

1st Q-PorkChains Congress

January 10th, 2007 Copenhagen, Denmark



Project title:

**Improving the quality of pork and pork products for the consumer:
Development of innovative, integrated, and sustainable food
production chains of high quality pork products matching consumer
demands**

PROCEEDINGS

Introduction

On the 1st of January 2007, a large EU-project supported by the EU 6th Framework programme was initiated. The full project title is: Improving the quality of pork and pork products for the consumer: Development of innovative, integrated, and sustainable food production chains of high quality pork products matching consumer demands (short title Q-PorkChains). The aim of Q-PorkChains is to develop high quality pork products in sustainable production systems with low environmental impact.

The project was initiated through collaboration between Faculty of Agricultural Sciences at University of Aarhus and Faculty of Life Sciences at University of Copenhagen. The project includes some of the most important research organisations and industries working in the field of pork and pork products all over Europe. The total budget of the project is 20.7 million, which makes this the greatest research project in the field of meat science financed by the EU Commission. The project coordinator is Professor Anders H. Karlsson, University of Copenhagen, Faculty of Life Sciences, Copenhagen, Denmark. A total of 51 partners are participating in Q-PorkChains for the next five years.

The first Q-PorkChains project meeting was held in Denmark from the 10th to 12th of January at the University of Copenhagen, Faculty of Life Sciences. On the 10th of January the meeting was initiated by an official kick-off meeting where stakeholders especially representing the industries around Europe as well as project partners were invited to participate. In total approximately 140 people participated in the kick-off event.

The official kick-off meeting was composed of oral presentations held by four invited speakers and the module coordinators of each of the eight Q-PorkChains modules. A summary of the speaker's presentations are presented in the following.

Mette Christensen
Module coordinator of module B

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Mr. Per Holten-Andersen, Dean of Faculty of Life Sciences*Welcome*

The Dean welcomed all participants to the kick-off meeting at Faculty of Life Sciences and started by congratulating the coordinator and project participants with succeeding in obtaining financing for Q-PorkChains. He mentioned that the acceptance of funding was a success story for the Faculty of Life Sciences because internationalization has a very high priority at the Faculty and it is the largest EU Integrated Project coordinated by the Faculty until date. Furthermore, food quality is a core area at the Faculty of Life Sciences and Centre for Advanced Food Studies in which Department of Food Science is represented. Q-PorkChains are composed of six research modules and two horizontal modules which are focusing on demonstration and teaching and training activities. The aim of the two horizontal modules is to transform the research findings into demonstration and pilot chains and teaching and training curricula for higher as well as non-academic educations. The hope is that Q-PorkChains will also benefit with new knowledge which can be encompassed in the Master programme Meat Science and Technology which is offered by the Department of Food Science.

Mr. Peter Gæmelke, President of the Danish Agricultural Council*Introduction*

The President of the Danish Agricultural Council informed that the Danish share of the overall allocation to themes in the 6th Framework Programme was 2.3%. Of these Food Science has attracted 6.2%. There is an increasing globalization in which the driving forces are faster development of technology, introduction of market economies in China, Central and Eastern Europe, faster and cheaper communication, and cheaper transportation. In order to adapt to this, we trade more with other countries, we communicate more across borders and we invest more in other countries and we share more knowledge and technology with other countries. Europe needs to be able to compete on the export market which becomes increasingly difficult. Therefore, funding needs to be allocated to R&D activities through industrial collaboration.

Dr. Christian Patermann, Director of Directorate E, Biotechnologies, Agriculture, Food, EU Commission

Food Quality in EU 6th and 7th Framework Programmes

The Director of Directorate E presented the 6th Framework Programme on Food Quality and Safety (<http://cordis.europa.eu/fp6/>). The total funding available from this framework programme was 685 million Euro. This framework programme concentrated on food quality and safety and was covering the whole chain from farm to fork i.e. production systems in agriculture, fisheries and aquaculture, processing, safe high-quality foods, food intake and environmental factors and their impact on the health and well-being of consumers. From the 7th Framework Programme (http://cordis.europa.eu/fp7/home_en.html) the draft work programme for theme 2 was presented. Pillar 1: Sustainable production and management of biological resources from land, forest and aquatic environments. Different areas of interest are expressed, i.e. enabling research (“omics” converging technologies, bioinformatics, biodiversity) for microorganism, plants and animals, competitive, sustainable and multifunctional agriculture, forestry, fishery and aquaculture, animal health production and welfare; animal disease incl. zoonoses, marine resources, fishery, aquaculture and development of policy strategies for knowledge based bio-economy, agriculture, fishery as well as rural and coastal areas. Pillar 2: “Fork to farm” – Food, health and well being. Different areas are: consumer, societal, industrial and health aspects of food and feed, nutrition, diet related diseases and disorders, innovative food and feed processing, improved quality and safety of food, beverage and feed, total food chain concept. This pillar ensures continuity of the 6th Framework Programme “Food quality and safety”. Pillar 3: Life sciences and biotechnology for sustainable non-food products and processes. These areas are: improved crops, feed-stocks, marine products and biomass for energy, environment, and high added value industrial products; novel farming systems, bio-catalysis; new biorefinery concepts and other bioprocesses, forestry and forest based products and processes, environmental remediation and cleaner processing.

