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INBREEDING TO SUPERIOR FEMALE LINES

THE PERFORMANCE OF THE RASMUSSEN FACTOR IN 2000

by Rommy Faversham

For a method to be beneficial, it must lead to the desired condition more often than when it is not applied.

For Thoroughbred breeders and their associates in the business mainly to sell, the priority of breeding to fashionable stallions is one rather obvious way to generate higher financial profits. Here, though, the goal of maximizing market value can sometimes supersede the objective of issuing the highest possible rate of superior individuals.

For those who breed to race, there is no such paradox. Any method that increases the likelihood of getting superior racehorses and producers should well be considered.

The issue, then, is really what systems are truly valid. This can only be determined by a sufficient analysis of the appropriate data. Breeding theories that are supported by no more than some hand-picked anecdotal evidence are very questionable in their future predictive value. Some of these have even become popular within the industry despite being inconsistent with proven and basic principles of Mendelian genetics. Still other approaches fail to appreciate that their nuance has become virtually ubiquitous throughout the breed and, therefore, of no particular merit as well.

The most valuable breeding strategies are those that have been properly tested over time and have, indeed, shown to outperform their collective opportunities. One such method that has demonstrated a unique proficiency across the entire spectrum of Thoroughbred lines since the origin of the breed is **female family inbreeding (FFI)**. This has all been documented in our book, *Inbreeding to Superior Females*, by this author and Leon Rasmussen, published in 1999.

To evaluate this distinct pattern, the extended pedigrees of a large sampling of the collective and contemporary American Thoroughbred population were examined. The results showed that only about 4.0% are inbred to a female ancestor through different individuals within the first five generations (through the cross of full or half siblings within the first four generations of the pedigree). This assignment of inbreeding has come to be known as the Rasmussen Factor (RF). The 4% figure serves as a baseline to help judge the value of the RF.

Previously in this column (Bloodstock Topics, THOROUGHBRED TIMES, August 14, 1999), we surveyed U.S. graded stakes winner during the first half of 1999 and found that 11% demonstrated female family inbreeding (FFI) within five generations. This represented a significant share when compared to the 4% for the general population of runners. These articles update the book's basic premise that FFI outperforms its opportunities in the production of superior individuals.

This past year has been another completed time window that illustrates the advantages of inbreeding to female families. Table I is a list of the U.S. Graded Stakes Winners demonstrating the Rasmussen Factor in 2000. Over this period, there were 320 total individual graded stakes winners. As shown in Table 2, the 25 individuals with the RF represented 7.8% of the total number of graded stakes winners, almost twice the 4% of the general population. At the same time, there were 79 individual Grade 1 winners in 2000 and 8 of these (10.1%) demonstrated female family inbreeding within five generations.

TABLE 1

• 2000 U.S GRADED STAKES WINNERS DEMONSTRATING
FEMALE FAMILY INBREEDING WITHIN FIVE GENERATIONS •

Graded Stakes winner victories	sire-dam	inbreeding pattern	2000 Graded Stakes
ALLEN'S OOP	Nines Wild-Silhouette	My Dear Girl 5X4	New Orleans H. {G3}
CAFFE LATTE	Seattle Dancer-Debbie's Next	Almahmoud 5X4	Ramona H. {G1T}
CASH RUN	Seeking The Gold-Shared Interest	Sequence 4X4	Santa Barbara H. {G2T}
DEPLOY VENTURE	Deploy-Tasseled	Lalun 5X5	Davona Dale S. {G2}
EUCHRE	Personal Flag-Solid Eight	Pocahontas 5X4	Bonnie Miss S. {G2}
FANTASTIC LIGHT	Rahy-Jood	Almahmoud 5X5	Golden Gate H. {G3T}
FICTITIOUS	Machiavellian-Trying For Gold	Natalma 4X4	Bel Air H. {G2}
GAVIOLA	Cozzene-Forest Key	Blue Canoe 4X4	Man O' War S. {G1T}
GOLDEN MISSILE	A.P. Indy-Santa Catalina	Imperatrice 5X5	De La Rose H. {G3}
			Garden City B.C. H. {G1T}
			Lake Placid H. {G2T}
			Herecomesthebride S. {G3T}
			Sands Point S. {G3T}
			Pimlico Special {G1}
			Stephen Foster H. (G2)

