

***HTR Monthly Report***  
**Thoroughbred Handicapping Newsletter**  
**September 2005**

Brought to you by –  
*KM Software*  
Handicapping Technology and Research

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*Handicapping***Favorites – To Bet, or Not to Bet**

All horseplayers are fascinated with the subject of favorites. They can be our greatest ally in one race and our hated enemy in the next. The *chalk* elicit more conversation among handicappers and those who write about horse racing than just about any other subject. This month we'll dive into a very deep statistical swimming pool and learn all we can about favorites and the myriad of statistics and distortions that surround them. Factors from HTR will be compared and filtered with the *chalk* and separated into several categories.

Definitions and labels for this report

ToteFav = Tote-favorite, the horse with the lowest final odds in the race. As you are no doubt aware, the actual public betting choice is not always apparent even as the horses leave the gate due to late simulcast money coming in after the bell ("simulcast dump"). An OddsOn Favorite is one with odds below even money and have attracted 50% or more of the entire win pool in most cases.

MLOFav = the MLO favorite, horse with the lowest ML odds after scratches, not always the betting favorite however. Normally the track employee who makes the morning line will separate a single choice with their line, so ties are uncommon unless there are scratches. We will only be discussing MLO favorites in tandem with tote choices this time.

HF = 'Hyper Favorite'. See definition in previous newsletters.

XF = 'Extreme Favorite'. See definition in previous newsletters.

K110+ = any horse with a K-rating of 110 points or higher ( $nK \geq 109.5$ ).

Our interest in the HF, XF and K-ratings this month will be entirely dealing with these horses when they are the final betting favorite (ToteFav).

Data Used

Any North American thoroughbred race with a result file and a chart issued by Equibase was used in the study.

Dates: August 1, 2004 – July 31, 2005 inclusive; 365 racing dates. About 60,000 races tested.

Evaluation of favorites before the race is susceptible to the "simulcast dump" and extreme late betting action. While rare, there are cases where the actual wagering choice is not definitive until after the race is completed and all the money has been deposited into the pool. Systems and betting plans that require the identity of the *chalk* before a bet is made can no longer be held reliable. In other words, as far as research is concerned, we may be performing too much *back fitting* – studying information that could not be understood before the race was run.

Why has the rate of winning favorites held steady at about 33% for the last 100 years - what is the dynamic that keeps this number set in stone? The firm "33" for favorites is the just the end result of a large statistical distribution that does not have enough variables to alter the outcomes consistently. Horse races don't have a tremendous amount of statistical volatility as most are run under similar circumstances with common numbers of competitors. For example, we never see an 87-horse field running 3 miles uphill. A few of those and our stats would be rocked! To make a dent in the 33% there would have to be a *motivating variable* introduced, such a large disparity in weights (handicaps), or non-human riders (maybe a monkey or robot). This notion is no different than expecting a change in normal distribution at the crap table or roulette wheel in the long run without a major cause-and-effect happening (such as the earth tilting off its orbit!). As we'll find out though, we can introduce factors and situations that push the statistics a little bit in our favor.

*Handicapping*  
**Favorites – Statistical Distortion**

Favorites are an excellent category for discussing the subtle realm of *statistical distortion*. Whether it is intentional or not, most statistics that are based on rankings, selections or software output are slightly better than they look due to situations that are somewhat unique to horse racing research.

