

Agriculture

Work related injuries and ill health

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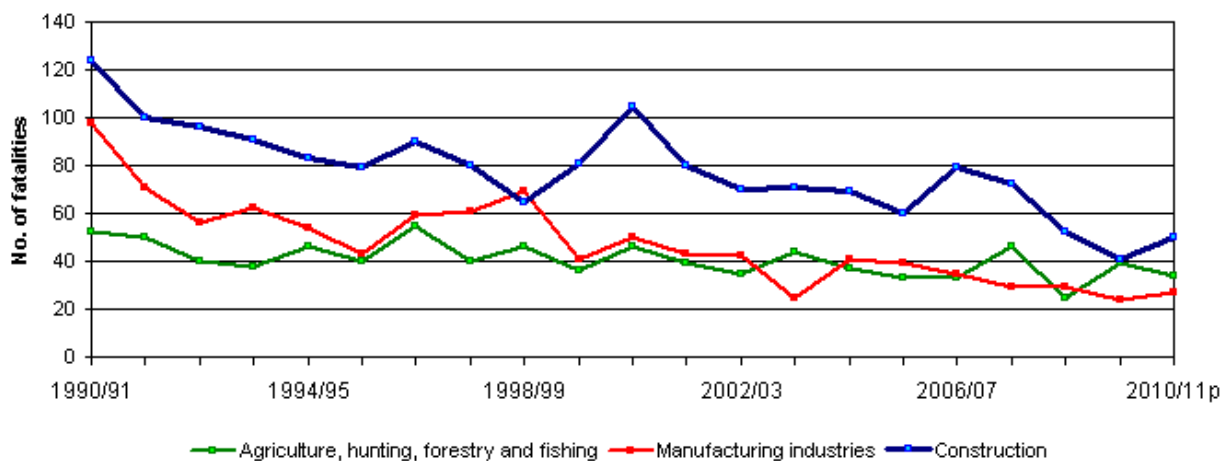
Summary

With high numbers and rates of fatal injury to workers, agriculture, forestry and fishing is the riskiest industry sector. Fewer than one in a hundred employees work in agriculture, but about one in ten fatal injuries to employees are in the sector.

In 2010/11 there were:

- **34 fatal injuries to workers.** The average over the previous five years was 35. This is a third lower than in 1981, but the rate is much higher than in any other major industry group (RIDDOR);
- **eight fatal injuries to members of the public.** The average over the previous five years was five. Three of these fatalities were to persons aged 16 or under (RIDDOR);
- both major and over three day injury rates were lower than the previous five year averages, but we estimate that well under half of all reportable injuries are actually reported (RIDDOR);
- the LFS suggests a **downward trend in reportable non-fatal injury rates.**

Figure 1 Twenty year trend in worker fatalities



What is agriculture?

HSE now uses the SIC 2007 classification scheme to define industries, rather than the SIC 2003 scheme, which we used in previous years see www.hse.gov.uk/statistics/industry/sic2007.htm. The industry for RIDDOR reports before April 2010 was coded using the older classification whilst the Labour Force Survey (LFS) was coded using SIC2003 prior to 2008/09. This data has been computer recoded to allow for comparisons over time. There may be errors as a result of this recoding

The new industry coding moves landscape activities from agriculture to the services sector. The Office for National Statistics estimates that this involves 13% of the employees who used to be classified to agriculture.

The impact on the statistics is different for fatal and non-fatal injuries. The risk to agricultural workers is higher than that to landscape workers. On the other hand the level of reporting of non-fatal injury is probably higher in landscape services. This results in an apparent increase in the agricultural fatal injury rate and a decrease in the non-fatal rates.

Between 2003/04 and 2006/07 some injuries were allocated to other industry groups. This effectively reduced the numbers and rates of non-fatal injuries classified as agricultural. This means that numbers and rates of injury for those years cannot be straightforwardly compared with numbers and rates for earlier or later years. Vertical dotted lines in some of the charts indicate these changes.

The LFS introduced a new automatic coding tool at the same time as the change to SIC2007. A more detailed explanation of the impact to the LFS can be found on the ONS website, see www.statistics.gov.uk, in the LFS User Guide – Volume 3. LFS rates of illness and injury for agriculture are of a similar order to those previously published under SIC2003. The reclassification to SIC2007 has had an impact on many of the published LFS tables for the agriculture industry. Annual estimates and rates are now less frequently available because of landscape activities moving to services, consequently there is a greater reliance on three-year averaged or previous years' data for rates and estimates.