HAL'S HOPE	Jolie's Halo-Mia's Hope	Cosmah 3X5	Florida Derby {G1} Holy Bull S. {G3}
HERITAGE OF GOLD	Gold Legend-Lyphard Gal	Glamour 5X5	Apple Blossom H. {G1} Go For Wand H. {G1} Louisville Breeders' Cup H. {G2} Oaklawn Breeders' Cup S. {G3} Fleur de Lis H. {G3} Hawthorne Derby {G3T}
HYMN	Fairy King-Handsewn	Thong 4X2	Ballston Spa Breeders' Cup H. {G3}
LICENSE FEE	Black Tie Affair-Star Deputy	High Voltage 5X4	Palm Beach S. {G3T}
MR. LIVINGSTON	El Prado-Vienna Knickers	Gaga 5X5	All American H. {G3}
PEACH FLAT	Cari Jill Hajji-Unsaddled	Nasco & Bold Ruler 4X4	Santa Ynez S. {G2}
PENNY BLUES	Pentelicus-Milagro Blue	Aspidistra 5X4X5	Iselin H. {G2}
RIZE	Theatrical-Capagnarde	Ruta 4X5	Las Flores H. {G3}
SHOW ME THE STAGE	Slew the Surgeon-Showtime Lady	Albany Isle 5X4	Count Fleet Sprint H. {G3}
SON OF A PISTOL	Big Pistol-Mood Swing	Traffic Court 5X5	San Carlos H. {G2}
STARTAC	Theatrical-Tenga	Pange 4X4	Generous S. {G3T}
TIPPITY WITCH	Affirmed-Senora Tippy	Exclusive 3X4	Martha Washington S. {G3T}
TRANQUILITY LAKE	Rahy-Winters' Love	Almahmoud 5X5	Yellow Ribbon S. {G1T}
UNITE'S BIG RED	Unite-Tropical Royalty	Plum Cake 4X4	Palomar H. {G3T}
WADE FOR ME	Western Playboy-Waders	Summer Hut 4X4	Mac Diarmida H. {G3T}
WHITE HEART	Green Desert-Barari	Almahmoud 5X5	Modesty H. {G3T}
			Charlie Whittingham H. {G1T}

TABLE 2

Total number of of U.S. Graded Stakes Winners in 2000:	320
U.S. Graded Stakes Winners with FFI within 5 generations:	25 (7.8%)
Total number of U.S. Grade One Stakes Winners in 2000:	79
U.S. Grade One Stakes Winners with FFI within 5 generations:	8 (10.1%)

One of the key features of Table I is the wide array of inbreeding patterns demonstrated by these successful individuals. In fact, during the course of our studies, we have never come across a consistently reproducible female family inbreeding pattern that was not deemed successful. In 2000, the 25 U.S. graded stakes winners with the RF were inbred to 20 different families. The only family represented by a multiple number was that of Almahmoud and her daughters, Natalma and Cosmah.

It's also worth noting that a number of these horses are quite modestly bred with their sire's stud fee falling well below \$10,000. Additionally, the above table, and our overall work in general, fail to show any propensity toward any particular sex, distance or track surface.

	Nasrullah	Nearco-Mumtaz Begum
Red God	Spring Run	Menow-Boola Brook
Blushing Groom	Wild Risk	Rialto-Wild Violet
Runaway Bride	Aimee	Tudor Minstrel-Emali
Rahy	Hail To Reason	Turn-to-Nothirdchance
Halo		

Almahmoud		Glorious Song	Cosmah	Cosmic Bomb-
		Ballade	Herbager	Vandale-Flagette
FANTASTIC LIGHT			Miss Swapsco	Cohoes-Soaring
		Northern Dancer	Nearctic	Nearco-Lady Angela
Almahmoud			Natalma	Native Dancer-
	Nijinsky II			
		Flaming Page	Bull Page	Bull Lea-Our Page
Jood			Flaring Top	Menow-Flaming Top
		Key to the Mint	Graustark	Ribot-Flower Bowl
	Kamar		Key Bridge	Princequillo-Blue Banner
		Square Angel	Quadrangle	Cohoes-Tap Day
			Nangela	Nearctic-Angela's Niece

Another way to study the effect of female family inbreeding is to look at a sire's progeny as a whole. Rahy's latest stakes star is Fantastic Light who recently captured the second annual Emirates World Series Racing Championship and a million dollar bonus when annexing the Hong Kong Cup (HK-1).

