

Q-PorkChains newsletter second edition

The Q-PorkChains Newsletter is published biannually on the public project homepage - www.q-porkchains.org. By subscription you can receive the newsletter via email. The objective of the Newsletter is to disseminate news and new knowledge in the field of pig and pork production obtained from the Q-PorkChains project to stakeholders at all levels. The newsletter is divided into different sections specifically directed towards different target groups, i.e. Pig production, Industry, Consumer, Teaching & training and Science.

In this newsletter you can read about

- Q-PorkChains weblog
- Project rationale
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- Pilotchain on management tools based on Quality Management principles starts its activities
- Understanding the Chinese pork consumer
- Q-PorkChains develop archive for free and open learning resources
- PhD students enrolled in Q-PorkChains

Q-PorkChains weblog: Address your pig and pork production topics online

The weblog serves as an exchange of information, opinions and views on current discussion topics. The initial discussion topic launched on the weblog is "Quality management in the pork production". We will encourage stakeholders to participate in the weblog by visiting www.q-porkchains-industry.org



By Maren Bruins

The industry platform of the EU project Q-PorkChains wishes to encourage interaction and knowledge exchange between stakeholders within pig and pork production and therefore offers the meat industry a weblog. The main aim of the weblog is to discuss current issues online in an international network. The Q-PorkChains weblog serves as an exchange of information, thoughts and experience and functions as a means of communication.



To catch up with international experience and launch an exchange of opinions and views, the international Q-PorkChains network will address cur-

rent discussion topics concerning pig and pork production at regular intervals. However, we would like to take your suggestions to discussion topics ►

- ▶ into account and therefore encourage you to send an email with your suggestion to Maren Bruns, GIQS (m.bruns@giqs.org).

The first discussion topic launched on the weblog is "Quality management production. The guidelines for food safety and quality give those in charge enough leeway to implement their own controlling systems. Enterprises can take advantage of this to

improve production and business operations. How the implementation of own controlling systems works, in particular in the enterprises, can be discussed by visiting the Q-PorkChains weblog. Input for initiating the discussions is offered in form of a presentation made in cooperation with the Wageningen University (Netherlands), University of Bonn (Germany) and GIQS (German abbreviation for "Trans Border Integrated Quality Assurance").

The presentation offers a short summary of the quality relevant Europe-wide legal requirements, standards, norms and initiatives for the food production and is found on:

www.q-porkchains-industry.org.





Project rationale

Q-PorkChains is an integrated project under the EU's sixth framework programme and focuses on quality of pork and pork products by covering the total production chain from farm-to-fork. Fiftyone partners from 19 different countries will during a period of five years (2007-2011) collaborate towards the ultimate goal which is to develop and implement new innovative methods to improve and control the quality of pork. The partners includes some of the most important research institutions and industries working in the field of pig and pork production in Europe, Brazil, China, South Africa and USA.

The challenge for the pig and pork industry is to increase the production of high quality pork products, by investing and/or sale. In any case, the consumers must be aware, that the price of the products will increase due to higher production costs of pigs produced in sustainable production systems with optimized meat quality. Several aspects, such as i.e. economics, consumer demands, and environmental sustainability are crucial on the way to develop new methods to improve and control the quality of pork.

The consumer needs are becoming more and more sophisticated and the consumers no longer only consume food to cover their basic needs. The consumers willingness to spend more money on products with added value

such as i.e. convenience, higher eating quality, animal welfare and healthiness are increasing. In the industry, the production are often hold to needs of the short term market and are at odds with the consumer preferences on the

long run. Q-PorkChains will address some of the misconceptions between the consumers and the industry which is likely to appear along the farm-to-fork chain.



Facts about Q-PorkChains

Q-PorkChains includes 51 partners, from 19 different countries including Europe, Brazil, China, South Africa and USA. The total budget is 20.7 million €. The EU grant is 14.5 million €. Q-PorkChains is an integrated project under the EU's sixth framework programme. The full title of the project is "Improving 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". Q-PorkChains is composed of nine modules. The six research modules include consumer and market analysis (Module I), on-farm sustainable production systems (Module II), product development (Module III), integration and sustainable management of the production chain (Module IV), molecular biology in pork quality control (Module V) and synthesis of existing knowledge on pork quality, safety and welfare (Module VI). Two horizontal modules (A and B) aims at incorporating new knowledge into pilot and demonstration chains and disseminate Q-PorkChains results to stakeholders at all levels.