Ill health

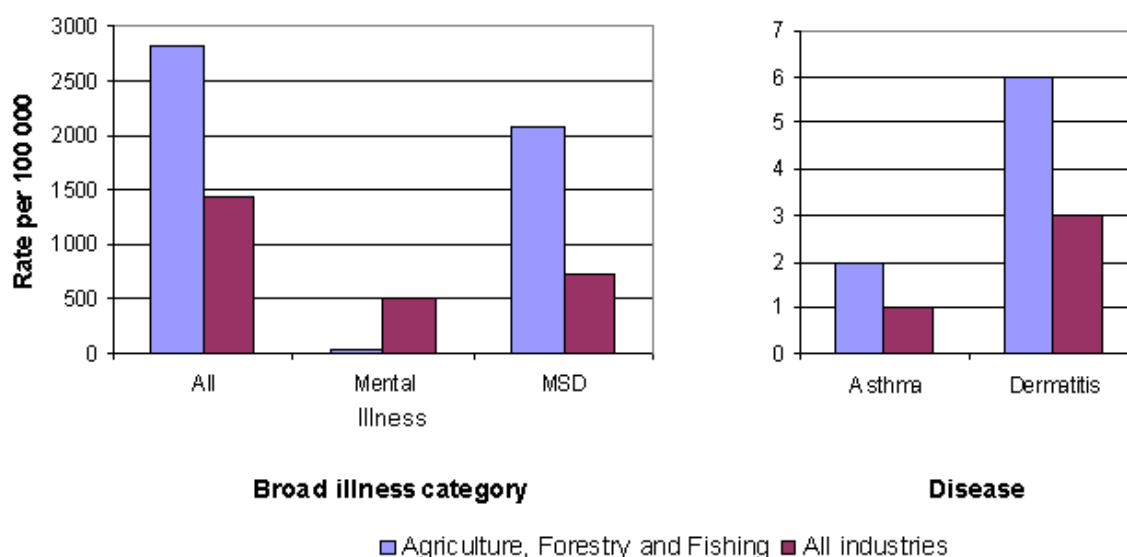
Labour Force Survey/THOR

The Labour Force Survey (LFS) and voluntary reporting of occupational diseases by doctors (THOR and THOR-GP) provide data about health risks in different industries and occupations. Additional data, for example, for previous years may be found in the various tables. For further information on these data sources see www.hse.gov.uk/statistics/sources.htm

Unfortunately the LFS sample size for agriculture in 2010/11 was not large enough to draw meaningful conclusions about the incidence rates (new cases) of ill health. Available data for previous years may be found in the various tables, but there is no trend (statistically significant) in the prevalence 'rate'¹ of cases of work related, agricultural ill health.

The incidence rates for work-related illness seen by consultants participating in one of the THOR surveillance schemes are shown in the following charts. The rate for agriculture and the all sector average rate are shown for selected disease categories.

**Figure 2 and 3 Work related ill health identified:
in General Practice (THOR GP) by Consultants (SWORD and EPIDERM)**



THOR indicates that between 2008 and 2010 the average rate of new cases of work-related mental ill-health was 45 per 100 000 (THORGP06). This is less than a tenth of the rate (500) for all industries and the lowest rate for all industry sections. Construction is the next lowest section (112).

¹ The prevalence rate indicates how many cases of work related ill health should be expected in a random group of 100 000 workers in the year of the survey. It includes those still suffering from ill health developed in previous years. The trend is examined using smoothing techniques to reduce irregularities – random short term fluctuations..

When comparing results from THOR and the LFS it is important to understand that cases reported under THOR have been **diagnosed by doctors**, while those reported under LFS are cases of **self-reported illness** caused or made worse by current or most recent job for people working in the last 12 months in the agriculture, forestry and fishing industry. In addition the rates quoted below are incidence rates from THOR and prevalence rates from the LFS.

