



Maintaining the integrity of the sport of horseracing

A Guide to Handicapping in Southern Africa

Definition of a Handicap

Wiksionary:

handicap (plural [handicaps](#))

1. An [allowance](#) of a certain amount of [time](#) or [distance](#) in starting, granted in a [race](#) to the [competitor](#) possessing [inferior advantages](#); or an additional [weight](#) or other [hindrance](#) imposed upon the one possessing [superior](#) advantages, in order to [equalize](#), as much as possible, the [chances](#) of [success](#).

The older boy won, even with a handicap of five meters.

A handicap in chess often involves removal of the queen's rook.

NHA Rule 47.4.2 “A Handicap, which shall be a race in which the weights to be carried by the horses are allocated by the handicapper for the purpose of equalizing their chances of winning”.

The operative word is EQUALISE

Is Handicapping an Art or a Science ?

“A bit of both -It can never be an exact science because OPINION as well as FACT is involved.

Late Phil Bull -TIMEFORM

Handicapping in Southern Africa

The ever-increasing exposure of South African horses to the international world of Thoroughbred horse racing has made it important to have a handicap system that is readily recognized by the global community.

With this objective in mind 'merit handicapping' was implemented as the method of rating horses in South Africa since 1999.

Whilst a system of handicapping on merit provides for Competitive racing domestically the benefit is the accurate assessment of the racing standard of Southern African horses relative to that of the global thoroughbred herd.

What is Handicapping Really?

Two great sports use handicap systems to 'level the playing field' - Golf and Horse Racing. The whole idea is that by the allotment of some type of Impediment, participants of different ability can compete against each other on equitable terms and therefore provide for interesting competition.

In golf a player's handicap is based on his recorded score as compared to par for the course. The resultant handicap is the number of strokes he requires to be deducted from his gross score so that it would give him a net score equal to par. The better the golfer the fewer strokes he needs to score par.

Weight is used to Handicap

In horse racing Handicappers use the weight that a horse has to carry in a race to handicap.

By either increasing or reducing the weight they attempt to equalize the chances of horses of different ability. The better the horse the higher the weight.

Handicapping is the foundation stone on which thoroughbred horse racing is built. It was introduced in the middle of the 19th century to British racing by Admiral Rous, the famous leader of the Jockey Club, who was able to express the ability of horses as a function of weight. He also introduced a scale on which horses of different ages could be compared which has become known as Weight for-Age (WFA).

What is Merit Handicapping?

As the name suggests, handicapping on merit means that a horse's allocated weight in a race will have been earned by the measurement of his previous performances. This means that the revealed ability of the animal is the primary basis for determining his handicap rating.

If we take a human example

Assume Man A runs against Man B over a distance of 100 metres.

Both have a good start and Man A beats B by 10m.

Next B runs against Man C and wins by 10m.

So when A and C line up the result should be predictable:

On available evidence A should beat C by 20m, all other things being equal.

A beats B by 10 metres.

B beats C by 10 metres.

A meets C - Result:

A beats C by 2 metres,

Now if A carries some weight and races against B - there is a dead heat.

To get the same result when A meets C it requires A to carry twice the weight.

Merit Theory

If **A** beats **B** by 10 m, and **B** beats **C** by 5 m
Then what would the “handicap” be?

If it is known that 5 kg stops the average runner by 5 m
then on ‘*MERIT*’ the weights in a merit handicap would
look something like :

A carries 15 kg

B carries 5 kg

C carries nothing

***Predicting who wins is not
straightforward - the runners are now
“COMPETITIVE”***

Variables

To complicate the example further the distance can be increased from 100 to 400 metres.

“A” will have a problem: the weight on his back will slow him down more and more the further he runs. So to achieve the same result as over 100 metres the weight on his back will have to be reduced.

But what if “B” and “C” are much better suited to 400m than to 100m, and “A” cannot run that far at all? In other words a change of distance could create circumstances for which historical information related to the old distance cannot be used.

