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Project Agri-Trans: Transparency in agricultural vocational education

European Standards using the example of livestock farming (pig farming)
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National report on general and agricultural vocational training system

Denmark (3F)

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The Danish report on national vocational training system pig husbandry

Denmark is one of the World's largest pork exporting countries. The number of pigs has by far outnumbered the Danish population. The success of the export and a high efficient agricultural production is partly the result of focus on vocational training in agricultural production and husbandry in a historical perspective.

With a total population of 5.5 million and a total area of 45.000 km², Denmark is a small European country both in terms of population and land. Although the area of agricultural land is declining in Denmark, 66% of the total area of Denmark is agricultural land¹ and agricultural production serves traditionally an important role in the Danish economy.

Today, an estimated 14%, or 150.000 persons of the population, have an income related to agricultural production (including food producing and processing). A majority of the workforce is enrolled in service industry, public services and high tech productions in industries such as science and medicine production and research.²

General characteristics of the Danish agricultural production

During the second half of the 20th century, the Danish agricultural sector has undergone considerable structural changes. Since 1960, the number of farms has declined dramatically. In 2008 there were 43.000 farms in Denmark with an average size of 61 hectares of agricultural land to each farm.³ On the agricultural land conventional crops like wheat and barley are grown as well as cash crops like potatoes and turnips.

Despite the fact that the number of farms has declined, the agricultural sector still plays a role in the Danish economy. In 2008 approximately 4% or 100.000 of the Danish workforce was enrolled in the primary agricultural production.

Although the number of farms has declined, the farms have become larger entities and there is an increased focus on effectiveness and cost-reduction which result in specialised farms with mainly one efficient and high-tech production.

With this efficient and output orientated approach, 19% of the Danish export was related to agricultural products in 2008⁴.

The role of pig husbandry in the Danish national economy

In 2008 there were a total of 5.800 farms with pig production in Denmark producing approximately 25 million pigs in 2008 and with an annual stock of 12 million. Of these 19 million were slaughtered in Denmark and another 5 million were exported to other European countries. 1 million are produced as sows with piglets.⁵

In terms of pig husbandry, the number of farms has been reduced by 50% in a 20 year span from late 1980ies to 2008. From 2007 – 2008 there was a decline in pig farms by 20% - and 13% of the total numbers of farms in 2008 were pig husbandries.⁶

As illustrated in the chart below, 5% than 5000 pigs. This illustrates the general tendency in agriculture: fewer farms with larger entities.

¹ Source: Statistics Denmark, 2008

² Source: Statistics, Denmark, 2008

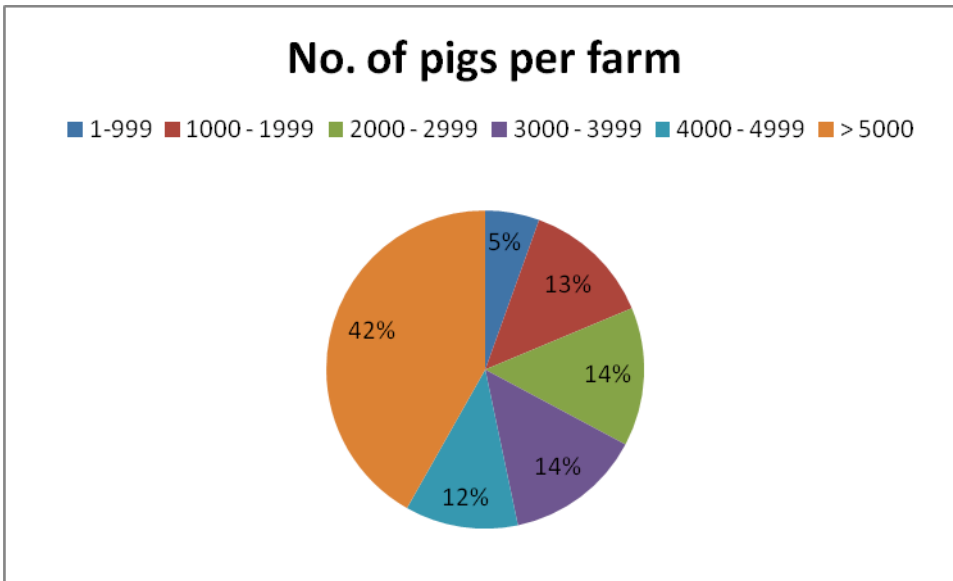
³ Source: Danish Agriculture & Food Council 2010.

