

How to Evaluate Animal Comfort

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Introduction

An animal's comfort depends on many factors including temperature, air quality, as well as food and water availability. Animal comfort can be quickly evaluated by looking at the behavior and condition of the animal. Design features such as housing type, pen design, stocking rates, type of flooring, stage of production, heating and ventilation will greatly influence the comfort of the animal.

Are my animals too cold or too hot?

Pig behavior and the posture they use for lying can be used to determine if animals are too hot or too cold.

Pigs may be too cold if they

- lie on the floor with their legs tucked under their body to reduce floor contact
- lie in a pile on top of each other
- lie away from damp cool areas
- show signs of shivering
- become hairy

If pigs are showing any of these signs starting a heating regime should be considered.



Pigs may be too hot if they

- are all spread out from each other and are lying on their sides with their legs stretched out from their bodies
- are lying in wet, damp areas
- are dirty
- are panting
- eat less.

If pigs are showing any of these signs producers may want to consider starting a cooling regime.

Are my animals getting enough feed?

Providing adequate amounts of feed and nutrition is essential to making animals comfortable. An important

management practice that can be used by producers to evaluate adequate feeding levels and health is body condition scoring. Body condition scoring evaluates the level of body reserves an animal possesses and is done through careful visual examinations from several different angles.

Pig body condition is often graded on a 1 (very thin) to 5 (very fat) scales. Readers are directed to the PQA plus book for pictures and descriptions. Any animal with a body condition less than 2 should receive immediate attention to improve their body condition score. For the breeding herd the industry recommends evaluating your feed delivery system and nutritional diet and plan if you see greater than 1% body condition score of 1 and for the nursery and growing animals 3 % of more.

Are my animals getting enough water?

Water is an essential for pig comfort. Normal water consumption for pigs is 2 to 3 lbs of water for every pound of feed consumed per day. Although water is essential for all animals newly weaned pigs and lactating sows are especially sensitive to low water intake.

A pig may not be getting enough water if they have:

- sunken or hollow eyes
- dry feces
- dehydrated skin.

If pigs demonstrate any of these signs water should be provided and a check of the water source for flow should be done.



Are my ammonia levels too high?

High ammonia levels can directly impact animal comfort. Although ammonia can be measured directly using specialized equipment. High ammonia levels or poor air quality can be detected by observing animals.

If pigs have:

- watery and matted eyes,
- bloodshot eyes
- difficulty breathing,
- increased coughing
- increase incidence of pneumonia
- restless, uncomfortable behaviors

Producers should begin checking their ventilation systems and perhaps even measure the air quality in that room or facility.

Do my pigs have enough room?

According to the PQA plus program, for pig space to be considered adequate, and pending further research, the pig must be able to:

- Easily lie down fully on its side (full lateral recumbency) without having to lie on another pig and be able to easily stand back up;
- Lie down without the head having to rest on a raised feeder.
- A sow housed in a stall must be able to lie down fully on its side (full lateral recumbency) without the head having to rest on a raised feeder and the rear quarters coming in contact with the back of the stall at the same time.

References

- Elanco Animal Health, 2007. No Matter How You Look At It: Body Condition Scoring Is An Important Part of Successful Swine Management (poster).
- National Pork Board, 2002. Swine Care Handbook. Des Moines, IOWA
- National Pork Board, 2007. PQA Plus. Des Moines, Iowa.
- Leibbrandt, V.D., L.J. Johnston, G.C. Shurson, J.D. Crenshaw, G.W. Libal, and R.D. Arthur. 2001. Effect of nipple drinker water flow rate and season on performance of lactating swine. *J. Anim. Sci.* 79:2770-2775.
- Xin, H. , 1999. Assessing Swine Thermal Comfort by Image Analysis of Postural Behaviors. *J. Anim. Sci.* 77:1-9.