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Traditional Food Network to improve the transfer of knowledge for innovation



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Guidelines for transferred Innovations

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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	



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1. Statement

Deliverable completed

2. Use and Verification of Deliverable in TRAF00N

Guidelines for successfully transferred innovations to SMEs

During 2015-2016, TRAF00N project has organized more than 55 Training Workshops (TWs) in 14 European countries with the focus on six different food product sectors: 1) grains, 2) fish, 3) vegetables, 4) mushrooms, 5) fruits and 6) olives, and general topics like food quality & food safety, and entrepreneurship. The main objective of the TWs was to allow the transfer of knowledge and innovation to SMEs, based on the analysis of the Inventory of Needs (IoN) previously performed during the Multi-stakeholder Workshops (MWs) at the beginning of the project.

TRAF00N knowledge transfer network interlinks researchers, knowledge transfer organizations and associations of SMEs on a European, national and regional level. The network acts as a mediator for the transfer of current innovative research in production and marketing of traditional food, and fosters entrepreneurship in the sector of traditional food producers.

The importance of knowledge transfer in the European food industry is obvious, especially in the case of Small and Medium Sized Enterprises (SMEs) in the food producing sector. These SMEs are increasingly under pressure due to the opening of new markets, an increasing demand of standardized and price competitive food products by the consumers, the rising importance of large retailers, and the need to conform to governmental regulations. To deal with this complex situation, the transfer of new technology and knowledge is essential, becoming an important subject of scientific research, as well as in economic and public policy.

Many obstacles that hamper the transfer of new scientific insights and innovation to SMEs have been identified, e.g. lack of trust, language and culture barriers, lack of ability to transfer knowledge to a non-specialist. Based on the experience in implementation of TRAF00N Training Workshops on Vegetables and Mushrooms sector, this document collects best practices, practical information, lessons learned and recommendations for a successfully transfer innovations to SMEs.



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The best practices from different training workshops (TWs) concerning vegetable and mushroom production and processing

In total, 12 training workshops have been organized within WP4: Products of Vegetables & Mushrooms (see Table 1). Two of them were addressed to producers and processors and wholesalers of cultivated mushrooms, mainly champignons, 9 to vegetable farmers and SMEs engaged in vegetable processing and traditional food production and one to organic food producers. Higher number of TWS dedicated to vegetables was due to higher importance of this commodity for European economy and wider culinary use.

Table 1. Training workshops organized within WP4: Products of Vegetables & Mushrooms, presented in chronological order

Workshop	Venue	Date	Lead partner
Tradycyjna żywność z warzyw <i>(Traditional food made of vegetables)</i>	Podkarpacki Ośrodek Doradztwa Rolniczego, Boguchwała, Poland	27.03.2015	INHORT Partner 8
Chou et choucroute. L'innovation au service de la tradition <i>(Cabbage and sauerkraut. Innovation in the tradition of service)</i>	Chambre d'agriculture de Région Alsace, Strasbourg, France	20.04.2015	CNRS/ University of Strasbourg (Partner 17/18)
Traditional food, tipicity and organic farming: opportunities and perspectives	University of Bologna, Italy	28-29.05.2015	UNIBO (Partner 21)
Mushroom workshop Trafoon	University and Research Centre Wageningen, The Netherlands	3.06.2015	DLO (Partner 3)



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TRAFOON Workshop on organic food at the EXPO Milan - Bio and tradition, Bio and innovation!	Milan, Italy	16.09.2015	UNIBO (Partner 21)
Nieuwe kansen voor traditionele groenten <i>(New opportunities for traditional vegetables)</i>	'Bij Daphne in de Kas', Amersfoort-Vathorst, the Netherlands	13.10.2015	DLO (Partner 3)
Grzyby uprawne w produkcji żywności tradycyjnej <i>(Cultivated mushrooms in traditional food production)</i>	Łódzki Ośrodek Doradztwa Rolniczego, Bratoszewice, Poland	23.02.2016	INHORT Partner 8
Tradycja i innowacje w produkcji warzyw w Polsce <i>(Tradition and innovations in vegetable production in Poland)</i>	Zajazd Lwowski, Klwów, Poland	4.03.2016	INHORT Partner 8
Tradycyjna i integrowana produkcja oraz innowacyjne metody przechowywania warzyw <i>(Traditional and integrated production of vegetables and innovative methods of their storage)</i>	Podkarpacki Ośrodek Doradztwa Rolniczego, Boguchwała, Poland	6.04.2016	INHORT Partner 8
Transformer des légumes méditerranéens: entre innovation et tradition <i>(Processing of Mediterranean vegetables: between innovation and tradition)</i>	Centre Technique de la Conservation des Produits Agricoles Avignon - France	8.04.2016	INRA – UMR IATE Partner 18
Jakość i bezpieczeństwo w produkcji i przetwórstwie warzyw <i>(Food quality and safety in</i>	Zajazd Biała Dama, Nieborów, Poland	25.05.2016	INHORT Partner 8



