

Survey on the Status of Enforcement of European Directives on Health and Safety at Work in some Farms of Central Italy

Massimo Cecchini*, Andrea Colantoni, Danilo Monarca, Filippo Cossio, Simone Riccioni

University of Tuscia. DAFNE, Via San Camillo De Lellis, snc - 01100 Viterbo, ITALY
 cecchini@unitus.it

Nine years after the publication of the Italian decree on safety and health in the workplaces, a failure to comply with the obligations that employers should fulfil to ensure the health and safety of workers still remains.

In survey, conducted through farm site inspections, authors were able to highlight the management criticalities can be addressed through organizational interventions. These interventions can allow a company to increase the quality of workers "working life".

The study took into account 25 agro-livestock farms (36 % livestock, 28 % cereal, 24 % hazelnut, 8 % fruit, 4 % vegetable) in the territory of Lazio region, central Italy.

The research shows that over half of the farms (66 %) has not performed the obligations related to the appointment of the figures responsible for work safety and health.

But the most worrying aspect is the lacking of workers' training: it appears to be in rule only in 33 % of monitored companies, and it dramatically decreases (4 %) if we look at the specific training for workers.

Even from the point of view of the required documentation many farms (39 %) are not compliant: the employer should ensure the immediate availability in case of inspection by the supervisory boards.

The last item analysed by the survey is the one concerning the verification of some technical and structural aspects for which 40% of farms is not in compliance with laws. In addition to endangering the safety of workers, this kind of lacking also jeopardizes the health of citizens, as it is often observed the presence of structures whose roofs contain potentially carcinogenic asbestos fibres.

The framework outlined by the research highlights a situation nothing short of disheartening, since it refers to obligations linked to an Italian law (Legislative Decree 81/2008, transposition of several European directives, including 89/391/EEC) that all employers must comply to ensure the health and safety of their workers in the workplace.

This geographical situation, which probably does not differ from the national context, is the demonstration that the incomplete fulfilment of legal obligations of Legislative Decree 81/2008 does not guarantee the safety of those who daily carry out their tasks on the farm; and the confirmation of this can be seen in the Italian annual injury trend with more than 600 000 injuries and more than 500 deaths in the workplaces.

1. Introduction

The high number of accidents and deaths at work that occur each year, not only in Italy but also in other countries (Fanzutto et al., 2015; Dogan et al., 2010) push institutional bodies to a continuous monitoring that highlights, to say the least, an alarming organizational state of farms (Alsamawi et al., 2017).

Table 1 shows the injuries recorded in agriculture in Italy during the years 2011 ÷ 2016 (INAIL, 2017). Several studies focused on the actual work situation (Nordlof et al., 2017; Chiaravalloti et al., 2016, Cecchini et al., 2013): forecasting models were used in some of them (Gautam et al., 2017; Wei et al., 2015). They were able to highlight serious deficiencies in the actual level of education and risk acceptability by workers (which are basic aspects for safety) (Silva et al., 2017; Tchiehe and Gauthier, 2017; Caffaro and Cavallo, 2015; Proto and Zimbalatti, 2010, 2015).

Table 1: Complaints of injury and fatal injury in agriculture in Italy (INAIL)

Year	Complaints of injury	Complaints of fatal injury
2011	47 080	182
2012	42 917	178
2013	40 317	186
2014	39 189	174
2015	37 456	153
2016	35 668	133

So initially it is essential to investigate on workers by means of direct and cross-analysis (Ajslev et al., 2017; Hadijmanolis et al., 2015) in order to ascertain the actual degree of training and information, but above all to investigate the assessment of the conditions in which the same workers perform their duties in order to optimize the working management (Mazur and Marczevska-Kuźma, 2015).

It is important to clearly define the responsibilities of the various figures involved in work safety aspects, without excluding the workers themselves (Legislative Decree 81/2008). The last have great responsibility in carrying out their activities. Especially desirable is a greater interaction between all the people in charge of the prevention and protection service in order to have input on a daily basis making it possible to ensure prevention in the workplace without neglecting the need to improve public policies of prevention (Torres and Jain, 2017; Molinero-Ruiz et al., 2015; INAIL, 2014).

2. Materials and methods

In order to study the proper application of the legislative obligations in relation to the agricultural sector, in compliance with Legislative Decree 81/2008, a survey was carried out on a sample of twentyfive farms operating in the territory of Lazio (central Italy), mainly in the province of Viterbo, for a total of 71 agricultural workers employed. The composition of the sample in term of farming system is shown in Figure 1.

