



# MORGAN SHOW AND SPORT BLOODLINES: A COMPARISON

*How They are Bred and Why It Matters.*

**A**mong the more popular uses of Morgans is as partners in some type of equine competition. Those having the closest association with the Morgan community are the ring classes at the breed shows.

The classes range from the high energy ones in park and English pleasure to the very popular ones in hunter pleasure and Western pleasure. A judge, or panel of judges, licensed by the USEF for Morgans evaluates each horse in a class against a “standard of perfection,” as described in *The Morgan Horse Judging Standards*. The 1972 Judging Standards Committee summarized the

process by stating, “Judging is the art of establishing a fixed image of the ideal representative of the breed in one’s mind and relating the individuals in each class to this mental image.” Performance criteria include quality of gaits, manners, presence, cadence and balance, and suitability of the horse to the rider/driver. Their relative importance varies according to the specific qualifications of the class. Conformation and Morgan type are a significant consideration in most classes, 40 percent in qualifying ones and 50 percent in championship classes.

In addition to competing in the ring classes at breed shows,

**By Jack Stang**

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**ABOVE:** The government stallion Bennington (left), is frequently present in Morgan sport horse pedigrees; Waseeka’s In Command (right) is influential in 96 percent of the Morgan show population.

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### SHOW & SPORT PROGENITORS:

**TOP ROW:** General Gates; Bennington; Artemisia. **BOTTOM ROW:** Mansfield; Upwey Ben Don (photo © Savage); Waseeka's Nocturne.

Morgans are used in an impressive array of equine sports, among them dressage, Western dressage, eventing, combined driving, competitive trail, endurance, working equitation, and Western sports such as reining and cutting. Although some breed shows include dressage and reining classes, most sport competitions, including the more prestigious ones, take place in open shows in which Morgans compete against other breeds. While each sport discipline has unique requirements, they share several features that differentiate them from the way horses are evaluated in show ring classes. First, the horses are presented individually, rather than as a part of a class. Second, results are determined more objectively, being based on time, composite score from individually evaluated elements of standardized tests, or some other measurable criterion. Unlike the show classes, Morgan type and conformation play no role in determining the results of sport competitions, and judges are licensed for their respective disciplines rather than for the Morgan breed. Finally, the sport disciplines have defined levels of competition; as a horse and rider/driver move up through these levels, the challenges and performance expectations increase. Moving up the levels is generally one of the principal goals of sport competitors.

This study compares the bloodlines of Morgans succeeding in relatively high-level show and sport competitions. Given the differences between the two types of competition, several questions arise: Are the top performing bloodlines similar or different? If the latter, why, and what is the significance of the difference to the Morgan breed?

### METHODOLOGY

Linebreeding is widely used by Morgan breeders to concentrate the genes of a specific ancestor or ancestors. A nine-generation analysis of inbreeding was carried out using the All Breed Pedigree Database to identify sources of linebreeding in the pedigrees of two populations of Morgan horses: one of high performing show horses and the other of advanced level horses in sport. For the purposes of this study, an ancestor is considered a significant source of linebreeding if it is present in a pedigree at a level of 10 percent blood and comes through at least two different offspring.

The show population included all horses that placed at the Grand National & World Championship Morgan Horse Show® from 2014 to 2018 in the following world championship classes: park saddle, English pleasure, hunter pleasure, Western pleasure, park harness, and pleasure driving; a total number of 172 entries. Horses that competed in the same class in different years were only counted once; however, if they competed in different classes, for example park harness one year and pleasure driving the next, they were included in each list. The world championship classes were used for this analysis because the results at this level are assumed to have the greatest influence on breed development.

The sport population was comprised of Morgans competing at relatively advanced levels over the same period (2014–2018) in the following disciplines: dressage at the FEI level, eventing at training level or above, endurance and competitive trail (as listed on the Morgan Open Competition list); reining in the Morgan



Grand National freestyle (non-pro and open) and open finals; and combined driving (preliminary division and above) at the Garden State Classic (2014–17), Gladstone (2014–18), Hermitage State Classic (2014–18), Katydid CDE (2014), the Live Oak International (2014–18), and Southern Pines (2014–18). The total number of sport competitors is 128. A few horses competed in more than one of the sport disciplines so were counted more than once. No horse appeared in both the show and sport populations.

## RESULTS

### SHOW BLOODLINES

The linebreeding analysis of the show horse population reveals two dominant bloodlines (Table 1). The more important one is based on Waseeka's In Command. Key progenitors behind this line include Upwey King Benn, Quietude, Upwey Benn Quietude, Upwey Ben Don, and finally Waseeka's Nocturne, the sire of Waseeka's In Command. Listed descendants of Waseeka's In Command include Wham Bam Command, Noble Command, Tug Hill Commando, Nobelle, Carlyle Command, Noble Flaire, and HVK Bell Flaire. Overall, Waseeka's In Command is present in the pedigrees of almost 96 percent of the horses in the show population. The average percent of blood of Waseeka's In Command in these horses is about 14.5 percent. Even more striking, the average additive genetic relationship (AGR) between these horses and Waseeka's In Command is about 23 percent. The AGR indicates how genetically similar they are to him because they have common ancestors.

