

SIREs' PROGENY DURABILITY

Among goals of the Welfare and Safety of the Racehorse Summits was to direct attention to stallions whose progeny exhibits statistically above-average soundness and durability. The Summits, co-funded by Grayson-Jockey Club Research Foundation and The Jockey Club, generated numerous committees to address certain subjects. Those committees have continued to work within the industry, and the durability Committee is among them. It was formed in response to the sharp decline in the average number of starts North American horses are making, down from about 11 in 1960 to less than 7 today.

It is understood that the average number of starts can be a function of many elements, some management based, but it is also intuitive to think that the decline reflects a decreasing ruggedness in the overall population of the North American Thoroughbred. The durability statistics that the Committee caused to be produced are seen as helpful clues as to which stallions statistically indicate above-average ability to get horses with soundness and racing durability.

Lists published here in the past fulfilled that promise and created interest, but the Durability Committee sought improvements. The first lists tended to be dominated by older or deceased stallions, many of which could not be said to be in the mainstream of the national breeding picture or likely to have much impact on the breed.

The lists presented herewith seek to counter that skewing by being somewhat exclusive. With the help of The Jockey Club Information Systems, we started with a proven population, the top 200 stallions of 2008 by progeny earnings in that year. The data included all North American-based stallions that made the top 200, including all their Northern Hemisphere earnings (except in Japan). All 2008 earnings are included, although starts, wins, etc., for juveniles of 2008 are excluded so as not to skew figures for career records downward. Even though the stallions on the list earned their way there strictly by 2008 earnings, the other statistics for each of them are lifetime statistics through October 6, 2009.

From that original list of the top 200, we herewith present the top 100 stallions by two separate measures: percentage of foals that get to the races and lifetime average starts per starter. In studying these lists, it might be well to consider the breed averages: About 70% of foals get to the races, and the career records of recent foal crops hover around 18 starts per horse; the latter mark is attained by a minority of the leading sires by progeny earnings.

We suggest that no statistical presentation can serve as a single indicator of success. There are other possibilities that could have influences. Results are affected by a broad range of phenomena, including racing luck, training, nutrition, and track condition, as well as management and motivation of the owner and trainer. Genetic propensities are a key to the success or failure of the race horse, but racing results can only be clues to various qualities rather than straight-line measures.

Insofar as percentage of starters and number of starts, it is clear that market and fashion forces are major factors. A superbly bred horse whose pedigree alone makes him/her

worthy of entering the breeding sphere is much less likely to have as lengthy a racing career or as high number of starts as a horse lacking that pedigree fashion. Thus, it is to be expected that the most renowned stallions---sires of classic winners and other graded winners, the very top echelon of earnings---will score lower in the measures we have selected as hints of durability and soundness.

The fact that a sire does not make these top 100 lists does not mean his offspring did not have the genetic potential to have been involved in getting him there. (In the case of average starts per starter, there is also a prejudice against younger stallions whose first runners might still be in training). The value in these lists, though, is that if a stallion does stand high then you can be certain that his offspring did have the genetic ability to create that result.

Such is the size and financial aggregate of the industry that a stallion needed progeny earnings of slightly more than \$1.5 million in 2008 to make the top 200 for that one year. At the top of the heap were Smart Strike at \$12-million plus, Giant's Causeway and Kingmambo at more than \$9 million each, and 31 other stallions with \$5 million or more. Nineteen of those 34 stallions with at least \$5 million in 2008 progeny earnings also made the top 100 list in career percentage of starters from foals a racing age, while 13 made the top 100 by career average starts per starter.

Three stallions of interest, all deceased, still influence pedigrees and deserve comment although statistically excluded from these top 100 lists. Miswaki, sire of the dam of Sea The Stars, is a case in point with 77.8% starters from foals of racing age and 17.4 starts per starter. Broad Brush, a champion sire, had 82.4% of his foals start and 20.2 starts per starter, validating the commonly held opinion that both sires produced durable foals as well as fast ones. Fit to Fight saw 84.1% of his foals actually start and then make 26.9 starts per starters; all of these failed to make this short list by virtue of declining 2008 earnings, predictable for deceased progenitors, but their progeny remains influential.