- ? Ties in the data. Ties in the data serve favorably for any selection method or ranking statistic. Most HTR2 factors avoid ties if possible, including the K and the velocity numbers. Some ratings require leaving ties alone, such as speed figs and pace ratings. It is possible that a tie could occur when testing tote favorites because our chart data is released as a single decimal numeral. We don't receive the final win-pool totals and cannot separate this situation internally. For example; the chart might show final odds as "1.8" on two horses in the same race; we are not aware of which horse was the actual betting (the one that had slightly more money bet on it) and both will ranked #1 internally.
- ? Coupled Entries. When running stats on favorites, the presence of a coupled entry produces an unfair advantage in the tally. A coupled duo that is the public wagering choice has an extra opportunity over a single horse that is favored and that overstates the results.
- ? Field Size. The average field size exerts a tremendous effect on the outcome of all race statistics. Favorites have a far greater advantage in small fields. Not to mention the smaller field diminishes the possibility of trouble in the race and a "clean" trip will favor the lower odds horses.
- ? Minor Tracks and Low Pool Sizes. If you watch win pool totals at county fairs, small tracks, dog races and most harness locations, the win pool amounts are laughable. A modest \$100 can knock the odds down considerably. There is no educated or determined betting action in such cases where most of the players recognize the futility of betting to win and nearly all of the money is put in the exotics for good reason.
- ? Cheap Races. At the lowest end of the thoroughbred class scale, past-performance is no longer the key handicapping element. Physical condition is the overriding factor. In these cases, the betting action can be downright inexplicable with the odds fluctuating wildly and favorites determined for reasons beyond public knowledge.
- ? Dumb Money. The Triple Crown and the Breeders Cup races come to mind immediately but there are many other examples of wagering based on whim and fun and impetuous behavior. Among these are wealthy owners that lay a bundle on their prized pet for no other reason than it is their *baby*. "Bridge jumpers" generally throw away their wad on a show bet, but there are plenty of other instances where desperate plungers wager to win on media hype and stable gossip to re-coop their losses. Large bills do not raise eyebrows at racetracks they way they do at other retail locations, so bet pools can be a magnet for drug and criminal *laundering*.
- ? Smart Money. There are rare cases where the outcome is simply not known to the public or could be ascertained on paper, but is very clear to a few *wise guys* that pound the pools knowing they have a sure thing. These include inside stable information, hidden workouts, illegal drugging, buzzers and various methods of race fixing.

Additionally, there are oddball distances, mixed breed events and wet track situations (lots of scratches) that can fog the results. As you look over the list above, it is apparent that there are many instances that create a wagering choice having little to do with actual handicapping and logical comparative analysis, not to mention some of the statistical tangles. We will try to break through some the *spider webs* in the report that follows.

*Handicapping*  
**Favorites –Basic Statistics**

**Tote Favorites - Unfiltered 365-Day Sample**

<u>Item</u>	<u>Plays</u>	<u>Wins</u>	<u>Win%</u>	<u>ITM%</u>	<u>WROI</u>	<u>AvgMut</u>	<u>I.V.</u>
All	60371	20366	33.7	68.2	0.82	\$4.84	2.78
OddsOn	13943	6535	46.9	80.1	0.81	\$3.46	3.53

Analysis

The average win mutual on favorites in North America dropped below \$5 sometime in the 1990's. That corresponded with a drop in the average field size during the decade as well. The average field size has stabilized at about 8.2 horses in 2005. The ROI for public choices was once as high as 0.85. Odds-on favorites, "OddsOn" (final odds < 1.0) win less than 50% of their starts and the return is paltry.

Tote favorites are obviously not good bets in mass. We'll locate situations later in this report when they can help us though. They are underlays most of the time due to excessive late wagering which tends to depreciate the odds on favorites more than any other category of horses. This is happening because bettors are sending in their action "blind" based on odds they see a minute or two before the horses reach the gate. After the race begins, some 30-80% of the win pool is received from simulcast hubs all over the world. A critical mass will occur when the tote shows a pre-race fair price on the board for the favorite – say 2/1 with a minute to post. Suppose this 2/1 shot looks very dominant on paper to hundreds of players who are about to make a bet on the race. The odds will plummet as everyone jumps on the perceived "overlay" and the horse's price drops dramatically after the bell.

The next test result shown below is similar except that we will attempt to filter out most of the problems mentioned on page-3. We can do this with the follow restrictions in our race sample ✂

- ? Remove races with purse below \$10,000. This is the easiest method avoiding the cheapest tracks or horses and the races with very low win pool totals.
- ? Remove statistical distortion problems such as ties in the odds (extremely rare among favorites) and coupled entries if they happen to be the public choice, which is common.
- ? Remove races with extreme field size issues: < 5 runners or > 12 runners.
- ? Remove races with unusual or extreme distances: < 4.0f or > 12.0f.
- ? Remove wet track races. It is not so much the track condition that concerns, but the large number of scratches that occur, particularly if the race is taken off the turf and now the horses (and handicappers) are out of their element.