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vegetable production and processing)			
La gestione dell'acqua nella coltivazione di prodotti orticoli <i>(Water management in vegetable cultivation)</i>	University of Bologna, Department of Agricultural Sciences, Bologna, Italy	27.05.2016	UNIBO Partner 21

Workshops contents and structure

Selection of transferrable knowledge

When organizing training workshop, it must be kept in mind that farmers and food SMEs managers are busy man. The participation in the workshop costs them time and money, so they would participate only if they are convinced that the knowledge they will obtain will help them to manage their businesses. Therefore, selection of the topic for lectures and trainings is a key for success.

During the first round of TWs the topics of the lectures were selected on the basis of the Inventory of Needs (IoN) and the SWOT analyses performed by Partners in during first and second year of the project, and the discussion during Multistakeholder Workshop, which has been organized in Poland in 2014. However, the experience from the first round of TWs have demonstrated that farmers and SME representatives participating in the workshops may have also specific requirements for knowledge, which is focused on local pedoclimatic conditions, the kind of their products and local tradition. Therefore, prior to the second round of TWs, small surveys has been undertaken among local producers about their preferences for trainings. Instrumental for that was close cooperation with regional Agricultural Advisory Centres, whose agricultural advisers have direct contacts with farmers and know well their problems and needs for knowledge.

The main topic for training expected/accepted by majority of the vegetable and mushroom producers was integrated pest management (IPM). This was mainly due to Directive 2009/128/EC, which made the use of IPM obligatory in all EC countries starting from 2015. The concept of IPM is to decrease the use of synthetic pesticides in pest management and replace them with biological control agents and agronomic techniques. To implement it in practice, the farmers must have in-depth knowledge of pest biology and plant-pest interaction, as well as basics of ecology. Therefore, trainings on IPM were highly appreciated.



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The rest of the topics for lectures were region-specific and included food quality, especially quality standards and certificates, pesticide residues, cultivation and fertilization of selected vegetable crops and vegetable storage and processing. In one case, the participants expressed interest in pesticide application techniques, including requirements for sprayers, safety zones and environmental pollution due to wind drifts.

The conclusions from TWs conducted within WP4 show that the source of transferable knowledge appreciated best by participants are the results of project conducted at local universities and research centres and focused on local problems. The results of big, international projects are interesting, but this knowledge is too far away from daily needs of vegetable and mushroom producers and processors.

The lecturers must be good specialists in the field. The questions asked frequently by participants have shown that they shall have knowledge much wider than the specific topic of the lecture. The participants appreciate the best lecturers with research degrees, but also with experience in extension.

Preparation of training material

Majority of the trainings were conducted as seminars, with lectures presented by specialists, with the help of multimedia presentations. The presentations were saved on memory sticks, usually in PowerPoint or .pdf formats, and provided to all the participants. It was highly appreciated because it enabled going back to the lectures whenever the need arise. In addition, the participants were provided with notepads and pens to make notes during lectures.

Additionally, during TWs organized in Poland, traditional food products made of vegetable or mushrooms by local producers were presented at the workshop's venues. This helped to exchange ideas on innovations in traditional food, especially on marketing techniques. During the workshop on vegetables organized in Italy one day was devoted to field trip, where the participants had the occasion to see in practice the techniques presented during lectures.

Nearly all the participants of the workshops organized in Poland requested the certificate of completing the training. These shows that the trainings organized with TraFoON project were highly valued.

One workshop on traditional products made of vegetables was organized in the Netherlands as a practical training in food preparation at a local restaurant. The vegetables and other ingredients were provided by restaurant's owner. This kind of training was highly appreciated by the participants, but because of relatively high costs, it has not been continued. However, shall available resources allow, this may be recommended as an attractive means for transfer of knowledge on traditional food.

