

# **Meat Processing by-products/ co-products**

## **1. Blood**

- Food (Sausages, pudding, cakes, biscuits)
- Non-food (fertilizer, animal feed, medicine etc.)

### **Medicinal and pharmaceutical usage of blood**

- As nutrient for tissue culture media
- As ingredient in blood agar and peptones for microbial use
- As adhesive and film former in paper, plywood, fiber, plastic and glue industry
- As a spray adjuncts with insecticide and fungicides
- As stabilizers in cosmetic base formulation
- As foaming agent in fire extinguishers

## **2. Hide and skin**

- Clothing, weapon, leather production, gelatin extraction

### **Gelatin extraction**

- Gelatin is produced by controlled hydrolysis of a water insoluble collagen.

## **3. Bones**

- Gelatin extraction, flavouring ingredients, medicine

### **Gelatin from bones**

- Ossein is normally produced from bone for gelatin extraction
- Bones are pre heated at 80-90oC
- Washed several times to get clean
- Treated with HCl to remove minerals
- Dried
- Processed into gelatin

### **Medicinal uses of bones**

- Specially processed xiphoid from the breast bone of young cattle is used by plastic surgeon to replace facial lbone

## **4. Glands and organs**

- Food, fertilizer, medicine)

### **Medicinal uses of organs**

- Brain, nervous system and spinal cord are a source of cholesterol which is raw material for the synthesis of Vitamin D and steroids.

## **5. Tallow and Lard**

- Animal fat, sausage, emulsifier, margarine

## **6. Meat extract**

- Flavouring

## **7. Viscera**

- Sausage casing