It's probably more than a coincidence that, so far, four of Rahy's five Grade I Winners have demonstrated the RF. Rahy's broodmare sire was Halo who shared the same grand-dam as Northern Dancer. When Rahy has been sent mares out of sons of Northern Dancer, the result has been inbreeding 5X5 to the great matriarch, Almahmoud. Serena's Song, Fantastic Light, Tranquility Lake and Exotic Wood, all multiple Grade/Group 1 winners, were out of mares by Northfields, Nijinsky II, Danzig and Dixieland Band, respectively (all sons of Northern Dancer). Many of Rahy's other top stakes winners were out of Northern Dancer-line broodmares.

It is, in fact, rather common to observe a disproportionate number of a sire's best (and richest) offspring demonstrating female family inbreeding. For example, in the 2001 Thoroughbred Times Stallion Directory, there are a total of 117 studs that have sired at least 10 stakes winners. Twelve of these (more than 10%) are represented by their richest stakes winner who demonstrates FFI within five generations. They are listed in Table 3. Again we see a broad spectrum of patterns that transcend sireline and stud fee. Many others with the RF are amongst their sire's top five earners.

TABLE 3

• **STALLIONS WHOSE RICHEST STAKES WINNER DEMONSTRATES
FEMALE FAMILY INBREEDING WITHIN FIVE GENERATIONS** •

Stallion	Sire's richest stakes winner	inbreeding pattern
A. P. INDY	Golden Missile	Imperatrice 5X5
CAHILL ROAD	Mi Vereda	My Dear Girl 5X3
DEPOSIT TICKET	Swearingen	Almahmoud 5X5
KINGMAMBO	El Condor Pasa	Special & Lisadell 4X4X3
LEO CASTELLI	Da Devil	Almahmoud 5X4
NOTEBOOK	Three Rings	Cap and Bells & Dunce 3X4
OUT OF PLACE	Certain	Exclusive 5X5
POLISH NAVY	Sea Hero	La Troienne 5X5
RAHY	Serena's Song	Almahmoud 5X5
STALWART	Stalwars	Pocahontas 4X4
SUMMER SQUALL	Charismatic	Somethingroyal 4X4
WOODMAN	Hishi Akebono	Glamour 4X5

TABLE 3

• **2000 EUROPEAN GROUP STAKES WINNERS DEMONSTRATING
FEMALE FAMILY INBREEDING WITHIN FIVE GENERATIONS** •

Group Stakes winner victories	sire-dam	inbreeding pattern	2000 Group Stakes
BARATHEA GUEST	Barathea-Western Heights	Lalun 5X5	Greenham S. {G3}
BEAT HOLLOW	Sadler's Wells-Wemyss Bight	Lalun 4X5	Grand Prix De Paris {G1}
BEST OF THE BESTS	Machiavellian-Sueboog	Natalma 4X5	Prix Guillaume D'Ornano {G2}
BLUEMAMBA	Kingmambo-Black Penny	Natalma 5X4	Poule D'Essai Des Pouliches {G1}
COUNT DUBOIS	Zafonic-Madame Dubois	Somethingroyal 5X5	Gran Criterium {G1}
CRIMPLENE	Lion Cavern-Crimson Conquest	Mixed Marriage 4X5	Irish 1,000 Guineas {G1}
			Coronation S. {G1}
			Nassau S. {G1}
			Henkel-Rennen {G2}
DALIAPOUR	Sadler's Wells-Dalara	Lalun 4X5	Coronation Cup {G1}
			Ormonde S. {G3}
DANEHURST	Danehill-Miswaki Belle	Natalma 4X4X5	Cornwallis S. {G3}
ENDLESS HALL	Saddlers' Hall-Endless Joy	Special & Lisadell 4X4	Gran Premio Di Milano {G1}
			Scottish Classic {G3}
GREEN MINSTREL	Green Tune-Shy Minstrel	Flaming Page 4X4	Prix D'Aumale {G3}
HIDALGUIA	Barathea-Halesia	Somethingroyal 5X5	Prix de Psyche {G3}
INDIAN DANEHILL	Danehill-Danse Indienne	Natalma 4X4X5	Prix Ganay {G1}
			Prix D'Harcourt {G3}
INDIAN LODGE	Grand Lodge-Repetitious	Little Hut 4X3	Prix du Moulin de Longchamp (G1)
			Prix De La Foret {G1}
			Earl of Sefton S. {G3}
			KLM UK Mile {G2}
KING CHARLEMAGNE	Nureyev-Race The Wild Wind	Almahmoud 4X5	Somerville Tattersall S. {G3}

