## 6 NATIONS 2004

## STATISTICAL REVIEW AND MATCH ANALYSIS

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## COMMENTARY

Six Nations 2004 provided a clear example of how much the game of rugby has changed over recent and not so recent years.

In 2004, for example, there was one penalty goal for every try. Ten years ago, there were 3 times as many penalty goals as tries and 20 years ago twice as many.

Of the 15 matches played in 6 Nations 2004, 13 were won by the team scoring most tries. In no game did the team scoring the fewest tries win - tries still win matches, and England's performance over the past 5 years illustrates this.

- they have scored more tries than any other country in each of the last 5 years with the exception of this year where Ireland also scored 17.
- they are the only team to have scored more tries than penalty goals in every one of the last five years. None of the other countries have come close. On all but a handful of occasions, the remaining 5 countries have consistently kicked more penalty goals than tries.
- In the last 5 years, England have scored $50 \%$ more tries than the second placed country, Ireland.

Penalty goals, as a proportion of all scores, therefore are in decline, and the extent of such a reduction is shown in the following table which shows the number of penalty goals kicked in the championship in each of the last 5 years:

| 2000 | 93 penalty goals |
| :--- | :--- |
| 2001 | 93 |
| 2002 | 89 |
| 2003 | 65 |
| 2004 | 69 |

As an illustration of the effect of such a reduction, a comparison with England's championship win in 1996 is illuminating. While England have averaged over 4 tries per game in recent years, in 1996 they scored just 3 tries in the 4 matches, or less than one per game, and still won the
championship thanks to 17 penalty goals. This contrasts with France's 14 tries and 18 penalty goals in this year's championship.

Much of this change results from an increase in ball-in-play time. It continues to increase - there was no game with less than $40 \%$ (ie 32 minutes play) and for the first time, two games were $50 \%$ or over.

Since the game went professional at the end of 1995, ball in play time has increased by almost $40 \%$ resulting in more rucks/mauls kicks and passes with the number of passes increasing almost exponentially.

Despite this however, most tries are not the result of continuous recycling and sweeping passing movements. The data shows that in $2004,88 \%$ of tries were preceded by 3 or fewer second phases and $43 \%$ of tries were preceded by 3 or fewer passes.

Other trends were also confirmed in 6 Nations 2004.
Conversion success rates continued to show a steady reduction in each of the last 5 years. From an $82 \%$ success rate in 2000, it has now declined to $63 \%$. The year on year reduction is as follows:

Conversion success rate $2004 \quad 63 \%$
2003 74\%

2002 76\%
2001 79\%
2000 82\%
This contrasts with penalty goal success rates which have remained more or less constant at around $72 \%$. As explanation for this could be that defences are organised in such a way that try scoring is being pushed further and further towards the touchlines.

In one area, there was one notable difference in 6 Nations 2004 from recent years. There was a measurable difference between the Northern Hemisphere group of referees and the Southern Hemisphere group:

- Southern Hemisphere referees awarded $30 \%$ more penalties than Northern Hemisphere referees
- the 4 highest penalised games were refereed by Southern Hemisphere referees while the 3 games with the least number of penalties were refereed by Northern Hemisphere referees and
- Northern Hemisphere referees were noticeably harsher on the tackled player than were Southern Hemisphere referees

The detailed report that follows covers the above and contains further analyses and breakdowns of other facets of play. It shows, for example, that

- France did not concede a single try in the first half of any of their matches and
- Scotland or Italy did not score a single try in the first half of theirs.
- England mauled the most, France the least
- Wales passed the most, Ireland the least
- Italy kicked the most, England the least
- Wales conceded the most penalties, while England conceded the largest proportion of penalties
and as a final illustration of how the game has changed, it shows that
- 22 substitutions were made after 40 minutes of the second half