The second significant show line is represented by horses having the Serenity prefix: Serenity Masterpiece, Serenity Remember Me, and Serenity Grandmaster. Fleetwing, who is also listed in Table 1, is a significant progenitor of this line. Although the Waseeka's In Command and Serenity lines developed independently, blending of the two is now common. Cedar Creek Harlequin is a notable example of this trend.

Two additional sires having a notable presence in the show population are Trophy and Vigilmarch. Each has played an important role in the development of both the Waseeka's In Command and Serenity lines. Trophy's Corrigan, a Trophy daughter, is the dam of three highly significant offspring of Waseeka's In Command, making her particularly noteworthy.

The "influence" columns in Table 1 can be used to compare either the relative significance of different horses within a class or the relative significance of an individual horse in different classes. Analysis shows that the influence of some prominent horses is dependent on the show class. For example, Wham Bam Command has a notable presence in park saddle but minimal influence in park harness. Conversely, Noble Command, a half-brother, is influential in park harness but not in park saddle. The Serenity line is found in all classes; however, it is more influential in English pleasure, hunter pleasure, and pleasure driving than in park harness and Western pleasure.

Just as striking as the dominance of the Waseeka's In Command and Serenity bloodlines in the show population, is the almost total absence of significant linebreeding to representatives of the Brunk, Lippitt, and Working Western families. Among the 172 show horses, there was a single member of the Lippitt family and two that had



### CONTRIBUTING FAMILY: WASEEKA'S IN COMMAND LINE

TOP TO BOTTOM: Waseeka's In Command; Wham Bam Command;  
I Will Command; Noble Command.





### CONTRIBUTING SHOW HORSE LINES

Serenity Masterpiece and Cedar CreekHarlequin (top, left to right) are both sires mentioned in this survey. Their influence is felt most prominently through their daughters, like (bottom, left to right) Broodmare Hall of Fame producers Pompp And Pazazz (Serenity Masterpiece x CyDon's Cynthia) and AFF Beulah (Cedar CreekHarlequin x MKS Destiny's Echo by Serenity Masterpiece). Note, AFF Beulah combines both Harlequin and Masterpiece.

(photos © Howard Schatzberg, Bob Moseder)

significant lines ( $\geq 10$  percent blood) to a Brunk sire: one to Senator Graham and the other to Beamington. All three of these horses competed in Western pleasure, the show class which also had the greatest bloodline diversity overall. None of the show competitors had significant linebreeding to a member of the Working Western

family. Representatives from the Brunk, Lippitt, and Working Western families can be found in the background of many horses in the show population. The most notable one is Starfire, the Brunk-bred sire of Waseeka's Nocturne. Show pedigrees continue to include a significant percentage of Starfire blood because of the amount



of Nocturne breeding present. Nevertheless, the fact that the show population used in this study includes no additional lines to Starfire, nor significant linebreeding to his Brunk progenitors, indicates that modern show breeding has moved in a different direction. Overall, the fact that the Brunk, Lippitt and Working Western families are not significant sources of linebreeding indicates their diminishing influence in the show ring.

The limited scope of bloodlines in the show population can be attributed to selection being strongly oriented toward a single performance trait, the quality of a horse's trot. This gait's importance is explained in an informative series of articles written by Stephen Kinney and published in *The Morgan Horse* subtitled, "Why We Breed for Trot. Why We Judge the Trot. Why We Train the Trot." He indicates the primary goal of show breeding is producing horses suited for the saddle seat and fine harness classes. The principal determinant of success in these classes is a highly energetic trot in which the flight of the front hooves appears to be circular. A horse that can go "above level" is highly prized. The dominance of Waseeka's In Command and Serenity bloodlines indicates they are the best source of this highly expressive trot.

#### SPORT BLOODLINES

The bloodlines of horses in the sport population are far more diverse and representative of the overall Morgan breed than those present in the show population (Table 2). There is linebreeding to multiple representatives from all four major Morgan families: Government, Brunk, Lippitt, and Working Western. Some horses prominent in the show population likewise have a significant influence in sport, including Bennington, Mansfield, Upwey Ben Don, Waseeka's Nocturne, and Waseeka's In Command. However, the sport population also features linebreeding to Flyhawk, Ashbrook, Red Correll, Jubilee King, and many other horses that are not significant sources in the show population. The Lippitt family is especially prominent in competitive trail and endurance; Brunk breeding is found in all disciplines but is most noteworthy in combined driving; and the Working Western family is prominent in reining—as would be expected—but also among dressage competitors. Waseeka's In Command breeding is found in all sport disciplines but it is not a dominant bloodline in any of them. Its greatest relative influence is in eventing.

