

## A CRITICAL SHORTAGE OF BLOOD

Tom Reed

Morningside Stud and the Warmblood Studbook of Ireland

Published in *Horse International*, 2015 Volume 3, pp 56 - 57.

Eventing has changed in the last decade or two, and not always for the better. Yes, there is more prize money in top sport, new innovative competitions such as the Eventing Nations Cup have become successful, and many more countries are fielding riders and horses. But many horses that have no business competing on a cross-country -- I call them "faux blood" horses -- are pointed to the sport for commercial reasons. And too many riders and horses are perishing or suffering devastating, life-altering injuries on the cross-country without adequate policy responses from the FEI and national equestrian federations.

Some believe these problems can be traced back to the unfortunate change in the long format designed to save eventing as an Olympic sport for 2004 and beyond, and the impact this had on horsemanship, training and development of eventing horses, and the perception of what qualities an eventing horse must have. Others argue that cross country course builders sometimes ask questions of horses and riders that are too technical, with very little margin for error. And others point to the lack of stamina in many "faux blood" eventing horses and the increased risk this introduces on the cross-country: Tired horses sometimes become dangerous horses.

The purpose of this article is to examine the decline of "pure blood" genetics in eventing breeding, the implications of this not only for eventing but also for showjumping and dressage breeding, and to offer a few suggestions for the future.

### SHARP DECLINE IN USE OF TB SIRES

We can observe a dramatic decline in the incidence of "pure blood" (thoroughbred and Anglo-Arab) sires in the rankings of the Top 10 Eventing Sires (Table 1) and Top 50 Eventing Sires (Table 2). During the decade of 1991 – 2001, fully 90% of the Top 10 eventing sires were pure blood, and another 10% were half-bred; there were no warmblood/other/unknown sires. In the rankings for last year, however, fully half of the Top 10 Eventing sires were non-pure blood.

Table 1: **BREED OF TOP 10 EVENTING SIRES**

	PURE BLOOD	HALF- BRED*	WB/OTHER/ UNKNOWN
1991 – 2001	9 (90%)	1 (10%)	0 (0%)
2014	5 (50%)	0 (0%)	5 (50%)

\* "Half-bred" is defined as a non-thoroughbred / non-Anglo-Arab horse having a TB or AA sire or a TB or AA dam.

Source: Calculated using data from the World Breeding Federation for Sport Horses

When we do the calculations for the Top 50 eventing sires for the same time periods we see that the percentage of pure blood and half-bred sires dropped from a combined 84% to 32% while the percentage of warmblood/other/unknown sires increased more than four-fold from 16% to 68% .

Table 2: **BREED OF TOP FIFTY EVENTING SIRES**

	PURE BLOOD	HALF- BRED*	WB/OTHER/ UNKNOWN
1991 – 2001	37 (74%)	5 (10%)	8 (16%)
2014	13 (26%)	3 (6%)	34 (68%)

Source: Calculated using data from the WBFSH

Digging deeper into the 2014 data we find that only twenty-three (23) of the Top 100 eventing sires are TB (there are no AA sires). And most of these TB sires are dead and unavailable for breeding because there is no frozen semen; only Ituango (located in Germany, and only available by natural service), Another Warrior (in Australia, and only available by natural service or chilled semen), Accondy (frozen semen available in the UK), and Lauries Crusader (frozen semen available for export from Germany to many countries) have semen available for breeders.

Table 3: **Thoroughbreds in 2014 Top 100 Eventing Sires**

Rank Name – Points – Age – Semen Availability

- 1 MASTER IMP - 1,023 – Dead – No
- 2 HERALDIK – 851 – Dead – No
- 4 GHAREEB – 662 – Dead – No
- 7 CULT HERO – 577 – Dead – No
- 9 ITUANGO – 491 – 19 – Natural Service
- 11 FINES – 470 – Dead – No
- 18 SUNLIGHT – 383 – Dead – No
- 26 HELIKON – 332 – Dead – No
- 27 STAR REGENT – 327 – Dead – No
- 33 CLASSIC - 280 – Dead – No
- 42 BARNAUL – 238 – Dead – No
- 46 ANOTHER WARRIOR – 232 – 17 – Natural Service & Chilled
- 48 ADIEU AU ROI – 217 – Dead – No
- 50 MARK TWAIN – 216 – Dead – No
- 51 PHANTOMIC – 215 – Dead – No
- 67 MILLKOM – 185 – Dead – No

72 URGENT REQUEST 181 – Dead – No  
76 COLONEL COLLINS 169 – Dead – No  
80 ACCONDY – 166 – Dead – Frozen Semen  
87 PRIMITIVE RISING – 154 – Dead – No  
91 NOT SURPRISED – 151 – Dead – No  
93 CHEF SUPREME – 145 – Dead – No  
93 LAURIES CRUSADER – 145 – Dead – Frozen Semen

Source of ranking data: [http://www.wbfsh.org/files/2014\\_sire\\_ranking\\_eventing\\_top\\_100.pdf](http://www.wbfsh.org/files/2014_sire_ranking_eventing_top_100.pdf)

Looking further down in the ranking of eventing sires I see no TB stallion that might have in the future a profound influence on eventing breeding. How did we arrive at this situation, and where does this leave us?