⁴ Source: Statistics Denmark, 2010

⁵ Source: Statistics Denmark, 2008

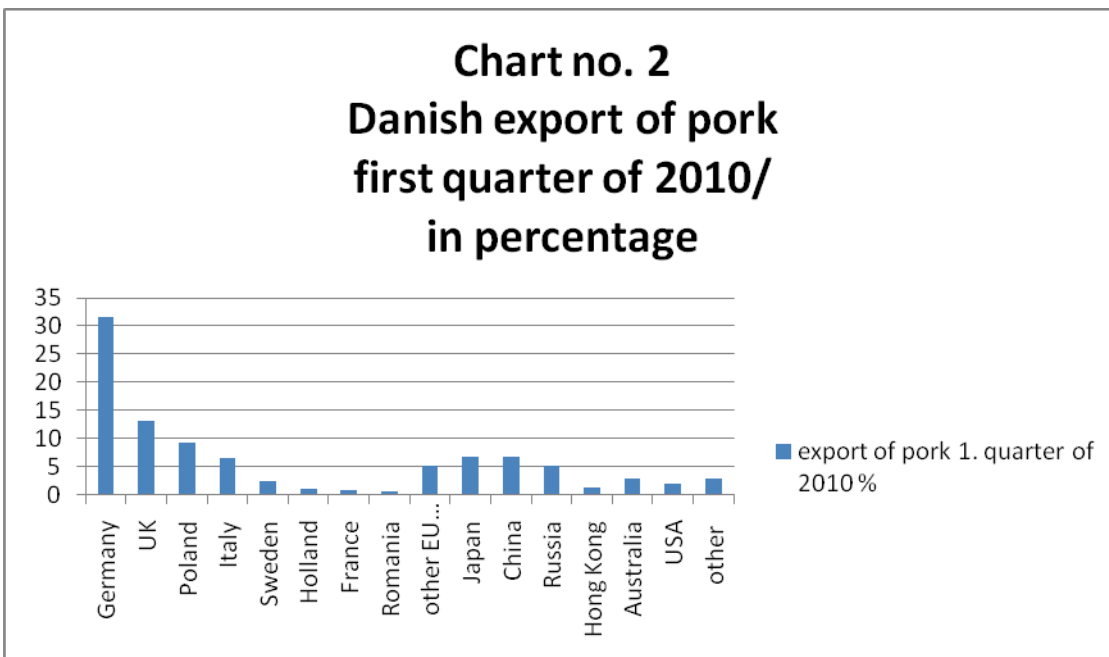
⁶ Source: Statistics Denmark, 2009

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50% of the surplus of the agricultural production comes directly from pig-production, and pig-production represents 5% of the Danish export.

A representative view of the Danish pork export is presented in chart no. 2. Approximately 71% of the Danish pork is exported to the European market, 13 % is exported to markets in China and Japan.



Employment in pig husbandry and secondary production

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Approx. 15.000 persons that are employed directed related to pig-breeding. The total number of employed in the pig production is 48.000 persons (including primary and secondary production incl. slaughtering and processing).⁷

The last century, the pig production in Denmark has been influenced by low prices on pork, both in Denmark and in exporting countries, and high economic conjuncture. With comparatively low wages in pig husbandry, and the general high conjunctures before the autumn of 2009, the agricultural sector has had difficulties in recruiting Danish labour. This has resulted in the recruitment of foreign low cost unskilled labour from mainly East-European countries in the primary production.

In order to ensure an efficient and high quality pig production, the future of the Danish pig production is dependent on highly skilled labour. Many functions in the production may still be carried out by low skilled labour related to pig husbandry. However, in the work of ensuring high quality production and products, there is in the public opinion an increased focus on welfare of animals, and on the impact of the agricultural production on the environment.

This increasing public focus is leading to tougher restrictions on for instance the use of medicine and ensuring the general well being of the pigs in the stables. This result in a growing acceptance of the need for qualified staff in the production along with an increased focus on proper working conditions for the staff.

Trade union enrolment

The employed in pig husbandry has been a difficult group for trade unions to recruit members from this sector. The historical small production units have had a close bond between the farm owner and the employed ensuring a patron-client relation. However, with the development of fewer but larger farms, the green sector in United Federation of Danish Workers (3F) is witnessing an increase in the numbers members. This is indicating that the traditional bond between farmer and employee in the agricultural sector is turning into a more employee-employer relationship.