**Tote Favorites - Filtered 365-Day Sample**

<u>Item</u>	<u>Plays</u>	<u>Wins</u>	<u>Win%</u>	<u>ITM%</u>	<u>WROI</u>	<u>AvgMut</u>	<u>I.V.</u>
All	44538	15504	35.0	70.2	0.84	\$4.81	2.89
OddsOn	10206	5058	49.7	82.1	0.86	\$3.48	3.79

Analysis

The filters cut the sample size by about 30% and these are the races that will attract the overwhelming majority betting action throughout the year. They are also the races most horseplayers are likely to focus on every day. Improvement is noted in every column, including the ROI. The Place and Show ROI for this filtered sample were over 0.90 in every case – a significant observation. More comments follow on page-5 and notice that win percentage.

*Handicapping*  
**Favorites –K Statistics**

If we isolate the favorites in a filtered sample that removes most of the distortion, and the 33-percent benchmark has been broken (35% winning favorites). We know the filtered sample contains most of the races we are likely to handicap and they are the ones that attract all the attention and wagering dollars. While we are stuck with more *chalk*, the monetary returns improve. Interesting dichotomy, let's press on and see what else we can find out.

K-Rating and Tote Favorites (Unfiltered sample)

<b>Tote Favorites - Unfiltered 365-Day Sample</b>							
<b>Item</b>	<b>Plays</b>	<b>Wins</b>	<b>Win%</b>	<b>ITM%</b>	<b>WROI</b>	<b>AvgMut</b>	<b>I.V.</b>
K=1	32855	12421	37.8	72.3	0.85	\$4.52	3.08
K=2	13749	4331	31.5	67.8	0.80	\$5.09	2.57
K=3	7082	1984	28.0	62.3	0.76	\$5.46	2.33
K=4	3643	977	26.8	60.0	0.77	\$5.76	2.26
K=5	1765	390	22.1	52.6	0.68	\$6.14	1.94
K=6	771	162	21.0	49.5	0.66	\$6.24	1.89
K=7	319	59	18.5	43.2	0.60	\$6.48	1.76
K=8	117	26	22.2	45.7	0.72	\$6.49	2.19
K=9	70	16	22.9	46.9	0.81	\$7.07	2.46
K110+	6458	2791	43.2	77.7	0.88	\$4.07	3.27
XF	4653	1836	40.2	76.2	0.83	\$4.10	2.92
HF	1422	724	50.9	83.0	0.91	\$3.57	3.74
MLOFav	38669	13886	35.9	69.8	0.81	\$4.53	2.93

Analysis

Incredibly there were some 500 horses in the sample with K rank 7,8,9 -- what were the bettors thinking?! The wagering favorites that are ranked below K=4 are very bad bets, winning under 23% with terrible returns on investment (ROI). Looks like a significant *chalk* eliminator, but the sample is small.

Favorites that are ranked K=3,4 also perform poorly and well below normal win rates for favorites. The sample size is substantial for the 3,4 group and you'll find some of these getting hammered every day – they are an excellent opportunity to beat the *chalk* and take some public money.

About 2/3 of all final betting favorites are ranked K=1 or 2 though. Normal win rate for K=1 is 30% and 22% for K=2, so these are substantial gains when favored. The ROI is not healthy though.

The K110+ group did extremely well along with the HF's. If you are going to bet *chalk*, or need a single, consider only those with K110 or an HF. The HF's are picking up most of the odds-on choices. Notice the surprisingly high ROI on those two groups. The XF's are based primarily on the 2/1 MLO and do not perform as well as expected. Important to keep in mind: the public can ascertain an XF pretty easily as the MLO 2/1 or less is the primary parameter. The HF and K110 are not as easy to recognize as they require specific HTR factors and that improves the ROI.

