. At least two mares have **open untreated wounds**, likely caused by struggling in the extraction box. A dun mare has a **bleeding wound on the left shoulder** and frequently touches the wound with her muzzle, which is an indication of pain. A white mare has a bleeding wound on the neck, which looks like an **infected puncture site**.

The horses do not receive **any feed supplements** (minerals such as iron), **nor any hay**, they only have short grass in the pasture which is insufficient for their needs. They are standing there lethargically after the blood extraction, they are not grazing and look **exhausted**.



*Untreated wound on the shoulder*



*Emaciated mare and infected puncture site*

At 17:30, a group of approximately 50 mares is moved away by a gaucho on horseback to a pasture further away, on the other side of the lake. Next to the road we see two mares with **bleeding holes** on the neck. Their ear tags reveal that they belong to the blood farm of Biomega.

### **Tuesday, 30th March 2021**

When we return to Biomega blood farm at 14:30, there are only around **ten horses** in the pasture next to the building. At 15:30, we recognise **around 100 to 200 horses** in the same corn field as yesterday. Two mares in a pasture next to the corn field are **severely emaciated (BCS 0)**. Their backbone and pelvis are **extremely prominent**. They have no fat reservoirs.



*Blood mares kept in a corn field near Biomega*



*Cachectic mare (BCS 0)*



*Aerial view of the pasture*

**Wednesday, 28th April 2021**

At 18:30, there are approximately **50 horses** in the pasture next to the extraction building, including a lot of foals. These mares might be **used for breeding** to ensure a steady supply of young mares. It appears that all mares either **have foals or are pregnant**. The foals are different ages. Again, the horses have **no additional food**, which they would need due the scarce pasture. Only very few are grazing. Some hungry horses try to eat from a bush outside the pasture by putting their head through the fence. Several mares are **thin or even emaciated**.



*Mares with foals at Biomega blood farm*

**Saturday, 11th December 2021**

At 11:00, we arrive at **Biomega's large pasture, which is located next to the city of Melo** and separated from the residential area by the river *Arroyo del Sauce*. The pasture is approx. 4 km long and 1 km wide and mainly consists of bushland, open areas and small eucalyptus plantations. There are some natural water resources, but the **water is dirty**. Within five hours, we manage to inspect about **20 % of the area and film approx. 80 horses**.



*Poor pasture with dirty water resources*

We discovered this pasture in April 2018, when we followed a group of about 300 mares that were moved there from the blood farm. Among them were many injured and emaciated animals. Biomega's employees told us that the perimeter of the pasture extends from the road down to the river *Arroyo del Sauce*.



*Approximate perimeter of Bocking's pasture (about 4 km long and 1 km wide)*

It is very hot today; the temperature has risen to **30° Celsius**. Most of the bushes growing in the pasture are too small to provide shade for the horses. They are standing in the **blazing sun**. Here, like at all the other pastures visited previously, **no man-made shelter** can be seen. There is some shade from eucalyptus trees, but since there is not much there for the horses to eat, they are unlikely to stay within the plantation.

All the mares we see today are **marked with ear tags**, except for two. We are able to discern three-digit numbers on these tags. The horses are grazing in groups of five to ten animals. Every group of mares is accompanied by a stallion. We do **not see any foals**, which is evidence that they are still **systematically aborted**. A few mares are heavily pregnant, likely the result of failed abortion, or some mares might be allowed to carry to term in order to breed more blood mares.

A lot of mares are thin with their ribs and hip bones clearly visible (BCS 2, moderate), **several are emaciated** (BCS 1, poor)<sup>37</sup>. A white mare is severely **emaciated (cachectic)** with extremely prominent pelvis, backbone and ribs (BCS 0, very poor). Out of the approx. 80 horses filmed today, **at least 36 have a low body condition (BCS 2 or less)**. According to the Uruguayan animal welfare manual, **almost half the mares filmed today would have to be excluded from blood extraction**. Indeed, the manual prescribes that *“under no circumstances may blood be collected from any animal whose body condition is classified as moderate or 2 or less on this scale”*<sup>38</sup>.



*Thin mare with BCS 2 (moderate)*



*Emaciated mare with BCS 1 (poor)*



*Cachectic mare with BCS 0 (very poor)*

<sup>37</sup> Body Condition Scoring of the *Manual de Buenas Prácticas de Bienestar Animal para equinos destinados a la producción de hemoderivados* (2017, Uruguayan Ministry of Livestock, Agriculture & Fisheries) with a scale from 0 to 5

<sup>38</sup> [www.gub.uy/ministerio-ganaderia-agricultura-pesca/sites/ministerio-ganaderia-agricultura-pesca/files/documentos/publicaciones/dgsg\\_no\\_215\\_5\\_06\\_manual\\_de\\_buenas\\_practicas\\_ba\\_plasma\\_0\\_1.pdf](http://www.gub.uy/ministerio-ganaderia-agricultura-pesca/sites/ministerio-ganaderia-agricultura-pesca/files/documentos/publicaciones/dgsg_no_215_5_06_manual_de_buenas_practicas_ba_plasma_0_1.pdf)

Back in Europe, we show the footage to a German veterinarian for assessment. Professor Dr. Stephanie Krämer is a specialist in animal welfare at Justus Liebig University in Giessen. According to her, the white mare has **clearly protruding bones on her back and hips**. The pregnancy can be misleading; she would rate her body condition between 0 and 1 (on a BCS scale from 0 to 5). These small, robust horse breeds actually cope very well with meagre rations, provided they are not put under any other stress. But because they are constantly pregnant, and probably also used for breeding quite early on and still growing – and they have non-physiological amounts of blood extracted – the **mares quickly run up an energy deficit**. According to Professor Krämer, **supplementary feeding is needed** to prevent nutrient deficiency.

The pasture mainly consists of weeds, bushes and **dry, nutrient-poor grass**. We do not see any additional feed, for example hay. The feed available certainly does **not satisfy the mares' special nutritional needs**. They not only have to provide energy for the development of the foetus but also for the regeneration of lost blood components. With the pasture being so poor, the mares **should receive additional feed to prevent nutrient deficiencies**. The above-mentioned manual stipulates that *“the horses must be fed an appropriate diet to prevent them suffering from thirst, hunger or undernourishment and to maintain adequate body condition”*. We do **not see any water troughs** either. There are some **muddy ponds** which the horses apparently use to drink water, as shown by their hoof prints in the soil. Indeed, we observe four horses **drinking dirty water** from a pond. We do not know if the river *Arroyo del Sauce* is accessible for the horses. Dense bushes growing on the banks of the river make it very difficult to access. It is thus unclear if the horses have clean water available in addition to the dirty ponds.



Horses eating nutrient-poor grass



Dirty drinking water

The horses are very shy and do not let us approach them, let alone touch them. They are **semi-wild and not used to human handling**. The only contact they have with humans is during blood extraction and other painful interventions (e.g. abortions), so they associate humans with **negative experiences**. The brutal handling by the workers during blood collection, as documented in 2018, only aggravates their fear of humans and leads to a **repeated traumatisation**.

We find a grey horse with a **severe injury on the left shoulder**. The circular wound is very deep and has obviously **not been treated**. Fluid is leaking from the wound and it is covered with **flies** which may have already laid eggs. The horse is observed **yawning repeatedly**, which can be a **sign of stress or pain**.



*Injured horse yawning repeatedly*



*Wound covered in flies (including blowflies)*

According to Professor Dr. Krämer, the **wound has been there for some time**; this is clear from the changes in the coat (which is no longer there in the area of the injury) and the skin (changed by **inflammation**, reddened) and the type of wound secretion (exudate). There is **no longer any acute bleeding**; only the wound secretion, which is coming out, showing that the processes have already organised themselves. **Various kinds of flies are on the wound**. Among them, blowflies can be recognised by their metallic green colouring. But maggots are not visible. **Myiasis caused by blowflies can be problematic**, because the fly eggs are often colonised by bacteria, which can lead to severe inflammatory processes.

**Yawning** in captive horses can be associated with compulsive behaviour (stereotypies); this can definitely be ruled out in this case. There is also evidence that horses with gastric ulcers yawn more frequently. If this behaviour is **observed repeatedly in a horse, it may be an indication of discomfort and pain**. In the video sequence, the horse first rubs its wound on a branch. Then the animal chews on nothing and pauses, and you can see its **pinched cheek area; this is an expression of tension**. Only then does the horse yawn. The yawning therefore may well be associated with pain/discomfort.

We detect more horses with health issues. A chestnut mare has a **wound on the nasal ridge**, just above the muzzle. Extensive skin alterations and abrasions are visible. Her **nostrils are red and swollen**, indicating an **inflammatory process**. The injury could have been caused by the use of a **rough rope** rubbing the mare's skin if she was making **strong defensive movements** of the head. We believe this is likely because halters made of rope are used to tie down and fixate the mares during blood collection.

A bay mare has an **injury on her left hind leg**, above the fetlock. The area around the wound is **swollen, indicating an infection**. An emaciated dark-bay mare has **dried blood** underneath and on the side of her tail. It is possible that she is bleeding from her vagina due to **manual abortion**. A white mare also has **blood on her hind legs and tail**.

We see several horses with **long, neglected hooves**, some with cracks. It is highly questionable if the hooves of these untamed animals are ever trimmed. Two mares have **dull, shaggy coats**, which could **indicate nutrient deficiency** or a number of clinical conditions<sup>39</sup>. We note that some mares have a **curved back**.

<sup>39</sup> AWIN, 2015. AWIN welfare assessment protocol for horses: <https://air.unimi.it/handle/2434/269097>



*Skin abrasions and red/swollen nostrils*



*Swollen area around wound*



*Blood possibly indicating an abortion*



*Emaciated mare with curved back*

On this rather small piece of land that we inspect, we find **three horse skulls and many bones**. We note that none of the skulls has a bullet hole. In case of weakness, disease, injury or miscarriage, the **mares are left to die instead of being treated or euthanised**. This shows, once again, that there is a **complete lack of veterinary supervision and care** of the blood mares kept in vast pastures and forest plantations.



*Horse skull without bullet hole*



*Underjaw of a dead horse*

### **Sunday, 12th December 2021**

At 9:30, we drive to Biomega's **large pasture on the other side of the lake**, 5.5 km away from the blood farm. We film a group of mares that are grazing close to the fence. A chestnut mare is **emaciated with her backbone, pelvis and ribs easily visible** (BCS 1-2). Another mare is standing there motionless, her **facial expression indicates pain** (Horse Grimace Scale)<sup>40</sup>. Her ears are held stiffly and turned backwards and her eyelids are partially closed. Her mouth and nostrils look strained. The ear tag is a clear indication that she is indeed a blood

<sup>40</sup> AWIN, 2015. AWIN welfare assessment protocol for horses: <https://air.unimi.it/handle/2434/269097>

mare. We do not see any injuries, but the mare might have some health problems which are not visible or might be undergoing an abortion. Only one mare in this group has a foal, which is the **only foal we see today** and might be the result of failed abortion.



*Mare's face expressing pain*



*Mare with foal and emaciated chestnut*



*Aerial view of Bocking's blood farm, stud farm and pasture*

At 11:00, we film more horses inside this pasture. It is an open field with bushes and a few trees, bordered by a small river. We manage to get close footage of about 30 horses, but many more are grazing in the distance, too far away for us to assess their condition. The mares are grazing in small groups, accompanied by stallions. We note that some mares have ear tags while others do not, even in the same groups. We also see different types of ear tags; some are round while others are shaped. Several mares are thin (BCS 2), some are emaciated (BCS 1). Out of the approx. **30 horses filmed, 10 mares have a low body condition (BCS 1-2)**. A grey mare is **extremely emaciated (BCS 0)** with prominent spine, ribs and hip bones. We find **three horse skulls** and many bones in this pasture.



*Emaciated mares with prominent bones*



*Horse skull and pelvis*

It is a sunny day and the temperature climbs up to **34° Celsius**. The bushes growing in the pasture are too small to provide shade for the horses. The few areas that do have trees have no grass, just bare ground and we do not see any horses standing there. They are **grazing in the blazing sun**, driven by hunger. However, the **grass is dry and nutrient-poor**, like the other pasture we documented yesterday. Furthermore, we note that the horses do **not have access to the adjacent river**, as a fence is running parallel to it. The only water resource we can see is a **dirty pond**, which the horses apparently use to drink water, as shown by their hoof prints in the dried mud.



*Muddy pond serving as water source*



*Nutrient-poor pasture without shade*

At 15:15, on our way back to Melo, we find a **seriously injured chestnut mare** on the side of the road. She is walking along the perimeter fence of Biomega's other large pasture, which is located 4.4 km away from the blood farm, and the pasture that we documented yesterday. We find the mare approx. 200 meters away from the entrance gate of that pasture. We discovered this pasture in April 2018, when we followed a group of several hundred mares that gauchos moved from the blood farm to this pasture, among them were many injured, lame and emaciated animals.

The injured chestnut mare is **marked with an ear tag and thus clearly belongs to Biomega**. It is the same ear tag with a three-digit number that we have seen on other blood mares. The mare is **severely lame and has great difficulty walking**. We suspect that she has not been able to keep pace with the other horses of her group and has been left behind, abandoned on the road.