#### TRAGEDY OF THE COMMONS

The use of TBs in sport horse breeding has become an example of the “tragedy of the commons”: Showjumping and dressage breeders are acting rationally and enhancing their own self-interest by avoiding thoroughbred sires, but they might be harming the population of showjumping and dressage horses – and are definitely harming the population of eventing horses -- by diluting the “blood” in the population.

In the next decade or two it will be remarkable achievement if a TB sire is bred to a sufficient number of mares to produce as profound an impact on one more studbooks and sports as Heraldik and Lauries Crusader had on eventing and dressage, respectively. What will be required is a perfect storm: Multiple approvals of a young TB stallion, world-class own success in sport, fantastic early progeny not only in sport but also as broodmares and approved sons, outstanding fertility, and an average of approximately 100 foals a year for fifteen or twenty years. A lot of stars will have to be aligned for all of this to happen. A TB stallion bought off the race track will not get the chance to have a profound influence because there is no compelling reason for breeders to use him in the first instance: Success on the track is not correlated with success as a sire in any Olympic discipline.

#### DO WE REALLY NEED TB SIRES?

I am not convinced that showjumping and dressage breeding require infusions of TB blood. In the article “A Special Role No More: TBs in Sport Horse Breeding” (*Horse International* Vol 7 2008, and available to be read at <http://www.morningside-stud.com/gpage19.html>) I argued that there is no longer a special place for TBs in showjumping and dressage breeding, and nothing in the seven years since the article was published leads me to change my mind. If anything, recent trends in breeding confirm my hypothesis. Studbook officials and breeders are more and more selecting on traits for showjumping and dressage breeding programs that heretofore were associated with the characteristics sought from a TB sire but are now increasing found in ultra-modern warmblood stallions: reactivity, quick reflexes, elegance, and a long front leg, for example. There is no compelling reason to use a TB sire in showjumping and dressage breeding if the desired “blood traits” can be accessed through ultra-modern warmblood stallions.

But we have a problem: Showjumping and dressage breeders are not selecting on certain other traits associated with TB stallions that are required for medium and upper level eventing horses: great stamina, courage, efficient jumping style, and gaits that are not overly elastic or “round”. So we are seeing showjumping and dressage horses that look like “blood” horses but are often “faux blood” horses, and many of these are pointed to eventing when they fail to excel in the sport for which they were bred. But they are ill-suited for the demands of this uncompromising sport at the medium and upper levels.

The critical question for showjumping and dressage breeding is whether or not selecting on certain desired “blood” traits when choosing an ultra-modern warmblood sire will “inoculate” a studbook’s population from plainness and the loss of the traits historically infused into the population through TB stallions. To extend the analogy, at the population level can a studbook reliably experience a kind of “herd immunity” from the negative impacts of the loss of blood traits if breeders are using ultra-modern warmbloods in high numbers? If this natural experiment is successful, TB stallions will not be required for showjumping and dressage breeding because their desired “blood” traits will have been consolidated in the studbook’s population through ultra-modern warmblood sires. And in this case showjumping and dressage breeders will use a TB stallion only if he meets the criteria I wrote about in the article cited above: “(thoroughbreds) will be assessed as sires and broodmares in the same way that any sire or broodmare is assessed: athleticism, jumping technique, movement, rideability, conformation, trainability. The TB stallion will always be considered but his special role in sport horse breeding no longer exists.” If the experiment fails, showjumping and dressage horses will revert to plainness in the coming years because of the lack of TB infusion, and sport results will suffer for those who avoided periodic infusions of TB blood. But whether this natural experiment is a success or a failure the avoidance of TB stallions by showjumping and dressage breeders creates a crisis for eventing breeding.

#### EVENTING’S EXISTENTIAL CRISIS

If TB sires are not a fundamental requirement for showjumping and dressage breeding then the sport of eventing as we know it is heading for an existential crisis. Where will the horses come from for medium and upper level CCI and CIC competitions? Already there are too many “faux blood” horses at all levels of the sport. And the sport has too few competitors, and certainly too few dedicated eventing breeders, to sustain even a small number of TB stallions that will be used exclusively (or almost exclusively) for eventing breeding. But the problem is that even today’s “dumbed down” version of the CCI4\* event, and many CCI3\* events, require true blood horses and not the “faux blood” horses that are failed showjumping and dressage horses. So either the sport has to lose even more of its historical character or studbooks and eventing breeders will have to get serious about developing TB genetics for eventing breeding.

