

## Danish Pork Industry - Welfare and Producer Adaptations

As a pork producer, your livelihood depends on the welfare and performance of your livestock. If an animal is mistreated or under stress, it will need to eat more feed to grow, will be more susceptible to disease and will generally not thrive. To do anything short of providing the best, humane care possible to help your animals realize their full productive potential is self-defeating." *Pork Checkoff Swine Welfare Assurance ProgramSM (SWAP) 2003 ed.*

Livestock welfare is not a new issue. In 1877, the American Humane Association was formed in Ohio. Its first goal of protecting livestock in transit to Eastern markets was based on public concern about the railcars in which cattle and hogs traveled for several days without adequate rest, feed or water, and the conditions of slaughterhouses.

The objective of animal welfare in Denmark, as in the United States, is to fulfill animals' physical demands, minimize fights and injuries, treat sick and injured animals, and produce pigs while minimizing fear, stress, and agitation. Policy is shaped to reflect the "Five Freedoms," i.e. freedom from hunger and thirst; freedom from discomfort; freedom from pain, injury and disease; freedom to express normal behavior; and freedom from fear and distress.

### History of legislation and industry agreements

The foundations for swine welfare in Denmark are built upon the interrelated requirements of European Union (EU) legislation, Danish legislation, voluntary industry initiatives, the DANISH Quality Guarantee, and niche market demands.

In 1991, the EU adopted a directive that required minimum standards for the protection of pigs reared in confinement. In 1998, Directive 98/58/EC set standards for pig space, flooring requirements, sow feeding systems, availability of manipulable materials, and feeding of fiber to sows. It also set rules for pig isolation and elimination of tethering of sows, encouraged group housing of sows, and set a time schedule for administering these practices.

The Danish Animal Welfare Act of 1991 established the Danish Council of Animal Ethics. The Act supported policy to comply with EU guidelines and provided a framework for introduction of additional welfare practices. In 1995, the DANISH Quality Guarantee was introduced and provides a thorough documentation of all standard practices in the Danish pork industry. Additional welfare issues were addressed in 2001, including requirements for natural lighting and maximum noise levels, permanent access to materials for rooting and playing, permanent access to fresh water, castration and tail docking limits, and observing the minimum weaning age of four weeks. Some regulations applying to outdoor pig housing began in 2001. Although the Quality Guarantee manual is intended for buyers of Danish pork, it also serves as a quality management structure for the Danish producer.

The Code of Practice is a set of rules issued by Danish Crown (the country's largest cooperative abattoir, representing 93% of slaughter) to member farmers. These rules cover several requirements that extend beyond legislation. Some are imposed by the industry and others are specific to marketing through Danish Crown. The requirements fall in three groups: food safety, meat quality, and ethics and welfare. Specific ethics and welfare requirements include the minimization of tail biting, hernias, shoulder bruising, neck scars, and bites to the vulva. These injuries are recorded at the abattoir and reported back to the

producer. A farm-specific plan of action must be formulated by the producer and attending advisors to resolve these problems. Specially trained advisors carry out the inspections for Danish Crown.

#### Monitoring and control

The Danish Veterinary Service is responsible for ensuring that producers observe welfare and other relevant legislation. Five percent of all herds are audited annually by specially trained veterinarians. One-half of the farms audited are selected at random and the remaining audits are from a pool of larger farms, farms with antibiotic usage outside the norm, and farms with poor quality pigs delivered to slaughter.

Veterinary care is mandated and tracked by farm.

- All farms are required to have an advisory contract with a veterinarian.
- The contracted veterinarian must make 12 visits per year (at least once every 35 days) to the producer.
- All medications are prescribed during these visits, although veterinarians themselves do not sell medications.
- Licensed pharmacies fill all prescriptions and report usages by veterinarian and producer to a central database.
- Farmers must retain medication usage records for three years.

More than 90 percent of Danish pork production is exported either as live animals or meat. The ISU group visited with local producers at various functions who indicated that most producers are well aware that, in order to keep their domestic market share and maintain exports to the EU and other countries, incorporation of welfare changes is required. Some producers have extensively remodeled their facilities to meet these requirements, while others have made small adjustments. A few farms will maintain gestation stalls until 2013 and then retire those facilities. One producer we visited with, Henrik Hanghøj (who owns 750 group-housed sows near Dybvad) told us there is strong and continuing welfare pressure within the EU to increase space allowances and phase out fully slatted floors. He also emphasized that pig welfare is subject to continued government and industry scrutiny from the farm to the abattoir, resulting in pressures on other production areas.

Currently, about 60 percent of sows are group housed, utilizing several facility designs. The National Committee for Pig Production/Danske Slagterier continually tests and evaluates housing systems to prevent marketing of production systems and products that are detrimental to animals' well-being, production economy, or are of poor quality or unsafe.