*Blood mare in very bad condition (severely emaciated and lame)*

The mare is in a poor general condition, **very weak and severely emaciated (cachectic)** with extremely prominent hip bones, spine and ribs (BCS 0). She has **open wounds on all four legs** which have obviously been **left untreated**. Her hip and fetlock of the right hind leg appear to be injured and she **stumbles repeatedly**, almost falling. The mare has a **small wound at the typical puncture site at the jugular vein**, which is an indication that she is most likely still in the blood collection process despite her poor condition. This mare would **need urgent veterinary care or euthanasia**. However, she is abandoned on the road and left to her fate.



*Injuries on front legs (fetlocks & carpal joints)*



*Injuries on both hind legs*

*Mare stumbling due to injured fetlock*

According to Professor Dr. Krämer, this chestnut mare is in an **alarmingly neglected condition**. Her BCS is zero. The horse's emaciation can be described as **cachexia** (pathological emaciation; underweight together with clinical symptoms). It is clear that **her entire musculature has degenerated**. There is virtually no subcutaneous fat tissue left. **Bones are protruding** in every prominent place. There are significant calluses from lying and injuries caused by getting up and lying down without any cushioning. **Severe emaciation causes coordination problems**; her walk is severely hampered. There are **injuries on both hind legs around the fetlock and hock, and on both forelegs around the fetlock and carpal joint**. The injuries on the front legs look like constriction wounds, as if a sharp rope or wire has eaten into the tissue. The wounds have similar patterns and are each at the same level. The mare **may have been tied up** or got caught in a fence (but this is unlikely, as the injuries are so parallel in their arrangement). The **wounds are inflamed**.

The small lesion on the chestnut mare's neck could be a puncture site. It does not look inflamed, but the hole that has developed does look like a puncture site because of its location on the jugular vein and its size. Very wide cannulas are used to take blood. In view of all these things, the **lesion is very likely to be the result of blood extraction**.

The mare appears to be aware of her serious injuries and tries to place her hooves down in a particular way to avoid twisting her ankle as much as possible. But she does not succeed. There is **abnormal mobility** in the fetlock joints of the hind legs, suggesting torn tendons. When her ankle twists, her **whole body convulses**, so we can assume that **she is in severe pain**. Other joints of the right hind leg also seem to be affected (hock, hip). The **horse is severely lame** and in an extremely poor overall condition. **Veterinary treatment definitely ought to be provided**. The least one would have to do to decide whether the animal has a chance of survival is to perform blood tests to see whether her organs are functioning. **Repeated blood extraction causes anaemia and weakens a horse**. If a responsible person were to take care of her and provide her with a lot of medical care, she might have a chance. But under the conditions there, the best one can probably hope for is the **quick release of euthanasia**.

At 19:00, we drive by Bocking's stud farm. A group of thoroughbred mares and foals are grazing next to the road. They look well fed and well cared for. In addition to producing PMSG, Martin Bocking also breeds racehorses as well as Criollos. The stud farm is only 2 km away from the blood farm (see map on page 32).

Next to the pasture with thoroughbreds, there is a large pasture with mares of different breeds, among them **Arabians in poor condition**. They might have been removed from a breeding program to be used for PMSG production. These mares are **thin or emaciated (BCS 1-2) and look neglected** with matted manes, one with shaggy coat. The Arabians do not have ear tags but other mares in the same group do, which is evidence that they are blood mares. In Uruguay, sport horses are usually microchipped and this might be the reason why the Arabians do not have ear tags.



*Emaciated Arabian mare in blood mare pasture*



*Thin Arabian mare with shaggy coat*

In the same pasture, we see two white mares with **wounds on their neck**. Both have ear tags, and one of them is heavily pregnant. In total, we count at least 20 horses in this herd but we cannot see the whole pasture, as it continues further over the hill.



*Blood mares with wounds on their neck*

Next to this large pasture, there is a smaller one with approx. 30 horses, some with and others without ear tags. We detect two heavily pregnant mares and one foal. At least **three mares have a low body condition**. There are more horses in other pastures closer to the lake, but they are too far away for us to assess their condition.

At 19:30, we drive to the Biomega blood farm. The nearby corn field where we saw a lot of blood mares in March is now empty. It looks like machines have recently harvested the plants. There is a group of approx. 15 horses in a pasture between the blood farm and the lake. The holding pens at the **blood farm** are empty. It is evident that **only one pen would offer the horses some natural shade from trees**. No activities can be observed.



*Only one pen offering natural shelter at Biomega blood farm*

## IV. Non-compliance with WOAAH standards

Our observations in Argentina and Uruguay show that conditions of PMSG production do not meet WOAAH standards - despite Argentina and Uruguay being members of the **WOAH, World Organisation for Animal Health**, founded as OIE. Member countries should respect the WOAAH Terrestrial Animal Health Code<sup>41</sup> which sets out standards for the improvement of animal health and welfare worldwide. The WOAAH has not yet issued any specific guidelines for the welfare of horses used for PMSG production, such as a limit for the amount of blood that can be taken or the maximum frequency with which it can be taken. However, according to the WOAAH, Chapter 7.8. on the use of animals in research and education does cover PMSG production.

It is important to note that **WOAH standards are recommendations only**, and not compulsory legal regulations. *“Except for the requirements for notification of listed diseases, the OIE Standards are not compulsory, but a harmonised basis for the Member Countries. **While there is no legal obligation, each OIE Member Country should base its legislation on these Standards where they exist, depending on their national possibilities, plans and priorities**”* (Dr Etienne Bonbon, Advisor to the OIE, 2013). During our most recent investigations, we found once more that many recommendations of the WOAAH Terrestrial Code are not respected, neither in Argentina nor in Uruguay. The conditions at South American blood farms are in violation of the **“Five Freedoms”** (Chapter 7.1.) and of the **“Three Rs”** (Chapter 7.8.) that have been adopted by the WOAAH.

### 1. Non-compliance with the WOAAH Terrestrial Animal Health Code Chapter 7.1.

In Article 7.1.2, the WOAAH defines **guiding principles for animal welfare**. The internationally recognised “Five Freedoms” and “Three Rs” provide valuable guidance in animal welfare and for the use of animals in science in particular. PMSG production in South America is in breach of both these principles.

The documented violations of the “Five Freedoms” are the following:

#### Freedom from hunger, thirst and malnutrition

- **Observations:** Both in Uruguay and Argentina, many horses used for PMSG are **thin to emaciated**. Mainly in Uruguay, the mares are in a poor body condition (BCS 2 or lower). The pastures are low-nutrient and do not satisfy their special physiological needs. The horses do **not receive any feed supplements** (minerals such as iron) **nor any hay** in addition to the short grass in the pasture which is their only source of food. To maintain adequate health, additional feed and supplements would be necessary to compensate for the high blood collections. At the Uruguayan blood farm Biomega, there are **no water troughs** in the holding pens, and the natural water resources in the pastures are dirty and muddy. At the Argentinian blood farm Syntex, we documented in 2018 that the mares did **not have access to water or food** during the abortion process.

#### Freedom from fear and distress

- **Observations:** The video recordings of the blood collection procedure in 2018 show workers beating and mistreating the horses in various ways, both in Uruguay and Argentina. Horses are flight animals; they are **panicked by such violent treatment**. Furthermore, the mares used for PMSG production are semi-wild and not used to human handling. Forcing them into narrow boxes, hitting and shouting at

<sup>41</sup> [Terrestrial Code Online Access - WOAAH - World Organisation for Animal Health](#)

them, and fixating their heads causes a lot of stress and fear. Several **mares reared up, tried to jump out** of the restraint box or **trembled** in the presence of an employee. Some **fell down** because their trembling legs gave in. As documented at Syntex in Argentina in 2022, the holding pens next to the extraction building are **very overcrowded**, which causes stress among the horses. **Biting each other** is an expression of stress, in this case caused by the high density in the pens.

### Freedom from physical and thermal discomfort

- **Observations:** Within our investigations there were many horses expressing physical discomfort. **Dilated nostrils, ears held stiffly and turned backward and partially closed eyes** indicate discomfort and can be caused by **pain or distress**. The mares often appeared exhausted, standing in the pasture with their head lowered, even too weak to graze. The **lack of shelter** in the pen areas at the blood farms and the insufficient or inexistent shade in the pastures leads to thermal discomfort and **possible heat stress** when temperatures rise to 30°C and more.

### Freedom from pain, injury and disease

- **Observations:** During our investigations from 2015 to 2022, we documented numerous injured horses with **untreated wounds**, others with **ruptured tendons or even broken legs**, some walking on three legs or **severely lame**. None of them received veterinary treatment. Both in Argentina and Uruguay, injured and lame horses were **left to their own devices** in huge, unmanageable pastures and in tree plantations **without veterinarian care and supervision**. Several horses observed in 2021/22 had severe open wounds where flies had settled and possibly laid eggs. The danger of a fatal infection without professional treatment is obvious. We assume that **not even emergency killings** are carried out. The abused animals are left in the pastures to die.

### Freedom to express normal patterns of behaviour

- **Observations:** During blood collection, the mares **cannot exhibit their natural behaviour**. Restraining them inside a box represents a severe threat for semi-wild flight animals that are not used to humans and prevents them from acting upon their innate **instinct to flee** and escape the danger. **Fixation is severely stressful for flight animals**. It creates a state of **helplessness** from which they cannot free themselves and is likely to lead to **repetitive traumatisation**.

The violation of the internationally recognised “Three Rs” will be explained in the following.

## 2. Non-compliance with the WOAH Terrestrial Animal Health Code Chapter 7.8.

The WOAH has specific guidelines and advice for the member countries, to formulate regulatory requirements for the use of live animals in research or education. In the context of the Chapter 7.8. of the Terrestrial Code, “research” is defined as follows: “Wherever the term “research” is used, it includes basic and applied research, testing and the **production of biological materials**; education includes teaching and training.”<sup>42</sup>

### Chapter 7.8.2

The scope of Chapter 7.8. defines that “animals to be used for **production of biologicals** and/or humanely killed for harvesting their cells, tissues and organs for scientific purposes **are also covered**.”

<sup>42</sup> Article 7.8. Preamble

- According to this definition, the manufacture of drugs is classified as animal experimentation. Thus, blood collections for the production of PMSG are covered by this definition. The **WOAH confirmed** that PMSG production belongs to Chapter 7.8: *“The relevant OIE standards **applicable for this kind of production are Chapter 7.8 Use of animals in research and education and Chapter 7.1. Introduction to the recommendation for animal welfare of the Terrestrial Animal Health Code. I draw your attention to the Preamble of Chapter 7.8. which defines the term ‘research’ in the context of this chapter as ‘includes the production of biological materials’.** In addition, Chapter 7.1 Introduction to the recommendation for animal welfare should also be considered as this chapter provides the **guiding principles when using animals for any purpose** and is cross-referenced in Chapter 7.8.”* (World Organisation for Animal Health, correspondence with AWF|TSB, 2018).

### Chapters 7.8.3. and 7.8.4.

The WOAH emphasises the **importance of the Three Rs**: *“The internationally accepted tenet, the ‘Three Rs’, comprises the following alternatives: **replacement, reduction and refinement.**”* (Chapter 7.8.3.) and projects must be checked for their *“scientific or educational aims, including consideration of **the relevance of the experiment to human or animal health or welfare, the environment, or the advancement of biological knowledge.**”* (Chapter 7.8.4.)

- According to this principle, animals may only be used in animal experiments if there are no alternative methods available which do not entail the use of live animals. In the case of PMSG, there are **numerous synthetic drugs available** that obtain the same result, namely the induction and synchronisation of oestrus and superovulation in farmed animals. In Germany alone, there are 36 alternative drugs available for different animal species<sup>43</sup>. An Argentinian company recently developed recombinant PMSG, called reCG, which is already marketed in several Latin American countries. Hence, the **indispensability requirement** for animal experiments – in this case for blood collections from pregnant mares – **is not fulfilled**. In addition, **husbandry management practices and zootechnical measures** are available to breeders who prefer to not use any fertility hormones (e.g. animal contact, nutrition, lighting, exercise). It is important to note that PMSG is often used to treat fertility problems which are caused by the system, namely by poor husbandry conditions in intensive farming. PMSG is **not used to cure sick animals** or improve animal welfare, but to **increase efficiency and profits in factory farming**. Organic piglet farms, for example, rely on hormone-free alternative methods with which they control the sows’ oestrus.

*“The oversight framework encompasses both **ethical review of animal use** and considerations related to **animal care and welfare.**” **Ethical considerations** such as the **application of the Three Rs** and a **harm/benefit analysis**; the benefits should be maximised and the harms, in terms of pain and distress, should be minimized.”* (Chapter 7.8.4.)