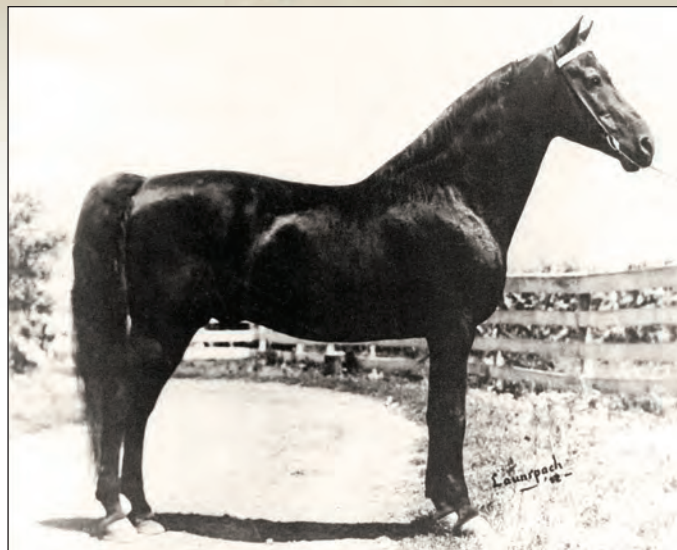
The difference in the diversity of the sport and show bloodlines can be attributed to a difference in the types of athleticism needed for the two types of competition. Whereas success in the saddle seat and fine harness classes depends largely on excellence in a single performance trait, excellence in sport requires multidimensional athleticism, including quality in all three gaits, speed, strength, agility, balance, stamina, etc. Obviously, some sports put more emphasis on certain skills than they do on others, but individually—and certainly collectively—the equine sports favor the all-around athlete. Since versatile athleticism has been the hallmark of the Morgan breed since its inception, it is not surprising that this quality can be found in many different Morgan bloodlines. That the top Government sires, Bennington and his son Mansfield, have the greatest overall influence in the sport population is also not surprising. It is a testament to the success of



#### OTHER CONTRIBUTORS

**TOP TO BOTTOM:** Vigilmar; Trophy (photo © Hal Hoover); and his important daughter Trophy's Corrigan.





**CONTRIBUTING FAMILY: BRUNK**

**TOP TO BOTTOM:** Flyhawk; Senator Graham; Jubilee King.

(photos © Launspach)

a breeding and innovative performance testing program designed to produce versatile Morgans.

**SUMMARY AND CONSIDERATIONS  
FOR THE MORGAN BREED**

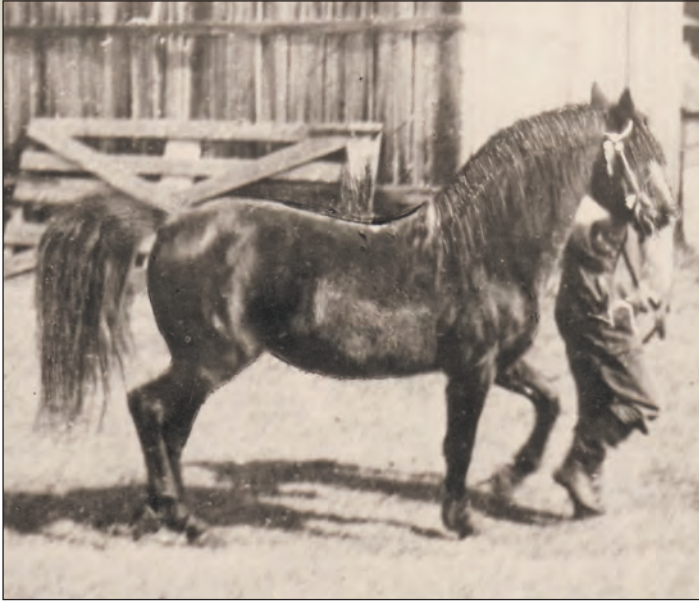
The linebreeding analysis of the show population documents what has been known for many years: if you want to compete at the highest level in the show ring, concentrate on the Waseeka's In Command and Serenity based bloodlines, especially the former. Success in saddle seat and fine harness classes depends on expressive, high-stepping trot and these two lines are the best sources in the breed. Other lines may offer possibilities, especially for Western pleasure classes, but these two bloodlines have proven to give the best overall chances of show ring success.

On the other hand, analysis of the sport population has shown that successful competitors in an array of equine sports have come from each of the breed's major families and from various bloodlines within these families to include those usually associated with the show ring. The Morgan's success in sport is an expression of its versatility which can be found throughout the breed.

The dominance of Waseeka's In Command blood in the show ring, as well as its successes in many sport disciplines, suggest that it will continue to receive intense interest from breeders. The downside for the Morgan breed is that continued inbreeding to this line could lead to a decrease in the breed's genetic diversity and thereby limit the ability of breeders to adapt to change. Traits that might be lost because they were unnecessary or even undesirable in the show ring, could become valuable in the future. As the noted equine geneticist Ann Bowling cautioned, "We cannot know what uses will be made of horses in the twenty-first century, but twentieth century history has shown that narrow specialization can doom a breed. It is important to maintain diversity even in—or particularly in—the context of closed studbooks." As a breed with a small population and a closed registry, preservation of genetic diversity should be an ongoing concern for the Morgan community.

