



## Heat stress in small swine herds



### Question:

You are worried about your grower pigs. You currently have six pigs around 55kg that you are growing for meat. There are no other pigs on farm. You pur-

chased them around 5 weeks of age and have had no health concerns up until now. All of your pigs have become lethargic, are not eating very much, and appear to be breathing heavily. One pig developed diarrhea yesterday and then died earlier today. You did not notice blood or mucous in the diarrhea.

**Farm:** it is around 36C outside.

- Pigs' pasture- a fenced in section of much larger field so there are no trees around it.
- Small barn attached to the pasture and says the pigs are all hiding in there to get out of the sun. The pigs have free access to come and go from the barn into the pasture through side doors that are currently left open.
- In the barn- a wall of humid air. The remaining pigs are spread out around the small barn and are all breathing very rapidly.
- The barn is bedded with older straw that is damp to the touch.

**Water trough:** It is full, the water appears clean, but it is sitting in full sunlight and the water is hot to the touch.

**Diet:** You are feeding a home mix of rough chopped alfalfa mixed with peas, soybeans, and a commercial pre-mix.

### Physical exam:

- Elevated respiratory rate, elevated heart rate, and elevated body temperature around 40C.
- One pig has loose stool.

### What is your diagnosis?

### What control measures can you implement?

### Response:

This is a case of severe heat stress. Pigs are particularly susceptible to heat stress because they are unable to sweat, and have smaller lungs for their body size compared to other species so panting is less efficient. Typical clinical signs include rapid breathing, reduced activity, and reduced feed intake. Severe heat stress for a prolonged period can cause break down of the intestinal structure, causing bacterial infection, diarrhea and potentially death.

### Intervention

- Provide shade outdoors so pigs can get out of the sun, as well as get exposure to more air movement.
- Change the straw in the barn to reduce the humidity in the barn. Pigs become heat exhausted faster if it is humid.
- Leave some area of floor without bedding so pigs can lie directly on the cool concrete or dirt floor. Pigs naturally wallow in mud to keep cool and protect their skin from the sun.
- A mud wallow in the pen will be beneficial.
- Spraying the pigs with a gentle spray will help to cool them. Don't spray them in an area where moisture will accumulate and cause increased humidity.
- Move the water trough to a shady place and change the water regularly. Ice can be added to keep it cool.
- Electrolytes and probiotics can also be added to the water to better maintain hydration and support intestinal health.
- During hot months, decrease the amount of fibre in the diet to reduce heat produced by fermentation.
- Excess protein should also be reduced to decrease heat production.
- Net energy should be increased since pigs are eating less. Moving feeding times to early morning and evening to reduce digestion that is occurring mid-day.



WeCAHN thanks Dr. Hollyn Maloney, Prairie Swine Health veterinarian, for contributing this case