## 6 NATIONS 2004

## STATISTICAL REVIEW AND MATCH ANALYSIS summary

- the average number of points scored per match was 43 compared with 47 in 6 Nations 2003. Tries were slightly down and penalty goals showed a small increase.
- tries accounted for $53 \%$ of total points scored. In 2003 , it was $52 \%$. The last time this figure was exceeded was in 1965.
- ball in play time was $46 \%$ - up by $2 \%$ on 2003.
- rucks/mauls increased from an average of 150 to 152 per game
passes increased from 285 to 291
open play kicks decreased to 57 from 60
- $63 \%$ of tries were converted, a success rate that has declined in each of the last 5 years. $75 \%$ of penalty kicks at goal succeeded, a slight increase over 2003 - both rates slightly down on 2003.
- 68 tries were scored in the 15 matches. This compares with 74 tries in 2003 and 75 in each of the previous 3 years.
- of the 68 tries, 1 in 6 started from inside the scoring team's half compared withl in 3 three years ago.
- as in previous years, over $30 \%$ of tries were the direct result of lineout possession.
- almost $90 \%$ of tries were preceded by 3 or fewer rucks/mauls.
- two thirds of all tries were scored in the second half while three quarters of penalty goals were kicked in the first half.
- around $80 \%$ of all passing movements continue to contain 2 passes or less.
- there were an average of 36 lineouts per game, the same as in 2003 but 3 more than 2003. Retained possession varied little at $80 \%$.
- there were 21 scrums per game - one more than in 2003 - while the number of collapsed scrums increased.
- during the championship, only one free kick was awarded for a crooked scrum feed.
- penalties went down from 25 in 2003 to 23 in 2003.
- penalties for ground offences at ruck and tackle accounted for $47 \%$ of all penalties, compared with $49 \%$ in 2003 and $42 \%$ in 2002.
- no red cards were issued while 4 yellow cards were issued compared with 8 in 2003.
- the incidence of scoring during the sin bin period was not significant.
- in the 15 matches, there were around 9 substitutions per game, a small reduction over 2003
note
- Over the last 5 years, England have scored $50 \%$ more tries than the next highest country
- England are the only country to have scored more tries than penalty goals in every one of the last 5 years
- Over the last 5 years, England have scored the most tries France kicked the most penalty goals And Scotland have the highest penalty goal to try ratio


## SIX NATIONS 2004

## STATISTICAL REVIEW AND MATCH ANALYSIS

## CHAMPIONSHIP TABLE

| Team | Played | Won | Lost | Drawn | For | Against | Points |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| France | 5 | 5 | 0 | 0 | 144 | 60 | 10 |
| Ireland | 5 | 4 | 1 | 0 | 128 | 82 | 8 |
| England | 5 | 3 | 2 | 0 | 150 | 86 | 6 |
| Wales | 5 | 2 | 3 | 0 | 125 | 116 | 4 |
| Italy | 5 | 1 | 4 | 0 | 42 | 152 | 2 |
| Scotland | 5 | 0 | 5 | 0 | 53 | 146 | 0 |

## MATCHES PLAYED

27 Mar 2004
27 Mar 2004
27 Mar 2004
21 Mar 2004
20 Mar 2004
20 Mar 2004
07 Mar 2004
06 Mar 2004
06 Mar 2004
22 Feb 2004
21 Feb 2004
21 Feb 2004
15 Feb 2004
14 Feb 2004 14 Feb 2004

France vs England 24-21
Ireland vs Scotland 37-16
Wales vs Italy
44-10
Scotland vs France 0-31
England vs Wales 31-21
Ireland vs Italy 19-3
Wales vs France 22-29
England vs Ireland 13-19
Italy vs Scotland 20-14
Ireland vs Wales 36-15
Scotland vs England 13-35
France vs Italy 25 - 0
Italy vs England $9-50$
Wales vs Scotland 23-10
France vs Ireland 35-17

## 6 NATIONS 2004 STATISTICAL REVIEW AND MATCH ANALYSIS

## A SCORING PROFILES

## POINTS SCORED

i There were 642 points scored in the 15 matches played. They were made up as follows:

Points Scored


$$
\begin{array}{lc}
43 \text { converted tries } & 301 \\
25 \text { unconverted tries } & 125 \\
69 \text { penalties } & 207 \\
3 \text { drop goals } & \underline{9} 9 \\
&
\end{array}
$$

ii $\quad$ The average number of points per game was 43 - down 4 points over 2003's average of 47. The last 4 year's figures were: 53, 51, 47 and 43.
iii There was a small reduction in the average number of tries scored per game.

- in 2000, there were 5.0 tries per match, an increase of $11 \%$
- in 2001, there were 5.0 tries per match - no change
- in 2002, there were 5.0 tries per match - no change
- in 2003, there were 5.0 tries per match - no change
- in 2004, there were 4.5 tries per match - a reduction of a half a try per game.

Despite the small reduction in the number of tries, they still accounted for $53 \%$ of total points scored, a similar figure to 2003.

