Project Manual ONLY

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4-H 166

Raising Turkeys

[redacted]

MA2101

STATE 4-H OFFICE
FILE COPY

Name _____

Address _____

4-H Club _____

4-H Advisor _____

Date started _____ **Date completed** _____

I hereby certify that as the 4-H member of this project, I have personally kept records on this turkey project and have personally completed this project and record book.

Signature _____ **Date** _____

THE OHIO STATE UNIVERSITY EXTENSION

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We appreciate the contributions to previous editions of this book by Keith Brown, James Marquand, and Allen Auck. Portions of this book are adapted from many other Ohio 4-H publications.

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Don't miss the 4-H Poultry web site from The Ohio State University Department of Animal Sciences. You will find short articles and videos about current topics, getting started, and showing. ***http://4hpoultry.osu.edu***

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Contents

Note to the Project Helper

Congratulations! A 4-H member has asked you to serve as a project helper. You may be a family member, project leader, club advisor, or another individual who is important in the 4-H member's life. As a project helper, it is up to you to encourage, guide, and assist the 4-H member. How you choose to be involved helps to shape the 4-H member's life skills and knowledge of turkeys.

Your Role as Project Helper

- Review the *Raising Turkeys Project and Record Book.* It has scientific and technical information that may be difficult for young 4-H members to comprehend without your help.
- Guide the youth and provide support in setting goals and completing this project.
- Encourage the youth to apply knowledge from this project book to the care and management of project turkeys.
- Serve as a resource person.
- Encourage the youth to go beyond the scope of the 4-H project book to learn more about particularly interesting topics.

The *Raising Turkeys Project and Record Book*

The Member Project Guide portion of this book provides ways to apply the skills and knowledge presented throughout the rest of the book. Youth are required to complete "learning activities" that pertain specifically to their projects, and are encouraged to do an in-depth study of turkeys and the poultry industry. Youth also are encouraged to develop leadership, citizenship, communications, and life skills through "learning experiences" and through "leadership and citizenship activities."

The Animal Records section allows youth the opportunity to develop scientific and basic mathematical skills. Skills such as record-keeping, comparing and measuring, observing, questioning, and evaluating are examined in the context of owning and managing project turkeys. Activities in this section also allow youth the opportunity to develop life skills such as time and money management.

Young members may find difficulty in grasping some of the concepts and activities in this book. They may require your assistance. Be patient. Guide them in understanding that although an activity may not seem useful, it is designed to help them learn something new and master important skills.

Learning Science

The design of this project and record book uses the latest information on how youth best learn science. The 4-H member experiences, comprehends, and applies information about the project animal using a variety of science processing skills. The 4-H member does all of the following:

- Keeps records
- Compares and measures
- Observes
- Communicates with others
- Uses scientific tools
- Evaluates
- Experiments
- Questions
- Conducts research

Experts agree that these skills, once mastered, are transferable to other aspects of the 4-H member's life in a way that goes beyond just content recollection. As project helper, you can support the 4-H member by encouraging effort on activities and records throughout the project experience. Every activity helps the 4-H member learn something new and master important life and science skills.

For the 4-H Member: Getting Started

Are you ready to begin your raising turkeys project? The activities in this book challenge you to explore knowledge of all aspects of raising and caring for turkeys. Your job is to raise as many turkeys as you like—5, 10, 25, 100, or more.

Your Project Helper

Before you begin your project, select a project helper. Your project helper can be a parent, project leader, club advisor, or an older friend who knows about turkeys. Your project helper is someone who can help you if you have difficulty understanding or completing an activity, and who can help you find more information about a topic in which you are interested. After you complete the activities in your project and record book, review them with your project helper. Discuss what you did and what you learned.

Write the name and contact information of your project helper here:

Name: _____

Phone: _____ **Email:** _____

Remember the following as you complete this project and record book:

- Do your best to answer the questions and complete the activities.
- Think about the ways in which the knowledge you gain applies to the way you care for and manage your turkeys.
- Work with a project helper to complete the activities in this book. Remember that your project helper is a valuable resource person.
- Look beyond the project books to explore areas of the project that interest you. You can find more information about particular topics from magazines, books, turkey breeders, and the Internet. Your project helper can also help you find more information.

Your Project Level

This project and record book is designed for all 4-H turkey projects. This is a beginning, intermediate, or advanced project.

Beginner—Members with no experience in a project area, or those who are 8 to 10 years old

Intermediate—Members with some experience in a project area, or those who are 11 to 13 years old

Advanced—Members with experience in a project area, or those who are 14 years old or older

Project Guidelines

Each year, complete these project components:

1. Obtain your project animal(s) by the required possession date for your county. Contact your county Extension office for this date.

The required date for my county is _____.

