EUWelNet
Coordinated European Animal Welfare Network

Coordinated European Animal Welfare Network (EUWelNet)

Deliverable 5

Title

Report presenting the rationale of the undertaken strategies for knowledge transfer and the results of their implementation, including the reasons for success or failures

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Contents

Abstract

Work Package 3 is the largest work package in the project and its objectives are to develop and test different types of strategy designed to transfer knowledge to competent authorities, animal welfare officers, veterinarians, producers and other stakeholders in order to improve the level of understanding and implementation of four specific examples of EU legislation on animal welfare. Different types of knowledge transfer strategies were developed in the work package, including a web tool, five fact sheets, an e-learning tool, and Standard Operating Procedures compiled by a network of experts on animal welfare at slaughter. Each strategy was developed to meet a particular need and the rationale for each strategy is explained in the report. During the test exercises, participants reacted in a positive or very positive way and mentioned that knowledge transfer was important to improve compliance with EU animal welfare legislation. The strategies were well received and in many cases the participants adopted the strategies and/ or were ready to recommend the training sessions to their peers. The results of simple tests indicate that the strategies are useful to improve knowledge about animal welfare. The participation of stakeholders through the Advisory Board was very useful, although the process would have benefited from further detailed discussion with the farming community, particularly with small scale producers.

1. Introduction

Work Package 3 is the largest work package in the project and its objectives are to develop and then test different types of strategy designed to transfer knowledge to competent authorities, producers and other stakeholders in order to improve the level of understanding and implementation of aspects of four specific examples of EU legislation on animal welfare. The work package is divided into the following four tasks: Task 3.1 (Broiler Directive), Task 3.2 (Pig Directive - Enrichment material), Task 3.3 (Pig Directive - Group-housing of pregnant sows) and Task 3.4 (Killing regulation).

This report has the following objectives:

- To describe the knowledge transfer strategies undertaken in each task and their rationale;
- To summarise the results of the test exercises carried out to assess the effectiveness of the knowledge transfer strategies;
- To discuss the strengths and weaknesses of the knowledge transfer strategies and relate them to the needs of a future Coordinated Animal Welfare Network;
- To discuss potential ways of ensuring that the training materials developed in this work package are distributed as widely and effectively as possible.

2. Description of the knowledge transfer strategies developed in each task and rationale for selecting each strategy

A brief description of the knowledge transfer strategies developed in this work package is given below. For a more detailed description of the strategies, please see the list of appendices on page 16.

Task 3.1: Broiler Directive

The Broiler Directive (2007/43/EC) is unique among other Directives in that it uses data collected at abattoirs and on farm to monitor on farm broiler welfare and decide the maximum permitted stocking density. By bringing technical personnel from the competent authorities together, Task 3.1 has been able to identify differences in approach across Member States as well as training areas that deserve particular attention in order to improve agreement and harmonization of methods and guidance material between Member States. A web tool to support harmonization of data collection and use, as well as to provide training in selected areas, was seen as the most effective strategy to facilitate the exchange of information among Member States (see appendices 1 and 2). The main objective of the web tool is to facilitate communication among competent authorities and enable them to share their experiences regarding the following aspects:

- The measures used in their own countries;
- The methods and reference material used to collate and assess these measures in each country;
- The enforcement actions;

- The way that each country has chosen to work with the broiler producers to rectify cases where welfare issues are identified.

A webtool offers several advantages over other knowledge transfer strategies, as it allows competent authorities to directly share experiences through forum pages and gives anonymous analysis of the use of different measures across the Member States. Additionally, the webtool contains self test quizzes to assist harmonised approaches to assessment and provides the possibility for competent authorities to give ranking information on practical aspects of their use of measures in the field. Indeed, using the webtool, full information from 13 Member States, and partial information for 12 Member States was collected.

Task 3.2: Pig Directive – Enrichment material

EU Directive 2008/120/EC requires professional judgement to assess enrichment and tail docking requirements on pig farms. However, the enrichment and tail docking requirements have been inconsistently implemented in many Member States, and Food and Veterinary Office (FVO) missions have reported difficulties in compliance. Since the enrichment and tail docking requirements are based upon extensive welfare research on tail biting in pigs (EFSA scientific opinion, 2007) it was hypothesised that improving knowledge amongst those assessing the requirements might improve the consistency of assessment. Task 3.2 therefore developed an e-learning knowledge strategy to improve the consistency of such professional judgements and examined its suitability.