And so with horses. Some are better suited to certain distances than others. Some carry weight better, because of age or build. Some cope better when the ground is soft, others only when it is hard. Add to these other factors such as the horse’s well being, fitness, race tactics, jockeyship, pace etc. present the complexities faced by the handicapper.

Merit Handicapping involves rating adjustments based on FACTS as well as JUDGEMENTS.

Facts include:

- The actual weight differences between the horses.**
- The actual margins between horses at the end of a race.**
- The drag effect of weight over different racing distances**

Judgements include :

- Did he get a fair start?**
- Did he have to race wide?**
- Was the pace of the race true or false?**
- Was the horse impeded during the race?**
- How did the horse act in the going?**
- Was the horse racing over a suitable distance?**
- Was a large margin of victory truly representative of his superiority?**

What is Handicapping Really?

Equalising chances of Competitors

What is Merit Handicapping?

Method of allocating weight impediments to equalise the chances of horses, based on measurable facts in conjunction with the interpretation of race results.

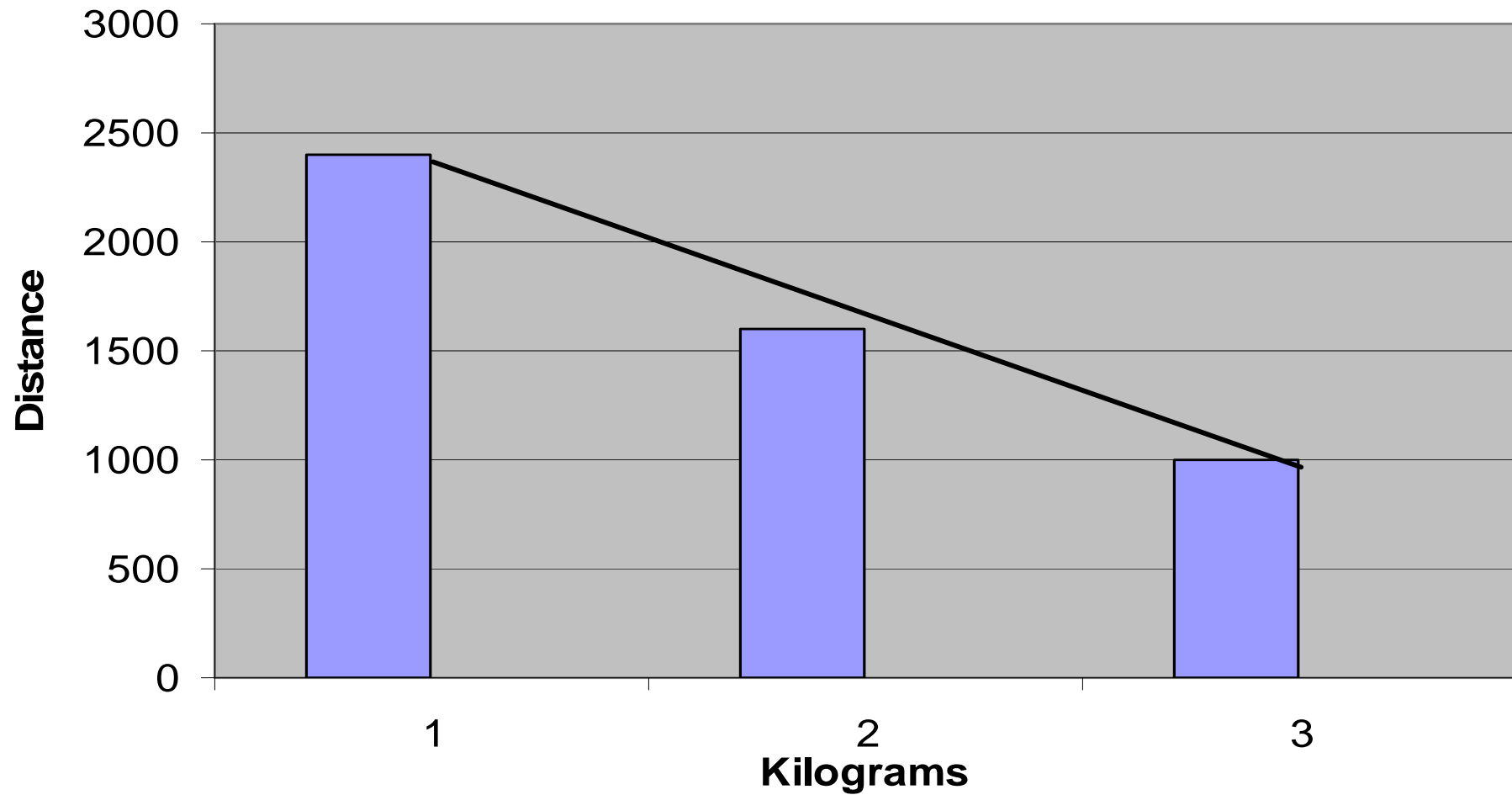
Measuring Merit

The measurable factors are the actual weight that the horse carries, the margin of victory or defeat, the drag effect of weight over different racing distances and the age of a horse.

Some non-quantitative factors, subject to interpretation by the handicapper, are things like the quality of opposition, the pace of the race, the effect of having raced wide, being hindered during the running, the impact of the going and the apparent well being of the animal.

Of the measurable factors the drag effect of weight needs explanation. It is apparent that it is more difficult to carry weight the further one goes. In horse racing it is generally accepted that one kilogram slows a horse down by one length over one mile (1600 metres). Distances shorter than this necessitate the allocation of more weight to achieve the same one length 'drag' on a horse whilst less weight is required over longer distances.

Drag Effect of Weight



The “Line Horse” (also referred to as the Key or Form horse)