Mr. Bent Claudi Lassen, President of the Danish Bacon and Meat Council, Danish Meat Association

Meat Research from an industrial perspective

The President of the Danish Bacon and Meat Council informed that one of the largest challenges for the future will be that the European Union's self-sufficiency and leading position in the global market for pork and pork products is challenged by Brazil, China, USA and Canada. Denmark needs to strengthen the position on the international market by competing on quality parameters like safety, hygiene, high veterinary standards and high eating quality. In Denmark there is a strong tradition of the industry collaborating in R&D activities and the industry is focusing on the fork to farm concept. Mr. Claudi Lassen stated that future meat research plays a key role in maintaining the strong position on the international market and therefore initiatives such as the Q-PorkChains project are very important.

Prof. Anders H. Karlsson, Coordinator of Q-PorkChains, Faculty of Life Sciences, Department of Food Science, Denmark

Project overview

The project coordinator welcomed all participants to the official opening of the new EU Integrated Project Q-PorkChains and to University of Copenhagen, Faculty of Life Sciences at Frederiksberg Campus. The opening ceremony is the culmination of 3 years hard work including meetings, workshops, discussions, networking and negotiations with the purpose to identify the basis for a research project in porcine science, pig production and pork quality that was of interest for both science, the public and for the industry. Many players have been involved in the whole process and the coordinator expressed his sincere thanks to these people.

The overall aim of the proposed project is expressed in the title: *'Improving the quality of pork and pork products for the consumer: Development of innovative, integrated, and sustainable food production chains of high quality pork products matching consumer demands'*. The project will contribute to the overall aim through the achievement of the Strategic Objective: Development and testing of advanced and multi-disciplinary approaches for identification, characterisation, prediction, and control of the quality of pork and pork products in different stages of the pork chain in diverse production systems.

The Q-PorkChains project is expected to contribute to many important scientific areas including innovative technologies to improve pork products so that they meet consumer expectations on quality, nutrition and convenience, new molecular control tools that can be applied in pork production, development of new ways to predict how production systems affect pork quality, safety and animal welfare, based on existing databases and models, and integrated and sustainable management of the pork production chain. Important outcome of the project will include the analysis of consumer preferences, new tools for marketing pork-based products based on quality, improved pork products aligned with European market requirements, a comprehensive dissemination programme to involve all stakeholders, as well as training in the new techniques and strategies developed.

Q-PorkChains is a 5-year project consisting of nine Modules: six core RTD pillars, that cover the entire pork products chain from fork-to-farm; and three horizontal modules that complete the RTD activities by adding research pilot and demonstrations chains, SME networking, and education, training and dissemination to the list of activities.

The coordinator acknowledged Centre for Advanced Food Studies (LMC, Director Lisbeth Munksgaard) and Department of Food Science (Head of Department Dr. Grete Bertelsen) for Danish financial support, as well as START funding from the Danish Agency for Science, Technology and Innovation. We succeeded with our proposal and got the financial support and thereby the possibility and the confidence from the European Commission to perform this task. We are very grateful for this.

Finally the coordinator thanked all who participated in the long process, in particular the Module coordinators for all the scientific and technical input and for shearing their experience during this creative process. With your help, we are now going to secure the carrying out and implementation of this successful Q-PorkChains project.

Prof. Klaus G. Grunert, Module I coordinator, University of Aarhus, MAPP, Denmark*Module I*

The title of Module I is Consumer/Market Analysis and the objective is to develop new tools for the development and marketing of pork-based products based on mapping and assessment of behaviour towards the pig production chain as citizens and as consumers.

