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K-State Research & Extension ■ Manhattan
What Members Will Learn . . .

ABOUT THE PROJECT:
• How to set goals

ABOUT THEMSELVES:
• Importance of setting goals

Materials Needed:
• Paper and pencils
• Poultry Member Guide and Annual Report (MG-26)

ACTIVITY TIME NEEDED: 30 MINUTES

ACTIVITY:

Goals should indicate growth in the project as well as the member’s learning. Each year the goals should include at least one new skill to learn.

The MAP Worksheet defines the steps members must go through to set their goals for Level II.
DIALOGUE FOR CRITICAL THINKING:

Share:
1. What is one skill you learned from your poultry project last year?
2. What is the goal you have for your poultry project this year?

Process:
3. What problems did you have with your poultry project last year?
4. Why do you think you had those particular problems?

Generalize:
5. Does setting goals help you solve poultry problems?
6. Does setting goals help you solve your own problems?

Apply:
7. How will you use goal setting the next time you plan an activity?

REFERENCES:

Author:
James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Poultry Design Team
SETTING GOALS FOR YOUR 4-H POULTRY PROJECT
POULTRY, LEVEL II
Poultry Member Guide and Annual Report

Welcome to the 4-H Poultry Project! The purpose of this Poultry Member Guide and Annual Report is to help you journey through your Poultry Project. This guide will:
- Identify how to set goals on things to learn and begin your project,
- Identify 4-H learning opportunities,
- Identify 4-H recognition system,
- Provide you with an annual summary for your Kansas 4-H Poultry Project.

EXAMPLES OF GOALS ON THINGS TO LEARN
- Level I  
  - Identify five poultry breeds
  - How to catch and handle a bird
- Level II  
  - The parts on an egg
  - Types of feathers and their functions
- Level III  
  - How to raise day-old chicks
  - Effect of light on egg production
- Level IV  
  - Stages of chick embryo development
  - The potential of five poultry careers

In addition, there is a note to your parents/guardian at the bottom of this page, so they can help you with your poultry project.

LEARNING OPPORTUNITIES IN 4-H
- Attending project meetings with your friends
- Learning record-keeping skills
- Giving presentations at club and county 4-H Days, State Fair, school or civic groups
- Attending judging clinics and contests to observe, evaluate and make decisions
- Exhibiting at local, county, state or at American Poultry Association sanctioned shows

4-H RECOGNITION SYSTEM
4-H’s Recognition System is diverse and provides you with many learning opportunities:
- Participation: attending project meetings, helping others at project meetings, show and share at State Fair
- Progress toward goals: meeting the deadlines you set on your MAP sheet (see page 2)
- Standards of excellence: meeting a high percentage of learning goals for each level of the project
- Peer competition: judging and showmanship contests at poultry shows and fairs
- Team/cooperative efforts: community service activities

NOTES TO PARENTS/GUARDIANS:
The Poultry Project is one of several projects in the Animal Sciences Division of Kansas 4-H projects. It is an ideal project for both rural and urban youth, as well as all age groups. Poultry is a good beginning project because it requires minimal investment and teaches responsibility.

If your youth does not have a group leader, check with your local Extension office to see if your youth can participate in a neighboring club. If this is not available, you will need to act as the leader or helper. The Poultry Committee has a copy of the “Poultry Leader’s Notebook” you may wish to use.

Insert all member handouts and activity sheets in the 4-H Record Book after this Poultry Member Guide and Annual Report. These records are a recording of what was done. List costs, hours spent, etc., on your journal page created in MAP STEP 8.

5-Poultry, Level II
HOW TO SET GOALS AND BEGIN YOUR PROJECT USING THE MEMBER ACHIEVEMENT PLAN—MAP

This is your Member Achievement Plan—MAP. This plan will help you begin to decide what goals, deadlines and energizers you want to use for the upcoming year.

MAP STEP 1
Identify as goals two things you would like to learn this year. Your leader will give you a list that might help you think about what you want to learn in your poultry project.

Goal 1: _______________________  
Goal 2: _______________________

MAP STEP 2
After you identify each goal, let’s break them into steps. You can list 3 to 5 steps for each one of your goals.

Steps for Goal 1:  

<table>
<thead>
<tr>
<th>Step</th>
<th>Deadline</th>
<th>Energizer</th>
<th>Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
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<td></td>
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<tr>
<td>2nd</td>
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<td>3rd</td>
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<td></td>
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<tr>
<td>4th</td>
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<td></td>
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<tr>
<td>5th</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MAP STEP 3
Now that you’ve put Goal 1 into steps, go back and put a deadline next to each step. The deadline shows when you plan to complete the step. Every step should have a different deadline or date.

MAP STEP 4
Sometimes goals are hard to stick to. It takes a long time to see results. So as you complete a step and meet a deadline you need to give yourself a boost. Let’s call this boost an energizer or reinforcer. An energizer can be anything that you like and enjoy: going to a movie with a friend, talking on the phone, listening to a CD, taking your dog for a walk, eating a healthy snack, playing ball, etc.

What are other things you might use as energizers? List them here: _______________________

Now, place one energizer for each step under the column marked, “Energizer.”

MAP STEP 5
When you’ve finished a step in your goal, place the date completed in the column marked, “Date Completed.”
**MAP STEP 6**  
Now that you’ve identified your steps, deadlines and energizers, do the same for Goal 2.

<table>
<thead>
<tr>
<th>Steps for Goal 2:</th>
<th>MAP STEP 3</th>
<th>MAP STEP 4</th>
<th>MAP STEP 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2nd</td>
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<td>3rd</td>
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<td>4th</td>
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<td></td>
</tr>
<tr>
<td>5th</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MAP STEP 7**  
Your goals, steps, deadlines and energizers are written. It’s time to share with one of your project members. When we talk to others about our goals, it helps us get a better idea of what we are going to do. Sometimes talking will help us get a better idea, so don’t worry about changing any part of your MAP if you want to. After you’ve explained your goal to a project friend, have them sign and date it in the space provided below.

Project Friend’s Signature: ___________________________ Date: ____________

Have your project leader sign below:

Project Leader’s Signature: ___________________________ Date: ____________

**MAP STEP 8**  
Keep a journal of everything you do in the project to help you remember these experiences. (Create a page with these headings and add it to this record.)

<table>
<thead>
<tr>
<th>Date</th>
<th>What you did, learned, how you felt, costs, time spent, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex. Nov 5</td>
<td>Attended a project meeting and learned parts of a bird. Now I know why a bird can fly so easily.</td>
</tr>
<tr>
<td>Mar. 6</td>
<td>Spent 10 hours building an incubator at a cost of $25.</td>
</tr>
</tbody>
</table>

**MAP STEP 9**  
You’ve spent a whole year on your poultry project. You should have learned many new things. Take some time to think back and review your journal (STEP 8). Write one or two main things you have learned about poultry. What is something you have learned about yourself while studying poultry? (Add a page if you need more space.)
### Year _____
#### 4-H Poultry Summary

<table>
<thead>
<tr>
<th>Name of project</th>
<th>Type of bird to exhibit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Age</td>
</tr>
<tr>
<td>4-H Club</td>
<td>County</td>
</tr>
</tbody>
</table>

1. Breed(s)  
2. Date project started  
3. Date project ended  
4. Total value or money received (column 2) $  
5. Value of birds at beginning (column 1) $  
6. Total feed cost $  
7. Other expenses (including birds bought during the year) $  
8. Total expenses (add lines 5, 6, 7) $  
9. Net income or loss from project (line 4 minus line 8) $  
10. A. Number of birds started  
    B. Number of birds raised  
    C. Number of birds that died  
11. Percent death loss (line 10c divided by line 10a $ \times 100) %

### Value of Birds at Beginning of 4-H Year

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th></th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chickens</td>
<td></td>
<td>Chickens</td>
<td></td>
</tr>
<tr>
<td>Turkeys</td>
<td></td>
<td>Turkeys</td>
<td></td>
</tr>
<tr>
<td>Pigeons</td>
<td></td>
<td>Pigeons</td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td>Waterfowl</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>$</td>
<td>TOTAL</td>
<td>$</td>
</tr>
</tbody>
</table>

(column number) (1) (2)

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**Kansas State University Agricultural Experiment Station and Cooperative Extension Service**

MG-26 (Revised) May 1998

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File code: 4-H Youth–2

8-Poultry, Level II
Identifying Poultry Feed Ingredients

*Poultry, Level II*

**What Members Will Learn . . .**

**ABOUT THE PROJECT**
- Six nutrient classes of feed ingredients
- Feed ingredient examples of each nutrient class

**ABOUT THEMSELVES**
- The nutrient classes included most in their diet
- The nutrient classes for their favorite foods

**Materials Needed:**
- Feed sample (not pelleted or crumbled)
- Feed sample (pelleted and crumbled)
- Activity Sheet 1, Poultry Feeds

**ACTIVITY TIME NEEDED:** 30 MINUTES

**ACTIVITY:**

The *feed ingredients* in a poultry ration are classified into one of six nutrient classes according to their function and chemical make-up. The classes are *carbohydrates, fats, proteins, vitamins, minerals* and *water*.

