

# Analysis of the race distribution for male 400m hurdlers competing at the 2000 Sydney Olympic Games

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The eight heats, the three semi-finals and the final of the male 400m hurdles event at the 2000 Sydney Olympic Games were video-recorded. The images were analysed in slow motion with special computer software and different parameters were examined, such as the number of strides, time differentials, split times of hurdle units, position and the overall performance time of every athlete, in order to understand the race distribution of the best 400m hurdlers in the world.

We found out that, particularly in the heats, the first half of the race was often run too fast, so that athletes ended up with a rapid decrease in speed in the second half. Furthermore, this was often coupled with mistakes made in the race rhythm. It is quite clear that the position held by the athlete after the 5th hurdle has a limited relationship to the position held at the finish line.

Generally the athletes achieved their maximum speed between hurdles 2 and 3 and only those able to control the decrease in speed, especially during the last few hurdles, produced the best performances.

## ABSTRACT

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and young athletes, males and females. Very often the results showed that athletes, even elite athletes, were far from the ideal model of 400m hurdlers. We wonder if perhaps coaches and athletes are less concerned about race distribution in 400m hurdles than in middle and long distance events. The Italian athlete, Fabrizio Mori, 400 m hurdles World Champion in Seville (1999), usually provides an example of very good race distribution. In contrast, most athletes with stronger physical qualities than Mori, often pay less attention to rhythm and technique, perhaps because they believe they can counterbalance this lack of an effective strategy with more emphasis on muscular and physiological aspects.

We thought that the Sydney Olympic Games would be an ideal occasion to investigate the performances of the best 400m hurdles athletes. This paper aims to contribute to an understanding of:

- 1) The normal race distribution model for 400m hurdles, as exhibited by the world's top athletes

### Introduction

The search for the "perfect" race model for 400m hurdles has been undertaken by many technical experts and sports scientists. Several papers have been published which analyse the event for both elite

- 2) Whether this distribution differs in comparison with the ideal model
- 3) Which parameters are most useful for the study of race performance.

### Methods and procedures

We observed all the male 400m hurdlers during the 2000 Sydney Olympic Games. Twelve races were studied: eight heats, three semi-finals and the final.

In order to gather the data for our analyses, the images were recorded from television, both from RAI, the Italian network, and from Eurosport. We were thus able to observe the same competition from two different perspectives but, even so, some data was still missing.

A cable was used to connect the video recorder to a computer by the video-card "Marvel Matrox G400-Tv", and the software "Avid Cinema". The video capture was conducted at 25 frames per second, so we obtained a thorough analysis of the images at slow motion.

The data collected consisted of:

- ◆ The total performance (race) time
- ◆ The half race time and position (just in the semi-finals and in the final)
- ◆ The time differential between the second 200 m and the first 200 m of the race (just in the semi-finals and in the final)
- ◆ The time of the approach run and number of strides, from the start line to the first hurdle
- ◆ The split times and number of strides between the hurdles (hurdle units)
- ◆ The time and number of strides from the last hurdle to the finish line
- ◆ The time differential between the worst and the best hurdle unit
- ◆ The position of every athlete after the fifth hurdle, after the eighth hurdle and at the finish line.

The split times and race position for each athlete were noted on touch down after every hurdle. In terms of statistical procedures, we used the mean, the standard deviation (sd), the simple frequency distribution and the Spearman correlation coefficient.

### Results and discussion

Tables 1-12 highlight all the data collected from the eight heats, the three semi-finals and the final. A general analysis allows us to note that:

- 1) All the raw data collected was of a higher standard when progressing from the heats to the semi-finals and even more so to the final, as one would expect.
- 2) Most of the athletes changed the number of strides taken between hurdles by the time they reached hurdles 6, 7 or 8; this corresponded to the highest decrease in speed. There are also several instances of mistakes being made in race rhythm.

We created a graphic to analyse and compare the race distribution of the eight finalists during the three rounds (figures 1-8). The x-axis shows the ten hurdle units and the unit from the last hurdle to the finish line. The y-axis shows the speed (in metres per second) of every hurdle unit. There is clear evidence that all the athletes reached their maximum speed by the 2<sup>nd</sup> or 3<sup>rd</sup> hurdle unit, after which their speed decreased progressively. In contrast, the athletes who achieved the best results exhibited less of a decrease, or even a final increase in speed (figure 1, A. Taylor, the winner).

Table 13 shows the position of each athlete after the 5<sup>th</sup> hurdle, after the 8<sup>th</sup> hurdle and at the finish line, for the eight heats. We correlated the position gained after the 5<sup>th</sup> hurdle with the position at the finish line and the position gained after the 8<sup>th</sup> hurdle with the position at the finish line. Tables 14 and 15 show the same data for the semi-finals and the final. We found a significant positive correlation of the position after the 5th hurdle ( $r_s \cong 0.4 - 0.5$ ) and after the 8th hurdle ( $r_s \cong 0.7 - 0.9$ ) with the position at the finish line. The correlation was even higher still when the athletes finished close to each at the finish line.

Despite the correlation, the position after the 5<sup>th</sup> hurdle is not very predictive of the position at the finish line. The statistical significance of the data is reduced for the final (table 15) but this is explained by the small number of athletes involved (only eight).

Figure 9 shows the mean values ( $\pm$  sd) of the differential time between the worst and

the best hurdle unit in the heats, semi-finals, final and the total of the results. When going from the heats to the final we observed a reduction in both the mean and in the standard deviation of the time differential. In the semi-finals and also in the final the time differential is under 1" and very close to 0"8 for the finalists. This is not so surprising because these are really the best athletes in the world.

Figure 10 is a histogram constructed from a simple frequency distribution. The bars on the x-axis represent the number of strides chosen by every athlete, during heats, from the start line to the first hurdle and for the various hurdle units. The height of each bar is determined by the frequency of that chosen number of strides as plotted on the y-axis. We can easily see that most athletes used 21 strides from the start to the first hurdle, 13 strides until the 5<sup>th</sup> hurdle, 14 strides until the 7<sup>th</sup> hurdle and 15 strides until the 10<sup>th</sup> hurdle.

**Conclusion**

We think that the data and the results shown in this study could be useful for coaches and athletes who are involved in the 400m hurdles event.

Several parameters have been gathered in order to thoroughly analyse this event. Even though we focused on the athletes competing

at the Olympic Games, we found, especially in the heats, several instances of poor race distribution. We would like to stress the importance of the second half of the race. The best performances were obtained by those athletes with the lowest time differential between the second and the first half of the event, and the worst and the best hurdle unit. The low positive correlation between the position gained after the 5<sup>th</sup> hurdle and the position at the finish line indicates that it is not so important to run as fast in the first half of the race. Instead we should consider starting the race from the 6<sup>th</sup> hurdle. From this point onwards, the athlete with energy in reserve and able to perform the correct number of strides, will be the winner at the finish line.

We agree with the famous Italian coach, Carlo Vittori, who said that it seems strange that the peak of speed is obtained so early in the race but this is confirmed by both our study and those done by other researchers. The important question to ask is whether this is the correct strategy for the best performance, or have no athletes been bold enough to attempt a different race distribution?

**Acknowledgements:**

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**Table 1**

*2000 Sydney Olympic Games - 400 m hurdles men*

| Heat 1 |               | 1 <sup>st</sup> h  | 2 <sup>nd</sup> h  | 3 <sup>rd</sup> h   | 4 <sup>th</sup> h   | 5 <sup>th</sup> h   | 6 <sup>th</sup> h   | 7 <sup>th</sup> h   | 8 <sup>th</sup> h   | 9 <sup>th</sup> h   | 10 <sup>th</sup> h  | fin. time             | Differential between the worst & best hurdle unit |
|--------|---------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---|
|        |               | tot. time          | tot. time          | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | un. time              |   |
| Lane   | Athlete       | n° strides         | n° strides         | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides            |   |
| 2      | Huston V.     | 5"90<br>5"90       | 9"58<br>3"68<br>13 | 13"34<br>3"76<br>13 | 17"22<br>3"88<br>13 | 21"22<br>4"00<br>13 | 25"54<br>4"32<br>14 | 30"10<br>4"56<br>14 | 34"86<br>4"76<br>15 | 39"98<br>5"12<br>15 | 45"34<br>5"36<br>16 | 51"51<br>6"17         | 1"68  |
| 3      | Mashchenko R. | 5"94<br>5"94       | 9"62<br>3"68<br>13 | 13"38<br>3"76<br>13 | 17"22<br>3"84<br>13 | 21"18<br>3"96<br>13 | 25"34<br>4"16<br>13 | 29"62<br>4"28<br>14 | 34"14<br>4"52<br>14 | 39"06<br>4"92<br>15 | 44"06<br>5"04<br>15 | 50"01<br>5"95<br>18,3 | 1"32  |
| 4      | Robinson R.   | 6"02<br>6"02<br>21 | 9"82<br>3"8<br>14  | 13"62<br>3"8<br>14  | 17"54<br>3"92<br>14 | 21"54<br>4"<br>14   | 25"70<br>4"16<br>14 | 30"10<br>4"40<br>14 | 34"70<br>4"60<br>15 | 39"74<br>5"04<br>16 | 44"82<br>5"08<br>16 | 50"80<br>5"98         | 1"28  |
| 5      | Smith W.      | 6"06<br>6"06<br>22 | 9"78<br>3"72<br>15 | 13"66<br>3"88<br>15 | 17"62<br>3"96<br>15 | 21"66<br>4"04<br>15 | 25"82<br>4"16<br>17 | 30"34<br>4"52<br>17 | 35"02<br>4"68<br>17 | 39"90<br>4"88<br>17 |                     | 50"89                 |   |
| 6      | Zbinden C.    | 6"10<br>6"10<br>21 | 9"90<br>3"8<br>13  | 13"82<br>3"92<br>13 | 17"70<br>3"88<br>13 | 21"70<br>4"<br>13   | 25"94<br>4"24<br>14 | 30"38<br>4"44<br>14 | 34"98<br>4"60<br>15 | 40"02<br>5"04<br>16 |                     | 51"36                 |   |
| 7      | Goller T.     | 5"94<br>5"94<br>21 | 9"58<br>3"64<br>13 | 13"30<br>3"72<br>13 | 17"10<br>3"8<br>13  | 21"02<br>3"92<br>13 | 25"10<br>4"08<br>13 | 29"50<br>4"40<br>14 | 33"94<br>4"44<br>14 | 38"74<br>4"80<br>15 | 43"62<br>4"88<br>15 | 49"32<br>5"7<br>19,2  | 1"24  |
| 8      | Herbert L.    | 5"98<br>5"98<br>22 | 9"82<br>3"8<br>14  | 13"62<br>3"8<br>14  | 17"50<br>3"88<br>14 | 21"42<br>3"92<br>14 | 25"58<br>4"16<br>15 | 29"82<br>4"24<br>15 | 34"18<br>4"36<br>15 | 38"74<br>4"56<br>15 | 43"62<br>4"88<br>16 | 49"25<br>5"63<br>19,2 | 1"08  |