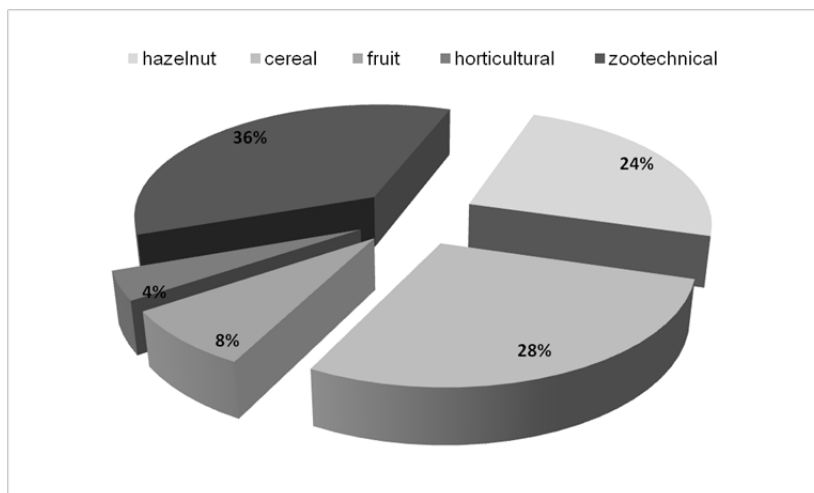


Figure 1: Farming system in the 25 farms

Although the number of monitored farms represents a relatively low sample compared to the number of farms in the surveyed territory (only 25 of the 470 requests for collaboration have been admitted to the survey), they represent the average in terms of territorial extension - 8.4 hectares is the average dimension of the surveyed farms (minimum 2.3, maximum 42.5) against the national average of 7.8 hectares (ISTAT, 2010) - both in terms of number of workers employed in the province's agro-livestock sector - 2.8 workers is the average in the surveyed farms (minimum 1, maximum 14) against a national average of 2.4 workers (ISTAT, 2010).

The study was focused not only on monitoring the presence or absence of certain documents requested by laws but also on the validity of the same because, for certain of these, it is required a mandatory periodic update.

For the achievement of objectives the following four monitoring areas were created: (1) appointment of prevention and protection service staff; (2) training of workers; (3) business records and documents; (4) farm inspections. An appropriate check-list has been prepared (Table 2), organized in order to verify on the spot the

presence or not of legislative non-compliances. Each monitoring area has several sections that allow investigating in more detail the state of compliance with legal obligations on monitored farms.

Table 2: The check list

Farm ID: _____	Farming system: _____	Nr. of workers: _____
Presence of WSR	<input type="checkbox"/> Yes <input type="checkbox"/> No	Upgrade course: <input type="checkbox"/> Yes <input type="checkbox"/> No
Presence of PPSM	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Employer <input type="checkbox"/> Ext. consultant
Presence of occupational physician	<input type="checkbox"/> Yes <input type="checkbox"/> No	Up-to-date medical visits: <input type="checkbox"/> Yes <input type="checkbox"/> No
Fire prevention certificate	<input type="checkbox"/> Yes <input type="checkbox"/> No	Updated: <input type="checkbox"/> Yes <input type="checkbox"/> No
Fire risk	<input type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Presence of extinguishers	<input type="checkbox"/> Yes <input type="checkbox"/> No	Periodic check performed: <input type="checkbox"/> Yes <input type="checkbox"/> No
Presence of firefighters	<input type="checkbox"/> Yes <input type="checkbox"/> No	Upgrade course: <input type="checkbox"/> Yes <input type="checkbox"/> No
Presence of first aid workers	<input type="checkbox"/> Yes <input type="checkbox"/> No	Upgrade course: <input type="checkbox"/> Yes <input type="checkbox"/> No
Presence of first aid kit	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Presence of asbestos	<input type="checkbox"/> Yes <input type="checkbox"/> No	Presence of inspection plan: <input type="checkbox"/> Yes <input type="checkbox"/> No
Workers general training	<input type="checkbox"/> Yes <input type="checkbox"/> No	Upgrade course: <input type="checkbox"/> Yes <input type="checkbox"/> No
Tractor drivers training	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Electrical system compliance certificate	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Grounding system	<input type="checkbox"/> Yes <input type="checkbox"/> No	Periodic check performed: <input type="checkbox"/> Yes <input type="checkbox"/> No
Documentation	Risk assessment document: <input type="checkbox"/> Yes <input type="checkbox"/> No	Updated: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Noise assessment: <input type="checkbox"/> Yes <input type="checkbox"/> No	Updated: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Vibration assessment: <input type="checkbox"/> Yes <input type="checkbox"/> No	Updated: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Chemical assessment: <input type="checkbox"/> Yes <input type="checkbox"/> No	Updated: <input type="checkbox"/> Yes <input type="checkbox"/> No
	MHL assessment: <input type="checkbox"/> Yes <input type="checkbox"/> No	Updated: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Work related stress ass.nt: <input type="checkbox"/> Yes <input type="checkbox"/> No	Updated: <input type="checkbox"/> Yes <input type="checkbox"/> No

In order to carry out a truthful investigation and to limit the presence of errors, the data collection was performed by qualified and experienced persons: all these persons have a documented expertise in health and safety in the workplace.