3F is taking an active part in ensuring the working conditions for the employeeed in the agricultural production. Along with the other social partners, 3F is by general collective agreements, ensuring wage,⁸ 37 hour working week, pensions, socially issues and working conditions including the right for participation in lifelong learning.

Research and development

The future of the Danish agricultural sector is highly dependent on development and promotion of new and smart solutions in terms of increasing the outputs of crops, the welfare of the livestock. Last but very crucial is environmental issues, such as reduction of CO2 from farms, production of biomass, and reduction of the use of pesticides etc.

There is a high focus on research and development in the Danish Agricultural Sector, including scientific research at university level in all aspects of agricultural development.

General description of the Danish vocational training system

Denmark has a long tradition of vocational training programmes with the active involvement of the Danish social partners. Based on a general law outlined by the Ministry of Education, the social partners form a national board of the individual programme (table 3 below).

⁷ Source: Danish Agriculture & Food Council

⁸ The average wage in 2010 for 3F members in agriculture is Euro 17 per hour, exclude payment for holiday, and pensions.

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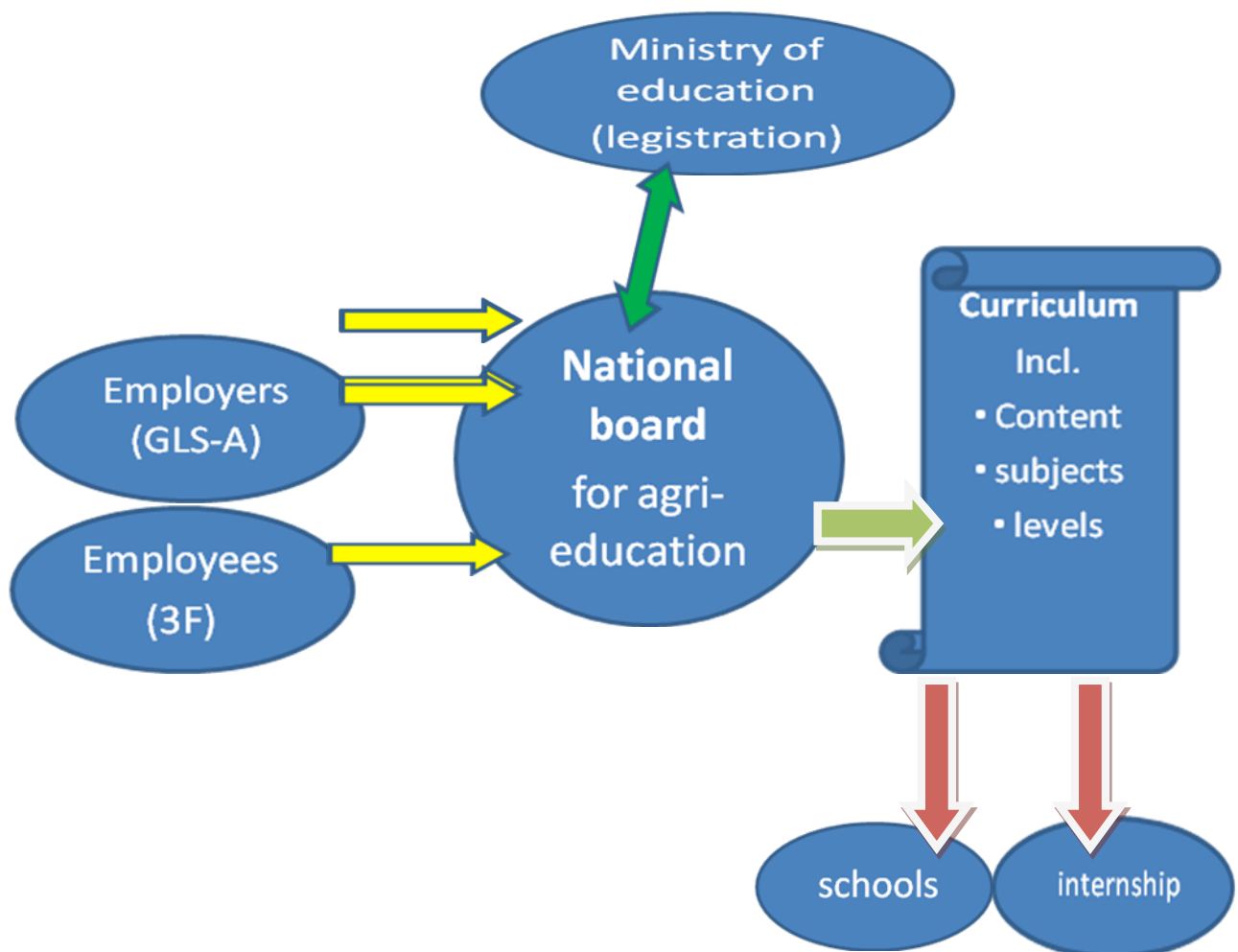
The main duties of the **national board**:

- outline the content of the curriculum including length of training, levels, subjects.
- approving the farms for apprenticeship/internship
- monitoring the programme and ensuring that the aims of the programme is equivalent to the requirements of the workarea.