MLO Favorites = Tote Favorite?

The overwhelming majority of MLO favorites eventually become the final betting choice as well (68%). But the MLO + Tote Favorite combination is a terrible underlay and has only a slight gain over betting the *chalk* by itself. The ROI actually drops a bit.

*Handicapping*  
**Favorites –Field Size and Vi**

We have mentioned how important the variable of field size is to thoroughbred statistics. The number of horses in the race exerts tremendous influence on the dynamic aspects of horse racing, most notably the influences of race trouble and post-position. Favorites would be expected to have a much higher rate of success in smaller fields if many of the random aspects of racing are eliminated.

**Tote Favorites - Unfiltered 365-Day Sample - by Field Size**

<u>Field</u>	<u>Plays</u>	<u>Wins</u>	<u>Win%</u>	<u>ITM%</u>	<u>WROI</u>	<u>AvgMut</u>	<u>I.V.</u>
4 or less	569	255	44.8	88.2	0.82	\$3.64	1.74
5	2762	1144	41.4	80.3	0.84	\$4.03	2.07
6	8014	3039	37.9	75.6	0.83	\$4.38	2.28
7	11704	4162	35.6	71.0	0.82	\$4.63	2.49
8	11657	3822	32.8	67.9	0.80	\$4.89	2.62
9	9508	3065	32.2	64.4	0.82	\$5.09	2.90
10	9532	2898	30.4	62.7	0.80	\$5.29	3.04
11	3278	972	29.7	60.9	0.81	\$5.41	3.26
12	3068	945	30.8	60.6	0.86	\$5.57	3.70
13 or more	280	64	22.9	55.4	0.68	\$5.57	3.08

Analysis

Median North American field size is 8 horses. ROI is basically the same for all levels, with the glaring exception of field size = 12 (see below).

Near perfect statistical correlation in all columns tells us what we already know – the smaller the field, the more likely the favorite will win. But wait a minute -- why are the I.V. (impact value) numbers increasing as the field size gets larger and the win percentages shrink?

Impact value measures expectation vs. performance. Expectation lowers as the field size increases. So favorites actually have impressive performance in fields greater than eight horses despite the depleted win percentages. Does this indicate *chalk* might be a superior bet in larger fields? No, the ROI is still bad in all cases, but the I.V. does remind us that favorites are still potent contenders in big fields.

Field size = 12 is very interesting. The impact value is extremely high and this is the only category on the chart with an ROI over 0.82. Why did this happen? It would be hard to pin down in a sample of over 3,000 races, but my guess is that many fields of 12 are maiden claimers with obvious favorites that dominate a field of very bad horses. Or it could just be a cyclical spike in the statistics.

Vi and Favorites

The Vi might be an enhanced method of studying the depth of a field in terms of competitiveness. In theory, the lower the Vi the less likely any horse has an advantage. Higher Vi races are more formful and easier to predict the outcome. Longshots win far more often in low Vi races. Analysis follows on page-7.

**Tote Favorites - Unfiltered 365-Day Sample - by Vi**

<u>Vi</u>	<u>Plays</u>	<u>Wins</u>	<u>Win%</u>	<u>ITM%</u>	<u>WROI</u>	<u>AvgMut</u>	<u>I.V.</u>
15-24	9877	2621	26.5	58.2	0.77	\$5.83	2.66
25-29	15475	4699	30.4	62.9	0.81	\$5.37	2.78
30-34	16254	5580	34.3	69.0	0.83	\$4.81	2.81
35-39	11235	4248	37.8	74.6	0.84	\$4.38	2.65
40-55	7530	3218	42.7	80.4	0.82	\$3.95	2.51

*Handicapping*  
**Favorites –HTR Statistics**

Analysis of Vi Stats

The Vi proves an effective barometer for the performance of favorites. At the lowest Vi levels the tote favorites win far less often and the ROI has dropped considerably under 0.80. Betting on chalk with Vi under 30 is risky. Confidence with favorites is found when the Vi is 30 and above, and the higher the better.