2. Identify your project goals and objectives.
3. Complete the Member Project Guide section of this book, including the following:
   - Study the interest areas. Topics can be simple or more complex depending on your age and skill level in the project. Write a summary of the topic(s) you studied and what you learned.
   - Complete five or more learning activities.
   - Participate in two or more learning experiences.
   - Take part in two or more leadership and citizenship activities.
4. Complete the Animal Records section of this guide.
5. Take part in a project review at a club meeting or on the county level. This project review can take place with your parent or project advisor. Have this person review this project and record book with you. This review helps you evaluate what you have learned and how you have grown as a 4-H member. Members who take part in this type of evaluation might receive a 4-H project achievement certificate. These certificates are awarded based on the member's level of involvement (beginner, intermediate, or advanced) and whether the member has met the minimum completion requirements for the project.
6. Take part in county project judging. (This step might be optional. Check your county's guidelines.) There are generally two kinds of county project judging: skillathons and interview judging. For skillathons, you visit a series of hands-on learning stations and demonstrate your knowledge of your animal. For interview judging, a judge asks you to share and apply your project knowledge, skills, and records in a one-on-one interview. In both cases, you receive a project grade or score based on your performance. Your achievements might be compared to others to determine the best performance within your age division or the best performance overall. Special project awards might be given for achieving a set standard for your age or for achieving personal goals.

Project Goals and Objectives

Identifying goals and objectives at the beginning of your 4-H project helps you determine what you want to accomplish while taking this project. You should set goals for learning more about turkeys. Goals and objectives provide guidelines for accomplishing new tasks.

A **goal** is a statement of what you want to learn or a statement about a task you want to complete. A goal helps you focus on the task at hand. A goal needs to be realistic and specific. Goals should challenge you in what you want to accomplish, yet be reasonably attainable within the current project year. Do not write a goal so broadly that it becomes a chore to complete. For example, the goal *Learn about turkeys* is too broad. A better goal is *Learn about marketing turkeys.* It has guidelines—specific animal, specific purpose—that keep you focused.

Once you decide on a goal, determine the objective you must do to work toward reaching that goal. **Objectives** are individual steps used to accomplish your goals. Each goal you write should have one or more objective statements. Each objective statement describes one action to complete while working toward your goal. Objectives are best when written with action verbs and few details. Here are some sample objectives for the goal *Learn about marketing turkeys:*

Objective 1: Interview a turkey breeder to ask what he or she does to market his or her product. Write up the information in a few short paragraphs.

Objective 2: Ask for more information from at least one professional group that markets turkey products. (Use the Internet for research.)

Objective 3: Make a timeline of the activities you would recommend to someone interested in marketing turkey products.

Objectives can be measured. In the above examples, you would have interview notes, information from the professional group, and a timeline of activities. These items are good evidence of your accomplishments.

Write a rough draft of your goals and objectives. Ask your project helper or another adult to review it with you. Discuss whether the goals and objectives are reasonable for your age and experience. Older members may have goals and objectives that are more involved than younger members. You might wish to adjust your goals before writing the final draft for your project book. Review your goals periodically to see if you are on track toward completing them. Make any adjustments necessary.

Goals can be identified from the learning activities you list in the Member Project Guide or from additional interests you have. Decide on at least three goals and your plan to accomplish them in this project year. Write them in the spaces on the next page. At the end of the project, ask yourself, "Did I reach my goals?" Write what you accomplished in the space provided.

Goal 1: _____

_____ **Project helper's initials:** _____

Objective 1: _____

Objective 2: _____

Objective 3: _____

What I liked/learned _____

_____

_____

_____ Project helper's initials: _____

Goal 2: _____

_____ **Project helper's initials:** _____

Objective 1: _____

Objective 2: _____

Objective 3: _____

What I liked/learned _____

_____

_____

_____ Project helper's initials: _____

Goal 3: _____

_____ **Project helper's initials:** _____

Objective 1: _____

Objective 2: _____

Objective 3: _____

What I liked/learned _____

_____

_____

_____ Project helper's initials: _____

Member Project Guide

Introduction

Truly successful 4-H members learn about and are familiar with the management and care of their project turkeys. As you complete the activities in this Member Project Guide, remember that you can choose the ones that are most interesting to you. What is it about raising turkeys that you really like? Keep your interests in mind as you plan your project. Choosing what you want to do means you will have fun while learning.

If you plan to prepare an exhibit for a county fair or participate in county project judging, be sure to find out whether your county has any special project guidelines or additional requirements.

Topics of Interest

Select and study one or more of the topics included in this book. (See sidebar.) What aspect of raising turkeys is especially interesting to you? Select one and write a short statement that describes it in the table below. Depending on your age and skill level, your topic can be simple or complex. Use the following page to write an in-depth summary that explains what you learned about your topic.