**Table 2**

| 2000 Sydney Olympic Games - 400 m hurdles men |                     |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                       |  |
|---|---------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------|--|
| Heat 2  |                     | 1 <sup>st</sup> h                | 2 <sup>nd</sup> h                | 3 <sup>rd</sup> h                | 4 <sup>th</sup> h                | 5 <sup>th</sup> h                | 6 <sup>th</sup> h                | 7 <sup>th</sup> h                | 8 <sup>th</sup> h                | 9 <sup>th</sup> h                | 10 <sup>th</sup> h               | fin. time             | Differential                               |
| Lane  | Athlete             | tot. time<br>un. time<br>strides | tot. time<br>un. time<br>strides | tot. time<br>un. time<br>strides | tot. time<br>un. time<br>strides | tot. time<br>un. time<br>strides | tot. time<br>un. time<br>strides | tot. time<br>un. time<br>strides | tot. time<br>un. time<br>strides | tot. time<br>un. time<br>strides | tot. time<br>un. time<br>strides | un. time<br>strides   | between the<br>worst & best<br>hurdle unit |
| 1   | Yamazaki K.         | 5"90<br>5"90                     | 9"66<br>3"76                     | 13"58<br>3"92                    | 17"58<br>4"00                    | 21"70<br>4"12                    | 25"98<br>4"28                    |                                  | 35"10                            | 39"78<br>4"68                    | 44"54<br>4"76                    | 50"15<br>5"61         | 1"00                                       |
| 2   | Chen T.             | 6"10<br>6"10<br>21               | 9"90<br>3"80<br>14               | 13"82<br>3"92<br>14              | 17"86<br>4"04<br>14              | 21"94<br>4"08<br>14              | 26"26<br>4"32<br>14              |                                  | 34"98                            | 39"54<br>4"56                    | 44"34<br>4"72                    | 49"93<br>5"59<br>19,1 | 1"00                                       |
| 3   | Keter E.            | 6"18<br>6"18<br>21               | 10"02<br>3"84<br>13              | 13"90<br>3"88<br>15              | 17"98<br>4"08<br>15              | 22"10<br>4"12<br>15              | 26"34<br>4"24<br>15              | 14                               | 35"22                            | 39"86<br>4"64                    | 44"58<br>4"72                    | 50"06<br>5"48<br>18,1 | 0"88                                       |
| 4   | Sanchez F.          | 5"86<br>5"86<br>21               | 9"58<br>3"72<br>13               | 13"38<br>3"80<br>13              | 17"18<br>3"80<br>13              | 21"14<br>3"96<br>13              | 25"34<br>4"20<br>13              | 14                               | 34"54                            | 39"34<br>4"80                    | 44"22<br>4"88                    | 49"70<br>5"48<br>18,2 | 1"16                                       |
| 5   | Mori F.             | 6"22<br>6"22<br>22               | 10"06<br>3"84<br>14              | 13"94<br>3"88<br>14              | 17"86<br>3"92<br>14              | 21"94<br>4"08<br>14              | 26"06<br>4"12<br>14              | 14                               | 34"86                            | 39"38<br>4"52                    | 43"98<br>4"60                    | 49"35<br>5"37<br>18,3 | 0"76                                       |
| 6   | Young B.            | 6"06<br>6"06<br>21               | 9"82<br>3"88<br>13               | 13"74<br>3"92<br>12              | 17"74<br>4"00<br>14              | 21"86<br>4"12<br>14              | 26"18<br>4"32<br>14              | 15                               | 35"42                            | 39"90<br>4"48                    | 44"50<br>4"60                    | 49"75<br>5"25<br>18,4 | 0"72                                       |
| 7   | Rakotoarimiandry I. | 5"98<br>5"98<br>21               | 9"78<br>3"80<br>14               | 13"70<br>3"92<br>14              | 17"66<br>3"96<br>14              | 21"70<br>4"04<br>14              | 26"06<br>4"36<br>14              |                                  | 35"14                            | 39"86<br>4"72                    | 44"62<br>4"76                    | 50"15<br>5"53         | 0"96                                       |
| 8   | Gorban B.           | 5"98<br>5"98<br>20               | 9"82<br>3"84<br>13               | 13"62<br>3"8                     | 17"54<br>3"92<br>13              | 21"54<br>4"00<br>13              | 25"70<br>4"16<br>13              |                                  | 34"66                            | 39"30<br>4"64                    | 43"98<br>4"68                    | 49"44<br>5"46<br>17,8 | 0"88                                       |

**Table 3**

| 2000 Sydney Olympic Games - 400 m hurdles men |              |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                        |  |
|---|--------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------|--|
| Heat 3  |              | 1 <sup>st</sup> h                   | 2 <sup>nd</sup> h                   | 3 <sup>rd</sup> h                   | 4 <sup>th</sup> h                   | 5 <sup>th</sup> h                   | 6 <sup>th</sup> h                   | 7 <sup>th</sup> h                   | 8 <sup>th</sup> h                   | 9 <sup>th</sup> h                   | 10 <sup>th</sup> h                  | fin. time              | Differential                               |
| Lane  | Athlete      | tot. time<br>un. time<br>n° strides | tot. time<br>un. time<br>n° strides | tot. time<br>un. time<br>n° strides | tot. time<br>un. time<br>n° strides | tot. time<br>un. time<br>n° strides | tot. time<br>un. time<br>n° strides | tot. time<br>un. time<br>n° strides | tot. time<br>un. time<br>n° strides | tot. time<br>un. time<br>n° strides | tot. time<br>un. time<br>n° strides | un. time<br>n° strides | between the<br>worst & best<br>hurdle unit |
| 2   | Omodiale S.  | 5"98<br>5"98<br>22                  | 9"78<br>3"80<br>15                  | 13"70<br>3"92<br>15                 | 17"78<br>4"08<br>15                 | 22"06<br>4"28<br>15                 | 26"30<br>4"24<br>15                 | 30"62<br>4"32<br>15                 | 35"30<br>4"68<br>16                 | 40"10<br>4"80<br>16                 | 45"14<br>5"04<br>17                 | 51"06<br>5"92          | 1"24                                       |
| 3   | Maritim H.   | 6"10<br>6"10<br>22                  | 9"98<br>3"88<br>15                  | 13"94<br>3"96<br>15                 | 17"98<br>4"04<br>15                 | 22"14<br>4"16<br>15                 | 26"46<br>4"28<br>15                 | 30"90<br>4"44<br>15                 | 35"54<br>4"64<br>15                 | 40"26<br>4"72<br>15                 | 45"34<br>5"08<br>17                 | 51"04<br>5"70          | 1"20                                       |
| 4   | Faye I.      | 6"02<br>6"02<br>22                  | 9"74<br>3"72<br>13                  | 13"62<br>3"88<br>13                 | 17"58<br>3"96<br>13                 | 21"66<br>4"08<br>13                 | 25"90<br>4"24<br>13                 | 30"38<br>4"48<br>14                 | 34"90<br>4"52<br>14                 | 39"62<br>4"72<br>15                 | 44"46<br>4"84<br>15                 | 50"09<br>5"53<br>18    | 1"12                                       |
| 5   | Isakov E.    | 6"10<br>6"10<br>22                  | 10"14<br>4"04<br>14                 | 14"14<br>4"0<br>14                  | 18"30<br>4"16<br>14                 | 22"62<br>4"32<br>14                 | 26"70<br>4"08<br>14                 | 31"18<br>4"48<br>14                 | 35"74<br>4"56<br>15                 | 40"34<br>4"80<br>15                 | 45"02<br>4"68<br>15                 | 50"71<br>5"69          | 0"68                                       |
| 6   | Morgan D.    | 5"90<br>3"76<br>22                  | 9"66<br>3"76<br>14                  | 13"54<br>3"88<br>14                 | 17"54<br>4"0<br>14                  | 21"66<br>4"12<br>14                 | 25"94<br>4"28<br>14                 | 30"34<br>4"40<br>15                 | 34"86<br>4"52<br>15                 | 39"42<br>4"56<br>15                 | 44"14<br>4"72<br>15                 | 49"64<br>5"50<br>18,5  | 0"96                                       |
| 7   | Ratnayake H. | 6"54<br>6"54<br>22                  | 10"58<br>4"04<br>14                 | 14"58<br>4"0<br>14                  | 18"62<br>4"04<br>13                 | 22"74<br>4"12<br>13                 | 27"18<br>4"44<br>14                 | 31"66<br>4"48<br>14                 | 36"26<br>4"60                       |                                     |                                     | 50"43                  |  |
| 8   | Taylor A.    | 6"06<br>6"06<br>21                  | 9"90<br>3"84<br>13                  | 13"74<br>3"84<br>13                 | 17"58<br>3"84<br>13                 | 21"58<br>4"0<br>13                  | 25"66<br>4"08<br>13                 | 29"94<br>4"28<br>13                 | 34"50<br>4"56<br>14                 | 39"18<br>4"68<br>14                 | 43"82<br>4"64<br>14                 | 49"48<br>5"66<br>17,5  | 0"80                                       |

**Table 4**

| 2000 Sydney Olympic Games - 400 m hurdles men |              |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       |              |
|---|--------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|--------------|
| Heat 4  |              | 1 <sup>st</sup> h  | 2 <sup>nd</sup> h   | 3 <sup>rd</sup> h   | 4 <sup>th</sup> h   | 5 <sup>th</sup> h   | 6 <sup>th</sup> h   | 7 <sup>th</sup> h   | 8 <sup>th</sup> h   | 9 <sup>th</sup> h   | 10 <sup>th</sup> h  | fin. time             | Differential |
|   |              | tot. time          | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | un. time              | between the  |
| Lane  | Athlete      | n° strides         | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides            | worst & best |
| 1   | Iakovakis P. | 6"00<br>6"00<br>22 | 9"84<br>3"84<br>14  | 13"76<br>3"92<br>14 | 17"72<br>3"96<br>14 | 21"72<br>4"00<br>14 | 25"72<br>4"00<br>14 | 30"12<br>4"40<br>14 | 34"72<br>4"60<br>15 | 39"68<br>4"96<br>16 | 44"72<br>5"04<br>16 | 50"20<br>5"48<br>18,6 | 1"2          |
| 2   | Sdad M.      | 6"04<br>6"04<br>21 | 10"16<br>4"12<br>15 | 14"20<br>4"04<br>15 | 18"36<br>4"16<br>15 | 22"56<br>4"20<br>15 | 26"88<br>4"32<br>15 | 31"36<br>4"48<br>15 | 36"04<br>4"68<br>15 | 40"96<br>4"92<br>17 | 45"92<br>4"96<br>17 | 51"39<br>5"47         | 0"92         |
| 3   | McGuirk T.   | 5"96<br>5"96<br>22 | 9"80<br>3"84<br>14  | 13"72<br>3"92<br>14 | 17"72<br>4"0<br>14  | 21"84<br>4"12<br>14 | 25"92<br>4"08<br>15 | 30"48<br>4"56<br>17 | 35"40<br>4"92<br>16 | 40"48<br>5"08<br>17 | 45"72<br>5"24<br>18 | 51"73<br>6"01         | 1"40         |
| 4   | Kawamura H.  | 5"96<br>5"96<br>21 | 9"68<br>3"72<br>14  | 13"60<br>3"92<br>14 | 17"52<br>3"92<br>14 | 21"52<br>4"00<br>14 | 25"64<br>4"12<br>15 | 30"04<br>4"40<br>15 | 34"60<br>4"64<br>15 | 39"68<br>5"04<br>17 | 44"72<br>5"04<br>16 | 50"68<br>5"96<br>20   | 1"32         |
| 5   | Lee D.       | 6"12<br>6"12<br>21 | 10"04<br>3"92<br>13 | 14"04<br>4"00<br>13 | 18"16<br>4"12<br>13 | 22"32<br>4"16<br>13 | 26"60<br>4"28<br>13 | 31"40<br>4"80<br>15 | 36"20<br>4"80       |                     |                     | 52"61                 |              |
| 6   | Thomas E.    | 6"08<br>6"08<br>21 | 9"88<br>3"80<br>13  | 13"72<br>3"84<br>13 | 17"64<br>3"92<br>13 | 21"60<br>3"96<br>13 | 25"72<br>4"12<br>13 | 30"20<br>4"48<br>14 | 34"76<br>4"56<br>14 | 39"64<br>4"88<br>15 | 44"60<br>4"96<br>15 | 50"16<br>5"56<br>17,4 | 1"16         |
| 7   | Zadoynov V.  | 6"04<br>6"04<br>20 | 9"84<br>3"80<br>13  | 13"84<br>4"00<br>13 | 17"84<br>4"00<br>13 | 21"84<br>4"00<br>13 | 26"00<br>4"16<br>13 | 30"44<br>4"44<br>13 | 35"16<br>4"72<br>14 | 40"28<br>5"12<br>15 |                     | 51"08                 |              |
| 8   | Muzik J.     | 6"00<br>6"00<br>21 | 9"76<br>3"76<br>13  | 13"64<br>3"88<br>13 | 17"60<br>3"96<br>13 | 21"64<br>4"04<br>13 | 25"80<br>4"16<br>14 | 30"20<br>4"40<br>14 | 34"80<br>4"60<br>14 | 39"76<br>4"96<br>16 | 44"68<br>4"92<br>16 | 50"11<br>5"43<br>18,9 | 1"16         |

