

## PRODUCTS DERIVED FROM ANIMALS

### Introduction

Few people 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, hogs 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 to 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.

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

Other product contributions using 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.

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

Other product contributions using swine by-products include glue, fertilizer, floor wax, matches, crayons/chalk, rubber, and fabric printing and dyeing.