NORTH AMERICAN MEAT INSTITUTE

FACT SHEET

PRODUCTS DERIVED FROM ANIMALS

Introduction

Few people comprehend the important role animal by-products play in their daily lives. In addition to being a major source of good nutrition for more than 95 percent of Americans, byproducts from cattle, hog, and sheep contribute to many commonly used products.

Medical and Social Benefits of Cattle

Adrenal Glands
Epinephrine is used to relieve some symptoms of hay fever, asthma, and some allergies. It is also used as a heart stimulant in some crisis situations, and by dentists to prolong the effect of local anesthetics.

Blood
Thrombin from cattle blood helps blood clotting, and is valuable in treating wounds in inaccessible parts of the body. It is also used in skin grafting.

Pancreas
Perhaps the most well-known contribution, insulin, is derived from the pancreas of cattle. Insulin is used to treat diabetes. Another hormone obtained from cattle is glucagon, which helps counteract insulin shock.

Other medical products derived from cattle production
Other medical products derived from cattle by-products include rennet, adrenocorticotropic hormone (ACTH), cholesterol, estrogen, and thyroid extract.

Medical and Social Benefits of Swine

Heart
Valves from young to grown hogs are used in valve replacement surgery in humans, from infants to the elderly. They are in some cases superior to mechanical valves because they don't stick and do not need the same level of anti-coagulant infusion.

Skin
Due to its similarity to human skin, pig skin is used to treat massive burns and large accidental skin removal. Gelatin is used for capsules and pills.

Other medical products derived from swine production
Other medical products derived from hog production include cortisone, norepinephrine, plasmin, blood fibrin, estrogen, relaxin, insulin, pepsin, and oxytocin.

Non-medical products derived from swine production
Non-medical products dervied from swine by-products include glue, fertilizer, floor wax, matches, crayons/chalk, rubber, and fabric printing and dying.

Medical and Social Benefits of Sheep

Wool
Using nanotechnology, scientists are using wool proteins to create new wound dressings, bone graft implants, and medical sutures.

Sheepskin
Sheepskin can be used in medical settings to prevent pressure sores among people confined to their beds.

Blood
Sheep blood is the ideal medium for culturing bacteria. Sheep blood and milk are also used to produce pharmaceuticals.

Non-medical products derived from sheep production
Wool is used for yarns and fabrics and is known for its insulation properties. Many carpets produced today are made from wool.

Wool is used to fill mattresses, as tennis ball covers, and pool table baize. Pads made from wool can be used to soak oil during spills.

Raw wool contains 10 to 25 percent grease or "lanolin," which consists of a highly complex mixture of esters, alcohols, and fatty acids and is used in adhesive tape, printing inks, motor oils, and auto lubrication. Lanolin is also used in cosmetics and pharmaceuticals. Virtually all cosmetics and beauty aids, such as lipsticks, mascara, lotions, shampoos, and hair conditioners, contain lanolin.

References

Much of the information in this fact sheet is derived from the publication entitled "Where's the (Not) Meat? Byproducts from Beef and Pork Production" published by the United States Department of Agriculture's Economic Research Service in 2011.