**Carbohydrates** are found in corn, milo, wheat and oats. You may find any one or all of these grains in a ration. **Fats** are used to supply energy and are usually used in the form of animal fats and vegetables oils. It is hard to see fat in a ration; however, the more fat that is used the less dusty the ration will be.

**Proteins** are used for muscle development and come from soybean meal, fish meal, meat by-products and corn gluten meal. **Vitamins** are found in alfalfa meal, yellow corn, and animal by-products. You should be able to find some of these ingredients in your ration. The best source of vitamins is a commercial vitamin premix and this will be hard to find in the ration. **Minerals** such as calcium and phosphorus are supplied by oyster shell, ground limestone and dicalcium phosphate. You may be able to see these products in the ration. Trace minerals are found in a commercial mineral premix and cannot be easily seen in the ration.

Many commercial feeds are pelleted by a pressure and steam process. This will alter the appearance of the ration. Crumbled rations are pellets that have been broken into small pieces. Pelleting or crumbling a ration may help the bird consume a more balanced diet and reduce feed wastage.
DIALOGUE FOR CRITICAL THINKING:

Share:
1. How many different ingredients did you find?

2. How many nutrient classes were in your feed sample?

Process:
3. What were the differences between pelleted or crumbled samples?

4. What ingredients are grown in your community?

Generalize:
5. What nutrient classes are most common in your diet?

6. What foods do you eat that represent each nutrient class?

Apply:
7. How will your eating habits change, based on what you have learned in this lesson?

GOING FURTHER:
- Give a presentation to your class or other groups about the similarities of poultry feeds and human foods.

REFERENCES:

Feeding the Small Flock of Poultry, K-State Research & Extension C-392 (Revised)

Author:
Cynthia R. Siemens, Extension Assistant, Kansas State University; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Albert W. Adams, Professor Emeritus, Poultry Sciences, Kansas State University; R. Scott Beyer, Extension Specialist, Poultry Sciences, Kansas State University

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Kansas State University Agricultural Experiment Station and Cooperative Extension Service

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## IDENTIFYING POULTRY FEED INGREDIENTS
### POULTRY, LEVEL II
#### Activity Sheet 1, Poultry Feeds

List the feed ingredients and their nutrient class you were able to identify from the feed sample provided by your leader.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Nutrient Class</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
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Match the following ingredients by drawing a line to the correct nutrient class.

### Ingredients
- Phosphorus: Carbohydrates
- Corn: Fats
- Soybean meal: Proteins
- B: Vitamins
- Milo: Minerals
- Alfalfa meal: Water
- Wheat: Minerals
- Fish meal: Water
- Oats: Vitamins
- A: Minerals
- Calcium: Water
- $H_2O$: Minerals

*11-Poultry, Level II*
How to Read Feed Tags
Poultry, Level II

What Members Will Learn . . .

ABOUT THE PROJECT:
- Ingredients listed on a feed tag
- To identify types of information found on a feed tag
- To identify feed tag ingredients as sources of energy, protein, mineral or vitamin

ABOUT THEMSELVES:
- Nutrients needed for humans are similar to those needed for poultry
- It is their responsibility to eat a balanced diet

Materials Needed:
- Activity Sheet 2, Cereal Box Feed Tag Quiz
- Several examples of feed tags (you may have some of your own from purchased feed or these can be acquired from your local feed dealer)
- Pencils and paper
- Samples of some common feeds—you can ask members to bring a sample of what they feed with the tag from the feed sack (best if it is in a plastic bag or a jar)
- Hand out some sample feed tags
- Flip chart or chalkboard
- Several boxes of breakfast cereals

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY:

Understanding the information written on the feed tag will help a member identify the ingredients of the specific feed, understand the nutrient requirements of a bird and eventually learn how to balance a ration.

During our entire life we must read labels to gather information that will be helpful in our decision-making process. Poultry feed tags have some of this type of information. Thus, it is a good practice to learn to read these labels.

Proper nutrition is the key to a successful poultry flock. In the same way, if we don’t get the proper nutrition by eating right, we can have health problems, our growth and development may be negatively affected, and we could die. Poultry also require proper nutrition for growth and development.

The main ingredients in poultry feeds are cereal grains (corn, wheat, barley and milo), oil meals (soybean, sunflower and cotton seed), fish
meal, packing house by-products and dried-milk products. These ingredients are high in energy, low in fiber and highly digestible.

Regardless of feed type, all feeds include six basic nutrients: protein, carbohydrates, fats, minerals, vitamins and water. Knowing what combination of these nutrients your feed supplies is critical to a good feeding program.

**Protein** supplies the materials necessary to make body tissues. They are the building blocks of which chickens are made. Protein makes up muscle, internal organs, bones and blood. They also make up the skin and feathers of birds. If you feed more protein to your chickens than they need, the extra protein is used as energy for body functions such as heating or cooling the body, or producing eggs. Grains such as corn, wheat and milo supply part of the protein needed for growth. Protein supplements such as soybean meal are used to balance the ration.

**Carbohydrates** and **fats** supply energy. These nutrients are to poultry what gasoline is to a car. They provide energy for movement: walking, breathing, heartbeat and so on. These nutrients also help the bird produce heat to keep warm. Energy fed in excess of a bird’s requirements is stored as fat until the body needs it.

**Minerals** build bones and support other life functions. Calcium and phosphorous make up the largest percentage of the minerals needed by a bird. Minerals that are needed in only very small amounts are called trace minerals. Calcium and phosphorus are usually added to the ration for growth of bones and egg shell formation. Many producers use calcium carbonate, bone meal, oyster shells or dicalcium phosphate as feed additives to supply these necessary minerals. Sodium, chlorine and iodine are also critical minerals that are usually added in the form of iodized salt. Trace mineralized salt also has a number of the minor minerals needed for proper nutrition.

**Vitamins** are just as important as other feed nutrients, but they are needed in smaller amounts. Vitamin A is required for the health of eyes, nasal passages and lungs. For strong bones and healthy blood, vitamin D is needed. Vitamins are also required for other body functions. The bird’s body produces some vitamins while others must be added to the ration or absorbed from sunlight (like vitamin D3).

**Water** is considered to be the most important part of the bird’s diet. Moreover, it is the cheapest part of the diet, but it is often the most neglected part, too. A bird’s body is over two-thirds water and blood is over 90 percent water. Water is also necessary in digestion and for carrying food nutrients to the rest of the body. Water carries away waste products through the urine, functions as the body’s built-in cooling system, and lubricates the joints. Your bird can live longer without feed than without water.
In addition to the six nutrients, most rations also contain **feed additives**. These additives are primarily put in the feed to prevent or control diseases and parasites. The addition of additives to feed is regulated by the Food and Drug Administration.

Most states require that a feed tag be attached to each bag of feed. This tag usually contains the following minimum information: net weight; guaranteed analysis for crude protein, crude fat and crude fiber; a list of the ingredients; any active ingredients, such as drugs, and their function in the feed; instructions on feeding; and any warnings, such as to discontinue use five days before slaughter.

Have you ever thought about what goes into prepared poultry feeds? Let’s look at these samples of feed and the tag from each feed. The tag is an important tool for us—it tells us what is in the feed. When you study the samples, answer these questions:

- What kind of poultry is this feed meant for?
- What are some of the major ingredients in the feed?
- What are the sources of protein, energy, vitamins and minerals in this feed?
- Why are some feeds medicated?

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**

1. If you have feed tags (labels) from different companies, how do they differ and how are they alike?

2. Why are some grains not listed by name on the feed tag?

**Process:**

3. Can you tell from the feed tag if the feed contains the necessary nutrients?

4. Why is it important labels (tags) carry the contents of a package?

**Generalize:**

5. Why should you read the labels of the foods you purchase?

6. How can labels help you make wise food purchases in the supermarket?

**Apply:**

7. If your diet was restricted from using an ingredient such as salt or sodium, how would labels be useful to you?
GOING FURTHER:
• Arrange a trip to a local feed mill to see how the feed ingredients are weighed and mixed together to make the complete ration.
• Have the members collect samples of different ingredients that are found in a ration and find out as much as possible about the preparation of these ingredients before they are put into the ration.
• Divide the group into teams and have each team compare two feed tags from different species or different age groups within the same species. Have them identify what kind of feed it is.
• Have members make lists of essential nutrients found on the feed tag.
• Compare the ingredients in the ration with the ingredients or nutrients found in some of our human rations such as breakfast cereals.

REFERENCES:
Author:
Adapted from Animal Science Project Meeting Guides, Dr. Thomas D. Zurcher, University of Minnesota, 1981, by James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Albert W. Adams, Professor Emeritus, Poultry Sciences, Kansas State University; R. Scott Beyer, Extension Specialist, Poultry Sciences, Kansas State University
HOW TO READ FEED TAGS
POULTRY, LEVEL II
Activity Sheet 2, Cereal Box/Feed Tag Quiz

Cereals are required to include nutrition information on the box. The label includes a list of ingredients that are listed in order from most to least. It also lists percentages of recommended daily allowances and the amounts of some nutrients per serving.