- Since there are numerous synthetic drugs available that fulfil the same purpose as PMSG, and since good fertility in farmed animals can also be achieved without using any hormones, a second **precondition for animal experiments is not fulfilled** in the case of PMSG production: the **ethical justifiability**. The commercially conducted high-volume blood extraction from pregnant mares is an **unnecessary “animal experiment”**, which must not be authorised or tolerated by the authorities. The harm caused to the pregnant mares in terms of suffering, pain and distress is major and not justified, since the **benefit is only of financial nature** (increase of efficiency in industrial farming). In addition, **harm is not only caused to the blood mares but also to the farmed animals to which PMSG is**

<sup>43</sup> <https://docplayer.org/80595704-Pregnant-mare-serum-gonadotropin-pmsg-produktion-zulassung-und-einsatz.html>

**administered.** In Europe, PMSG is used on large scale in industrial piglet farms. The aim is to get all mother sows pregnant at the same time so that the further processes fit into the industrial cycle: birth, fattening, slaughter. The use of the fertility hormone leads to **oversized litters**, resulting in piglets being born dead or subsequently starving to death, because the mother sow cannot feed them all. The sows have **no time to recover** in between pregnancies.

Furthermore, the methods used to collect mares' blood **do not minimise pain, suffering and distress.** The handling of the mares is rough to brutal and their blood is taken by force. There is also a risk of **lasting harm**, both by the traumatisation of the mares and by the repeated high-volume blood extractions which can lead to a weakened immune system and increase the animals' general susceptibility to infections.

#### Chapter 7.8.6.

This chapter describes the provision of veterinary care, such as clinical responsibilities: "The veterinarian should have the **authority to use appropriate treatment or control measures, including euthanasia** if indicated, and access to appropriate resources, following diagnosis of an animal disease or injury."

- Since our investigations started in 2015, we have **not observed any veterinary care** being administered to blood mares, neither in Argentina nor in Uruguay. **Wounds remained untreated** until they got infested by maggots. **Severely lame horses were moved** over long distances, even though they should not have been walking at all. Mares that were **unable to bear weight on a hind or front leg** still went through the blood extraction process. Injured and sick horses were **left to die** in the pastures **instead of being euthanised.** Often the responsible veterinarian is the owner of the blood farm. It is very questionable whether he is acting in the interest of the animals.

#### Chapter 7.8.9.

The WOAHP describes **good husbandry practices** in ten points, practices which are intended to "enhance the health and welfare of the animals used and contributes to the scientific validity of animal research." The blood farmers violate at least four points in particular:

1. "Cages and pens should be made out of material that can be readily cleaned and decontaminated. Their design should be such that the animals are **unlikely to injure themselves.**"

- Installations and methods of restraint pose a **considerable risk of injury**, such as dangerous gaps where legs can get caught. The **fixation and hyperextension** of the mares' necks and heads during blood collection is also very dangerous for the horses and leads to severe stress, or even panic, as documented in 2018.

2. "Provision should be made for each animal to have **access to feed to satisfy its physiological needs.**"

- The horses have **no food in addition** to the scarce pasture, which is insufficient. Many mares are **thin to emaciated** due to the high blood loss and lack of appropriate food. They should receive feed supplements, e.g. minerals such as iron.

3. "**Uncontaminated potable drinking water** should normally be available at all times."

- The water access we have seen is **partly polluted puddles** in the pastures. The horses **do not have unrestricted access** to clean drinking water at all times. At Biomega blood farm, there are **no water troughs** in the pen area next to the extraction building.

4. “Staff dealing with animals should have a **caring and respectful attitude towards the animals** and be **competent in handling** and restraint.”

- Covert footage recorded in 2018 showed extremely **violent handling** of the horses. The employees abused the mares systematically by **pulling tails and ears** forcefully, **sticking fingers** in eyes, **hitting** them with ropes, wooden and rubber sticks, iron hooks, fists, hands and flags, even on their heads and faces, and **stabbing them in their genitals** with wooden sticks. The documented handling was absolutely incompetent and brutal. The **cannulas were inserted by workers who were unskilled**, did not have any veterinary qualification and pushed them in by force.

## V. Violations of Argentinian legislation

Argentina is a member of the World Organisation for Animal Health (WOAH). The **Terrestrial Animal Health Code**<sup>44</sup> of the WOAH contains recommendations, which however are **not legally binding**. Member states are advised to define their legislation on the basis of the WOAH standards. According to **Chapter 7.8. on the use of animals in research** and education, animals that are to be used for **production of biologicals** are also covered by this chapter. Unlike Uruguay, **Argentina has not yet passed a specific law for the protection of animals used in research**. In 2001, the Argentinian Association for Laboratory Animals (AADEAL), currently the Argentinian Association for the Science and Technology in Laboratory Animals (AACYTAL), presented to the scientific community and parliament a draft law for the care and use of laboratory animals (AADEAL Bulletin Nos. 15 and 16, 2001)<sup>45</sup>. This **draft has not yet been adopted**. In September 2016, the national commission on natural resources and conservation of the human environment presented a draft law for the protection of experimental animals used for scientific and educational purposes<sup>46</sup>. However, this draft has also not yet been adopted.

The **only Argentinian legislation that applies to PMSG production is the animal protection law**, LEY 14.346<sup>47</sup>, which was enacted in October 1954. This law established penalties (imprisonment from fifteen days to one year) for persons who mistreat or cause cruelty to animals. Our video footage, obtained since 2015, has **repeatedly shown serious violations** against this law at the Syntex blood farm in Ayacucho. Therefore, our Argentinian partner organisation, Fundación Franz Weber, filed a criminal complaint against Syntex<sup>48</sup> in November 2019 (see annex I on page 64).

### **Breaches of the animal protection law (LEY 14.346)**

According to Article 2 of Ley 14.346, the following actions are considered **acts of mistreatment**:

#### **Article 2.1.**

**Not feeding domestic or captive animals in sufficient quantity and quality.**

- **Observations:** At Syntex' blood farm in Argentina, we repeatedly found thin to emaciated horses. Repeated high blood loss (approx. 10 litres per week) in combination with insufficient feed is the main reason for the poor body condition of blood mares. After blood collection, the pregnant mares do not receive **any feed supplements (minerals such as iron) nor any hay**, they only have poor quality grass available which is insufficient for their special physiological needs.

#### **Article 2.2.**

**Setting them on to work by means of instruments which, not being for simple stimulation, provoke unnecessary punishment or painful sensations.**

- **Observations:** In 2015 and again in 2018, Syntex' employees used inappropriate instruments, such as **wooden sticks, beams and metal rods with pointed hooks**, to move the frightened horses into the blood extraction boxes. The workers were observed beating the mares on their bodies and heads and

<sup>44</sup> [www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/](http://www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/)

<sup>45</sup> [www.fmed.uba.ar/sites/default/files/2018-04/Reglamento%20UBA\\_0.pdf](http://www.fmed.uba.ar/sites/default/files/2018-04/Reglamento%20UBA_0.pdf)

<sup>46</sup> [www.hcdn.gob.ar/comisiones/permanentes/crnaturales/proyectos/proyecto.jsp?exp=6758-D-2016](http://www.hcdn.gob.ar/comisiones/permanentes/crnaturales/proyectos/proyecto.jsp?exp=6758-D-2016)

<sup>47</sup> <http://servicios.infoleg.gob.ar/infolegInternet/anexos/150000-154999/153011/norma.htm>

<sup>48</sup> [www.lanacion.com.ar/sociedad/crueldad-animal-la-justicia-investiga-la-extraccion-de-sangre-a-yeguas-prenadas-nid18032021/](http://www.lanacion.com.ar/sociedad/crueldad-animal-la-justicia-investiga-la-extraccion-de-sangre-a-yeguas-prenadas-nid18032021/)

**stabbing them in sensitive body parts**, including their bellies and genitals. New footage from 2022 shows that the employees still use **leather whips** to move the mares from the pens into the extraction building. They frequently crack the whips, shout at the horses and frighten the sensitive animals.

### Article 2.3.

Making them work excessive hours **without providing them with adequate rest**, according to the climatic seasons.

- **Observations:** International guidelines<sup>49</sup> recommend that **no more than 10 % to 15 %** of a horse's total blood volume should be extracted **every month**<sup>50</sup>. The mares used for blood collection in Argentina have about 30 litres of blood. At Syntex' blood farm, **33 % of the mares' total blood volume (10 litres) is removed once a week**. They do not have enough resting time between blood collections to allow for blood regeneration. Such an exhausting and debilitating process every week can clearly be seen as "excessive work". Work in this sense does not mean sporting performance or agricultural work, but rather anything extra done that is a **drain on their physical resources**, in this case the drawing of blood in **amounts that far exceed international recommendations**. The mares need energy and adequate nutrition in order for their unborn foals to develop and, on top of this, to regenerate lost blood components. The blood mares at Syntex get neither, they are being required to supply excessive amounts of blood under conditions of stress, fear and inadequate nutrition. They have **no time to recover in between blood collections** and as a result suffer repeated, and totally unacceptable, physical and emotional trauma.

### Article 2.4.

Employing them at work when they are **not in adequate physical condition**.

- **Observations:** In 2022, we observed once again that **severely injured and lame horses are not excluded from the blood collection process**. Mares with old, untreated injuries have visible puncture sites at the jugular vein, which means that their **blood has been drawn** recently. Mares who can **only bear minimum weight** on one leg or even hobble on three legs are moved into the extraction building **instead of being separated** from the group and **treated by a veterinarian**. Video footage of the blood extraction process filmed in 2015 and 2018 showed that blood was also drawn from injured, as well as lame and emaciated mares. Not only are injured mares not treated by a veterinarian, but the inhumane handling during the blood collection process occurs regardless of their injuries.

According to Article 3, these actions are considered **acts of cruelty**:

### Article 3.5.

**Abandoning animals used in experimentation to their own devices**.

- **Observations:** According to WOA standards, PMSG production is classified as an animal experiment (see chapter IV on page 37). At Syntex' blood farm, **seriously injured horses are left to their own devices** in the vast pastures. In a group of seven mares documented in March 2022, five were in very bad condition. Their wounds had obviously been left untreated for a prolonged period of time. They were left in a swampy field without shelter and **without veterinary care**, instead of being separated and treated or euthanised, if necessary.

<sup>49</sup> [Blood sampling: General principles | NC3Rs](#)

<sup>50</sup> <https://www.mdpi.com/2076-2615/11/5/1466/html>

**Article 3.7.**

**Intentionally hurting** and dragging animals, **causing them unnecessary torture or suffering**, or killing them in a spirit of perversity.

- **Observations:** Covert footage recorded in 2015 and again in 2018 showed extremely cruel handling of the mares during blood collection. Syntex' employees **hit the mares using metal rods with pointed hooks, wooden boards, hands and fists**, even when the mares went down on their knees. One employee repeatedly kicked an exhausted mare in the face until she went down. Footage recorded in 2022 of the outside area shows gauchos chasing around the sensitive, frightened horses, **shouting and using leather whips**.

## VI. Violations of Uruguayan legislation

In April 2009, the Uruguayan government implemented Law 18.471 on the protection, welfare and keeping of animals. It does not include specific provisions for animals used in experiments. The animal experiment legislation (Ley 18.611) followed in October 2009. The government expanded Ley 18.611 with Decreto 78/014, called *Regulation of Law 18.611 on procedures for the use of animals in experimentation, teaching and scientific research activities* in April 2014. With this legislation it is made clear that the **production of drugs – and thus of the PMSG hormone – falls under the description of animal experiments** and should comply with the principle of the **internationally accepted Three Rs**. According to the Three Rs principle, animals may only be used in animal experiments if there are no alternative methods available (replacement).

In **June 2017**, **new legislation** was introduced by the Uruguayan Ministry of Livestock, Agriculture and Fisheries (MGAP) in an attempt to **regulate PMSG production and improve animal welfare**: Resolución 215/017 DGSG, which includes a **legally binding animal welfare manual**. In 2018, we criticised this manual due to its significant loopholes and the vague, imprecise and non-binding provisions. The manual **mainly contains recommendations** instead of clear legal requirements and prohibitions. The **most important factors influencing the health and welfare of the mares are not regulated**, namely the volume and frequency of blood extractions as well as inspections to check on the horses' welfare and health. Based on this legislation, the MGAP collects numerous data from the blood farm companies but does **not verify the accuracy and veracity of the data provided**. The new legislation is based on trust and the MGAP relies on the information provided.

Our investigations from 2018 and 2021 show numerous violations against Uruguayan legislation. Improvements to the welfare of the mares would mean less profits for the blood farmers, because less blood would be taken and it would be taken less frequently. The mares would also have to be better cared for, be fed appropriately and receive veterinary treatment, etc. It would not be “profitable” for the blood farmers to comply with the laws and recommendations.

### 1. Breaches of the animal protection law

**Ley 18.471**<sup>51</sup> aims to protect animals in their life and welfare. It covers responsible animal ownership (Art. 9) as well as obligations and rights of animal owners (Art. 12).