Used to ‘measure’ the race.
The equine version of golf’s ‘PAR’

How and Why ?

Identify an individual that generally performs to a consistent level.

Often the overall result can identify the race level - E.g. if the 3rd, 4th and 5th finish together then they can be assumed to have run to their handicap.

By comparing against the performance of the “line horse” the performances of the other horses in the race can be determined.

Drag Effect of Weight (measured in 1/2kg units)

Factor	2.3	2	1.7	1.5
Generally applied scale to beaten margins				
	Sprint	Mile	Intermediate	Long
Beaten Margin(Lengths)	up to 1200m	1300m to 1800m	1801m to 2200m	2400m and more
up to 0.5	1 or 2	1	1	1
1.0	2	2	2	2
1.5	3	3	3	2
2.0	5	4	3	3
2.5	6	5	4	4
3.0	7	6	5	5
3.5	8	7	6	5
4.0	9	8	7	6
4.5	10	9	8	7
5.0	11	10	9	8

With the knowledge of the effects of weight over different race distances it is possible to equate the margin of victory or defeat as a measure of weight.

The application of simple mathematics to any race result whereby a race rating is allotted based on the (1) the actual weight carried by a horse (2) less the weight value of the margin of defeat. This gives every horse an actual 'weight value' for his performance in that race.

Once these relative weight values have been determined for each horse in a race the handicapper now uses his judgement to effectively quantify the overall value of the race.

Comparisons will be made based on the level of ratings of each horse prior to the event. It is assumed that one or more of the contestants achieved a level of performance consistent with their pre-race rating, in other words

they run to 'par. These animals are used as 'line horses'.

They are the "key" against which the other horses in a race will be measured. "Line horses" are generally consistent and genuine animals and therefore their performance can more often than not be relied upon. A line horse would also preferably be an animal that has run a place.

Do the Handicap

Position	Horse	Kg	Margins	Lengths	Equiv	Comp*
1	Flower Bowl	55	-	-	0	+4
2	Painter	55	0.25	0.25	1	+3
3	Wood Owl	55	0.50	0.75	2	+2
4	Paper Chase	55	1.10	1.75	4	0
5	Phone Call	55	3.00	4.75	10	-6
6	Prince	55	2.75	7.50	15	-11

Line Horse - No Adjustment

There are no valid excuses in this race.

