

BACON BITS

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In February, Alberta Agriculture, Food and Rural Development and the Western Hog Exchange organized a series of seminars. These seminars covered the main constraints involved in meeting packer demands: genetics, nutrition, weighing and handling, and health. This month, we are presenting the first in a series of articles from this seminar.

Preventing Carcass Losses

When margins are tight, getting the most dollars for every pig marketed is critical. Certain health problems can lead to extra carcass trims and condemnations, reducing any profits made. Many health problems that create carcass losses can be prevented or minimized. Knowing what conditions are causing the losses and what is an acceptable rate for these conditions are important first steps towards reducing carcass losses.

Carcass Condemnations

Condemned carcasses are those considered unfit for human consumption and are sent for rendering. In Alberta, the five most common causes of condemnation are abscesses, arthritis, pneumonia, peritonitis and nephritis. Generally, a carcass is condemned rather than just trimmed if the health condition involves the entire animal (e.g. fever or septicemia) or is very extensive (e.g. multiple abscesses or four swollen joints).

The best producers will have only one hog per 10,000 marketed condemned for abscesses and less than one hog per 10,000 condemned for arthritis, pneumonia, peritonitis and nephritis. However, some producers can have rates of up to 100 per 10,000 (1%) of their animals condemned for arthritis or abscesses.

“Subject hogs” are those that have an obvious illness (e.g. are down), abnormality (e.g. large hernia), or injury (e.g. cannot walk) on arrival at the plant. In Alberta, subject hogs whose carcasses are later condemned could be assigned an index of zero and assessed a \$28.00 slaughter charge. This charge is to discourage producers from shipping hogs that may be condemned.

Carcass Trims

Carcass trims occur when the inspector decides a specific area is of concern, but the rest of the carcass is fit for human consumption. For example, trims are commonly done on swollen joints, around smaller abscesses and on ribs. In addition to losing the weight of the trim from the carcass, trimmed carcasses may also be given further penalties.

Processors want to reduce trim rates as trimming reduces pork value and quality. Abnormal carcasses must be tagged, trimmed and placed on the held rail. The extra handling results in increased bacterial contamination of the carcass, reducing shelf life and resulting in faster spoilage of the pork. This situation is a particular concern for overseas markets where fresh pork must keep for upwards of 35 days before

consumption. Reduced shelf life of pork can result in loss of market share in competitive overseas markets. Pork from trimmed areas can only be sold as trim, instead of as the more valuable primal cuts (e.g. ham, loin, shoulder butt, etc).

The three “A’s” (adhesions, arthritis, abscesses) make up the majority of trim losses seen in Alberta. Chest adhesions are the most common problem. The best producers will consistently have zero hogs affected, but some producers routinely send in lots with 60 per cent of the animals requiring trims. Investing dollars to reduce adhesion trim rates could clearly result in some significant returns for producers with these high rates.

Arthritis is the second most common cause of trims. Some producers will have up to 9 per cent of their hogs trimmed for arthritis, while others will, on average, need only 0.3 per cent of hogs trimmed. For an operation with 600 sows producing 22 pigs per sow per year, this figure means that an arthritis problem can result in more than 1,000 extra hogs per year requiring trims. Likewise, some herds have over 4 per cent of hogs requiring trims for abscesses, while the best herds have less than 0.1 per cent.

Tracking down the causes of trims and condemnations and investing dollars to reduce their occurrence can have large paybacks for herds with high rates. Start by contacting your processor for information on your rates and compare these to plant targets. Consult your veterinarian for a diagnosis and the best methods for reducing the effect of any of the conditions listed below.

Conditions Causing Trims and Condemnations

1. Chest Adhesions

Chest adhesions are scars in the lining of the chest cavity. They occur after severe pneumonia or septicemia (infection). The membrane lining will adhere to the ribs, making lung removal difficult or impossible. Adhesions can be small spots or can involve the entire chest cavity. When severe, the ribs must be trimmed and lose their value for sale.