- **Article 9 - Responsible animal ownership**

Point A) Every keeper, in any capacity whatsoever, of an animal shall “... keep it in **adequate physical and sanitary conditions, providing it with housing, food and shelter** in appropriate conditions according to its species, **in accordance with the regulations established by the World Organisation for Animal Health (OIE<sup>52</sup>) and the guidelines of the World Society for the Protection of Animals (WSPA).**”

- **Observations:** The appalling conditions the blood mares endure remain unchanged since our last investigations in 2018. The mares are **deliberately kept in a low body condition**. According to a statement of Martin Bocking (owner of Biomega) quoted in a scientific article<sup>53</sup>, the level of PMSG is higher when the mares are in light-to-poor condition. Several mares are **emaciated and/or injured**,

<sup>51</sup> [www.impo.com.uy/bases/leyes/18471-2009](http://www.impo.com.uy/bases/leyes/18471-2009)

<sup>52</sup> OIE is now called WOAH

<sup>53</sup> S. WILSHER, Factors influencing equine chorionic gonadotrophin production in the mare, EQUINE VETERINARY JOURNAL, 2011

**none of them under veterinary supervision or care.** The mares need a lot of energy during pregnancy and in the blood regeneration process, so the **nutrient-poor, short grass is not sufficient for their physiological needs.** Neither the holding pens at Biomega's blood farm nor the pastures further away have sufficient **natural or man-made shelters** to provide protection from the elements for all horses. Furthermore, these conditions are in violation of the “Five Freedoms” and of the “Three Rs”, that have been adopted by the WOA, World Organisation for Animal Health (formerly known as OIE), of which Uruguay is a member (see chapter IV on page 37).

Point E) The owner shall “... provide **treatment appropriate to their species and breed.**”

- **Observations:** The mares used for PMSG production are semi-wild and the only contact they have with humans is during blood collection. Undercover footage from 2018 shows employees **shouting at the horses.** Workers moving the mares into narrow and crowded raceways and the **fixation with ropes** inside the restraint boxes frighten the semi-wild flight animals. The **repeated violent handling** with wooden and rubber sticks as well as hitting their faces and pulling their ears and tails, week after week, frightens the mares more and more, and leads to **repeated traumatisation.** They have no chance to escape this totally inappropriate treatment. It is simply **impossible to take blood** from semi-wild horses **without using force or causing stress and fear.**

- **Article 12 – Obligations and rights of animal owners**

Point A) it is expressly forbidden “to **mistreat or injure animals,** mistreatment being understood as any unjustified action that generates **damage or excessive stress** to an animal, and injury as that which **causes damage or impairment to its physical integrity.** (...)”

- **Observations:** Again and again, horses get injured during the blood extraction. The construction of the wooden restraint boxes poses a **high risk of injuries.** In 2018, **panicked mares got beaten and pushed with force** into the boxes, some fought in defence and fell down or reared up. Injuries which occur during blood collection remain untreated, and injured mares remain in the blood extraction process. In December 2021, we documented a number of injured horses in Biomega's pastures. A grey horse was **severely injured** and had a severe open wound on the left shoulder, flies sitting on it. The high risk of an infection is more than obvious. A **cachectic (BCS 0)** chestnut mare was **severely lame** and could hardly keep on her feet while walking. We assume due to her leg injuries. Others had smaller wounds or were lame. Obviously, **no money is spent on veterinary care.** The exhausted, injured and emaciated mares are left in the pastures to their own devices. Horse skulls and bones show that some of them die.

## 2. Breaches of the animal experiment legislation

**Ley 18.611**<sup>54</sup> defines and regulates the use of animals for experiments.

- **Article 2**

“All activities related to basic sciences, applied sciences, technological and biotechnological development, **production and quality control of drugs, medicines,** food, immunobiologicals, devices and instruments **are considered as experimentation and scientific research activities** (...)”

- The fertility hormone PMSG, obtained from the blood of pregnant mares, is used for industrial animal breeding, mainly for piglet production in Europe. The use of PMSG stimulates and synchronises oestrus in farmed animals and induces superovulation. Blood collection from horses for the

<sup>54</sup> <https://www.impo.com.uy/bases/leyes/18611-2009>

production of this hormone is legally classified as an animal experiment. Thus, mares used for the purpose of PMSG production are covered and protected by this law.

**Decreto 78/014**<sup>55</sup> is the regulation of Ley 18.611 on the procedures for the use of animals in experimental, teaching and scientific research activities.

- **Article 1.1**

“Experimental animal: **any animal covered by Law 18.611** and used for the purposes covered by this decree.”

- Horses used for PMSG production fit the description of experimental animals, thus the **principle of the Three Rs described in this decree must be followed.**

- **Article 1.7 / Article 2 / Article 3**

“The **Three Rs**: designates the internationally accepted philosophy of Russell and Burch's (1959) for the use of animals in research, consisting of:

1.7.1. **Replacement**: use of methods that do not require the use of animals to achieve the scientific objectives.

1.7.2. **Reduction**: methods that enable researchers to obtain comparable levels of information from fewer animals or to obtain more information from the same number of animals.

1.7.3. **Refinement**: methods to prevent, alleviate or minimise known and potential pain, distress, discomfort or lasting harm, and/or to improve the welfare of the animals used or to replace superior animals with those of inferior neurophysiological sensitivity.” (Art. 1.7.)

“The **use of animals** in experimentation, teaching and scientific research activities should only be considered **when there is no other alternative** available and should consider that **animals have an intrinsic value to be respected**, always treating them **as sensitive creatures.**” (Art. 2)

“The breeding and use of animals in experimentation, teaching and scientific research activities throughout the national territory will be governed by the internationally established principles of replacement, reduction and refinement (3 Rs). In the choice of methods, the **mentioned principles must be applied in hierarchical order.** Alternative methods should be used first. When there is no recognized alternative method available, the number of animals to be used should be reduced, also applying experimentation strategies such as the use of in vitro methods or others that can reduce and improve the use of animals.” (Art. 3)

- The **principle of the Three Rs is not taken into account** in PMSG production. According to this principle, animals may only be used in animal experiments if there are no alternative methods available which do not use live animals. When choosing methods, the principle of replacement, reduction and refinement should be implemented through a **strict hierarchy of the requirement to use alternative methods.** In the case of PMSG, there are **numerous synthetic drugs available** that achieve the same result. In Germany alone, more than 36 synthetic alternatives to PMSG are available on the market (replacement). In 2021, an Argentinian company (Zoovet) developed a **synthetic/recombinant PMSG molecule** (reCG, product called Foli-Rec), which is already registered and marketed in several Latin American countries. A scientific study shows very similar results when compared to PMSG. In addition, **husbandry management practices and zotechnical measures** are available to breeders who prefer to not use any fertility hormones (e.g. animal contact, nutrition, lighting, exercise).

<sup>55</sup> <https://www.impo.com.uy/bases/decretos/78-2014>

### **3. Resolución 215/017 DGSG and its animal welfare manual**

#### **3.1. Criticism of the resolution and the manual**

In June 2017, the Uruguayan Ministry of Livestock, Agriculture and Fisheries (MGAP) published a resolution on the collection of blood from horses<sup>56</sup>. The accompanying manual of good animal welfare practices<sup>57</sup> is an integral part of the resolution, and failure to fulfil the provisions of the manual should lead to sanctions. Thus, the Uruguayan manual is of a legal nature, which is different from Europe where manuals contain guidelines that are not legally binding.

Our main criticism points regarding the new resolution and its manual are the following:

- **Self-control of the blood farmers**

The animal welfare **manual does not set clear legal rules** in many cases but rather issue recommendations and is therefore based on trust. The most important factors influencing the health and welfare of the mares – the **blood volume, the frequency of blood extractions and of health inspections** – are **defined by the responsible veterinarian**, who does not have to be an independent or an official veterinarian, but in most cases is the **blood farmer himself or the manager of the farm**. In practice, this means that the **blood farmers control themselves**. Of course, they have a vested interest in taking as much blood as possible.

#### 3.3.4. Blood collection routine

The **volume, frequency and duration of blood collection** must be decided according to the animal's general condition and factors related to its welfare. (...) **The professional veterinarian is responsible for specifying the conditions for blood collection for each animal individually.** (...)

#### 4.4. General health inspection

The animals must be examined at appropriate intervals, in accordance with the production systems and the risks to animal health and welfare. **Health inspections must be carried out at the frequency pre-determined by the acting veterinarian.** (...)

#### 4.5. Body weight

Body weight and changes in body weight are an indication of the animal's metabolic balance and welfare. **Body weight must be recorded according to the pre-determined frequency decided by the acting veterinarian**, or according as required by the competent health authority.

- **Many provisions are not binding due to vague and imprecise descriptions**

To give an example: Rule 7 of the resolution says that “officials of the division for animal health are **entitled to inspect the plants** (...) in order to control compliance of the provisions (...)”. Entitled does **not mean that they have to inspect** the plants. Although this would be a key point to make sure that both the resolution and the manual are taken serious by the blood farmers. In this case, it would make sense to **replace**

<sup>56</sup> DGSG/No 215/017 <https://www.gub.uy/ministerio-ganaderia-agricultura-pesca/institucional/normativa/resolucion-n-215017-dgsg-establezcase-habilitacion-sanitaria-obligatoria>

<sup>57</sup> Manual de buenas prácticas de bienestar animal para equinos destinados a la producción de hemoderivados [https://www.gub.uy/ministerio-ganaderia-agricultura-pesca/sites/ministerio-ganaderia-agricultura-pesca/files/documentos/publicaciones/dgsg\\_no\\_215\\_5\\_06\\_manual\\_de\\_buenas\\_practicas\\_ba\\_plasma\\_0\\_1.pdf](https://www.gub.uy/ministerio-ganaderia-agricultura-pesca/sites/ministerio-ganaderia-agricultura-pesca/files/documentos/publicaciones/dgsg_no_215_5_06_manual_de_buenas_practicas_ba_plasma_0_1.pdf)

“entitled” with “obliged”. In the manual as well, there are several provisions like this: 3.1.4. “**Avoid hitting the animals or any practice that could cause injury, fear or excitement.**” The wording that something should be “avoided” makes it **impossible to impose sanctions**. “It is prohibited to...” would be much more precise and binding, and violations could be sanctioned.

- **Clear provisions instead of recommendations regarding the blood extraction (maximum blood volume and frequency) are missing**

There is **no legal limit for the volume of blood** that can be taken, it is **merely recommended** that between 3 and 6 litres be drawn. Thus, if a blood farmer takes 10 or even 12 litres from a mare, **this practice cannot be sanctioned**. According to EU standards, a maximum of 10 % of the total blood volume (3.3 - 4.5 litres) can be taken from a horse once a month<sup>58</sup>. In Uruguay, the **frequency of blood extractions is not regulated either**, nor is the frequency of inspections of the mares’ welfare and health. The mares have a **high risk of anaemia and other diseases** due to their weakened immune system, and moreover, they are pregnant and risk miscarriage due to the high blood loss.

- **Lack of daily horse inspections and sufficient food**

Although daily inspections of the mares’ condition would be crucial, the manual does not define how often they have to be inspected either in the pastures or at the farm. Moreover, there is **no requirement to supplement their diet with additional nutrients such as iron** during the blood extraction period, even though this would be very important because of the massive and repeated blood loss. Furthermore, there is no requirement to provide additional feed like hay or straw during extreme weather, when there might not be sufficient feed available in the pastures.

- **Systematic abortions allowed**

Foals can still be **aborted until day 105 of pregnancy, which corresponds to the existing practice, the abortion method is not defined** and anaesthesia or the administration of pain killers is not required. Furthermore, it is not required that abortions are to be carried out by a veterinarian:

2.2.6. Pregnant mares must be cared for during gestation to maintain adequate body condition. Induction of **termination of gestation must not occur beyond 15 weeks**. (...) Any intervention in breeding or reproductive management – as in all other aspects of animal management – must seek to avoid or **minimise unnecessary suffering** for the animal.

It has to be noted that **any abortion in PMSG production and the related suffering is unnecessary and unacceptable**. First of all, producing PMSG without aborting the foals is possible. But going even further, PMSG production per se is not necessary, as it does not contribute to human or animal well-being, but merely increases profits in factory farming. PMSG production is particularly cruel, as it means abuse of one species (horses) in order to abuse another species (pigs and other farm animals).

<sup>58</sup> <https://www.nc3rs.org.uk/3rs-resources/blood-sampling/blood-sampling-general-principles>

- **Blood collections carried out by workers instead of veterinarians**

The blood is taken by employees who do **not have veterinary qualifications**:

3.2.2. The staff carrying out the blood collection must be **suitably qualified and trained** in good animal management and welfare practices, including in normal animal behaviour.

- **Blood farmers set criteria for excluding mares from blood collection**

#### 4.6. Body condition

**Body condition must be assessed according to the pre-determined frequency decided by the acting veterinarian.**

The acting veterinarian – thus the **blood farm owner or manager** – is **responsible for assessing the mares' body condition and deciding at which point a mare has to be taken out of the blood extraction process** because of disease, injury, low body condition or weakness. It is up to him to define the criteria for excluding mares from PMSG production:

#### 4.8. Critical productive point criteria

When there is an indicator of pain or discomfort that affects animal welfare, action must be taken to improve the environment to overcome or alleviate the discomfort. The **critical productive point consists of temporarily or permanently withdrawing the animal from reproduction or blood collection, taking steps to restore its welfare and as a last resort, euthanising the animal**, in accordance with Chapter 7.6, Article 7.6.15 of the OIE Terrestrial Animal Health Code (2021). The **critical productive point criteria must be established by the managing veterinarian.**

Our observations have shown that profit is more important for the blood farmers than animal welfare. It is **profitable for them to keep the mares alive and to draw blood even if they are injured, weak and sick.**

- **Contradictories between the resolution and its annex *“Procedure for the authorisation, registration and operation of plants dedicated to collection of blood products from horses”*<sup>59</sup>**

Rule 6 in the resolution says *“about endorsement: The sanitary qualifications must be renewed each year (...) through a certificate issued by an **authorised veterinary practitioner** (...)”*. This is contradictory to what is written in the annex, point 5.3: *“About endorsement: The qualification has to be done by an **audit from the Livestock Service.**”* It is questionable, if the authorised practicing veterinarian, who is the owner or manager of the blood farm, would not issue his own certificate, even though there are possible deficiencies.