Iv Drop goals decreased from 11 to 3 in the 15 matches

- in 2000, there were 0.5 drop goals per match
- in 2001, there were 0.5
- in 2002, there were 0.2
- in 2003, there were 0.7
- in 2004, there were 0.2
v Penalty goals averaged 4.6 per match, a slight increase over 2003.
- in 2000, there were 6.3
- in 2001, there were 6.2
- in 2002, there were 5.9
- in 2003, there were 4.3
- in 2004, there were 4.6

SUMMARY: average per match

Score Summary 2000-2004


## TRIES

Over the 5 years since RWC99, the total number of tries scored by each country in the 6 Nations championship is as follows:

## Total tries scored in last 5 years

|  |  | Average per game |
| :--- | ---: | :---: |
| England | 107 | 4.3 |
| Ireland | 71 | 2.8 |
| France | 67 | 2.7 |
| Wales | 53 | 2.1 |
| Italy | 35 | 1.4 |
| Scotland | 34 | 1.4 |

The table shows that that England have scored $50 \%$ more tries than the second placed country, Ireland. What is interesting to note however is that England's total try count has declined in each of the last 4 years from 29 in 2001, to 23 in 2002, 18 in 2003 and 17 in 2004.

Nevertheless, England have scored more tries than any other country in each of the last 5 years with the exception of 2004 where Ireland also scored 17.

Finally, as an indication of how far the game has changed since the onset of professionalism, a comparison with England's championship win in 1996 is illuminating. While England have averaged over 4 tries per game in recent years, in 1996 they scored just 3 tries in the 4 matches, or less than one per game, and still won the championship thanks to 17 penalty goals.

## PENALTY GOALS

Despite the slight increase, the 2004 average of 4.6 per game confirmed the diminishing reliance on penalty goals in the 6 Nations championship. The extent of such a reduction is shown in the following table which shows the number of penalty goals kicked in the championship in each of the last 5 years:

| 2000 | 93 penalty goals |
| :--- | :--- |
| 2001 | 93 |
| 2002 | 89 |
| 2003 | 65 |
| 2004 | 69 |

A further breakdown shows that England is the only team to have scored more tries than penalty goals in every one of the last five years. None of the other countries have come close. On all but a handful of occasions, the remaining 5 countries have consistently kicked more penalty goals than tries.

This is further illustrated in the following table which shows the total number of penalty goals kicked by each country over the last 5 years together with the total number of tries over the same period:

|  | penalties kicked tries scored | ratio pens:tries |  |
| :--- | :---: | :---: | ---: |
| England | 65 | 107 | 0.6 to 1 |
| Ireland | 77 | 71 | 1.1 to 1 |
| Wales | 64 | 53 | 1.2 to 1 |
| France | 88 | 67 | 1.3 to 1 |
| Italy | 55 | 35 | 1.6 to 1 |
| Scotland | 60 | 34 | 1.8 to 1 |

The above table shows that over the 5 year period,
France have kicked the most penalty goals
England have scored the most tries and
Scotland have the highest penalty goal to try ratio.

## SCORING PROFILE OF THE MODERN GAME

The following table shows the comparative figures for the 5 Nations Championships played in 1954, 1964, 1974, 1984 and 1994 - and compares them with 6 Nations 2004

## scores- average number per game

|  | converted <br> tries | unconverted <br> tries | total tries | pens | drops |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0.9 | 2.0 | conversion <br> success rate |  |  |  |
| 1954 | 0.9 | 2.9 | 1.3 | 0.2 |  |  |
| 1964 | 1.8 | 1.4 | $53 \%$ | 3.2 | 1.2 | 0.2 |
| 1974 | 1.3 | 0.9 | $59 \%$ | 2.2 | 3.4 | 0.7 |
| 1984 | 2.1 | 0.6 | $78 \%$ | 2.7 | 5.4 | 0.7 |
| 1994 | 1.0 | 1.0 | $50 \%$ | 2.0 | 6.1 | 0.2 |
| $\mathbf{2 0 0 4}$ | $\mathbf{2 . 9}$ | $\mathbf{1 . 6}$ | $\mathbf{6 3 \%}$ | $\mathbf{4 . 5}$ | $\mathbf{4 . 5}$ | $\mathbf{0 . 3}$ |

As an indication of how the game has changed, it is worth noting that while there were very nearly the same number of tries as penalty goals in 2004, ten years ago, there were 3 times as many penalty goals as tries and 20 years ago twice as many.

## KICKING

Over the last number of years, kicking success rates in all international matches including World Cups, have shown a noticeable improvement over earlier decades. In the 6 Nations tournament however, this increase now appears to have reversed.