However, there is a contradictory piece of statistical evidence here. The Impact Value remains about the same throughout the Vi chart. In fact, the Vi: 15-24 range has a higher I.V. than the 40-55 group, how can that be? This test mirrors the previous field size data in that respect. At the lowest Vi levels, the *chalk* must compete in much larger and more competitive fields of horses than at the higher Vi ranges. Despite the apparent lower win percentage, they are holding their own in terms of expectation.

A key point of understanding the low Vi races is not that the favorites are terribly disadvantaged, but there is greater opportunity for more horses due to the increase in chaos and random events. Also, low Vi races are more complicated for handicappers and produce a higher frequency of wagering uncertainty. The favorites are badly over bet vs. their chances of winning as the Vi drops – even though they continue to win their fair share of these races.

Impact values (I.V.) help us break through the fog of win percentage statistics with public favorites. Same comment is relevant for the ROI. The normal I.V. is for all winning chalk (see page-4) is 2.78 and the ROI is 0.82. We can establish clear benchmarks for the performance of favorites *☞*

- ? Looking for I.V. above 3.00 combined with ROI above around 0.90 or better. These would represent a considerable improvement and a stronger bet on the *chalk*.
- ? Impact value drops below 2.20 and ROI falls under 0.80. These are “false favorites”.

So far we have located some strong favorite trends with the K110 and HF groups. I put more stock in the K110 as a *power-chalk* indicator because the sample size is so much larger and the average mutual is reasonable (the majority of HF end up at odds below even money). *False favs* are easy to spot in a hurry with  $rK > 3$ . Next we'll look at a myriad of HTR factors and look for similar strength and weakness.

Top 9 HTR factors when tote favorites --- by Impact Value

As explained above, impact value is more indicative than win percentage for understanding the strength of the factor (particularly when multiple horses qualify under the test parameters). The impact value is the second number listed below. The 3rd number shown is the size of the sample.

1.	HF	3.67	2726
2.	K110+	3.32	13166
3.	HTR=1	3.14	25996
4.	CLASS=1	3.13	20136
5.	FC=1	3.10	17403
6.	VEL=1	3.09	21805
7.	K=1	3.08	32855
8.	FC=85+	3.07	19094
9.	S/P=1	3.06	17397

Analysis

An I.V. over 3.00 is basically off the charts in terms of statistical power and it rarely achievable without favorites and low priced winners. HTR=1 and K=1 have huge sample sizes and are highly reliable positive indicators for final betting favorites. K110 and HF are ballistic for *chalk*, but most are odds-on.

*Handicapping*  
**Favorites –HTR Statistics**

It might be more beneficial to find out the top factors in terms of return on investment (ROI).

Top 9 HTR factors when tote favorites --- by ROI

1. \$\$	0.91	785
2. HF	0.91	2726
3. FC=1	0.88	17403
4. K110+	0.87	13166
5. Class=1	0.87	20136
6. HTR=1	0.87	25996
7. FR1=1	0.86	13246
8. FC=85+	0.86	19094
9. PER=1	0.86	26629

Analysis

How can 785 tote favorites have earned the “\$\$” when part of the parameter for (\$\$) is MLO 6/1 up? Simple answer is they were bet heavily and ended up the *chalk* despite the MLO. It is also possible this was due to multiple scratches that allowed horses with 6/1 and 8/1 odds to become the favorite by default.

The HF continues to surprise and kept its ROI above 0.90. The FC=1 and K110 are additionally terrific indicators for improving the monetary results with favorites and have huge sample sizes to confirm it.