*Comp = the performance of each horse compared to the line horse

Weight-for Age

Scale that measures physical progress of the thoroughbred horse as he matures.

Basic Principles

Sprinters mature more quickly than stayers.

It is harder to carry weight the further one goes.

Weight for Age race – Race Assessment

Race-8 KENILWORTH 2009/01/10 1,600m QPLT

Going: Good Race Time: 98.38 Ave Time: 99.53 Diff: -1.15

Draw#	Horse	Age	Sex	Kgs	Fn	Lengths behind winner	Drag Adj (1/2) kg	Pre Race Rating	Actual Weight performance against winner	Actual weight performance against line horse	Actual rating performance against line horse	New Rating	Adjustment	Apt	C/Bett
3	POCKET POWER	6	G	58	1	1.25	0	120	58.0	57.0	114	120	0	I	13-20
8	* OUR GIANT (AUS)	5	G	58	2	1.25	3	111	56.5	55.5	111	111	0	M	3-1
10	* KAPIL	6	G	58	3	1.50	3	110	56.5	55.5	111	110	0	M	6-1
5	BUY AND SELL	5	G	58	4	4.00	8	113	54.0	53.0	106	113	0	M	8-1
2	AFRICAN APPEAL	7	G	58	5	5.00	10	102	53.0	62.0	104	104	2	M	66-1
6	VISION OF GRANDEUR (IRE)	5	H	58	6	6.25	13	104	51.5	50.5	101	104	0	M	12-1
1	THUNDERING JET	4	G	58	7	7.50	15	103	50.5	49.5	99	103	0	M	66-1
9	FLOATYOURBOAT	6	G	58	8	8.50	17	103	49.5	48.5	97	100	-3	M	50-1
7	MAJESTIC SUN	6	G	58	9	11.00	22	91	46.0	46.0	92	90	-1	M	125-1
11	ALVARO (AUS)	4	G	58	10	11.25	23	101	45.5	45.5	91	101	0	M	66-1
4	QUICK MILLIONS (BRZ)	5	G	58	11	13.00	26	93	44.0	44.0	88	93	0	M	125-1

* = Line Horse

Weight for Age

In 1855 Admiral Rous introduced a table that measures the progress of maturity that takes place on average in every thoroughbred. It expresses, in terms of weight, what horses of different ages, over a given distance, at different times of the year, should carry to equalise any difference in maturity. Although introduced nearly 150 years ago the Admiral's WFA Scale has stood the test of time. This scale, with only minor variations, is applied throughout the racing world.

Weight for Age is best described as the physical progress a horse makes as it matures. By the age of 18-24 months a horse will have achieved 95% of its mature height and weight, and by the age of four full maturity will be reached.

In general term's sprinters mature more quickly than stayers and the scale takes this into account. From a handicapping point of view the immaturity factor must be taken into consideration when assessing a young horse's performance, and where necessary the appropriate compensation should be credited.

Dist	AGE	August	September	October	November	December	January	February	March	April	May	June	July
=<1200 m	2									21	19	17	15
	3	14	13	11	10	8	7	6	5	4	3	2	1
	4												
	2									24	22	20	18

HEMISPHERE ALLOWANCE

1201 TO 1400	3	17	16	14	12	10	9	7	6	5	4	3	2
	4	1	1	1									
1401 TO 1600	2									25	23	21	19
	3	18	17	16	14	12	10	8	6	5	4	3	2
	4	1	1	1									
1601 TO 2000	2									27	25	23	21
	3	20	19	18	16	14	12	10	9	7	5	4	3
	4	2	2	2	1	1	1						
2001 TO 2400	2												
	3	21	20	19	17	16	14	12	10	9	7	6	4
	4	3	3	3	2	2	2	1	1	1			
2401 TO 3600	2												
	3	23	22	21	19	18	16	14	12	11	9	8	7
	4	4	4	4	3	3	3	2	2	2	1	1	1