Health issue	THOR – The estimated average incidence rate (new cases) per 100 000 persons of work-related between 2008 and 2010	LFS – The estimated average prevalence rate , (existing and new cases combined) of self-reported illness per 100 000 persons between 2008/09 and 2010/11
Ill health	2 826 (THORGP04) This is almost twice the rate (1 429) for all industries and the highest rate of the main industry sections;	3 400 (WRIIND2_3YR). This was of a similar order (not statistically significantly different) to that for all industries (3 400).
Musculoskeletal disorders	2 068 (THORGP05). This is almost three times the rate (734) for all industries – again the highest rate of the main industry sections;	2 500 (MSDIND2_3YR) This is statistically significantly higher than the all industry rate (1 500), but not significantly different to the previous averaged rate (2005/06 to 2007/08)
	See www.hse.gov.uk/statistics/tables/index.htm for further information.	<i>The values quoted above are the central estimates from the LFS survey. The respective tables include the confidence interval (C.I. - an indicator of the reliability) for each estimate.</i>

The Labour Force Survey also estimated that in 2010/11 between 9 000 and 23 000 people whose current or most recent job in the last year was in the agriculture, forestry and fishing industry suffered from an illness which was caused or made worse by this job see www.hse.gov.uk/statistics/lfs/wriind2.xls. The associated prevalence rate, between 2 700 and 6 600 per 100 000 people (2.7% to 6.6%) working in the last year, was of a similar order (not statistically significantly different) to that for all industries (3 200 per 100 000 people – 3.2%).

Examining the prevalence rates over time using smoothing techniques, which aim to reduce irregularities (random fluctuations) in the times series, suggests there is no (statistically significant) evidence of trend over time.

Occupational cancer

Agriculture is an industry with high cancer registrations. There are also about 90 deaths per year that are attributed to occupational carcinogens (e.g. substance or occupational circumstance). The most significant carcinogen is TCDD (2,3,7,8-Tetrachlorodibenzodioxin). Non-arsenical insecticides and solar radiation are also significant carcinogens. About three quarters of the deaths are in general farming while most of the others are in horticulture.

Further information is available from our cancer page see www.hse.gov.uk/statistics/causdis/cancer/index.htm or from research report 800 "The burden of occupational cancer in Great Britain" see www.hse.gov.uk/research/rrpdf/rr800.pdf

Injuries

Fatal injuries

Figure 4 Number and rate of fatal injuries to workers 2005/06 to 2010/11p



In 2010/11p there were 34 fatal injuries to workers. The average over the previous five years was 35.

The fatal injury rate was 9.9 per 100 000 workers. This is lower than the average figure for the previous five years of 11.9. The rate is much higher than any other industry section.

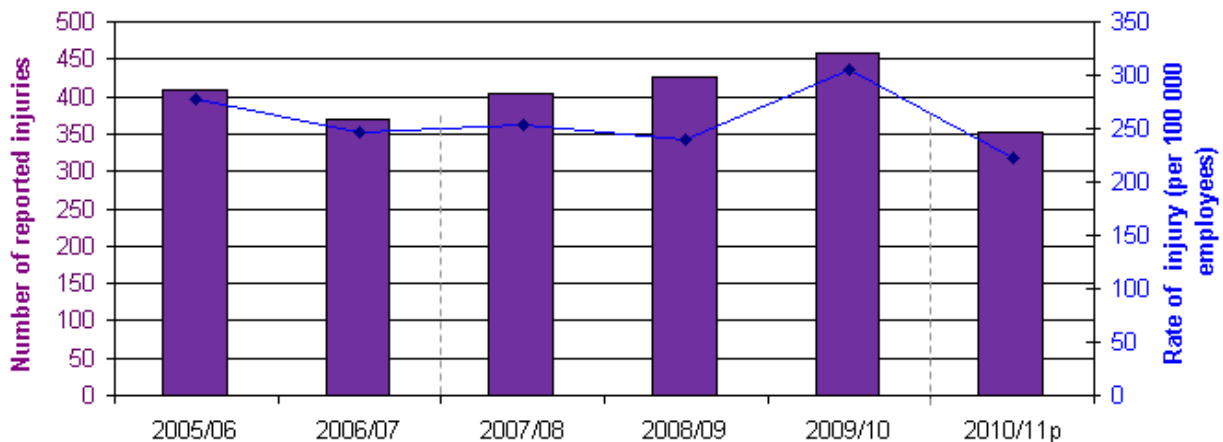
There is no clear trend in the number or rate of fatal injury since 2005/06.