As with all lists by earnings, indices, stud fee, percent stakes winners, etc., which are familiar to readers of the trade press, the foregoing are individual indicators or "hints". We would not anticipate a breeder looking at these lists and making mating decisions based solely upon them. However, the information can be useful in cases in which two or more stallions of relatively comparable status are being considered and a small difference in one of the measures would guide a final decision.

While these data might not be easily applicable at the top-end of pedigree fashion, they could be used at most levels. We suggest that a few percentage points in likelihood of getting to the races, or the prospect of a few more starts per horse, could be a useful factor in a stallion choice for a particular mare.

The authors look forward to your comments and suggestions as to the further improvement of these data.

---- *Dr. Hiram Polk and
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Top 100 Sires - Starts per Starter

#	Stallion	YOB	Sire of Stallion	Loc	Foals of RA	2008 Earnings	Starts/St rtr
1	Regal Classic	1985	Vice Regent	NY	719	\$1,689,787	26.18
2	Notebook	1985	Well Decorated	FL	635	\$1,777,686	25.33
3	High Brite	1984	Best Turn	CA	890	\$1,655,488	25.14
4	Beau Genius	1985	Bold Ruckus	CA	766	\$1,617,398	24.73
5	Runaway Groom	1979	Blushing Groom (FR)	KY	1146	\$1,751,273	23.09
6	Cryptoclearance	1984	Fappiano	KY	1141	\$1,987,615	22.51
7	Slew City Slew	1984	Seattle Slew	KY	828	\$2,479,391	22.37
8	Suave Prospect	1992	Fortunate Prospect	CAN	381	\$1,954,740	22.26
9	Peaks and Valleys	1992	Mt. Livermore	ON	505	\$1,591,640	22.09
10	Lit de Justice	1990	El Gran Senor	CA	394	\$1,878,877	21.95
11	Concorde's Tune	1989	Concorde Bound	FL	432	\$2,152,147	21.85
12	Lucky Lionel	1993	Mt. Livermore	OK	271	\$2,763,248	21.83
13	Glitterman	1985	Dewan	KY	727	\$2,128,254	21.55
14	Mt. Livermore	1981	Blushing Groom (FR)	KY	1006	\$1,692,337	21.23
15	Ide	1993	Forty Niner	LA	407	\$2,201,063	20.59
16	Sky Classic	1987	Nijinsky II	KY	688	\$2,904,963	20.31
17	Roar	1993	Forty Niner	CA	398	\$1,752,072	20.15
18	Marquetry	1987	Conquistador Cielo	KY	829	\$2,154,251	19.84
19	Eltish	1992	Cox's Ridge	NY	245	\$2,059,295	19.80
20	Lite the Fuse	1991	Buckaroo	PA	440	\$2,102,215	19.68