Next a look at the very interesting statistics with Place and Show wagers and favorites. We’ll use the filtered sample with the Place and Show stats as these will be the races with the largest parimutuel pools and not subject to extreme betting flux. ROI is the key with Place and Show with favorites and the information is useful for grind it out rebate players ☞

Top 9 HTR factors for Place or Show when tote favorites --- by ROI – Filtered Sample

1. \$\$	PLACE	0.99	555
2. \$	SHOW	0.97	1936
3. Fr3=1	SHOW	0.96	8609
4. HF	PLACE	0.95	2143
5. S/P=1	SHOW	0.95	13284
6. FR1=1	PLACE	0.94	9685
7. K110+	SHOW	0.94	10047
8. PAC=1	SHOW	0.94	13561
9. HTR=1	SHOW	0.94	19657

Analysis

Some promising results for those of you looking for the lowest risk types of bets. The problem here is that many of these favorites are not solid right before post-time when you have to make your bet. If there are two horses hovering at 2/1 as the horses near the gate, you might guess wrong on which will go favored in the end. My suggestion is to use another methodology such as MLO or Kline for these decisions, or just stick with HF or strong K110 types. Before making any large Place or Show bet I would require some strength in the late speed factors of S/P or Fr3 for insurance as we do with the “HF”.

Impressive and reliable (large samples) ITM results are noted with the late speed velocity factors Fr3=1 and S/P=1. If you are plunging on the *chalk* to show, be sure the horse dominates in these categories.

*Handicapping***Favorites – Negative (False Favorites) Factors**

Now let's look at factors that may be detrimental to public favorites – hopefully without the public knowing it! Let's start by looking at layoff statistics in general ☞

**Tote Favorites – Unfiltered 365-Day Sample – by Layoff Categories**

<u>Vi</u>	<u>Plays</u>	<u>Wins</u>	<u>Win%</u>	<u>ITM%</u>	<u>WROI</u>	<u>AvgMut</u>	<u>I.V.</u>
FTS	1414	476	33.7	63.5	0.85	\$5.08	2.21
001-030	43062	14577	34.0	69.1	0.82	\$4.83	2.86
031-090	12524	4241	33.9	66.8	0.82	\$4.82	2.77
091-180	1556	496	31.9	61.6	0.78	\$4.92	2.69
180-999	1815	576	31.7	61.4	0.78	\$4.93	2.66

Analysis

The Impact Values are about the same all the way across so there is no serious problem when favorites have layoff issues. First time starter (FTS) *chalk* perform well - giving some credence to bet-down “inside information” on debut runners. Longer layoffs (90 days +) rarely go favored, but those that do run to expectation and this is usually due to having dominant class and speed numbers or the public wouldn't bet them heavily. Our goal is to locate “false favorites” but there are none with layoff categories.

The chart below assesses certain “bad” characteristics found in HTR.

*Bad* Trainer, Jockey and Pedigree are those < 200.

*Bad* Workout is any (including zeros) below 75, but not zero.

*Bad* PAC, PER FC and VEL ratings are those ranked > 5, or rank 6,7,8,9+

*Bad* K raised the bar to those ranked > 2 or rankings 3,4,5,6,7,8,9.

**Tote Favorites – Unfiltered 365-Day Sample – Various Categories**

<u>Vi</u>	<u>Plays</u>	<u>Wins</u>	<u>Win%</u>	<u>ITM%</u>	<u>WROI</u>	<u>AvgMut</u>	<u>I.V.</u>
Bad Jockey	7369	2284	31.0	65.2	0.80	\$5.16	2.64
Bad Trainer	9800	2997	30.6	65.5	0.79	\$5.15	2.60
Bad Pedigree	1718	518	30.2	66.0	0.76	\$5.02	2.57
Bad Workout	27168	9279	32.9	67.6	0.80	\$4.86	2.72
Bad K	6685	1630	24.4	55.9	0.73	\$5.95	2.12
Bad PAC	8099	2246	27.7	60.4	0.77	\$5.55	2.53
Bad PER	3709	876	23.6	52.3	0.69	\$5.81	2.17
Bad VEL	5271	1270	24.1	53.7	0.78	\$5.69	2.66

Analysis

Remember the columns to consider with interest are the I.V. and ROI. The logical benchmarks for “false favorite” would be I.V. < 2.20 and/or ROI < 0.80.

