

Pig Case Study Czech Republic 1

Organic pig production system, Farma Sasov, Jihlava

Organic system with enriched pens, open yards and late weaning

Josef Sklenár runs the largest organic pig farm in the Czech Republic and he is trying to develop a fledgling local market for organic pigmeat products. The pigs live in an enriched indoor environment with access to an outdoor run. The farm keeps 80 Large White/Landrace sows which are mated with Duroc or Czech Saddleback boars.

A notable feature of the system is that, six weeks after farrowing, the sows and their piglets are placed together in family groups. A few days later, boars join the group in turn so that the sows become pregnant again. This enables late weaning at three months old whilst the sows can still produce two litters of piglets per year.



Vegetation and soil are placed in the outdoor runs to provide fibrous food and foraging opportunities



Family group indoors

All the pens for the family groups and the growing pigs have a deep layer of straw for comfort and foraging. The pens have access to an outside straw yard. Unfortunately, environmental regulations require a concrete base. However, the yards are enriched by providing vegetative forage and sods of soil on top of the concrete. Vegetative forage includes grass, nettles and a range of waste vegetables and crop weeds as

are available. The farmer also has a supply of stale unsold bread and rolls. These are fed to the pigs as a further source of dietary and environmental enrichment.

The farmer would like to be able to keep his pigs free-range and has visited and studied free-range systems in the UK.

Unfortunately, free-range pig-keeping is not permitted by the veterinary authorities in this part of the Czech Republic. There is a concern about the spread of disease from the wild boar population.

Family group system

This traditional family group system has many advantages for welfare:

- Later weaning for the piglets
- More gradual drying off period for the sow
- Less feed-restriction for the sow
- Longer periods between pregnancy reduce pressure on the sow
- Increased social contact for the boars



Straw provides comfort as well as environmental enrichment

Piglets naturally start to sample solid food when they are three weeks old. They would naturally wean from their mothers at 13-17 weeks. It is, however, common practice in intensive systems to wean piglets at 3-4 weeks old. Early weaning is highly stressful for the piglets because:

- They suddenly lose the comfort and protection of their mother
- Their diet suddenly changes from liquid to solid food
- They are usually removed to an alien environment
- They are usually mixed at the same time with unfamiliar piglets
- This leads to fighting to establish a dominance hierarchy

In a natural environment, piglets would get used to all these kinds of change gradually. With early weaning, all these stressors happen at once and can cause major problems for the piglets:

- They may feed much less for several days, causing a loss of weight
- The change in diet can cause digestive disorders
- Their strong urge to suckle may lead to vices such as belly-nosing and navel-chewing
- The stress can weaken the immune system, making the piglets more susceptible to disease

A higher incidence of disease may require increased use of antibiotics. For these reasons, organic systems in the EU are not allowed to wean piglets until they are at least 40 days old.

Extending this period to 12 weeks, after joining family groups together at 6 weeks, has many advantages for piglet health and welfare. Weaning is a gradual process and they will be used to eating solid food by the time their mother is removed. The mother's presence may have a calming effect and help reduce aggression. By the time their mother is removed, they will have established a stable hierarchy. Reduced stress means less susceptibility to disease.

Later weaning has advantages for the sow too. Her milk will dry off more gradually, reducing discomfort. Extra nutrition required to feed her piglets during the earlier stages of pregnancy means that she can be fed ad libitum without the risk of obesity. She is likely to suffer far less from hunger. Both sow and piglets are likely to benefit from each other's company, as they would in a natural environment.

Later weaning extends the gaps between pregnancies. This adds to the cost of production, though this is minimised by introducing the boar once the piglets are six weeks old. An advantage of extending the gap between pregnancies is to reduce the metabolic pressure on the sow. This is better for their body condition and their health. Partly as a result, the sows live to produce an average of ten litters, reducing the cost of replacements.

The family groups are kept in a spacious enriched environment. A large space is required to reduce aggression when the sows and their six-week-old litters are mixed. Josef Sklenár believes that the indoor pens



The farm's boars are rotated daily around the family groups

need to be at least seven metres long to allow a subordinate sow to escape from an aggressive encounter. In practice he says that aggressive behaviour does not last long once the sows have established or re-established their dominance hierarchy.