Preparation of promotional material



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The survey among participants of the workshops organized in Poland have shown that the most effective way of recruitment is the information provided by agricultural advisers during their field trips. The second in importance means of recruitment are personal invitations sent via e-mails. Promotional materials like posters, banners, information placed at web pages and advertisements in professional journals are only accessory to personal invitations and play secondary role in the recruitment, and thus in the success of the training. However, promotional materials, especially posters and banners, attract public attention and are important for spreading information about the project and objectives of the training. Thus, they shall be prepared professionally and displayed a few weeks ahead. The same purpose serves the logo of a workshop, which shall be placed on all training materials like notepads, pens, memory sticks etc.

Contribute to the promotion also the exhibitions of traditional food, which may accompany TWs.

In Italy, the involvement of trade organisations and SAM associations was important for recruitment, but effective were also advertisements in professional journals. Sometimes, phone calls had to be used for inviting politicians and managers of the associations. Generally, organizers of all the workshops had very close contacts with trade associations and mass media and these connections were useful and fruitful for the workshop preparation process.

Structure of the workshop

The survey among putative participants done by agricultural advisers has shown that the optimal duration of the training in Poland is one day. Two- or more days long workshop would require staying overnight at the hotel for most of the participants, which would increase significantly the cost of participation. Besides, the target participants are mainly owners of family farms and SME owners/managers, who usually cannot afford longer absence from their businesses.

Because of a limit of active perception of knowledge, the training workshop day shall not last more than 5 hours a day and consist of 5 - 6 lectures. The practice shows that after this time the attention of the participants is significantly decreasing and the discussion die off. Thus, prolongation of the lectures is not effective in term of transferring the knowledge, but leaves the impression of bad organization of the trainings.

For this same reason, every two-three lectures there shall be a coffee break. It allows the participants to relax, but also provides opportunity for discussing the lectures among participants and share their opinions about trainings.

Also in Italy, the experience gained during workshops preparation workshop has shown that trainings should not be longer than 1.5 days. Longer events are time consuming for participants and very often farmers do not decide to participate. One-day-long workshop is probably the best practice, trying to



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balance technical and more general talks and also inserting several short coffee breaks during the day. Usually small farmers and SMEs delegate are not used to follow long training session. For this reason, the discussion section at the end of each talk is important in order to keep up the interest and the attention and to stimulate the discussion about real practical problems of farmers and SMEs. Generally, each presentation should have time limitation (maximum around 20 minutes). Workshops that include an evening event could be also very fruitful for knowledge sharing, focus discussion groups etc. However considering that workshops should not be only at regional level, the overnight stay could be expensive for foreign participants.

Additional activities: excursions, visit, etc.

The participants of the training workshops organized in Poland are usually professionals who know the technology of traditional food production as well as production facilities. At registration, majority of them did not express interest in seeing another farms or SMEs. The purpose of their participation is to improve/gain the knowledge in specific fields, which are important for running their businesses. However, most of them would appreciate visiting research facilities and learn about projects and innovative products/technologies being developed. Thus, whenever possible, a short guided visit to research laboratory shall be enabled for interested participants.

In Italy, the practical session was appreciated; however, the organization of external trip could be time-consuming for one-day workshop, drastically reducing the time for knowledge transfer.

Designing and planning Workshops

Date (special considerations for SMEs)

The date of a workshop must be carefully planned in order to find a time window convenient for target participants. Vegetable growing and processing are seasonal activities. In Poland season for farmers starts in early April, depending on a kind of vegetables grown in the area, and ends in October. The season for SME processing vegetables is shifted by app. 2 months; it starts in late July and ends in November-December. Our experience shows that the best time for organizing trainings for vegetable growers/processors is early March.

As opposite, production of champignons is not seasonal but lasts year around. However, there are no SMEs specializing in processing exclusively mushrooms; typically they process both vegetables and mushrooms, and sometimes also fruits. Thus, the best time for organizing TWs addressed to mushrooms producers and processor is also spring, but a little later than those concerning vegetables.



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Venue (accessibility, location, etc.)

The proper selection of a venue for a workshop is very important for the success. It shall be located in the centre of vegetable or mushroom production area. Polish experience shows that one hour drive is the longest distance the participants would accept in order to participate in the training. The venue shall have a good access by car and ample parking space, so it shall not be located in big cities. In our experience the best suited for a host of TW are Agricultural Advisory Centres, which are usually located in the country and have good training facilities. Cooperation with such Centres has additional benefits, like very good contacts with local agribusiness, politicians and NGOs, which helps with recruitments of the participants and planning the agenda.