An e-learning tool was proposed as the most efficient strategy to provide extensive and detailed scientific knowledge to competent authorities and in that way to improve compliance with EU Directive 2008/120/EC as it relates to enrichment and tail docking requirements. As described later, this strategy would support farmer-focused initiatives. The e-learning tool is currently available in seven languages (Dutch, English, French, German, Italian, Spanish and Polish) at https://www.euwelnetpigtraining.org. Further languages can be added later. The e-learning tool consists of an online tutorial on a dedicated website with a concise synthesis of the scientific data underpinning EU legislation on tail biting and enrichment as well as supporting photographic and video material. The tool focuses on clarifying the suitability of different enrichment materials by comparing them in relation to four dimensions: "is it 'edible, chewable, rootable, and destructible'?" In addition, a "discussion tool" was produced to enable official inspectors to trial a simplified welfare outcomes assessment during official visits. It consists of a leaflet; scoring sheet and guidance document (see appendices 3-6).

Task 3.3: Pig Directive – Group-housing of sows

EU Directive 2008/120/EC requires that pregnant sows are housed in groups. The implementation of this requirement has encountered some knowledge related bottlenecks, including the lack of technical expertise as to how group-housed sows should be managed as well as difficulties in interpreting some aspects of the legislation. However, the specific problems to be addressed vary considerably across producers and competent authorities. For example, small scale producers may use group-housing systems that require low initial investment, whereas large scale producers may prefer more expensive systems. Since each group-housing system poses specific management challenges, knowledge transfer exercises should be done mainly on farm and should be tailored to the specific needs of the audience.

Focused fact sheets and a supporting Power Point presentation were developed in an attempt to overcome the above obstacles.

Fact sheets and Power Point presentation were considered to be the best material to assist trainers in practical, on-farm sessions in order to provide knowledge that could help increase the level of implementation of EU Directive 2008/120/EC as it relates to group-housing of pregnant sows.

The five fact sheets consist of two pages each and address different aspects related to the group-housing of pregnant sows, including basic information on the welfare needs of pigs (Fact sheet A), management and husbandry strategies to improve welfare and performance of group-housed pregnant sows (Fact sheets B, C and D), and difficulties in the interpretation of EU legislation on group-housing of pregnant sows (Fact sheet E). Fact sheets A, B, C and D are intended for pig producers, whereas fact sheet E is intended for competent authorities.

The associated Power Point presentation is based on the contents of the fact sheets and it is intended to serve as support material in face-to-face training sessions.

The fact sheets are available in four languages (Dutch, English, Spanish and Polish) (see appendices 7-11 for fact sheets in English; 12-16 for fact sheets in Dutch; 17-21 for fact sheets in Polish, and 22-26 for fact sheets in Spanish). The Power Point presentation is in English (see appendix 27)

Task 3.4: Killing regulation

Since the new Regulation (EC) No. 1099/2009 came into force, many competent authorities, official veterinarians and food business operators have encountered problems with the implementation of some requirements thereby increasing the risk of non-compliance. Some of the problems relate to the quality of stunning and its assessment. To solve them, the Regulation refers to the need for each Member States to develop a mechanism to provide scientific support to national contact points. However, as the level of scientific expertise in this field varies across Member States, it is important that knowledge is provided by an international scientific network. The Regulation also requires a qualified Animal Welfare Officer in each slaughterhouse to ensure compliance with the Regulation and develop Standard Operating Procedures. Therefore Task 3.4 focused on establishing an appropriate network to share expertise and on developing Standard Operating Procedures to help implement the welfare requirements at slaughter (see appendices 28 and 29). During the development of the Standard Operating Procedures, the network reviewed the templates in the study countries (UK, Sweden, France, Spain and The Netherlands). The Standard Operating Procedures had the following objectives:

- To assist food business operators and animal welfare officers to cope with the technical challenges arising from implementation of the Regulation (EC) 1099/2009 and thereby help ensure compliance;
- To provide the competent authorities and official veterinarians with a method to assess compliance;
- To provide recommendations on the control measures and monitoring procedures to ensure proper stunning.

