



TECHNICAL REPORT

by Groupe Cérés and Nutrition Athéna



FEED WITHDRAWAL PRIOR TO SLAUGHTER

Dan Bussières, B.Sc., agr., Jean-Philippe Martineau, M.Sc., agr. & Martine Pelletier-Grenier, B.Sc., agr.
Swine nutrition specialists for Nutrition Athena inc. and Shakespeare Mills inc.

Pork industry is always looking for ways to improve meat quality, food safety and also animal welfare. One good practice to put in place is withdrawing of feed from market hogs prior to slaughter. Easier said than done, the practice demands good planning and communication between producers, transporters and the slaughterhouse. However, this is time well spent regarding pig welfare, meat quality and even feed cost.

Most important thing to know: what is the ideal feed withdrawal time for pigs?

17-24 hours

A feed withdrawal period is necessary to have pigs with empty stomach when they are slaughtered. If digestive tracts are full with feed, chances are greater to accidentally pierce them at evisceration and getting carcasses contaminated. This contamination is a risk for food safety and it's time and money consuming for the slaughterhouse .



A good feed withdrawal period also allows pigs to be easier to move around and load into the truck. There is a potential cost saving by reducing feed consumption by 2 to 3 kg/pig and decreasing mortality rate during transportation.

Feed withdrawal period begins when pigs are denied access to feed, not when you last fed them. Always give access to water.

A feed withdrawal period is necessary regarding meat quality. We want to avoid PSE meat (soft, pale and exudative) which is caused by a rapid drop in muscle pH after slaughter. This phenomenon comes from the presence of muscle glycogen which is transformed in lactic acid after slaughter resulting in lower meat pH. Feed withdrawal period reduces the amount of muscle glycogen and therefore, prevents rapid muscle pH drop.

This can be achieved by different ways :

- Stop filling feeders and let pigs empty them (start counting time when all feeders are empty).

August 2021



Advantage:

Easy to apply, no need to manipulate animals.

Disadvantage:

Apply to all animals, even those who are not leaving. Many studies have shown that there is no negative impact on average daily gain for those animals. They will compensate when feed is available.

- Separate pigs in the shipping area with no feed access .

Advantage:

No withdrawal period for pigs who don't need it.

Disadvantage:

Mixing pigs can lead to battle. Demand more time.

Keep in mind, pigs must generally be without feed about 5h before being loaded for transportation. However, the withdrawal period should not exceed 24h to avoid negative impact on meat quality, weakness and reduced carcass weight. Feed withdrawal period stops when pigs are slaughtered.

So, to determine when you should withdraw feeds, you need to know:

- When is the loading and how long it will take to load all pigs;

- Duration of transport;
- Holding time at the slaughterhouse;
- When pigs will be slaughtered.

This requires a good communication with the transporter and the slaughterhouse.

To validate if your feed withdrawal period is effective and correct, you have to check your slaughter certificates. The goal is to obtain 0% of full stomach. A stomach is considered full when its dry content weight more then 1.7 kg. If you have difficulties achieving this goal, we can help you setting your feed withdrawal period. You will only have advantages to do it!

Finally, there is a new regulation in Canada about Human Transportations of Animal. For longer transportation time to slaughterhouse, the new regulations may impact how you approach feed withdrawal. The new regulations state that you have a maximum of 28 hours without Feed-Water-Rest (FWR). For more details, you can refer to the following link:

<https://inspection.canada.ca/animal-health/humane-transport/health-of-animals-regulations-part-xii/eng/1582126008181/1582126616914#a20-2>