21	Devil His Due	1989	Devil's Bag	KY	851	\$3,447,648	19.53
22	Bold Executive	1984	Bold Ruckus	ON	668	\$4,373,994	19.52
23	Catienus	1994	Storm Cat	KY	369	\$3,833,030	19.49
24	Two Punch	1983	Mr. Prospector	MD	975	\$2,035,582	19.39
25	Sea of Secrets	1995	Storm Cat	CA	317	\$2,779,716	19.37
26	Storm Boot	1989	Storm Cat	KY	723	\$3,750,765	19.36
27	Concerto	1994	Chief's Crown	FL	339	\$2,727,694	19.32
28	Out of Place	1987	Cox's Ridge	KY	629	\$2,407,530	19.25
29	El Prado (IRE)	1989	Sadler's Wells	KY	917	\$4,338,854	19.21
30	Not For Love	1990	Mr. Prospector	MD	693	\$6,425,297	19.14
31	Adcat	1995	Storm Cat	FL	188	\$1,667,904	19.11
32	Quiet American	1986	Fappiano	KY	755	\$3,140,662	19.10
33	Silver Deputy	1985	Deputy Minister	KY	1021	\$4,850,154	19.08
34	Double Honor	1995	Gone West	FL	482	\$2,702,587	19.07
35	Outflanker	1994	Danzig	MD	387	\$3,818,193	18.99
36	Matty G	1993	Capote	WA	331	\$1,893,126	18.83
37	Evansville Slew	1992	Slew City Slew	OK	398	\$1,702,300	18.79
38	Halo's Image	1991	Halo	FL	480	\$2,663,413	18.79
39	Gulch	1984	Mr. Prospector	KY	1037	\$3,868,846	18.79
40	Lear Fan	1981	Roberto	KY	909	\$4,382,712	18.72
41	Boundary	1990	Danzig	KY	418	\$5,224,717	18.69
42	Mutakddim	1991	Seeking the Gold	KY	604	\$5,333,287	18.47
43	Petionville	1992	Seeking the Gold	KY	531	\$4,271,571	18.44
44	Cozzene	1980	Caro (IRE)	KY	937	\$2,058,655	18.27
45	Defrere	1992	Deputy Minister	NJ	477	\$1,891,913	18.27
46	Dynaformer	1985	Roberto	KY	1078	\$5,535,748	18.13
47	Exploit	1996	Storm Cat	KY	356	\$1,697,166	17.96
48	Valid Expectations	1993	Valid Appeal	TX	504	\$2,194,217	17.86
49	Pine Bluff	1989	Danzig	TX	586	\$1,592,670	17.84
50	Langfuhr	1992	Danzig	KY	780	\$7,672,141	17.84
51	Carson City	1987	Mr. Prospector	KY	1045	\$3,697,135	17.62
52	Partner's Hero	1994	Danzig	PA	354	\$2,879,809	17.55
53	Gilded Time	1990	Timeless Moment	AB	893	\$3,976,112	17.48
54	Swiss Yodeler	1994	Eastern Echo	CA	562	\$2,236,957	17.39
55	Formal Gold	1993	Black Tie Affair (IRE)	CA	403	\$1,756,953	17.35
56	Gold Case	1994	Forty Niner	NM	476	\$1,990,635	17.35
57	Service Stripe	1991	Deputy Minister	OK	322	\$2,103,764	17.35
58	Vettori (IRE)	1992	Machiavellian	?	593	\$2,421,943	17.25
59	Alphabet Soup	1991	Cozzene	FL	640	\$3,138,649	17.22
60	Salt Lake	1989	Deputy Minister	CA	917	\$3,164,063	17.20
61	Lord Carson	1992	Carson City	CA	492	\$2,249,488	17.13
