TGCA Health and Welfare Policy

In the context of this paper, we are interested in 'welfare' in both negative and positive senses. We are concerned with protecting equines from negative experiences such as pain, discomfort, fear and stress, and ensuring the horse has a positive healthy life.

Colour Breeding

The TGCA are increasingly concerned about the fashion for breeding new colours into the breed which were in unrecognised in the Historic creation of the 'Breed'. These new colours are being advertised as 'rare' or special 'and the TGCA is putting measures in place to tackle the issue while gathering data to help protect the welfare and future of the breed of Gypsy Cobs.

The TGCA is wary of the dangers of breeding or buying a horse solely for colour, particularly when these colours were unrecognised in the initial breed standard. Those breeding for colour are often doing so with little or no regard for important elements such as health, temperament and conformation, and importantly Breed type

One would question where and how were some of the new colours introduced to the breed? They had to be introduced by using another breed to bring in the colour genetics, if you introduce another breed based just on colour then you are also at risk of introducing the alternative breeds features be it good or bad which can include the genetics issues they may display. also breed type and temperament play a part. So therefore, you no longer have a pure-bred gypsy cob, you have a part bred that can or cannot look like a gypsy cob but it will display characteristics of the other breed in some form.

As caretakers of the breed, we surely must all stand together and try to reduce welfare issues such as deaf, blind and fading foals /youngstock
Having listened to the views and received reports of the issues that are surrounding some of the new fashionable colours the TGCA has announced the first phase of measures to address the problem, which will come into effect immediately.

All youngstock and offspring can be registered as follows:

SUPPLEMENTARY 1(SSB1) & 2(SSB2)

- Section A – exceeding 13 hands
- Section B – 13 hands and under
- Section C – with a non-TGCA graded sire

Stallions must produce a full colour and individual & PSSM1 DNA profile prior to grading

Stallions of the certain colours if passed at grading will be issued with a limited number of covering certificates, it is advised these are not used on mares of the same colour with matching DNA genetics as the resulting offspring may not be eligible for master stud book status so will be deemed as non-breeding stock and entered into the Breed Identity Register (BIR)only.

The registering of all foals within main stud book will be requested to enter the colour in the application box,

Accepted historic colours All solid base colours inc. Black, Bay,Chestnut, Piebald, Skewbald, Tri Colour.

Additional colours: will need a colour DNA profile to be added to the application.

Database change

When registering equines, the new information gathered will enable the TGCA to collect data on Colour registrations across all the breed, which will be used along with other information to decide what further action that needs to be taken. Although the specific Additional colours will not be published, it is planned that the TGCA will work to increase knowledge in this area.

Engaging with breeders and buyers

After data on registrations has been collected for a number of months, the TGCA plans to advise Stud book Registered horse owners, breeders and buyers , about the need choose a mate of a recognised accepted colour if planning to breed from their gypsy cob in the future by promoting graded animals – if they fail to do this, they will run the risk that the TGCA may not register the progeny within the required stud book .

Education and online resources

To ensure that both Gypsy Cob buyers and breeders of all levels of experience are made aware of the recognised colours across all breeds and the issues with some additional colours,

new content has been added below:

Links

https://thehorse.com/149016/examining-eye-issues-in-silver-dapple-horses/

What horse breeds carry the silver dapple gene? Photo gallery! - ilovehorses.net

Leopard Complex & Congenital Stationary Night Blindness | Veterinary Genetics Laboratory (ucdavis.edu)

Where there is evidence that certain colours can affect the health of the equine , the TGCA may add further restrictions to registrations that are produced as a result of mating silver dapple coloured parents together as an example.

Assured Breeder Scheme

Members of the Assured Breeder Scheme who choose to breed additional colours will be required from now on to carry out all health tests for their breeding equines, this information will be checked for compliance at the time of joining the scheme as well as during any subsequent visit from a TGCA Breeder Assessor.

With the advanced genetic testing we have experienced in recent years certain issues have started to occur within the breed , below we address the TGCA management plan to ensure the breed and the historic breeding lines are not lost.

PSSM

After much research and advice, the TGCA has issued the following statement that comes into force immediately.

All stallions to be used for breeding (as above stallion requirements) will be required to also test for PSSM 1

Any stallions testing positive will be required to follow the guidelines as below.

Heterozygous PSSM1– will be issued with 5 covering certificates, all mares used will need to be tested for PSSM1 prior to mating, the resulting foals will be required to submit a DNA profile to include PSSM testing at the time of registration

Homozygous PSSM1 stallions will undergo a committee review and if it deemed their valuable rare bloodline genetics would have major impact on the genetic gene pool then a special breeding licence will be discussed with the owner/stud of the said animal and a monitored breeding program would be implemented.

Any stallion that is or has displayed any symptoms of PSSM1 will be precluded from the breed programme even if only carrying 1 marker. There is some evidence although still more research needed to suggest that animals that are actually symptomatic may in fact be more likely to produce offspring that become symptomatic.

Stallions with 1 marker and PSSM1 mares will not be removed from breeding programs as it would result in the loss of valuable blood lines and possibly introduce further genetic problems with poor blood lines and potentially lesser quality equines being used in breeding programs

The above will be under constant review and we reserve the right to change the TGCA Stud book guideline regulations where applicable.

PSSM1 & 2 Below are some extracts of the scientific facts and links available on line.

PSSM is a disorder that causes muscle cramping in horses from abnormal glycogen (sugar) storage in the muscles. Sore muscles, muscle weakness and cramping are all signs of PSSM. Type 1 PSSM is caused by a mutation in the GYS1 gene.