The module is coordinated by University of Aarhus, Aarhus School of Business, Centre for Research on Customer Relations in the Food Sector (MAPP) assisted by the Ghent University (UG), Agricultural University of Athens (AUA) and the Norwegian Food Research Institute MATFORSK (MF). The two largest meat companies in Europe also participate in this module together with other institutions from Europe and Brazil. Module I is divided into three work-packages.

WP I.1: Pan-European segmentation associated with attitudes and behaviour related to pig production and consumption of pork products (month 0 – month 24)

The overall objective of WP I.1 is to comprehensively assess the present and predict the future role of pork in people's lives as citizens and consumers. The expected results pertain to an in-depth understanding of the way European citizens relate to pig production, and the problems the sector will face in the years to come, including policy and communication challenges. Furthermore, the ways in which pork and pork products are perceived, chosen, prepared and consumed in Europe and beyond, including trends, emerging needs, and gaps in the market will be assessed. All relevant segments in the market will be identified and guidelines for targeted product development, positioning, pricing, distribution, and communication will be provided. The activities within this work package will ultimately yield clear, empirically based guidelines to the other modules regarding the market potential and societal acceptance of pig production systems, processing technologies, and newly developed consumer products. Reporting within the consortium will be completed during the first 18-month period. Reporting through papers in scientific journals will be concentrated during the second 18-month period.

WP I.2: Analysis of behaviour and willingness-to-pay related to value-adding quality dimensions and new product development of modules II – V (month 18 – month 42)

The objective of WP I.2 is to develop and test new product concepts based on the results from modules II-V and of WP I.1 from module I. In this way, WP I.2 will demonstrate that it is indeed possible to develop new pork-based products that will be appreciated by consumers, and will provide results that can give direction to future innovation activities in the pork industry. The expected results is to indicate consumer acceptance of the 25 concepts tested and give general guidance regarding promising avenues for developing new, value-added pork products. In addition, the methodology developed for the creative task and for the concept test will be handed over to WP I.3, where it will be integrated into the toolbox for product development processes in the pork sector. WP I.2 will commence in month 19 and end in month 42.

WP I.3: Marketing and new product development tools (month 36 – month 60)

The objectives of WP I.3 are to develop a modularized, easy-to-use toolbox for new product development and marketing management. The toolbox is to be tailored towards SME's within the food industry in Europe. A Stage-Gate-Model for product development, as seen below, is the point of departure for the development of the new tool. The expected results are a new toolbox system, including computer software for market share prediction and new up-front product development techniques.

Prof. Michel Bonneau, Module II coordinator, French National Institute for Agricultural Research, France

MODULE II

The title of Module II is Diversity, Flexibility and Sustainability of Farm-level Production Systems and the objective is to contribute to the development of a diversity of sustainable production systems (at farm level) that correspond to market and society demands.

The module and one work-package are coordinated by the French National Institute for Agricultural Research (INRA). University of Newcastle (UN) and Institute of Animal Science and Health (ASGV) will lead the other two work-packages. Several other universities and industries around Europe are involved in this module. Module II is composed of three work-packages.

WP II.1: Assessment of existing tools and further development of tools for sustainability measures (month 0 – month 39)

The objectives of WP II.1 is to develop tools for standardised assessment of the various dimensions of sustainability for use in benchmarking of different current and future pork production systems. The expected results are a suite of agreed tools for standardised assessment of sustainability to be applied in WP II.2, identification of gaps or weaknesses in the tools currently available for this purpose and development and validation of new tools to fill these gaps.

WP II.2: Integrated sustainability evaluation of the existing pork production systems (month 0 – month 36)

The objective of WP II.2 is to evaluate the sustainability of the variety of existing pork production systems. The expected results are a comprehensive inventory of pork production systems existing in EU countries and in the most important competing countries, a rough, qualitative, evaluation of the sustainability of existing production systems and a thorough evaluation of the sustainability of selected, contrasting pork production systems.

WP II.3: Systems improvement and quality assurance schemes (month 0 – month 54)

The objective of WP II.3 is to improve current systems and develop improved systems towards a better market and sustainability orientation through experimental and theoretical studies. The expected results are further understanding of the effects of system shifts on sustainability indicators including opportunities to deal with unfavourable relations between sustainability components, improved systems and insight into combined effects of systems improvements, theoretical systems that can act as reference systems and improved and innovative quality assurance strategies.

Dr. Jacint Arnau, Module III coordinator, Institute for Food and Agricultural Research and Technology, Spain

Module III

The title of module III is Product Development – Quality, Nutrition and Convenience and the objective is to develop innovative technologies for improved pork products to match consumer demands in relation to quality, nutrition, and convenience.