62	Louis Quatorze	1993	Sovereign Dancer	MD	625	\$2,383,602	17.09
63	Smoke Glacken	1994	Two Punch	KY	611	\$4,483,053	17.07
64	Meadowlake	1983	Hold Your Peace	KY	943	\$1,652,667	16.95
65	Lost Soldier	1990	Danzig	KY	434	\$1,731,423	16.95
66	Rahy	1985	Blushing Groom (FR)	KY	1029	\$4,879,667	16.83
67	Afternoon Deelites	1992	Private Terms	LA	505	\$2,069,606	16.80
68	Dixieland Band	1980	Northern Dancer	KY	1268	\$2,220,261	16.78
69	Doneraile Court	1996	Seattle Slew	KY	436	\$5,539,366	16.69
70	Running Stag	1994	Cozzene	LA	346	\$2,037,261	16.68
71	Cat Thief	1996	Storm Cat	PA	365	\$3,567,438	16.65
72	Disco Rico	1997	Citidancer	NY	143	\$1,857,902	16.61
73	Deputy Commander	1994	Deputy Minister	CA	557	\$3,757,165	16.58
74	Pleasant Tap	1987	Pleasant Colony	KY	695	\$3,398,787	16.57
75	Belong to Me	1989	Danzig	KY	870	\$5,022,727	16.56
76	Snuck In	1997	Montbrook	LA	260	\$1,900,753	16.54
77	Good and Tough	1995	Carson City	LA	297	\$2,324,511	16.47
78	Skip Away	1993	Skip Trial	KY	467	\$1,892,073	16.42
79	Artax	1995	Marquetry	OK	399	\$1,864,678	16.34
80	Chester House	1995	Mr. Prospector	KY	223	\$6,972,642	16.34
81	Montbrook	1990	Buckaroo	FL	705	\$4,538,749	16.16
82	Cee's Tizzy	1987	Relaunch	CA	697	\$2,174,468	16.06
83	Real Quiet	1995	Quiet American	PA	342	\$2,630,992	16.02
84	Sahm	1994	Mr. Prospector	KY	204	\$2,388,410	15.98
85	Leestown	1994	Seattle Slew	LA	446	\$2,676,787	15.89
86	Northern Afleet	1993	Afleet	KY	574	\$5,151,715	15.88
87	Tactical Cat	1996	Storm Cat	OK	447	\$3,189,434	15.78
88	Three Wonders	1997	Storm Cat	FL	238	\$2,440,327	15.55
89	Western Expression	1996	Gone West	NY	293	\$1,939,229	15.39
90	Mazel Trick	1995	Phone Trick	BC	346	\$1,769,296	15.32
91	Distant View	1991	Mr. Prospector	KY	489	\$2,047,514	15.23
92	Yes It's True	1996	Is It True	KY	512	\$5,251,870	15.19
93	Cherokee Run	1990	Runaway Groom	KY	747	\$5,408,528	15.16
94	West Acre	1995	Forty Niner	FL	270	\$1,620,479	15.06
95	Maria's Mon	1993	Wavering Monarch	KY	877	\$5,595,155	14.96
96	Chief Seattle	1997	Seattle Slew	NY	346	\$2,824,442	14.75
97	Sweetsouthern saint	1995	Saint Ballado	FL	326	\$2,131,886	14.67
98	Delaware Township	1996	Notebook	PA	224	\$1,780,156	14.60
99	Albert the Great	1997	Go for Gin	PA	245	\$2,291,723	14.49
100	Unusual Heat	1990	Nureyev	CA	421	\$5,828,073	14.47