These points lead us to the conclusion that the resolution and manual are **insufficient to protect the mares used for PMSG production**, since there are no clearly binding provisions concerning the horses' welfare and health.

<sup>59</sup> [Procedimiento para habilitación, registro y funcionamiento de establecimientos productores de hemoderivados | Ministerio de Ganadería, Agricultura y Pesca \(www.gub.uy\)](#)

### 3.2. Violations of the animal welfare manual

Uruguay's animal welfare manual from 2017 seems to be inadequate and fails to protect the blood mares. Even these insufficient provisions are not complied with or enforced, as documented in 2018 and 2021:

#### 2.2 Animals and management

The animals must be managed and handled to **avoid causing pain and unnecessary discomfort, fear, distress or abnormal behaviour.**

- **Observations:** Covert footage recorded in 2018 showed that the mares were systematically abused during the blood extraction process. They were hit on their heads, pulled by their tails, and cruelly mistreated by having their genitals stabbed with sticks. The mares panicked and fought in defence, certainly due to bad experiences in the past. They showed strong signs of pain and distress when the cannula was inserted into their jugular vein. Even injured horses were processed despite obvious and severe pain.

#### 2.3. Feeding

The horses must be fed an **appropriate diet** to prevent them suffering from thirst, hunger or **undernourishment** and to maintain **adequate body condition.**

##### 2.3.2. General feeding conditions

The animals must have access to a **balanced diet in sufficient quality and quantity to satisfy their physiological needs.** (...) Short-term **exposure to climatic extremes in the pastures** may disrupt the supply of feed that meets the animals' daily physiological needs. In such circumstances, the feed provider must **make sure that food is not restricted for a prolonged period** and that mitigation strategies are implemented if there is a risk of compromising the animals' welfare.

- **Observations:** The mares do not receive any additional feed to what they can find in the pastures and forests, even during periods of extreme weather, when there is not sufficient feed available in the pastures. Large numbers of mares are undernourished; they are thin, emaciated or cachectic. It is plain to see that their diet does not satisfy their special physiological needs. The mares are weakened by the repeated pregnancies and massive blood extractions and should receive additional nutrients such as iron and other minerals.

#### 2.4. Biosecurity and health

**Health care for the animals must be provided so that each individual animal remains healthy and free from pain, injury or illness.**

- **Observations:** The mares are left to fend for themselves in vast pastures and in tree plantations. Many are injured, sick, weak or emaciated, and suffering animals are left to die instead of being treated or euthanised. Health care and supervision are obviously insufficient or non-existent. Effective supervision of the mares is nearly impossible, as they are kept hidden in large forest pastures or bushland. Daily inspections would be very time-consuming: finding and checking these shy animals, who only regard humans as a danger, is very difficult. Furthermore, blood is taken regardless of the mares' condition, even if they are walking on three legs or severely emaciated, and their condition remains untreated.

### 2.4.3. Zoosanitary management

The animal hands must be **capable of recognising signs of poor health or distress**, such as reduced water or feed intake, changes in body weight and condition, behaviour changes or abnormal physical appearance.

Animals with the **highest risk of disease or distress will require more frequent inspection** by the hands. If they are unable to **rectify the causes of illness or distress**, or if they suspect the presence of a notifiable disease, they must **consult the veterinarian in charge**.

- **Observations:** The employees are not able to detect injured, sick or weak animals among the hundreds or thousands of horses in fields and forests – if they carry out inspections at all. It is important to note that ALL blood mares have an elevated risk of disease (e.g. anaemia), because of the massive and repeated blood loss, and should therefore be inspected very frequently, preferably on a daily basis. From what we saw in 2018, the employees do not take any action when seriously injured or emaciated mares go through the blood extraction process; they do not even notify the veterinarian in charge (the blood farmer or manager). After blood extraction, the suffering mares are released back into the pastures together with all the others, as again documented in 2021.

### 2.4.4. Good euthanasia practices

If an animal is injured or sick, the **veterinarian must quickly diagnose the problem** to determine whether the animal should be **treated or killed, in accordance with good euthanasia practices**. After treatment has been attempted and following the decision that it will not recover, the animal must be euthanized in accordance with Chapter 7.6, Article 7.6.15 of the WOAH Terrestrial Animal Health Code (2021). The **reasons for euthanasia** may include:

- a. **severe emaciation, extreme weakness, inability to move or risk that the animal cannot get to its feet;**
- d. **severe and debilitating pain;**
- e. **catastrophic and/or disabling injury;**

- **Observations:** Blood mares are kept in vast pastures and forests, without veterinary supervision. In case of weakness, disease, injury or complications arising from abortion, they are left to die instead of being treated or humanely killed. Evidence obtained during repeated investigations since 2015 shows that severely emaciated/cachectic, seriously injured and suffering mares are NOT euthanised, not in the pastures nor at the farm.

### 3.1.2. Staff

The staff involved in this activity must have the requisite **training to ensure good animal welfare practices**.

- **Observations:** As documented by covert cameras in 2018, the members of staff handling the horses were obviously unskilled. The handling was extremely unprofessional and cruel. It was very unlikely that the employees had ever received training in good animal welfare practices, but if they had, their behaviour would even be more inexcusable. Regardless of whether the employees had received training or not, in practice, when they did not feel that they were being observed by official visitors, they acted highly unprofessionally. They systematically abused the mares when moving them, when taking their blood and during other activities. New footage of the activities happening outside the extraction building, obtained in 2021, shows that the handling of the mares is still incompetent and unprofessional, with employees running after the horses and throwing flags at them.

### 3.1.3 Facilities

**All facilities must be designed, built, maintained and operated to minimise risk to the welfare of the animals and to ensure the safety of staff. (...)**

It is particularly important to pay attention to inadequate facilities, since they create the potential for harm to both animals and staff. (...)

First and foremost, it is essential that the pens, passageways and doors allow the animals to move smoothly. Avoid accesses that are uncomfortable or that have steps, **sharp bends** and/or steep slopes that can cause the animals to slip and/or fall. The design should take into account the latest knowledge in the field, preferably based on curved and diagonal lines so that the animals can move easily and continuously through the sector, taking advantage of their gregarious nature. (...)

The **health of the horse's feet must be a priority** due to the central importance of their function and their impact on the animal's health.

- **Observations:** The restraint boxes, which are not padded, pose a high risk of injury as do the ropes and halters used to tie the horses down. The boxes are open at the back, which is very dangerous for the mares standing behind, next in line. Furthermore, there are sharp bends between the raceway and the restraint boxes, which add to the mares' reluctance to enter the boxes.

Hidden footage from 2018 showed that mares fought in defence, reared up and their legs got caught over the side wall. Other mares collapsed inside the box, their heads pulled up by the short ropes and their necks overstretched. It can be assumed that many injuries seen on mares in the pastures have occurred during the blood extraction due to the defensive movements of the mares while in the restraint boxes. The lack of good restraint also poses a risk of injury for the employees handling the horses.

Hoof care is insufficient or non-existent. Horses with neglected and overgrown hooves are observed frequently.

#### 3.1.4. Working with the animals

**Prods or other types of stimulators that are sharp or cause pain may not be used under any circumstances.**

Animals should be **herded with flags** or similar. They can also be guided using slight sounds, avoiding excessive, piercing or sudden noise.

Operators can work from behind the horses with a raised flag to facilitate movement, (...) Guide the animals slowly to prevent slips and falls. **Avoid hitting the animals or any practice that could cause injury, fear or excitement.**

- **Observations:** Long wooden sticks, short pointed sticks, ropes and rubber strings, which have a solid object attached, were used to force the mares into the restraint boxes, as documented in 2018. They were systematically hit and poked with these objects, including on their heads, and stabbed into their genitals, which is extremely painful. Flags were also used to hit the mares rather than simply guide them. The cruel handling causes fear and panic and poses a risk of injuries.

#### 3.1.5. Containment site

Restraint of the animal for blood collection must be **designed to be safe** for the individual animal, the other animals and the operators. Animals must be **led into the containment or restraint site in flowing and calm conditions, using methods such as flags**. Shouting and electric prods or any other stimuli must be prohibited.

Containment systems and doors must be **maintained so that moving parts work properly**.

- **Observations from 2018:** Panicked mares were moved into restraint boxes with brute force. If flags were used, it was to hit the mares. Stimulus/pain was intentionally applied to the sensitive genitals. The methods of restraint posed a high risk of injury, both for the horses and the staff. Furthermore, the facilities were not maintained in good working order. Several doors did not close properly and opened under the pressure of struggling mares, subsequently hitting hard against other mares standing in the raceway and frightening them.

### 3.1.6. Thermal environment during the procedure

The blood collection facilities must have a **source of water, shade**, indoor ventilation for areas under roof and be appropriate for an animal density that prevents the risk of heat stress.

- **Observations:** In the pen area next to the extraction building, there is no man-made shelter. Most of the pens offer absolutely no protection from sun and rain, and moreover, no water troughs are available in the pen area. Only one pen offers some natural shade from trees.

### 3.2.2. Staff

Blood collection must be carried out by **qualified, trained personnel, in stress-free conditions without causing preventable pain or suffering to the animals**. The staff carrying out the blood collection must be suitably qualified and trained in good animal management and welfare practices, including in normal animal behaviour.

- **Observations from 2018:** Blood was taken by employees who did not have veterinary qualifications and were unskilled to carry out this procedure. They regularly had difficulties finding the jugular vein, and the attempts took up to several minutes, during which the panicked mares fought in defence. The employees pushed the cannula in by force, causing pain reactions.

### 3.2.3 Restraint

Animals must be **brought into the containment site in flowing and calm conditions, using methods such as flags**. Shouting and electric prods or any other stimuli must be prohibited.

Animals must not be placed in the containment site until the person responsible for blood collection is ready to carry out the procedure. **Animals must be in the containment site for as short a period as possible. Only one animal must be in the containment site at any one time.**

- **Observations from 2018:** As already described above, the mares were not guided with flags, but were forced into the restraint boxes with extremely violent methods. They were not kept in the restraint boxes for as short a period as possible, but sometimes had to wait for quite some time until their blood was taken or until they were released after blood extraction. Furthermore, the mares were moved into the restraint boxes in pairs. The wooden divider between the two mares was not used, posing a considerable risk for injury, as the mares fought in defense and kicked. Sometimes foals were moved into restraint boxes together with two mares, which poses a high risk of them being injured or trampled to death.

### 3.3.4. Blood collection routine

The **volume, frequency and duration of blood collection must be decided according to the animal's general condition** and factors related to its welfare. All situations that could lead to animal suffering or illness must be avoided. The professional **veterinarian is responsible for specifying the conditions for blood collection for each animal individually**. (...)

The number and **volume of collections from each animal must be recorded on each occasion**.

- **Observations from 2018:** The employees did not check the ear tag numbers of the mares, and thus it was clear that no-one established or supervised the volume of blood drawn from each mare individually. Thus, the amount of blood extracted was not adjusted for each individual mare depending on her condition. Furthermore, the employees drawing the blood did not take notes.

### 4.3. Behavioural assessment

The **animals' behaviour must be assessed** according to a pre-determined frequency and method **in both the pasture and the facilities**. (...) Factors **assessed include indicators of stress, fear or suffering** based on the animal's sensory condition and body language, and the movements of ears, eyes, nostrils and mouth. Any

change in behaviour must be recorded and the animal in question identified for **remedial measures to overcome the difficulty**.

- **Observations:** At no time during seven years of investigation have staff been observed checking on the mares in the pastures or tree plantations. Sick, injured and weak horses are left untreated, showing clear signs of pain as for example lameness. This neglect leads to severe animal suffering and even results in horses dying.

#### 4.4. General health inspection

The animals **must be examined at appropriate intervals**, in accordance with the production systems and the risks to animal health and welfare. Health inspections must be carried out at the frequency pre-determined by the acting veterinarian. (...)

The **general health inspection** must be performed by the **veterinary observation of each animal**, considering aspects of health such as posture, attitude, senses, changes in respiratory, digestive, reproductive or nervous systems, **changes in skin, hair condition**, mucous membrane condition, **wounds, limping**, etc.

If the animal shows any sign of change during the health inspection, a more detailed diagnosis must be made and the **appropriate treatment provided**, also taking into consideration the end point criterion indicated below.

- **Observations:** The frequency and quality of veterinary health inspections are obviously insufficient, if existing at all, considering the large numbers of seriously injured, lame, sick and weak mares found in the pastures, all left without veterinary treatment.