Table 1 provides a summary of the knowledge transfer strategies developed in each task and their rationale.

Table 1 - Knowledge transfer strategies developed in each task, their rationale, target audience, language and where the full description can be found

Task	*Strategy*	*Rationale*	*Target audience*	*Languages*	*Full description*
3.1 Broilers	Web tool	Need to exchange information to harmonize data collection and use	competent authorities	English	Appendices 1 and 2
3.2 Enrichment and tail docking on pig farms	E-learning tool	Need to provide extensive and detailed scientific knowledge to CAs.	competent authorities and veterinarians	Dutch, English, French, German, Italian, Spanish and Polish	Appendices 3 to 6
3.3 Group housing of sows	Fact sheets and Power Point presentation	Need for effective material to assist trainers in practical, on-farm sessions	competent authorities, veterinarians and pig producers	Fact sheets in Dutch, English, Spanish and Polish Power Point in English	Appendices 7 to 27
3.4 Killing	Scientific network and Standard Operating Procedures	Need to share scientific expertise and provide guidelines to assess stunning	competent authorities, animal welfare officers	English	Appendices 28-29

3. Results of the test exercises

General comments

The effectiveness of a knowledge transfer strategy can be evaluated at four different levels:

- Reaction: how does the target audience respond to / perceive the strategy?
- Learning: has the strategy improved the knowledge of the audience?
- Behaviour: does the audience use or intend to use the knowledge provided?
- Results: is there any measurable effect of using the provided knowledge, i.e. is there an improvement in animal welfare?

Due to the short duration of the project, it was not possible to assess the results of the knowledge transfer strategy in terms of animal welfare improvements. However, in all tasks we assessed the reaction of the audience and in some cases we were also able to gather data on learning and behaviour (see below). It is important to remember though, that in the future it would be advisable to test whether the knowledge transfer strategies have a real impact on the welfare of animals.

Task 3.1: Broiler Directive/ web tool

The online questionnaire and workshop exercises enabled us to identify priority areas for knowledge transfer and training. For example, food pad dermatitis, hock burn, deaths on arrival and total rejections were identified as measures of medium to low priority in terms of knowledge transfer because there are methods that are already well accepted by competent authorities. On the other hand, breast lesions, cellulitis, emaciation, joint lesions, respiratory problems, scratches, wing fractures and a number of environmental measures were identified as having high priority in terms of knowledge transfer. There is significant variability in the stage of implementation between Member States, and shared guidance and technical information provided by the web tool may be of value in the set up process for those Member States engaged in this process.
The web tool is a shared technical forum for the specialists in the Member States who work with the Broiler Directive and its structure was developed taking into account the results of the training exercises. Currently the Webtool is accessible only to technical specialists from the Member States, and contains information on how these Member States collect and use current information. When agreement on the composition of a 'wider group of participants' is achieved, then there is potential for this to be used by non specialised users for training and information. The comments on the early use of the web tool and the workshop activities indicate that this forum has real value in creating confidence in the Member States personnel to make and frame technical and professional judgements in enforcement – with the knowledge that they share techniques and guidance with other Member States.

Task *3.2: Pig Directive – Enrichment material / e-learning*

The e-learning tool, which was available in several languages (English, French, German, Spanish, Polish, Italian, Dutch), was evaluated by 121 participants from over 10 countries; these included official inspectors, certification scheme assessors and advisors. All participants completed a quiz twice: Control group participants completed the second iteration *before*, and

Training group participants *after*, viewing the training. Data were analysed using nested models in MLwiN (Iteration within Person within Country). P values described below represent significant *Iteration* (1 vs. 2) x *Group* (Control vs. Training) interactions, indicating a divergence between groups following training.

