

# EXPERT OPINION

**Vanessa Fairfax**, designer of Fairfax Saddles, explains how two years of scientific testing has led to the development of a new dressage saddle that is proven to significantly improve the dressage horse's way of going

## SCIENCE AND SADDLES

### Why did you commission the research?

Having discovered what impact relieving pressure under the girth had on the horse's way of going, I was keen to see if we could further improve the horse's freedom of movement by derestricting the muscles further up under the saddle. I really wanted to know the facts and not just base my designs on opinions or guesswork.

### What testing technology was used?

In order to establish how a reduction in pressure affects the horse's freedom of movement, it was essential to use modern dynamic testing equipment that measures exactly what the horse is feeling and how the removal of pressure assists or hinders its way of going. Testing in motion is the key. Therefore, two systems were used simultaneously - the Pliance pressure-mapping system, which records under-saddle pressure while the horse is moving, and Centaur Biomechanics' gait analysis, which uses Quintic software to precisely measure the movement in the joints of the fore and hindlimbs.

### Who else is on the development team?

We work with impartial experts in their field to ensure our testing is unbiased and accurate. Mark Fisher, who is the BEF Consultant Master Saddler and operator of the Pliance system for the BEF and the SMS, together with Russell Guire, of Centaur Biomechanics, are experienced at following scientific protocols and recording reliable data. Mark and Russell were co-authors of the scientific paper that was published on the performance benefits of the Fairfax Performance girth.

### What is different about the new Fairfax saddle design?

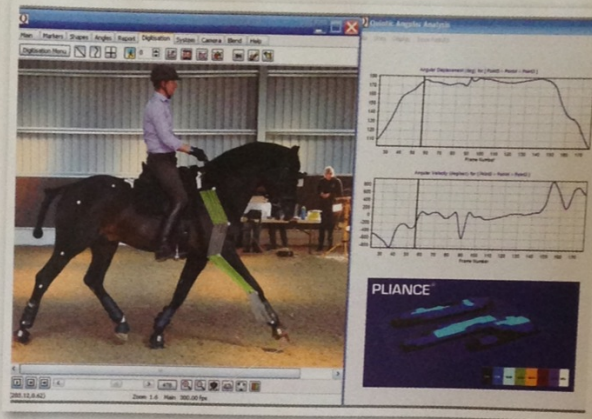
It has a unique two-part panel (patent number GB 11021343.2) that prevents the front of the saddle from being pulled down and in. The upper part of the panel bears the rider's weight and the lower part, under the rider's knee, is separated to derestrict the shoulder girdle muscles and allow the horse's general range of movement to be significantly increased.

The adjustable block that fits under the rider's knee and against the horse's shoulder enables the key muscles that activate the shoulder to move freely. Also, the shoulder blocks come in three depths that can quickly be adapted to suit the conformation of the horse. If the horse has an asymmetrical shoulder development, the block resting on the larger shoulder can be interchanged for a shallower one, so enabling the rider to sit squarely.

Although packed with many innovative features to improve the interface with the horse, the saddle still manages to maintain a look of traditional, understated elegance, as the science part is out of sight on the underside.

### How does the new Fairfax saddle shape up when tested against other saddles?

We measured how much the fore and hindlimbs extended and how much the knee and hock flexed. An improvement in extension indicates an increase in stride length. An improvement in all four measurements indicates greater freedom of movement. By greatly reducing the pressure, we saw a significant improvement in limb extension, joint



Fairfax uses modern technology to test performance in motion

flexion and gait symmetry. The findings are a scientific breakthrough and are currently being written up as a scientific paper.

### What proportion of the improvement is down to the Fairfax Performance girth?

We tested the new Fairfax saddles with and without the Fairfax Performance girth and there was a definite performance benefit from using each individually. However, the largest improvement was seen when the Fairfax saddle and girth were used together as a system to complete the circle of muscle derestriction. Our focus is very much on having a harmonious interface between the saddle, girth and horse.

### Have you had any rider input during the scientific trials?

All the trials have been conducted with our team riders: Gareth Hughes, Rebecca Hughes, Spencer Wilton, Henriette Andersen and Daniel Timson. Working with top-level riders gives us a more accurate base for scientific testing, as many variations are removed immediately. For example, the speed the horse travels at has to be precisely controlled to ensure the results recorded are consistent. Using riders and horses competing at prix st georges level or above ensures that the pace is easily maintained. During the many hours of testing, we have also had the opportunity to gain accurate rider feedback on seat positioning and leg support. This has enabled us to develop several new rider options to suit different rider preferences and physiques.

### Do you think the performance benefits will wear off?

We have now had the opportunity to go back and test the same team of horses at three- and six-month intervals, and this testing has shown that the horses' freedom of movement continues to increase as the horses adapt and train in a more unrestricted way.

To find out more and watch the testing footage, visit [www.fairfaxsaddles.com](http://www.fairfaxsaddles.com) or find them on Facebook

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