Conversion success rates have shown a steady reduction in each of the last 5 years. From an $82 \%$ success rate in 2000, it has now declined to $63 \%$. The year on year reduction is as follows:

Conversion success rate 2004 63\%
2004 74\%
2003 76\%
200079\%
$2000 \quad 82 \%$

As for 2004, the following charts show all successful and unsuccessful conversion and penalty kicks during the 2004 championship.

## Conversions

43 successful attempts success rate: $63 \%$ (2003-74\%)

25 missed attempts


23 missed attempts

Penalties
success rate: $75 \%$ (2003-72\%)



The following charts show each country's successful and unsuccessful kicks at goal. Blue = successful: Red = unsuccessful

SUCCESSFUL/UNSUCCESSFUL KICKS AT GOAL BY COUNTRY

England


Ireland


Scotland


France


Italy


Wales


## KICKING SUCCESS RATES FROM VARIOUS PARTS OF PITCH

The success and failure rate of both conversions and penalties were combined in order to determine success rates from various parts of the pitch. An appropriate adjustment was made for left-footed kickers.

If the various areas are grouped into 3 - i.e. in front, right side and left side, the success rates are:

| In front | $\mathbf{8 7 \%}$ |
| :--- | :--- |
| Right side | $\mathbf{5 5 \%}$ |
| Left side | $\mathbf{6 1 \%}$ |

Overall therefore, the degree of difficulty of a kick is little affected by the side of the post from which the kick is taken.

## B TRIES

i tries scored by winning team
Of the 15 matches played in 6 Nations 2004, 13 were won by the team scoring most tries. In 2 games, tries were equal and in no game did the team scoring the fewer tries win. It remains true therefore - that $75 \%$ to $80 \%$ of matches are won by the team scoring the most tries. It is still infrequent for a team to score fewer tries but then win because of penalties.
ii source of tries

There were 68 tries scored in 6 Nations 2004- six less than 2003.
The teams scoring the tries obtained possession of the ball prior to the scoring of the try from a variety of sources. This is shown in the following chart and table:


| Possession source |  | $\mathbf{2 0 0 4}$ |
| :--- | ---: | ---: |
| Penalty | $\underline{2003}$ |  |
| Scrum | 11 | 11 |
| Lineout - own | 21 | 25 |
| Lineout - opposition | 2 | 3 |
| Opponent's kick | 9 | 9 |
| Opponent's handling error | 9 | 6 |
| Turnover | 7 | 5 |
| Opponent's restart | 0 | 1 |
| Own restart | 1 | 1 |
| Opponent's scrum | $\underline{0}$ | $\underline{1}$ |
|  | 68 | 74 |

While lineout possession continues to account for most tries (around $30 \%$ ), in 2004 tries from lineout possession went down slightly with tries from opponents' errors increasing correspondingly.

## iii origin of tries

Tries originate from various parts of the pitch. The following chart shows where the attacking team obtained the possession from which they eventually scored.


This shows that:

34 or $50 \%$ originated within the 22 metre line (2003-51\%) 18 or $26 \%$ between the 22 and 10 metre line (2003-19\%) 6 or $9 \%$ between 10 metres and halfway (2003-14\%) and 10 or $15 \%$ originated in the scoring team's half (2003-16\%)

In 2001, 1 in 3 tries originated from within the scoring team's own half. This has become a less frequent occurrence over the last 3 years . In 2002, it went down to 1 in 5 and in 2003 and 2004 it was 1 in 6.

The corollary is that over $50 \%$ of tries started within 22 metres of the goal line in 2003 and 2004 compared with $30 \%$ in 2001.

## Iv Position where tries were scored

The chart below indicates where across the goal-line tries were scored.
It shows that $\quad 7 \%$ were scored under the posts
$56 \%$ on the left side of the posts, and
$36 \%$ on the right side of the posts.
The chart below shows that twice as many tries were scored within 15 metres of the left corner of the pitch than on the right.


## v build-up to tries

Possession of the ball that leads to tries is obtained from a number of sources - and they are listed above. More often than not, other actions - second phase, kicks and passes - then take place before the try is scored.

