

A preliminary analysis of completion of a statutory farm safety code of practice document by farmers in Ireland

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Introduction The Safety, Health and Welfare at Work Act 2005 in Ireland permits farmers with three or less employees to complete a risk assessment (RA) document as an alternative to preparing a written safety statement, required under the previous 1989 Act. A statutory code of practice (COP) incorporating a RA document, an explanatory document and a farm health and safety DVD was prepared by a statutory advisory committee to the Health and Safety Authority and was then sent to all farms, nationally. The research aims of this paper are to (1) provide national estimates of the stated level of completion of the RA document and satisfaction levels with the COP documents along with levels of viewing of the DVD, and (2) to identify explanatory variables associated with statistically significant probabilities for completion of the RA document, satisfaction with the COP documents and DVD viewing.

Material and methods An additional survey was conducted among participants in the National Farm Survey (NFS) during the second half of year 2007. The questions posed were whether or not the RA document had been completed, the opinion of the farmer on the usefulness of the COP documents and whether the accompanying DVD was viewed by the farmer, or another household member(s). The population surveyed was 1,040 and this sample was weighted to represent a national population of 111,913 farms of at least 2 Economic Size Units (ESU) in accordance with NFS protocols (Connolly *et al.*, 2008). Logistic regression analysis using SAS (2004) was used to model the NFS data available for a reduced sample of 991 related to use of the COP components, allowing for up to three-way interactions, with the following potential explanatory variables: farm size; farm system; region; economic size; man days used; age of farmer; use of hired labour; number in household; educational attainment of the farmer; rural environmental protection scheme (REPS) participation, Teagasc client membership and whether the farmer and/or spouse had off-farm employment.

Results The nationally weighted results indicated that 41.5% of farmers reported completing the RA document and of the 54.2% who gave an opinion on utility of the COP documents, 74% considered these 'excellent' or 'good'. The DVD was viewed by 24.8% of the weighted farmer population and by one or more household members for 18.6% of farms. The model fitting process selected region ($p=0.017$), Teagasc client ($p=0.001$) and economic size unit ($p=0.009$) as the main variables associated with completion of the RA document. Region was considered as a blocking factor and interpretation focussed on the other factors and the odds ratios for these are shown in Table 1. The relationship between odds ratio and change in ESU for RA document completion is shown in Figure 1.

Table 1 Odds Ratios for RA Document Completion

Effect	Odds Ratio	Confidence Limits (95%)	
Teagasc Client (yes vs. no)	1.592	1.205	2.109
Economic Size	1.008	1.003	1.013

Table 2 Odds Ratios for Viewing of DVD

Effect	Odds Ratio	Confidence Limits (95%)	
Age of Farmer	0.98	0.967	0.993
REPS (yes vs. no)	1.453	1.074	1.961
Household Number	1.111	1.018	1.212

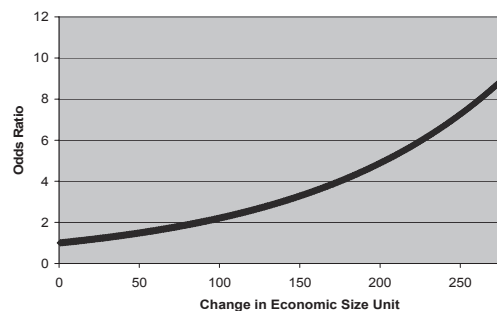


Figure 1 Odds Ratios and change in ESU for RA document completion.

Usefulness of the COP documents was modelled using a multinomial logit model which found that region, man days and their interaction ($p=0.031$) were significant. For viewing the DVD, decreasing farmer age ($p=0.003$), participation in REPS ($p=0.015$) and household number ($p=0.018$), were significantly associated and Table 2 shows the odds ratios for these responses. A quadratic effect occurred for household number ($p=0.002$) where the odds ratio increased up to 5 household members and then decreased.

Conclusions The weighted survey results give national estimates of farmer use of the farm safety RA document, farmer perception of COP documents and viewing levels of the DVD. The exploratory statistical analysis of the sample population indicates that completion of the RA document was predominantly influenced by whether farmers were Teagasc clients and economic size and viewing the DVD by farmer age, REPS participation and household number. Overall the data obtained suggests that engagement with the COP materials is associated with farmer contact with outside influences (e.g. Teagasc, REPS).

References

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