**Table 5**

| 2000 Sydney Olympic Games - 400 m hurdles men |                |                    |                     |                     |                     |                     |                     |                     |                     |                     |                     |                       |              |
|---|----------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|--------------|
| Heat 5  |                | 1 <sup>st</sup> h  | 2 <sup>nd</sup> h   | 3 <sup>rd</sup> h   | 4 <sup>th</sup> h   | 5 <sup>th</sup> h   | 6 <sup>th</sup> h   | 7 <sup>th</sup> h   | 8 <sup>th</sup> h   | 9 <sup>th</sup> h   | 10 <sup>th</sup> h  | fin. time             | Differential |
|   |                | tot. time          | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | tot. time           | un. time              | between the  |
| Lane  | Athlete        | n° strides         | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides          | n° strides            | worst & best |
| 1   | Juricic D.     | 6"04<br>6"04<br>22 | 9"92<br>3"88<br>14  | 13"76<br>3"84<br>14 | 17"72<br>3"96<br>14 | 21"80<br>4"08<br>14 | 25"96<br>4"16<br>14 | 30"64<br>4"68<br>16 | 35"60<br>4"96<br>17 | 40"88<br>5"28<br>18 | 46"16<br>5"28<br>18 | 52"39<br>6"23<br>21,9 | 1"44         |
| 2   | Januszewski P. | 6"08<br>6"08<br>22 | 9"88<br>3"80<br>14  | 13"64<br>3"76<br>14 | 17"48<br>3"84<br>14 | 21"44<br>3"96<br>14 | 25"60<br>4"16<br>14 | 30"08<br>4"48<br>14 | 34"80<br>4"72<br>15 | 40"04<br>5"24<br>15 | 45"28<br>5"24<br>15 | 51"40<br>6"12<br>19,7 | 1"48         |
| 3   | Rawlinson C.   | 5"96<br>5"96<br>22 | 9"60<br>3"64<br>14  | 13"36<br>3"76<br>14 | 17"16<br>3"80<br>14 | 21"08<br>3"92<br>14 | 25"16<br>4"08<br>14 | 29"52<br>4"36<br>14 | 34"36<br>4"68<br>15 | 39"80<br>5"44<br>17 | 45"16<br>5"36<br>17 | 51"30<br>6"14<br>20   | 1"80         |
| 4   | Vershinin L.   | 6"08<br>6"08<br>21 | 9"92<br>3"84<br>13  | 13"84<br>3"92<br>13 | 17"80<br>3"96<br>13 | 21"80<br>4"00<br>13 | 25"96<br>4"16<br>14 | 30"28<br>4"32<br>14 | 34"92<br>4"64<br>15 | 40"28<br>5"36<br>17 | 45"64<br>5"36<br>17 | 51"84<br>6"20<br>20   | 1"52         |
| 5   | Harden K.      | 6"28<br>6"28<br>22 | 10"00<br>3"72<br>13 | 13"92<br>3"92<br>13 | 17"84<br>3"92<br>13 | 21"88<br>4"04<br>13 | 26"00<br>4"12<br>13 | 30"40<br>4"40<br>13 | 35"24<br>4"84<br>15 | 40"48<br>5"24<br>17 | 45"72<br>5"24<br>17 | 51"83<br>6"11<br>19,7 | 1"52         |
| 6   | Al Najem Z.    | 6"00<br>6"00<br>21 | 9"84<br>3"84<br>13  | 13"72<br>3"88<br>13 | 17"68<br>3"96<br>13 | 21"76<br>4"08<br>13 | 26"00<br>4"24<br>13 | 30"68<br>4"68<br>13 | 35"60<br>4"92<br>14 | 41"16<br>5"56<br>16 |                     | 52"70                 |              |
| 7   | Bedi T.        | 5"92<br>5"92<br>21 | 9"68<br>3"76<br>13  | 13"64<br>3"96<br>14 | 17"64<br>4"00<br>14 | 21"80<br>4"16<br>14 | 26"00<br>4"20<br>14 | 30"36<br>4"36<br>15 | 35"04<br>4"68<br>15 | 40"24<br>5"20<br>17 | 45"48<br>5"24<br>17 | 51"54<br>6"06<br>20,9 | 1"48         |
| 8   | Dzhivondov I.  | 6"08<br>6"08<br>22 | 9"88<br>3"80<br>13  | 13"80<br>3"92<br>13 | 17"80<br>4"00<br>13 | 22"00<br>4"20<br>14 | 26"36<br>4"16<br>14 | 30"92<br>4"56<br>15 | 35"88<br>4"96       |                     |                     | 54"36                 |              |

**Table 6**

**2000 Sydney Olympic Games - 400 m hurdles men**

| Heat 6 |               | 1 <sup>st</sup> h      | 2 <sup>nd</sup> h      | 3 <sup>rd</sup> h      | 4 <sup>th</sup> h      | 5 <sup>th</sup> h      | 6 <sup>th</sup> h      | 7 <sup>th</sup> h      | 8 <sup>th</sup> h      | 9 <sup>th</sup> h      | 10 <sup>th</sup> h     | fin. time             | Differential |
|--------|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|--------------|
|        |               | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | un. time              | between the  |
| Lane   | Athlete       | un. time               | un. time               | un. time               | un. time               | un. time               | un. time               | un. time               | un. time               | un. time               | un. time               | n <sup>o</sup> stride | worst & best |
|        |               | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides |                       | hurdle unit  |
| 1      | Al-Somaily H. | 5"98                   | 9"66                   | 13"50                  | 17"38                  | 21"34                  | 25"42                  | 29"78                  | 34"34                  | 38"98                  | 43"70                  | 49"28                 | 1"04         |
|        |               | 5"98                   | 3"68                   | 3"84                   | 3"88                   | 3"96                   | 4"08                   | 4"36                   | 4"56                   | 4"64                   | 4"72                   | 5"58                  |              |
|        |               | 21                     | 13                     | 13                     | 13                     | 13                     | 13                     | 13                     | 14                     | 14                     | 17                     | 17,7                  |              |
| 2      | Weakley I.    | 6"02                   | 9"86                   | 13"90                  | 17"94                  | 22"06                  | 26"34                  | 30"74                  | 35"34                  | 40"22                  |                        | 52"18                 |              |
|        |               | 6"02                   | 3"84                   | 3"96                   | 4"04                   | 4"12                   | 4"28                   | 4"40                   | 4"60                   | 4"88                   |                        |                       |              |
|        |               | 22                     | 14                     | 15                     | 14                     | 15                     | 15                     | 15                     | 15                     | 16                     |                        |                       |              |
| 3      | Pochanis K.   | 6"22                   | 10"02                  | 13"94                  | 17"94                  | 21"98                  | 26"34                  | 30"98                  | 35"70                  | 40"54                  |                        | 51"20                 |              |
|        |               | 6"22                   | 3"80                   | 3"92                   | 4"00                   | 4"04                   | 4"36                   | 4"64                   | 4"72                   | 4"84                   |                        |                       |              |
|        |               | 22                     | 14                     | 14                     | 14                     | 14                     | 15                     | 16                     | 16                     | 16                     |                        |                       |              |
| 4      | Borsumato A.  | 6"10                   | 9"86                   | 13"74                  | 17"70                  | 21"70                  | 25"90                  | 30"50                  | 35"02                  | 39"90                  |                        | 50"73                 |              |
|        |               | 6"10                   | 3"76                   | 3"88                   | 3"96                   | 4"00                   | 4"20                   | 4"60                   | 4"52                   | 4"88                   |                        |                       |              |
|        |               | 21                     | 13                     | 13                     | 13                     | 13                     | 14                     | 15                     | 15                     | 16                     |                        |                       |              |
| 5      | Rodrigues P.  | 6"06                   | 9"84                   | 14"10                  | 18"02                  | 22"02                  | 26"30                  | 30"58                  | 35"02                  | 39"58                  | 44"46                  | 49"90                 | 1"04         |
|        |               | 6"06                   | 3"88                   | 3"84                   | 3"92                   | 4"00                   | 4"28                   | 4"28                   | 4"44                   | 4"56                   | 4"88                   | 5"44                  |              |
|        |               | 21                     | 13                     | 13                     | 13                     | 13                     | 14                     | 14                     | 15                     | 15                     | 18,4                   |                       |              |
| 6      | Myburgh A.    | 5"98                   | 9"82                   | 13"82                  | 17"82                  | 21"94                  | 26"22                  | 30"50                  | 34"98                  | 39"54                  | 44"14                  | 49"57                 | 0"76         |
|        |               | 5"98                   | 3"84                   | 4"00                   | 4"00                   | 4"12                   | 4"28                   | 4"28                   | 4"48                   | 4"56                   | 4"60                   | 5"43                  |              |
|        |               | 21                     | 14                     | 14                     | 14                     | 14                     | 14                     | 14                     | 15                     | 15                     | 18,7                   |                       |              |
| 7      | Carter J.     | 5"74                   | 9"50                   | 13"46                  | 17"38                  | 21"46                  | 25"70                  | 30"26                  | 34"78                  | 39"30                  | 43"94                  | 49"41                 | 0"88         |
|        |               | 5"74                   | 3"76                   | 3"96                   | 3"92                   | 4"08                   | 4"24                   | 4"56                   | 4"52                   | 4"64                   | 4"64                   | 5"47                  |              |
|        |               | 21                     | 13                     | 13                     | 13                     | 13                     | 13                     | 14                     | 14                     | 14                     | 17,9                   |                       |              |
| 8      | Beckenaham M. | 6"18                   | 10"10                  | 14"26                  | 18"42                  | 22"74                  | 27"30                  | 31"86                  | 36"38                  |                        |                        | 51"27                 |              |
|        |               | 6"18                   | 3"92                   | 4"16                   | 4"16                   | 4"32                   | 4"56                   | 4"56                   | 4"52                   |                        |                        |                       |              |
|        |               | 21                     | 14                     | 14                     | 14                     | 14                     | 15                     | 15                     | 15                     |                        |                        |                       |              |

**Table 7**

**2000 Sydney Olympic Games - 400 m hurdles men**

| Heat 7 |             | 1 <sup>st</sup> h      | 2 <sup>nd</sup> h      | 3 <sup>rd</sup> h      | 4 <sup>th</sup> h      | 5 <sup>th</sup> h      | 6 <sup>th</sup> h      | 7 <sup>th</sup> h      | 8 <sup>th</sup> h      | 9 <sup>th</sup> h      | 10 <sup>th</sup> h     | fin. time             | Differential |
|--------|-------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|--------------|
|        |             | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | tot. time              | un. time              | between the  |
| Lane   | Athlete     | un. time               | un. time               | un. time               | un. time               | un. time               | un. time               | un. time               | un. time               | un. time               | un. time               | n <sup>o</sup> stride | worst & best |
|        |             | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides | n <sup>o</sup> strides |                       | hurdle unit  |
| 1      | Matete S.   | 5"92                   | 9"64                   | 13"52                  | 17"60                  | 21"64                  | 25"80                  | 30"16                  | 34"52                  | 39"04                  | 43"60                  | 48"98                 | 0"84         |
|        |             | 5"92                   | 3"72                   | 3"88                   | 4"08                   | 4"04                   | 4"16                   | 4"36                   | 4"36                   | 4"52                   | 4"56                   | 5"38                  |              |
|        |             | 21                     | 13                     | 13                     | 13                     | 13                     | 13                     | 13                     | 15                     | 15                     | 17,8                   |                       |              |
| 2      | Holubek R.  | 6"04                   | 10"08                  | 14"16                  | 18"36                  | 22"56                  | 26"88                  | 31"36                  | 35"92                  | 40"68                  |                        | 51"18                 |              |
|        |             | 6"04                   | 4"04                   | 4"08                   | 4"20                   | 4"20                   | 4"32                   | 4"48                   | 4"56                   | 4"76                   |                        |                       |              |
|        |             | 22                     | 14                     | 14                     | 14                     | 14                     | 14                     | 14                     | 15                     | 15                     |                        |                       |              |
| 3      | Abou H.     | 6"08                   | 10"08                  | 14"20                  | 18"36                  | 22"76                  | 27"04                  | 31"60                  | 36"04                  | 40"68                  |                        | 50"74                 |              |
|        |             | 6"08                   | 4"00                   | 4"12                   | 4"16                   | 4"40                   | 4"28                   | 4"56                   | 4"44                   | 4"64                   |                        |                       |              |
|        |             | 21                     | 14                     | 14                     | 14                     | 14                     | 14                     | 15                     | 15                     | 15                     |                        |                       |              |
| 4      | Boino M.    | 6"16                   | 10"28                  | 14"52                  | 18"76                  | 23"04                  | 27"52                  | 32"08                  | 36"48                  |                        |                        | 51"38                 |              |
|        |             | 6"16                   | 4"12                   | 4"24                   | 4"24                   | 4"28                   | 4"48                   | 4"56                   | 4"40                   |                        |                        |                       |              |
|        |             | 22                     | 15                     | 15                     | 15                     | 15                     | 15                     | 15                     |                        |                        |                        |                       |              |
| 5      | Gorbenko G. | 6"08                   | 9"88                   | 13"80                  | 17"76                  | 21"76                  | 25"84                  | 30"12                  | 34"48                  | 39"00                  | 43"72                  | 49"12                 | 0"92         |
|        |             | 6"08                   | 3"80                   | 3"92                   | 3"96                   | 4"00                   | 4"08                   | 4"28                   | 4"36                   | 4"52                   | 4"72                   | 5"40                  |              |
|        |             | 20                     | 13                     | 13                     | 13                     | 13                     | 13                     | 13                     | 14                     | 14                     | 17,4                   |                       |              |
| 6      | Tucker P.   | 6"00                   | 9"80                   | 13"76                  | 17"76                  | 21"88                  | 26"04                  | 30"48                  | 35"04                  | 39"92                  |                        | 50"92                 |              |
|        |             | 6"00                   | 3"80                   | 3"96                   | 4"00                   | 4"12                   | 4"16                   | 4"44                   | 4"56                   | 4"88                   |                        |                       |              |
|        |             | 22                     | 14                     | 14                     | 14                     | 14                     | 14                     | 15                     | 15                     | 16                     |                        |                       |              |
| 7      | Thompson K. | 6"08                   | 9"88                   | 13"96                  | 18"04                  | 22"28                  | 26"52                  | 30"96                  | 35"32                  | 39"80                  | 44"52                  | 50"40                 | 0"92         |
|        |             | 6"08                   | 3"80                   | 4"08                   | 4"08                   | 4"24                   | 4"24                   | 4"44                   | 4"36                   | 4"48                   | 4"72                   | 5"88                  |              |
|        |             | 22                     | 14                     | 14                     | 14                     | 14                     | 14                     | 15                     | 15                     | 16                     |                        |                       |              |
| 8      | Douglas M.  | 5"96                   | 9"64                   | 13"56                  | 17"48                  | 21"52                  | 25"80                  | 30"20                  | 34"60                  | 39"28                  | 44"04                  | 49"62                 | 1"04         |
|        |             | 5"96                   | 3"68                   | 3"92                   | 3"92                   | 4"04                   | 4"28                   | 4"40                   | 4"40                   | 4"68                   | 4"72                   | 5"58                  |              |
|        |             | 21                     | 13                     | 13                     | 13                     | 13                     | 14                     | 14                     | 15                     | 15                     | 18,6                   |                       |              |