3. Results

The results obtained from the survey conducted in twentyfive farms highlighted an alarming framework concerning the compliance with law preventing and protecting workers from injuries in the workplace and from occupational diseases. This is especially true when you consider that nine years have elapsed since the publication of the Legislative Decree 81/2008 that, in Italy, regulates and defines the obligations for the prevention of occupational accidents and diseases.

Regarding the type of farms, it is important to emphasize that, both in terms of territorial extension and occupation, there is a significant uniformity in the data obtained from the monitoring; so there is no significant difference between large and small farms.

Looking at the data regarding the appointments of the figures responsible for safety in the workplace, only 34 % of farms appears to be in good standing, while 66 % of respondents has defaulted on at least one appointment. These shortcomings affect the peak (92 %) in the appointment of the workers' representative for safety (WRS).

If we look to the appointment of first aiders and of workers required to implement measures of fire-fighting and the evacuation of workers, 75 % of farms are in compliance with law. Moreover, as it regards the appointment of occupational physician, only 68 % of respondents took steps to fulfil this legal requirement (Figure 2).

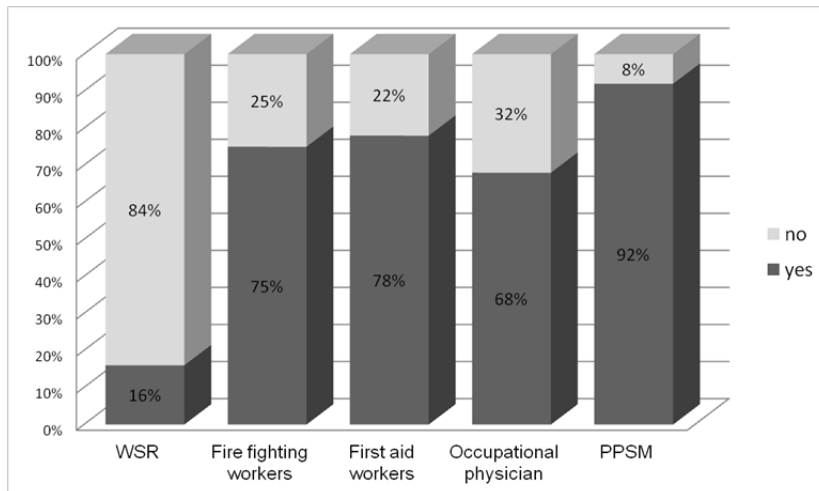


Figure 2: Monitoring area 1: assignment of company figures (PPSM: prevention and protection service manager)

The training of workers (monitoring area 2) is only guaranteed in 33 % of farms reaching a negativity peak of 96 % of not-compliance as it regards the training for workers involved in driving and use of farm machinery (tractors), and a negative peak of 67 % of not-compliance as it regards the general training of workers. It is important to highlight that the training is a legal requirement with the aim of imparting the basic knowledge to prevent accidents and occupational diseases.

Another attention point is the documentation: there is a situation that shows an incomplete farm performance: in fact only 62 % of the sample have a complete documentation as required by the law. And looking for the specific documentation for the risks, it is founded that in the case of manual handling of loads (MHL) and work-related stress assessment, 100 % of companies provided for the implementation of the document. Regarding the documents assessing the physical hazards, we observe that 67 % of the farms have the specific assessment document for noise and 62 % for vibration.

A most worrying situation is found in chemical risk assessment, taking into account that in all farms substances are used for the preservation of agricultural products: only 13 % of farms has a specific document associated with appropriate risk assessment.

Last analyzed entry is the risk assessment document which is present in 95 % of the sample (Figure 3), while it is binded in all farms with at least one worker.

