

PREVENTION OF MSDs IN VITICULTURE

1. Organisations involved

Mutualité sociale agricole du grand sud (MSA: Agricultural Mutual Benefit Society).

Central fund of the Mutualité Sociale Agricole (CCMSA)

2. Description of the case

2.1. Introduction



Since 2002 in France viticulture has been the main sector of activity affected by musculoskeletal disorders (MSDs): 565 cases of MSDs were recognised in 2006, or five times more than in 1996.

The questions were therefore posed based on a dual approach:

- How to stimulate a dynamic of MSDs prevention at the level of the network of occupational health and safety (OH&S) advisers and industrial doctors of the Mutualité Sociale Agricole (MSA)?
- How to respond to institutional control at the local level in small organisations and carry out concrete actions in the field despite three difficulties:
 - The industry is not keen to take action;
 - The structure of the industry is not uniform throughout the territory; the number of firms, operations and employees and the size of the cultivated areas are variable depending on the locality;
 - Increasingly fierce global competition is resulting in a situation of economic crisis which is exacerbating the production and quality constraints of the winegrowers.

Following this initial review and based on its know-how in implementing the "cutting knife approach" in the meat industry¹, the MSA decided to use its knowledge to adapt this initiative to viticulture.

It was therefore investigating the possibility of combining the MSDs prevention approach with an industry-specific approach, and in particular use of the pruning shears tool.

For this purpose, a study carried out by a task force at the initiative of the "Caisse centrale de la mutualité sociale agricole" (CCMSA) has highlighted the lack of knowledge and expertise regarding both the pruning activity, and the choice and maintenance of tools. These problems are due to

¹ "The cutting knife approach" proposes helping those in the meat industry to undertake management of a project to improve the cutting power of knives. Now, it has been demonstrated that a knife that cuts well allows better quality work, and is also an important factor in combating MSDs of the upper limbs, from which workers in the meat industry frequently suffer. Importance of the choice of tool and of maintaining its cutting power (sharpening): see INRS data sheet.
http://www.inrs.fr/hm/la_demarche_couteau_qui_coupe_pour_mieux_choisir.html

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fundamental technical shortcomings not compensated for by appropriate training during the recruitment and induction of new employees.

The act of pruning testifies to the winegrower's expertise and determines the future of the vine. In particular, pruning will be decisive for the health of the plant, and subsequently the quality of the grape harvest and, hence, the economic profitability of the vineyard.

Accordingly, establishing a training session on improvement of the cutting tool and its use not only helps prevent MSDs but also helps "do the job properly".

Given the lack of interest shown by the viticultural sector concerning the issue of MSDs, the MSA had to arouse the interest of the industry by identifying occupational shortcomings, even though they are necessary for learning the job, such as the lack of knowledge and expertise regarding the sharpening of pruning shears.

This technical approach was an opportunity to persuade the industry by showing the benefits of the approach; a concrete, effective and easy-to-implement application as one of the possible approaches to occupational health and safety. This initiative made it possible to examine other components of the work such as its organisation, its planning with job rotation, cultivation techniques and other issues such as back pains.

2.2. Aims

This approach included two objectives:

- Stimulate a dynamic of MSDs prevention at the level of the network of OH&S advisers and industrial doctors of the MSA in the viticulture sector;
- Carry out concrete actions in the field.

2.3. What was done, and how?

The viticulture sector can be characterised by the multitude of localities bearing their own specific features. What was wanted therefore was not training at the national level but relaying of the training in each locality. To do this, the CCMSA initiated an action at the national level by training its twin network of OH&S advisers and industrial doctors.

The viticultural sector has 60,000 farmers and 500,000 employees, so that levers had to be identified to facilitate the establishment of such an occupational health and safety approach.

The CCMSA chose to obtain support from competent local inter-company personnel to coordinate training in the field as part of a three-member team with the OH&S adviser and the industrial doctor, especially for the technical part concerning tool selection and maintenance.



