



Accurate assessments

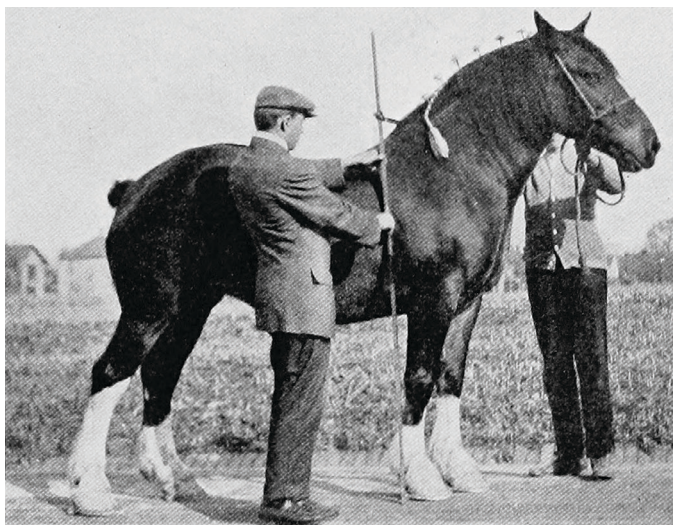
Regular height measurements are a fact of life for young equines competing nationally or internationally. Official measurer *Rebecca Hamilton-Fletcher MRCVS* explains how to ensure a smooth process for your horse or pony

ASSESSING height has long been a way of distinguishing ponies from horses. Height was originally measured in hands, where one hand equalled four inches, and a pony was classified as being 14.2hh or under.

As breed standards became increasingly formalised and sporting equestrianism evolved, with intra-disciplinary height divisions giving larger animals a competitive advantage, it became clear that robust and independent systems of evidencing wither height were needed.

Establishing an animal's true height is therefore necessary for both competition and breed eligibility – both of which can have significant valuation implications.

The FEI, the body responsible for all regulatory aspects of international equine sport, has its own system for ponies competing internationally, with annual official measuring sessions being run by each national federation. Measuring may also occur at some FEI competitions themselves, with a height allowance granted



Traditional measurements in hands were used for many years, prior to modern development of breed standards and equestrian sport

for shoes worn and for the buzzy atmosphere. The traditional wooden measuring stick is currently still used throughout.

Interim certificates, lasting for 15 months, are awarded up until eight years of age, after which a lifetime height certificate is

granted. With some international competition animals selling for huge amounts, a fraction of a centimetre can be vital, and remeasurements can be requested.

Sometimes being classified as a horse, rather than a pony, is the important criteria. All event horses

competing at Tokyo 2020 had to measure over 148cm, for example.

Back here in the UK, the Joint Measurement Board (JMB) has been independently verifying the height of our national equine population for many decades. It was set up almost 90 years ago to run an official national equine measurement scheme for description, classification, and for national affiliated competitions.

The Board includes representatives from each of its member societies (see box, below right), as well as from the Royal College of Veterinary Surgeons and the British Equine Veterinary Association. There are over 100 approved official measurers (OMs) nationwide, all of whom are equine vets.

Annual height certificates are awarded from four years of age, with a full height certificate (the old "life height certificate") given once the animal turns seven – this differing slightly from the FEI rules already detailed. All JMB measurements, both past and present, can now be viewed on the JMB website.

What does and doesn't affect height?

AMONG many old wives' tales and much misinformation, the following facts about an equine's height have been established.

- Final height is genetically predetermined. A foal's leg length at birth is already 90% of its adult length, this being achieved by two years of age. Further height is then provided by growth of the torso, with less than 0.5% occurring in years five, six and seven.
- Research has shown that nutrition has very little effect on growth and final height; one cannot make one's horse taller (or shorter) by feeding it more (or less) during development.
- Researchers at Liverpool University have shown that body condition score (BCS) has no effect on height, with the same measurement being recorded irrespective of whether the animal is over- or underweight. This validates the bony withers as an acceptable reference

point, with the depth of overlying soft tissue varying little from its 12.5mm thickness, regardless of height, type and BCS.

- By far the most important factor for achieving a true minimum height is relaxation. The equine thorax is suspended between the forelimbs by soft tissue connections only, such that during relaxation the muscles involved become slacker, and the trunk (including the withers) "sinks". This can take time, and is the reason why any JMB measurement will only be recorded after a minimum of 20 minutes on the pad.
- The opposite is true if adrenaline is flowing. Excitement, stress, exercise and travel will all cause a horse to "grow" significantly in height, as muscles contract and the trunk lifts. This is why the FEI grants an allowance when measuring at competitions.



Genetics dictate an equine's height: foal leg length is 90% of its adult length

The onus is on the owner to know when a certificate is required, and to prepare their horse or pony for measuring



THE JMB: MEMBER SOCIETIES

- British Connemara Pony Society
- British Show Horse Association
- British Showjumping
- British Skewbald and Piebald Association
- British Show Pony Society
- Coloured Horse and Pony Society
- National Pony Society
- UK Ponies & Horses Ltd
- Pony Racing Authority
- Sport Horse Breeding of Great Britain
- Welsh Pony and Cob Society

MEASURING METHODS

THE basis for all JMB measurements is the accurate and repeatable recording of the animal's lowest relaxed height, using as reference the relatively consistent highest point of the withers above the dorsal spinous processes of T4/T5 (the fourth and fifth thoracic vertebrae), while all four limbs are perpendicular to the ground. A calibrated wooden measuring stick with an integral spirit-level on the horizontal arm is used, together with an accredited level standing pad and a listed OM.