Fortunately, a loss of genetic diversity is mitigated by the tapestry of distinct, inbred sub-populations existing within the breed. These sub-populations are typically based on one of the four commonly recognized Morgan families, and often involve linebreeding to a favorite sire. They manifest the differing opinions individual breeders have about what constitutes the ideal Morgan. To again quote Ann Bowling, "Several horse breeds are fractionated into subsets of inbred lines, sometimes defended so vehemently by their protagonists that personal feuding between owners of different sub-strains becomes surprisingly intense and bitter. The far-sighted view of breed promotion recognizes the value of maintaining multiple lines to preserve diversity for the genetic health of the breed." The value of the breed's multiple sub-populations can be seen in the results from several genomic studies which indicate a moderate level of genetic diversity still exists in the Morgan breed despite its limited population size and widespread inbreeding to the Waseeka's In Command line. In short, these inbred sub-populations are vital to the breed's genetic health because they are resources for traditional Morgan traits not valued in the show ring. However, simply having these sub-populations





**CONTRIBUTING FAMILY: LIPPITT**

**TOP ROW:** Ethan Allen 2nd; Ashbrook. **BOTTOM ROW:** Lippitt Ethan Ash; Royalton Ashbrook Darling.

is not enough. Their value to the breed depends on them being maintained at a high standard, including a high standard of athletic performance. Performance standards are preserved when selection of breeding stock is based on meaningful and relatively objective evidence of athletic ability. Since Morgans are no longer used for utilitarian purposes, except on a diminishing number of working ranches, the primary ways of assessing their athletic ability and other performance-related traits are now the show ring and sport competitions.

The ring competitions have proven highly effective in advancing the performance standard of the Morgan show horse. As Stephen Kinney has written, "...their abilities are the stuff of

dreams of trainers, and judges, and breeders, and exhibitors—all of whom aspire to extremes in the all-important gait: the trot." Fundamental to the successes of show breeding has been the practice of selecting breeding stock based on performance; the top sires, as well as many dams, have strong show performance records themselves, or have a record of producing successful progeny. It also helps that the ability of interest to the show breeders, the quality of the trot, is clearly defined and identifiable at an early age. However, as the current study has shown, selection for the show ring has led to the evolution of a genetically circumscribed Morgan sub-population which, as could be expected, dominates all major

*Continued on page 206*

TABLE 1

SOURCES OF LINEBREEDING IN HORSES THAT PLACED IN WORLD CHAMPIONSHIP CLASSES  