In all

Dist	AGE	August	September	October	November	December	January	February	March	April	May	June	July
=<1200 m	3	5	5	4	4	4	4	3	3	3	2	2	2
	4	1	1	1	1								
1201 TO 1600	3	6	6	5	5	5	5	4	4	4	3	3	3
	4	2	2	2	2	1	1	1	1				
1601 TO 2000	3	6	6	5	5	5	5	5	4	4	4	4	4
	4	3	3	3	2	2	2	1	1	1			
2001 TO 2400	3	7	7	6	6	6	6	5	5	5	4	4	4
	4	4	4	3	3	3	3	2	2	1	1		
2401 TO 3000	3	8	8	7	7	7	7	7	7	6	6	6	6
	4	5	5	4	4	4	3	3	2	2	1	1	1
Over 3000m	3					8	8	8	8	8	8	8	8
	4	6	6	5	5	5	4	4	3	3	2	2	1

standard Weight-for-age races an allowance according to the following scale shall be made to all horses sired north of the equator and foaled between the 1st of January and 31 st of July, viz:-

Fillies & Mares 84 Handicap

Example of Race Assessment and Rating Adjustment

Race-8 KENILWORTH 2009/01/31 1,400m FM84

Going: Good Race Time: 88.04 Ave Time: 87.70 Diff: 0.34

Drw#	Horse	Ag	Sx	C/Wgt	Fn	Lbh	Adj	Pre	Rmr	TNew	Diff	Apt
5	COCOA BEACH	3	F	55.0	1	1.75	0	83	87	87	4	M
12	GAILY GOES WEST	4	F	57.0	2	1.75	4	78	78	78	0	S
2	MYSTERY DAME	4	F	52.5	3	2.00	4	69	69	69	0	I
6	JOYFUL DANCER	4	F	57.0	4	2.10	4	78	78	78	0	M
1	BADGER'S COVE	3	F	58.5	5	2.60	5	90	89	90	0	M
7	WOLFISTA	3	F	55.0	6	3.35	7	83	80	83	0	M
3	JOURNAL	4	F	62.5	7	4.10	8	89	85	87	-2	M
11	JOSHUA'S BEST	4	F	52.0	8	4.35	9	67	63	67	0	M
14	WATER IS GOLD	3	F	53.5	9	4.40	9	80	75	80	0	M
10	MOULIN GRISE	4	F	55.0	10	4.65	9	74	69	74	0	M
4	NATIONAL ARABIAN	3	F	53.5	11	6.40	13	79	70	79	0	M
8	DANCING PENNY	4	F	61.0	12	7.15	14	86	76	85	-1	M
9	SWEET DUEL	4	F	52.0	13	9.90	20	52	52	52	0	M
13	CLOSE TO PARADISE	4	F	54.0	14	11.15	22	72	54	72	0	S

Legend

C/Wgt = Carried weight

Fn = Finish Position

KG = Weight carried

LBH = Lengths behind the winner

Adj = Adjustment for beaten margin.

Pre = Rating going into the race.

Rmr = Race Rating achieved in race.

Tnew = New Rating after assessment.

Diff = Up or Down adjustment.

Apt = Distance Aptitude.

Adjustments to Ratings

Remember, the rating assessment is a matter of comparing performance against weight carried against what opposition.

When making adjustments to a horse's rating the previous record of the animal is taken into account. Most horses reveal their level of ability early in their careers, therefore out of character performances must be treated with caution.

The aim of rating adjustments is to 'level the playing field', a winner must still remain competitive, and the beaten horses must have rating adjustments where necessary to make them more competitive.

Over a period of time the cross-referencing of many lines of form establishes where a horse fits in terms of the whole population.