**Table 8**

**2000 Sydney Olympic Games - 400 m hurdles men**

| Heat 8 |                    | 1 <sup>st</sup> h                               | 2 <sup>nd</sup> h                               | 3 <sup>rd</sup> h                               | 4 <sup>th</sup> h                               | 5 <sup>th</sup> h                               | 6 <sup>th</sup> h                               | 7 <sup>th</sup> h                               | 8 <sup>th</sup> h                               | 9 <sup>th</sup> h                               | 10 <sup>th</sup> h                              | fin. time   | Differential                               |
|--------|--------------------|---|---|---|---|---|---|---|---|---|---|---|--|
| Lane   | Athlete            | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | un. time<br>n <sup>o</sup> strides                | between the<br>worst & best<br>hurdle unit |
| 1      | Tamesue D.         | 5 <sup>''</sup> 78<br>5 <sup>''</sup> 78<br>13  | 9 <sup>''</sup> 38<br>3 <sup>''</sup> 60<br>13  | 13 <sup>''</sup> 14<br>3 <sup>''</sup> 76<br>13 | 16 <sup>''</sup> 98<br>3 <sup>''</sup> 84<br>13 | 20 <sup>''</sup> 98<br>4 <sup>''</sup> 00<br>13 | 25 <sup>''</sup> 18<br>4 <sup>''</sup> 20<br>14 | 29 <sup>''</sup> 66<br>4 <sup>''</sup> 48<br>14 | 34 <sup>''</sup> 30<br>4 <sup>''</sup> 64<br>15 | fallen down<br>17                               |   | 1 <sup>''</sup> 01 <sup>''</sup> 81               |  |
| 2      | Young C.           | 6 <sup>''</sup> 02<br>6 <sup>''</sup> 02<br>21  | 9 <sup>''</sup> 74<br>3 <sup>''</sup> 72<br>13  | 13 <sup>''</sup> 54<br>3 <sup>''</sup> 80<br>13 | 17 <sup>''</sup> 54<br>4 <sup>''</sup> 00<br>13 | 21 <sup>''</sup> 74<br>4 <sup>''</sup> 20<br>13 | 25 <sup>''</sup> 98<br>4 <sup>''</sup> 24<br>14 | 30 <sup>''</sup> 58<br>4 <sup>''</sup> 60<br>15 | 35 <sup>''</sup> 50<br>4 <sup>''</sup> 92<br>15 | 40 <sup>''</sup> 78<br>5 <sup>''</sup> 28<br>16 | 46 <sup>''</sup> 18<br>5 <sup>''</sup> 40<br>16 | 52 <sup>''</sup> 46<br>5 <sup>''</sup> 28         | 1 <sup>''</sup> 68                         |
| 3      | Harnden I.         | 6 <sup>''</sup> 26<br>6 <sup>''</sup> 26<br>21  | 10 <sup>''</sup> 10<br>3 <sup>''</sup> 84<br>13 | 13 <sup>''</sup> 98<br>3 <sup>''</sup> 88<br>13 | 17 <sup>''</sup> 98<br>4 <sup>''</sup> 00<br>13 | 22 <sup>''</sup> 18<br>4 <sup>''</sup> 20<br>13 | 26 <sup>''</sup> 62<br>4 <sup>''</sup> 44<br>14 | 31 <sup>''</sup> 22<br>4 <sup>''</sup> 60<br>14 | 36 <sup>''</sup> 26<br>5 <sup>''</sup> 04<br>15 | 41 <sup>''</sup> 74<br>5 <sup>''</sup> 48<br>16 |   | 54 <sup>''</sup> 01                               |  |
| 4      | Shiryayev V.       | 6 <sup>''</sup> 26<br>6 <sup>''</sup> 26<br>20  | 10 <sup>''</sup> 18<br>3 <sup>''</sup> 92<br>13 | 14 <sup>''</sup> 10<br>3 <sup>''</sup> 92<br>13 | 18 <sup>''</sup> 10<br>4 <sup>''</sup> 00<br>13 | 22 <sup>''</sup> 14<br>4 <sup>''</sup> 04<br>13 | 26 <sup>''</sup> 26<br>4 <sup>''</sup> 12<br>13 | 30 <sup>''</sup> 62<br>4 <sup>''</sup> 36<br>14 | 35 <sup>''</sup> 26<br>4 <sup>''</sup> 80<br>15 | 40 <sup>''</sup> 06<br>4 <sup>''</sup> 40<br>15 | 44 <sup>''</sup> 70<br>4 <sup>''</sup> 64<br>15 | 50 <sup>''</sup> 39<br>5 <sup>''</sup> 69<br>18,2 | 0 <sup>''</sup> 88                         |
| 5      | Monreal I.         | 6 <sup>''</sup> 18<br>6 <sup>''</sup> 16<br>20  | 9 <sup>''</sup> 54<br>3 <sup>''</sup> 76<br>13  | 13 <sup>''</sup> 86<br>3 <sup>''</sup> 92<br>13 | 17 <sup>''</sup> 90<br>4 <sup>''</sup> 04<br>13 | 22 <sup>''</sup> 02<br>4 <sup>''</sup> 12<br>13 | 26 <sup>''</sup> 30<br>4 <sup>''</sup> 28<br>13 | 30 <sup>''</sup> 74<br>4 <sup>''</sup> 44<br>14 | 35 <sup>''</sup> 58<br>4 <sup>''</sup> 84<br>15 | 40 <sup>''</sup> 66<br>5 <sup>''</sup> 08<br>15 | 45 <sup>''</sup> 90<br>5 <sup>''</sup> 24<br>15 | 51 <sup>''</sup> 32<br>5 <sup>''</sup> 42         | 1 <sup>''</sup> 48                         |
| 6      | Frinolli G.        | 6 <sup>''</sup> 06<br>6 <sup>''</sup> 06<br>21  | 9 <sup>''</sup> 82<br>3 <sup>''</sup> 76<br>14  | 13 <sup>''</sup> 78<br>3 <sup>''</sup> 96<br>14 | 17 <sup>''</sup> 70<br>3 <sup>''</sup> 92<br>13 | 21 <sup>''</sup> 78<br>4 <sup>''</sup> 08<br>14 | 25 <sup>''</sup> 94<br>4 <sup>''</sup> 16<br>14 | 30 <sup>''</sup> 26<br>4 <sup>''</sup> 32<br>14 | 34 <sup>''</sup> 86<br>4 <sup>''</sup> 60<br>15 | 39 <sup>''</sup> 78<br>4 <sup>''</sup> 92<br>16 | 44 <sup>''</sup> 66<br>4 <sup>''</sup> 88<br>16 | 50 <sup>''</sup> 27<br>5 <sup>''</sup> 61<br>19,2 | 1 <sup>''</sup> 16                         |
| 7      | Pesa S.            | 6 <sup>''</sup> 06<br>6 <sup>''</sup> 06<br>20  | 9 <sup>''</sup> 82<br>3 <sup>''</sup> 76<br>13  | 13 <sup>''</sup> 70<br>3 <sup>''</sup> 88<br>13 | 17 <sup>''</sup> 62<br>3 <sup>''</sup> 92<br>13 | 21 <sup>''</sup> 74<br>4 <sup>''</sup> 12<br>14 | 25 <sup>''</sup> 98<br>4 <sup>''</sup> 24<br>14 | 30 <sup>''</sup> 38<br>4 <sup>''</sup> 40<br>14 | 35 <sup>''</sup> 18<br>4 <sup>''</sup> 80<br>15 | 40 <sup>''</sup> 26<br>5 <sup>''</sup> 08<br>16 |   | 52 <sup>''</sup> 14                               |  |
| 8      | Nunes de Araujo E. | 6 <sup>''</sup> 06<br>6 <sup>''</sup> 06<br>21  | 9 <sup>''</sup> 86<br>3 <sup>''</sup> 80<br>13  | 13 <sup>''</sup> 62<br>3 <sup>''</sup> 76<br>13 | 17 <sup>''</sup> 58<br>3 <sup>''</sup> 96<br>13 | 21 <sup>''</sup> 62<br>4 <sup>''</sup> 04<br>13 | 25 <sup>''</sup> 86<br>4 <sup>''</sup> 24<br>14 | 30 <sup>''</sup> 18<br>4 <sup>''</sup> 32<br>14 | 34 <sup>''</sup> 82<br>4 <sup>''</sup> 64<br>15 | 39 <sup>''</sup> 62<br>4 <sup>''</sup> 80<br>15 | 44 <sup>''</sup> 42<br>4 <sup>''</sup> 80<br>15 | 50 <sup>''</sup> 06<br>5 <sup>''</sup> 64<br>17,9 | 1 <sup>''</sup> 04                         |