AT THE GRAND NATIONAL & WORLD CHAMPIONSHIP MORGAN HORSE SHOW, 2014–2018.

Number of horses in each division is in parenthesis. For each division, the influence is calculated by taking the number of horses from a line breeding source divided by the total number of horses in the discipline, and the result multiplied by the Average Percentage of Blood. Combined is the average of all divisions. Mares are indicated by italics.

	PARK SADDLE (18)			ENGLISH PLEASURE (28)			HUNTER PLEASURE (33)			WESTERN PLEASURE (38)		
LINEBREEDING SOURCE	# HORSES	AVE % BLOOD	INFLU-ENCE	# HORSES	AVE % BLOOD	INFLU-ENCE	# HORSES	AVE % BLOOD	INFLU-ENCE	# HORSES	AVE % BLOOD	INFLU-ENCE
Waseeka’s Nocturne	15	15.78	13.15	15	16.06	8.60	22	16.47	10.98	26	16.66	11.40
Waseeka’s In Command	11	15.06	9.20	12	17.06	7.31	20	19.06	11.55	15	18.44	7.28
Bennington	14	12.28	9.55	16	12.37	7.07	21	12.42	7.90	21	13.97	7.72
<i>Upwey Ben Quietude</i>	7	12.67	4.93	5	13.24	2.36	14	11.82	5.01	11	12.46	3.61
Upwey Ben Don	9	12.61	6.31	8	11.89	3.40	12	12.42	4.52	22	12.90	7.47
<i>Quietude</i>	8	11.74	5.22	5	12.38	2.21	12	12.30	4.47	16	12.50	5.26
Upwey King Benn	7	11.50	4.47	5	11.76	2.10	11	12.06	4.02	16	12.15	5.12
Mansfield	6	11.56	3.85	9	11.09	3.56	9	11.81	3.22	11	11.42	3.31
Wham Bam Command	5	17.50	4.86	5	18.75	3.35	4	18.75	2.27	7	17.41	3.21
Serenity Masterpiece	2	21.88	2.43	5	22.50	4.02	5	26.25	3.98	1	25.00	0.66
Noble Command	1	25.00	1.39	4	15.63	2.23	2	15.62	0.95	2	15.62	0.82
Noble Flaire	1	25.00	1.39	3	20.83	2.23			0.00	1	25.00	0.66
HVK Bell Flaire	1	25.00	1.39	2	25.00	1.79			0.00			0.00
<i>Trophy’s Corrigan</i>	2	12.50	1.39	2	14.84	1.06	4	12.89	1.56	3	11.98	0.95
Vigilmarch	1	15.63	0.87	4	16.02	2.29	4	12.89	1.56	1	15.63	0.41
Serenity Remember Me			0.00	3	20.83	2.23	4	21.10	2.56			0.00
Trophy			0.00	2	11.82	0.84	1	10.94	0.33	1	12.50	0.33
Serenity Grandmaster	1	15.63	0.87	2	15.62	1.12			0.00	1	12.50	0.33
UVM Flash	1	10.94	0.61	1	12.50	0.45	1	11.72	0.36	3	14.06	1.11
Fleetwing	2	12.50	1.39			0.00	1	12.50	0.38			0.00
<i>Lost River Sanfield</i>			0.00	2	14.06	1.00			0.00			0.00
Cedar CreekHarlequin	1	25.00	1.39			0.00			0.00			0.00
<i>Waseeka’s Interlude</i>			0.00	1	10.94	0.39			0.00			0.00
I Will Command	1	12.50	0.69	1	12.50	0.45			0.00			0.00
Orcland Vigildon			0.00	1	14.06	0.50	1	11.72	0.36	2	14.06	0.74
<i>Nobelle</i>			0.00			0.00			0.00	1	25.00	0.66
<i>Artemisia</i>			0.00			0.00	1	14.45	0.44	5	12.38	1.63
<i>Waseeka’s Thisizit</i>	1	12.50	0.69			0.00			0.00			0.00
Carlyle Command			0.00			0.00	1	37.50	1.14	1	18.75	0.49
Captor			0.00			0.00			0.00			0.00
<i>Townshend Donachime</i>			0.00	1	15.63	0.56			0.00	2	17.19	0.90
Tug Hill Commando			0.00			0.00			0.00	2	25.00	1.32
Ulendon			0.00	1	10.94	0.39			0.00	2	12.11	0.64
UVM Highlight			0.00			0.00			0.00	2	18.75	0.99
Waer’s Playboy			0.00			0.00	1	12.50	0.38	1	12.50	0.33
Orcland Leader			0.00			0.00			0.00	2	12.50	0.66
Canfield			0.00			0.00			0.00	2	11.72	0.62
Ethan Allan			0.00			0.00	1	10.55	0.32	1	11.13	0.29
General Gates			0.00			0.00			0.00	2	10.64	0.56