Pork production in regional chains

By Mette Christensen



and Nel Wognum



Small-scale pork chains are regional chains, which include the biological/organic chains. They deliver mostly regionally and high-quality products to lean markets. Their importance is expected to grow, as European consumers increasingly demands regional products at high quality. In contradiction, large-scale productions have international sourcing and trade, and professionalization of the chain links.

A regional chain has therefore some complementary challenges in the production. Due to their special character and smaller dimensions they are more vulnerable and are forced to adjust themselves continuously to the changing requirements of consumers. On the other hand, they can often sell the products at a higher price due to the higher added value (i.e., food safety and quality level) of their special products. Two examples of such regional chains are the Mangalica pig from Hungary and a small chain in Middenbeemster in the Netherlands.



Mangalica pig

The most common types of Mangalica pigs in Hungary are the Blonde, the Swallow-Bellied and the Red Mangalica. The meat is characterised by a high degree of intramuscular fat (approx. 7.5-9%), high extent of satu-

rated fat and the meat has a strong taste and has a high juiciness. Consumption of this meat containing proteins, fatty acids and other nutrients in optimal proportion and composition is very healthy. In addition, the meat is ▶



Pig production



- ▶ an excellent basic ingredient for salami, dry sausages and is a good source of ham. Nowadays, Mangalica is one of the indigenous protected animals of Hungary and may very well give rise to a new pork chain.

Middenbeemster

In Middenbeemster, in the North-Western part of the Netherlands, pig farmers decided together with local butchers and other supply chain parties to establish a small regional supply chain. They wanted to produce high quality meat to the local market. Several decades ago, the farmers did not have the economics of scale to participate in the existing fresh meat chain. A sustainable pig production was needed to get a higher price for his pigs.

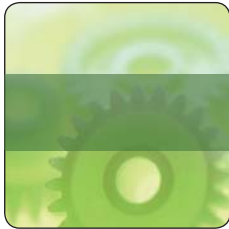
- Today the farmers in the region have about 200 pigs which are produced without use of antibiotics, sows in gestation is kept in a large open barn on straw, pigs are fed with grain and straw from the same area and the grain comes to the farm through a local, GMP certified, feed producer who mixes the grain into pig feed. The pigs are delivered to a small slaughterhouse for slaughter after which carcasses is distributed to approximately 20 butchers, Nel Wognum, Wageningen University (Netherlands) says. - A win-win situation is created for all parties. The farmer gets a higher price per pig, the butchers have a good marketing concept and the feed producer has stable demand and supply. The farmer is a member



of a larger initiative in the Netherlands that aims at marketing the pig farming sector to the broad public. The initiative has received subsidy from the government to install a sky box in the stables to allow the public to watch breeding sows and piglets.

Module IV

In module IV inventories of existing pork chains in Spain, Hungary, Greece, Germany, Netherlands, China and South Africa are being compiled with the aim to achieve extensive insight into the structure and variety of the European and international pork systems. Special attention is given to regional production systems, as these have a special place in the European market.



Pilotchain on management tools

based on Quality Management principles starts its activities

By Maren Bruns



One of the horizontal modules in Q-PorkChains (module A) aims at incorporating new knowledge from the research modules into pilot and demonstration chains. The pilot chains hence make the switch from research to business by testing and implementing innovative concepts from Q-PorkChains R&D activities in specific European

pork chains or networks. The team of the first pilot chain (out of nine) consists of the following partners:

The team members in the first pilot chain will address issues related to animal health on piglet production level. Salmonella and ¹PRRS are in the first place the important parameters to focus on.

The main business partner EGO offers for the R&D activities a fully integrated regional production chain from piglet production over to slaughter facilities through to a meat processing unit.

