

Robust breeds for organic pig production

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Implications

Robust animals – here piglets – are important for the organic production, since vital and healthy animals are one of the pillars for animal welfare and comfort in the daily management. One of the key issues in the conventional breeding system is a high litter size. The average is 15 – 16 live born, but quite often more than 20 piglets are seen in practice. The organic production system uses the same genetic as the conventional because the production scale is too small to run its own breeding system.

The organic regulation offers a frame for a wide range of high level of animal welfare parameters (free range, prolonged nursing period and access to roughage, just to mention some). However, at the same time it has to face a major problem with high mortality among the piglets. This conflicts with the aim of high animal welfare, and also stresses the staff.

A high litter size is partly responsible for the mortality rate for piglets. The sow normally has 13 – 14 teats – which makes a litter equalization needed, when there are born more piglets than there are teats. The equalisation management tool works, but the question is what to do, when there are either extra sows or teats available? The conventional production solve the challenge by practising “nursing sows”, meaning that, when a sow has brought up her own litter, these are weaned and the sow “adopts” some younger piglets. This kind of management is difficult in the organic production, because the sow has already had 7 weeks lactation and also it can be difficult to make the sow accept new piglets, because it is not allowed to fix organic sows. This has led to a request from some of the organic pig farmers: Can we breed sows where the litter size is balanced to the number of teats? The born piglets should also be both strong and vital.

Background and objectives

In Denmark the organic pig production is characterised by being an outdoor production. Each sow has her own hut in the farrowing pen and the lactation period is 7 weeks, which is one week longer than the EU-organic regulation requires. This set-up has been ordinary practice for more than 20 years. The farmers like the system and are proud of this way to keep pigs. Also the consumers appreciate the opportunity to observe the animals outdoor.

Almost all herds in Denmark use the same genetic material as the conventional indoor production. This is caused by the fact, that the organic production is too small for running a breeding programme itself and because the slaughter quality – measured as meat content - is a high value parameter, concerning the consumer (both home- and export market). But for years the organic farmers have asked: “Is it the right choice to use the same genetic for two systems that differs so extremely”?

A project named "Robuste racer i økologisk sohold" (Robust races in organic sows for piglet production) has been carried out. The aim of this project is to find the answer for the farmers: can the use of other breeds give a sow where 1) the litter size matches the capacity of the sow, 2) the sow produce strong and vital piglets and 3) the slaughter quality is at the same high level as today,

Key results and discussion

Results are measured as: production level, robustness (mortality and treatment) behavior, temperament and slaughter quality. The results are under preparation and will be presented at the seminar. There was not found literature from scientific work carried out with the similar focus.

How was the work carried out?

First some interviews were carried out among colleagues in the organic farming system in Sweden, England, Germany and The Netherlands. We visited farmers, advisers, breeding associations and breeding companies. It is a challenge to compare animals and results while in Sweden, Germany and The Netherlands there in-door farrowing are often practiced. Sweden and to some extent the Netherlands use Landrace x Yorkshire/Large White like in Denmark. England has a total outdoor system and uses breeds, which are very different compared to the traditional Danish (Danish Landrace and Danish Yorkshire). In Denmark Duroc is used as sire (boar) line – in England it is bred as dam (sow) line. Years ago an immigrant settled down in Denmark as an outdoor pig farmer. He brought with him animals from the English Duroc dam line and had very good experience with them concerning behavior and maternal instincts. Based on information from the interviews, visits and production data (in the extend it was available) it was decided to import semen from England (Duroc dam line) and Saddleback (from Ireland). The semen was used for purebred Danish Landrace gilts and offspring from here was the new crossbreed sows. We ended up with 11 Saddleback x Landrace gilts and 7 Duroc x Landrace gilts. For the new crossbreeds was used ordinary Yorkshire semen to try to reach the aim for meat content in the slaughter pig. The practical work was located "on farm".

References

The project is funded by Fonden for Økologisk Landbrug, Landdistriktsprogrammet og Udviklingscentret for Husdyr på Friland. The project period is 2011 – 2013. The work will be finished in July 2013 and the results formulated for the NJF seminar as the first place to be disseminated.

Results from the project will be found (in Danish) at <https://www.landbrugsinfo.dk/Oekologi/Svin/Sider/Svinehåndbog.aspx> after the end of the project.