The fatal injury rates quoted above are higher than those provided in June because a different employment source (Annual Population Survey) has been used. This gives a lower estimate for agricultural employment. (See www.hse.gov.uk/statistics/sources.htm#employment for further information.)

The number of fatalities is slightly lower than when calculated using the SIC2003 definition of agriculture. This included landscape services, which averaged 1 fatality per year over the last 10 years.

Major injuries

Figure 5 Number and rate of reported major injury to employees, 2005/06 to 2010/11p



In 2010/11p, there were 221.9 reported major injuries per 100 000 employees in agriculture. The average over the previous five years was 263.3.

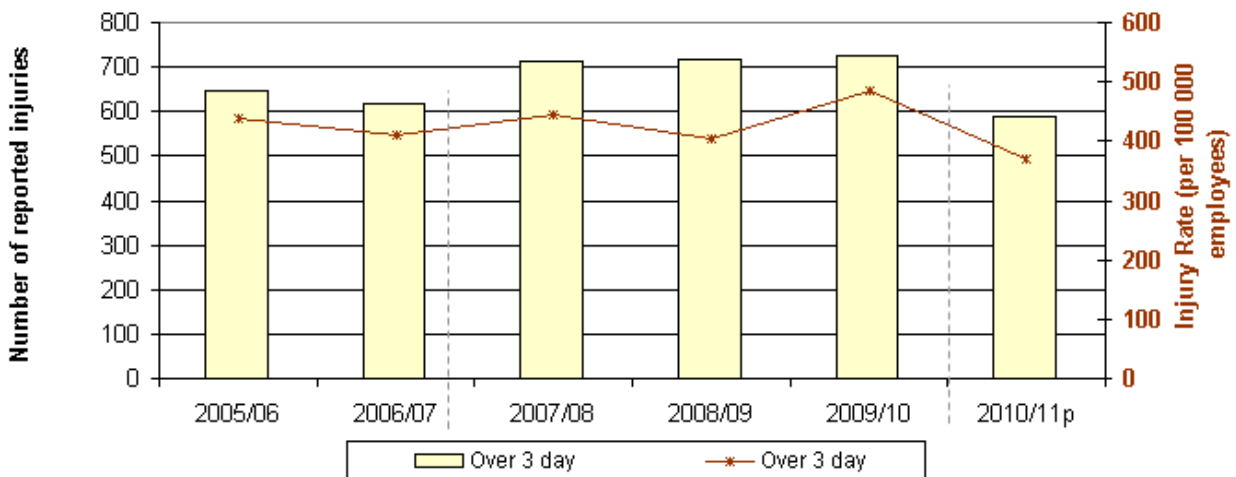
This is one of the highest rates of reported major injury – even though the proportion of injuries actually reported in agriculture is low.

It is difficult to judge whether the reduction in 2010/11p is a random fluctuation or because of:

- an improvement in standards;
- a reduction in the reporting rate; or
- a result of the change in industry coding.

Over three day injuries

Figure 6 Number and rate of over 3 day injuries to employees. 2005/06 to 2010/11p