The module is coordinated by The Institute for Food and Agricultural Research and Technology (IRTA). The Ashtown Food Research Centre (AFRC), Danish Meat Research Institute (DMRI) and IRTA will each lead a workpackage. Module III is divided into three work packages.

WP III.1 Nutritional enhancement of pork products (month 0 – month 60)

The objective of WP III.1 is to develop pork products with enhanced nutritional characteristics, through lowering detrimental components and/or adding functional ingredients. The expected results are formation of processing guidelines for safe pork products with lower fat and/or salt content with equal sensory and texture properties, processing guidelines for safe, health promoting pork products and development of processing technology to concentrate the meat factor to be used as functional ingredient in pork based functional foods

WP III.2 Quality optimisation of pork and pork products (month 0 – month 60)

The objective of WP III.2 is to optimise quality of pork and pork products by “omic” markers, new drying control methodologies and control of the physical characteristics of the fat fraction. The expected results are identification of “omic” markers (linked to Module V) with potential to predict some specific sensory and technological quality characteristics, drying technologies for improved quality and safety of fermented products and dry cured meat products, innovative tools for on-line control of key-points for dried pork products, emulsified meat products with superior textural properties of meat products.

WP III.3: Development of convenience pork products (month 0 – month 60)

The objective of WP III.3 is to develop safer and more stable convenience and delicatessen pork products. The expected results are to create processing guidelines for new combinations of minimal processing and hurdle technology for cured/uncured pork products.

Dr. Jacques H. Trienekens, Module IV coordinator, Wageningen University, The Netherlands

Module IV

The title of module IV is Integration and Sustainable Management of the Production Chain and the objective is to identify and develop tools for integration and efficient sustainable management of a diversified European production and distribution system.

The module is coordinated by Wageningen University who is also leading two of the work packages while the University of Bonn and the University of Aarhus (Faculty of Agricultural Sciences) is leading the other two. A large number of institutions from Europe as well as from China and South Africa participate in the activities of the module, so as to cover the diversity of pork (net-) chains in the EU and other countries. Module IV consists of four work-packages.

WP IV.1: Inventory of pork chains (month 0 – month 30)

The objective of WP IV.1 is to arrive at a typology of pork chains in Europe and other parts of the world. The expected results are a typology of pork chains in Europe that can serve as basis for further research in this (WPIV.2, WPIV.3, WPIV.4) and the other modules and for pilot and demonstration projects to be selected in horizontal module A.

WP IV.2: Chain quality management systems (incl. governance and information systems) (month 0 – month 60)

The objective of WP IV.2 is to arrive at integrated quality management system designs for differentiated pork-chains in Europe, supported by connective information systems and inter-company governance regimes. The expected results is quality management reference models and system designs for various types of pork chains; chain information models and system designs that enable and support these systems; and governance regime scenarios supporting effective chain quality management.

WP IV.3: Matching product and process innovation upstream the production chain with market demands in differentiated markets (month 0 – month 60)

The objective of WP IV.3 is to arrive at Critical Success Factors for innovation management in Pork Chains and design of a Decision Support System for innovation management. The expected results are to invent Critical Success Factors for innovation management in various pork chains and a Decision Support System for innovation management in pork chains.

WP IV.4: Sustainability of production and logistics in European pork chains (month 0 – month 60)

The objective of WP IV.4 is to design effective and sustainable logistics systems for the European pork sector and to establish a chain based environmental appraisal system for pork chains. The expected results are to develop decision support models for optimization of international distribution networks (with a global perspective on the pork chain) incorporated in a Decision Support System for pork industries. Furthermore, tools for chain/network assessment of ecological load based on LCA will be designed with the aim of integration with chain quality management systems (WP IV.2). A selection of the variety of EU pork chains will be made to test and implement the methods and tools developed in these work-packages.

Prof. Niels Oksbjerg, Module V coordinator, University of Aarhus, Faculty of Agricultural Sciences, Denmark

Module V

The title of module V is New Biology as a Tool for Control of Pork Quality. The objective is to develop and apply new and appropriate molecular control tools in the production of pork.

The module is coordinated by University of Aarhus (AU-DJF) and they will also lead one work-package. The two other work-packages will be lead by the Institute of Animal Science and Health (ASGV) and the French Institute for Agronomy Research (INRA). Furthermore leading industrial companies in breeding and meat production will participate from Europe as well as from China. The module is composed of three work-packages.