1. Name of cereal

2. Main ingredient

3. Serving size_________servings per package_________

4. What does U.S. RDA mean?

5. Which vitamins are listed?

6. Does this cereal provide all of your daily needs (100%) for any of the nutrients? If so, which.

7. Which nutrients increase when milk is added?

8. Which nutrients are minerals?

9. Do the ingredients include BHA or BHT? If so, why?

10. Repeat this exercise using a poultry feed tag. Compare and discuss the answers.

Think Back:
What are the main feed ingredients for poultry and what nutrients do they provide?

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A Chicken’s Digestive System

What Members Will Learn . . .

ABOUT THE PROJECT:
- The four functions of a chicken’s digestive system
- To identify at least eight parts of the chicken’s digestive system
- The eight functions of each major part of the digestive tract

ABOUT THEMSELVES:
- The importance of their digestive system
- How food choices affect their digestive system

Materials Needed:
- Chalkboard or newsprint
- Markers
- Activity Sheet 4, Digestive Tract
- Activity Sheet 5, Digestive System Word Search

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY:

The digestive system consists of the parts of the body which are involved in the chewing and digesting of feed. This system is also responsible for moving the digested food particles through the chicken’s body and absorbing the products of digestion. Chickens have certain special organs that are not found in other animals.

Functions of the chicken’s digestive system are to get the food into its mouth with its beak or bill (prehension), storage of the food (in the crop) until it can be digested, physical breaking down of the food particles by the gizzard (mastication), chemical breaking down of the food nutrients into the simple forms (digestion), passage of the simple forms across the intestinal wall to the blood vessels (absorption) and storage and elimination of the wastes.

The structure and length of the digestive tract of an organism is determined by what type of food it eats. Meat and grain eaters (omnivores), such as birds, dogs, cats and humans, have shorter digestive tracts than cattle or sheep, which are herbivores, animals that eat complex plant materials. For example, the length of the bird’s digestive tract is approximately four times longer than its body. The digestive tract of a sheep measures approximately 27 times its body length. The longer tract is necessary to allow a longer time for digestion to take place.
Chickens, like humans, are a monogastric, which means they have a simple stomach. Cattle and sheep are polygastric, or ruminants, because they have four stomachs.

The major parts of a chicken’s digestive system and their functions are:

1. **Mouth**—The prehension or acquiring of food by birds differs from mammals because birds do not have teeth, lips or cheeks. The shape of the bird’s beak or bill is related to the type of food it eats (for example chickens and turkeys have pointed beaks because they are grain eaters.) A chicken’s tongue is pointed with barb-like projections on the back and hard projections on the roof of the mouth, which serve to force the food toward the gullet (or esophagus) of the bird.

2. **Gullet (or esophagus)**—The gullet is a flexible tube, next to the windpipe, which connects the mouth to the crop. (Like a human’s throat.)

3. **Crop**—This is the first storage site for the feed that is eaten. The crop stores and softens the food. The time food spends in the crop depends on the type of food and how much food is in the gizzard. Whole grain is kept in the crop longer than ground grain.

4. **Glandular Stomach**—The glandular stomach or proventriculus is the segment which contains cells that secrete, or give out, digestive juices that start the chemical breakdown of the food particles.

5. **Gizzard**—The gizzard serves as the bird’s teeth to grind the food. It is composed of a thick, powerful muscle and is lined with a thick, tough lining. Birds eat small rocks or pebbles called grit that they use to grind the food.

6. **Small Intestine**—The small intestine is a section that extends from the gizzard to the junction with two blind pouches, called the ceca. The first section is the duodenal loop that surrounds the pancreas. The pancreas secretes insulin which regulates how the body uses sugar. It also secretes pancreatic juice that aids in the digestion of fat, starches and protein. The main functions of the small intestine are secretion of digestive juices and absorption of nutrients.

7. **Ceca**—The two ceca, sometimes called blind guts, mark the junction of the small and large intestines. Even though a chicken can live without its ceca, some digestion takes place here. The ceca is a favorite site for multiplication of parasites such as cecal worms and protozoa, like the blackhead organism.

8. **Large Intestine**—The large intestine is very short in birds and its major functions are to reabsorb water and store waste materials.
9. **Cloaca**—The cloaca is an enlarged part found where the large intestine joins the vent. Feces from the large intestine are passed out of the body through the vent. This is a common passageway for the ends of both the reproductive and digestive tracts.

10. **Liver**—The liver is an accessory organ to the digestive tract because it secretes bile, filters the blood and stores excess carbohydrates. The green colored **gall bladder** is embedded in the liver tissue. (The chicken has a gall bladder, but some other birds do not.) The liver has two bile ducts that carry the bile from the liver to the intestines. The right duct is enlarged to form the gall bladder, through which most of the bile passes and is temporarily stored. The **spleen** is a dark red organ next to the liver. Its main function is the destruction of red blood cells. The excretion of water and metabolic waste occurs largely through the kidneys. These wastes are filtered out as blood passes through the **kidneys**. The wastes are excreted as a whitish pasty substance that gives bird droppings their characteristic white color.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What was the easiest and most difficult part of the digestive system to understand? Why?

**Process:**
2. What are the four basic functions of a bird’s digestive system?

3. How does a bird make food particles smaller to prepare them for digestion?

**Generalize:**
4. What conclusions can be made about a monogastric digestive system? (Efficiency, Capacity, Problems?)

**Apply:**
5. How will understanding your digestive system help you eat the right foods?

**GOING FURTHER:**
- Make a poster of the digestive system of a chicken and prepare a talk to present to your next club meeting or your school classroom.
- Visit a feed store and compare the composition of poultry feed with livestock feed fed to cattle and sheep.
- Help process a fryer and identify the digestive tract parts. Observe or take notes about the contents of each part and how it changes as digestion occurs.
References:

Poultry Meat and Egg Production, Parkhurst
Poultry Science, Ensminger
Poultry Science, Adams

Author:
Cynthia R. Siemens, Extension Assistant, Kansas State University; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

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CHICKEN’S DIGESTIVE SYSTEM
POULTRY, LEVEL II
Activity Sheet 4, Digestive Tract

Match name with number.

____Beak and mouth
____Ceca
____Cloaca
____Crop
____Duodenal loop
____Gall bladder
____Gizzard
____Glandular stomach
____Gullet
____Kidney
____Large intestine
____Liver
____Pancreas
____Small intestine
____Spleen
____Ureter
CHICKEN’S DIGESTIVE SYSTEM
POULTRY, LEVEL II
Digestive Tract Guide

Match name and number.

1. Beak and mouth
2. Gullet
3. Crop
4. Glandular stomach
5. Gizzard
6. Liver
7. Gall bladder
8. Spleen
9. Duodenal loop
10. Pancreas
11. Small intestine
12. Ceca
13. Large intestine
14. Kidney
15. Ureter
16. Cloaca
CHICKEN’S DIGESTIVE SYSTEM
POULTRY, LEVEL II
Activity Sheet 5, Digestive System Word Search

Find the hidden words in the puzzle.

prehension
digestion
monogastric
ceca
small intestine
gizzard
crop
grit
omnivore
liver
bile
gall bladder

O M N I V O R E J D N O O
S O Q T U A E I T I H O L
Z N P T S S E U U G E M G
X O A E U M U T T E E N A
G G I Z Z A R D D S I A L
L A T A Y L A E I T T J L
B S B I L L L G R I T T B
P T A O U I R Y O O S T L
P R E H E N S I O N S S A
I I S E U T K S U S M U D
A C E C A E S L A E I O D
H H H R K S H I M B I L E
O P P O P T M V A E O U R
M E M P A I E E Q R S T U
G O F I G N S R U M N O P
Q S C W D E V R G N T H M
Poultry Disease Prevention

About Members Will Learn . . .

About the Project:
- Five major areas of a good disease prevention program
- Most common poultry disease to prevent

About Themselves:
- Importance of a human disease prevention program

Materials Needed:
- Pencil and paper
- Flip chart and markers

Activity TIME NEEDED: 45 MINUTES

Activity:

Disease prevention in poultry production is much more economical and effective than treating diseases with medications. Although the medication may relieve the problem, much of the damage is already done, such as retarded growth, reduced egg or meat quality and increased costs of production. However, with some simple planning steps, most diseases can readily be prevented.

Housing
First, plan the housing of the birds to provide good ventilation and adequate heat, feeder and waterer space. Overcrowding must be avoided as it is a major source of stress and disease in a flock. Keep different species in separate housing. If possible, also raise the age groups separately. Make sure the buildings or pens have good drainage, as excess moisture results in many disease problems. Construct the buildings or pens to be predator and wild bird proof.

Nutrition
It is best to use commercially available poultry feeds appropriate for the species, age and usage of the flock. Store feed in cool, dry, rodent-proof containers.

Sanitation
Good common-sense practices such as daily cleaning of waterers, removal of wet litter spots and frequent removal of manure should be practiced.