This training for the various local stakeholders (advisers, doctors and relays in the sector) made it possible to unite the forces in the field and thus be able to take action subsequently in the very heart of the various viticultural localities.

However, the fact that the occupational health and safety specialist and a viticulture specialist work together does not guarantee that concerns of the trainees coming for training will disappear. It is essential to "prove oneself" and it is only at the end of the training course that the barriers fall and the usefulness of the training is recognised. Subsequently, word of mouth becomes the best medium for communicating the success of this training.

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The programme began at the end of 2005, at the national level, with the establishment of experimental training sessions in use of the training module on "Prevention of MSDs of the upper limbs in viticulture" with relays in the industry and several OH&S advisers. This experimental session provided training for 30 relays and 12 OH&S advisers.

Given the satisfaction of the trainees, the programme was deployed in the local network of MSA organisations (OH&S advisers and industrial doctors) and then to further relays in the industry.

During the following winters, including that of 2008-2009, these training sessions were deployed in the MSA network of OH&S advisers and industrial doctors and to further relays in the industry.

Lastly, in 2008, at the request of certain manufacturers, but also because they are important stakeholders, the programme was presented to the leading manufacturers of pruning shears, emphasising their role with regard to prevention of MSDs (design, selection and maintenance of equipment).

Application of the approach in the "Fédération des caisses de MSA du Grand Sud" (Aude and Pyrénées-Orientales regions of southern France)

In this region, 40% of agricultural activity concerns viticulture. There are 5,000 viticultural farms, with few employees (4,200 in total). These are therefore microfarms or very small enterprises, not very highly organised, grouped together on an identified locality which is often synonymous with the "canton" (the geographic area of a group of "communes").

Ambitious objectives have been set by the Board of Directors of the FGS (Fédération du Grand Sud):

- 100% of young people in training;
- 100% of farms certified as "sustainable agriculture" farms, and;
- 30% of other farms are to be covered by this training programme by the end of 2010, i.e. 210 training sessions, which would represent 2,200 people trained.

To achieve these objectives, the seven advisers of the OH&S Department and four relays in the industry were trained in the approach.

Four main aspects guided thinking to "establish neighbourhood OH&S".

The importance of the territory

In this particular locality (a fragmented sector), the MSA has to apply to the network of elected representatives of the sector covered by the fund to obtain access to farmers in the viticulture sector.

The offices of the "cantons" are therefore stakeholders in the occupational health and safety programmes. The offices of the "cantons" consist of a chairman and an executive committee with elected representatives. These elected representatives are chosen from the farmers, employees, employers and trade union representatives. Elections are held every five years. The offices of the "cantons" organise meetings in the evening to bring the farmers together. Some advisers are there to present first-hand accounts or give advice. This requires strong commitment by the advisers in the evening to attend these meetings.

The programme was undertaken in the "cantons" by raising the awareness of the chairmen of the "cantons", who are professionals promoting this programme in their dual role (as farmer and as elected MSA representative).

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The training was then provided for the members of the offices of the "cantons". Following this, and supported by this neighbourhood network, the representatives of the "cantons" went to meet the farm managers personally to convince them to come for training and involve their employees.

Inter-company training sessions were held in response to the request of the offices of the "cantons".

The cooperative cellars are also very interesting targets, because they make it possible to reach a large number of farms in a given locality.

An initial meeting with the decision maker, i.e. the chairman of the cooperative cellar, gives a political aspect to the programme. The prevention of MSDs becomes as important as the prevention of plant-related diseases. The action taken by the chairman lends weight for organising training for the Board of Directors. This training then gives full legitimacy to the members of the Board and the crop technician to propose the approach to all the winegrowers who come under the control of the cooperative cellar.

Organisation of the training

It is the offices of the "cantons" or the cooperative cellars that take charge of the logistics involved in inviting the participants to attend and choosing a training venue.

The MSA provides training as a service provider and supervises redundancies in the invitations, because a given winegrower may be invited to attend by both the cellar and the office of the "canton".