WP V.1 Identification of molecular markers of importance for pork quality in muscle and adipose tissues (month 0 – month 60)

The objectives of WP 5.1 are to develop biomarkers that can be used to improve pork quality in all segments of pork production chains. The expected results are to create a list of biomarkers showing association with pork quality traits either in all pork production chains under investigation or in one or more specific pork production chains. Tools for the various industries in the pork production chains that can be used to improve pork quality for present and future consumer demands will also be developed.

WP V.2 Application of new molecular methods to selected production systems, processing techniques and consumer demands of modules I – IV (month 13 – month 60)

The objectives of WP V.2 is to further develop the tools developed in WP V.1 into ready-to-be-used tests which can be directly applied by the industries in various pork production chains. The expected results are to verify that quality control tools developed in WP V.1 can be used to differentiate pork and pork products at all stages in the whole chain from fork to farm.

*WP V.3 Improving basic and applied knowledge of muscle biology in relation to meat quality
(month 0 – month 60)*

The objective of WP V.3 aims at identifying genes controlling adipose and muscle biology in relation to pork quality in order to improve our understanding of the regulation of pork quality in diverse production systems. The expected results are to test the functionality of some genes in muscle cell cultures and pass on knowledge to other modules.

Dr. Karel de Greef, Module VI coordinator, Institute for Animal Science and Health, The Netherlands

Module VI

The title of module VI is Synthesis of Existing Knowledge on Pork Quality, Safety and Welfare. The objective of the module is to develop prediction models for pork quality and safety as a consequence of the production systems.

The module is coordinated by the Institute for Animal Science and Health (ASGV) who will also lead the workpackage concerning animal welfare model development while quality model development will be lead by Scottish Agricultural College (SAC) and safety model development will be lead by Ashtown Food Research Centre (AFRC). The module consists of three workpackages.

WP VI.1: Pork quality model development (month 0 – month 60)

The objective of WP VI.1 is to integrate existing data and upcoming knowledge data to produce a model that accounts technological and sensory pork quality, based on animal, production and slaughter information. The expected results are to develop a model with predictive power giving guidelines to obtain meat products that fulfil specific demands with respect to technological and sensory quality. It will be flexible, that is, function with incomplete inputs. On the scientific level, the model will establish relationships between animal, production and slaughter aspects and technological and sensory meat quality, determine their impact and robustness. It will identify new scientific hypothesis and propose itineraries for future research. The model will be accessible to scientists and professionals via a free-access interactive user-friendly website.

WP VI.2: Pork safety model development (month 0 – month 36)

The objective of WP VI.2 is to deliver a quantitative risk characterisation model (RCM) that will identify the principle sources of microbial contamination in pork, assess the efficiency of Salmonella and Yersinia enterocolitica intervention control strategies, evaluate technologies developed in this project and prioritise research areas for the future. The expected results is to deliver a quantitative

RCM which will be used to identify the parts of the pork chain which contribute most to microbiological risk, assess the efficacy of some risk management interventions for addressing the problems of *Salmonella* and *Y. enterocolitica* associated with pork, evaluate the effect of technologies developed in other workpackages and tasks in this project on *Salmonella* and *Y. enterocolitica* risk and to identify future research priorities for the microbiological safety of pork. WP VI.2 will deliver a quantitative risk characterisation model(s) (RCM) to *characterise the risk to the consumer associated with the consumption of selected Salmonella and Yersinia enterocolitica contaminated pork and pork products and will deliver a report on the microbiological safety of new technologies developed during this project.*

WP VI.3: Pig welfare model development (month 0 – month 60)

The objective of WP VI.3 is to integrate existing and upcoming knowledge & views on pigs into prediction models, taking into account various stakeholder perspectives. The principle of this workpackage is that relatively simple model components will be built that integrate available knowledge (both scientific and tacit) on ‘good animal welfare’. The expected results are four knowledge components representing major interestgroups (farmers, citizens, consumers and animals), an integrative model presenting effects of systems changes on various welfare attributes. Programmed in a publicly accessible interface serving as a tool that demonstrates the consequences of pig production systems changes with regard to the various welfare related aspects and identification of knowledge gaps, chain opportunities and actor-dilemma’s for welfare improvement.

Prof. Brigitte Petersen, University of Bonn, Germany*Module A*

The title of module A is Pilot and Demonstration Chains and the objective is to facilitate cooperation with SMEs on pilot research and demonstration activities (of results of Pillar I-VI) and develop inter-organisational collaboration along pork chains and networks.

