

6.1 Introduction

Food processing, regardless of the type of food, can be divided into three classes: separation (e.g. rendering, skimming, boning, coring, defeathering, husking, peeling, shelling, etc.) assembly (e.g. coating, enrobing, baking, homogenisation, roasting, pelleting, stuffing, etc.) and preservation. These can occur at harvest, at the food processing plant, or even at the point of retail sales.

Foods can be categorised as living-tissue or raw foods, and as non-living tissue. Living-tissue foods include fresh, fruits, vegetables, meats and grains.

Most processed foods, e.g. canned, frozen, and dried products are marketed as non-living tissue or manufactured foods. Separation, assembly, and preservation operations determine the final quality of the product. Non-living tissue products must be defined in terms of composition, absence of defects, nutritional value, fill of container, etc, rather than of genetic quality.

6.2 Poultry Meat Processing

The poultry production is also increased due to intensive agriculture system and increased grain production. Poultry meat consists of several desirable properties, compared to other meats. It provides important class of nutrients, proteins and relatively little fat.

6.3 Manufacturing Process

A typical poultry meat processing plant consists of two main processing zones. First processing zone consist of receiving, killing and defeathering units and second processing zone contain evisceration final processing and packaging unit.

Receiving: Generally poultry meat processing plants are installed near poultry farms, poultry arrives at plant and convey to the shacking area. In shacking area poultry are shacked by their feets than it is transported to killing section.

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Killing: Killing is usually performed manually. Many plants employ electric stunning

prior to killing. This serves to reduce struggling and also relaxes the feather papillae, thereby facilitating feather removal.

Bleeding: After killing, blood comes approximately for minutes. Incomplete bleeding cause discolouration of the carcasses and consequent low-grading.

Scalding: Scalding is done at 123 to 128 °F for 1.5 to 2 minutes commonly, it is sufficient to allow feather removal, yet the outer layer of skin on the carcass remain intact.

Defeathering: Defeathering of carcasses is completed in rotating drum. In rotating drum carcasses are brought in contact with rubber fingers, the feathers loosened by scalding, are stripped away with little damage to the skin.

Singeing: After defeathering process all poultry contain some hair like feather which is removed by passing the carcass quickly through a flame.

Washing: Spray washing is used to remove feather, blood and other foreign materials from the outer skin of carcass.

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Pinning: Sometimes carcass contain developing feather that have just pierced the skin, are removed manually by grasping the protruding pin feather between the thumb and the edge of a knife and giving a strong tugging motion.

Eviscerating: In the eviscerating process, first of all a vertical cut is made from the tip of the sternum to the vent, and with the vent still attached viscera are drawn out, but remain attached viscera is used for the post-mortem inspection.

Removal of various parts: After inspection the liver and gizzard are removed and remaining viscera discarded. Then lungs and kidney removed mechanically or by used of a strong vacuum aspirator. Head of bird is removed by using v-shaped knife.

Washing: Carcasses are washed with cold water to remove attached tissue, foreign materials, blood, etc.

Chilling: Chilling of carcasses is done to remove body heat and to protect from microbial action. Normally chilling is done below 40 °F.

Packing: Sometimes carcasses are cut into parts according to market demand otherwise then are packed in frozen form.