

PRODUCTS DERIVED FROM ANIMALS

Introduction

Few people fully comprehend the important role that 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, cattle, hog and sheep by-products 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 best known contribution, insulin derived from cattle pancreas, is used to treat diabetes. Glucagon helps counteract insulin shock.

Other medical products derived from cattle by-products include rennet, epinephrine, thrombin, insulin, heparin, TSH, ACTH, cholesterol, estrogen, and thyroid extract.

Other non-medical products derived from cattle by-products include tires, leather, surgical sutures, soaps, brushes, buttons, and cosmetics.

Medical and Social Benefits of Swine

Heart

Valves from young to full grown hogs are used in valve replacement surgery in humans, from infancy to old age. 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, pigskin is used to treat massive burns and large accidental skin removal. Gelatin is used for capsules and pills.

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

Other non-medical products derived 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

Wool is used for yarns and fabrics and is known for its insulation properties. Many carpets produced traditionally and 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.

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.

Lanolin

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.

Blood

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