The Ministry of Education is responsible for the quality of the school based training, whereas the national board is responsible for the quality of training in the internship.

Each programme consists of a combination of training and theoretical teaching in learning centres or technical /agricultural schools.⁹

The Danish model of involvement of the social partners in VET and lifelong learning.



Target groups for VET and Lifelong learning

The VET-programme is mainly focused on young people or people with no skilled qualifications.

⁹ [There exist 140 VET programmes in the Danish sector divided into 12 different sectors. For further reading: .](#) For further reading on the AMU program: [read her](#). For further reading on the Danish strategy of lifelong learning, [read here](#).

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The main target group for the AMU-programme are adults, skilled as well as unskilled.

Financing the programmes

The VET-programme is financed by government means in terms of financing the schools and learning centres. As the programme is a mix between training on the farm and theoretical studies at the school, the students form a contract with the employer, and get a salary from their employer. The employer will in return get a refund from the government for the students during their theoretical studies.

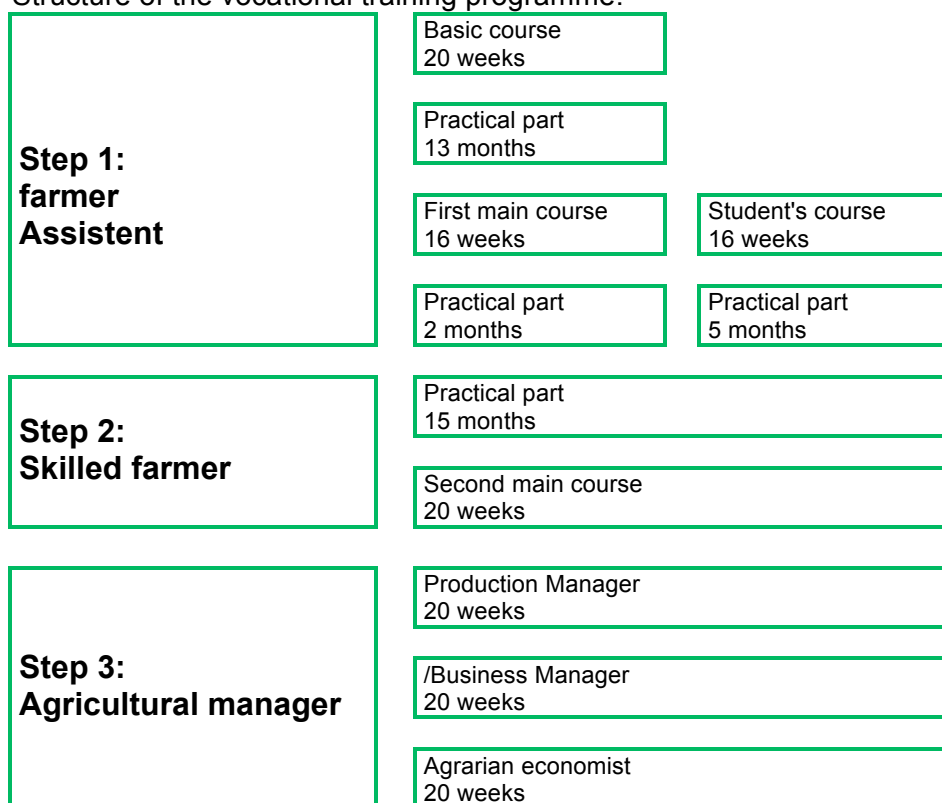
The AMU-programme is financed by government means. The government funding is ensuring that the courses have a very low cost, and that the participants get a salary refund when participating on a course.

VET in animal husbandry/ pig husbandry

The first agricultural school was established in the middle of the nineteenth century and there is a long tradition in Denmark for formal training in the agricultural sector. In order to require a farm, traditionally there has been a “green certification” ensuring that the farmer had basic skills and qualification to run a farm.