#### 4.6. Body condition

Body condition must be assessed according to the pre-determined frequency decided by the acting veterinarian. (...) Body condition is evaluated on six-point scale from 0 to 5, where 0 is emaciated and 5 is obese (see Appendix). **Under no circumstances may blood be collected from any animal whose body condition is classified as moderate or 2 or even less on this scale.**

- **Observations:** On the scale referred to in this manual, the score 2 means “moderate” and the mares’ ribs and hip bones are slightly visible (see annex II on page 71). Video footage recorded in 2018 during blood collection showed that a large number of mares going through the blood extraction process had a body condition score from 0 to 2, thus between “very poor” and “moderate”. According to the present manual, these mares should be excluded from blood extraction. As documented in 2021, about 30-50 % of the mares in Biomega’s pastures have a body condition score of 2 or less.

#### 4.7. Limping

Horses must be examined stationary and in motion to identify potential problems with their limbs. Each animal must be examined according to a pre-determined frequency to prevent any suffering and to protect the animal's functions.

When there is a **change in its movement that indicates pain or suffering, the animal must be diagnosed and the appropriate treatment provided**. An animal that shows any sign of **moderate or severe limping**, for any reason whatsoever, **must be withdrawn from the blood collection routine to address the situation**.

- **Observations:** Large numbers of lame mares are found on blood farm pastures, left without veterinary treatment. Lameness means that the horse is experiencing pain and may be the result of several clinical conditions, which need to be diagnosed and treated. Video footage recorded at Biomega in 2018 showed several lame mares going through the blood extraction process. One mare was seriously injured and unable to bear any weight on one hind leg. She kept lifting it up, indicating strong pain. An employee looked at the injury but did not take any action. The mare was cruelly mistreated by having

her genitals stabbed with a bamboo stick and had her blood taken. The injury obviously remained untreated, as she was released into the pasture together with all the other horses. In 2021, we found a chestnut mare on the side of the road, belonging to Biomega as shown by her ear tag, who could hardly keep on her feet while walking due to her leg injuries.

### 3.3. Data collected by the Ministry of Livestock, Agriculture and Fisheries (MGAP)

According to the new resolution, the blood farmers and employees have to record and keep available a lot of information: weight and body condition of each mare at the beginning and the end of the blood extraction period; euthanasia performed; length of the extraction period, frequency, quantity and volume of extraction; gestational age of abortions and applied method; etc. At the end of the extraction period, all documentation with the records about extracted volumes and monitoring of animal welfare must be submitted to the veterinary services in charge. **While the government does collect a lot of data, it does not provide supervision of the activities carried out on blood farms nor of the horses in the pastures.** The government apparently relies on the information provided.

The location of the blood farms and the number of horses has to be reported only once a year, and the exact number of animals does not have to be provided, only the “**estimated animal population** and animal density” (Rule 2i of the resolution). This means that within a year, the blood farmer can move the production from one place to another without informing the authorities. The mares are also moved around from one pasture to another. Only a small number are kept at the blood farm and the rest are on rented land further away, mostly in forest plantations. The mares’ numbers change significantly throughout the year, with approximately 30 % of the mares dying in the pastures or sent for slaughter each year. **In the EU, the change of production site or the death of horses would have to be reported to the authorities in a timely manner.**

In December 2021, we contacted the MGAP with a **request under the Freedom of Information Act**. We submitted questions to the Ministry referring to the documentation which must be recorded by the blood collecting establishments and submitted to the competent authorities at the end of the extraction period, according to Resolución DGSG/N° 215/017 and its attached manuals.

According to the information we received, **only one horse was euthanised, in one of the three establishments** (in three years). This confirms our observations that **euthanasia is generally not performed**. We observed at least two severely injured horses at Biomega blood farm within five days of investigation in 2021, these horses should have immediately been emergency killed. We also found several horse skulls without bullet holes in the pastures, which shows that horses are left to die without assistance. Furthermore, the **reported number of dead mares cannot be correct**. One blood farm reported only eight dead horses per year, the other two did not report any deaths. The reported causes of death are intoxication from plants and old age. The mares certainly do not die of old age in the fields. Blood mares only stay three to four years in the process and never get old. A former employee of a blood farm estimated that 25-30 % of the mares die during the blood extraction season. He witnessed severely injured horses that were left to die. Another eyewitness stated that the mares are sold for slaughter when they no longer get pregnant. According to the data we received, the mares in the fields and forests are **inspected every day**. This is very unlikely and **should also be questioned by the authorities**. If this was true, why would we find so many injured and dead horses? A grey horse had a severe open wound, which happened days before we saw it, so either the employees refused to treat the horse, or they had not inspected the horses’ condition for days.

Our main criticism is the **lack of physical supervision of blood farms** by the authorities. Detailed data analysis should ring alarm bells, as **some of the data submitted may not be correct**. It is obvious that the blood farmers put more emphasis on the economic return than on the welfare of the mares. It is also highly questionable that the government tacitly accepts that the responsible and supervising veterinarians are also the owners or managers of the blood farms. By collecting data alone, the government **cannot ensure good animal welfare practices**.

However, it would not be sufficient to only monitor the blood extraction process, and it is nearly impossible to monitor the mares. They are kept in large pastures all over the country, where they are left without veterinary supervision and care, although many are weak, sick or injured from the blood extraction. Mares die in the fields without euthanasia provided.

In our eyes, the resolution as well as its animal welfare manual are an **unsuccessful attempt to get to grips** with the problem. We are of the opinion that the blood business is not controllable.

## VII. Non-compliance with applicable EU legislation

Before our first publication about blood farms in 2015, there had been no controls whatsoever by Argentinian and Uruguayan authorities. As a reaction to the criticism from Europe, the Uruguayan ministry published a legally binding manual of good animal welfare practices that are to apply during the production of PMSG, however there are considerable loopholes and the manual is insufficient and inadequate to protect blood mares (see chapter VI on page 48). Argentina has not yet introduced any legal requirements for PMSG production, and thus there is **no legal basis for official controls or sanctions**. In both countries, blood farmers continue to extract as much blood as possible from pregnant mares during the short period when they produce PMSG, since there is **no legal limit on the volume of blood taken or the frequency**. The foals continue to be systematically aborted, since they are an unwanted by-product of PMSG production. The **Uruguayan manual allows the abortion until day 105 of pregnancy**, without defining the abortion method. Such a late pregnancy interruption, be it manually or medicinally, holds a high risk for the mares' health and life.

The **European Union imports PMSG** from both Argentina and Uruguay but it does **not set any animal welfare standards** that must apply during its production. There is an EU legislation that applies to the import of horse blood – Regulation (EU) 142/2011 – but it only lays down animal health rules and does not include specific animal welfare requirements, such as a maximum limit for the blood volume taken, a maximum frequency of blood extractions or regular inspection of the mares.

Furthermore, manufacturers of medicines intended for the EU market must **comply with EU-defined Good Manufacturing Practice (GMP)**. To this day, the GMP does not include any animal welfare standards. Regulation (EU) 2019/6 on veterinary medicinal products adopted in 2019<sup>60</sup> indicates that **animal welfare should be included in the revised GMP by 2025**<sup>61</sup>. As the European Commission will define the standards for the revised GMP, it should promote high animal welfare requirements to ensure no more cruelly obtained PMSG enters the EU market.

### **Non-compliance with Regulation (EU) No 142/2011 laying down health rules as regards animal by-products and derived products not intended for human consumption**

Commission Regulation (EU) No 142/2011 on animal by-products formulates a number of animal health requirements for the production within and imports into the Union of blood and blood products of horses<sup>62</sup>.

#### **Annex XIV, Chapter II, Section 3:**

##### **Imports of blood and blood products from equidae**

The following requirements shall apply to the import of blood and blood products from equidae:

1. The blood must comply with the conditions set out in point 1(a) of Chapter IV of Annex XIII and must be collected under veterinary supervision either in:
  - (a) slaughterhouses [...]

<sup>60</sup> <https://eur-lex.europa.eu/eli/reg/2019/6/oj>

<sup>61</sup> "The good manufacturing practice for the purpose of this Regulation should take into account the Union and international standards of animal welfare when active substances are prepared from animals." (Recital 68 of Regulation (EU) 2019/6)

<sup>62</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32011R0142>

- (b) facilities approved and furnished with a veterinary approval number and **supervised by the competent authority of the third country** for the purpose of collecting blood from equidae for the production of blood products for purposes other than feeding.
2. The blood products must comply with the conditions set out in point 2 of Chapter IV of Annex XIII. In addition, the blood products referred to in point 2(b)(i) of Chapter IV of Annex XIII must be produced from **blood collected from equidae which have been kept for a period of at least three months, or since birth if less than three months old, prior to the date of collection on holdings under veterinary supervision** in the third country of collection which during that period and the period of blood collection has been free of: [...]
- **Observations:** From the findings of repeated investigations since 2015, it seems clear that in Uruguay and Argentina there is **no effective supervision by the competent authorities** that approved the establishments that export PMSG to the EU. In fact, in Argentina there is still no specific legislation for PMSG production and hence no basis for official controls. In Uruguay, there are no strong legal requirements, and even the insufficient provisions of the animal welfare manual are not enforced. Furthermore, the Uruguayan government collects a lot of data from blood farmers, but it does not supervise the activities carried out on blood farms nor verify the data provided by the farmers (see chapter VI on page 56).
- There is obviously **no veterinary supervision of the horses** considering the large number of **seriously injured, sick and weak mares** found in the pastures. Horses die in blood farm pastures without euthanasia provided. In both countries, **blood is taken regardless of the mares' condition**, even if they are walking on three legs or severely emaciated, and their condition remains untreated. According to the present EU Regulation, the mares should be under veterinary supervision starting at least three months before the blood extraction. Therefore, the blood farms and the European import companies are violating the applicable European legislation.

## VIII. Conclusion

Our international animal welfare coalition, formed by Animal Welfare Foundation (Germany), Tierschutzbund Zürich (Switzerland), Anima (Denmark), Animal Justice (Canada), Animales sin Hogar (Uruguay), Animals' Angels (USA), Dier&Recht (Netherlands), DSPCA (Ireland), Fundación Franz Weber (Spain/Argentina), Green REV Institute (Poland), Italian Horse Protection IHP (Italy), Varkens in Nood (Netherlands), Welfarm (France), and supported by Eurogroup for Animals (Brussels), urgently calls upon the European Commission to take all necessary measures to stop the import, production and use of the fertility hormone PMSG in the European Union.

The new investigations carried out in Uruguay and Argentina in 2021 and 2022 clearly show that seven years after our first publication about blood farms in South America<sup>63</sup>, pregnant mares continue to be abused and to suffer both physical and emotional trauma, and foals are still systematically aborted. Horses suffer needlessly for the production of a fertility hormone which could easily be replaced by alternative methods. The production conditions for the mares have not improved since 2015, despite the legally binding manual of good animal welfare practices for blood production introduced by the Uruguayan ministry in June 2017, despite monitoring and auditing by the Argentinian veterinary authority SENASA and despite new manuals of the industry. The animal welfare concerns in connection with blood collection from semi-wild pregnant mares in South America remain the same:

- Abortions carried out systematically around day 110 of pregnancy, posing a high health risk for the mares
- High volume and frequency of blood extractions in combination with poor supply of food lead to emaciation and weakness
- Sick, injured and lame horses left untreated
- Severely injured and emaciated mares still used for blood collection
- No veterinary supervision or care observed
- Horses dying in the pastures without euthanasia provided
- Lack of man-made or natural shelter and dry resting areas
- Low-nutrient pastures with scrub and dry residual grass
- No additional feed or dietary supplements such as minerals after blood collections
- Intentional malnutrition of the mares for increased PMSG levels in the blood
- No fresh water sources in many pastures
- Unprofessional handling of horses
- Untamed mares exhibiting signs of stress, fear or panic when being handled

At the Uruguayan company Biomega, the only visible change are the tarpaulins erected around the blood farm, apparently with the intention of avoiding observation. Most of the horses are still in a low body condition, which is the intention of Biomega's owner Martin Bocking so that he can harvest more PMSG<sup>64</sup>. At the Argentinian blood farm Syntex, the horses are kept in vast pastures without any weather protection. Seriously injured mares are left there without veterinary care. Puncture marks on their necks show that their

<sup>63</sup> [www.sueddeutsche.de/wirtschaft/handel-grausamer-bluttransfer-1.2668283](http://www.sueddeutsche.de/wirtschaft/handel-grausamer-bluttransfer-1.2668283)

<sup>64</sup> "Where considerable differences in feed availability and intake occur in the extensively managed groups of mares between years, overall **PMSG production is invariably higher in leaner years when the mares are in light-to-poor condition in early gestation**" (G. Maruri and M. Bocking, personal communication) in: S. Wilsher, Factors influencing equine chorionic gonadotrophin production in the mare, Equine vet. J. (2011)

blood is still taken. Both at Syntex and Biomega, emaciated and severely lame mares are still not spared from blood extraction. According to the Uruguayan manual from 2017, such mares should be excluded from blood collection. Syntex claims to regulate the care and use of animals in its own animal welfare manual, which was written in 2013 and updated in 2017. However, the manual obviously fails to ensure the welfare of the mares used in PMSG production, as shown by our recent observations at Syntex.