Denmark has adopted specific rules to comply with the EU Directives: sows must be group housed at a minimum from week four post-service until day seven pre-farrow, space requirements dependent on group size and proportion of gilts (see Charts 1 and 2), no gestation tethering allowed after 2005, and no gestation stalls allowed by 2013. These are EU requirements and all member countries may use the same phase-in periods. Beginning in 2000, any new construction must have a minimum of one-third solid flooring for all age groups, and access to straw or other high-fiber feed material must be provided to the breeding herd.

Also, sows and gilts must be given nesting material in the week before expected farrowing unless the manure handling system is unaccommodating. Permanent access to rooting or enrichment materials (such as straw, hay, sawdust, wood, peat, mushroom compost, or natural rope) is required; chains, plastic strips, bowling balls, etc. are not sufficient.

Sprinkler systems in pens must be available to enable regulation of body temperature for grow-finish production and breeding stock. The sprinkling requirement, in effect since July 2000 in all new facilities, must be incorporated into all facilities by July 2015.

Additional welfare-related management requirements have been implemented. Hospital or relief pens for individual pig care were required in all herds by January 2005. Animals are placed in hospital pens either when in need of extra heat and space and a soft bed, or when in need of access to feed and water without competition. These pens have twice the space as healthy animals, rubber floors or bedding. It is recommended that two to five percent of herd spaces be as relief pens and the animal should not remain there all the time. A welfare emphasis on shoulder sores in sows has been recently incorporated in Denmark. Farms may be inspected for presence of shoulder lesions and sows with bad lesions are not allowed to be sent to slaughter. A lesion scoring system is in place to assess the severity of the lesions. Prevention of shoulder sores appears to be a function of proper body condition, a wider farrowing stall, and flooring surface in farrowing.

Piglets may not be weaned until they are at least 28 days old, unless they are weaned to an isolated off-site nursery. Teeth clipping and tail docking are allowed from four to seven days old without anesthesia. After seven days, an anesthetic must be used and no more than half of the tail length can be docked. Castration can be done from two to seven days after birth without anesthesia. After seven days, the castration must be performed under anesthetization by a veterinarian. Euthanasia is required when highly painful conditions or diseases occur that cannot be cured or when treatment has not helped. Euthanasia requires stunning followed by bleeding the animal via cutting at least one of the carotid arteries -- a practice in which the farmers disagree.

#### Transportation

Pig transportation also is regulated in Denmark. All truckers must receive training, and be licensed and approved by the abattoir. Electric prods are banned during loading, unloading, and while in lairage. There are regulations on size and dimensions of truck pens, number of animals, and flooring type. Trucks are equipped with rubber flooring, natural and mechanical ventilation, insulated walls and roof, a misting system, lift ramp and air suspension. The mandated space requirement is 0.42 sq. meters (4.4 sq. ft.) for a 100 kg (220 lb) pig. Market hogs must not be hauled more than four hours, or sows for eight hours, without off loading for rest, feed and water.

#### Special production systems

As in the USA, there are niche markets driven by perceived welfare standards. "Friland grise" (free-range), "Økologisk" (organic), and "UK grise" (pigs produced for the English market) are a few examples. Friland and organic production are specific to the domestic market. Fifteen percent of Danish pork production is bound for the English market. Danish producers of UK pigs must abide by British production protocols. These farms are inspected annually to ensure that they are following UK production guidelines, which include loose sow housing directly after breeding and no animal fats in the diet. These requirements are beyond those required of normal production as specified in the DANISH Quality Guarantee. There are 65 Friland pig farms in the country producing 200,000 pigs per year. To qualify for Friland production, farms must be inspected by the Danish Animal Welfare Society (Dyrenes Beskyttelse) and the pigs must be farrowed on pasture and raised in bedded

systems. Inspections and certifications of organic farms are carried out by the Plant Directorate.

#### Implications

The requirement for group housing of sows, combined with high labor costs and reduced availability of labor, has encouraged use of electronic sow feeders and sorting. When we asked producers about the successes and challenges with group housing, two themes arose. First, when sows lose condition and are sliding backwards, the caretaker must be quick to respond. The sow must receive attention and possibly be removed from the pen. Second, in any given pen size and structure, there is a balance of sows that should be maintained for optimal performance. More or fewer sows than ideal is detrimental to group performance. A farm-specific learning curve is required with each new system. Farms operate with either static or dynamic groups. Static groups are maintained by breeding date. With dynamic groups -- where sows are added weekly, monthly, etc. -- there is an optimum number for every pen that should be introduced at one time to reduce aggression. The requirement for bedding and manipulable materials appears to be a bit more difficult to adapt on some farms. Bedding accumulation can create difficulties with current manure handling systems. Bedding management creates more labor and storage facility needs.

The ultimate question for the American pork producer: Will the welfare issues as they are currently addressed in Denmark and the EU be of concern in the United States? If so, how soon and how will it affect your operation?

For more information, contact the Iowa Pork Industry Center at (800) 808-7675, or any ISU Extension swine/livestock field specialist. We also can help if your group would like a presentation on the Danish pork industry or the specific issues of productivity, antibiotic growth promotants, and animal welfare.