

Scientists uncover the key to predicting the price of a show-jumper

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(PhysOrg.com) -- The higher a horse can tuck up its front legs the higher its price on the international market, scientists at Newcastle University have revealed.

Leading bio-engineer Dr Sian Lawson has shown that the sale price of a horse is directly linked to how high the animal can tuck its front hoof into its shoulder when it leaps over a fence.

This contradicts previous assumptions that the back leg is the most important feature in a prime show-jumper.

Dubbed the 'forelimb tuck', the tuck-up distance can be measured in a three-year-old horse and used to determine how much it is worth.

In the UK, horses are a £3.8bn industry. With champion horses carrying a price tag of several million pounds, Dr Lawson said the results could have major implications for the world of show-jumping.

'This is not the result I was expecting at all,' says Dr Lawson, herself a former professional show-jumper. It has always been assumed that the back leg is the most important feature in a show-jumper.

'The height at which a horse can raise its back leg is innate – that is, it's something the horse is born with. Just like some people can do the splits and others can't, so some horses are very flexible and can bring their back legs up much higher than others.'

'Conversely, the front leg is not thought to be genetically linked and is very trainable. This means most horses can be trained to develop a good 'forelimb tuck'.

'What this research has shown is that the trainer is as important as the horse.'

The horses used in the study - which was presented at the Sixth International Conference on Equine Locomotion in Cabourg - were all aged between three and five years old and had sold for between 5,000 and 60,000 Euros.

Before making a purchase, trainers often watch videos of the young horses in action and make a decision based on a number of factors including pedigree, temperament, jumping ability, age, sex and height.

Dr Lawson used these same videos for her research, mapping the movement of the horse and charting it against sale price.

And she found that in every case the forelimb action correlated with sale price. No other attribute – other than age and height – had a strong bearing on the final price of the horse.

Dr Lawson says the next step is to chart the progress of these young horses and see if the forelimb tuck can be used to predict the price of the horse when it reaches its peak – and ultimately its potential as a top show-jumper.

Dr Lawson explains: 'Predicting the worth of a horse at such a young age is very difficult and is often based on the animal's performance over a single day. This is very subjective and has obvious limitations.

'What this study shows is that sale price can be predicted from the

forelimb tuck and this gives trainers a quantifiable parameter to work with when viewing horses.'

Provided by Newcastle University

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