According to the EU Regulation 142/2011 which lays down health rules regarding animal by-products and applies to the import of horse blood into the European Union, the horses should be under veterinary supervision starting at least three months before the blood collection. This is obviously not the case at blood farms in Uruguay and Argentina. Therefore, the blood farms and the European import companies are violating European legislation.

The conditions of PMSG production are also in violation of the “Five Freedoms” and of the “Three Rs” that have been adopted by the WOAAH (former OIE), World Organisation for Animal Health, of which Argentina and Uruguay are members. According to the WOAAH, animals used for the production of biologicals are also covered by Chapter 7.8. “Use of animals in research and education” of the Terrestrial Animal Health Code<sup>65</sup>. According to the internationally accepted principle of the “Three Rs”, animals should only be used when necessary, where there are no alternative methods available that do not use live animals (replacement). In the case of PMSG, there are numerous alternatives available to breeders for the induction and synchronisation of oestrus in farmed animals, and their efficacy is very similar to PMSG according to studies and practical experience. In Germany alone, there are 36 synthetic hormones available for different animal species and indications. Synchronisation of cycles is also possible with hormone-free methods, so-called zootechnical measures, such as optimal nutrition and lighting, contact with sows in oestrus and boar contact. Such measures are, for instance, used in organic farming, where the systematic use of fertility hormones is prohibited.

PMSG production in Uruguay and Argentina is not only in breach of applicable EU legislation and of WOAAH standards, but also of national legislation. Blood farms in Uruguay violate several articles of Law 18.471 (animal protection law), Law 18.611 (animal experimentation act) and of Resolution 215/017 (legislation on blood collection from horses) which includes a legally binding animal welfare manual. Unlike Uruguay, Argentina has not yet passed a specific legislation for the protection of animals used for experimentation or for blood production. However, the Argentinian blood farm Syntex is in breach of Law 14.346 (animal protection law), which was highlighted in a criminal complaint filed by the Argentinian NGO Fundación Franz Weber in 2019<sup>66</sup>.

In our opinion, based on the years of observations, the production conditions of PMSG in South America cannot be improved to meet acceptable standards of animal welfare, be transparent or be controllable. The blood farmers own thousands of mares and it is almost impossible to tame and train them all so that their blood could be taken without violence. It is simply impossible to take blood from untamed horses without causing stress and fear and without using force. Furthermore, because the valuable hormone can only be found in the mares’ blood in approximately three months of their pregnancy, too much blood is taken from them and it is taken too often due to the limited period. In addition, the fact that the mares are kept in groups hidden in vast fields throughout the country makes effective supervision of the animals difficult at best. Obviously, the necessary training of the mares, veterinary supervision and care, allowing pregnancies to go

<sup>65</sup> *Terrestrial Animal Health Code*, Chapter 7.8. [www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/?id=169&L=1&htmlfile=chapitre\\_aw\\_research\\_education.htm](http://www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/?id=169&L=1&htmlfile=chapitre_aw_research_education.htm)

<sup>66</sup> [www.lanacion.com.ar/sociedad/crueldad-animal-la-justicia-investiga-la-extraccion-de-sangre-a-yeguas-prenadas-nid18032021/](http://www.lanacion.com.ar/sociedad/crueldad-animal-la-justicia-investiga-la-extraccion-de-sangre-a-yeguas-prenadas-nid18032021/)

full term and then raising the foals, and a reduction of the volume and frequency of blood extractions would make this business far less profitable.

In addition to raising serious welfare concerns with regard to horses, the use of PMSG also has a negative impact on the welfare of farmed animals. Indeed, one animal species is used to exploit another. The mares' hormone is used to boost productivity and efficiency in industrial farming. It promotes unnatural rates of reproduction in farmed animals and gives them no time to recover in between pregnancies, which can lead to severe health issues and early slaughter as a consequence. PMSG also induces superovulation, which results in larger litter sizes in pigs. There are often more piglets than a sow has teats. The greater the number of piglets, the higher the risk of animals being born weak and malnourished. Increased litter size is clearly associated with increased piglet mortality<sup>67</sup>. Furthermore, PMSG can also be used for induction of puberty in young sows, but early pregnancy shortens pubertal development and usually leads to early infertility and slaughter. Considering these negative effects of PMSG on farmed animals, its use appears not to be compliant with Council Directive 98/58/EC on the protection of animals kept for farming purposes. The Directive states that *“natural or artificial breeding or breeding procedures which cause or are likely to cause suffering or injury to any of the animals concerned must not be practised.”*

In Switzerland, the farmers' association representing almost 50,000 farmers has recently made the decision to prohibit the use of PMSG for all animal species<sup>68</sup>. This voluntary ban on the use of PMSG by the industry proves that animal breeding without PMSG is indeed possible. In Denmark, a representative of the pig industry recently stated that farmers would not miss PMSG products much if they were taken off the market<sup>69</sup>.

On 20<sup>th</sup> October 2021, the European Parliament adopted by a large majority a Resolution on a *Farm to Fork Strategy* for a fair, healthy and environmentally-friendly food system<sup>70</sup>. It includes a paragraph on PMSG:

*The European Parliament,*

130. Recalls that **structural animal experiments that are not indispensable** should have no place in the food chain as Directive 2010/63/EU prescribes the replacement and reduction of the use of animals in procedures; **calls on the Commission and Member States to stop the import and domestic production of Pregnant Mare Serum Gonadotropin (PMSG)**, which is extracted from the blood of pregnant horses that are systematically impregnated and exposed to blood collections, involving health and welfare issues;

This call represents the official position of the European Parliament, even if it is not legally binding on the European Commission. Our recent investigations in South America show that it is high time for the Commission to act and follow the Parliament's request. Industrial farming systems which rely on the use of PMSG go against the objectives of the *European Green Deal* and the *Farm to Fork Strategy*, which aim to move towards more sustainable food systems, reduce greenhouse gas emissions and improve animal welfare. PMSG is a cruelly produced hormone, and it is not indispensable since there are numerous alternative methods available to breeders, including zootechnical measures and improvement of animal husbandry.

<sup>67</sup> [www.researchgate.net/publication/236961159\\_The\\_welfare\\_implications\\_of\\_large\\_litter\\_size\\_in\\_the\\_domestic\\_pig\\_I\\_Biologica\\_factors](https://www.researchgate.net/publication/236961159_The_welfare_implications_of_large_litter_size_in_the_domestic_pig_I_Biologica_factors)

<sup>68</sup> [www.sbv-usp.ch/de/problematisches-medikament-aus-schweizer-tierhaltung-verbant/](https://www.sbv-usp.ch/de/problematisches-medikament-aus-schweizer-tierhaltung-verbant/)

<sup>69</sup> [www.bt.dk/nyheder/heste-mishandles-i-chokerende-video-fra-islandske-blodfarme](https://www.bt.dk/nyheder/heste-mishandles-i-chokerende-video-fra-islandske-blodfarme)

<sup>70</sup> EP resolution: [www.europarl.europa.eu/doceo/document/TA-9-2021-0425\\_EN.html](https://www.europarl.europa.eu/doceo/document/TA-9-2021-0425_EN.html)

Several EU Member States, such as Austria, Denmark, Poland and the Netherlands, have already expressed that they support the Parliament's call for an EU-wide import and production ban and/or envisage a national ban on PMSG. The Dutch parliament recently adopted a motion calling for a European ban on PMSG production and import as soon as possible<sup>71</sup>.

There are currently several regulatory opportunities at EU level which would allow the European Commission to take action:

1. The Commission should use the opportunity created by the current revision of the EU animal welfare legislation, by the end of 2023, to include provisions explicitly prohibiting the production, import and use of PMSG.
2. The new EU Regulation 2019/6 on veterinary medicinal products indicates that animal welfare should be included in the Good Manufacturing Practice (GMP), which exporters in third countries have to comply with. As the Commission defines the standards for the revised GMP, it should ensure that high animal welfare standards are included so that no more cruelly obtained PMSG enters the EU market. The deadline for the Commission to amend the GMP is January 2025, but the Commission can and should do so earlier.
3. The PMSG monograph was suspended from the European Pharmacopoeia in July 2022<sup>72</sup>. The Commission should press for a definitive cancellation of the PMSG monograph, which would make marketing authorisation of PMSG products within the EU difficult.

**We urge the European Commission to follow through with the call made by the European Parliament and to take the opportunity of the revision of the EU animal welfare legislation and of the Good Manufacturing Practice (GMP) in order to finally end PMSG import, production and use in the European Union.**

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<sup>71</sup> [Tweede Kamer: snel verbod op PMSG-hormoon gemaakt uit bloed van zwangere paarden - Europa - Partij voor de Dieren](#)

<sup>72</sup> [www.edqm.eu/en/-/ph.-eur.-commission-suspends-the-monograph-on-gonadotrophin-equine-serum-for-veterinary-use](http://www.edqm.eu/en/-/ph.-eur.-commission-suspends-the-monograph-on-gonadotrophin-equine-serum-for-veterinary-use)

## Annex I

### Summary of the legal proceedings against Syntex S.A. in Argentina

I, the undersigned, Dr. Leonardo Carlos Barnabá, a public lawyer registered in V. XII F 13 of the C.A.Q. [Quilmes Bar Association] and in V 132 F 508 of the C.P.A.C.F. [Bar Association of the Federal Capital], hereby submit a report regarding the criminal complaint filed against the company Syntex S.A., located in the Argentine city of Ayacucho, province of Buenos Aires, which engages in the so-called "bleeding of mares".

By virtue of the work carried out by the Animal Welfare Foundation and the Fundación Franz Weber, international organizations dedicated to the fight against all forms of animal mistreatment, a very important volume of information was obtained regarding the activity that this company carries out. This information is indisputable proof of the harm caused to the animals in terms of their sentience (scientifically verifiable) and includes documentation showing the state of the animals in Syntex' own property.

Thus, a criminal complaint was formally filed on 19 November 2022 against the company, which was drawn with the number PP-03-00-005141-19-00 in the Judicial Department of Dolores and was accompanied by photographs of the property and its geographical characteristics, as well as the complete investigation report carried out in 2018 by the Animal Welfare Foundation in collaboration with 12 other international organisations. In the complaint it is explained, both in general and in detail, the cruel activities carried out by Syntex S.A. on the animals along with other scientific information regarding these activities, journalistic notes on the subject, reports of four Argentine veterinarians and Dr. Axel Wehrend as well as an important number of videos obtained anonymously from inside the building, where the form of the activity and clear situations of mistreatment suffered by the animals could be observed.

I expressly requested that a search of the premises be carried out immediately, in order to obtain information regarding the number of horses that the company is in charge of (including a review of the number of pregnant mares and whether the number of foals corresponds to the number of pregnant mares). I also requested the seizure of all documentation referring to the protocols used to treat the animals, the amount of blood obtained from the horses in each bleeding, the frequency of bleeding, the protocols for obtaining blood, records of constant induced abortions and the amount of hormone exported in relation to the number of horses. This information is urgently required in order to observe the overexploitation and use of mares as mere merchandise, extracting quantities of blood that put their lives and physical integrity at risk as do the systematic abortions mentioned above. Records were also required of the existence, or not, of veterinary treatments provided to the animals and whether veterinarians are present during all activities. I further requested the seizure of the elements with which the blood extractions are performed for later expert assessment; inspection of the extraction boxes and the surrounding areas, resting areas, veterinary attention during abortions and the area in which the abortions are performed; information regarding the state of the horses: general sanitary status, nutritional status, physical status, emotional status of the mares. In particular, it should be observed if the mares show any signs of mistreatment or any signs of having undergone mechanical abortions. I also asked for analyses of the place where the horses are located, in terms of sanitary, feeding and veterinary care, and the seizure of all information related to the origin and destination of the horses and the destination of the foetuses' corpses.

After receiving the complaint, the Prosecutor's Office ordered as means of evidence: the identification of Syntex' rural establishment, in order to know if it really existed; testimonial statements from the Argentine

veterinarians (but not from Dr. Axel Wehrend); information from SENASA regarding the development of the activity performed by Syntex; and reports to the Ministry of Labour and the National Senate about the company.

However, these measures were not sufficient and specifically SENASA should not have been informed of the complaint (since the activity is authorised by that agency even though it results in extremely cruel treatment of the animals, which demonstrates the lack of commitment of SENASA to this issue and, possibly, its connivance with the company). In any case, the other means of evidence requested were not carried out.

Hence, the General Prosecutor's Office of Dolores ordered a change of Prosecutor's Office. After that, we noticed that the new Prosecutor gradually began to carry out the means of evidence that had been ordered by the previous Prosecutorial Unit. However, there were two means of evidence that the Prosecutor's Office started to carry out that we understood were manifestly improper, and we made it known. One is that it required to take depositions from people living near Syntex, as if these people had the capacity to prove whether the animals were in good or bad condition, and the other was taking depositions from employees of the company. Not only did the Prosecutor's Office not carry out the requested search of the premises, which would clearly prove the cruelty that this activity involves for the animals, but it also directly informed Syntex of the complaint against them.