**Table 9**

**2000 Sydney Olympic Games - 400 m hurdles men**

| Semi-final 1 |                | 1 <sup>st</sup> h                               | 2 <sup>nd</sup> h                               | 3 <sup>rd</sup> h                               | 4 <sup>th</sup> h                               | 5 <sup>th</sup> h                               | Time & position after 200 m         | 6 <sup>th</sup> h                               | 7 <sup>th</sup> h                               | 8 <sup>th</sup> h                               | 9 <sup>th</sup> h                               | 10 <sup>th</sup> h                              | fin. time   | Fin. Position & differential (final time - 200 m time) | Differential between the worst & best hurdle unit |
|--------------|----------------|---|---|---|---|---|-------------------------------------|---|---|---|---|---|---|--|---|
| Lane         | Athlete        | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides |                                     | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | tot. time<br>un. time<br>n <sup>o</sup> strides | un. time<br>n <sup>o</sup> strides                |  |   |
| 1            | Ridrigues P.   | 6 <sup>''</sup> 06<br>3 <sup>''</sup> 92<br>21  | 9 <sup>''</sup> 98<br>3 <sup>''</sup> 92<br>13  | 13 <sup>''</sup> 98<br>4 <sup>''</sup><br>13    | 17 <sup>''</sup> 98<br>4 <sup>''</sup><br>13    | 21 <sup>''</sup> 98<br>4 <sup>''</sup><br>13    | 23 <sup>''</sup> 5 8 <sup>''</sup>  | 26 <sup>''</sup> 02<br>4 <sup>''</sup> 04<br>13 | 30 <sup>''</sup> 38<br>4 <sup>''</sup> 36<br>14 | 34 <sup>''</sup> 86<br>4 <sup>''</sup> 48<br>14 | 39 <sup>''</sup> 42<br>4 <sup>''</sup> 56<br>15 | 44 <sup>''</sup> 10<br>4 <sup>''</sup> 68<br>15 | 49 <sup>''</sup> 48<br>5 <sup>''</sup> 38         | 7 <sup>''</sup><br>2 <sup>''</sup> 48                  | 0 <sup>''</sup> 76                                |
| 2            | Thomas E.      | 6 <sup>''</sup> 02<br>6 <sup>''</sup> 02<br>21  | 9 <sup>''</sup> 86<br>3 <sup>''</sup> 84<br>13  | 13 <sup>''</sup> 74<br>3 <sup>''</sup> 88<br>13 | 17 <sup>''</sup> 62<br>3 <sup>''</sup> 88<br>13 | 21 <sup>''</sup> 58<br>3 <sup>''</sup> 96<br>13 | 23 <sup>''</sup> 14 4 <sup>''</sup> | 25 <sup>''</sup> 66<br>4 <sup>''</sup> 08<br>13 | 30 <sup>''</sup> 04<br>4 <sup>''</sup> 40<br>14 | 34 <sup>''</sup> 42<br>4 <sup>''</sup> 46<br>15 | 39 <sup>''</sup> 02<br>4 <sup>''</sup> 60<br>15 | 43 <sup>''</sup> 74<br>4 <sup>''</sup> 72<br>15 | 49 <sup>''</sup> 25<br>5 <sup>''</sup> 51<br>17,8 | 5 <sup>''</sup><br>2 <sup>''</sup> 97                  | 0 <sup>''</sup> 88                                |
| 3            | Goller T.      | 5 <sup>''</sup> 90<br>5 <sup>''</sup> 90<br>21  | 9 <sup>''</sup> 58<br>3 <sup>''</sup> 92<br>13  | 13 <sup>''</sup> 50<br>3 <sup>''</sup> 92<br>13 | 17 <sup>''</sup> 42<br>3 <sup>''</sup> 96<br>13 | 21 <sup>''</sup> 38<br>3 <sup>''</sup> 96<br>13 | 22 <sup>''</sup> 90 1 <sup>''</sup> | 25 <sup>''</sup> 50<br>4 <sup>''</sup> 12<br>13 | 29 <sup>''</sup> 82<br>4 <sup>''</sup> 32<br>14 | 34 <sup>''</sup> 30<br>4 <sup>''</sup> 58<br>15 | 38 <sup>''</sup> 94<br>4 <sup>''</sup> 64<br>15 | 43 <sup>''</sup> 66<br>4 <sup>''</sup> 72<br>15 | 49 <sup>''</sup> 28<br>5 <sup>''</sup> 64<br>18   | 6 <sup>''</sup><br>3 <sup>''</sup> 48                  | 1 <sup>''</sup> 04                                |
| 4            | Mori F.        | 6 <sup>''</sup> 14<br>6 <sup>''</sup> 14<br>22  | 10 <sup>''</sup> 10<br>3 <sup>''</sup> 96<br>14 | 13 <sup>''</sup> 90<br>3 <sup>''</sup> 8<br>14  | 17 <sup>''</sup> 82<br>3 <sup>''</sup> 92<br>14 | 21 <sup>''</sup> 82<br>4 <sup>''</sup><br>14    | 23 <sup>''</sup> 42 6 <sup>''</sup> | 25 <sup>''</sup> 98<br>4 <sup>''</sup> 16<br>14 | 30 <sup>''</sup> 14<br>4 <sup>''</sup> 16<br>14 | 34 <sup>''</sup> 50<br>4 <sup>''</sup> 36<br>15 | 38 <sup>''</sup> 90<br>4 <sup>''</sup> 40<br>15 | 43 <sup>''</sup> 34<br>4 <sup>''</sup> 44<br>15 | 48 <sup>''</sup> 40<br>5 <sup>''</sup> 06<br>19   | 2 <sup>''</sup><br>1 <sup>''</sup> 56                  | 0 <sup>''</sup> 64                                |
| 5            | Gorbenko G.    | 5 <sup>''</sup> 94<br>5 <sup>''</sup> 94<br>21  | 9 <sup>''</sup> 86<br>3 <sup>''</sup> 84<br>13  | 13 <sup>''</sup> 70<br>3 <sup>''</sup> 84<br>13 | 17 <sup>''</sup> 62<br>3 <sup>''</sup> 92<br>13 | 21 <sup>''</sup> 62<br>4 <sup>''</sup><br>13    | 23 <sup>''</sup> 10 3 <sup>''</sup> | 25 <sup>''</sup> 82<br>4 <sup>''</sup><br>13    | 29 <sup>''</sup> 66<br>4 <sup>''</sup> 04<br>13 | 34 <sup>''</sup> 10<br>4 <sup>''</sup> 44<br>14 | 38 <sup>''</sup> 50<br>4 <sup>''</sup> 40<br>14 | 43 <sup>''</sup> 18<br>4 <sup>''</sup> 68<br>14 | 48 <sup>''</sup> 40<br>5 <sup>''</sup> 22<br>17,4 | 3 <sup>''</sup><br>2 <sup>''</sup> 20                  | 0 <sup>''</sup> 84                                |
| 6            | Al-Somaily H.  | 5 <sup>''</sup> 94<br>5 <sup>''</sup> 94<br>21  | 9 <sup>''</sup> 74<br>3 <sup>''</sup> 8<br>13   | 13 <sup>''</sup> 58<br>3 <sup>''</sup> 84<br>13 | 17 <sup>''</sup> 46<br>3 <sup>''</sup> 88<br>13 | 21 <sup>''</sup> 42<br>3 <sup>''</sup> 96<br>13 | 22 <sup>''</sup> 94 2 <sup>''</sup> | 25 <sup>''</sup> 50<br>4 <sup>''</sup> 08<br>13 | 29 <sup>''</sup> 62<br>4 <sup>''</sup> 12<br>13 | 33 <sup>''</sup> 94<br>4 <sup>''</sup> 32<br>13 | 38 <sup>''</sup> 30<br>4 <sup>''</sup> 36<br>13 | 42 <sup>''</sup> 82<br>4 <sup>''</sup> 52<br>13 | 48 <sup>''</sup> 14<br>5 <sup>''</sup> 32<br>17   | 1 <sup>''</sup><br>2 <sup>''</sup> 26                  | 0 <sup>''</sup> 72                                |
| 7            | Januszewski P. | 6 <sup>''</sup> 02<br>6 <sup>''</sup> 02<br>22  | 9 <sup>''</sup> 86<br>3 <sup>''</sup> 84<br>14  | 13 <sup>''</sup> 70<br>3 <sup>''</sup> 84<br>14 | 17 <sup>''</sup> 62<br>3 <sup>''</sup> 92<br>14 | 21 <sup>''</sup> 58<br>3 <sup>''</sup> 96<br>14 | 23 <sup>''</sup> 14 4 <sup>''</sup> | 25 <sup>''</sup> 70<br>4 <sup>''</sup> 12<br>14 | 29 <sup>''</sup> 94<br>4 <sup>''</sup> 24<br>14 | 34 <sup>''</sup> 26<br>4 <sup>''</sup> 32<br>15 | 38 <sup>''</sup> 66<br>4 <sup>''</sup> 40<br>15 | 43 <sup>''</sup> 22<br>4 <sup>''</sup> 56<br>15 | 48 <sup>''</sup> 42<br>5 <sup>''</sup> 20<br>18,2 | 4 <sup>''</sup><br>2 <sup>''</sup> 14                  | 0 <sup>''</sup> 72                                |
| 8            | Chen T.        | 5 <sup>''</sup> 98<br>5 <sup>''</sup> 98<br>22  | 9 <sup>''</sup> 82<br>3 <sup>''</sup> 8<br>14   | 13 <sup>''</sup> 82<br>4 <sup>''</sup><br>14    | 17 <sup>''</sup> 82<br>4 <sup>''</sup><br>14    | 21 <sup>''</sup> 86<br>4 <sup>''</sup> 04<br>14 | 23 <sup>''</sup> 42 6 <sup>''</sup> | 25 <sup>''</sup> 98<br>4 <sup>''</sup> 12<br>14 | 30 <sup>''</sup> 38<br>4 <sup>''</sup> 40<br>14 | 34 <sup>''</sup> 86<br>4 <sup>''</sup> 48<br>15 | 39 <sup>''</sup> 46<br>4 <sup>''</sup> 60<br>15 | 50 <sup>''</sup> 52                             | 8 <sup>''</sup><br>3 <sup>''</sup> 68             |  |   |

**Table 10**

**2000 Sydney Olympic Games - 400 m hurdles men**

| Semi-final 2 |               | 1 <sup>st</sup> h                  | 2 <sup>nd</sup> h                  | 3 <sup>rd</sup> h                  | 4 <sup>th</sup> h                  | 5 <sup>th</sup> h                  | Time & position after 200 m | 6 <sup>th</sup> h                  | 7 <sup>th</sup> h                  | 8 <sup>th</sup> h                  | 9 <sup>th</sup> h                  | 10 <sup>th</sup> h                 | fin. time             | Fin. Position & differential (final time - 200 m time) | Differential between the worst & best hurdle unit |
|--------------|---------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------|--|---|
| Lane         | Athlete       | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides |                             | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | un. time<br>n°strides |  |   |
| 1            | Sanchez F.    | 6'00<br>6'00<br>6'00               | 9'68<br>3'68<br>13                 | 13'48<br>3'8<br>13                 | 17'44<br>3'96<br>13                | 21'52<br>4'08<br>13                | 23'12 4°                    | 25'80<br>4'28<br>13                | 30'20<br>4'4<br>14                 | 34'76<br>4'56<br>14                | 39'44<br>4'68<br>15                | 44'16<br>4'72<br>15                | 49'69<br>5'53         | 7°<br>3'45   | 1'04  |
| 2            | Frinolfi G.   | 6'08<br>6'08<br>6'08               | 9'88<br>3'8<br>14                  | 13'84<br>3'96<br>14                | 17'84<br>4'00<br>14                | 21'92<br>4'08<br>14                | 8°                          | 26'08<br>4'16<br>14                | 30'52<br>4'44<br>15                | 35'04<br>4'52<br>15                | 39'72<br>4'68<br>16                | 44'48<br>4'76<br>15                | 50'10<br>5'62         | 8°   | 0'96  |
| 3            | Taylor A.     | 5'84<br>5'84<br>5'84               | 9'60<br>3'76<br>13                 | 13'48<br>3'88<br>13                | 17'36<br>3'88<br>13                | 21'28<br>3'92<br>13                | 22'8 2°                     | 25'32<br>4'04<br>13                | 29'60<br>4'28<br>14                | 34'04<br>4'44<br>14                | 38'52<br>4'48<br>14                | 43'12<br>4'6<br>14                 | 48'49<br>5'37<br>17.4 | 2°<br>2'89   | 0'84  |
| 4            | Herbert L.    | 5'96<br>5'96<br>5'96               | 9'80<br>3'84<br>13                 | 13'8<br>4'00<br>13                 | 17'72<br>3'92<br>13                | 21'72<br>4'00<br>14                | 23'28 6°                    | 25'80<br>4'08<br>14                | 29'96<br>4'16<br>14                | 34'16<br>4'20<br>15                | 38'56<br>4'4<br>15                 | 43'12<br>4'58<br>15                | 48'38<br>5'26<br>18.2 | 1°<br>1'82   | 0'72  |
| 5            | Muzik J.      | 5'96<br>5'96<br>5'96               | 9'88<br>3'92<br>13                 | 13'72<br>3'84<br>13                | 17'64<br>3'92<br>13                | 21'76<br>4'12<br>14                | 23'36 7°                    | 25'96<br>4'2<br>14                 | 30'24<br>4'28<br>14                | 34'68<br>4'44<br>15                | 39'20<br>4'52<br>15                | 43'92<br>4'72<br>15                | 49'23<br>5'31<br>19.2 | 5°<br>2'51   | 0'88  |
| 6            | Rawlinson C.  | 6'00<br>6'00<br>6'00               | 9'76<br>3'76<br>14                 | 13'56<br>3'80<br>14                | 17'40<br>3'84<br>14                | 21'36<br>3'96<br>14                | 22'88 3°                    | 25'48<br>4'12<br>14                | 29'80<br>4'32<br>15                | 34'24<br>4'44<br>15                | 38'92<br>4'68<br>15                | 43'76<br>4'84<br>16                | 49'25<br>5'49<br>19   | 6°<br>3'49   | 1'08  |
| 7            | Mashchenko R. | 5'88<br>5'88<br>5'88               | 9'72<br>3'84<br>13                 | 13'44<br>3'72<br>13                | 17'24<br>3'80<br>13                | 21'12<br>3'88<br>13                | 22'64 1°                    | 25'16<br>4'04<br>13                | 29'40<br>4'24<br>14                | 33'80<br>4'4<br>15                 | 38'40<br>4'6<br>15                 | 43'16<br>4'76<br>15                | 48'94<br>5'78<br>18.6 | 3°<br>3'66   | 1'04  |
| 8            | Young B.      | 6'12<br>6'12<br>6'12               | 9'96<br>3'84<br>13                 | 13'84<br>3'88<br>13                | 17'88<br>3'84<br>13                | 21'60<br>3'92<br>13                | 23'24 5°                    | 25'84<br>4'24<br>14                | 30'16<br>4'32<br>14                | 34'60<br>4'44<br>15                | 39'24<br>4'64<br>15                |                                    | 49'20                 | 4°<br>2'72   |   |

