

Lesson 1 Microbiology – Food Safety

When dealing with any raw agricultural product, microorganisms will be present. Some of these are a food safety concern. The economic loss from a food safety problem can be enormous. It is important that all those working with raw agricultural products have a basic knowledge of factors which contribute to the microbiological safety of foods. This lesson is designed for that purpose. It does not include an extensive amount of microbiological information, but does include factors that must be known to appreciate the requirements of food production.

Lesson 2 Sanitation

In order to produce the highest quality poultry meat, it is necessary to understand the basics of food sanitation. This lesson gives the basic information required to operate a plant with adequate sanitary practices.

Lesson 3 Maintenance

A poultry processing plant is made of conveyors all run by electric or hydraulic motors. It also contains numerous pieces of mechanical equipment along with electronic controls and measuring devices. A breakdown in any of these can cause the plant to stop running. This is too expensive to tolerate, so it is absolutely necessary to have good maintenance. This lesson will familiarize the student with the very basic concepts of good maintenance.

Lesson 4: Yield

Yield is the measure of performance most important to the processing plant. The higher the yield the more product available for sale. This lesson contains the basics required to understand how yield affects each aspect of plant operation and why it is important.

Lesson 5: Live Poultry

This lesson deals with preparing the bird for transport to the plant, transportation to the plant and all ante mortem activities at the plant. It is essential that this portion of the operation be conducted properly so that subsequent processing steps can be performed efficiently.

Lesson 5 Slaughter and Picking

The first steps in post mortem processing are covered in this lesson. It includes all steps preparing the bird for evisceration.

Lesson 6 Evisceration

Evisceration means to remove the internal parts or disembowel. In the U.S. poultry processing industry, “evisceration” includes several additional procedures. All of these are included in this lesson.

Lesson 7 Chilling

Chilling is required to minimize bacterial growth and, therefore, prevent premature spoilage. This must be accomplished without collecting excessive amounts of water in the carcass. This lesson covers the steps and requirements for chilling poultry carcasses.

Lesson 9 USDA Inspection

The Wholesome Poultry Act was implemented in 1968. It mandated that a plant must have USDA Inspection in order to ship product to another state. This lesson covers the basics of the regulation and its evolution into the current state. It does not cover all aspects of the regulations.

Lesson 10 HACCP

HACCP is an abbreviation for "hazard analysis of critical control points". Today, USDA requires that all poultry processing plants operate under a HACCP plan. This lesson explains the HACCP system and outlines the requirements for preparing a HACCP plan.

Lesson 11 Grading

To use an official USDA grade label, a plant must have the services of a Resident USDA Grader. However, grading is not necessary to ensure wholesomeness, freedom from adulteration, etc., so this service is optional. This lesson discusses the factors involved in USDA grading and a discussion of why it is and is not done in various processing plants.

Lesson 12 Second Processing

This section covers the processes that immediately follow the birds exit from the chiller. All broiler processing plants are basically the same through the chiller. The significant differences begin to occur in the second processing portion of the plant.

Lesson 13 Cut-up

In the past, birds were sold primarily in whole form. Today, 80% of all chicken is sold as parts. Cutting has advantages as it allows upgrading parts from birds that must be trimmed as a result of damage or disease condition. This lesson covers

the basics of adding value to product and the operations involved in producing chicken parts.

Lesson 14 Packaging

There are numerous packaging options available to poultry processors today. This lesson includes the basics of these options.

Lesson 15 Shipping

Shipping involves more than just loading the chickens on a truck. The birds must be processed into a form that conforms to the requirements of each customer. It is the last inspection station before the customer. This lesson covers the various aspects of plant operations that are usually included in the shipping department.

Lesson 13 Waste Water Handling

The poultry processing industry uses large volumes of water. Before it can be discharged from the plant into the environment, it must be treated to remove components added in the processing operations. This lesson covers the basics. There are many options available to today's processor.

Lesson 14 Rendering

Rendering involves the cooking of by products of meat processing to make a variety of products. This industry is very important to the animal processing industry as it allows the recycling of the waste products into saleable components. The basics of rendering are covered in this lesson.