About Us

Plusvital is the world’s leading provider of genetic testing to the Thoroughbred industry. Powered by Equinome’s cutting edge genomic tools, we provide tests which analyse the DNA of the horse to predict optimum race distance, optimum race surface and performance potential. We assist leading trainers, owners and breeders in all of the major Thoroughbred regions around the world from our headquarters in Dublin, Ireland.

In 2017, Plusvital have launched the Plusvital Racing GenePak, which provides objective, scientific information to support training and race entry decisions.

The Speed Gene Test

The Speed Gene Test was launched by Equinome in 2010 and since then has grown to be the most firmly established genetic tool for Thoroughbred horses around the globe. The test examines changes in the DNA within the “Myostatin” gene, which is responsible for muscle development and muscle fibre type.

The test then categorises horses into three distinctive types:
- **C:C** Sprint/Mile Types (5-8f)
- **C:T** Middle Distance Types (6-10f)
- **T:T** Staying Types (8f+)

Speed Gene Test results can be used to:
- Determine optimum race distance
- Inform expectations on 2-year-old performance
- Increase strike rates and earnings through optimised training and racing decisions.

The Distance Plus Test

The Distance Plus Test refines the predicted optimum race distance to within a couple of furlongs, sub-categorizing the Speed Gene types into “Short” or “Long” (e.g. C:T – Short or C:T – Long).

This test, launched in 2016, analyses 50,000 genetic markers to provide an enhanced level of information when combined with the Speed Gene Test. As with all technologies, the products developed by Plusvital scientists continue to evolve and improve.

Average Best Race Distance
(508 winners - USA only)

![Graph showing race distance categories for C:C, C:T, and T:T types.]

*95%+ of horses will have their best distance within the Speed Gene Test range.

The Dirt vs Turf Test

Applicable for North American horses and horses with American pedigrees, this test identifies whether the individual’s genetic preference is dirt or turf.

Horses are categorised as:
- **Dirt Pro**: 3 out of 4 prefer dirt (75%)
- **Dirt**: 3.2 out of 5 prefer dirt (64%)
- **Turf**: 1 in 2 prefer turf (51%)
- **Turf Pro**: 4 out of 5 prefer turf (80%)
Why Test Your Racehorse?

Using the Speed Gene, Distance Plus and Dirt vs Turf Genetic tests to identify the best distance range and surface preference for an individual, from when the horse arrives in the yard, means:

1. **Optimise Training & Race Selection**
   Train a horse to its strengths resulting in higher performance and fewer injuries.

2. **Improved Strike Rates**
   Win more races and increase earnings because horses are racing on their preferred surface and at their best trip earlier.

3. **Happier Owners**
   Manage your owner’s expectations with objective scientific information on likely two-year-old performance, best trip and race selection.

"Using the combination of the Speed Gene Test, Distance Plus Test and the Dirt vs Turf Test as a tool in my operation, I can **confidently place horses in the right races, on the right surface, earlier on in their career**, to give them the best possible opportunity to succeed."

- Eoin G. Harty, Multiple Group 1 Winning Trainer

The Testing Process

- Client takes blood sample from individual in a purple top test tube.
- Samples are sent to Plusvital labs, clearly labelled, where they are processed.
- DNA is extracted from the blood, analysed and results sent back to sales team.
- Your sales executive will arrange a personalised results consultation.
FAQs

Q: How do I explain this additional cost to owners?
A: The use of these technologies eliminates overheads in the long run by reducing the need to try horses over distances they prove to be unsuited to.

Q: How do I manage owner expectations with this information?
A: This information could also be used to support your judgement on the ideal trip or likely two-year-old performance where this might not match expectations based on pedigree or physical type.

Q: Does this test tell me if a horse is more likely to be elite?
A: These tests are not designed to identify elite performance potential, but rather identify the conditions under which each individual horse can perform to its maximum potential.

Q: How do I incorporate this into the training regime?
A: Like all other training aids, this information can be incorporated into the regime by using it as a reference point to support or inform key decisions such as race entries.

Q: Can’t I infer this information from the pedigree?
A: Genetic testing and pedigree go hand in hand as the tests will give a definitive answer to what we are already attempting to infer from pedigree, but pedigree alone can often be misleading.

Q: In the past, I have trained full siblings that wanted completely different distances. How is this related to genetics?
A: As the genes are inherited in pairs, one from the dam and one from the sire, it is very common for full siblings to inherit different combinations of genes and thus be completely different types of racehorses. This is the reason why genetic testing is more accurate than pedigree alone.

Q: Why is there a different distance preference between Dirt and Turf horses?
A: A perception within the industry is that it is harder to stay on dirt than it is on turf. We have confirmed this fact by measuring our Speed Gene Test against surface preference.

Q: Why are the distance ranges so short compared to Europe?
A: The distance ranges differ due to opportunity and race distance distribution. Only 2% of races in North America measure longer than 10f, so all of the TTs tend to fall into shorter distance categories, while the CCs move into longer distance categories.


“Having done a genetic test, it’s implications have opened my eyes into thinking about what the optimum distance of a horse could be and how it can contradict the normal assumptions that might be made based on pedigree.”

- Hugo Palmer, Trainer of ’16 2000 Guineas winner Galileo Gold

How To Order

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