

SMALL-BUSINESS INNOVATION



SPORT SCIENCE: Harrison's company helps owners who put hundreds of thousands into breeding future winners find a track to success

DNA winner makes for racing certainty

APPLYING the latest advances in genetics to the big-money business of horse racing has made an enterprise an outright commercial winner.

Techniques devised by the Thoroughbred Genetics Company (TGC) analyse a horse's DNA to assess its suitability for flat racing — which generates the most serious prize money — and its likely potency when it is put out to stud. Such information can be worth millions of pounds to breeders and owners.

But where TGC really scores is on the bloodstock report that it files to clients, who could be buying, selling or assessing the breeding potential of a particular horse.

TGC not only provides a genetic health report but also makes recommendations about trading and breeding tailored to each customer — for example, whether it is worth a

BY MAISHA FROST

client's mare breeding with a particular stallion. TGC's founder, geneticist Dr Stephen Harrison, has been a horse enthusiast since childhood and has a detailed knowledge of how the racing industry works.

"The information that each report provides is of direct commercial use to our clients," explains Harrison.

"I am a scientist but I have also worked in the racing business for more than a decade. No other company combines these two aspects in one service.

"Breeding horses is risky. Failures far outweigh successes. Millions are spent producing foals and yearlings that are unsuccessful on the track and are of little value at stud. Breeders constantly look to reducing that failure rate.

"We have developed tools to provide enhanced genetic management

of bloodstock with the objective of increasing winnings and, ultimately, stud fees. Before our tests, decisions were based on visual assessments and written profiles. Our techniques reveal a horse's characteristics that are invisible to the eye but indicate its trainability, performance and soundness."

Optimum track distances for individual horses can also be identified.

"In the 1950s, horses were bred for stamina and ability to cover long distances," says Harrison. "Now preferred distances are shorter, but greater speed is required. This changes the characteristics necessary in a winner."

One test can show the transmission of a particular gene on the female side that indicates better performance over longer distances.

Harrison, 40, set up TGC — which employs four staff and part-time bloodstock and racing consultants — 18 months ago. He and his wife, Ann,

invested £100,000 to equip a laboratory in Sittingbourne, Kent.

"We are on course to turn over £1 million within three years," says Harrison.

"We use routine DNA tests for application to thoroughbred systems. However, we have invested in research for further applications."

That research is backed by a £50,000 Government SMART award for the company to develop specific genetic tests to assess a horse's trainability and soundness.

Depending on complexity, it costs from £250 to £400 to test one horse. Harrison says about 1,000 tests have been performed so far. A top-class stallion can command £100,000 per mare when put out to stud, servicing as many as 200 in a season — bringing in £20 million to its owner.

However accurate the results are under the microscope, Harrison likes to see the horses. He travels extensively to studs from Kentucky to New South Wales and hopes to have testing stations worldwide.

There has been interest from large breeders to take a share in the business but Harrison feels TGC's independence is its great selling point. But he is looking for funding and would offer equity in return for venture capital investment.

Does he find himself the top tipster down at his local in Sittingbourne? He admits: "I like racing and there have been times when I have recommended certain horses I know about with moderate success."

● Thoroughbred Genetics Company: 01795 411544; www.thoroughbredgenetics.com

Pedigree tests break the mould

THE racing business naturally depends on a horse's pedigree as a guide to its form and breeding potential. Using DNA inheritance analyses, the Thoroughbred Genetics Company can determine how in- or out-bred a horse is.

Managing director Dr Stephen Harrison sees his tests as breaking the deadlock imposed

by a business still hidebound by convention.

"The DNA analysis can show very different results to a pedigree worked out on paper," he explains. "Breeders can see which characteristics — good and bad — will or won't be passed down the line.

"The more forward-thinking, competitive stables in the US,

France and Ireland have realised genetic analysis is the way forward for thoroughbred selection. Clients in the UK have been slower to use us.

"The main reason is the nature of racing in this country, where businesses are usually inherited and ways of working are based on traditions built up over generations."