

BEEF BY-PRODUCTS

by

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The following information was developed by the California Beef Council.

"All products other than carcass meat are designated as by-products. Only 50% of the animal can be used as meat-cuts for the public. In early days, most of the by-products were hides and tallow, with the remainder being destroyed.

In due time, factories were built near slaughter facilities and started manufacturing glue, fertilizer, soap, buttons, and numerous other by-products, thereby helping with the expense of marketing.

In recent years the initial by-products--tallow and hides--have decreased in value, and this decrease has been reflected in cattle prices.

Cattle alone produce hundreds of by-products which have a great variety of uses. If it were not for this conversion of waste materials into salable form, the price of meat would be higher; the sale of by-products nets a return which covers slaughter costs, leaving a reasonable profit to the meat packer.

Average Dressing Weight of 1200 lb. steer:

Carcass.	.700
Hide	.75
Head, feet, and knees.	.45
Oleo fat	.80
Liver.	.12
Heart.	.3
Lungs.	.20
Tongue	.5
Cheek Meat	.5
Rough tallow and entrails.	.84
Liquid Blood	.46
Paunch and contents.	.106
Lips and weasand meat.	.4
Tail, bung and casing.	.15

Total: 99.57% of total animal

Listed below are some important items manufactured from cattle By-Products:

HIDES: Hides are the most valuable of all the By-Products and have an important place in commerce throughout recorded history. Cowhide is used for leather clothing, shoes, saddles, luggage, sporting goods and numerous other leather goods.

FATS: Next to hides, the fats are the most valuable cattle By-Product. Products rendered from them are used in the manufacturing of oleomargarine, soaps, animal feeds, lubricants, leather

dressings, candles, fertilizer and many other products. Stearin, the solid portion of fat, is used in making candies and chewing gum. Fats can also be converted to glycerin which is used for explosives, solvents and as a plasticizer.

COLLAGEN: This fibrous protein that occurs in the connective tissue of the lips, head, sinews, knuckles, feet and bone, yields gelatin and glue. Gelatin is used for baking, medicine capsules and coating, photographic film, printers' rollers and as a culture media. The glue plays an important role in the woodworking industry and in manufacturing matches, sheet rock and window shades.

BONE: The bones and cartilage are converted into stock feed, fertilizer, glue, crochet needles, dice, knife handles, buttons, toothbrush handles, bone china and numerous other items. Bone charcoal is used for high-grade steel such as that used for ball bearings.

HAIR: The bristles of the artist's brush are from the fine, inner-ear hair of the cattle. Other hair is used in toothbrush bristles, mattresses, upholstery coverings, carpet pads, air filters and padding. Lanolin, refined from hair, is used in cosmetics and ointments.

CHEMICALS: Cattle By-Products are used in products and processes that affect us daily. Blood is used in refining cane sugar, in making pharmaceuticals, sausage, stock feeds and shoe polish. These products are a part of asphalt paving, tires, instrument strings, drumheads, cheese and ice cream making and many others.

PHARMACEUTICAL PREPARATIONS: There are 134 medicines created from the glands of the beef carcass. Listed below are a few widely used:

INSULIN: The only substance known to medical science which can control diabetes. It takes pancreas glands of 7,500 pigs or that of 1,500 cattle to make a single ounce of insulin and this gland is the only source.

ACTH: It is used in the treatment of rheumatic fever, arthritis, various allergies, acute inflammation of eyes and skin, acute alcoholism, severe asthma, and hay fever.

CORTISONE: Treatment of rheumatic fever, arthritis, various allergies, inflammatory eye diseases, etc.

EPINEPHRINE: Treatment of many allergic conditions such as asthma, low blood pressure, certain heart afflictions.

LIVER EXTRACT: Treatment of pernicious anemia.

FIBRIN MUCIN: Controls bleeding during surgical operations.

GASTRIC MUCIN: Treatment of many stomach afflictions, notable peptic ulcer.

THYROID EXTRACT: Treatment of depressed functioning of the thyroid gland.

POSTERIOR PITUITARY EXTRACT: Increased blood pressure during certain conditions of shock.

BILE SALTS: Treatment of gall bladder disturbances and abnormalities in fat digestion.

SUTURES: Widely used in surgery because they possess great strength; need not be removed since they are absorbed by the body.

RENNET: Aids in milk digestion.

ESTROGENIC HORMONES: Treatment of certain conditions arising out of the menopause.

PROGESTERONE: Treatment of threatened and habitual abortion, and in severe dysmenorrhea.

DEHYDROCHLOIC ACID: Treatment of certain gall bladder disorders and abnormalities of bile flow.

SUPRARENAL CORTEX EXTRACT: Used in the treatment of Addison's Disease.

BENZOINATED LARD: Widely used as a medicinal ointment base.

CHOLESTEROL: Starting material for the preparation of many hormones.

LIPASE: Aids in promoting fat digestion.

TRYPSIN: Used in surgery to aid in cleaning up wounds.

BONE MARROW CONCENTRATES: Treatment of various blood disorders.

PARATHYROID EXTRACT: Treatment of tetany (severe involuntary muscle contraction) which follows removal of these glands.

Reprint of materials by Reuben Albaugh, Extension Animal Scientist, July 9, 1975.

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