TABLE 1

SOURCES OF LINEBREEDING IN HORSES THAT PLACED IN WORLD CHAMPIONSHIP CLASSES  
AT THE GRAND NATIONAL & WORLD CHAMPIONSHIP MORGAN HORSE SHOW, 2014–2018.

CONTINUED

	PARK HARNESS (22)			PLEASURE DRIVING (33)			COMBINED (172)		
LINEBREEDING SOURCE	# HORSES	AVE % BLOOD	INFLU-ENCE	# HORSES	AVE % BLOOD	INFLU-ENCE	# HORSES	AVE % BLOOD	INFLU-ENCE
Waseeka’s Nocturne	17	18.74	14.48	26	17.66	20.87	121	16.95	79.48
Waseeka’s In Command	16	18.80	13.67	22	18.01	18.01	96	17.97	67.03
Bennington	12	12.14	6.62	17	12.56	9.71	101	12.71	48.57
<i>Upwey Ben Quietude</i>	11	14.38	7.19	14	14.11	8.98	62	13.12	32.08
Upwey Ben Don	7	12.98	4.13	10	13.67	6.21	68	12.78	32.03
<i>Quietude</i>	9	13.65	5.58	13	13.72	8.11	63	12.77	30.86
Upwey King Benn	9	14.38	5.88	11	13.53	6.77	59	12.62	28.36
Mansfield	6	11.30	3.08	7	11.33	3.61	48	11.42	20.63
Wham Bam Command	1	18.75	0.85	6	16.41	4.48	28	17.69	19.02
Serenity Masterpiece	2	23.44	2.13	4	26.56	4.83	19	24.51	18.04
Noble Command	7	22.32	7.10	4	25.00	4.55	20	20.31	17.04
Noble Flaire	3	25.00	3.41	4	25.00	4.55	12	23.96	12.23
HVK Bell Flaire	1	25.00	1.14	4	34.38	6.25	8	29.69	10.56
<i>Trophy’s Corrigan</i>	3	21.88	2.98	2	18.75	1.70	16	15.33	9.65
Vigilmarch	3	13.28	1.81	4	14.26	2.59	17	14.34	9.53
Serenity Remember Me			0.00	2	18.75	1.70	9	20.49	6.49
Trophy	1	14.84	0.67	2	12.50	1.14	7	12.42	3.32
Serenity Grandmaster			0.00	1	18.75	0.85	5	15.62	3.17
UVM Flash			0.00	1	12.50	0.57	7	12.83	3.09
Fleetwing			0.00	2	13.28	1.21	5	12.81	2.97
<i>Lost River Sanfield</i>	1	37.50	1.70			0.00	3	21.87	2.71
Cedar CreekHarlequin	1	25.00	1.14			0.00	2	25.00	2.53
<i>Waseeka’s Interlude</i>			0.00	3	14.58	1.99	4	13.67	2.38
I Will Command	2	12.50	1.14			0.00	4	12.50	2.28
Orcland Vigildon			0.00	1	12.50	0.57	5	13.28	2.17
<i>Nobelle</i>			0.00	1	31.25	1.42	2	28.13	2.08
<i>Artemisia</i>			0.00			0.00	6	12.73	2.07
<i>Waseeka’s Thisizit</i>	1	17.19	0.78	1	10.16	0.46	3	13.28	1.94
Carlyle Command			0.00			0.00	2	28.13	1.63
Captor	2	10.84	0.99	1	11.52	0.52	3	11.07	1.51
<i>Townshend Donachime</i>			0.00			0.00	3	16.67	1.46
Tug Hill Commando			0.00			0.00	2	25.00	1.32
Ulendon			0.00			0.00	3	11.72	1.03
UVM Highlight			0.00			0.00	2	18.75	0.99
Waer’s Playboy			0.00			0.00	2	12.50	0.71
Orcland Leader			0.00			0.00	2	12.50	0.66
Canfield			0.00			0.00	2	11.72	0.62
Ethan Allan			0.00			0.00	2	10.84	0.61
General Gates			0.00			0.00	2	10.64	0.56