Daily Bird Care
Examine birds daily and weigh some individuals weekly. Remove sick and dead birds daily. Place sick birds in a pen far removed from the rest of the flock. Cull abnormal or lame birds.
Buying Birds
Be sure to buy new stock from a hatchery or breeding source that is a participant of the National Poultry Improvement Plan. This will assure that the birds will be free from several of the egg-transmitted diseases such as Salmonella pullorum and the mycoplasmas. Have a quarantine pen available for any new arrivals and keep them there for three weeks before introducing them to the rest of the flock.

Traffic Control
People are the main spreaders of diseases to and from poultry flocks. Be sure to screen all visitors prior to their coming into contact with the birds. Ask that they not come into contact with other birds on the day of the visit. Give them boots to wear before entering the poultry pens.

Vaccination
Unless you have specific disease problems, it is best not to use vaccines. Most farms have coccidiosis. Therefore, preventative medication is necessary in the feed.

Medication
Before using medication, be sure you have a diagnosis of the problem by your veterinarian. Always follow label instructions exactly.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What are some common disease prevention methods for poultry?
2. Which prevention method was most difficult to understand? Why?

**Process:**
3. What are some common poultry health problems?
4. What are three ways to prevent the most common poultry health problems?

**Generalize:**
5. What are some common human disease preventions?
6. How important are human disease prevention programs? (Such as immunization for mumps, measles, small pox, polio, etc.)

**Apply:**
7. How will what you learned about disease prevention in this lesson help you avoid and prevent disease in the future?
GOING FURTHER:
• Design a disease prevention program for your family.
• Give a presentation to civic groups about your poultry disease prevention program or the importance of a community disease prevention program.

REFERENCES:
Author:
Dr. Eva Wallner-Pendleton, Avian Extension Veterinarian, University of Nebraska; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Albert W. Adams, Professor Emeritus, Poultry Sciences, Kansas State University; R. Scott Beyer, Extension Specialist, Poultry Sciences, Kansas State University

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What Members Will Learn . . .

ABOUT THE PROJECT:
- Five common causes of poultry disease
- Three types of parasites

ABOUT THEMSELVES:
- The importance of personal hygiene in preventing parasites or disease

Materials Needed:
- Chalkboard or flip chart

ACTIVITY TIME NEEDED: 30 MINUTES

ACTIVITY:

Poultry can become ill from a number of diseases. These diseases are frequently classified according to their cause. Diseases can be caused by viruses, bacteria, parasites such as mites or worms, poor nutrition or toxic substances. The most common of these diseases will be discussed.

Parasites that live on skin and feathers
Mites and lice frequently live on the skin of poultry. Lice are true insects, while mites are related to spiders. Mites and lice are irritating to the birds, and frequently spread diseases among the flock. A flock may become infected through contact with other poultry or wild birds.

Diagnosing lice or mite infection involves careful inspection of each bird’s feathers and skin. Mites frequently like to congregate under the bird’s tail. Lice can be anywhere on the skin. Lice will place masses of eggs at the base of the feathers. Some mites feed only at night, then leave the bird during the day, so check the coop at night with a flashlight.

Treatment of these external parasites involves spraying or dusting with an insecticide. Treatment of the birds with flea powders approved for cats is safe and effective. Application of sprays or powders must be repeated at least two or three times, 10 days apart to eliminate the parasites. From then on, the birds should be inspected regularly, at least every two weeks for reoccurrence of these pests.

Internal parasites
Poultry are frequently infected with a tiny, single celled organism called coccidiosis. These parasites live in the intestinal tract of birds, where they can cause much damage. Infected birds excrete the eggs of this parasite (called oocysts) in their droppings.
Other birds become infected when they eat the eggs while feeding on the ground.

Signs of coccidiosis include diarrhea, which is often blood-tinged. The sick birds begin to act cold, huddle together and fluff their feathers.

Diagnosis is achieved by identifying the parasite eggs in the droppings under a microscope.

Coccidiosis medication is given in the drinking water or the feed to stop the disease. Prevention of coccidiosis is primarily by keeping conditions in the poultry house dry and manure free.

**Nutritional Diseases**

Nutritional diseases are common in small poultry flocks. Although most commercially available feeds are nutritionally balanced, each type of feed is specifically designed for a given species of poultry for a specific purpose. For instance, starter rations are designed for baby chicks while lay rations are formulated for birds in egg production. It is very important to adhere to the diet formulated for the species and age group.

Sometimes even birds on commercial rations may suffer from a deficiency of a nutrient if the feed has been mishandled, i.e. allowed to get wet, or improperly stored. Commercial feeds occasionally get diluted with added grain. This results in malnutrition, obesity and poor production. To prevent malnutrition; scraps, grain, and foraging should not constitute more than 10 percent of the poultry diet.

Typical signs of malnutrition may include:
- poor, dull feathering and scaly skin,
- soft and curved leg and keel bones,
- high percentage of runts and poor-doers,
- poor egg production, soft shelled eggs
- poor egg fertility and hatchability.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What poultry diseases have your birds experienced? Why?

2. What poultry parasites have you seen? Where or when?

**Process:**
3. What are three causes of poultry diseases?

4. What are three types of parasites?
Generalize:
5. Has your school ever experienced an outbreak of lice or other parasite? How was the problem handled?

Apply:
6. How can you help prevent parasite infestations?

GOING FURTHER:
• Visit a veterinarian to see parasite samples.
• Check for parasites in your flock.
• Check feed tags at a feed store to see what medications are added for parasite or disease control.

REFERENCES:
Suggested Treatments for Diseases and Internal Parasites of Poultry, (L765) K-State Research and Extension

Author:
Dr. Eva Wallner-Pendleton, Avian Extension Veterinarian, University of Nebraska; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
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Think Back:
Discuss with your group and record your thoughts about any part of a bird’s structure or digestive system that might cause or prevent a disease. (Note: Recordings should be added to record book. Extra sheets with this discussion could be made for each member.)
Preventing Cannibalism

*Poultry, Level II*

**What Members Will Learn . . .**

**ABOUT THE PROJECT:**
- Causes of cannibalism
- Ways to prevent cannibalism

**ABOUT THEMSELVES:**
- Preventive measures for self protection
- Behaviors they have that could be harmful to others

**Materials Needed:**
- Member Handout 7, Degrees of Beak Trimming and Anti-peck Devices
- Mechanical devices—specs, blinders, peck guards, bits (optional)

**ACTIVITY TIME NEEDED:** 45 MINUTES

**ACTIVITY:**

Cannibalism in poultry is one bird pecking the feathers, combs, toes or vent of other birds. If cannibalism isn’t prevented, it can result in death or lowering of market value due to poor feathering and damaged bodies.

Usually, the exact cause of cannibalism cannot be traced to any one factor. Cannibalism may start because of:

- Overcrowding or overheating—may cause birds to be uncomfortable.
- A lack of a nutrient in the feed—particularly protein, may cause the birds to peck penmates’ feathers to satisfy their hunger for protein.
- Excessive light—can make birds nervous and allow them to better see wounds on penmates.
- Inadequate feeding and nesting space—increases the competition for feed and water which can encourage cannibalism.
- Mixing of birds of different ages, colors, or stages of maturity— disrupts the social order of a flock, encouraging cannibalism.

There are several different methods for prevention and control of cannibalism. Prevention stops the development of bad pecking habits before they get started. In some cases, removing the cause(s) will result in discontinuation of cannibalism.

**Beak trimming**, which is removal of a portion of the bird’s beak, is the best preventative measure. Beak trimming can be done at any age. There is no one beak trimming program that fits all situations. Broiler chicks are usually beak trimmed at the hatchery. Egg-type chicks are usually beak trimmed.
trimmed at 6 to 10 days and again at 12 to 14 weeks of age. Beak trimming is best done with an electric beak trimmer.

Control with **mechanical devices** such as specs, blinders, peck guards or bits are used by some producers. These devices are attached to the bird’s beak and prevent pecking by either limiting their vision or preventing complete closure of its beak.

**Miscellaneous** methods that give variable results are: (1) providing other objects for the birds to peck, such as alfalfa hay, (2) increasing the salt content of the ration, and (3) darkening the interior of the pen or using red-colored lights. These adjustments make it more difficult for the birds to see bloody wounds on penmates.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. How did the chick react after the beak was trimmed?

2. What problems did you or others have when trimming beaks?

**Process:**
3. Why is it often necessary to trim beaks?

4. What other methods have you used or observed that help prevent cannibalism in poultry?

**Generalize:**
5. What are some preventative measures that producers do to provide for the general safety of other farm animals?

6. What are some safety precautions that you use everyday at home or school? Why?

7. How do you attempt to prevent a friend’s negative behavior?

**Apply:**
8. What are some ways to prevent negative group behavior?

**GOING FURTHER:**
- Research the common causes of poultry cannibalism to see which is the most prominent.
- Give a presentation on the need for preventing cannibalism in poultry.
PREVENTING CANNIBALISM
POULTRY, LEVEL II
Member Handout 7, Degrees of Beak Trimming and Anti-Peck Devices

BEAK TRIMMING

1. Under 10 days

2. During growing period

3. Adult

ANTI-PECK DEVICES

1. Specs on laying hen
What Members Will Learn . . .

ABOUT THE PROJECT:
• Equipment needed for a small flock
• Purpose for each piece of equipment

ABOUT THEMSELVES:
• Equipment needed for their health and safety
• Equipment (or furniture) they have that makes life easier or more comfortable, but is not necessary

Materials Needed:
• Several poultry equipment catalogs
• Samples of small flock equipment (optional)
• Activity Sheet 10, Poultry Furniture
• Activity Sheet 11, People Equipment-Furniture

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY:  

There are many different feeders and waterers that can be used in the poultry house. You have equipment for small flocks and equipment for large flocks. The equipment is very different for each situation.