Top 100 Sires - % of Foals of Racing Age Started

#	Stallion	YOB Sire of Stallion	Loc	Foals of		Strtrs/Fis of RA
				RA	2008 Earnings	
1	Regal Classic	1985 Vice Regent	NY	719	\$1,689,787	85.40%
2	Notebook	1985 Well Decorated	FL	635	\$1,777,686	84.57%
3	Chester House	1995 Mr. Prospector	KY	223	\$6,972,642	82.96%
4	Roar	1993 Forty Niner	CA	398	\$1,752,072	82.91%
5	Runaway Groom	1979 Blushing Groom (FR)	KY	1146	\$1,751,273	82.72%
6	Cryptoclearance	1984 Fappiano	KY	1141	\$1,987,615	82.38%
7	Mutakddim	1991 Seeking the Gold	KY	604	\$5,333,287	82.12%
8	Petionville	1992 Seeking the Gold	KY	531	\$4,271,571	81.92%
9	Storm Boot	1989 Storm Cat	KY	723	\$3,750,765	81.74%
10	Two Punch	1983 Mr. Prospector	MD	975	\$2,035,582	81.13%
11	Out of Place	1987 Cox's Ridge	KY	629	\$2,407,530	81.08%
12	Mt. Livermore	1981 Blushing Groom (FR)	KY	1006	\$1,692,337	80.91%
13	Sea of Secrets	1995 Storm Cat	CA	317	\$2,779,716	80.76%
14	Vettori (IRE)	1992 Machiavellian	?	593	\$2,421,943	80.44%
15	Langfuhr	1992 Danzig	KY	780	\$7,672,141	80.38%
16	Dynaformer	1985 Roberto	KY	1078	\$5,535,748	80.24%
17	Not For Love	1990 Mr. Prospector	MD	693	\$6,425,297	80.23%
18	Cape Canaveral	1996 Mr. Prospector	AB	308	\$2,213,380	80.19%
19	Sky Classic	1987 Nijinsky II	KY	688	\$2,904,963	80.09%
20	Cherokee Run	1990 Runaway Groom	KY	747	\$5,408,528	79.79%
21	Lost Soldier	1990 Danzig	KY	434	\$1,731,423	79.72%
22	Salt Lake	1989 Deputy Minister	CA	917	\$3,164,063	79.72%
23	Smoke Glacken	1994 Two Punch	KY	611	\$4,483,053	79.38%
24	Eitish	1992 Cox's Ridge	NY	245	\$2,059,295	79.18%
25	Valid Expectations	1993 Valid Appeal	TX	504	\$2,194,217	79.17%
26	Matty G	1993 Capote	WA	331	\$1,893,126	78.85%
27	Slew City Slew	1984 Seattle Slew	KY	828	\$2,479,391	78.62%
28	Devil His Due	1989 Devil's Bag	KY	851	\$3,447,648	78.61%
29	Suave Prospect	1992 Fortunate Prospect	CAN	381	\$1,954,740	78.48%
30	Straight Man	1996 Saint Ballado	FL	306	\$2,336,759	78.43%
31	Gilded Time	1990 Timeless Moment	AB	893	\$3,976,112	78.39%
32	Exchange Rate	1997 Danzig	KY	258	\$3,078,933	78.29%
33	Marquetry	1987 Conquistador Cielo	KY	829	\$2,154,251	78.29%
34	Glitterman	1985 Dewan	KY	727	\$2,128,254	78.27%
35	Gulch	1984 Mr. Prospector	KY	1037	\$3,868,846	78.11%
36	Lear Fan	1981 Roberto	KY	909	\$4,382,712	78.00%
37	Carson City	1987 Mr. Prospector	KY	1045	\$3,697,135	77.89%
38	Lord Carson	1992 Carson City	CA	492	\$2,249,488	77.85%
39	Afternoon Deelites	1992 Private Terms	LA	505	\$2,069,606	77.82%
40	Bold Executive	1984 Bold Ruckus	ON	668	\$4,373,994	77.40%
41	Concerto	1994 Chief's Crown	FL	339	\$2,727,694	77.29%
42	Catienus	1994 Storm Cat	KY	369	\$3,833,030	77.24%
43	Quiet American	1986 Fappiano	KY	755	\$3,140,662	77.22%
44	Stormin Fever	1994 Storm Cat	CA	491	\$3,377,618	77.19%
45	Yes It's True	1996 Is It True	KY	512	\$5,251,870	77.15%
46	Partner's Hero	1994 Danzig	PA	354	\$2,879,809	77.12%
47	Gold Case	1994 Forty Niner	NM	476	\$1,990,635	77.10%
48	Distorted Humor	1993 Forty Niner	KY	689	\$8,472,513	77.07%
49	Lit de Justice	1990 El Gran Senor	CA	394	\$1,878,877	76.90%