To prevent eventing from becoming even at top levels a sport for failed showjumping and dressage horses, and to prevent further “dumbing down” of the sport by transforming the cross-country phase into a showjumping exercise on rolling hills and plains, the rules of eventing must change so that success at medium to upper levels requires the use of true blood horses. Along with preserving the true historical character of the sport, and providing incentives to many more breeders to experiment more with TB genetics, this also may potentially reduce the number of fatal and devastating accidents on the cross-country.

## WHAT DO WE DO NOW?

Studbooks in the core countries where TBS are used for sport horse breeding (e.g., USA, Canada, Ireland, Great Britain, France, Germany, Australia, and New Zealand), where there is an immense concentration of TB genetics, should collaborate to establish and jointly own and operate a global pure blood studbook for breeders who want to produce purpose-bred TB stallions and mares for the Olympic disciplines, and especially eventing. While this initiative will mostly benefit eventing breeding and sport in the short run, in the long run there will be purpose-bred TB stallions and mares produced of the quality of Heraldik that will be used by showjumping and dressage breeders for outcross purposes.

And what is an eventing breeder to do now? Below is a list of TB sires that meet at least some of my criteria for a pure blood stallion: I expect the stallion to possess the same athletic traits and riding horse qualities I demand in warmblood stallions. Success on the race track is of no significance. If the stallion has been used in breeding, I want to see empirical evidence that he is producing promising progeny; if the stallion is young or has not been used in breeding because he has been in sport, I want to see empirical evidence that he has the riding horse qualities required for an eventing horse. Here is my short list of non-aged TB stallions that should be considered for an eventing breeding program:

### **Another Warrior xx** (Brave Warrior xx x Semipalatinsk xx)

Born in 1998 and ranked 46<sup>th</sup> as an eventing sire, Australia-based Another Warrior already has sired the three star winner Shanghai Joe, ranked as the world's 15<sup>th</sup> best eventing horse in 2014. He also has sired the CIC1\* eventer Fantastic Mr Fox, born in 2007.

### **Armand xx** (Winged Love xx x Chief Singer xx)

The 2001 stallion Armand has had few foals (the 2013 Holsteiner breeding index reports 47 foals), but already two progeny from his first crop began competing in one star international events in 2014. The breeding index reports that Armand makes good foals (index score = 119) that are of a very well-built type (index score = 131) with average movement (index score = 100). He has produced two approved sons and five registered broodmares. Armand approval was based in part on his performance on the race track, so we have no under saddle or jumping assessments to rely on.

### **Asagao xx** (Tertullian xx x Tagel xx)

Asagao is a 2009 stallion in Germany that is competing with success in eventing and showjumping. A full profile of Asagao appears in WSI News in this issue of *Horse International*. This is a very promising TB stallion.

### **Duke of Hearts xx** (Halling xx x Königsstuhl xx)

Duke of Hearts is a 1999 stallion that has been used in breeding since 2005. He has thirty-five progeny in sport in Germany, one approved son, and six registered broodmares. He has produced one 2\* eventer and three 1\* eventers. Originally approved by the Oldenburg studbook, he has more recently been approved by Hanover (2010), Baden-Wurtemberg (2011), and Trakehner and Holstein (2012).

### **Fragonard xx** (Dashing Blade xx x Acatenango xx)

The 1999 stallion Fragonard, based in 2015 at the Holsteiner Verband, has produced the CCI3\*

eventer Sunny Side First for the Trakehner Studbook and the CCI2\* horse Flick Flack 37 for the Hanoverian Studbook. Fragonard completed the 30 day stallion test at Adesheidsdorf with scores of 7.25 for dressage and 7.13 for jumping. The Holsteiner breeding index reports that Fragonard makes well-built foals of a good type (index score = 123) and his overall foal index was 120.

**Nobre xx** (Gem Master xx x Assert xx)

The 1999 stallion Nobre xx has serviced the Hanoverian studbook since 2003. He completed the 300 day stallion test at Adelheidsdorf and received index scores of 90.41 for dressage and 121.47 for jumping. Nobre's total breeding value for jumping is 130. Based on inspections of twelve broodmare daughters, Nobre's index score for limbs is 122. From only sixty-two (62) foals he has sired five international eventing horses. This stallion is stationed with the Russian Federation in 2015, and is available only by natural service.

**Sea Lion xx** (Sea Salute xx x Caveat xx)

The 1998 stallion Sea Lion (his Jockey Club registered name is Sea Elephant) was campaigned lightly each year in the USA from 2008 to 2014, and competed up to CCI4\* level. His first foal was born in 2013, and he is approved by the American Trakehner and ISR Oldenburg studbooks. Through his damline Sea Lion is very closely related to the approved stallions Nobre xx (see above) and Noble Houston xx.

**Sula Blue xx** (Sula Bula xx x Ascertain xx)

This 2002 stallion is competing successfully in CIC2\* events in Great Britain and was the highest ranked thoroughbred stallion in British Eventing competitions in 2014. Although very lightly used as a sire because of his sport career he has many of the attributes required in an eventing sire.