Compare the different styles of feeders, waterers and other equipment. Notice the wide range of equipment that is available to a producer.

Make a list of the equipment you would need for a small farm flock on the Activity Sheet, Poultry Furniture. List the function or purpose of each piece of equipment. Discuss what equipment is necessary and what is convenient or makes caring for the flock easier.

Next, use Activity Sheet, People Equipment-Furniture, to list all the pieces of equipment that are necessary for your health and safety, plus other items that you have that make life easier or more fun, but are not necessary.
DIALOGUE FOR CRITICAL THINKING:
Share:
1. What was unique about your list of poultry equipment? What items did everyone list?
2. What portion of the items was necessary?

Process:
3. Why is size of equipment important?
4. Did you consider purchasing any equipment strictly for convenience? Why? Why not?

Generalize:
5. What did you learn about equipment or furniture in your house?
6. Which list of furnishings was longer, necessary or nice? Why?

Apply:
7. How did you decide what was really necessary?
8. How will you act differently in the future as a result of this activity?

GOING FURTHER:
• Compare differences in equipment needed for a large commercial producer and a small farm flock.
• Compare differences in equipment and housing for baby chicks as opposed to a laying house.
• Discuss confinement versus free range egg production.
REFERENCES:
Management of a Small Flock of Poultry, Kansas State University, C-507

Author:
John Struwe, Extension Assistant, University of Nebraska–Lincoln; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
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List the equipment you would need for a small farm flock of laying hens or for raising a few day-old chicks for broilers.

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Function</th>
<th>Necessary</th>
<th>Nice</th>
</tr>
</thead>
</table>
1. Make a list of the furniture, appliances and other equipment you have in your house.
2. Check if each item is necessary for your health or safety or just nice and convenient.
3. Circle five to 10 items that are needed for survival.

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Function</th>
<th>(Check one)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Necessary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nice</td>
</tr>
</tbody>
</table>
Types of Poultry Housing

What Members Will Learn . . .

ABOUT THE PROJECT:
- To identify several types of poultry housing
- To match age and type of bird with proper housing type

ABOUT THEMSELVES:
- Differences in human housing in their community and around the world
- Their feelings about housing or room needs for various ages of people

Materials Needed:
- Magazines, catalogs, library books and other pictures of different types of poultry housing
- Pictures of human houses from around the world
- Scissors, glue, scrapbooks

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY:

There are many examples of poultry housing. They all have the same function; that is, to provide shelter and a healthy environment for the birds, as well as a pleasant environment for the caretaker. Some are very elaborate and others are simple, depending on the purpose.

Collect pictures of poultry houses from magazines and catalogs or make photocopies from library books. Paste your pictures in a scrapbook and arrange them by type of house and/or age and type of poultry they are best suited for.

DIALOGUE FOR CRITICAL THINKING:

Share:
1. How many different types of poultry houses did you find?
2. What were the similarities and differences of most poultry houses?

Process:
3. What were some of the major features of poultry housing? Why?
4. What are the differences between housing for young chicks as compared to laying hens?
Generalize:
5. What features do you feel are needed in houses for people?

6. What housing features are needed in extremely cold climates as compared to extremely hot climates?

Apply:
7. How do housing needs change for young children as compared to senior citizens?

8. How will you act differently in the future as a result of this activity?

GOING FURTHER:
• Exhibit your scrapbook at the county fair.
• Give a talk to your school class about poultry and human housing around the world.
• Tour poultry facilities of different types in your area.

REFERENCES:
*Egg Industry*, *Broiler Industry*, and *Turkey World* magazines, Watt Publishing Co, 122 S. Lesley, Morris, Illinois 61540

Author:
John Struwe, Extension Assistant, University of Nebraska–Lincoln; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

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Albert W. Adams, Professor Emeritus, Poultry Sciences, Kansas State University; R. Scott Beyer, Extension Specialist, Poultry Sciences, Kansas State University

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Talking Like a Poultry Raiser

Poultry, Level II

What Members Will Learn . . .

ABOUT THE PROJECT
• To define and use 20 common poultry terms in sentences

ABOUT THEMSELVES:
• Their preferred learning method
• Their feelings about learning specific terminology for hobbies or a career

Materials Needed:
• List of terms and definitions

ACTIVITY TIME NEEDED: 60 MINUTES

ACTIVITY:

Understanding various poultry terms helps members expand their knowledge of poultry production and products. Whether a member is judging a class of chickens or eggs, reading about poultry, or simply talking with others, the ability to use correct terms will be very helpful.

Quiz Bowl—Definitions make excellent questions for quiz bowl use. To hold a quiz bowl, divide the members into two teams, read a definition or term to the teams, and give the team answering it correctly a point.

Drawing—Many of the terms can be understood more clearly by having your members make a drawing of what they think it means. Have them explain their drawings or sketches to each other.

Charades—Your members will enjoy acting out many of the terms as the rest of the group tries to figure out the term. To play charades, hand out or have them draw terms and let them take turns doing a charade.

Poultry Terms
Here are some terms that are used in describing and working with poultry and poultry production. Some uses are quite general and others are more specific. Quite a few terms you hear will be used only by the poultry judge or raiser of exhibition poultry. Some terms which have specific meanings for producers of waterfowl and turkeys are included in a separate list.

Avian—relating to or pertaining to birds.

Axial feather—the short feather in the middle of the wing that separates the primary feathers from the secondary feathers.
**Bantams**—miniature chickens, usually one-fourth to one-fifth the size of regular chickens.

**Barring**—two alternating colors on a feather, running across its width.

**Bird**—an individual of any avian species.

**Blade**—the portion of a single comb below the points.

**Bow-Legged**—a deformity in which the legs are farther apart at the hocks than at the feet.

**Brassiness**—the light yellowish metallic cast commonly found in the plumage of white or partly white varieties.

**Breed**—a group of chickens within a class with a distinctive body shape and having the same general feathers and body weight.

**Broody**—the characteristic of birds to develop motherly instincts for setting on eggs and brooding chicks.

**Candling**—examining the contents of an egg by holding it up to a light source in a darkened room.

**Capon**—a castrated male chicken, usually processed at about 5 months of age for meat purposes.

**Carriage**—the posture of the bird.

**Chalaze**—white, twisted, cord-like structures which hold the yolk in the center of the white of an egg.

**Class**—a group of chickens that has been developed in a particular region of the world.

**Close Feathered**—feathers held tight to the body.

**Cockerel**—a male chicken under 1 year of age.

**Comb**—the fleshy protruding part on top of the head of a fowl.

**Condition**—the state of a bird’s health, including sufficient fleshing and cleanliness and brightness of plumage.

**Cornish Game Hen**—an immature chicken, usually processed at 5 to 6 weeks of age, from one of the Cornish meat-type crosses. Cornish game hens weigh no more than 2 pounds ready-to-cook.

**Coverts**—the feathers covering the base of the primary and secondary wing and main tail feathers.
**Crest**—a round tuft of feathers on the top of the head of some chickens and ducks.

**Crop**—the enlarged part of the gullet, between the neck and body, in which food is stored temporarily and softened for digestion.

**Crossbreed**—the offspring of parents of different breeds

**Crow Head**—a narrow, shallow head with an abnormally long beak.

**Culling**—removing unproductive or inferior birds from the flock.

**Cushion**—a mass of feathers over the back and base of the tail of a chicken, giving it a rounded effect.

**Cuticle**—a protective covering over the shell of the egg which partially seals the pores and makes the shell more water-resistant.

**Debeak**—the removal of part of the beak of birds to reduce picking and egg eating.

**Defect**—a fault that is considered in judging poultry.

**Disqualification**—a serious deformity or a defect which prevents a bird from receiving an award.

**Down**—the soft, fine, fluffy covering of a young bird.

**Dubbing**—trimming the comb and/or wattles.

**Earlobe**—a round, fleshy patch of bare skin on each side of the head, varying in size, shape and color according to the breed.

**Embryo**—the developing bird within the egg.

**Eviscerate**—to remove the contents of the body cavity when processing poultry.

**Fowl**—a collective term applying to chickens, ducks, geese, turkeys and sometimes other avian species. Also a marketing term used for mature chickens.

**Fryer (Broiler)**—a young, meat-type chicken, usually processed at 7 to 10 weeks of age.

**Giblets**—the heart, liver and gizzard of poultry when used for meat.

**Hackle**—the rear and side neck feathers of a bird.

**Hen**—a female of many avian species. Also a female chicken over 1 year of age.
**Hen-Feathered**—a male having oval instead of pointed sex feathers in the hackle, saddle, wingbow and sickles.