A simple DNA test performed on the follicles from a hair sample will accurately determine if the horse carries 1 or 2 copies of the abnormal gene

Horses with 1 copy May develop a mild form of the disorder and have a 50% chance of passing to their offspring.

Horses with 2 copies of the gene can develop a severe form of the disorder and will 100% pass on to their offspring.

Many horses that test positive never exhibit symptoms and live normal healthy lives.

Good management of a horse, good diet and regular exercise can prevent the onset and certainly help if a horse has symptoms.

PSSM 2 there is some scientific uncertainty as to the scientific validated evidence of a test to identify if a horse carries genetic mutation/mutations that cause PSSM2. The current genetic test is not reliable in demonstrating or excluding a muscular disease that falls under PSSM2 with certainty.

A Muscle biopsy is currently the best way to detect PSSM2 in horses with clinical symptoms of PSSM. (If they test negative for PSSM1).

We can only read the evidence available to us at the moment for PSSM 1 & 2 and try to make the best, informed decisions concerning the breeding of our Gypsy horses. In making the decisions there are many factors you need to take into consideration.

One of these is scientific evidence and comparisons from reliable scientific sources who have no commercial interest in testing (ie, making money from commercial tests for sale to the public). |Their studies are carried out for evidence, based research into equine diseases the outcomes of which will be used all over the world.

A second consideration is possible loss of some of the most valuable blood lines that exist

A third consideration is the valuable research to show how many horses who have either of the PSSM variants go on to develop actual symptoms. (How many people do you know in the UK with Gypsy horses who have been diagnosed and suffer from symptoms) this number could be a lot higher in countries where Gypsy horses are not a native species. This may well be down to different life style, diet, turnout, etc.

Decisions are based on an individual persons view on the risks within their own horse or breed herd and how they interpret the available evidence. With PSSM1 Sensible breeding can maintain precious and ancient bloodlines by not breeding animals that both hold a copy of the GSY1 gene however even in animals that carry 2 copies they do not necessarily develop symptoms.

Here quoted the breeding proviso on PSSM2 testing by Generation that offer the tests.
https://generatio.de/en/guidance/lexicon/pssm2

Recommendations for breeding

Having one or more P variants does not automatically exclude an animal from breeding. The goal is to step-wise reduce the frequency of P-variants in a breed population without affecting genetic diversity or eliminating desired traits.

Animals with clinical symptoms of PSSM2 should not be used for breeding for animal welfare reasons.

Animals with one or more P* variants which have no clinical symptoms can be considered for breeding if the breeding partner is tested normal for all variants.

If it is planned to breed horses which both have P-variants, it is recommended to pair animals which have different variants to limit the production of possible homozygotes.

EquiSec does not recommend considering the Px variant in breeding decisions; alone, the variant may have little/no impact on the health of the horse. It appears that the Px variant is a greater problem when it is found in combination with other variants. For example, a horse with the profile n/P2 will usually have less severe symptoms than a horse that is n/P2 n/Px.

It is recommended to limit the breeding of homozygous animals (P/P) because all offspring will inherit at least one P variant from that parent.

The below links will take you to information providing more detail of the full facts currently available. These are just some of the most up to date but there are many more if you wish to look. Only the laboratories offering the tests currently offer information as to their value however 1 adds a proviso to guard against using these tests as an exclusion for breeding.

Understanding PSSM in Horses | Horse Journals

Polysaccharide Storage Myopathy type 2 (PSSM2) Test | EquiSeq

https://wpcs.uk.com/wp-content/uploads/2022/08/PSSM-Paper-R-Piercy.pdf

https://cvm.msu.edu/research/faculty-research/comparative-medical-genetics/valberg-laboratory/type-2-polysaccharide-storage-myopathy

https://beva.onlinelibrary.wiley.com/doi/10.1111/evj.13345

Polysaccharide Storage Myopathy (PSSM1) | Veterinary Genetics Laboratory (ucdavis.edu)

The PSSM1 variant has been documented in at least 30 horse breeds and has been observed to range in frequency among these breeds. The prevalence is reported to be highest in some draft horse breeds and lowest in warmblood breeds. The PSSM1 variant is believed to be an old mutation that may have been under positive selection in some draft breeds, particularly the Belgian horse. This mutation may have been advantageous to horses that had daily work schedules with limited sugar feed intake.

Testing for PSSM1 can help to inform clinical, management, and breeding decisions. If a horse tests positive for the PSSM1 variant, veterinarians should be consulted to develop a diet and exercise regime that best manages the disease.

It is important to note, however, that the PSSM1 variant does not explain all cases of excessive abnormal glycogen accumulation in the muscle. It is likely that other genetic factors contribute to this condition, but to date no genetic variants for other types of PSSM (for example, PSSM type 2) have been identified or scientifically validated.

Please remember that for those people whose horses were happy and healthy before you carried out a test in all probability, they will continue to stay that way. If you are concerned good management of your horses feed and exercise can help prevent the onset and certainly help if your horse has symptoms in just the same way that it would help prevent the onset of laminitis or metabolic syndrome also very debilitating and possibly life-threatening problems.

Remember also that decisions to test are a personal choice this may be governed by a requirement from a purchaser but also you have the choice as with a vetting to say it's at the purchaser's cost. There are many genetic diseases and other ailments that horses suffer from and unfortunately die from, colic being one of these that probably takes more lives than most other ailments. I speculate most will know someone who's horse has had colic or died from complications of it.

We all must put these things into perspective and what concerns one person immensely may not worry another at all. There are many ailments, genetic, disorders that horses suffer from, and it is not possible to test for them all or perhaps it is but then for most they wouldn't be able to afford to buy a horse.