The agricultural programme is divided into 3 steps, initiated with 20 weeks for the VET-programme to become a farmer with skills in husbandry/livestock. Step 1 last 2 years and qualifies to become a “farmer assistant”. Step 2, last another 1 ½ (total of 3 years and 5 – 11 months) and qualifies to be a “skilled farmer”. The third step, “agricultural manager”, is additional approximately 2 years.

Structure of the vocational training programme:



The general requirement for joining the VET- programme is to have finished 9 years of compulsory school. After the 20 weeks of the core curriculum programme, the student form a contract with an approved employer and continues the training at a farm, combined with theoretical studies at the agricultural school.

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Content of the theoretical curriculum, farmer assistant/skilled farmer

Basic subjects	Specialized subjects (livestock)	Aims at internship
Economy	Ecological farming	Day-to-day care and handling of livestock (pigs, cattle)
Communication and collaboration	Machinery	Feeding and feed scheduling
Biology	Technical subjects	Health control of livestock
Social Science	Health	Establishing, tending and harvesting crops
Innovation	Finance and investments	Operating and maintain equipment and technical installations
English	Truck-licence	
Technical Science		
Pesticide Techniques		
Animal husbandry		
Production of plants		
Sustainability		

The programme finishes with a test including theoretical and practical aspects equivalent to European National Framework level 3. On this background, the students have the opportunity to continue to study in other agricultural areas, including agricultural management, at a higher ENF level.

The Lisbon process in the VET-programme

The Danish Government and the social partners are preoccupied with implementing the agreed principles on Vocational education training outlined in the Lisbon process. Internationalisation, Innovation and entrepreneurship became integrated parts of all vocational training programmes in 2008. In terms of internationalisation, the programme encourages the students to take a part of their training in countries abroad.

Development of the quality of training programme

The agricultural training programme is witnessing an increase in the number of students. However, the major challenge of the agricultural programme is to reduce drop-outs. Many students dropout during the course – some schools are witnessing drop-out rates as high as 35%.

The reasons for this drop out can be a complicated mixture of personal reasons. However, there is a high focus on how the learning environment can influence on drop-out. The Danish government has initiated that each school have to define specific plans on how to reduce the drop-out rate.

Lifelong learning

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In combination with the VET-programme there is a programme of lifelong learning – the so called “AMU-programme”. On the structural level, The AMU-programme is on the structural level based on the same principals as the VET-programme, with the active involvement of the social partners. The AMU-programme consists of small short term courses (1/2 day to 6 weeks). The courses are based on the concrete need for competences/skills on the labour market. The introduction of a new technology, techniques to survey the welfare of pigs or focus on ecological breeding of pigs may result in a AMU-course.

The agricultural sector, is as described above, a sector, undergoing major structural and technological changes.

Despite these changes and despite these very favourable conditions for undertaking lifelong learning courses, the number of participants on the AMU-courses are considerably lower than the political ambitions for lifelong learning – the agricultural sector and pig farming, being a sector with one of the lowest percentages of participation.¹⁰

The reasons for this relatively low participation in the AMU-programme are multiple and complex. It relates both to lack of interest from the employers of educating the employees, difficulties of the employees to face the motivation for lifelong learning, and to some extent a bad /low status brand of the AMU-programme.

Realizing the requirement for lifelong learning for both companies and employers, the social partners have, in the collective agreements, put extra means into a fund. The major objective of this fund is to increasing the lifelong learning activities. In order to meet objectives, projects of mobilisation and encouraging the individual for lifelong learning is initiated.

Perspectives: motivation for lifelong learning

It is crucial for the sector in pig farming to adjust to increased standards of welfare of pigs, environmental issues, know- how on cost-reduction etc. In order to keep up with the development, the sector requires skilled employees who quick gain the skills and can adjust to work with new technologies and ways to work.

In the Danish situation, the AMU-programme ensures that both the structural and financial condition for lifelong learning is very close to optimal; A wide range of courses based on a pedagogical principle of practical job-related training, and securing full wage. Despite this optimal point of departure for lifelong learning, the number of participants in the Danish system is too low.

But what is needed to enrol more employees from pig farming into lifelong learning? How do other European countries meet the need for qualified staff in a lifelong learning perspective – and has anyone found the key on how to motivate for participating in lifelong learning?

These issues would be interesting to investigate in a future project.

¹⁰ New analysis from 3F, shows that just 2 out of 5 members are participating in the AMU-programme annually.