**Table 11**

**2000 Sydney Olympic Games - 400 m hurdles men**

| Semi-final 3 |            | 1 <sup>st</sup> h                  | 2 <sup>nd</sup> h                  | 3 <sup>rd</sup> h                  | 4 <sup>th</sup> h                  | 5 <sup>th</sup> h                  | Time & position after 200 m | 6 <sup>th</sup> h                  | 7 <sup>th</sup> h                  | 8 <sup>th</sup> h                  | 9 <sup>th</sup> h                  | 10 <sup>th</sup> h                 | fin. time             | Fin. Position & differential (final time - 200 m time) | Differential between the worst & best hurdle unit |
|--------------|------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------|--|---|
| Lane         | Athlete    | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides |                             | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | un. time<br>n°strides |  |   |
| 1            | Myburgh A. | 5'78<br>5'78<br>22                 | 9'50<br>3'72<br>14                 | 13'34<br>3'84<br>14                | 17'26<br>3'92<br>14                | 21'22<br>3'96<br>14                | 22'74 4°                    | 25'26<br>4'04<br>14                | 29'50<br>4'24<br>14                | 34'06<br>4'56<br>15                | 38'74<br>4'68<br>15                | 43'58<br>4'84<br>15                | 49'25<br>5'67<br>19   | 4°<br>3'77   | 1'12  |
| 2            | Morgan D.  | 5'86<br>5'86<br>22                 | 9'54<br>3'68<br>14                 | 13'34<br>3'8<br>14                 | 17'30<br>3'96<br>14                | 21'42<br>4'12<br>14                | 23'02 5°                    | 25'70<br>4'28<br>14                | 30'02<br>4'32<br>15                | 34'70<br>4'68<br>15                | 39'46<br>4'76<br>15                | 44'42<br>4'96<br>16                | 50'23<br>5'81<br>19   | 7°<br>4'19   | 1'28  |
| 3            | Carter J.  | 5'70<br>5'70<br>21                 | 9'46<br>3'76<br>13                 | 13'14<br>3'68<br>13                | 16'90<br>3'76<br>13                | 20'86<br>3'96<br>13                | 22'38 1°                    | 24'90<br>4'04<br>13                | 29'14<br>4'24<br>14                | 33'54<br>4'4<br>14                 | 38'10<br>4'56<br>14                | 42'96<br>4'86<br>15                | 48'48<br>5'52<br>18   | 1°<br>3'72   | 1'18  |
| 4            | Araujo E.  | 5'94<br>5'94<br>21                 | 9'62<br>3'68<br>13                 | 13'34<br>3'72<br>13                | 17'18<br>3'84<br>13                | 21'18<br>4°                        | 22'70 3°                    | 25'26<br>4'08<br>13                | 29'46<br>4'2<br>14                 | 33'98<br>4'52<br>14                | 38'58<br>4'6<br>14                 | 43'94<br>4'76<br>14                | 48'76<br>5'42<br>17.8 | 2°<br>3'36   | 1'08  |
| 5            | Gorban B.  | 5'94<br>5'94<br>20                 | 9'74<br>3'8<br>13                  | 13'66<br>3'92<br>13                | 17'62<br>3'96<br>13                | 21'66<br>4'04<br>13                | 23'18 6°                    | 25'74<br>4'08<br>13                | 30'02<br>4'28<br>14                | 34'54<br>4'52<br>14                | 39'14<br>4'6<br>14                 | 43'86<br>4'72<br>14                | 49'29<br>5'43<br>17.5 | 5°<br>2'98   | 0'92  |
| 6            | Metete S.  | 6'06<br>6'06<br>21                 | 9'82<br>3'76<br>13                 | 13'70<br>3'88<br>13                | 17'66<br>3'96<br>13                | 21'66<br>4°                        | 23'18 6°                    | 25'74<br>4'08<br>13                | 29'98<br>4'24<br>13                | 34'38<br>4'4<br>13                 | 38'90<br>4'52<br>15                | 43'50<br>4'6<br>15                 | 48'98<br>5'48<br>18   | 3°<br>2'62   | 0'84  |
| 7            | Keter E.   | 6'14<br>6'14<br>21                 | 9'90<br>3'76<br>13                 | 13'70<br>3'8<br>13                 | 17'70<br>4°                        | 21'98<br>4'28                      | 8°                          | 26'26<br>4'28<br>15                | 30'74<br>4'48<br>15                | 35'34<br>4'6<br>15                 |                                    |                                    | 51'25                 | 8°   |   |
| 8            | Douglas M. | 5'86<br>5'86<br>21                 | 9'50<br>3'64<br>13                 | 13'22<br>3'72<br>13                | 16'98<br>3'76<br>13                | 20'90<br>3'92<br>13                | 22'50 2°                    | 24'98<br>4'08<br>14                | 29'34<br>4'36<br>14                | 33'86<br>4'52<br>15                | 38'62<br>4'76<br>15                | 43'62<br>5°                        | 49'53<br>5'91<br>19.5 | 6°<br>4'53   | 1'36  |



**Table 12**

**2000 Sydney Olympic Games - 400 m hurdles men**

| Final | Lane | Athlete        | 1 <sup>st</sup> h                  | 2 <sup>nd</sup> h                  | 3 <sup>rd</sup> h                  | 4 <sup>th</sup> h                  | 5 <sup>th</sup> h                  | Time & position after 200 m | 6 <sup>th</sup> h                  | 7 <sup>th</sup> h                  | 8 <sup>th</sup> h                  | 9 <sup>th</sup> h                  | 10 <sup>th</sup> h                 | fin. time | Fin. Position & differential (final time - 200 m time) | Differential between the worst & best hurdle unit |
|-------|------|----------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------|--|---|
|       |      |                | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides |                             | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides | tot. time<br>un. time<br>n°strides |           |  |   |
| 1     |      | Taylor A.      | 5:90                               | 9:62                               | 13:38                              | 17:22                              | 21:14                              | 22:66 4 <sup>a</sup>        | 25:10                              | 29:22                              | 33:58                              | 38:02                              | 42:46                              | 47:50     | 1 <sup>a</sup>   | 0:72  |
|       |      |                | 5:90                               | 3:72                               | 3:76                               | 3:84                               | 3:92                               |                             | 3:96                               | 4:12                               | 4:36                               | 4:44                               | 4:44                               |           |  |   |
| 2     |      | Januszewsky P. | 5:98                               | 9:86                               | 13:66                              | 17:50                              | 21:46                              | 22:94 6 <sup>a</sup>        | 25:62                              | 29:82                              | 34:10                              | 38:66                              | 43:18                              | 48:44     | 6 <sup>a</sup>   | 0:76  |
|       |      |                | 5:98                               | 3:88                               | 3:80                               | 3:84                               | 3:96                               |                             | 4:16                               | 4:20                               | 4:28                               | 4:58                               | 4:52                               |           |  |   |
| 3     |      | Mori F.        | 6:10                               | 9:94                               | 13:66                              | 17:46                              | 21:46                              | 22:90 5 <sup>a</sup>        | 25:54                              | 29:70                              | 34:06                              | 38:54                              | 43:22                              | 48:78     | 7 <sup>a</sup>   | 0:96  |
|       |      |                | 6:10                               | 3:84                               | 3:72                               | 3:80                               | 4:00                               |                             | 4:08                               | 4:16                               | 4:36                               | 4:48                               | 4:68                               |           |  |   |
| 4     |      | Al-Somaily H.  | 5:94                               | 9:66                               | 13:42                              | 17:26                              | 21:14                              | 22:62 2 <sup>a</sup>        | 25:14                              | 29:18                              | 33:38                              | 37:82                              | 42:34                              | 47:53     | 2 <sup>a</sup>   | 0:8   |
|       |      |                | 5:94                               | 3:72                               | 3:76                               | 3:84                               | 3:88                               |                             | 4:00                               | 4:04                               | 4:20                               | 4:44                               | 4:52                               |           |  |   |
| 5     |      | Carter J.      | 5:78                               | 9:50                               | 13:26                              | 17:10                              | 21:06                              | 22:58 1 <sup>a</sup>        | 25:14                              | 29:26                              | 33:62                              | 38:02                              | 42:62                              | 48:04     | 4 <sup>a</sup>   | 0:88  |
|       |      |                | 5:78                               | 3:72                               | 3:76                               | 3:84                               | 3:96                               |                             | 4:08                               | 4:12                               | 4:36                               | 4:40                               | 4:60                               |           |  |   |
| 6     |      | Herbert L.     | 5:98                               | 9:78                               | 13:62                              | 17:50                              | 21:46                              | 22:98 7 <sup>a</sup>        | 25:50                              | 29:54                              | 33:70                              | 38:06                              | 42:54                              | 47:81     | 3 <sup>a</sup>   | 0:68  |
|       |      |                | 5:98                               | 3:80                               | 3:84                               | 3:88                               | 3:96                               |                             | 4:04                               | 4:04                               | 4:16                               | 4:36                               | 4:48                               |           |  |   |
| 7     |      | Gorbenko G.    | 8:26                               | 10:02                              | 13:90                              | 17:70                              | 21:70                              | 23:18 8 <sup>a</sup>        | 25:70                              | 29:90                              | 34:34                              | 38:90                              | 43:58                              | 49:01     | 8 <sup>a</sup>   | 0:96  |
|       |      |                | 6:26                               | 3:76                               | 3:88                               | 3:80                               | 4:00                               |                             | 4:00                               | 4:20                               | 4:44                               | 4:56                               | 4:68                               |           |  |   |
| 8     |      | De Araujo E.   | 5:98                               | 9:66                               | 13:38                              | 17:14                              | 21:06                              | 22:62 2 <sup>a</sup>        | 25:10                              | 29:38                              | 33:78                              | 38:26                              | 43:94                              | 48:34     | 5 <sup>a</sup>   | 1 <sup>a</sup>                                    |
|       |      |                | 5:98                               | 3:68                               | 3:72                               | 3:76                               | 3:92                               |                             | 4:04                               | 4:28                               | 4:40                               | 4:48                               | 4:68                               |           |  |   |
|       |      |                | 21                                 | 13                                 | 13                                 | 13                                 | 13                                 |                             | 13                                 | 14                                 | 14                                 | 14                                 | 14                                 | 17,1      |  |   |

**Table 13. Comparison of positions after the 5<sup>th</sup> hurdle, the 8<sup>th</sup> hurdle and at the finish line in the eight heats.**