The first table below shows the number of rucks and mauls ( $2^{\text {nd }}$ phase) that preceded each of the 68 tries scored in the 2004 championship

| No of $2^{\text {nd }}$ phases | frequency |
| :---: | :---: |
| None | 19 |
| 1 | 16 |
| 2 | 16 |
| 3 | 9 |
| 4 | 4 |
| 5 | 1 |
| 6 | 0 |
| 7 | 0 |
| 8 | 0 |
| 9 | 0 |
| $10-13$ | $\underline{38}$ |

The table shows that $88 \%$ of tries were preceded by 3 or fewer second phases.(2003-79\%)

The next table shows the total number of passes that preceded each of the 68 tries.

No of passes
None
1
2
3
4
5
6
7
8
9

## 10

11
12
13
14
18
$\frac{\text { frequency }}{11}$
11
4
5
9
8
9
5
4
1
1
1

2
1
2
4
1

The table shows that $43 \%$ of tries were preceded by 3 or fewer passes. (2003-50\%)

This was not a figure that was seen consistently throughout all six teams.
The table below shows that only 2 of Wales' 14 tries included 3 passes or less. In Ireland's case however, the opposite was the case - 12 out of their 17 tries had 3 or fewer passes.

## vi timing of tries

The 2 charts show that

- every country scored most of their tries in the second half
- every country conceded more tries in the second half
- France did not concede a single try in the first half of any of their matches and
- Scotland or Italy did not score a single try in the first half of theirs.
a the half in which each country scored their tries

b the half in which each country conceded tries.


There is a noticeable difference between the time when tries are scored and the time when penalties are kicked.

In 6 Nations 2004:
25 tries were scored in the first half -43 in the second.
Penalties however showed a different profile:
51 penalties were kicked in the first half - 18 in the second
In general therefore, almost twice as many tries were scored in the second half than the first half but three quarters of penalty goals were kicked in the first.

The following chart breaks down the timings further and shows both penalties and tries in 5 minute sequences:

Score Times for 6 Nations


The above analysis was then broken down further to see if the scoring profiles of each of the 6 countries reflected the overall scoring profile.

With regard to penalties, all countries kicked the majority of their penalties in the first half. Ireland and Scotland did not kick a single penalty in the second half of any of their matches. France however kicked almost as many $2^{\text {nd }}$ half penalties as the other 5 countries combined.

## C MODE OF PLAY

## i match time

The average length of a match in 6 Nations 2004 was
90 mins 26 seconds
The comparative figure for 6 Nations 2003 was
88 mins 49 seconds.

- an increase of 1 min 37 seconds.

The longest match time was 96 mins 09 secs
The shortest match time was 84 mins 01 secs

## ii ball in play times

In percentage terms, the 2004 matches produced the following ball-in-play times
$40 \%, 40 \%, 41 \%, 42 \%, 44 \%, 45 \%, 46 \%, 47 \%, 47 \%, 48 \%, 49 \%, 49 \%, 49 \%$, $50 \%, 51 \%$.- an average of $\mathbf{4 6 \%}$

In 2003, the corresponding figures were
$38 \%, 41 \%, 41 \%, 42 \%, 42 \%, 42 \%, 42 \%, 43 \%, 43 \%, 45 \%, 45 \%, 46 \%, 48 \%$, $49 \%, 50 \%$ - an average of $44 \%$

The average ball in play time increased therefore from $44 \%$ to 46\%.

Ball in play time continues to increase - there was no game with less than $40 \%$ (ie 32 minutes) and for the first time, two games were $50 \%$ or over. The ball in play for each game is shown in the chart below:


An indication of how far ball in play time has increased is when a comparison is made with with 5 Nations 1999. In that year, only one game exceeded $40 \%$ ball in play time while in 2004, all 15 achieved $40 \%$ or more.

Not surprisingly, the above figures also show noticeable increases from RWC91, 95 and 99 as shown below:
ball in play time RWC91
ball in play time RWC95
ball in play time RWC99
ball in play time 6 Nations 2004

24 mins 48 secs ( $31 \%$ )
26 mins 43 secs (33\%)
30 mins 35 secs ( $38 \%$ )
36 mins 41 secs (46\%)

Since the game went professional at the end of 1995, ball in play time has increased by almost 40\%.

Ball In Play


## iii activity cycles

Activity cycles reflect what happens when the ball is in play - and with increased ball in play times, there has been a consequent increase in activity levels i.e. there have been more passes, kicks and ruck/mauls. Consequently, the average number of stoppages in the game has come down and in recent years has stabilised at around 95 per game.

