

Breeding

The Speed Gene Test

By using The Speed Gene Test on your mare or stallion you can understand what type of horse they can produce.

Speed Gene Type	Best Race Distance	Can Produce
C:C	Sprinter (5-8f)	C:C & C:T
C:T	Middle (6-10f)	C:C, C:T & T:T
T:T	Route/Long (8-14f)	C:T & T:T

How do I use this information?

Use The Speed Gene Test information when matching mares and stallions to produce more of your desired type on a consistent basis. The mare and stallion each pass on one copy of their genetic marker (i.e. 'C' or 'T') to the foal, with a C:T horse being equally likely to pass on a 'C' or 'T'. The table below shows clearly how to tilt the breeding odds in your favour.

Example:

Q How do I guarantee I'm going to produce a middle distance C:T type?

A By breeding a T:T (Sire) x C:C (Dam) = 100% C:T (Foal).

		SIRE 		
		C:C	C:T	T:T
DAM 	C:C	100% C:C	50% C:C 50% C:T	100% C:T
	C:T	50% C:C 50% C:T	25% C:C 50% C:T 25% T:T	50% C:T 50% T:T
	T:T	100% C:T	50% C:T 50% T:T	100% T:T

Why should I test?

By using The Speed Gene Test to identify what your horse may produce you can:

- 1 Gain objective scientific support for mating decisions
- 2 Make more informed sales and racing decisions (see overleaf)
- 3 Improve average sales prices and clearance rates (see overleaf)

Does this work?

A leading Irish owner/breeder/trainer had the goal of reducing the T:T's in his foal crop with the aim of improving his two-year-old performance.

Outcome:

- Decreased T:T foals from 16.5% to 5.5% in one year.
- Doubled two-year old strike rate (9%-18%) and tripled two-year old earnings within two years.

"Anyone breeding horses who doesn't know the genetic make up of his mares is throwing caution to the wind." *Leading Irish trainer, breeder and owner, Jim Bolger (Source: TDN)*

Other Tools Available

The Elite Performance Test

- **Genomic Breeding Value:** The value predicts the potential for a broodmare or stallion to produce offspring with a higher potential for elite success.
- **Genomic Racing Value:** Horses rated as higher potential tend to yield double the return on investment of lower potential rated horses.
- **Genomic Inbreeding Value:** This value quantifies the level of inbreeding in a horse.

The Raced/Unraced Test

- This test predicts the likelihood of an individual having at least one racecourse start in their two or three-year-old seasons.
- Horse rated as higher potential tended to yield double the return on investment.

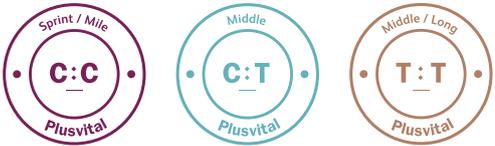
The Dirt vs Turf Test

- This test assesses the likelihood of a horse passing on genetic traits that predict surface preference.

Stallion Advertising

Promote your Stallion's producing capability:

- Increase season sales.
- Manage the books of mares more efficiently to increase the Stallion's chance of success earlier in their career.
- Concrete scientific support behind mating recommendations to meet your breeding goals.



BROKEN VOW 



Example: Broken Vow, Pin Oak Stud, KY

Identifying Opportunities

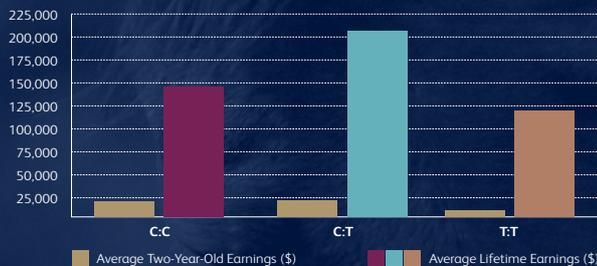
Racing Trends: Race Distribution

- **Dirt Racing:** 70% of Stakes races are run under 8.5f, which means there is more opportunity for C:C and C:T type horses.
- **Turf Racing:** Only 11% of Stakes races are under 8f, which means there is more opportunity for C:T and T:T type horses.

Racing Trends: Precocity

- The majority of two-year-old races are under one mile.
- **C:C** and **C:T**s type horses are quick and precocious, earning over two times more than **T:T**s at two years old.
- **T:T**s under perform as two-year-olds because they tend to take longer to mature and have less opportunity to run past one mile, but as three-year-olds the opportunity increases and earnings dramatically increase.

1,109 North American Thoroughbred Horses



Market Trends: Yearling Sales

- **C:C**s sell for on average over \$65,000 more than **T:T**s (tend to be more muscular and forward looking).
- **C:C**s and **C:T**s have the highest clearance rates.

2015 Australian Yearling Sales (n=623)

Speed Gene Type	Clearance Rate	Average Sale Price Per Horse (AU\$)
C:C	93%	142,795
C:T	93%	117,058
T:T	85%	76,833

Market Trends: Two-Year-Old HIT Sales

- **C:C**s sell for over \$40,000 more than **T:T**s (faster times and precocious).
- Having more **C:C**s and **C:T**s in a sale, improves your chances of having higher sales prices and clearance rates.

2015 Mid-Atlantic Two-Year-Old Sale

(Average Sale Price & Clearance Rate - \$)



FAQs

Q Does this mean that T:T type horses are bad?

A No. T:T type horses are suited to longer distances and can take longer to physically develop when compared with C:C and C:T horses, but this does not mean that they are “bad” or “slow” horses. The racing trends highlighted above would suggest that they have a much lower likelihood of achieving two-year-old success, although it is evident that their earnings increase as they progress into their three-year-old season and further. As a breeding prospect, they are ideal if you are looking to breed middle to longer distance types, suited to Triple Crown races.

Q How will this affect my Stallion's reputation?

A No. The Speed Gene Test simply determines what type of horses a Stallion can produce, but does not indicate performance in

any way. It provides breeders with a deeper understanding of what they can produce, allowing them to accurately control their breeding programs in line with their own individual goals. As a Stallion farm, it allows you to give concrete scientific evidence behind breeding recommendations, helping to increase stallion season sales and work with more owners to achieve the desired result.

Q Will this make it harder for me to sell my horses?

A No. By default, we treat all test results as strictly confidential, so there is no obligation for any operation to share this information with potential buyers. However, if you decide to share the results, it increases the trust and honesty between the consignor and buyer and can often increase the value of your horses.



How To Order



US: +1 (0) 8593513217
 IRE / UK / EU: +353 (0) 860463187
 AUS / NZ: +61 (0) 499585951
 INTERNATIONAL: +353 (0) 860416121



info@plusvital.com