This module will be coordinated by Grenzüberschreitende Integrierte Qualitätssicherung (GIQS, Germany) in cooperation with Agri Chain Competence Centre (ACC, The Netherlands). Both organisations are already acting as national or international platform for public-private RTD in pork chains and facilitate collaborative research between research and relevant partners in chains. They will be supported by the expertise centres on chain and network sciences of Wageningen University and University of Bonn. With their extensive knowledge in coordinating collaborative projects along food chains, GIQS together with its partners will motivate SMEs in setting up pilot chains and organise competitive calls. GIQS and ACC will be supported by regional partners who assist in awareness raising and mobilisation of interested chains and networks to apply for a pilot or demonstration activity. These are Zentralverband der Deutschen Schweineproduktion (Germany), Pigchamp Pro (Spain), Central Food Research Institute (Hungary), and Association of Meat Processors in Bulgaria (Bulgaria).

Regional partners have been selected for their strong network with SMEs in pork chains in their country and will organise local seminars for potentially interested Industry farm organisations and SME partners. These partners will also have a role in Work Package B2 SME Networking. The work-package is composed of two work-packages.

WP A.1: Development and set-up of applied research SME pilot chains and networks on inter-organisational aspects (month 0 – month 54)

The objective of WP A.1 is to apply results of core research activities in Modules I-VI in specific European pork chains or networks of SMEs. The expected results are nine successful and complementary pilot research implementations in chains together with SMEs/ chain coordinators/

industry partners, efficient experience exchange between pilot chain coordinators facilitated and Europe wide visibility of piloting activities.

WP A.2: Conduction of demonstration activities in different European pork production and processing chains and networks (month 30 – month 60)

The objective of WP A.2 is to demonstrate the benefits of specific research results with an inter enterprise dimension in chains and networks. The expected results are four successful demonstration implementations in different chains together with SMEs/ chain coordinators/ industry partners and a Europe wide visibility of project results.

Dr. Mette Christensen, University of Copenhagen, Faculty of Life Sciences, Denmark*Module B*

The title of the module is Education, Training and Dissemination and the objective is to transfer knowledge from the project to users at all levels.

The module is coordinated by University of Copenhagen (KU) who is also leading one work package. The Swedish University of Agricultural Sciences (SLU) is leading another work package and GIQS is also leading one work package. Other partners in Module B include the Royal Veterinary College (RVC) from the UK, the Danish Meat Research Institute (DMRI), the Danish Meat Trade College (DMTC) and Kansas State University (KSU) from the USA as well as a number of SMEs. Since the horizontal Module B will function as a bridge between the RTD modules and the horizontal modules the Module Coordinators RTD modules (I-VI) and the horizontal activity A will also participate. The role of the module coordinators and work package leaders will be to provide module B with innovative knowledge. The module consists of three work-packages.

WP B.1: Develop and implement traditional and web-based curricula for training at all levels from industry to post graduate level (month 0 – month 60)

The objective of WP B.1 is to utilise and implement new knowledge generated within the project through a problem based and interdisciplinary approach and delivered by e-learning modules to all levels. The expected results are that different target groups from industry to post graduate level should continuously be provided with the newest knowledge in the field of pork quality while recognising the diversity of backgrounds, interests and motivation. Ten learning objects adopted for the learning needs within industry will be developed and 10 curricula will be developed for B.Sc., M.Sc. and Ph.D. students related to the learning objects. Furthermore, one leaflet per curricula will be developed and distributed to stakeholders inclusive higher education institutions.

WP B.2: Establish a platform for knowledge dissemination to a multitude of SMEs in the sector (month 0 – month 60)

The objective of WP B.2 is to ensure efficient communication, knowledge transfer and training activities towards European SMEs at all stages of pork production. The expected results are formation of a web-based knowledge platform and forum for SMEs, 15 targeted trainings for entrepreneurs from SMEs in at least 10 different EU countries and direct and informal support for any SME related project issues.

WP B.3: Dissemination incl. general awareness raising, and development of exploitation plans (month 0 – month 60)

The objective of WP B.3 is to ensure general awareness rising and dissemination of the results from Q-PORKCHAINS to the public. The expected results are implementation of a project homepage, biannual newsletters distributed by the project homepage and via email service, a yearly leaflet distributed at the yearly project conference, 3 large Q-PORKCHAINS congresses (initial, mid-term and final), at least 3 trade associated publications and management-oriented publications, press conferences and media articles when appropriate and an exploitation plan for promotion and exploitation of results after project finalising.

For further information about Q-PorkChains visit the homepage on www.q-porkchains.org or www.qpork.org

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