The already existing combined animal health service system that provides preventive veterinary services should be improved fundamentally. This will be done by software based systems developed in close collaboration with two software providers and the University of Bonn. The scientific input on the part of University of Bonn is important related to the analysis of weak points in the existing animal health system and to the conceptual development of supportive software based management tools.

The partners of this pilot chain are now in the process of developing a detailed implementation plan for their activities in the next two years. This is the first task of each pilot chain. ▶

Business partners:



The main business partner EGO (Erzeugergemeinschaft Osnabrueck; www.eichenhof.net/)



Software developer Chainfood (www.chainfood.com)



Software developer Qualitytype (www.qualitytype.de)



Research partner:



University of Bonn (FoodNetCenter Bonn; <http://www.foodnetcenter.uni-bonn.de>)



Coordination:



GIQS (Trans Border Integrated Quality Assurance; www.giqs.org)



¹ Porcine Reproductive and Respiratory Syndrome Virus (PRRSV), also known as Blue-Ear Pig Disease, is a virus that causes a disease of pigs, called Porcine Reproductive and Respiratory Syndrome (PRRS).



► Preparations for integrating additional companies into Q-PorkChains consortium start off

The thematically focus and partner structure of three more pilot chains is already defined:

- Pilot chain 2: Improvement of the exchange and use of quality relevant information in a pork production chain.
- Pilot chain 3: Use of rapid methods (e.g. dipstick test for positive Acute Phase proteins) for animal health, animal welfare and food safety.
- Pilot chain 4: Evaluation of newly developed logistic concepts for a match of production systems and market segments.

Additional pilot chains will be selected by a competitive call in the beginning of 2009. The project coordination committee will come to a decision on the R&D objective for additional pilot chains in the end of 2008 .





Understanding the Chinese pork consumer



By Klaus Grunert

China is the largest producer of pork in the world, and it is also the biggest market. No wonder then that European producers of

pork have looked at China and posed themselves questions: Is this a major future export market for European pork products? Will the Chinese producers be a threat on our markets in the future? And which room is there for cooperation?

In finding answers to these questions, gaining a better understanding of the Chinese consumer is crucial. In module I of Q-PorkChains we are therefore in the process of conducting a major study of the way the Chinese consume pork, their perception of a range of pork products, and their attitudes towards pork production. The study follows as much as possible the design of a similar study underway in EU countries.

However, this was not a question of just translating a questionnaire into Chinese and recruiting respondents. Moving a research design from one country to another, with different culture and language, always involves difficult questions of cross-cultural validity and comparability.



The Danish and Chinese teams working hard to adapt the questionnaire instrument to Chinese conditions.

In this case these problems were especially pronounced, since China is so different from Europe in many ways – in terms of language and culture, and more specifically in the way people shop, prepare meals, and eat. How do we study attitudes to pig production in a country where half of the pigs raised are in small farms with less than 10 pigs, while there on the other hand are industrial farms with 20,000 pigs? Does it give meaning to ask about animal welfare in China? How can we take care of the fact that a large percentage of shopping occurs in local markets and not in supermarkets? And which part of this vast country should we concentrate on in our study?

In taking care of these differences, the original questionnaire used in the European part of the study underwent considerable modifications – in close cooperation between the Q-PorkChains team from Aarhus University and the local team from Sun Yang-Tsen University in Guangzhou. ▶



Pig ears, pig feet or spareribs? It is always good to get first-hand knowledge of local eating habits.

- ▶ Local product categories had to be found and adapted, shopping habits had to be mapped differently, and the instrument used for measuring attitudes to pork production was changed a good deal.

The whole instrument was adapted in English first, then translated into Chinese, and then translated back into English to check for unintended changes in meaning – a common procedure in cross-cultural research.

Field work is currently underway in six different provinces in China.

Published research on Chinese consumers is still scarce. Q-PorkChains will therefore break new grounds in giving a scientific snapshot of a country where not only industrial production, but also consumer habits are rapidly evolving.



A traditional outlet where Chinese consumers buy pork in Gunagzhou.