Also in the opinion of Italian partner, the selection of venue will affect the participation at the workshop. The venue should be in well-connected places (reachable from train and bus stations) or in places with comfortable car parking. In Italy, TWs were held twice in Bologna at Department of Agricultural Sciences that is equipped with big meeting rooms and a big car parking, simplifying also the access to the Pullman for the external visitors. The location of the third TW in Milan was strategic considering that it was held inside EXPO 2015 the Universal Exposition.

Invitations (who?, when?, how?)

As mentioned earlier, in Poland the most effective way of recruitment of participants is the information spread by agricultural advisers during their field visits and the personal invitations send via e-mails. The recruitments shall start at least a month in advance and the provisional lists of participants shall be ready 2 weeks prior to the workshop in order to calculate the number of training materials, the size of the lecture room, catering etc.

In Italy invitations were organized at least two months before the organization of the workshop and three different channels have been used:

1. by email, above all for researcher and scientists,
2. by phone, for politicians,
3. through sector association channels and e-mail for farmers, SMEs and stakeholders in general.

Participation of SMEs Associations as mediator

In Poland very helpful in organizing TWs were producer's groups organizing local vegetable producers and nationwide Association of Cultivated Mushroom Producers. They helped to select topics for lectures and encouraged their members to participate in the trainings. One workshop has been organized specifically on the request of SME, who wanted to train farmers/vegetable suppliers in food safety issues.



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In Italy, as already stated, local professional SMEs and farmers associations were very helpful for workshop organization with the promotion and acceptance of these events. Therefore, we recommend cooperating with professional associations.

Registration

The registration for the workshops organized in Poland was by e-mails sent by the participants to organizers. The attempt to organize on-line organization through webpage of the organizer, the Research Institute of Horticulture, was only partially successful; only a few participants have registered this way, but anyway they confirmed the registration by e-mails.

Agenda (presentations, coffee breaks and lunches, networking time)

The agenda of each workshop has been prepared after discussion with representatives of producers groups. The lecturers were carefully selected, basing on their specialty, but also on their experience in training. The programmes have been sent together with invitations, so they had to be ready at least one month in advance. The PowerPoint presentations have been submitted by the lecturers one week before the workshop, saved on memory sticks and included in the training materials provided to the participants.

Coffee breaks were treated as time for relaxation after lectures and for discussions. Coffee breaks and the lunches were also the occasions for making plans for future cooperation and networking among producers and researchers.

Lessons learned

The workshops of the second round have been evaluated by the participants using uniform questionnaires provided by the Management Team. In all the countries involved the organization of TWs was evaluated very high. In Poland over 80% of the participants considered the structure and implementation of the session as appropriate. Similarly high was evaluated the clearness of the presentations and the content of the trainings. Vast majority of the participants think the workshops will improve their collaboration with universities and research centres. The main benefits they expect expected from the trainings are: increased profit margin, reduction of costs, obtainment of certificate of origin, reduction of water and energy costs and reduction of environmental impact.

What to avoid for a successfully transferred innovations to SMEs?

The biggest risk of a failure of a workshop is a mismatch between the content of a training programme and the expectations of the participants.



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Thus, the agenda shall take into account not only the needs for innovations learned during countrywide inventory, but also specific problems and needs of local producers. The selection of venue and/or the date of the workshop, which is not convenient for local producers may also result in very low attendance, and thus not effective transfer of knowledge.

Another reason that can preclude a successful transfer of knowledge to SMEs is the low interest of stakeholders in innovations. In Italy, producers believe that innovations require large investments and they are not interested if they do not have resources to cover the costs. Moreover, poorly organized workshop and failure of timing during workshop can discourage people to continue attending such events.

General recommendations

The organization of a workshop, especially planning the agenda and the time, shall be done after consulting the target participants in the area. Very helpful in this matter is collaboration with local Agricultural Advisory Centres, who knows the best the problems and needs of the local traditional food producers.

Specific considerations

Basing on the experience gained in Italy, we recommend the reservation of well-equipped meeting rooms, with the possibility also of simultaneous translation in case foreign speakers or participants were expected. Moreover, it is important to focus on technologies and researches which reached application level (TRL 8) and can be implemented directly on farms or SMEs. In a country like Italy, where the countryside and operational frameworks could be extremely different, it is important to propose solutions for defined problems and strategies to be applied in different environments or situations.