50	Beau Genius	1985 Bold Ruckus	CA	766	\$1,617,398	76.89%
51	Dixieland Band	1980 Northern Dancer	KY	1268	\$2,220,261	76.74%
52	Three Wonders	1997 Storm Cat	FL	238	\$2,440,327	76.47%
53	Doneraile Court	1996 Seattle Slew	KY	436	\$5,539,366	76.38%
54	Exploit	1996 Storm Cat	KY	356	\$1,697,166	76.12%
55	Outflanker	1994 Danzig	MD	387	\$3,818,193	75.97%
56	Concorde's Tune	1989 Concorde Bound	FL	432	\$2,152,147	75.93%
57	Distant View	1991 Mr. Prospector	KY	489	\$2,047,514	75.87%
58	Forest Wildcat	1991 Storm Cat	KY	757	\$5,335,332	75.56%
59	Delaware Township	1996 Notebook	PA	224	\$1,780,156	75.45%
60	Diesis (GB)	1980 Sharpen Up (GB)	KY	1054	\$1,890,669	75.33%
61	Put It Back	1998 Honour and Glory	FL	254	\$2,820,755	75.20%
62	Real Quiet	1995 Quiet American	PA	342	\$2,630,992	75.15%
63	King Cugat	1997 Kingmambo	NY	188	\$2,309,155	75.00%
64	Thunder Gulch	1992 Gulch	KY	870	\$4,026,154	74.94%
65	High Brite	1984 Best Turn	CA	890	\$1,655,488	74.83%
66	Ide	1993 Forty Niner	LA	407	\$2,201,063	74.69%
67	Honour and Glory	1993 Relaunch	KY	910	\$4,959,384	74.62%
68	Van Nistelrooy	2000 Storm Cat	KY	252	\$3,092,747	74.60%
69	Hennessy	1993 Storm Cat	KY	777	\$3,474,784	74.52%
70	More Than Ready	1997 Southern Halc	KY	607	\$5,779,382	74.46%
71	Pulpit	1994 A.P. Indy	KY	579	\$5,874,096	74.44%
72	Brahms	1997 Danzig	LA	356	\$2,511,167	74.44%
73	Boundary	1990 Danzig	KY	418	\$5,224,717	74.40%
74	Louis Quatorze	1993 Sovereign Dancer	MD	625	\$2,383,602	74.40%
75	Deputy Commander	1994 Deputy Minister	CA	557	\$3,757,165	74.33%
76	Lite the Fuse	1991 Buckaroo	PA	440	\$2,102,215	74.32%
77	Mazel Trick	1995 Phone Trick	BC	346	\$1,769,296	74.28%
78	Alphabet Soup	1991 Cozzene	FL	640	\$3,138,649	74.06%
79	Formal Gold	1993 Black Tie Affair (IRE)	CA	403	\$1,756,953	73.95%
80	El Prado (IRE)	1989 Sadler's Wells	KY	917	\$4,338,854	73.72%
81	Northern Afleet	1993 Afleet	KY	574	\$5,151,715	73.69%
82	Smart Strike	1992 Mr. Prospector	KY	775	\$12,413,093	73.55%
83	Halo's Image	1991 Halo	FL	480	\$2,663,413	73.54%
84	Stormy Atlantic	1994 Storm Cat	KY	826	\$7,941,022	73.49%
85	Lemon Drop Kid	1996 Kingmambo	KY	426	\$6,475,827	73.47%
86	Lucky Lionel	1993 Mt. Livermore	OK	271	\$2,763,248	73.43%
87	Adcat	1995 Storm Cat	FL	188	\$1,667,904	73.40%
88	Tactical Cat	1996 Storm Cat	OK	447	\$3,189,434	73.38%
89	Silver Deputy	1985 Deputy Minister	KY	1021	\$4,850,154	73.36%
90	Skip Away	1993 Skip Trial	KY	467	\$1,892,073	73.23%
91	Montbrook	1990 Buckaroo	FL	705	\$4,538,749	73.19%
92	Leestown	1994 Seattle Slew	LA	446	\$2,676,787	73.09%
93	Peaks and Valleys	1992 Mt. Livermore	ON	505	\$1,591,640	73.07%
94	Graeme Hall	1997 Dehere	FL	230	\$2,975,865	73.04%
95	Sahm	1994 Mr. Prospector	KY	204	\$2,388,410	73.04%
96	Tale of the Cat	1994 Storm Cat	KY	937	\$8,199,565	73.00%
97	Belong to Me	1989 Danzig	KY	870	\$5,022,727	72.87%
98	Snuck In	1997 Montbrook	LA	260	\$1,900,753	72.69%
99	Service Stripe	1991 Deputy Minister	OK	322	\$2,103,764	72.67%
100	Rahy	1985 Blushing Groom (FR)	KY	1029	\$4,879,667	72.59%