The following data compares the average for the matches played in the last 4 years

|  | $\underline{2001}$ | $\underline{2002}$ | $\underline{2003}$ | $\underline{2004}$ |
| :--- | :---: | :---: | :---: | :---: |
| rucks/mauls (2nd phase) | 138 |  | 135 | 150 |
| passes | 275 | 282 | 285 | $\mathbf{1 5 2}$ |
| open play kicks | 49 | 53 | 60 | 57 |
| kick:pass ratio | 1 to 6.3 | 1 to 5.3 | 1 in 4.8 | 1 in 5.1 |



It can be seen that the increase in ball in play time over recent years has resulted in more rucks, passes and kicks with open play kicks increasing proportionately more than rucks and passes.

## Rucks/Mauls (2 ${ }^{\text {nd }}$ phase)

The average number per game was 152 (2003-150).
The most in any game was 207 - the fewest was almost 100 less at 108. The most by any team in a game was 143 (England) - the fewest, 53(Italy).

There was a noticeable difference between some of the 6 teams. England for example created $34 \%$ more rucks/mauls than Wales. The average per country is shown below:

|  | Average no of rucks/mauls per game |
| :--- | :---: |
| England | 90 |
| Scotland | 84 |
| Ireland | 74 |
| Italy | 71 |
| France | 71 |
| Wales | 67 |

The above table shows the total number of rucks/mauls created by each team in the competition expressed as an average per game. On a game by game basis therefore it shows that England and Scotland created the most rucks and mauls while Wales rucked and mauled the least.

However, the number of rucks and mauls made by one team may be constrained because it obtained only limited possession of the ball. In order to address this, an alternative calculation has been made which relates the number of rucks/mauls to the share of ball in play time won by each team.
ruck/mauls per minutes possession

| England | 4.6 |  |
| :--- | :--- | :--- |
| ltaly | 4.4 |  |
| Scotland | 4.3 | average: 4.2 |
| Ireland | 4.0 |  |
| Wales | 4.0 |  |
| France | 3.6 |  |

The above chart shows certain changes from the former. While England remained the highest ruck/mauling team on both measures, France's rate of rucking was seen to be less than any other country.

## Passes

Games, on average, contained 291 passes (2003-285). The most in any game was 348 - the fewest was almost 150 less at 212.
The most by any team in a game was 260 (France) - the fewest, 98 (Ireland).

Again, there were noticeable differences between the six teams France completed almost $50 \%$ more passes than Italy. Each team's average is shown below:

Average no of passes per game

| France | 166 |
| :--- | :--- |
| Wales | 162 |
| Scotland | 157 |
| England | 150 |
| Ireland | 125 |
| Italy | 114 |

When an adjustment is made to take account of the percentage possession obtained by each team, then the table changes however.

This table now shows that Wales were the clearly the highest passing team, their rate exceeding France and Ireland by $14 \%$ and $41 \%$ respectively.
Wales
France
Scotland
England
Italy
Ireland

Passes per minutes possession
9.6
8.4
7.9 average: 7.9
7.7
7.0
6.8

## Kicks

The average number per game was 57.
The most open play kicks in a game was 81 - the fewest 42.
The most by any team in a game was 44 (Ireland) - the fewest 19 (Scotland and Italy).

There were little differences between the 6 participating teams - all were within 6 kicks of each other.

## Average no of kicks per game

| Scotland | 31 |
| :--- | :--- |
| France | 30 |
| Ireland | 29 |
| Italy | 29 |
| England | 28 |
| Wales | 25 |

When an adjustment is made to take account of the percentage possession obtained by each team, it shows that Italy was the highest kicking team in relation to the possession they obtained while England were the lowest.

Kicks per minutes possession

| Italy | 1.8 |  |
| :--- | :--- | :--- |
| Ireland | 1.6 |  |
| Scotland | 1.6 | average: 1.6 |
| France | 1.5 |  |
| Wales | 1.5 |  |
| England | 1.4 |  |

A summary of both tables - the first showing the average number of rucks, passes, and kicks per game and the second the rate per minute possession - is given below:


Passes are grouped into passing movements - i.e. one pass movement, two pass movements and so on.

The data shows that some $83 \%$ of all passing movements contained two passes or less. This now appears to be a constant and varies little from year to year.