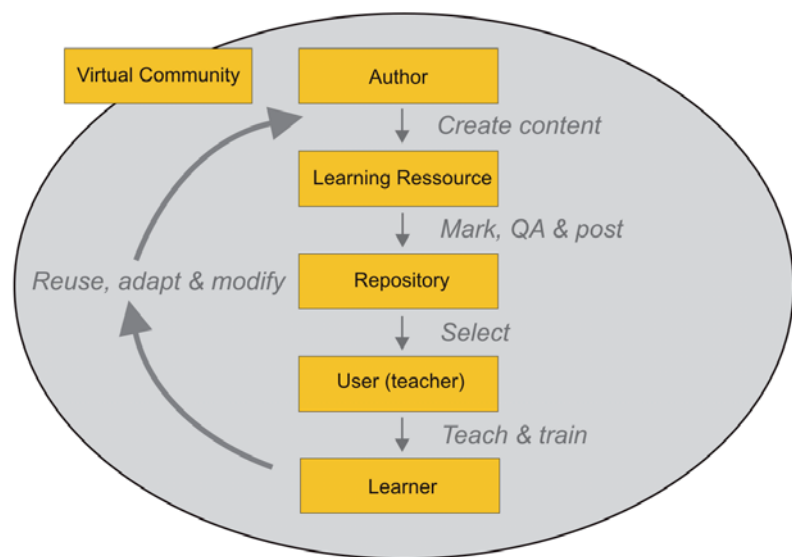


Q-PorkChains develop archive for free and open learning resources



By Anne Algers

During 2008 a repository (a digital archive) will be launched at the public webpage www.q-porkchains.org. A repository (a digital archive) will give the possibility to submit own teaching and training resources, to find and use resources developed by others and to evaluate those already submitted. The learning resources developed in module B will successively be marked, quality checked and posted in this repository.



Within the teaching and training network (virtual community) content is created either by Q-PorkChains (Module B) or by others (new and existing resources). The learning resources will be quality checked, posted and marked so that they can easily be found in the repository. The resources can be selected and utilized either directly by the learner or by teachers using the resources in their teaching and training. Learners can reuse and in some situations adapt and modify the learning resources (e.g. by adding new cases). In this way the repository will include an increasing number of learning resources.



Learning resources are often considered as key intellectual property. However, more and more institutions and individuals are sharing their digital learning resources over the internet, openly and for free, as Open Educational Resources (OECD, 2007). The arguments for OER are many including aspects such as democracy and preservation of public education. Furthermore, it gives teachers alternatives and increases competition between providers of teaching and

training. From a more individual point of view, open sharing increases publicity, reputation and the pleasure of sharing with peers. It also means broader and faster dissemination. In addition, OER enhance the motivation of students since they take part in problem solving and the intellectual development of learning resources. This makes learning more rewarding and the amount of learning resources will increase over time.





Teaching & training



- ▶ The community for teaching and training in Q-PorkChains is international and includes vocational trainers in private and governmental organisations and teachers in universities and research institutions. Two surveys have shown that the demanded topics include different subjects from the farm level to the retailer level and comprehensive topics such as quality management, food safety, marketing and consumer demands. The surveys are followed up by workshop discussions with a reference group composed of representatives from higher education and industry.

Two reports summarizing the results from the surveys are published on www.qpork.org



A workshop with industry representatives was held at Inst. for Food and Agricultural Research and Technology in Monells (Spain). Woody Majers (Netherlands), Elia Lorenzo (Spain), Karen Wahlgreen (Denmark), Melvin Hunt (USA) and Maren Bruns (Germany) participated among others in the workshop.



PhD students enrolled in Q-PorkChains

By Mette Christensen



Currently 15 PhD students are involved in research projects within Q-PorkChains focusing on activities mainly within module I (consumer, citizens and market), III (product development), IV (chain management) and VI (knowledge synthesis). Q-PorkChains is expecting to initiate further PhD studies, presently one PhD student in module V. In March 2008 a menu-item "Science" will be launched, in order to facilitate discussions among involved PhD students and other PhD students in the area of pig and pork production. Visit www.q-porkchains.org soon, when the menu-item "Science" is launched. At this page the initial PhD studies will be briefly presented and contact details will be included.