TABLE 2

SOURCES OF LINEBREEDING IN MORGANS COMPETING AT ADVANCED LEVELS IN SELECTED SPORTS, 2014–2018.

Number of horses in each discipline is in parenthesis. For each discipline, the influence is calculated by taking the number of horses from a line breeding source divided by the total number of horses in the discipline, and the result multiplied by the Average Percentage of Blood. Combined is the average of all disciplines. Mares are indicated by italics.

	DRESSAGE (27)			COMBINED DRIVING (26)			REINING (18)			ENDURANCE/ COMP. TRAIL (41)			EVENTING (16)			COMBINED (128)		
LINEBREEDING SOURCE	# HORSES	AVE % BLOOD	INFLU- ENCE	# HORSES	AVE % BLOOD	INFLU- ENCE	# HORSES	AVE % BLOOD	INFLU- ENCE	# HORSES	AVE % BLOOD	INFLU- ENCE	# HORSES	AVE % BLOOD	INFLU- ENCE	# HORSES	AVE % BLOOD	INFLU- ENCE
Bennington	12	14.62	6.50	17	13.57	8.87	10	13.22	7.34	15	15.18	5.55	6	14.36	5.39	60	14.20	33.60
Mansfield	8	12.38	3.67	5	12.15	2.34	5	11.06	3.07	10	12.46	3.04	4	15.38	3.85	32	12.54	15.96
Upwey Ben Don	6	15.88	3.53	5	13.71	2.64	5	13.75	3.82	8	14.40	2.81	1	14.06	0.88	25	14.47	13.67
Waseeka’s Nocturne	5	13.91	2.58	3	12.50	1.44	1	12.50	0.69	4	20.32	1.98	4	16.80	4.20	17	15.77	10.90
Flyhawk	5	16.45	3.05	6	13.83	3.19	1	21.48	1.19	3	13.11	0.96	2	13.97	1.75	17	14.94	10.14
<i>Artemisia</i>	3	15.69	1.74	5	11.72	2.25	1	10.94	0.61	7	13.67	2.33	2	14.16	1.77	18	13.37	8.71
Ethan Allan 3rd	3	13.15	1.46	3	12.63	1.46	1	10.74	0.60	8	14.89	2.91	1	10.35	0.65	16	13.60	7.07
Waseeka’s In Command	2	14.06	1.04	2	13.28	1.02	1	18.75	1.04	2	19.53	0.95	3	15.63	2.93	10	15.94	6.99
<i>Quietude</i>	4	11.14	1.65	1	11.33	0.44	2	10.55	1.17	5	14.30	1.74	1	17.19	1.07	13	12.74	6.08
Ashbrook	1	17.77	0.66	1	28.71	1.10			0.00	6	22.95	3.36	1	12.70	0.79	9	21.88	5.90
Upwey King Benn	4	10.84	1.61	2	11.14	0.86	1	10.55	0.59	4	13.18	1.29	1	17.19	1.07	12	12.18	5.41
<i>Upwey Benn Quietude</i>	2	10.55	0.78			0.00			0.00	3	16.93	1.24	3	14.58	2.73	8	14.45	4.75
Noble Flaire	1	25.00	0.93	1	18.75	0.72			0.00	1	31.25	0.76	1	37.50	2.34	4	28.13	4.75
Red Correll	2	12.80	0.95			0.00	4	16.12	3.58			0.00			0.00	6	15.01	4.50
Lippitt Ethan Ash			0.00	1	23.24	0.89			0.00	5	21.60	2.63	1	12.89	0.81	7	20.59	4.33
Blackwood Correll	2	17.19	1.27			0.00	2	24.22	2.69			0.00			0.00	4	20.71	3.96
General Gates	2	11.82	0.88	2	10.94	0.84			0.00	2	12.98	0.63	2	11.72	1.47	8	11.87	3.82
<i>Sentola</i>	1	14.06	0.52	4	15.87	2.44			0.00			0.00			0.00	5	15.51	2.96
Royalton Ashbrook Darling			0.00	1	17.19	0.66			0.00	3	28.65	2.10			0.00	4	25.79	2.76
Ethan Allen 2nd	1	11.33	0.42	2	10.36	0.80			0.00	4	15.33	1.50			0.00	7	13.34	2.71
Jubilee King			0.00	4	11.62	1.79			0.00	2	18.06	0.88			0.00	6	13.77	2.67
Senator Barr	1	25.00	0.93			0.00			0.00			0.00	1	25.00	1.56	2	25.00	2.49
Senator Graham	2	14.06	1.04			0.00			0.00	1	11.72	0.29	1	17.97	1.12	4	14.45	2.45
<i>Allan’s Fancy L</i>	2	14.46	1.07	1	10.94	0.42			0.00	1	10.94	0.27	1	10.94	0.68	5	12.35	2.44
Go Hawk	1	15.23	0.56	3	10.55	1.22	1	11.72	0.65			0.00			0.00	5	11.72	2.43
Vigilmarch			0.00	2	12.50	0.96			0.00	3	19.79	1.45			0.00	5	16.87	2.41
Orcland Vigildon			0.00	2	13.67	1.05			0.00	3	15.63	1.14			0.00	5	14.85	2.20
The Brown Falcon	1	17.19	0.64	1	12.50	0.48	1	18.75	1.04			0.00			0.00	3	16.15	2.16
Waseeka’s Here Tiz	1	15.63	0.58	1	15.63	0.60			0.00			0.00	1	15.63	0.98	3	15.63	2.16
Penrod	1	11.52	0.43	3	14.65	1.69			0.00			0.00			0.00	4	13.87	2.12
<i>Daisette</i>	1	11.91	0.44	3	14.19	1.64			0.00			0.00			0.00	4	13.62	2.08
Mr Breezy Cobra	1	18.76	0.69	1	12.50	0.48			0.00			0.00	1	14.06	0.88	3	15.11	2.05
Tutor	2	15.24	1.13	1	13.67	0.53			0.00	1	14.84	0.36			0.00	4	14.75	2.02
Domino Joe	1	15.63	0.58	1	12.50	0.48	1	15.63	0.87			0.00			0.00	3	14.59	1.93
Easter Vermont	2	18.75	1.39			0.00			0.00	1	18.79	0.46			0.00	3	18.76	1.85
UVM Highlight	1	18.75	0.69	1	17.19	0.66			0.00	1	18.75	0.46			0.00	3	18.23	1.81
<i>Hillview Jubilee</i>			0.00	2	18.75	1.44			0.00	1	14.06	0.34			0.00	3	17.19	1.79
Topside Eager Beaver			0.00			0.00	2	15.62	1.74			0.00			0.00	2	15.62	1.74
Orcland Leader	1	14.06	0.52	2	14.84	1.14			0.00			0.00			0.00	3	14.58	1.66
Trophy	1	20.31	0.75	1	15.63	0.60			0.00	1	12.50	0.30			0.00	3	16.15	1.66