Overall the results from the evaluation were very encouraging:

1. Training helped participants identify enrichment materials that were less likely to achieve compliance. Participants were asked to rate the importance of modifying the enrichment defined in nine scenarios from 1 (not important) to 10 (very important). After training, participants were significantly more likely to identify the welfare problems of two scenarios: where wood was provided but not being manipulated (p=0.0004) and where a chain was present and being manipulated (p=0.003).
2. Training significantly increased participants' rating of the importance of modifying a barren environment. Participants were asked to rate risk factors for tail biting from 1 (no risk) to 10 (high risk). Participants' initial mean rating for barren environment was already above 9 but nonetheless increased significantly after training (p=0.002). Conversely, training led to moderate decreases in risk ratings for heat stress (p=0.0003) and high stocking density (p=0.005) which is accordance with the information provided during training.
3. Training significantly increased the proportion of respondents correctly identifying that a farm with no evidence of tail lesions should stop tail docking (McNemar's test; p=0.001).
4. Training helped participants to identify scenarios with possible non-compliance. Training increased the reported importance of modifying enrichment in the two scenarios where non-compliance was less obvious: a) tail lesions present; pig provided with but not manipulating straw that was wet and dirty (p=0.01), and b) no tail lesions; chains provided and partly used (p=0.006).
5. The feedback questionnaire for the training tool indicated that it was well received, with mean scores of at least 7.5/10 for all questions. The greatest mean response (8.7) was attributed to the statement recommending the e-learning tool to others.

In summary the tool appeared to be well received by participants. Undertaking the e-learning exercise had a significant influence on participants' understanding of the legislative requirements, the importance of modifying certain enrichments and of certain tail biting risk factors.

Task 3.3: Pig Directive – Group-housing of sows / fact sheets

The fact sheets and the Power Point presentation were used in a total of 14 training sessions with 65 pig producers in Poland, Spain and the Netherlands. Each training session lasted half a day. The small number of participants per session (an average of 4-5 producers per session) allowed the trainers to address the particular needs and interests of the audience in a participative and interactive way. The producers attending the training sessions had different degrees of experience with group-housed pregnant sows and they also used a variety of feeding and housing systems on their farms. The training sessions included the following sections:

- A short introduction describing the objectives of the training;

- A review of the EU legislation on group-housing of pregnant sows with particular emphasis on areas that are perceived as having caused difficulties in terms of interpretation;
- A review of the main husbandry and welfare problems in group housing of pregnant sows, (again, using the fact sheets and the Power Point presentation as support material);
- A general discussion.

After the session, the participants were asked to fill in a questionnaire to assess to what extent they found the session useful to increase their knowledge on the legal and practical aspects of group-housing of sows. In average, the participants gave an overall score of 6.2 on a 0 to 10 scale, 0 meaning that the training was not useful at all and 10 that it was the most useful training session they could think of. Although the overall score may seem low, it is important to take into account that farmers with more limited experience tended to find the training material particularly useful. Moreover, some farmers pointed out that such an initiative would have been very useful before the transition to group-housing of sows. Additionally, participants were asked if they would recommend the training session to peers, and 82% of them answered "yes".

Task *3.4: Killing regulation / template of Standard Operating Procedures*

The effectiveness of the implementation of the SOPs was assessed in 20 slaughterhouses[1] located in five Member States (France, Spain, Sweden, The Netherlands and the United Kingdom). The assessment started with a first visit to introduce the Standard Operating Procedures to the Animal Welfare Officer. After an average period of two months, a second visit to the slaughterhouses was carried out to evaluate the implementation effectiveness by conducting face-to-face interviews with the Animal Welfare Officers and official veterinarians, direct evaluation of the monitoring procedure, and assessment of the number of failures in the assessment of unconsciousness (false positive and false negative).

The level of implementation of the Standard Operating Procedures varied among slaughterhouses, depending on the slaughter throughput, the species and the country, and was classified in 4 categories:

1. Five slaughterhouses already had Standard Operating Procedures similar to those developed in the EUWelNet project and no implementation of the EUWelNet Standard Operating Procedures was carried out, although they were used to check and validate their own protocols.
2. Four slaughterhouses had Standard Operating Procedures with lower standards compared with the EUWelNet Standard Operating Procedures and these were used to improve their own Standard Operating Procedures.
3. Six slaughterhouses did not have Standard Operating procedures and adopted the EUWelNet ones.
4. Five slaughterhouses did not have Standard Operating Procedures and were not willing to adopt the EUWelNet ones.

[1] 6 cattle plants with captive bolt stunning, 5 sheep plants with electrical stunning, 1 sheep plant with captive bolt stunning, 4 pig plants with gas stunning and 4 poultry processing plants with electrical waterbath stunning

In summary, then, 15 out of 20 slaughterhouses either adopted EUWelNet Standard Operating Procedures or used them to validate / improve their own procedures. The remaining five slaughterhouses were not willing to adopt or even use EUWelNet procedures despite the fact that they did not have any and the main reason given to explain this was the short period of time (2 months) given for its implementation and the time of the year (summer holidays).