The training session lasts about three hours, alternating presentations by the OH&S adviser and industry relays and questions and comments by the winegrowers.

Examples of statements by winegrowers:

- "I have been working since April 2008, on the vine and the tractors, and I've heard about MSDs because I had my first tendinitis in the shoulder a few months ago. I come from Brittany where I received general-purpose training (dairy, pig and cereal farming)."
- "I'm a hairdresser, I'm not from the region and I'm doing the training to learn the job. Even though I've done grape-picking in the Champagne region. I know MSDs well because my mother has had two operations of the carpal tunnel."
- "I'm a seasonal worker too and here we are offered a permanent contract so I'm doing training in pruning. I don't know about MSDs, as yet I haven't had any."
- "On a farm last week, the boss said that in any case we're all worn out in the end and that it's part of the job..."

The training covers the following points:

- An introduction to establish the link between pain and work;
- "What about MSDs in your case?";
- Overview of the statistics;
- Explanation of the differences between an occupational injury and occupational diseases, with an explanation of how to report an occupational injury;
- Anatomical explanations and explanations of the symptoms, especially for the carpal tunnel syndrome;
- Overview of the consequences for the enterprise and the employee;
- Explanation of the "5 M's":

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The "5 M's" is the approach recommended and promoted by training, which consists of an overall approach to work situations to be adopted by trainees.

These "5 M's" are both the 5 causes of occurrence of MSDs and the 5 means of action from an occupational health and safety viewpoint. Since the causes of MSDs are multifactorial, it is important to ask oneself questions about each of the aspects, to be capable as it were of establishing one's own diagnosis and thinking about the potential for change offered by one's own work situation.

The "5 M's" are:

- Labour ("**M**ain d'oeuvre"): training, information, experience, type of contract, status, system of pay, equipment/clothing appropriate for the activity or not;
- The **M**ethod: Working hours, sustainable pruning of the vineyard over several years or not, organisation of teams, alternation of jobs, work planning, preliminary pruning, recruitment system.
- Equipment ("**M**atériel"): type of tools available, choice of tools (by whom? according to what criteria?), maintenance;
- The **M**aterial: type of pruning practised, number of pruning shear operations required, nature of vine varieties (hardness, robustness), type of vine (height, density, tying-up, etc.);
- The environment ("**M**ilieu"): climatic conditions taken into account? Characteristics of the land (slope, nature of soil, etc.)?

This approach is then illustrated by examples, and in particular by explaining the differences in work methods from one farm to another, differences of equipment (pruning shears for left-handed workers, different cutting capacities, etc.), the material (old vineyards, young vines), etc.

- The "5 M's" in pruning: illustration of the alternation of jobs, rotation between work stations and the importance of breaks (and not just a pause in the activity);
- Risk factors: stress;
- Recommendations concerning labour;
- Recommendations concerning equipment;
- Recommendations concerning sharpening: reminder of the importance of the pruning angle, the choice of pruning shears matching the size of the hand, taking time to measure the size of the hand.

The instructive contribution of the training centres

Treating occupational health and safety in training organisations as an issue for the industry, in the same way as pruning techniques, is a demand of the MSA that has been favourably received by school heads and the directors of training organisations. The objective is to make instructors independent regarding these MSDs issues, and two of them were therefore trained from the start of implementation of the programme in 2005. They are now capable of leading training sessions by themselves, even though they may, at their request, be supported by an OH&S adviser.

2.4. What was achieved?

This institutional approach to prevention of MSD corresponds to the first level of prevention: alerting, raising awareness and involving those working in an industry consisting of small farms.

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Number of people trained

The summary of people trained (as at 27 April 2009) is as follows:

- 27 MSA organisations out of 44 for which at least one OH&S adviser, one industrial doctor or one relay instructor has been trained;
- 150 people trained, of whom 120 are still active or in the MSA network.

This represents a total of:

- 50 relay instructors of whom 45 are still considered as relay instructors by the MSA organisations;
- 36 industrial doctors of whom 31 are still in the OH&S network of the MSA;
- 55 OH&S advisers of whom 47 are still in the OH&S network of the MSA.