**Hock**—the joint between lower thigh and shank.

**Horn**—a term used to describe the various shades of dark color in the beak of some breeds such as the Rhode Island Red.

**Incubation**—applying heat to eggs to cause them to hatch.

**Keel**—the lower portion of the breast bone.

**Lacing**—a narrow border of contrasting color around the entire web of a feather.

**Leg**—the upper and lower thigh and shank in the live bird. The thigh and drumstick in processed poultry.

**Lopped Comb**—a comb which falls over to one side.

**Luster (Sheen)**—a glossy appearance to the feathers, due to the reflection of light rays.

**Molt**—the process of shedding old feathers and regrowing new ones.

**Mottling**—spots of a color or shades different from the base color of the feather.

**Oil Gland**—a gland on the back at the base of the tail that secretes an oily fluid used in preening the bird’s feathers.

**Ovary**—the part of a hen’s reproductive system that produces the female germ cell and the yolk of the egg.

**Oviduct**—the part of the hen’s reproductive system that produces the white, shell membranes and shell of the egg.

**Plumage**—the collective term for the feather covering of a bird.

**Poultry**—a general term applied to all domesticated fowl.

**Primaries**—the long, stiff feathers growing from outer segments of the wing.

**Pubic Bones**—the thin, rear portion of the hip bones that form part of the pelvis.

**Pullet**—a female chicken less than 1 year old.

**Roach Back**—a deformed, humped back.
Roaster—A young, meat-type chicken, usually processed at 3 to 4 months of age.

Saddle—the rear of the back of a male fowl.

Scales—the thin, horny growths covering the shanks and feet.

Secondaries—the long, stiff wing feathers growing from the wing segment next to the primaries.

Sex Feathers—the pointed feathers in the hackle, back, saddle, sickles and wingbow of a male fowl. In females, these sex feathers are oval.

Shank—the portion of the leg between the hock joint and the foot.

Sickles—the long, curved feathers of a male chicken’s tail.

Side Sprig—a pointed growth on the side of a single comb.

Slipped Wing—a wing that is carried so the primary feathers do not overlap properly when folded.

Split Wing—a wing with a distinct gap between the primary and secondary feathers, due to the permanent absence of a feather.

Spurs—a bony growth from the rear inner side of the shanks.

Standard Fowl—the large or regular-sized breeds of poultry.

Strain—fowl of any breed or variety that have undergone a breeding and selection program for a number of years so they reproduce with uniform characteristics.

Stub—a short feather, usually found on the shanks, or on or between the toes.

Texture—the condition or size of the grain and quality of the skin of the comb, face, wattles and earlobes.

Thumb Print—a disfiguring indentation on the blade of a single comb.

Ticking—specks or small spots of color in contrast to the base feather color. Ticking can be required on some portions of some breeds, but it may cause disqualification in others.

Type—the general shape and form common to all fowl in a breed.

Undercolor—the color of the lower or fluff portion of feathers.

Variety—a subdivision of a breed, distinguished by color, color pattern or comb type.
Notes

Vent—the single body opening in birds, used to both discharge the waste products of digestion and the eggs or sperm from the reproductive tract.

Wattles—the fleshy, red growths that hang below the side and base of the chicken’s beak.

Wry Tail—the tail of a fowl permanently carried to one side.

Domestic Waterfowl and Turkey Terms

Bean—a raised, hard, bean-shaped swelling on the end of the bill of waterfowl.

Beard—a small cluster of coarse black hairs growing from the upper part of the breast of adult male turkeys.

Bill—the horny mouthparts of waterfowl.

Caruncles—the fleshy growths of naked portions of the head and neck of the turkey and Muscovy duck.

Dewlap—a growth of skin hanging from under the upper bill and throat of some breeds of geese (a dewlap-like skinfold in turkeys is usually called a wattle or throat wattle).

Drake—a male duck.

Duck—name for many smaller species of the waterfowl family; also female duck.

Duckling—a young duck.

Fryer-Roaster—a young turkey usually processed at 12 to 14 weeks.

Gander—a male goose.

Goose—name for many larger species of the waterfowl family; also female goose.

Gosling—a young goose.

Knob—a knob-shaped growth at the base of the upper bill in African and Chinese breeds of geese.

Poul—a young turkey.

Sex Feathers—the feathers in the tail of male duck (except Muscovy breed) which curl upward and forward.
Snood—a tube-like fleshy growth near the front of the top of the head in turkeys.

Tom—a male turkey.

Web—the skin growing between the toes of waterfowl.

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. Which method of learning terms in this lesson was most difficult? Why?
2. What method of learning do you enjoy most? Why?

**Process:**
3. Why is it important to use different learning methods?
4. Why do you think specific poultry terminology is important?

**Generalize:**
5. What did you learn about yourself as you tried different learning techniques?
6. What other activities do you do at school, home, etc., where specific terminology is needed?

**Apply:**
7. What are some hobbies or careers that might require an understanding of a lot of specific terms?

**GOING FURTHER:**
- Attend a 4-H Poultry Quiz Bowl.
- Participate in a poultry judging contest and give oral reasons.
- Watch a poultry judge explain placings at a poultry show.
- Make a poster of poultry terms and share at next club meeting or your school class.
REFERENCES:

Author:
Adapted from Minnesota 4-H Animal Science Project Meeting Guide by James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
Albert W. Adams, Professor Emeritus, Poultry Sciences, Kansas State University; R. Scott Beyer, Extension Specialist, Poultry Sciences, Kansas State University
Poultry Breed Characteristics
Poultry, Level II

What Members Will Learn . . .

ABOUT THE PROJECT:
• Physical traits and characteristics associated with 10 individual breeds or varieties of poultry
• Three to five breeds or varieties for each purpose (meat, egg or dual purpose production, plus exhibition)
• Origin of 10 different breeds and varieties of poultry

ABOUT THEMSELVES:
• Differences between people with different heritage and ethnic backgrounds

Materials Needed:
• Index cards with names of species, breeds, varieties and place of origin
• Pictures of various species, breeds and varieties
• Chalkboard or large piece of paper and marker to keep score
• American Standard of Perfection (use to get information on breeds, varieties, etc)

ACTIVITY TIME NEEDED: 30 MINUTES

ACTIVITY:

During today’s meeting, we are going to practice our skills in identifying species, breeds and varieties. We will see if we can select breeds according to their best purpose. We will also learn where some of the poultry species and breeds originated.

CHICKENS
The domesticated chicken was derived from the Wild Jungle Fowl, which still exists in a wild state in India and adjacent countries.

*The Standard of Perfection*, which is used to judge poultry at shows, classifies purebred chickens in the following categories.

Class—the class a chicken belongs in is determined by the geographical area of the world in which it was developed. There are 12 classes of chicken; most of the breeds and varieties raised in the United States belong to the American, English, Mediterranean, Asiatic or Continental classes.

Breed—a breed is a group of birds that possess common distinctive characteristics such as body shape. There are 60 breeds of chickens.
Variety—a variety is a subdivision of a breed that differs from another variety of the same breed by comb type (single, pea, rose), feather color (white, red, buff), or feather pattern (barred, spangled, laced). An example is the Leghorn breed, which contains 12 different varieties that differ by feather color or comb type. There are 175 varieties of chicken.

Poultry is also classified by the intended use of the birds. The major types are:

**Egg-type** are small-bodied chickens that have been selected for maximum egg production. The Single Comb White Leghorn is the main producer of white-shelled eggs in the United States, and the Rhode Island Red is the major producer of brown-shelled eggs.

**Meat-type** are large bodied, fast growing and heavily muscled chickens. The major breeds used in the production of meat-type chickens (broilers) are the White Plymouth Rock and the White Cornish.

**Dual-purpose** breeds of chickens have been bred for both egg and meat production. Examples are the Plymouth Rock, New Hampshire, Rhode Island Red and crosses between these breeds.

**Exhibition or Fancy type** are breeds and varieties developed for show. Many of these birds are bantams, which are one-fourth to one-third smaller in size than their normal counterparts.

**Strains.** As the industry has become more specialized, emphasis has shifted from development of new breeds and varieties to improvement of strains within breeds and varieties. A strain is a flock that has been closed to new bloodlines for several generations. Many strains are named after the original developer of the strain. Most commercial egg- and meat-type stocks are strain crosses.

### Characteristics of the More Common Breeds and Varieties of Chickens

<table>
<thead>
<tr>
<th>Class</th>
<th>Skin Color</th>
<th>Earlobe Color</th>
<th>Egg shell Color</th>
<th>Main Use</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>Yellow</td>
<td>Red</td>
<td>Brown</td>
<td>Meat, egg</td>
<td>Plymouth Rock, New Hampshire, Rhode Island Red Cornish, Australorp</td>
</tr>
<tr>
<td><em>The Cornish has yellow skin, while the Australorp has white skin.</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>Yellow/ White*</td>
<td>Red</td>
<td>Brown</td>
<td>Meat, egg</td>
<td></td>
</tr>
<tr>
<td>Mediterranean</td>
<td>Yellow/ White</td>
<td>White</td>
<td>White</td>
<td>Egg</td>
<td>Leghorn</td>
</tr>
<tr>
<td>Asiatic</td>
<td>Yellow</td>
<td>Red</td>
<td>Brown</td>
<td>Show</td>
<td>Brahma, Cochin</td>
</tr>
<tr>
<td>Continental</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>Show</td>
<td>Hamburg, Polish, Houdan, Sebright</td>
</tr>
</tbody>
</table>
TURKEYS
The turkey is a native of North America. Historical evidence indicates the Spanish explorers introduced the North American wild turkey into Europe. Several varieties developed from the stocks brought to the United States by the European immigrants. These stocks have provided the genetic base for present varieties.