Summary of the test exercises:

In all tasks, the participants reacted in a positive or very positive way and mentioned that knowledge transfer was important to improve compliance with EU animal welfare legislation. When learning was assessed, the strategies appeared useful and in many cases the participants adopted the strategies and/ or were ready to recommend the training sessions to their peers.

4. Positive and negative points of the strategies and things that should be improved. What can we learn from this Work Package to support a future Network?

As explained before, target audiences were extremely positive about the opportunity to exchange technical information, to share training exercises, to meet with peers and trainers and to discuss technical and practical aspects. For example, in Task 3.1 (Broiler Directive), the Member States' representatives very clearly stated that spending time in a technical forum where they were able to speak in confidence about the methods and approaches used in their own countries, and to share and learn the technical and implementation details of what other Member States do is of great value in identifying and resolving technical issues and questions which each country may otherwise have had to deal with in isolation. Similarly, most users of the e-learning tool developed in Task 3.2 (Pig Directive – Environmental Enrichment) and those attending the training sessions in 3.3 (Pig Directive – Grouping-housing of sows) were very positive and would recommend such training to peers. In Task 3.4 (Killing Regulation), the response of the Food Business Operators, Animal Welfare Officers and official veterinarians about the role of the technical network of scientists and the development of improved Standard Operating Procedures was generally positive. They believed that the Standard Operating Procedures are comprehensive, well explained and effective for the monitoring of consciousness and an improved effectiveness of waterbath stunning in poultry by trained Animal Welfare Officers and operators. Clearly, implementation of the Regulation will be facilitated by appropriate training of Animal Welfare Officers and operators in the monitoring of consciousness.

Collaboration between scientists was effective in producing a set of knowledge transfer resources that were valued by the intended audience.

Additionally, the participation of stakeholders in the Advisory Board (AB) was very useful. For example, the AB gave very useful feedback on the first drafts of the e-learning tool developed in Task 3.2 (Pig Directive – Environmental Enrichment) and on the fact sheets developed in Task 3.3 (Pig Directive – Group-housing of sows). The process would likely have benefited from further detailed discussion with the farming community and, in particular, with small scale producers. This became particularly apparent during some of the test exercises in task 3.3 (Pig Directive – Group-housing of sows), when small farmers

mentioned that they may have more difficulty in gaining access to knowledge transfer resources than would large, industrial producers. This could hamper the uptake of EU animal welfare legislation by small farmers who may feel that such legislation puts them at a disadvantage compared with large producers.

In relation to the role played by the Advisory Board it became clear that ongoing interaction with DGSANCO and EFSA to formulate the knowledge transfer strategies is very important. For instance, the EUWelNet Standard Operational Procedures aimed initially to monitor unconsciousness in animals. However, the current EFSA opinion on monitoring procedures at slaughter concluded that attention should be focused on indicators of consciousness. Following this opinion, the EUWelNet approach was changed to focus on indicators of consciousness or recovery rather than unconsciousness. Consequently, Animal Welfare Officers and Official Veterinarians were encouraged to assess indicators of consciousness, because it is in these cases that corrective actions have to be taken.

The experience also indicated that producing multi-languages material is essential for successful knowledge strategy in many cases. As previously explained the knowledge strategies that have been developed in tasks 3.2 (Pig Directive-Enrichment material) and 3.3 (Pig Directive-Group-housing of pregnant sows) are available in several languages. This was considered as a very positive feature by many of the participants in the test exercises. In fact, some of these exercises would not have been possible had the resources been available in English only. Having the resources available in several languages is not only particularly important for farmers but it may also be very useful when the target audience is made up of competent authorities.

Several types of training resources have been developed in this Work Package, including web sites, e-learning tools, written material and networks of experts. The decision as to which one(s) of these types is/are the most relevant will depend on the target audience as well as on the precise methodology and objectives of the training exercise (see Table 2 for specific examples).