This training initiative is normally coordinated by a three-member team (OH&S adviser, industrial doctor and relay instructor) to allow complementarity of the three players during field training.

At present the three different "trades" have been trained in practically all the MSA organisations, which is very satisfactory from an efficiency viewpoint.

As at 27 April 2009, 420 training sessions had been carried out in the field since the end of 2005, i.e. 4,636 people had been trained, with an average of 11 people per session (12 recommended).

This included:

- 2,495 salaried workers, i.e. slightly more than half (54%);
- 766 non-salaried workers, i.e. about 16% (2007: 25%, 2009: 16%);
- 1,375 students or trainees, i.e. about 30%.

On average, each MSA organisation carried out about 15 training sessions and trained 150 people.

The "Fédération des caisses de MSA du Grand Sud", through its strategy of widespread dissemination of training, has already carried out more than 100 training sessions and trained more than 1,200 people.

Other MSA organisations have been less active, which can be explained by the fact that the viticultural sector is less important on their territory, or by the choice of different priorities.

These results are nevertheless encouraging and show strong involvement in the field, despite the difficulties increasingly faced in mobilising winegrowers to take part in this training related to problems that are often cyclical.

Impact study

An impact study of this training programme on the prevention of MSDs started in October 2008 and will be completed in April 2010. Its main objective is to identify the effects on winegrowers in the field, based on:

- experience and attitude to MSDs, or even changes in the observed practices of workers and winegrowers;
- feedback by the occupational health and safety stakeholders (consisting of the OH&S teams and relays in the industry) concerning the use of this training.

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Regional working groups bringing together OH&S advisers, industrial doctors and relays in the industry will allow sharing, discussion and review of the initial results achieved during the first pruning season.

The module has been revised by the users, amended and adapted. One of the objectives of evaluation is to capitalise on the needs and developments made to the module, but also to help teams of instructors develop strategies adapted to the specific local features of their operations, the enterprises involved, local practices, etc.

Initial findings

However, some initial findings concerning this project may be noted.

Regarding transfer between the CCMSA and the network:

- Contribution to the network of knowledge and useful information concerning MSD and possible effective approaches to occupational health and safety for the viticulture sector;
- Definition of an OH&S strategy and implementation of the programme in the field to strengthen complementarity in the OH&S adviser/industrial doctor tandems.

Regarding field training:

- Satisfaction of the winegrowers with the advice received during the training;
- Numerous adaptations of the module by the OH&S teams to be consistent with the specific features of their viticulture localities;
- Production of specific materials (brochures, DVDs, mock-ups);
- Numerous OH&S recommendations made to the winegrowers to initiate possible changes concerning not only the equipment but also the outdoor work environment, the vine, work organisation and labour.

Regarding vine pruning:

- Increased awareness by the winegrowers of the relationship between their work and their health;
- Knowledge and discussion on the organisation of their work, practices that could reduce the occurrence of pain;
- Easier application of occupational health and safety principles for employees of farms in which the manager is aware of MSD risk prevention than for other farms.

2.5. Success factors

Adaptation of the module by each participant, with adjustments and changes in the training materials and broadening of the target audience (transfer of the tool to other sectors), is one of the main success factors.

Finally, mobilisation of all local stakeholders was a decisive factor for the success of this programme.

To sum up, the main success factors of this initiative are as follows:

- Direct relationships preferred to formal communication;
- Identification of good relays to convey "safety" messages;
- Permanence of medium- and long-term policy guidelines;
- Relying on sharing and development of the skills of stakeholders at all levels;
- Encouraging coordination and promoting the stakeholders and their activities (advisers, doctors, relays in the industry) by synergising competencies.

2.6. Further information

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2.7. Transferability

This initiative has already been transferred in France and is currently being used in orchardry in several regions. Similarly, such initiative can be used in other countries.

It is also used by relays in the industry as part of their work (Chamber of Agriculture, training organisation).