Most teams played to this formula, but there are exceptions. The noticeable differences this year relate to England: 71\% of their passing movements contained just one pass which was a far higher percentage than any other country. The corresponding figure for France, for example, was just $46 \%$. The $71 \%$ figure was also noticeably different from the 2003 figure of $50 \%$

| Passing Sequences | 1 Pass\% | 2 Pass \% | Total \% | 2003 |
| :--- | ---: | ---: | ---: | ---: |
| England | 71 | 19 | 90 | 80 |
| France | 46 | 30 | 76 | 77 |
| Ireland | 54 | 32 | 86 | 82 |
| Italy | 59 | 26 | 85 | 84 |
| Scotland | 58 | 24 | 82 | 81 |
| Wales | 58 | 20 | 78 | 75 |

## D RESTARTS

There were 198 start and restart kicks in the 15 matches. Just under 1 in 4 were contestable and of these, the kicking team regained possession on $28 \%$ of occasions.

Overall, and after allowing for kicking errors, possession was retained by the kicking team on 1 in 8 occasions.

## E LINEOUT

The following data compares lineouts in 2002, 2003 and 2004:

| average number per game | $\frac{2002}{33}$ | $\frac{2003}{36}$ | $\frac{2004}{36}$ |
| :--- | :---: | :---: | :---: |
| percentage competed | $70 \%$ | $64 \%$ | $\mathbf{6 1 \%}$ |
| lineout penalties per game | 1.6 | 1.4 | $\mathbf{1 . 5}$ |
| possession retained | $78 \%$ | $83 \%$ | $\mathbf{8 0 \%}$ |

The most lineouts in a game was 44; the fewest 23.
Competition at the lineout has reduced in each of the last 4 years. Possession retained by the throwing in team has however changed little. However, it should be noted that quality of possession has not been measured. No distinction has been made therefore between good and bad possession. This same qualification applies to scrum data.

## F SCRUM

The following data compares scrummages in 2002, 2003 and 2004

|  | $\underline{2002}$ | $\underline{2003}$ | 2004 |
| :---: | :---: | :---: | :---: |
| average number per game | 24 | 20 | 21 |
| scrum penalties per game | 3.3 | 3.1 | 3.1 |
| scrum pens as \% of all pens | 15\% | 12\% | 14\% |
| penalty : scrum ratio | 1:7 | 1:7 | 1:6 |
| possession retained | 91\% | 88\% | 87\% |

In 6 Nations 2004, there were 314 scrummages and 100 resets making a total of 414 scrum engagements.

Of the 414 engagements, there were 96 collapses or $23 \%$ of all engagements (2003, 15\%)

On 2 occasions the 'use it or lose it' law was seen to apply. There were 4 in 2003.

There was 1 free kick for a crooked feed compared with four in 2002.

## G PENALTIES

i number and incidence
In 6 Nations 2004, the average number of penalties and free kicks awarded in a game was 23. This compares with 25 in 2003.

In 2004, the most awarded in a single game was 33 - the least, 13. The comparative figures for 2003 were 31 and 21. In 2003 the extremes
came far closer. The difference between the most and least penalties in 2004 was 20 - this was the same number as 2002 and 2001. Last year however, the differential was only 10.

In the 15 matches, the team playing at home was awarded the most penalties in 4 matches, the away team the most in 10 matches with an equal number of penalties being awarded in the remaining match.
ii teams penalised
Wales conceded the most penalties while Ireland conceded the fewest (including free kicks) as shown in the following table:
penalties conceded

## Wales <br> 67

Italy 60
Scotland 57
France 55
England 51
Ireland 50
What needs to be noted is that the above are absolute figures - but because the number of penalties can vary from match to match (in 2004, between 13 and 33), a better and probably more accurate indicator, is the proportion of penalties conceded by a team in all their matches compared with their opponents.

|  | Proportion of times penalised |
| :--- | :---: |
| England | $54 \%$ |
| Scotland | $53 \%$ |
| Wales | $53 \%$ |
| ltaly | $50 \%$ |
| France | $49 \%$ |
| Ireland | $43 \%$ |

The second table shows that England, just as in 2002 and 2003, conceded proportionately more penalties than their opponents. By contrast, Ireland were penalised the least.

There were more penalties awarded in the first 5 minutes of the game than in any other 5 minute period while the highest proportion of penalties were awarded in stoppage time at the end of the game. Overall however, there was little difference in the number of penalties awarded in the first half and the second half. The following chart shows the times at which penalties were awarded:

Infringements in 5m Intervals

iv
categories of offences penalised
The following table groups the penalties awarded into 10 categories and shows the comparative figure for 6 Nations 2001 and 2002:

|  | 2002 | 2003 | $\mathbf{2 0 0 4}$ |
| :--- | :---: | :---: | :---: |
| $\%$ | $\%$ | $\%$ |  |



## v pitch location of penalties

The chart below shows the location of every penalty awarded during the championship. The figures on the chart show the percentages for each quarter of the pitch.