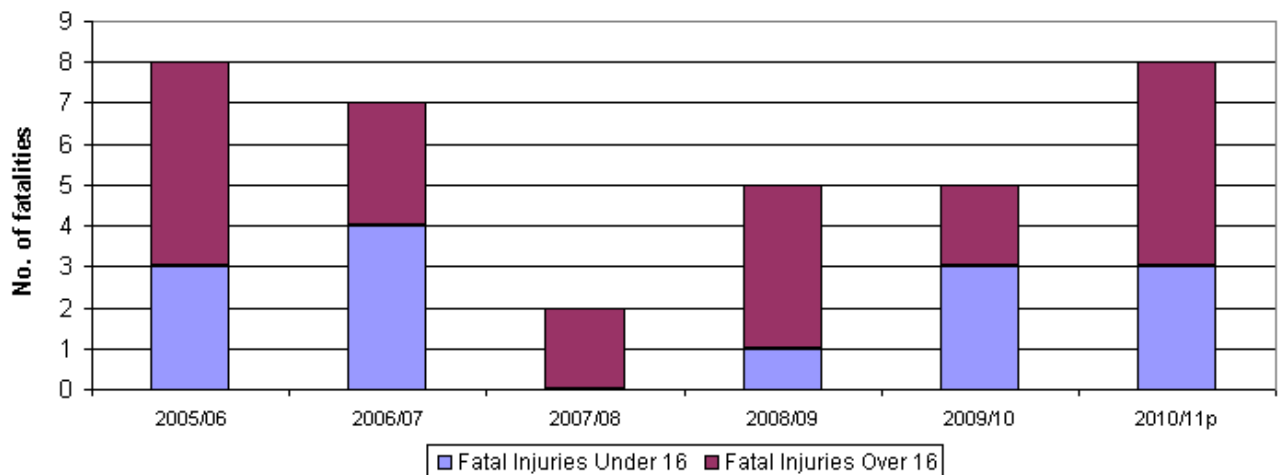


The 2010/11p rate of reported over-three day injury was 369.7 per 100 000 employees. Over the previous five years the average rate was 435.7

As with major injuries it is difficult to judge whether or not this reduction indicates an improvement in standards.

Reported injuries to members of the public

Figure 7 Fatal injuries to members of the public, 2005/06 to 2010/11p

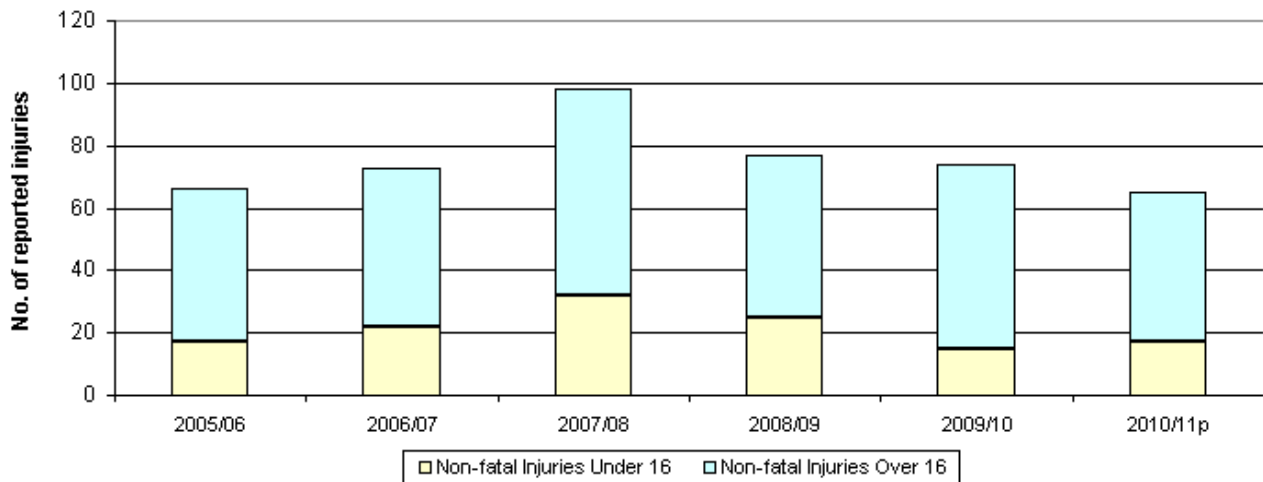


There were eight fatal injuries to members of the public in 2010/11p. This compares to an average of five a year over the previous five years. Three of these fatalities were to people aged 16 or under.

The number of fatalities has been rising for the last four years after an earlier fall. It is now back at the level in 2005/06.

About one third of fatalities since 2005/06 involved animals and another third, either moving vehicles or falling objects.

Figure 8 Non-fatal injuries to members of the public, 2005/06 to 2010/11p



There were 65 reported non-fatal injuries to members of the public in 2010/11p. The average, over the previous five years, was 78 a year. 17 of these injuries were to those aged 16 or under.

The trend in non-fatal injuries is, oddly, almost opposite to that of the fatalities. The number peaked in 2007/08 and has fallen back to the level of 2005/06.

About a quarter each of these non-fatal injuries involved falls or animals.

Labour Force Survey (LFS) injuries and days lost

There are insufficient injury sample cases to provide a reliable estimate or rate for agriculture for 2009/10 (three-year pooled) so the latest available years estimate and rate is that for 2008/09.