University of Bonn and Wageningen University are cooperating in Module IV and regularly arrange meetings with PhD students involved in module IV, accompanied by the module coordinator, work package leaders and

Status February 2008

<p>Module I: Two PhD students Universities: Aarhus University, MAPP FUNDACE, University of São Paulo</p>	<p>Module V: One PhD student Universities: University of Aarhus</p>
<p>Module III: Three PhD student Universities: University of Girona University of Copenhagen</p>	<p>Module VI: Three PhD students Universities: Scottish Agricultural French National Institute for Agricultural Research (INRA) University of Ulster (and Teagasc)</p>
<p>Module IV: Four PhD students Universities: University of Bonn Wageningen University</p>	

post-docs, to coordinate the cross-border interdisciplinary collaboration. The main objectives of these meetings are to introduce researchers, build-ups of work groups and organisation of communication, comparison of working status and planning of further cooperation. By having these meetings, work efficiency will hopefully gain an optimum of forward-looking research results Detert Brinkmann (University of Bonn) says.

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By Detert Brinkmann

- 1 University of Copenhagen (KU)
- 2 University of Aarhus (AU)
- 3 Wageningen University (WU)
- 4 University of Bonn (UB)
- 5 Swedish University of Agricultural Sciences (SLU)
- 6 Agricultural University of Athens (AUA)
- 7 University Gent (UGent)
- 8 University of Newcastle (UNEW)
- 9 Technical University of Lodz (TUL)
- 10 Politechnic University of Madrid (UPM)
- 11 LaSalle Beauvais Polytechnic Institute (LB)
- 12 University of Helsinki (UH)
- 13 Royal Veterinary College (RVC)
- 14 Institute of Genetics and Animal Breeding, Polish Academy of Science (PAS)
- 15 National University of Ireland, University College Dublin (UCD)
- 16 University of Naples (UNINA)
- 17 French National Institute for Agricultural Research (INRA)
- 18 Inst. for Food and Agricultural Research and Technology (IRTA)
- 20 Teagasc, Ashtown Food Research Centre (AFRC)
- 21 Norwegian Food Research Institute (Matforsk)
- 22 ASG Veehouderij BV (ASGV)
- 23 Danish Meat Research Institute (DMRI)
- 24 Central Food Research Institute (CFRI)
- 25 Agrotechnology & Food Sciences group (AFSG)
- 26 RIKILT - Institute of Food Safety (RIKILT)
- 27 Grenzüberschreitende Integrierte Qualitätssicherung (GIQS)
- 29 Zentralverband der Deutschen Schweineproduktion (ZDS)
- 30 Association of Meat Processors in Bulgaria (AMB)
- 31 Institut de la Filière Porcine (IFIP)
- 32 Chambre Régionale d'Agriculture de Bretagne (CRAB)
- 33 The Danish Meat Trade College (DMTC)
- 34 Danish Crown (DC)
- 35 Vion Food Group (VFG)
- 36 Nutreco, Swine Research Centre (SRC)
- 37 Pigchamp Pro (PP)
- 38 Pig Improvement Company UK Limited (PIC)
- 39 Casademont (CS)
- 40 Esteban Espuña (EE)
- 41 Glon Group (GG)
- 42 Erzeugergemeinschaft Osnabrueck (EGO)
- 43 France Hybrides (FH)
- 44 Chainfood (CHF)
- 46 Qualitype (QT)
- 48 Nanjing Agricultural University (NAU)
- 49 University of Pretoria (UP)
- 50 FUNDACE, University of São Paulo (FD)
- 51 Inst. of Animal Science/ Chinese Academy of Ag. Science (CAAS)
- 52 Kansas State University (KSU)
- 53 Scottish Agricultural College (SAC)
- 54 European commission ()

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Responsible editor

Mette Christensen
mec@life.ku.dk

Editor

Carsten Gydahl-Jensen
caj@danishmeat.dk

Project homepage

www.q-porkchains.org
www.qpork.org

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