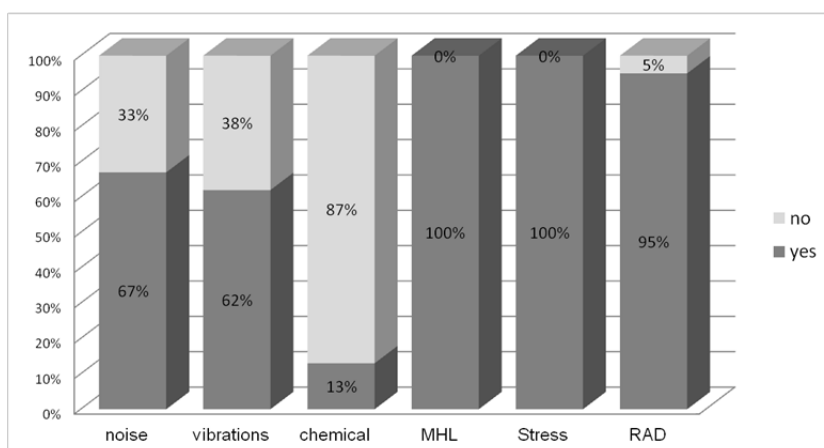


Figure 3: Monitoring area 3: farms documentation

The last analyzed framework consists in farm inspections. This framework reflects the situation found up to here: only 60 % of farms is compliant with law as it regards the checks that must be performed periodically or at least once. One of these checks relates to the presence of asbestos: in this case 59 % of farms appears to

be defaulting; the failure increases to 81 % if we look at the data concerning the verification of electrical earth systems of equipment and facilities. Observing among the survey items, the firefighting devices appears to be in good standing in 84 % of the sample; the first aid kit is in good standing in 83 % of farms (Figure 4).

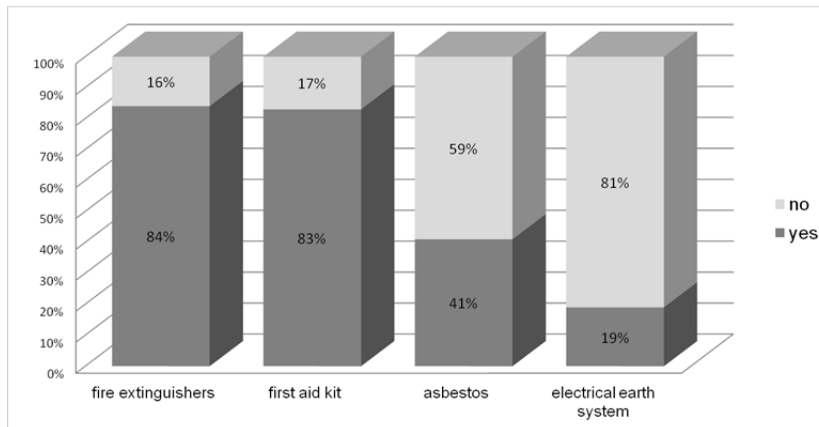


Figure 4: Monitoring area 4: checks

4. Conclusions

The results of the study outline an alarming situation, taking into account that nine years have passed since the publication of the Italian Legislative Decree 81/2008 which has tightened the sanctions for all the figures responsible for health and safety in the workplace. This framework seems related to the injury trend that is annually reported by the agencies responsible for the control and the protection of safety and health at work.

The non-idyllic situation is highlighted by the fact that the percentage that identifies the presence of health and safety managers is only 66 %: so a figure which guarantees a continuous monitoring for legislative compliance is often lacking in farms. And if we look at the context of corporate training, taking into account that this obligation has the aim to guarantee the workers to carry out in a "correct" and "safe" mode their jobs, only 33 % of workers are in good standing: so there is a confirmation that the injury trend on national soil is linked to aspects that are often neglected by employers.

Also from the point of view of the documentation there is a situation that underestimates some aspects for which employers should pay more attention. In fact, while from the point of view of manual handling of loads there is an almost complete and accurate monitoring and attention, from the point of view of chemical risk there is a greater negligence, since only 13 % of all the farms presents a specific assessment document.

So we highlight a worrying disregard on the prevention and protection from chemical risk by everyone in the farm (from employers to the prevention and protection service managers, from the supervisors to the workers). Ultimately, the framework of company audits confirms a negative situation, especially if we look at the monitoring of the presence of asbestos in the structures: being recognized as a carcinogen, the verification of the presence of asbestos should be conducted on all farms and, where discovered its presence, there should be a clearance, or, in the best of conditions, a continuous monitoring. These kinds of controls are done only in 41 % of surveyed farms. Also observing the data concerning the first aid kit and fire detection/extinguisher systems, even if the data is more comfortable, it remains a small percentage of activities in which such aspects are neglected, so the farms are non-compliant with current regulations.

At the conclusion of this work, the presence of a significantly worrying situation relating to the prevention and protection in the workplace is once again highlighted, particularly in light of the fact that it's been several years since Italian Decree on safety and health in the workplaces was published.

Unfortunately, on the one hand the lack of continuous monitoring by the competent territorial bodies, on the other the superficiality of those who should provide in their working environments more safety, are the contributory causes of a national injury trend still too high; therefore there should be greater accountability from all the figures involved in health and safety aspects in the workplace in order to significantly reduce accidents, fatal injuries and especially occupational diseases which show a significantly increasing trend during the last years.

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