



Packing House Byproducts

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The focus of this briefing is for small and medium sized beef and pork slaughterhouses. The large industrial scale entities have long found solutions and markets to capture the “last squeal” from the pig.

In order to understand the slaughterhouse by product business more thoroughly, it is important to understand that meat is the primary output of the slaughter house. All other activities are subservient to slaughtering cattle or hogs for their meat. These ancillary activities can be broken down into several distinct categories: edible variety meats, inedible variety meats, hides and skins, pharmaceutical products, fats and other miscellaneous items such as bones, blood and meat scraps. Each of these categories will be discussed separately.

For this paper, the definition of small and medium sized packing houses is less than 500 head of beef and 2000 swine slaughtered on a continual daily basis. The major challenge facing the small and medium sized slaughterhouse is lack of quantity of animals. Larger facilities have enough volume in order to have at least some economies of scale.

One of the major disadvantages of small-scale operations is that they cannot accumulate sufficient quantities to efficiently market all of these items. Thus they tend to be at the mercy of local rendering operations that will pick up slaughterhouse byproducts at a cost to the packinghouse. Instead of byproducts being a revenue stream, they suddenly evolve into a cost item for the slaughterhouse, thus making it even harder for them to compete with larger operations.

What then are some alternatives and possible solutions for the small-scale operator? The major byproduct categories will be examined.

Edible Variety Meats

These are generally internal organs such as hearts, tongues, livers, etc. or external parts such as feet, ears, tails, etc. One of the first steps would be to re-name these products and call them “Specialty Meats” instead of Variety Meats or Offal, which are the more common names. A

generation or two ago Western European immigrants favored some of these items, but then they generally fell out of fashion. In the right markets, pork liver can still be made into pate and beef liver sold as a center of the plate item, However, these markets are difficult to find today.

The best local markets for this general category are ethnic markets where the prices garnered are often normal retail prices and even higher in some cases. Hispanics like beef tripe, livers and feet as well as pork stomachs, feet, snouts, ears, etc. Asians, and especially those of Chinese origin, prefer almost any pork item as well as beef tripe. The lesson is to seek out those ethnic communities in your area. Several small slaughter houses located in the rural Midwest, as well as a few near major metro areas, are not able to meet customer demand regularly.

Inedible Variety Meats

Spleens, lungs, trachea, condemned livers, etc. are the more common items in this category. Typically the large slaughterhouses form these separately into nude blocks that are sent to the large pet food manufacturers. If there is not a small regional or local pet food company close by, separate them and then attempt to sell them in a denatured fashion to a local supermarket or butcher as pet food. Denatured products are classified inedible by the USDA and are marked with a purple dye; it can be sold only as an industrial product or pet food and must be identified as such. There is also a possibility of cooking and then grinding and mixing these items with other more industrial by products for animal feed. It must be remembered at present in the U.S. there is no ruminant-to-ruminant feeding; items must be segregated by specie. If no market can be found, then the only other alternative is to have the local rendering company pick them up.

Hides and Skins

Skins can only be originated from pork operations that skin their animals instead of scalding and then dehairing. There are a few brokers in the U.S. who will work with small pork slaughterers that skin their pigs. As the skin was once a living organism, it must be treated as a perishable item. All rough flesh must be removed from the underside of the skin and then placed in a cooler for inedible items. The skins remain there until the agreed upon amount of skins are accumulated. The broker/processor will then buy them for about \$2.00-2.50/skin and take them to be further defleshed and semi-processed before exporting them to Asian tanneries for leather.

Beef hides represent about two-thirds the value of all the by products from cattle. In large industrial sized slaughter houses this can represent between \$40-50/hide. As the perishable nature is still the same for cattle hides as with hog skins, the same procedure exists for preparing and preserving them before they are turned over to a broker/processor. Since supply is so small for hides, there does not seem to be a very good “secondary” or alternative for them. Small slaughterers only receive about \$5 per hide.

Pharmaceutical Products

As the volume of animals slaughtered in smaller facilities is small and also quite irregular, there does not seem to be a market for any pharmaceutical products such as pepsin from the linings of hog stomachs or fetal calf serum from beef plants. One exception seems to be pork heart valves, which continue to have some strong demand. With the advent of biotechnology, the market for animal byproducts has decreased in recent years.

Fats and Other Miscellaneous Byproducts

Edible pork fat represents a strong possibility for additional revenue from this packing house segment. Normally it is boxed and then frozen and shipped to a cold storage warehouse where a broker/exporter arranges to have it exported usually to Mexico. Because of the difference in melting point temperatures of beef fat and pork fat, only the pork fat is in demand as it is better in sausage formulations.

Liquids such as blood, waste water and stick water which are usually captured and further processed into animal feed components. One way to accomplish this is by reverse osmosis of the fluid stream, which concentrates the solids and then dries them. Liquid blood has long been converted into blood meal by the use of a ring dryer. Meat scraps, inedible fat, ground up bones are usually cooked, and mixed together to produce what is known in the industry as meat and bone meal. These are animal feed components. However, because of the small quantities these byproducts are not likely to be captured at all by the small operators.

Summary

It is possible for smaller slaughter houses to differentiate themselves from the large industrial establishments in terms of quality of meat, meat by breed, organically and/or naturally raised. Often times, these differentiated products are better in the eyes of the consumer and they are willing to pay more money.

On the operational side of the slaughterhouse, the small facility suffers from dis-economies of scale. So far no market exists for hide or skins from individual farmer marketing mystique, no real market for most small packing houses exists for pet food items for animal feed components and only sketchy opportunities exist for edible "Specialty Meats." It is the clever packing house operator who can "break even" on his byproducts versus credits gained by the large operations of \$60-90 for beef operations and \$5-7 for hog plants