Two days after the sows and their piglets are mixed, the first boar is introduced. Every day or so, the boars are switched from one group to another. The farmer finds that sows have different preferences in a mate and that cycling the boars around increases the frequency of conception. The boars are very gentle towards the piglets. Extra social contact is likely to be very beneficial to the welfare of the boars.



Farrowing system allows freedom of movement of the sow whilst providing some protection for the piglets

Tail-docking is not practised on the farm since, in an enriched environment which gives the pigs plenty to do, tail-biting is not a significant problem. Tooth-clipping is practised on an individual basis, for example with a large litter where the sow might suffer more from biting piglets. Unfortunately, castration is practised because the local market requires it. It is also unfortunate that the vets who carry out the operation are not prepared to use an anaesthetic. EU organic regulations do permit castration of male pigs but state that any suffering to the animals must be reduced to a minimum. This would appear to require the use of anaesthetic. The farmer dislikes castration and hopes to abandon the practice in time.

Dry sows

At 12 weeks, the sows are moved as a group to a new pen for the middle and later stages of pregnancy.

The key welfare aspects for the sows are:

- Deep straw bedding for foraging and supplementing the diet
- Access to an outdoor run
- Provision of stale bread and forage to enrich the diet
- Being kept in a stable group without further mixing

Farrowing system

Prior to farrowing, the sows are transferred to individual straw-bedded pens.

The key welfare aspects of the farrowing system are:

- The sows have freedom of movement at all times
- The sows have straw for carrying out nest building
- The sows have individual pens to reduce disturbance
- The piglets have a safety area to reduce mortality from crushing



Infrared lamp encourages piglets away from the danger of crushing

Growing pigs

At 12 weeks, the growing pigs are transferred to large straw-bedded barns with an outdoor run.

The key welfare aspects for the growing pigs are:

- Pens with a thick layer of straw bedding
- A generous space allowance
- Access to an outdoor run
- Provision of forage and stale bread to vary the diet
- They remain in the same group, minimising stress and aggression



Indoor quarters for the growing pigs

At Farma Sasov, the pigs receive a great deal of human attention. They are inspected 5-6 times per day. When the finished pigs have to be loaded on a lorry bound for the slaughterhouse, their familiarity with people means that they can be loaded with a minimum of stress. The farmer attributes the fact that not a single pig has died on the way to slaughter in the last three years to regular handling. Social and environmental enrichment helps prepare pigs for novel stresses.

It must also help that the journey to slaughter is only 12km. Nevertheless, the farmer has plans to build his own slaughterhouse on the farm to remove the stress of the journey and to control all welfare aspects of the slaughter process.

A key welfare issue on this farm is the need to address the levels of piglet mortality (though mortality figures quoted below are rough estimates).

Only a proportion of the farm's pigs are sold at premium prices since the Czech organic market is still in its infancy. 80% of the pigs are sold on the conventional market. 20% are killed and processed to make organic salamis and other pigmeat products. The farm also sells organic beef, grains and vegetables and runs a horse riding business. The farmer grows most of his own organic feed. This keeps down the costs of production and makes the farm more independent. It is also consistent with the farm's sustainable production ethic.

Organic production system

Date of visit	22 September 2004
Certification scheme	KEZ (EU Organic scheme inspected by the Czech authorities)
Number of sows	80
Breed	Large White/Landrace sows x Duroc or Czech Saddleback boars
Food	Home grown organic feed based on peas, oats and other grains with yeast and vitamin supplements
Average and maximum farrowings per sow	Average 10
Farrowings per year	2
% piglets stillborn	14% (1-2 per litter)
% live born piglet mortality	27%
Average number of piglets weaned per farrowing	9 (18 per sow per year)
Mutilations	Castration. Teeth-clipping sometimes practised on an individual basis. No tail-docking
Weaning age	3 months
Growth rate	500-550g per day
Food conversion rate	Varies with feed
Weight when sold on or slaughtered	120-150kg
Transport to slaughter	12km
Price to farmer	80% at normal commercial prices. 20% sold as processed organic
Market	80% sold to local slaughterhouse. Developing an organic market for salami, hams, pork joints etc.
Number of stockpersons	3
Number of inspections	5-6 per day
Health problems	Occasional piglet digestion problems
Other welfare problems identified	Piglet mortality, mutilations