Chest adhesions are reported to be commonly caused by *Actinobacillus pleuropneumonia* (APP), pneumonia, and Glasser’s disease. *Mycoplasma pneumonia*, influenza and *Actinobacillus suis* (*A. suis*) infection may also contribute to adhesions. Infection may occur in young pigs, but when the pig recovers, the adhesions or scars will remain for the life of the animal. Affected pigs may have difficulty breathing, especially after exercise, or they may appear normal.

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European research has shown that herds with higher rates of adhesions have higher stocking densities, poorer ventilation rates, mixed multiple source pigs and did not practice all-in-all-out production. The prevalence of adhesions is reportedly lower in *Mycoplasma pneumoniae*-free herds.

Chest adhesions not only affect carcass losses, but overall growth performance. Herds with high adhesion rates will have slower growth rates, reduced feed efficiency, increased days to market and increased medication costs.

2. Arthritis

Arthritis is the inflammation of one or more joints in the body. There are two types of arthritis: infectious and non-infectious. Erysipelas is the most common cause of infectious arthritis, while OCD (osteochondrosis) or degenerative joint disease is the most common non-infectious cause.

Erysipelas can be controlled through strategic vaccination programs. The cause of OCD is not completely understood, but stocking density, genetics, nutrition, growth rate, environment, flooring and exercise have been reported to be involved.

Since the control measures for erysipelas and OCD are different, an accurate diagnosis is essential to reducing arthritis trims and condemnations. It is suspected that the majority of joint trims at slaughter may be OCD.

3. Abscesses

Abscesses are pus-filled cavities that range from marble size to grapefruit size and larger. They are the result of an infection, either from a wound or from a blood borne infection. Bacteria can enter the blood via a wound or needle stick and spread throughout the body, producing abscesses far from the site of entry. Tailbiting is a common cause of abscesses hidden within the body. Internal abscesses may not be visible, and an affected pig may appear normal.

Common causes of abscesses are tailbiting, wounds, dirty needles, dirty tail docking equipment, fighting and castration wounds. In units with high abscess rates, consider cleaning and disinfecting all medical equipment between uses, changing needles more frequently, reducing stress to control tailbiting, improving cleanliness of pens and removing sharp edges that cause injuries.

4. Peritonitis

Peritonitis is an inflammation of the lining of the abdomen, which causes the internal organs (viscera) to stick together. Peritonitis indicates a previous or ongoing infection. Common causes include hernias, umbilical infections, torsion of the intestine, infected castration wounds and Glasser's disease.

5. Nephritis

Nephritis is inflammation of the kidney. Common causes are leptospirosis and urinary tract infections. Leptospirosis is a waterborne infection spread by wildlife urine, especially skunks. It is rare in Alberta and can be controlled by vaccination. Bladder infections can be a result of dirty wet pens and inadequate water intake. Affected hogs usually appear normal.

Conclusion

Reducing trim and condemnation rates can result in big paybacks. Hogs may appear healthy on the outside, so closely following trim and condemnation rates is the only way to catch any problems.

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Alberta Hog Prices

	Week Ending April 2, 2004	Average Price in March 2004
AB Hog 100 Index ¹	\$1.526/kg	\$1.533/kg
Cull Sow Price #1 ²	\$1.151/kg Lwt	\$1.170/kg Lwt
Cull Sow Price #2 ²	\$ 1.095/kg Lwt	\$1.114/kg Lwt
Cull Boar Price ²	\$5.500 cwt. Lwt	\$5.500 cwt. Lwt

¹ Weekly Livestock Market Review, AAFRD

² The Insider, Western Hog Exchange

Alberta Average Feed Prices (per tonne)

	Week Ending April 2, 2004	Average Price in March 2004
Feed Barley ¹	\$133.08	\$122.27
Feed Wheat ¹	\$141.02	\$135.08
Corn ²	\$182.00	\$170.53
Canola Meal ¹	\$289.17	\$282.08

¹ Weekly Crop Market Review, AAFRD

² Alberta Grain Commission