MEDICEAN MINARDI	Machiavellian-Mystic Goddess Boundary-Yarn	Natalma 4X4 Round Table & Monarchy 4X4	Celebration Mile {G2} Phoenix S. {G1} Middle Park S. {G1}
NO EXCUSE NEEDED NOVERRE	Machiavellian-Nawajet Rahy-Danseur Fabuleux	Natalma 4X5 Almahmoud 5X4	Vintage S. {G3} Champagne S. {G2} July S. {G3}
PROUDWINGS PUNTILLA	Dashing Blade-Peraja Acatenango-Prada	Women's Legion 5X5 Aggravate 2X5	Premio Sergio Cumani {G3} Preis Der Diana {G2}
ROMANTIC MYTH ROYAL REBEL	Mind Games-My First Romance Robellino-Greenvera	Natalma 5X5X5 Monarchy & Round Table 4X4	Queen Mary S. {G3} Goodwood Cup {G2} Lonsdale S. {G2}
SAKHEE	Riverman-Thawakib	Lalun 3X5	Dante S. {G2} Thresher Classic Trial {G3}
SAYEDAH SEQUOYAH	Darshaan-Balaabel Sadler's Wells-Brigid	Lalun 5X5 Lalun 4X5	Rockfel S. {G2} Moyglare Stud S. {G1}
SUBTLE POWER TOBOUGG	Sadler's Wells-Mosaique Bleue Barathea-Lacovia Somethingroyal	Lalun 4X5 5X4	King Edward VII S. {G2} Prix De La Salamandre {G1}
WELLBEING WINS FICTION	Sadler's Wells-Charming Life Platini-Win Hands Down	Special 3X4 Little Hut 5X4	Dewhurst S. {G1} St. Simon S. {G3} Betty Barclay Rennen {G3}

TABLE 4	Total number of of European Group Stakes Winners in 2000:	240
	European Group Stakes Winners with FFI within 5 generations:	29 (12.1%)
	Total number of European Group One Winners in 2000:	56
	European Group One Winners with FFI within 5 generations:	11 (19.6%)

Thoroughbreds demonstrating female family inbreeding were also very well represented in Europe last year. Table 4 is a list of European Group Stakes Winners demonstrating the Rasmussen Factor in 2000. Over this period, there were 240 total individual Group winners. As shown in Table 5, the 29 individuals with the RF represented 12.1% of the total. At the same time, there were 56 individual Group 1 winners in 2000 and 11 of these (19.6%) demonstrated female family inbreeding within five generations.

These 29 European Group winners were inbred to a total of 10 different families. Nine individuals were inbred to Almahmoud or her daughter, Natalma. Another seven were inbred to the matriarch, Lalun. This latter pattern is becoming increasingly prominent as the male lines of Sadler's Wells and Never Bend are crossed. This inbreeding is generated since Lalun is the dam of both Never Bend and Bold Reason, the broodmare sire of Sadler's Wells. This is demonstrated in the pedigree of Group 1 winner, Daliapour.

	Nearctic	Nearco	Pharos-Nogara
	Northern Dancer	Lady Angela	Hyperion-Sister Sarah
	Natalma	Native Dancer	Polynesian-Geisha
Sadler's Wells		Almahmoud	Mahmoud-Arbitrator
		Hail To Reason	Turn-to-Nothirdchance

		Bold Reason		
			Lalun	Djeddah-Be
Faithful		Fairy Bridge		
			Forli	Aristophanes-Trevisa
		Special		
			Thong	Nantallah-Rough Shod II
DALIAPOUR			Never Bend	Nasrullah- Lalun
		Mill Reef		
	Doyoun		Milan Mill	Princequillo-Virginia Water
			Kashmir II	Tudor Melody-Queen of Speed
		Dumka		
			Faizebad	Prince Taj-Floralie
Dalara			Arbar	Djebel-Astronomie
		Abdos		
			Pretty Lady	Umidwar-La Moquese
	Delsy			
			Venture Relic-Rose O'Lynn	
		Kelty		
			Marilla	Marsyas II-Albanilla

Finally, in Japan, there were a total of 85 individual Group winners in 2000. Ten of these, or 11.8% demonstrated female family inbreeding within five generations. The majority were the offspring of Sunday Silence (a son of Halo) out of Northern Dancer-line mares.

Throughout much of Thoroughbred history, the development of superior male and female lines have followed pathways in which complementary family strains have been crossed.

This has often gone unrecognized as most individuals in our many racing and breeding environments have lacked such inbreeding patterns.

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