The JMB is constantly reviewing other techniques, all of which would necessitate the clipping of hair and mane over the withers. These techniques include:

- Projecting a laser beam across the withers; most studies have shown consistently higher readings with this method, perhaps due to the lack of any manual pressure over the withers.
- The "Heightlight", which uses a triangulation of laser equipment, and is still being assessed.
- The "Hawk-Eye" system of multiple cameras linked to computer software. This has the potential to be very accurate but is probably cost-prohibitive at present.

ESSENTIAL PREPARATION

THE onus is on the owner or producer to know if and when an official height measurement is needed. Both the JMB and whichever member society is involved have plenty of online guidance, and all measurements must be booked and paid for via the JMB website in advance.

Being prepared is key to maximising one's chances of a "successful" measurement, so accustom your horse or pony to the following in advance:

- Travelling, and new surroundings.



A blood test to check for prohibited substances may be taken at an initial measuring, and would always be taken at a remeasurement

- Having a (masked) stranger moving closely around, while standing quietly on a small, flat area for at least 20 minutes.
- Standing with front legs together and perpendicular to the ground, and hind legs no more than 15cm apart.
- Standing with the head in a natural position, no more than 8cm above or below the withers.
- Having a horizontal stick held across the withers for a prolonged period.

On the day itself the horse or pony must be presented in "good working condition", without shoes and with feet properly trimmed. You may choose to clip the hair over the withers, especially if the mane here is thick and wiry.

Allow yourself plenty of time: if you are rushed or stressed your animal is unlikely to relax properly. Don't talk unnecessarily during the measurement, as the OM is having to do several things simultaneously and must concentrate – and don't resort to feeding tit-bits, as this may encourage unwanted fidgeting. Maximum relaxation is likely to be achieved only if all external stimuli are minimised.

The OM will always want to

achieve the best result possible for you, but if proper relaxation cannot be achieved, with the pony in the correct standing position, the process may be abandoned. There is always another day.

Likewise, if there are any welfare concerns (such as over-trimmed feet, obvious exhaustion or obesity), or reasons to suspect the animal may have been doped, then the OM can decline to measure. Blood samples may be taken at the time to test for prohibited substances, with results forwarded to the society involved. Penalties for positives can be harsh.

IN CASE OF CONTENTION

MUCH can depend on the official height recorded, in terms of both likely competition success and potential value. There can also be considerable judgement from third parties regarding eligibility of "full up" (maximum height) animals in certain classes. A structured appeal process therefore exists, with any objections or requests for remeasurement being actioned only if received in writing with the appropriate fee.

The most common scenarios

THE JMB'S OBJECTIVES

"THE objective of the JMB is to provide a measuring service for competitions, and we are currently looking at ways in which we can improve that service. Some things are visible, such as the new website, which we think is easier to use; other changes are not so. Although we continue to use the traditional measuring stick, we are also looking at modern electronic methods.

"We want to provide the best accuracy that we can for measuring the height and that requires a lot of research and validation. Even with the stick we spend a lot of effort in validating the stick and the pad and making sure that the equipment is inspected and calibrated." **Robert N W Ellis PhD, BVSc, MRCVS, chairman of the Joint Measurement Board**

involve objections from:

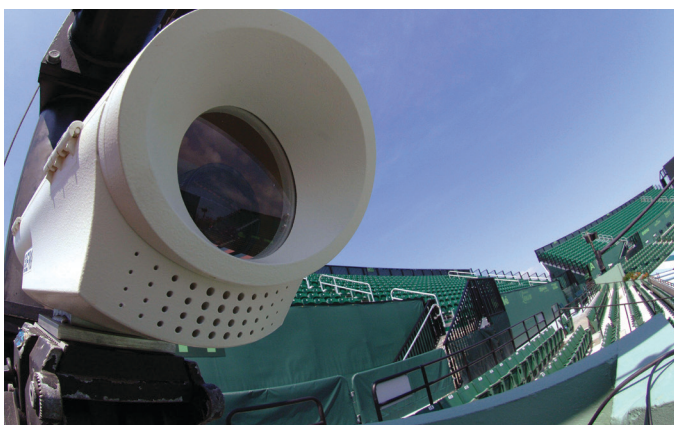
- Fellow competitors.
- The judge, via the member society involved.
- The show itself.
- The stewards of the JMB (for example, if there has been a significant difference between two annual measurements).
- The owner.

All remeasurements are carried out by two referees (OMs) in the presence of a JMB steward, and blood samples to test for any prohibited substances are always taken.

The JMB recognises that the current system is not perfect and has plans for a series of working parties to look into areas for improvement. **H&H**

NEXT WEEK

Fixing fractures: the factors that influence the prognosis



The "Hawk-Eye" system familiar to tennis fans may in time be used for measuring. Currently prohibitively expensive, it is highly accurate



To date, the traditional wooden measuring stick incorporating a spirit level is used. Both the stick and pad are stringently validated