It was because of this that Syntex became involved in the case, they requested a hearing, were legally sponsored and knew absolutely everything that we denounced, the evidence that we provided and about the search (unannounced, until then) that we requested. From then on, the investigation and, above all, the Prosecutor's attitude towards it were very different. Syntex falsely pointed out to the Prosecutor that those of us who had denounced the activity were part of an international organisation that intended to sell the "Know How" of the activity on the black market, and that for that reason (not for the defence of the animals) we requested the search. At Syntex' simple request, the Prosecutor began to deny us the possibility of having access to the file and indicated in person to the undersigned that the case was not the most important one he had.

At that time, we made several presentations with great intensity, which caused the Judge of the case to take action in the matter, issuing an unprecedented resolution in our favour, which I can summarise in the following points: that the complainants in the case are legitimate and are really pursuing animal rights; that the Prosecutor has not made any request, which shows a lack of interest in the investigation; that there is a lot of insistence on our part, and a drive for the case with the clear intention that it reaches the corresponding result, even offering the Prosecutor many alternative evidence of relevance that he did not take into account; that the complaint made appears to be truthful and, above all, serious; that Syntex' presentations in this case have not been serious, resulting in "a kind of struggle" and their objection to us having access to the case file, while Syntex' argument against us is not really credible; that our argumentation in defence of our participation in the investigation (the animals as victims, their right to be heard and the rights at stake) is serious and correct. Something important is that the Judge indicated that we, complainants, have complied with what was required of us from the first moment, that we insisted, even requested hearings with the Public Prosecutor's Office and objected to measures. These actions demonstrate that we are really the victims in the process (or representatives of the victims). The Judge also stated that it is not appropriate that we are prevented from accessing the investigation file. She then decided to consider the complainants as legitimate and ordered the case to be returned to the Prosecutor's Office as a matter of urgency, urging it to investigate and not to continue "delaying" the measures it should take.

The company then took an even more violent attitude against us, threatening to sue us for damages and even questioning whether the undersigned was qualified and registered to practice law. In this context, instead of complying with the Judge's statements, the Public Prosecutor decided to close the investigation (on the understanding that as the activity is permitted by SENASA, criminal law is forbidden to continue investigating it, in a clear attempt to find a pretext not to continue).

It is worth clarifying an important point in this regard: In the Province of Buenos Aires, even though the Judge has agreed with us, it is only the Public Prosecutor's Office that has the power to bring a criminal action. We questioned the Prosecutor's decision before the Departmental Public Prosecutor's Office, who, while admitting that mistreatment can be seen in the videos, confirmed that no investigation will be carried out as long as the activity is authorised by their control body (SENASA). Subsequently, we sent a note to the Buenos Aires Province Attorney General's Office but received no response.

*This text is a translation. The original was written in Spanish language and may be requested from the Animal Welfare Foundation.*

## Annex II

### Excerpt of the Uruguayan Manual of Good Animal Welfare Practices for Equines for the Production of Blood Products

#### 2. GENERAL MANAGEMENT OF THE ANIMALS

##### 2.2. ANIMALS AND MANAGEMENT

The animals must be managed and handled to avoid causing pain and unnecessary discomfort, fear, distress or abnormal behaviour.

##### 2.2.6. Breeding and reproduction

Pregnant mares must be cared for during gestation to maintain adequate body condition. Induction of termination of gestation must not occur beyond 15 weeks. (...)

Any intervention in breeding or reproductive management – as in all other aspects of animal management – must seek to avoid or minimise unnecessary suffering for the animal.

##### 2.3. FEEDING

The horses must be fed an appropriate diet to prevent them suffering from thirst, hunger or undernourishment and to maintain adequate body condition. The density of the population (stocking rate) in the paddocks must be adjusted to the available feed supply to maintain body weight and/or condition.

##### 2.3.2. General feeding conditions

The animals must have access to a balanced diet in sufficient quality and quantity to satisfy their physiological needs. (...)

Short-term exposure to climatic extremes in the pastures may disrupt the supply of feed that meets the animals' daily physiological needs. In such circumstances, the feed provider must make sure that food is not restricted for a prolonged period and that mitigation strategies are implemented if there is a risk of compromising the animals' welfare.

##### 2.4. BIOSECURITY AND HEALTH

Health care for the animals must be provided so that each individual animal remains healthy and free from pain, injury or illness.

##### 2.4.3. Zoosanitary management

The animal hands must be capable of recognising signs of poor health or distress, such as reduced water or feed intake, changes in body weight and condition, behaviour changes or abnormal physical appearance.

Animals with the highest risk of disease or distress will require more frequent inspection by the hands. If they are unable to rectify the causes of illness or distress, or if they suspect the presence of a notifiable disease, they must consult the veterinarian in charge.

#### **2.4.4. Good euthanasia practices**

If an animal is injured or sick, the veterinarian must quickly diagnose the problem to determine whether the animal should be treated or killed, in accordance with good euthanasia practices. After treatment has been attempted and following the decision that it will not recover, the animal must be euthanised in accordance with Chapter 7.6, Article 7.6.15 of the OIE Terrestrial Animal Health Code (2015). The reasons for euthanasia may include:

- a. severe emaciation, extreme weakness, inability to move or risk that the animal cannot get to its feet;
- b. inability to move or to get to its feet, no desire to eat or drink, or unresponsive to treatment;
- c. rapid deterioration in health and treatment ineffective;
- d. severe and debilitating pain;
- e. catastrophic and/or disabling injury;
- f. spinal cord injury;
- g. disease of the central nervous system;
- h. multiple joint infections with chronic weight loss.

The decision to practice euthanasia must be made by a veterinarian on the basis of the animal's welfare and according to the procedure established for this purpose.

### **3. BLOOD COLLECTION**

#### **3.1. MANAGEMENT OF THE ANIMALS**

##### **3.1.2. Staff**

The staff involved in this activity must have the requisite training to ensure good animal welfare practices.

##### **3.1.3. Facilities**

All facilities must be designed, built, maintained and operated to minimise risk to the welfare of the animals and to ensure the safety of staff. (...)

It is particularly important to pay attention to inadequate facilities, since they create the potential for harm to both animals and staff. (...)

First and foremost, it is essential that the pens, passageways and doors allow the animals to move smoothly. Avoid accesses that are uncomfortable or that have steps, sharp bends and/or steep slopes that can cause the animals to slip and/or fall. The design should take into account the latest knowledge in the field, preferably based on curved and diagonal lines so that the animals can move easily and continuously through the sector, taking advantage of their gregarious nature. (...)

The health of the horse's feet must be a priority due to the central importance of their function and their impact on the animal's health.

##### **3.1.4. Working with the animals**

Prods or other types of stimulators that are sharp or cause pain may not be used under any circumstances. Animals should be herded with flags or similar. They can also be guided using slight sounds, avoiding excessive, piercing or sudden noise.

Operators can work from behind the horses with a raised flag to facilitate movement, (...) Guide the animals slowly to prevent slips and falls. Avoid hitting the animals or any practice that could cause injury, fear or excitement.

### **3.1.5. Containment site**

Restraint of the animal for blood collection must be designed to be safe for the individual animal, the other animals and the operators. Animals must be led into the containment or restraint site in flowing and calm conditions, using methods such as flags. Shouting and electric prods or any other stimuli must be prohibited. Containment systems and doors must be maintained so that moving parts work properly.

### **3.1.6. Thermal environment during the procedure**

The blood collection facilities must have a source of water, shade, indoor ventilation for areas under roof and be appropriate for an animal density that prevents the risk of heat stress.

## **3.2. COLLECTION PROCEDURE**

### **3.2.1. Manager**

The facility must have a blood collection manager who is a qualified professional veterinarian. He or she is responsible for the management and control of the animals during the procedure and must be present in person at the facility during blood collection.

### **3.2.2. Staff**

Blood collection must be carried out by qualified, trained personnel, in stress-free conditions without causing preventable pain or suffering to the animals. The staff carrying out the blood collection must be suitably qualified and trained in good animal management and welfare practices, including in normal animal behaviour.

### **3.2.3. Restraint**

Animals must be brought into the containment site in flowing and calm conditions, using methods such as flags. Shouting and electric prods or any other stimuli must be prohibited.

Animals must not be placed in the containment site until the person responsible for blood collection is ready to carry out the procedure. Animals must be in the containment site for as short a period as possible. Only one animal must be in the containment site at any one time.

The animals must be led out calmly after restraint or containment in the pen to prevent fear and the risk of injury.

### **3.3.4. Blood collection routine**

The volume, frequency and duration of blood collection must be decided according to the animal's general condition and factors related to its welfare. All situations that could lead to animal suffering or illness must be avoided. The professional veterinarian is responsible for specifying the conditions for blood collection for each animal individually. (...)

The foregoing notwithstanding, the recommended blood collection volume is 13 to 15 ml per kilo of body weight, equivalent to 3 to 6 litres per animal, depending on the animal's body weight.

The number and volume of collections from each animal must be recorded on each occasion.

## **4. MONITORING OF ANIMAL WELFARE**

### **4.3. Behavioural assessment**

The animals' behaviour must be assessed according to a pre-determined frequency and method in both the pasture and the facilities. (...) Factors assessed include indicators of stress, fear or suffering based on the

animal's sensory condition and body language, and the movements of ears, eyes, nostrils and mouth. Any change in behaviour must be recorded and the animal in question identified for remedial measures to overcome the difficulty.

#### **4.4. General health inspection**

The animals must be examined at appropriate intervals, in accordance with the production systems and the risks to animal health and welfare. Health inspections must be carried out at the frequency determined by the acting veterinarian. (...)

The general health inspection must be performed by the veterinary observation of each animal, considering aspects of health such as posture, attitude, senses, changes in respiratory, digestive, reproductive or nervous systems, changes in skin, hair condition, mucous membrane condition, wounds, limping, etc.

If the animal shows any sign of change during the health inspection, a more detailed diagnosis must be made and the appropriate treatment provided, also taking into consideration the end point criterion indicated below.

#### **4.5. Body weight**

Body weight and changes in body weight are an indication of the animal's metabolic balance and welfare. Body weight must be recorded according to the pre-determined frequency decided by the acting veterinarian, or according as required by the competent health authority.

#### **4.6. Body condition**

Body condition must be assessed according to the pre-determined frequency decided by the acting veterinarian. (...) Body condition is evaluated on six-point scale from 0 to 5, where 0 is emaciated and 5 is obese (see Appendix). Under no circumstances may blood be collected from any animal whose body condition is classified as moderate or 2 or even less on this scale.

#### **4.7. Limping**

Horses must be examined stationary and in motion to identify potential problems with their limbs. Each animal must be examined according to a pre-determined frequency to prevent any suffering and to protect the animal's functions.

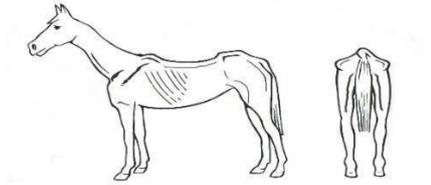
When there is a change in its movement that indicates pain or suffering, the animal must be diagnosed and the appropriate treatment provided. An animal that shows any sign of moderate or severe limping, for any reason whatsoever, must be withdrawn from the blood collection routine to address the situation.

#### **4.8. Critical productive point criteria**

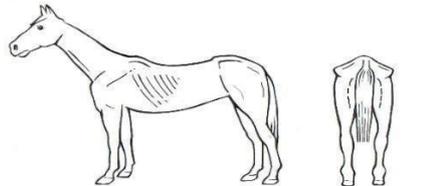
When there is an indicator of pain or discomfort that affects animal welfare, action must be taken to improve the environment to overcome or alleviate the discomfort. The critical productive point consists of temporarily or permanently withdrawing the animal from reproduction or blood collection, taking steps to restore its welfare and as a last resort, euthanising the animal, in accordance with Chapter 7.6, Article 7.6.15 of the OIE Terrestrial Animal Health Code (2015). The critical productive point criteria must be established by the managing veterinarian.

## Body Condition Scoring - Horses

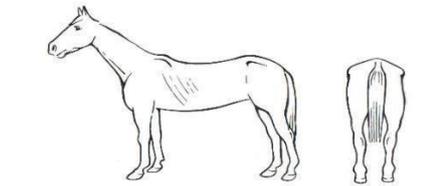
**0 Very Poor**



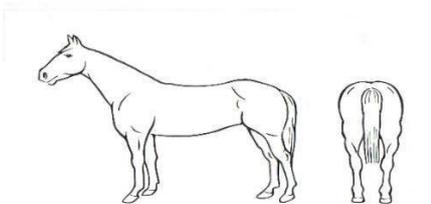
**1 Poor**



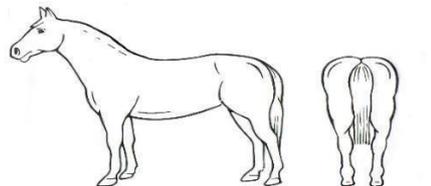
**2 Moderate**



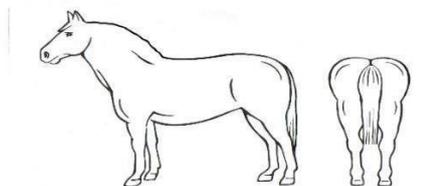
**3 Good**



**4 Fat**



**5 Very Fat**



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