| Heat 1 |                        |                        |               | Heat 2 |                        |                        |               | Heat 3   |                        |                        |               |
|--------|------------------------|------------------------|---------------|--------|------------------------|------------------------|---------------|--|------------------------|------------------------|---------------|
| lane   | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos | lane   | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos | lane   | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos |
| 1      |                        |                        |               | 1      | 3                      | 5                      | 7             | 1  |                        |                        |               |
| 2      | 3                      | 5                      | 7             | 2      | 6                      | 4                      | 5             | 2  | 4                      | 5                      | 7             |
| 3      | 2                      | 2                      | 3             | 3      | 8                      | 7                      | 6             | 3  | 5                      | 6                      | 6             |
| 4      | 5                      | 4                      | 4             | 4      | 1                      | 1                      | 3             | 4  | 2                      | 3                      | 3             |
| 5      | 6                      | 7                      | 5             | 5      | 6                      | 3                      | 1             | 5  | 6                      | 7                      | 5             |
| 6      | 7                      | 6                      | 6             | 6      | 5                      | 8                      | 4             | 6  | 2                      | 2                      | 2             |
| 7      | 1                      | 1                      | 2             | 7      | 3                      | 6                      | 8             | 7  | 7                      | 4                      | 4             |
| 8      | 4                      | 3                      | 1             | 8      | 2                      | 2                      | 2             | 8  | 1                      | 1                      | 1             |
| Heat 4 |                        |                        |               | Heat 5 |                        |                        |               | Heat 6   |                        |                        |               |
| lane   | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos | lane   | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos | lane   | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos |
| 1      | 4                      | 2                      | 3             | 1      | 4                      | 6                      | 6             | 1  | 1                      | 1                      | 1             |
| 2      | 8                      | 7                      | 6             | 2      | 2                      | 2                      | 2             | 2  | 2                      | 7                      | 8             |
| 3      | 5                      | 6                      | 7             | 3      | 1                      | 1                      | 1             | 3  | 5                      | 7                      | 6             |
| 4      | 1                      | 1                      | 4             | 4      | 4                      | 3                      | 5             | 4  | 3                      | 4                      | 5             |
| 5      | 7                      | 8                      | 8             | 5      | 7                      | 5                      | 4             | 5  | 6                      | 4                      | 4             |
| 6      | 2                      | 3                      | 2             | 6      | 3                      | 6                      | 7             | 6  | 4                      | 3                      | 3             |
| 7      | 5                      | 5                      | 5             | 7      | 4                      | 4                      | 3             | 7  | 2                      | 2                      | 2             |
| 8      | 3                      | 4                      | 1             | 8      | 8                      | 8                      | 8             | 8  | 8                      | 8                      | 7             |
| Heat 7 |                        |                        |               | Heat 8 |                        |                        |               | Correlation: position after the 5 <sup>th</sup> h. vs pos. at the finish line<br>$r_s = 0.5145$ $p < 0.0001$<br><br>Correlation: position after the 8 <sup>th</sup> h. vs pos. at the finish line<br>$r_s = 0.7277$ $p < 0.0001$ |                        |                        |               |
| lane   | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos | lane   | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos |  |                        |                        |               |
| 1      | 2                      | 2                      | 1             | 1      | 1                      | 1                      | 8             |  |                        |                        |               |
| 2      | 6                      | 6                      | 7             | 2      | 3                      | 6                      | 6             |  |                        |                        |               |
| 3      | 7                      | 7                      | 5             | 3      | 8                      | 8                      | 7             |  |                        |                        |               |
| 4      | 8                      | 8                      | 8             | 4      | 7                      | 5                      | 3             |  |                        |                        |               |
| 5      | 3                      | 1                      | 2             | 5      | 6                      | 7                      | 4             |  |                        |                        |               |
| 6      | 4                      | 4                      | 6             | 6      | 5                      | 3                      | 2             |  |                        |                        |               |
| 7      | 5                      | 5                      | 4             | 7      | 3                      | 4                      | 5             |  |                        |                        |               |
| 8      | 1                      | 3                      | 3             | 8      | 2                      | 2                      | 1             |  |                        |                        |               |

Table 14. Comparison of positions after the 5<sup>th</sup> hurdle, the 8<sup>th</sup> hurdle and at the finish line in the three semi-finals.

| Semi-final 1 |                        |                        |                | Semi-final 2 |                        |                        |                |
|--------------|------------------------|------------------------|----------------|--------------|------------------------|------------------------|----------------|
| lane         | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos. | lane         | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos. |
| 1            | 8                      | 7                      | 7              | 1            | 4                      | 7                      | 7              |
| 2            | 3                      | 5                      | 5              | 2            | 8                      | 8                      | 8              |
| 3            | 1                      | 4                      | 6              | 3            | 2                      | 2                      | 2              |
| 4            | 6                      | 6                      | 2              | 4            | 6                      | 3                      | 1              |
| 5            | 5                      | 2                      | 3              | 5            | 7                      | 6                      | 5              |
| 6            | 2                      | 1                      | 1              | 6            | 3                      | 4                      | 6              |
| 7            | 3                      | 3                      | 4              | 7            | 1                      | 1                      | 3              |
| 8            | 7                      | 7                      | 8              | 8            | 5                      | 5                      | 4              |

| Semi-final 3 |                        |                        |                |
|--------------|------------------------|------------------------|----------------|
| lane         | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos. |
| 1            | 4                      | 4                      | 4              |
| 2            | 5                      | 7                      | 7              |
| 3            | 1                      | 1                      | 1              |
| 4            | 3                      | 3                      | 2              |
| 5            | 6                      | 6                      | 5              |
| 6            | 7                      | 5                      | 3              |
| 7            | 8                      | 8                      | 8              |
| 8            | 2                      | 2                      | 6              |

Correlation:  
position after the 5<sup>th</sup> h. vs pos. at the finish line  
 $r_s = 0.4421$   $p < 0.0305$

Correlation:  
position after the 8<sup>th</sup> h. vs pos. at the finish line  
 $r_s = 0.7664$   $p < 0.0001$

Table 15. Comparison of positions after the 5<sup>th</sup> hurdle, the 8<sup>th</sup> hurdle and at the finish line in the finals.

| Final |                        |                        |                |
|-------|------------------------|------------------------|----------------|
| lane  | pos. 5 <sup>th</sup> h | pos. 8 <sup>th</sup> h | fin. line pos. |
| 1     | 3                      | 2                      | 1              |
| 2     | 5                      | 7                      | 6              |
| 3     | 5                      | 6                      | 7              |
| 4     | 3                      | 1                      | 2              |
| 5     | 1                      | 3                      | 4              |
| 6     | 5                      | 4                      | 3              |
| 7     | 8                      | 8                      | 8              |
| 8     | 1                      | 5                      | 5              |

Correlation: position after the 5<sup>th</sup> h. vs pos. **at the** finish line  $r_s = 0.5436$   $p < 0.1710$

Correlation: position after the 8<sup>th</sup> h. vs pos. **at the** finish line  $r_s = 0.9286$   $p < 0.0022$

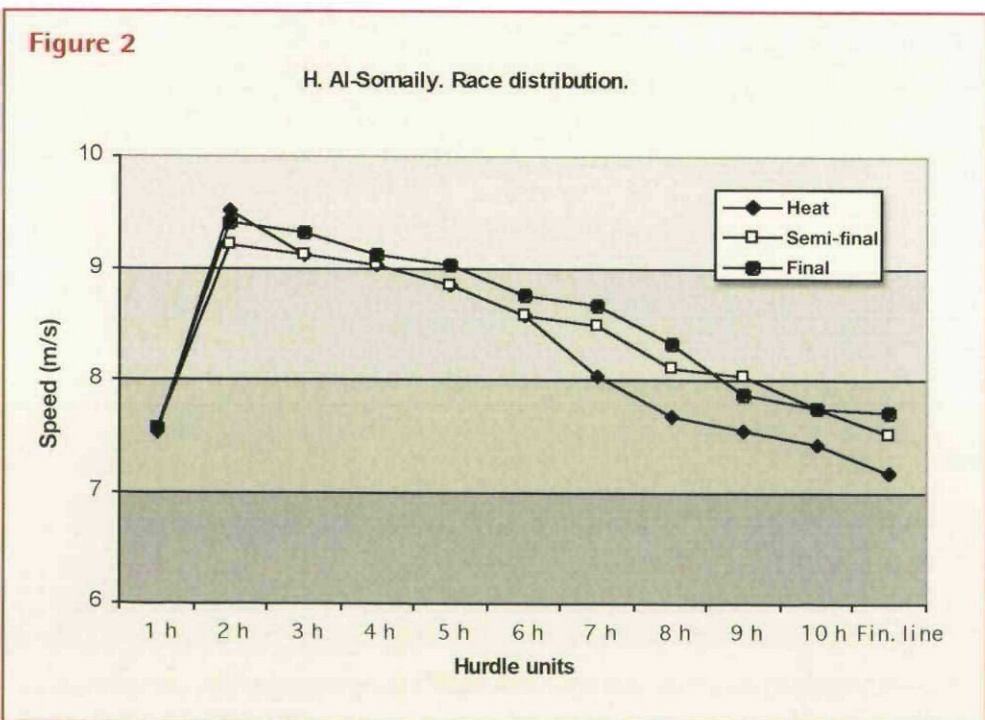
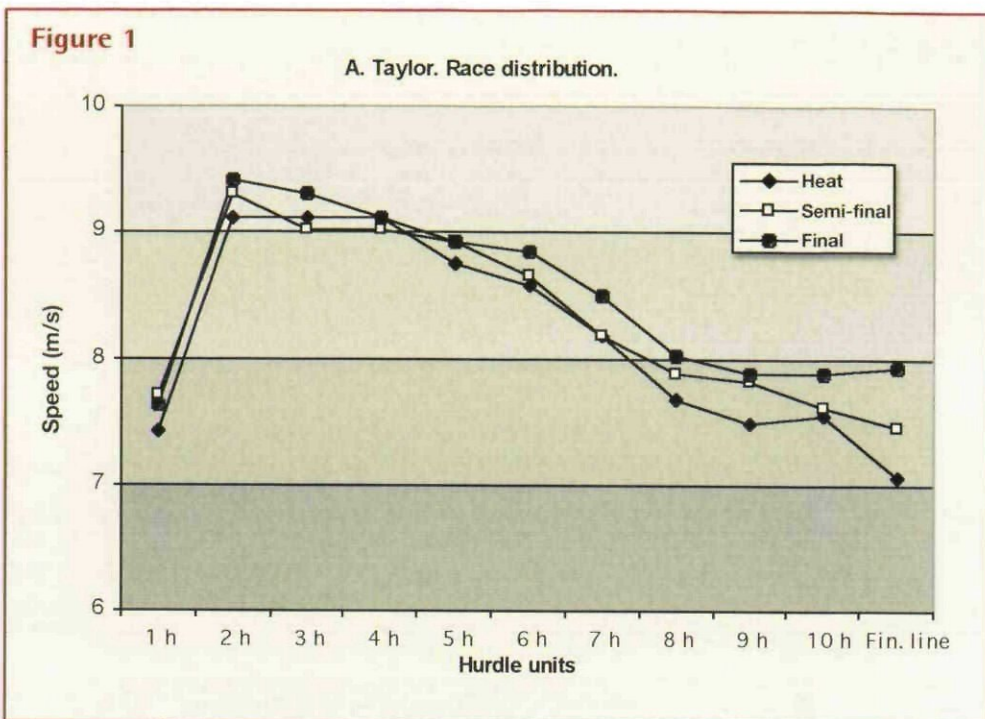


Figure 3

L. Herbert. Race distribution.

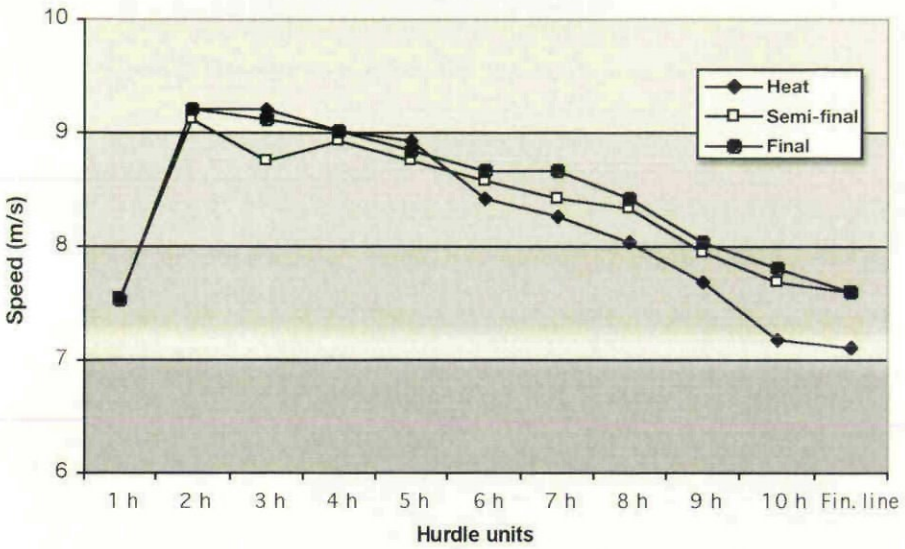
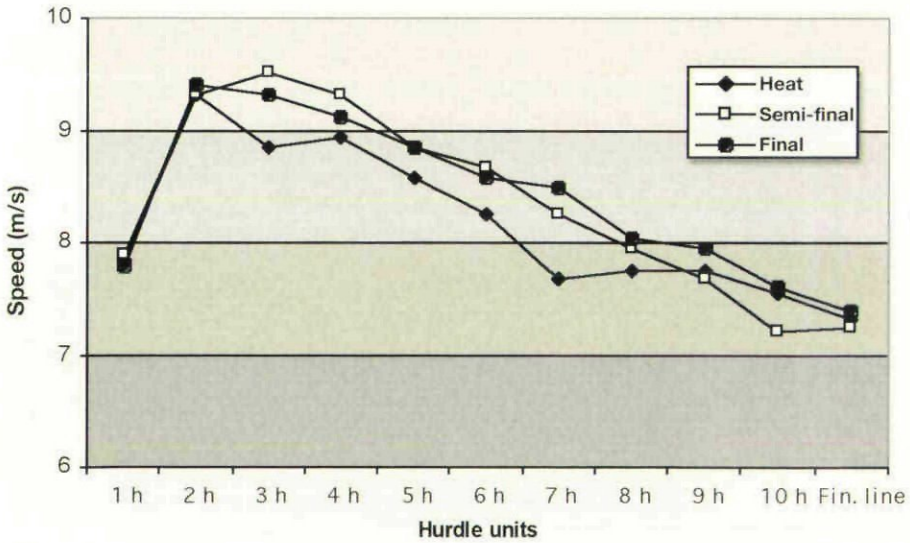