Lack of harmonization and differences across Member States regarding the implementation of EU legislation on animal welfare was perceived as a problem by many participants in several of the tasks. It was recognized by some that a harmonisation process will take time but this project is seen by many as a starting point in such a process because it may prevent each Member State working on their own 'isolated' system. The feedback given by the Advisory Board highlighted the need to overcome a number of challenges. These included: underlying uncertainties with the interpretation of the legislation, the need for clearer official guidance, the problems in providing the requirements in indoor intensive production systems, and the fact that some Member States had slightly different versions of the EU Directive due to language issues.

The development phase of the project (especially that of achieving agreement amongst the partners on the content of the knowledge transfer resources and translation of the technical terms when the resources were made available in several languages) took longer than expected. Similarly, the main constraint for the implementation of the EUWelNet Standard Operating Procedures developed in Task 3.4 (Killing Regulation) was the short period of time.

In summary, the following points appear to be particularly relevant:
• *There was a good level of collaboration between scientists in Work Package 3 and the participation of stakeholders through the Advisory Board was very useful. This could provide a firm basis for a future broad based animal welfare network.* • *The process of developing knowledge transfer material would have benefited from further detailed discussion with the farming community, particularly with small scale producers. Although reaching a significant proportion of small scale producers in all Member States is difficult, it would be possible to arrange pilot training sessions with a number of them and one possible strategy to do so with the involvement of the private sector is suggested below. These pilot sessions could be useful to identify areas of concern that would then be included in the final version of the knowledge transfer material.* • *Knowledge transfer strategies should have two general objectives: (1) to provide training to producers, competent authorities, official veterinarians and animal welfare officers and (2) to facilitate exchange of information and experiences between competent authorities in order to increase harmonization across Member States. Knowledge-transfer material should include not only information on how to implement EU legislation on animal welfare, but also on the expected benefits (economic and others) of doing so.* • *It is important to have the training resources available in several languages, particularly (but not only) when they are intended for farmers.* • *Several types of resources (e-learning tools, web sites, written material, networks of experts, etc) can be useful and the ones chosen may depend on the objective, methodology and target audience. The table below gives some examples of the strategies that could be most appropriate depending on the objective:*

Table 2 Examples of strategies that are particularly suited to different knowledge transfer objectives

Objective	*Strategy*
To exchange information / experiences between competent authorities	Webtool
To provide detailed technical information to official veterinarians or animal welfare officers	E-learning tool
To provide support material for practical, on-farm training sessions with producers	Fact sheets
To support competent authorities in countries lacking a given expertise	Network of experts
To harmonize procedures	Standard Operating Procedures

5. How can we facilitate the dissemination and use of the knowledge transfer material?

Knowledge transfer materials will only be successful if they are readily available to and used by their intended audience. We suggest that there are two different types of knowledge transfer materials as it regards their dissemination and potential use:
(1) material addressed to competent authorities, official veterinarians and animal welfare officers, and
(2) material addressed to private veterinarians and producers.

Material addressed to competent authorities, official veterinarians and animal welfare officers

Dissemination may be less of an issue when the material is addressed to competent authorities, official veterinarians and animal welfare officers. This is the case, for example, with the webtool developed in Task 3.1 (Broiler Directive), the e-learning tool developed in Task 3.2 (Pig Directive – Enrichment material) and the standard operating procedures developed in task 3.4 (Killing regulation). In these and similar cases, the knowledge transfer material could in theory be made easily available to the target audience through the chief veterinary officers of the Member States or animal welfare focal points established by the World Organisation for Animal Health.

We recognize, though, that availability of the knowledge transfer material does not guarantee its actual use. Based on the experience gained in the EUWelNet project, we suggest that there are several strategies that are likely to increase the likelihood of the material being used:

- Knowledge transfer materials will need to be updated on a regular basis.

- Producing materials in a variety of languages is likely to be useful, particularly in those countries where English is not widely understood.

- Knowledge transfer materials will be more likely to be used if they reduce the work load of the intended audience. This may result from two different approaches:
    - (1) collating scientific information which is important for assessing compliance but is widely scattered in the scientific literature, and
    - (2) sharing information that has been proved useful in some countries but is not available in others due to lack of expertise. The e-learning tool developed in Task 3.2 (Pig Directive – Enrichment material) is an example of the first strategy. It t is important to remember, though, that the tool does not attempt to define the acceptability of the different enrichment materials in terms of compliance with EU legislation. Therefore, if it is to be used for disseminating official guidance its wording will need to be edited. The Standard Operating Procedures and the network of experts developed in task 3.4 (Killing regulation) are examples of the second strategy.