TABLE 2

CONTINUED

	DRESSAGE (27)			COMBINED DRIVING (26)			REINING (18)			ENDURANCE/ COMP. TRAIL (41)			EVENTING (16)			COMBINED (128)		
LINEBREEDING SOURCE	# HORSES	AVE % BLOOD	INFLU- ENCE	# HORSES	AVE % BLOOD	INFLU- ENCE	# HORSES	AVE % BLOOD	INFLU- ENCE	# HORSES	AVE % BLOOD	INFLU- ENCE	# HORSES	AVE % BLOOD	INFLU- ENCE	# HORSES	AVE % BLOOD	INFLU- ENCE
Criterion			0.00	1	10.94	0.42			0.00	1	50.00	1.22			0.00	2	30.47	1.64
Allen’s Major			0.00	1	10.94	0.42			0.00	2	22.74	1.11			0.00	3	18.81	1.53
Dyberry Ethan			0.00	1	17.97	0.69			0.00	2	15.62	0.76			0.00	3	16.40	1.45
Croydon Prince	1	10.16	0.38			0.00			0.00	3	14.71	1.08			0.00	2	18.75	1.44
Ebony Baron			0.00	2	18.75	1.44			0.00			0.00			0.00	2	18.75	1.44
Lady Rockwood			0.00			0.00	2	12.90	1.43			0.00			0.00	2	12.90	1.43
UVM Kris	1	18.75	0.69	1	18.75	0.72			0.00			0.00			0.00	2	18.75	1.42
Whippoorwill Duke	1	18.75	0.69	1	18.75	0.72			0.00			0.00			0.00	2	18.75	1.42
Pecos			0.00	1	12.50	0.48	1	10.94	0.61	1	10.94	0.27			0.00	3	11.46	1.36
Norma	1	10.94	0.41	2	12.11	0.93			0.00			0.00			0.00	3	11.72	1.34
Canfield			0.00	1	13.87	0.53			0.00	2	15.62	0.76			0.00	3	15.04	1.30
Fleetwing			0.00	2	12.50	0.96			0.00	1	12.50	0.30			0.00	3	12.50	1.27
Noble Command	1	18.75	0.69			0.00			0.00	1	21.88	0.53			0.00	2	20.32	1.23
Funquest Falcon			0.00	1	18.75	0.72			0.00	1	18.75	0.46			0.00	2	18.75	1.18
Warhawk			0.00	1	15.63	0.60			0.00	2	11.72	0.57			0.00	3	13.02	1.17
Jubilee Courage			0.00	1	10.16	0.39			0.00	1	31.25	0.76			0.00	2	20.71	1.15
Tehachapi Allan	1	11.33	0.42	1	10.16	0.39			0.00	1	10.55	0.26			0.00	3	10.68	1.07
John A. Darling			0.00			0.00			0.00	3	14.07	1.03			0.00	3	14.07	1.03
Symphonee			0.00	1	14.84	0.57			0.00	1	18.75	0.46			0.00	2	16.80	1.03
Moro Hills Adonis			0.00	1	14.06	0.54			0.00	1	18.75	0.46			0.00	2	16.41	1.00
Lady Laura	1	11.75	0.44			0.00			0.00	2	11.14	0.54			0.00	3	11.34	0.98
Squire Burger	1	13.28	0.49	1	12.50	0.48			0.00			0.00			0.00	2	12.89	0.97
Fleetfield	1	12.50	0.46	1	12.50	0.48			0.00			0.00			0.00	2	12.50	0.94
Townshend Lass			0.00			0.00			0.00	2	19.14	0.93			0.00	2	19.14	0.93
Florette			0.00			0.00	1	10.94	0.61	1	10.94	0.27			0.00	2	10.94	0.87
Lippitt Sam			0.00	1	11.33	0.44			0.00	1	16.80	0.41			0.00	2	14.07	0.85
Goldfield	1	13.28	0.40			0.00			0.00	1	13.09	0.32			0.00	2	13.19	0.81
UVM Vision			0.00	1	12.50	0.48			0.00	1	12.50	0.30			0.00	2	12.50	0.79
Lippitt Gay Locket			0.00	1	11.72	0.45			0.00	1	12.50	0.30			0.00	2	12.11	0.76
Panfield			0.00			0.00			0.00	2	3.68	0.67			0.00	2	13.68	0.67
Lippitt Gladys Moro			0.00			0.00			0.00	2	12.89	0.63			0.00	2	12.89	0.63
Lippitt Ashmore			0.00			0.00			0.00	2	11.72	0.57			0.00	2	11.72	0.57
Lippitt Georgia			0.00			0.00			0.00	2	11.33	0.55			0.00	2	11.33	0.55
Lippitt Moro			0.00			0.00			0.00	2	10.94	0.53			0.00	2	10.94	0.53
Moro			0.00			0.00			0.00	2	10.94	0.53			0.00	2	10.94	0.53
Ne Komia			0.00			0.00			0.00	2	10.84	0.53			0.00	2	10.84	0.53





### CONTRIBUTING FAMILY: WORKING WESTERN

LEFT TO RIGHT: Red Correll; Blackwood Correll (photo from Mary Jean Vasiloff, Courtesy Kristal Homoki).

*Continued from page 201*

classes. This situation has discouraged those favoring other lines from competing in these classes. The fact that the show population surveyed in this study only includes horses placing in the world championship classes notwithstanding, it is likely that individuals favoring the non-show bloodlines are not participating in large numbers in breed shows at any level. This situation significantly limits the usefulness of the show competitions for advancing performance standards of Morgans that are not part of the show horse sub-population.

The equine sport competitions can be used to foster a high standard of athletic performance across all of the breed's disparate bloodlines. As the current study has shown, Morgans from diverse bloodlines are competing successfully at the higher levels of an

array of athletically challenging equine sports. They are relevant to all Morgan breeders wanting to evaluate the athletic ability and trainability of their stock, including those focused on perpetuating a specific Morgan family or sire line. However, at present it is unclear to what extent breeders are using sport performance records to guide the selection of breeding stock. Unlike the situation in the show industry, a significant share of the horses used in sport competitions appear to be coming from the general population of Morgans rather than from farms that are purpose breeding for sport. But, as more breeders base their selection of breeding stock on evidence of superior performance in sport competitions, the value derived from involvement of Morgans in sport with respect to the genetic health and traditional qualities of the breed will increase. ■

### RESOURCES

- All Breed Pedigree, [www.allbreedpedigree.com](http://www.allbreedpedigree.com)
- AMHA Competition Show Results, <https://www.morganhorse.com/competitions/competitions/show-results/>
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- Morgan Sport Resource, <http://morgansportresource.com/>
- Petersen JL, Mickelson JR, Cothran EG, Andersson LS, Axelsson J, Bailey E, et al. (2013) *Genetic Diversity in the Modern Horse Illustrated from Genome-Wide SNP Data*. PLoS ONE 8(1): e54997. <https://doi.org/10.1371/journal.pone.0054997>
- The Morgan Horse Judging Standards, 2020 Edition. [www.morganhorse.com/upload/photos/9102020JudgingStandards\\_WEB2.pdf](http://www.morganhorse.com/upload/photos/9102020JudgingStandards_WEB2.pdf)