This, in effect, is what is known as the 'long handicap' where the measured ability of the animal, as reflected by his rating, places him at some position in an imaginary handicap for all horses. The relative abilities of two different animals can then be quantitatively gauged, even to be compared with horses from different eras or generations.

Adjustments to Ratings (continued)

In merit handicapping a horse's rating is adjusted based on performance.

There is no arbitrary or standard penalty.

In handicap races it can be assumed that the winner has 'beaten the handicap' and as such his performance will not be used as the yardstick to rate the race.

There are occasions when the second, third or even fourth placed horses will be rated as having "beaten the handicap". A handicapper will base his race assessment on his interpretation of the performance of the line horse(s) and adjustments to ratings of other horses will be made relative to these horses

and with consideration of the animal's overall rating profile.

In races where the weight allocations are made by terms or conditions the assessment of the race is a lot less straightforward.

In a level weight contest the horse with the highest rating is more likely to win, if he doesn't there are likely to be tangible reasons as to why he didn't - for example the distance of the race did not suit. But here again, the line horses will provide a clue as to the level of ratings of the horses in the race.

In these races it is quite possible that a winner may receive a rating adjustment that is less than a placed horse, and sometimes nothing at all.

Horse Merit Rating Profile

REBEL KING by NATIONAL EMBLEM - Age:5 Sex:H **Turf MR:109 Sand MR:0**

Runs: 22 Wins: 7 Places: 13 Stakes Earned:R 1579135.00

T/Apt (1160)(S) **Bst** (109) **Bst/lst3** (109) **Bst6/mnth**s (109) **Lwin** (-12 days)

S/Apt (0)() **Bst** (81) **Bst/lst3** (81) **Bst6/mnth**s (0) **Lwin** (0 days)()

Ven	Date	G	Cls	Gr	Dst	Mss	BA	Drw	Run	Fin	LBH	Winner/Second	WFA	Pre	RMR	NRMR	Odds	Days	
KEN	20090124	G	CFly	1	1,000	116	A	3	10	1	0.25	Blue Tiger	0	109	109	109	5/2	012	Well timed win
KEN	20081220	G	Diad	2	1,200	116	A	2	14	3	1.30	Blue Tiger	0	109	104	104	2/1	035	Strong finish
TURs	20081129	G	Merc	2	1,160	120	A	5	15	2	0.10	Something Else	0	108	109	109	5/1	021	Bumped start - tried
TURs	20081106	G	Pinn		1,160	120	A	9	12	1	0.25	Succesful Bidder	0	108	104	104	1/1	023	Won well after rest
CLA	20080720	G	Merc	1	1,200	116	A	5	15	2	4.00	J J The Jet Plane	0	107	108	108	14/1	109	Slow - second best
SCOs	20080531	G	GHor	1	1,200	117	A	10	16	3	3.00	J J The Jet Plane	0	107	107	107	7/1	050	Stayed on well
GRE	20080509	G	DrHS	2	1,400	116	A	1	16	8	7.15	Imbongi	0	107	94	94	7/1	022	Plodded last bit
RAN	20080413	G	Pinn		1,400	120	A	3	4	2	1.25	Fork Lightning	0	108	99	99	1/8	026	No extra late
VAA	20080324	G	SSan	2	1,200	120	A	7	13	3	2.50	J J The Jet Plane	0	108	107	107	3/1	020	No extra late
TURs	20080301	G	Hawa	2	1,400	112	A	13	14	4	1.75	Mentor	0	108	103	103	4/1	023	Stayed on
KEN	20080119	G	CFly	1	1,000	116	A	6	11	4	1.75	O Caesour	0	108	106	106	11/2	042	Strong late run
KEN	20071208	G	Diad	2	1,200	116	A	4	11	1	1.25	Blue Tiger	0	108	106	106	15/10	042	Won going away
TURs	20071124	S	Merc	2	1,160	117	A	4	16	4	1.50	Succesful Bidder	0	108	108	108	9/2	014	No extra - needed it
VSA	20070922	G	Hamp	4	1,000	122	A	8	10	10	24.00	Fair Brutus	0	108	81	81	7/2	063	Faltered - short
CLA	20070715	G	Merc	1	1,200	115	A	1	13	2	0.75	War Artist	1	107	108	107	6/1	069	Ran on - coughing
SCOs	20070527	G	Ghor	1	1,200	113	A	15	16	4	2.60	Kildonan	3	107	107	104	6/1	049	Stayed on well
TURs	20070505	G	CSpr	1	1,000	113	A	1	15	2	2.25	Mythical Flight	3	106	107	104	8/1	022	Tried - great run
NEW	20070324	G	Ssan	2	1,200	108	A	15	15	3	1.25	Fair Brutus	5	106	107	102	4/1	042	Stayed on
TURs	20061216	G	Prgm		1,160	116	A	1	5	1	0.10	Fair Brutus	8	106	97	89	2/1	098	Gutsy win
TURs	20060429	G	Nurs	2	1,160	114	A	3	11	1	2.25	Evening Attire	21	0	106	85	16/10	231	Drew clear late
TURs	20060408	G	Juvm		1,000	114	A	3	6	1	3.00	Man O' Choice	21	0	100	79	1/8	021	Easy - good time
NEW	20060314	G	MJPm		1,000	114	A	6	13	1	5.25	Westward Bound	0	0	106	106	28/10	025	Effortless