Material addressed to private veterinarians and farmers

Dissemination is more difficult when the knowledge transfer material is addressed to private veterinarians and producers. This is the case, for example, with the fact sheets developed in task 3.3 (Pig Directive – Group housing of pregnant sows) which are intended to serve mainly as support material in face-to-face training sessions. Therefore, it would be extremely useful to have them distributed as widely as possible through local veterinary authorities, veterinary associations, pharmaceutical companies and farmer organizations. As mentioned before, particular care should be taken to ensure that the material is available to small-scale producers. Although reaching small scale producers may be difficult, there are several ways of doing it. One possibility that is currently being explored by one of the institutions participating in the EUWelNet project (Universitat Autònoma de Barcelona, UAB) is to involve private companies in the training sessions. The companies cover the cost of the training sessions and recruit potential participants so that the training has no cost for the farmers participating in it. In exchange, the private companies are seen as providing an extra service to potential customers. Details on this initiative can be found at www.fawec.org.

Again, and based on the experience gained in the EUWelNet project, we suggest that there are several strategies that are likely to increase the likelihood of the material being used:

- Producing materials in a variety of languages is likely to be useful and this aspect is even more important with knowledge material addressed to farmers and private veterinarians than with that intended for competent authorities.

- There are already many resources on animal welfare addressed to veterinarians and farmers and therefore the new material that will be produced has to have some additional value. Measures to improve animal welfare can provide a number of economic benefits and these aspects should be highlighted in training materials for farmers and private vets. In other words, the material has to explain why implementing animal welfare will benefit the farmers and other stakeholders' interests, and will contribute to increase EU competitiveness. This means that animal welfare has to be presented in a practical and realistic manner and the performance benefits of higher welfare have to be emphasized.

6. Conclusions and final comments

All the participants in Work Package 3 worked together to form successful and effective networks as well as a collective whole that would provide a firm basis for a future broad-based animal welfare network. Knowledge transfer strategies should provide training and facilitate the exchange of information between competent authorities to increase harmonization across Member States. Several types of resources (e-learning tools, web sites, written material, networks of experts, etc) can be useful and the ones chosen may depend on the objective, methodology and target audience of the particular knowledge transfer exercise. Dissemination of knowledge-transfer materials can be facilitated through official authorities of each Member State or through joined actions with the private sector. Knowledge-transfer materials in the field of animal welfare should provide information on the expected benefits of implementing EU legislation, particularly in terms of economic performance and sustainability, as this would render the materials more attractive to stakeholders.

7. List of appendices

Task 3.1Broiler Directive

Appendix 1 Web tool screen shots

Appendix 2 Examples of quiz questions

Task 3.2 Pig Directive – Enrichment material

Appendix 3 EUWelNet training tool (not attached, see https://www.euwelnetpigtraining.org)

Appendix 4 Official inspector tool guidelines

Appendix 5Official inspector tool leaflet

Appendix 6 Official inspector tool score sheet

Task 3.3 Pig Directive – Group-housing of pregnant sows

Appendix 7 Fact sheet A in English

Appendix 8 Fact sheet B in English

Appendix 9 Fact sheet C in English

Appendix 10 Fact sheet D in English

Appendix 11 Fact sheet E in English

Appendix 12 Fact sheet A in Dutch

Appendix 13 Fact sheet B in Dutch

Appendix 14 Fact sheet C in Dutch

Appendix 15 Fact sheet D in Dutch

Appendix 16 Fact sheet E in Dutch

Appendix 17 Fact sheet A in Polish

Appendix 18 Fact sheet B in Polish

Appendix 19 Fact sheet C in Polish

Appendix 20 Fact sheet D in Polish

Appendix 21 Fact sheet E in Polish

Appendix 22 Fact sheet A in Spanish

Appendix 23 Fact sheet B in Spanish

Appendix 24 Fact sheet C in Spanish

Appendix 25 Fact sheet D in Spanish

Appendix 26 Fact sheet E in Spanish

Appendix 27 Supporting Power point presentation

Task 3.4 Killing regulation

Appendix 28 List of national contact points

Appendix 29 Standard Operating Procedure