Characteristics of the More Common Breeds and Varieties of Turkeys

<table>
<thead>
<tr>
<th>Variety</th>
<th>Primary Feather Color</th>
<th>Main Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad Breasted Bronze</td>
<td>Bronze and Black</td>
<td>Meat, show</td>
</tr>
<tr>
<td>Large White</td>
<td>White</td>
<td>Meat</td>
</tr>
<tr>
<td>Beltsville Small White</td>
<td>White</td>
<td>Meat</td>
</tr>
<tr>
<td>Bourbon Red</td>
<td>Red</td>
<td>Show</td>
</tr>
<tr>
<td>Narragansett</td>
<td>Black</td>
<td>Show</td>
</tr>
</tbody>
</table>

DUCKS
All breeds of ducks, except the Muscovy, most likely were derived from the Wild Mallard. The Muscovy is a native of South America and has a different genetic origin than the other breeds.

Characteristics of the More Common Breeds of Ducks

<table>
<thead>
<tr>
<th>Variety</th>
<th>Primary Feather Color</th>
<th>Main Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pekin</td>
<td>White</td>
<td>Meat, show</td>
</tr>
<tr>
<td>Muscovy</td>
<td>White &amp; Black varieties</td>
<td>Meat, show</td>
</tr>
<tr>
<td>Rouen</td>
<td>Multi-colored</td>
<td>Meat, show</td>
</tr>
<tr>
<td>Call</td>
<td>Various colors (varieties)</td>
<td>Show</td>
</tr>
<tr>
<td>Runner</td>
<td>Various colors</td>
<td>Eggs, show</td>
</tr>
<tr>
<td>Khaki Campbell</td>
<td>Light Brown</td>
<td>Eggs, show</td>
</tr>
</tbody>
</table>

GEESE
The common breeds of geese in the United States were imported from Europe and Asia. Most of the breeds originated from the wild gray goose.
Characteristics of the More Common Breeds of Geese

<table>
<thead>
<tr>
<th>Variety</th>
<th>Primary Feather Color</th>
<th>Main Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toulouse</td>
<td>Gray</td>
<td>Meat</td>
</tr>
<tr>
<td>Embden</td>
<td>White</td>
<td>Meat</td>
</tr>
<tr>
<td>African</td>
<td>Brown</td>
<td>Show</td>
</tr>
<tr>
<td>Chinese</td>
<td>White &amp; brown varieties</td>
<td>Show, Weeders</td>
</tr>
</tbody>
</table>

**DIALOGUE FOR CRITICAL THINKING:**

**Share:**
1. What species of poultry do you enjoy? Why?
2. What breed or variety are most common in each species?

**Process:**
3. What are the three main purposes for raising poultry?
4. Which purpose of poultry is most common in your area? Why?

**Generalize:**
5. Poultry classes are determined by geographic regions of the world. How does that compare to the different cultures represented by people who live in your community?
6. What are some neat aspects of various cultures?

**Apply:**
7. Why is it important to know about and understand other cultures?

**GOING FURTHER:**
- Read about various species and breeds of poultry and trace their origin.
- Give a talk to your club or class about the origin and characteristics of your favorite breeds of poultry.
REFERENCES:
*American Standard of Perfection*, American Poultry Association, Box 351, RD #4, Troy, New York, 12180
*The Bantam Standard*, American Bantam Association, Box 610, N. Amherst, Massachusetts, 01059
*Poultry Science Manual*, A.W. Adams, Department of Animal Sciences & Industry, Kansas State University, Manhattan, Kansas, 66506

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What Members Will Learn . . .

ABOUT THE PROJECT:
- Three grooming techniques used by chickens
- The purpose of each grooming technique

ABOUT THEMSELVES:
- What they do to maintain personal body hygiene
- Grooming practices they do for social reasons
- Why their personal appearance is important to them

Materials Needed:
- Small Farm Flock
- Pencil and writing pad
- Activity Sheet 16, Observing Poultry Grooming Habits

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY:

Animals groom themselves, as we do, except in different ways. The object of their grooming is much the same as ours, to clean themselves and make them attractive to others of their species.

There are three basic types of grooming by birds. Dust bathing is practiced by birds that are allowed on the ground. It involves the birds resting on an area where the soil is dusty. By fluffing their feathers, dust particles are spread over their body surfaces. This process has a soothing effect and, in some cases, is useful in controlling external parasites such as lice. Preening involves the bird using its beak or bill to spread oil secreted by the oil gland (located on top of the tail) onto the feathers. The oil maintains the luster of the feathers and improves the water resistance of the feathers. Feather pecking can be either a grooming activity or a cannibalistic activity. Feather pecking is a grooming activity when a bird pecks or grooms the feathers of penmates. In contrast, feather pecking becomes a cannibalistic activity when damage is done to the skin or feathers of the bird that is being pecked.
DIALOGUE FOR CRITICAL THINKING:

Share:
1. What types of grooming did you observe in the flock?
2. What types of grooming occurred most often? Why?

Process:
3. When birds picked at the top of their tail, what were they doing? Why?
4. Why do birds groom themselves?

Generalize:
5. Why are good grooming habits important to you? (Consider health and appearance.)
6. How do you decide what style of grooming to use?

Apply:
7. When does grooming for health reasons conflict or agree with social appearance? Why?
8. How do you think your grooming habits will change as you get older? Why?

GOING FURTHER:
- Read a book on poultry behavior.
- View a video or movie on some aspect of poultry behavior.

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Reviewed by:
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POULTRY GROOMING
POULTRY, LEVEL II
Activity Sheet 16, Observing Poultry Grooming Habits

<table>
<thead>
<tr>
<th>Activity</th>
<th>Function/Reason</th>
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</table>
What Members Will Learn . . .

ABOUT THE PROJECT
- Five parts of a bird examined during showmanship
- Characteristics defining quality and condition of a bird
- How to take waterfowl from a cage

ABOUT THEMSELVES:
- How they feel about presenting themselves for examinations
- How they feel about the impressions they make with friends and others

Materials Needed:
- Tables and cages
- Live bird
- Wood shavings
- Paper to cover table
- A judge
- Member Handout 14, Poultry Handling Positions
- Member Handout 15, Scorecard for Poultry Showmanship

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY:

Most showmanship events involve demonstrating these procedures when requested by the judge.

HOLDING AND CARRYING THE BIRD
To carry a bird, you should keep the body balanced and upright on the palm of the same hand which was used to remove the bird from the cage. The head and neck may extend between the arm and body of the person carrying it or, with a small bird, against the carrier’s body and above the arm on which it is carried. The other hand should rest on the bird’s back.

EXAMINATION AND HANDLING
Birds should be held upright to give the judge a side view of the body. The bird should rest comfortably on the palm of the holder’s hand. The strengths of the bird should be emphasized: tails fluffed, head and beak raised, feathers smoothed, wings tucked in normal position. In this basic hand-posed position, the participants will be asked to show the judge several parts of the bird.
Notes

**Head**—The bird should be raised to shoulder height and turned so the head and face can be examined. The hand supporting the bird should remain in place, while the free hand moves the head. Complete the examination by turning the bird to examine the other side of the head and face.

**Wings**—Spread wings to examine condition and pattern of the feathers. To extend the first wing, grasp wing tip with free hand and pull. To examine second wing, place free hand across body of bird and apply pressure to last wing joint with thumb and fingers of free hand to extend the wing.

**Undercolor**—The undercolor of the back and body fluff of the birds will be examined. Use finger tips to gently pull tops of feathers against the grain. This action exposes portions of feathers normally hidden from view.

**Width of Body**—Width of body is determined by placing the thumb and index fingers of free hand across the bird’s body directly behind the bases of the wings. Gently push the measuring arch, thus formed downward to the tail, to determine the width and shape of the body.

**Breast**—Without changing the grip, examine the breast by holding the bird so its head is downward and its back is directly against the body of the showman. The showman’s free hand should be used to measure the breast bone and examine the keel for straightness, breast blisters, indentations or other defects. In this position the depth of the body or distance between the keel and back may also be determined.

**Depth of Abdomen**—After examining the vent, measure the depth of the abdomen by placing as many fingers of the free hand as possible between the tip of the keel and the pubic bones.

**Pubic Bones**—The width between the pubic bones is determined by placing as many fingers of the free hand as possible between the tips of these bones.

**Feet and Legs**—To examine the feet and legs, the bird is held against the showman’s body. The free hand should be used to manipulate feet and legs so all parts can be examined. Swivel the bird to examine the front of the feet and legs.