The LFS suggests that the agriculture, forestry and fishing sector accounted for an estimated two per cent of both reportable non-fatal injuries and all non-fatal injuries in 2008/09 (latest year available and three-year average).

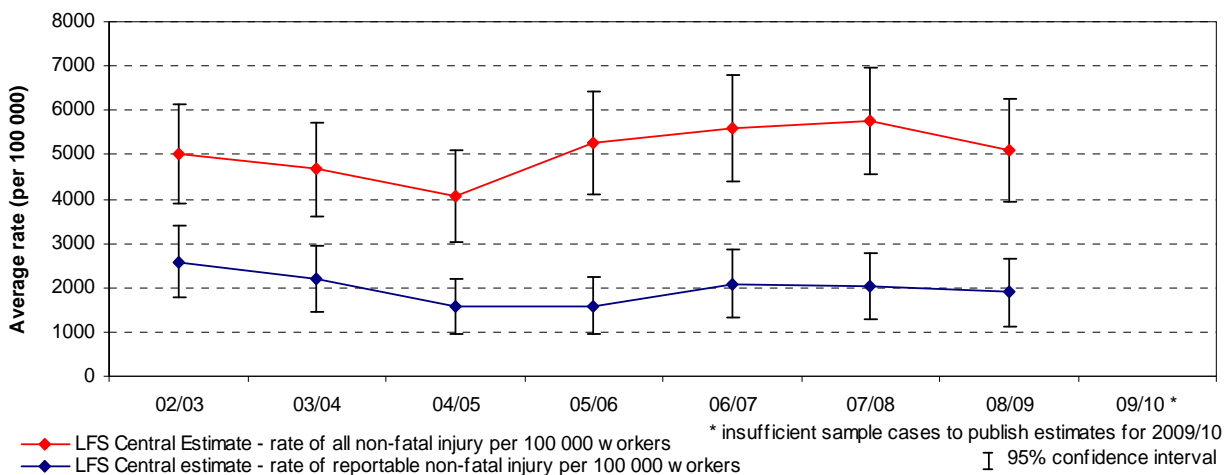
The estimated incidence rates of reportable non-fatal injury and all non-fatal injuries for the agriculture, forestry and fishing industry were 1 900 (95% C.I. 1 100 and 2 700) and 5 100 per 100 000 workers respectively (1.9% and 5.1%) in 2008/09 (three-year average). Both were statistically significantly higher than the corresponding average rates of 850 and 2 500 per 100 000 workers (0.85% and 2.5%) across all industries. For reportable non-fatal-injury rates see www.hse.gov.uk/statistics/lfs/injind1_3yr.xls.

Examining the reportable non-fatal injury rates over time using smoothing techniques, which aim to reduce irregularities (random fluctuations) in the times series, suggests a downward trend.

Results from the LFS suggest that around half of reportable non-fatal injuries are recorded under RIDDOR, but that the level for agriculture, forestry and fishing is lower than this.

The LFS suggests that in 2010/11 the combined estimate of the number of days lost (full-day equivalent) due to workplace injury and work-related ill health attributed to the current or most recent job in agriculture, forestry and fishing industry was between 74 thousand and 0.5 million. This equates to an average annual loss of between 0.2 and 1.21 days per worker, see www.hse.gov.uk/statistics/lfs/wdlind.xls. This was of a similar order, not statistically significantly different from the rate for all industries (0.98 days per worker).

Figure 9 Estimated incidence rates of non-fatal injury per 100 000 people working in agriculture, forestry and fishing in the last 12 months (all injuries and reportable injuries with over 3 day absence)



Industry profile

Agriculture accounted for about 0.6% of employees, and 0.8% of reported injuries to employees in 2010/11p. 11% of employee deaths, (20% workers), 1.4% of reported major and 0.6% over three day injuries.)

Handling and slip & trip injuries accounted for 20% and 19% of all reported injuries to employees in 2010/11p. (There were 31% and 27% respectively across all industries). Injuries from moving and falling objects accounted for another 16%. 14% involved being injured by an animal. The animal injuries (137 cases) accounted for 13% of all animal injuries. (Postal and courier activities accounted for the largest group with 22%, of reported animal injuries.) Further detail can be obtained using HandS-On at www.hse.gov.uk/statistics/hands-on/index.htm

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