Notice how the *chalk* hold their own in the I.V. columns in most of the “bad” cases. There is an ‘elastic’ effect on the wagering public with these horses – despite a single negative element - there will probably be overriding domination in other factors, such as pace, speed and class that persuades the public to ignore the “bad” item. But a PER rating > 5 or K > 3 are our best weapons. We discussed the K rating on page-5 in greater depth, any favorite rated worse than K-rank-3 is risky.

The ROI results were terrible in this test, well below the normal benchmark for all favorites. The “bad” factors listed have a slight, but clear negative impact, yet the public does not adjust their wagering enough to compensate and consequently these horses are bankroll killers. Lots of *false favorites* are hammered mercilessly late in the wagering, sort of a *bandwagon effect*; those are the best opportunities to try and beat the *chalk* if the tote choice has a poor (K) rating or lousy PER rank.

*Handicapping with HTR2***Fitness Assessment - Wk and FC ratings**

We have lots of good handicapping factors and can make many solid comparisons with our HTR ratings. Yet powerful ratings are useless if the horse is not fit and ready to run today. As you know, our focus in the last couple of years has been to find the "live" horses – those that are ready run at peak form. The Wk (workout) ratings were a huge breakthrough in this area. Expanded pedigree and trainer analysis has also been useful. The latest rating is the FC (form-cycle number) that attempts to relate speed figures to current fitness. We'll focus on the Wk and FC items this month with a few tips and reminders.

The [KM] screen contains several elements of workout analysis that should increase your awareness surrounding the fitness/work pattern.

**Wk**

Workout rating combines workout strength with race/work interval appraisal.

**90-99 (+) Unusually strong work pattern detected.**

**85-89 (+) Excellent, extra fit if working regularly since raced.**

**80-84 (\*) Looking good, check for other clues to fitness.**

**76-79 Could be indicative with 2yr and cheaper horses.**

**75-00 Usually no meaning, probably not negative.**

**Lay**

Layoff over 30 days should always capture our attention and a long look at the workout related facts. A short rest (30-90) "freshening" combined with a sharp work pattern is a highly positive sign of fitness. Longer layoffs are more questionable and could be due to injury. Very few horses are sharp after being off more than 180 days. Shorter rest combined with one or two works is desirable, but not necessary for many horses as racing alone will be enough to keep them in sharp.

**DW**

Days Since Last Workout. A week or so (5-8 days) is perfect for almost all horses, but particularly for those that have several works since the last start. A patten of every 6-7 days appears optimal for first-time-starters or those returning from layoffs over 30 days. A more recent workout in the last 4 days or less can be a good sign if slow and easy, but counter-productive if too fast. A long gap since the last work is curious and puzzling, particularly if the workout rating is 85+. I have run tests in the past that compared Wk 90+ horses with recent works vs. those with "stale" patterns (no workouts in over 20 days) and the results were the typical dichotomy of higher win rate vs. better payoff respectively. A "stale" but sharp work pattern is analogous to a strong speed figure that was achieved a long time ago. It is a guess as to whether the horse will run back to it.

**#**

This column lists the number of workouts since the last race between 0 and 4.

**4** = a definitive indicator of soundness and fitness if combined with a solid workout rating. The "4" lets us know there has been an organized schedule of works, usually with 6-8 day intervals. **3** = Good for those not raced recently, could indicate a missing work if the pattern looks interrupted. **2** = Excellent with horses racing every 24-36 days. **1** = fit if the work takes place on short rest. **0** = hard to determine if negative or meaningless. At minor tracks, there is often no oversight or clocker around to record the works, so **0** is common. At any track, horses that are racing regularly, particularly older runners do not require workouts to remain fit, and are only jogged between races to remain ready.

On the default PGM (Program Screen there is a ( ' ) mark to indicate horses that have at least one workout since the last start (the # column on KM screen if > 0 is the same thing). This is an instant clue to determine if the Wk rating is based on workouts that have occurred since the last race or if the pattern might be "stale" and no longer valid.

*Handicapping with HTR2*  
**Fitness Assessment - Wk and FC ratings**

The FC (Form Cycle) rating attempts to quantify two very different aspects of speed figure analysis.