**PERSONAL APPEARANCE OF MEMBERS**
Each contestant should be neatly dressed in clean, well-pressed clothes. No uniform is required, but no shorts or cut-offs should be worn. Personal grooming is particularly important.
QUALITY AND CONDITION OF THE BIRD
When selecting a bird, whether it’s a male or large female bird, a bantam, a duck, a goose or a turkey, the following characteristics should be considered:

- Pleasing appearance—bright eyes, good fleshing, free from defects
- Good, smooth plumage—shiny appearance, clean and washed if appropriate for species
- Breed and varietal characteristics
- Free from diseases and parasites
- Gentle and not flighty—usually a bird that is worked with over a period of time will become accustomed to the showmanship routine and will show its strongest characteristics while being judged. A radio played near the bird will also help familiarize it with show conditions. A short practice session just before the contest is also suggested to help calm both bird and exhibitor.

KNOWLEDGE OF POULTRY TERMS
The judge will ask the participants to explain various poultry terms and their relationship to the bird and the poultry project.

TURKEY AND WATERFOWL SHOWMANSHIP HINTS
Turkey and waterfowl are shown similar to chickens. The only major difference occurs when waterfowl are taken out of the cage. The correct procedure is as follows:

Open cage door. Grasp large duck’s or goose’s neck (loosely) and turn bird toward cage door. Pull out of cage, head first. At the same time, slide second hand beneath the bird’s body, placing fingers between the bird’s legs and grasping them so the bird, when lifted, can be balanced on the palm of that hand. Place first hand on bird’s back and wings.

All other procedures will be the same as for chickens. When taking out very small ducks, such as bantam ducks, the same procedure as for chickens may be used. Ducks and geese should never be caught by the legs.

DIALOGUE FOR CRITICAL THINKING:
Share:
1. What happened the first time you attempted to properly hold and carry a bird?
2. What examination position was the most difficult? Why?

Process:
3. What are some of the parts of a bird to examine during showmanship? Why do you think these parts were selected?
4. What differences in handling are there for turkeys and waterfowl? Why?
Notes

Generalize:
5. How important is your personal appearance when showing poultry? Why?
6. When have you had to present yourself for inspection or examination? Why?

Apply:
7. What do you do to present your best qualities to others?
8. How important do you think a good impression will be when interviewing for a job in the future? Why?

REFERENCES:

Preparing for 4-H Poultry Showmanship, Agricultural Extension Service, University of Minnesota
The Standard of Perfection, American Poultry Association, 26363 S Tucker Road, Estacada, Oregon 97023
Judging Poultry at the County Fair, L-772, Kansas State University
A Guide in Selecting and Preparing Poultry for Show, L-771, Kansas State University

Author:
Adapted from Preparing for 4-H Poultry Showmanship, Agricultural Extension Service, University of Minnesota by Albert W. Adams, Professor Emeritus, Poultry Sciences, Kansas State University; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
R. Scott Beyer, Extension Specialist, Poultry Sciences, Kansas State University

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POULTRY SHOWMANSHIP
POULTRY, LEVEL II
Member Handout 14, Poultry Handling Positions

Holding

Carrying

Wing Examination

Head Examination

Under Color
POULTRY SHOWMANSHIP
POULTRY, LEVEL II
Member Handout 14, Poultry Handling Positions, *continued*

Think Back:
Why is doing and looking your best important? List times when it is extremely significant.

<table>
<thead>
<tr>
<th>Width of Body and Breast</th>
<th>Depth of Abdomen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feet and Legs</td>
<td>Pubic Bones</td>
</tr>
</tbody>
</table>
POULTRY SHOWMANSHIP
POULTRY, LEVEL II
Member Handout 15, Scorecard for Poultry Showmanship

Exhibitor Number: ____________________________

<table>
<thead>
<tr>
<th>Possible Points</th>
<th>Points Awarded</th>
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<tbody>
<tr>
<td>10</td>
<td>1. Introduction</td>
</tr>
<tr>
<td>20</td>
<td>2. Grooming and condition of bird</td>
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<td></td>
<td>3. Routine in any order should be smooth</td>
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<tr>
<td>5</td>
<td>A. Examination of head, wattle, etc.</td>
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<td>5</td>
<td>B. Wings, color pattern, condition of feathers, check for lice or mite damage.</td>
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<td>5</td>
<td>C. Show width of back, undercolor.</td>
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<td>5</td>
<td>D. Check keel bone, breast, feather color, undercolor.</td>
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<td>5</td>
<td>E. Feet, toes, shank.</td>
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<tr>
<td>5</td>
<td>F. Tail, proper carriage, condition</td>
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<tr>
<td>5</td>
<td>G. Place bird on table and pose for judge.</td>
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<tr>
<td>20</td>
<td>4. Exhibitors appearance and attitude</td>
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<td>15</td>
<td>5. Exhibitor’s speaking ability and knowledge of the subject.</td>
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<tr>
<td>100</td>
<td>Total</td>
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70-Poultry, Level II
Use of Poultry Products

Poultry, Level II

What Members Will Learn . . .

ABOUT THE PROJECT:
- The difference between edible and nonedible poultry products
- Five edible uses of poultry products
- Five nonedible uses of poultry products
- Five nonedible uses of egg byproducts

ABOUT THEMSELVES:
- Their feelings about the value of poultry products in their daily lives
- Their feelings about the importance of recycling poultry wastes

Materials Needed:
- Magazines and newspapers containing advertisements that depict different poultry products

ACTIVITY TIME NEEDED: 45 MINUTES

ACTIVITY:

Poultry products are either edible (fit for human consumption) or nonedible (not fit for human consumption). Although eggs and poultry meat are major parts of the human diet, we also benefit from many nonedible products that are produced by the poultry industry.

EDIBLE PRODUCTS
Eggs and poultry meat are classified as a protein food. About 70 percent of the eggs consumed in the US are purchased as shell eggs and served in the fried, hard cooked or scrambled forms. The other 30 percent are used in a wide range of food products because of the egg’s functional properties they add to foods. Egg white is used in pie meringsues and in angel food cakes because of its leavening property, or its ability to make them rise. The egg yolk is used in meatloaf and in coatings on fried chicken because of its binding ability. Egg yolk is used in mayonnaise because it adds a natural yellow color to the product and because it contains an emulsifying agent that keeps the oil and water from separating. Lastly, the egg is used in foods because of its excellent nutritional value.

Poultry meat is a very popular item in the American diet because it is economical, highly nutritious and available in many different forms such as parts, ground turkey, breast fillets, etc. These are called value-added or further-processed products because the processor has increased the product’s value by increasing the convenience of their preparation.
NONEDIBLE PRODUCTS
There are many nonedible products produced by the poultry industry. Although some of these products are still wasted, the industry is making progress in using them.

Poultry manure is in high demand for use as a fertilizer, a feed ingredient and in the production of methane gas. Feathers are used for livestock feed, ornaments, some sporting equipment (arrows), bedding (down-filled blankets) and clothing. Offal which consists of the heads, feet and nonedible internal organs is used in various types of feed. Blood can be used for fish bait, fertilizer and feed. Grease extracted from the offal is used in feed.

Nonedible byproducts from eggs have many uses. The most significant use of eggs other than for human food is for reproduction. Other uses are: the addition of nonedible eggs in pet foods; the production of biological products such as vaccines and growth media for microorganisms; the use of egg yolk in preservation of sperm, tanning of leather, shampoos and lotions; the use of egg white in adhesives; and the use of the intact egg shell as an art medium.

DIALOGUE FOR CRITICAL THINKING:
Share:
1. What activity did you choose? Why?

2. What was the most unusual or interesting thing you learned from your activity?

Process:
3. What are some important uses for non-edible poultry products?

4. What is the significance of value-added poultry products?

Generalize:
5. How many of the products do you use?

6. How did you decide to use these products? Why?

Apply:
7. What products do you feel you will use in the future that you do not currently use? Why?
GOING FURTHER:
- Study recycling aspects of poultry manure and share with your group and others.
- Explore how poultry manure is used to produce methane gas.
- Give a presentation on uses of feathers and show examples.
- Give a presentation on egg byproducts and their value to humans.
- Have someone demonstrate the use of an egg shell as an art form.

REFERENCES:
Author:
Albert W. Adams, Professor Emeritus, Poultry Sciences, Kansas State University; James P. Adams, Extension Specialist, 4-H Youth Programs, Kansas State University

Reviewed by:
R. Scott Beyer, Extension Specialist, Poultry Sciences, Kansas State University

Think Back:
What are the nutritional pros and cons of poultry products?
Note: List these on a separate sheet to include in your record book.
Complete step 8 of your Member Guide and Annual Report.
Summary of Accomplishments (when record book is due)

Chautauqua County Fair Poultry Show Summary:
Showmanship Placing: ____________________
Special Awards Received: ________________________________________________________________
List Exhibition Birds Shown and their Placing:

<table>
<thead>
<tr>
<th>Band #</th>
<th>Breed</th>
<th>Class Entered</th>
<th>Placing</th>
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What goals have you accomplished? If you have not accomplished one or more of your goals, please explain. What have you learned? Describe your experiences this year. (Attach additional paper if needed.)

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Member Signature: ________________________________