Looking at his overall rating profile and recent form what is a fair rating at this point in time ?

Real advantages of a Merit System of Handicapping.

- **Internationally recognised Handicapping System.**
 - **Merit System provides for competitive racing.**
- **Merit System provides link to World Thoroughbred Rankings**

Minor Race Plate Rule

1. The winner of a plate race will not be adjusted more than 6 merit rating points.
2. Placed horses will not be adjusted upwards unless requested by the connections. The higher rating will be as assessed by the handicappers in such a Plate race.

Maiden Plate Winners

1. A four year old or older winner will not be rated higher than a net 70.
2. A three year old Maiden winner will not be rated higher than a net 78. This does not apply to a Graded Placed horse.
3. The winner of a maiden plate in Kimberley will not be rated higher than a net 60 and Zimbabwe a net 58.

Layoff Allowance

Horses 4 year old older where no WFA is applicable to receive up to a maximum of 3 rating points for being off 210 days and 5 rating points for 365 days and more. Horses placed in a graded race at their last start may receive an allowance at the discretion of the handicapper but not exceeding 5 rating points.

Retrospective assessments of a horse's last start when returning from a layoff also to be utilized when making a rating adjustment.

Sand and Turf Ratings

- 1. Sand and Turf ratings will be treated independently of one another, once established. (Wins and places are cumulative on both surfaces).**
- 2. A horse must run at least three times on both surfaces before it qualifies to have dual ratings, however the handicappers must be satisfied that there is a discernable difference between the two ratings.**
- 3. Should a 2 or 3-year-old horse which has form on one surface go on to show improvement on another surface, it is reasonable to assume that the horse has improved with maturity. If the rating goes up on one surface the rating on the other surface may increase at the discretion of the handicapper.**
- 4. When a horse with 10 or fewer starts goes from one surface to another and shows a 10 ratings or more improvement on the other surface, the rating on the other surface may be adjusted to 50 % of the difference between the two ratings when next nominated on the other surface.**
- 5. Should a horse be absent from a particular surface for a period of more than six months, the lesser of the two ratings may lapse. A return to the other surface after this time will necessitate a reassessment at the handicappers' discretion.**
- 6. The handicappers reserve the right to use the higher rating on the inferior surface should a horse have made improvement over a different aptitude, gelding , equipment change etc.**
- 7. A horse returning from a layoff will retain both ratings.**
- 8. 210 day layoff allowance will apply to both ratings to the date of last run.**
- 9. Margins on the Vaal Sand to be treated at 75 % of normal length/ distance factor. (1/2 margins apply to Kimberley).**