1. Comparative Speed Figure approach. The mass majority of horseplayers look at figures in simple comparative: “HORSE-A ran a 90; HORSE-B ran an 85; therefore A is faster than B”. Too bad it isn’t always so simple! Statistics on any mechanical comparative approach to speed figures, regardless of the origin (Beyer, Cramer, *Sheets*, etc) or whatever methodology (“best fig last 45 days”, “best speed rating at the distance”) reveal remarkably predictable stats -- basically winning 24-27% and ROI 0.80 – 0.85 depending on the parameters used. Ties are common.
2. Form-Cycle Analysis. This approach seeks out “live” and “improving” runners that will exceed their previous figures or run back to a strong rating. The methodology is based on the pattern of the figures, the layoff intervals, and the class/distance/surface/trainer/jockey/equipment changes that have taken place in each start. Considerable time and experience are needed to becoming an expert, but results are undeniable for those with the hours available to study and observe.

The FC rating uses approach (1) as its base, but attempts to improve on it by using (2) above. A key benefit is time savings. There are many issues when testing or applying any rating or speed figure method and these are especially true when using the FC -

- ? Ties in the data are common.
- ? Blanks and zeros are frequent. HTR2 will blank entire races in some cases if data is sparse.
- ? Low odds horses tend to get most of the high ratings, the public is always aware of speed plays.
- ? Lightly raced and young horses can improve their early figures dramatically and unexpectedly.

The FC ratings are often so close, that testing it by rank, aside from the top ranked horse, proves almost meaningless. The actual rating numbers (60 – 90) provide better separation. To eliminate blanks, ties and unreliable statistics, I filtered the sample below and tested only Non-Maidens, Fast Dirt and Purse > \$10,000. This should give us a fair appraisal of the FC rating without all the peculiarities that skew the statistics. \* = non-zero, no blanks tested.

**FC Test Results - FILTERED 365-Day Sample**

<u>Item</u>	<u>Plays</u>	<u>Wins</u>	<u>Win%</u>	<u>ITM%</u>	<u>WROI</u>	<u>AvgMut</u>	<u>I.V.</u>
FC= 1	17203	4017	23.4	55.4	0.89	\$7.59	1.81
FC 85-90	18292	4376	23.9	56.3	0.89	\$7.38	1.84
FC 80-84	48322	5910	12.2	40.4	0.82	\$13.38	0.95
FC 75-79	32886	4488	13.6	40.7	0.78	\$11.39	1.08
FC < 75*	33282	2480	7.4	24.6	0.63	\$16.95	0.67

Analysis

We get no help in the middle groups, FC 75-84 because there are countless multiples per race and sometimes the entire field of horses will rate in the same numerical range. This area of the FC is best broken apart, particularly for testing longshots because the average mutual is very high.

The highest and lowest categories offer some respectable results. The FC=1 and FC 85-90 groupings appear to be made up of the same horses for the most part. The ROI of 0.89 is strong for a factor based 100% on speed ratings. A reasonable number of longshots are factored in as well as the average mutual is pretty good for a ranked=1 item in HTR. Those horses that rate below FC 75 are terrible bets all around and at a huge disadvantage.

The FC results do not jump off the page, but like its sister rating, the Wk, it has loads of promise with alerting us to higher priced horses that might outrun their odds.

*Back Page*Late News and Announcements

Our fearless HTR web master Rick Bush got out of New Orleans having survived the greatest calamity in American history. We are grateful for his safety after not hearing from him for more than a week when hurricane Katrina clobbered his neighborhood with flooding. If you would like to join dozens of your fellow HTR subscribers in helping out Rick and his wife, please contact me via email or read the HTR Discussion Board.

I will be in Vegas for the Orleans tournament Oct 4-8. The newsletter for October will wait until after that so the results from the tourney can be published along with analysis and comments; look forward to seeing many of you in action in Vegas again. HTR2 software upgrade will be posted some time in October as well – nothing special, just some small additions and minor bug fixes. New stuff will come in 2006. Thanks to those of you that have emailed me with suggestions and ideas for the software along with reporting any problems you encounter.

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