Of the 15 matches, 8 were refereed by Northern Hemisphere referees, 7 by Southern Hemisphere referees. The following table looks at the breakdown of penalties and other match details between the two groups:
northern southern
a average points per match 43
b average ball in play times $46 \%$
C average number of penalties 2026
d $\quad$ \% of penalties given against team in possession at $\begin{array}{lll}\text { ruck/tackle on ground offences } & 48 \% & 38 \% \\ (36 \%-2002) & (33 \%-2002)\end{array}$

This is the first time for several years that there has been a noticeable difference between the $\mathbf{2}$ groups of referees.

- Southern hemisphere referees awarded $\mathbf{3 0 \%}$ more penalties than northern hemisphere referees
- Northern hemisphere referees were harsher on the tackled player than were southern hemisphere referees
- The 4 games with the most penalties were refereed by Southern Hemisphere referees
- The 3 games with the lowest number, were refereed by Northern Hemisphere referees
e offences penalised:
ruck/tackle - on ground offences 50
offside - backs/forwards/open play 20
scrum 1315
lineout 4
plus 10 metres 1
foul play 1
obstruction $\quad 3 \quad 7$
tackle - early/late/dangerous 3
maul - pulling down 5
$100 \% \quad 100 \%$


## Penalty Offence North v South



## H RED AND YELLOW CARDS ISSUED

The following paragraphs examine the circumstances and effects of the issue of red and yellow cards during the 6 Nations championship, 2004.
i red cards

There were none issued during the 2004 championship.(2002-none)
ii yellow cards
Number issued
Matches:
Scotland v England McHugh (I) 1
Ireland $v$ Wales Jutje (F) 1
Scotland v France Young (SA) 1
Ireland $v$ Italy Deaker (NZ)

In 11 of the 15 matches, not a single yellow card was issued.

## iii Offences for which yellow card issued:

Tackle - dangerous 1
Ruck/Tackle - player to ground

- wrong side 1

Offside - forward $\quad 1$
4
During the 15 matches, there were just 4 penalties awarded for foul play offences. - none resulted in a yellow card.

Iv Countries conceding yellow cards:

|  | $\mathbf{2 0 0 3}$ |  | $\underline{2004}$ |
| :--- | :---: | :---: | :---: |
| France | 0 |  | 0 |
| Italy | 1 | 1 |  |
| Wales | 2 | 0 |  |
| England | 2 | 0 |  |
| Scotland | 3 | 2 |  |
| Ireland | $\underline{0}$ | $\underline{1}$ |  |
|  | $\underline{8}$ | $\underline{4}$ |  |

The yellow cards issued against Italian players amounted to just one - just as in 2003. This total of two compares with 11 yellow and 1 red card received over the 2 previous seasons.

## v Referees

Northern Hemisphere referees
matches refereed
8
matches with yellow cards 2
yellow cards issued -1,1 2
Southern Hemisphere referees
matches refereed $\underline{7}$
matches with yellow cards 2
yellow cards issued - 1, 12
vi Home team/Away team
Issued against home team player 3
Issued against away team player 1
vii Times of issue
Issued during first half 2
Issued during second half 2
ix Impact on scoring during sin bin period
The points benefit to the team with 15 players while an opponent was off the field was as follows:
a $\quad 7$ pts. Last quarter of game - team penalised also losing heavily
b 7pts. Team penalised win comfortably.
c $\quad$ 5pts. First try to Ireland $v$ Italy
d none
The above figures indicate that the points benefit to the team with 15 players continues to be relatively marginal at best.

## I SUBSTITUTIONS

In the 15 matches, there were

$$
\begin{aligned}
& 9 \text { blood bins } \\
& \text { and } \\
& 133 \text { tactical and injury substitutions }
\end{aligned}
$$

There were, on average, over 9 replacements per game. This shows a slight reduction over last year.

The following chart shows the number of substitutions - both injuries and tactical - made in each 5 minute period

Substitutions in 5m Intervals


## J TELEVISION MATCH OFFICIAL

- During the championship, there were 7 references to the TMO (2003 - 7).
- As a result of the 7 references, 1 try was awarded.
- The shortest reference to the TMO took 36 seconds - the longest, 1min 35 seconds.
- Only 2 references took more than one minute (1m 35s, 1 m 17s).
- 4 of the remaining references took between 36 s and 48 s
- one took 59 secs