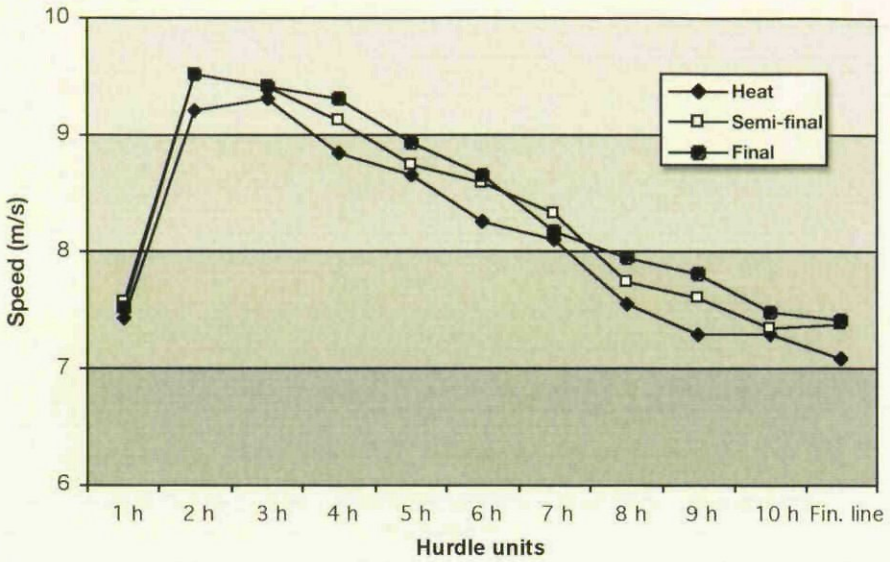
Figure 4

J. Carter. Race distribution.



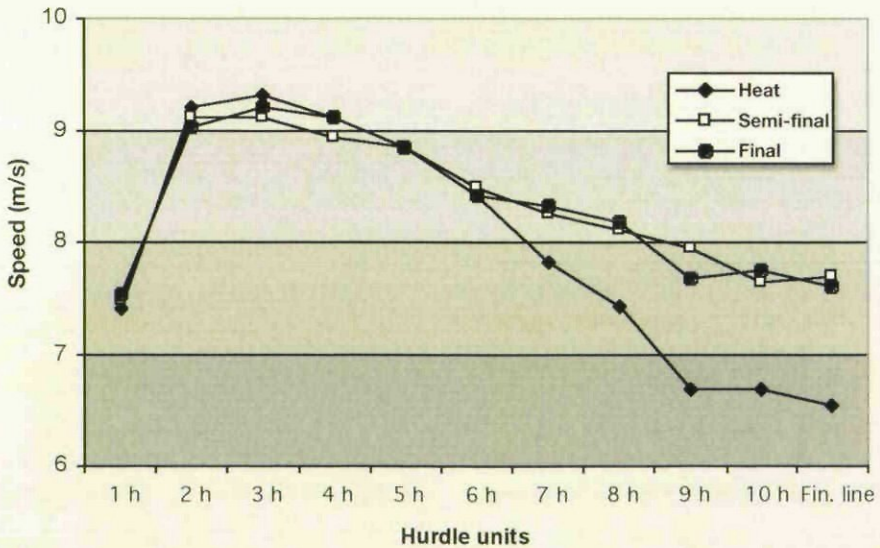
**Figure 5**

**E. De-Araujo. Race distribution.**



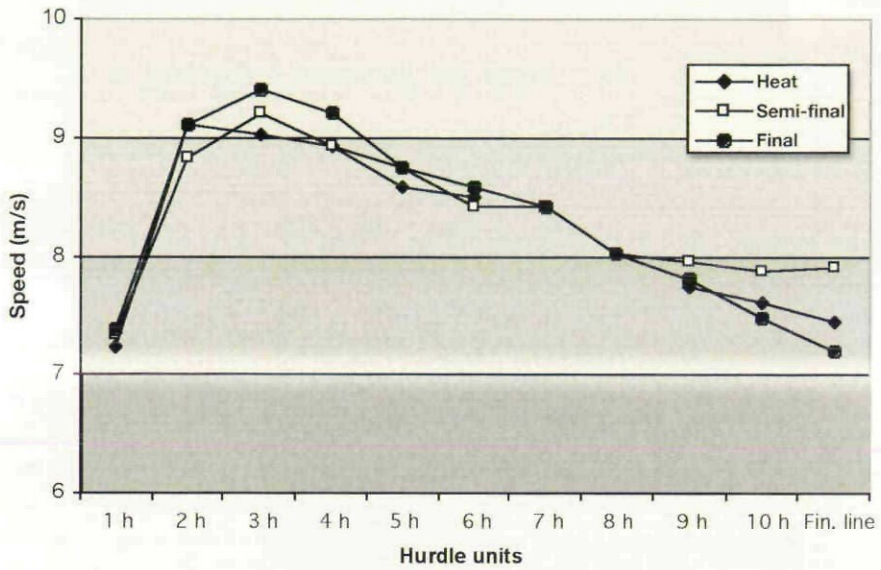
**Figure 6**

**P. Januszewsky. Race distribution.**



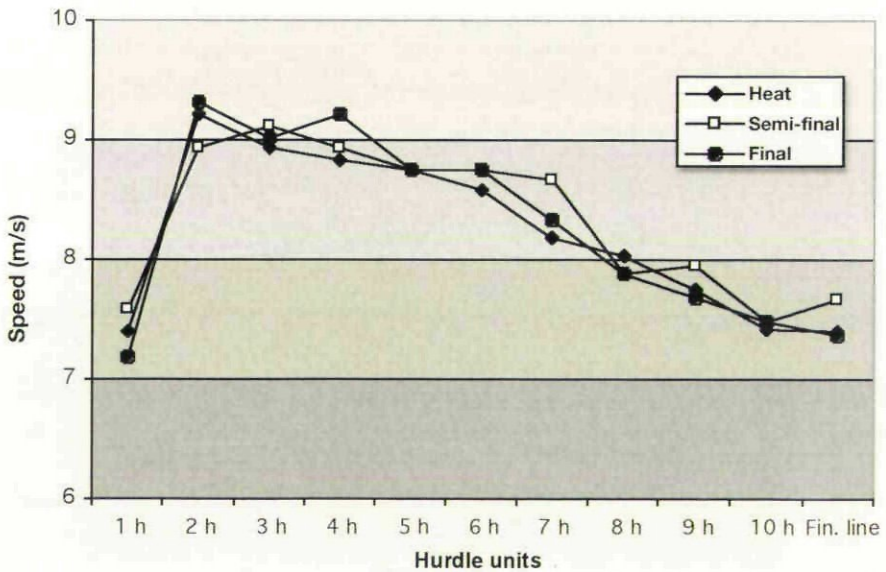
**Figure 7**

**F. Mori. Race distribution.**

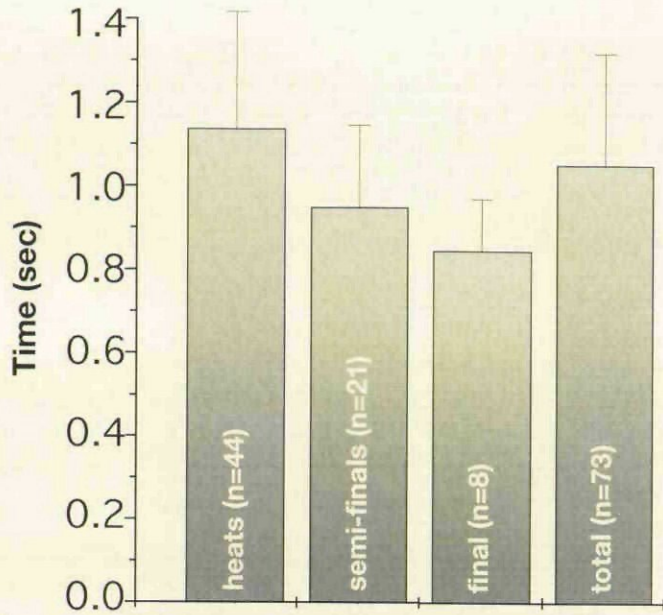


**Figure 8**

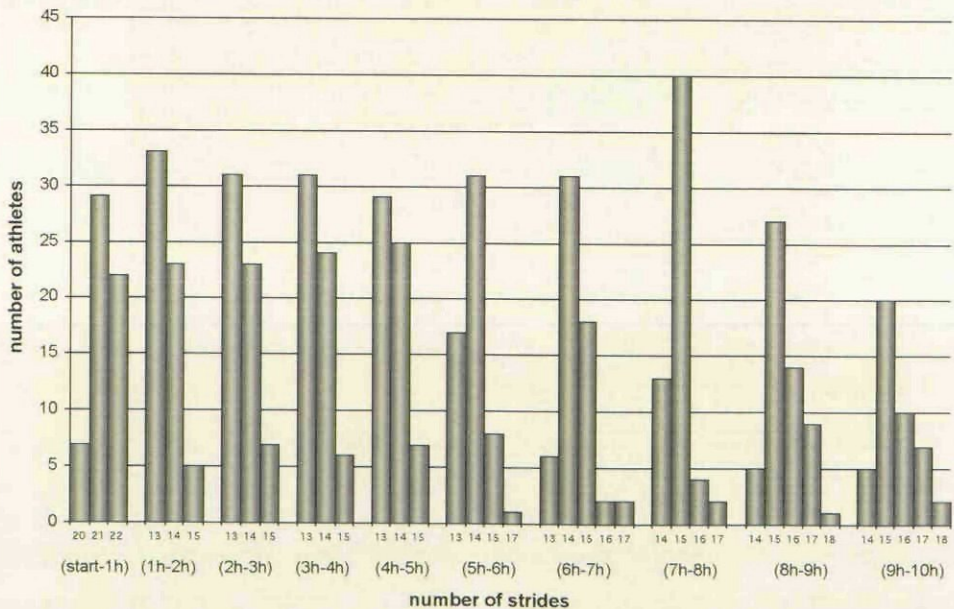
**G. Gorbenko. Race distribution.**



**Figure 9.** Mean values ( $\pm$  sd) of time differential between the worst and the best hurdle unit



**Figure 10.** Frequency distribution of the number of strides for each hurdle unit



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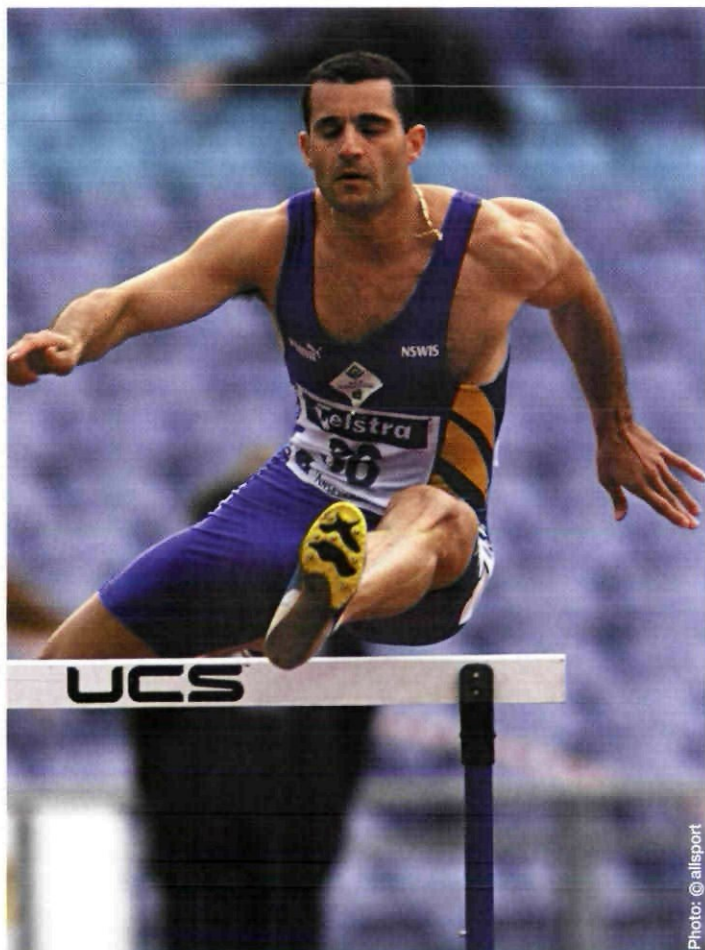


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