You can choose as many topics of interest as you want, but you must complete at least one new one each year. The topics of interest correspond to the content in this book. Feel free to explore all the interest areas below, but remember to record the dates you begin and complete each one.

Your interest area can be related to any of the content in this project and record book. To keep learning more about turkeys, choose different interest areas each year you complete a turkey project.

- *Types of Poults to Purchase*
- *Housing and Equipment*
- *Feeding and Management*
- *Preventing Disease Problems*
- *Selecting Turkeys for Show*
- *Factors in Judging and Selecting Turkeys*
- *Marketing*
- *Exploring Careers in Poultry Science*

Topics of Interest **Complete at least one. If necessary, attach additional pages.**	**Date Started**	**Date Completed**
Example: Many varieties of turkeys are available.		

Topic of Interest Summary

Use this space to summarize one of the topics of interest you studied. Tell how the information you learned affects the way you manage and care for your turkeys. If you need more space or if you complete more than one topic area, attach additional pages as necessary.

Learning Activities

Learning activities are your opportunity to explore the things that interest you. When you complete a learning activity, you are demonstrating and applying what you have learned.

Here's what to do: browse through this book to get ideas for activities. Choose **five or more** activities you could complete to demonstrate the interesting things you are learning by managing and caring for turkeys. Here are some examples:

Beginner Level. Beginning activities are for members with no experience in a project area or for those who are 8 to 10 years old.

- Identify at least two breeds of turkeys and describe their main differences.
- Identify ten body parts of a turkey.
- Define the following terms: *poult, brooder, tom, hatchery,* and *roost.*

Would you like more examples of learning activities? There are ideas included in each section of this book. Remember though, you should complete learning activities that are interesting to you, even if it means coming up with your own ideas.

Intermediate Level. Intermediate activities are for members with some experience in a project area or for those who are 11 to 13 years old.

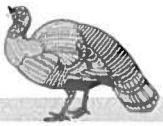
- Using a picture or an actual animal, describe an ideal turkey using judging terms.
- Help a new member learn how to correctly identify 10 external parts of a turkey.
- Describe how you would care for newly hatched turkey poults.

Advanced Level. Advanced activities are for members with experience in a project area or for those who are 14 or older.

- Help a new 4-H member select a turkey for a turkey project.
- Describe the correct way to administer medication to your turkeys.
- Visit two turkey farms to discuss management practices.
- Calculate the amount of feed necessary to raise your flock to market age (20 weeks).

Ready to get started? Follow these guidelines:

1. Rather than selecting activities you completed during previous years in the turkey project, select activities that are new for you.
2. Using the example on the next page as a guide, be sure the activities you select are appropriate for your level (beginning, intermediate, or advanced).
3. In the table on the next page, write the activities you plan to complete. Remember that you are being asked to **complete at least five** new learning activities each year.
4. Ask your project helper to initial and date the activities as you complete each one.
5. Advance to the next level after completing 15 or more activities or after reaching the appropriate project level.



Learning Activities	Date Completed	Project Helper's Initials
Example: Identify ten body parts of a turkey. (This is beginning level.)		
1.		
2.		
3.		
4.		
5.		
Complete as many additional learning activities as you want.		

Learning Experiences

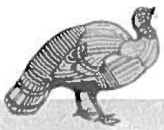
Learning experiences are meant to complement the learning activities, providing the opportunity for you to expand and apply your knowledge even more. Participate in **at least two** learning experiences each project year. Follow these guidelines:

1. Learning experiences should be different from the learning activities you complete, and they should be different from year to year. The idea is for you to continue to expand your experiences and your knowledge of raising turkeys and the turkey industry.
2. After reviewing the list of experiences on the next two pages, place a check next to the ones you plan to complete this year. You may add to or change your plan at any time.
3. You can repeat an experience if each instance is sufficiently different. For example, showing at a county fair is different from showing at the state fair; visiting a turkey farm is different from visiting a more diversified poultry operation, etc. If you do repeat, use one of the extra rows to describe your learning experience.
4. With the approval of your project helper, you may also develop your own learning experience. If you develop your own, use one of the extra rows.
5. Ask your project helper to initial and date the learning experiences you complete.

Be sure to record in your 4-H exhibit record any awards or recognition you receive for participating in an activity.

Learning Experiences	Plan to Do	Date Completed	Project Helper's Initials
Example: Exhibit at the state fair.	✓	*8/11/YR*	*JA*
Attend a turkey show at your local, county, or state fair. See how many varieties of turkeys you can find and identify.			
Tour a turkey farm or breeding operation.			
Attend a state or regional turkey or poultry conference.			
Attend a showmanship clinic.			
Become a member of a poultry judging team.			
Become a member of an avian bowl team.			
Participate in a turkey BBQ competition.			
Give an illustrated talk about raising turkeys.			

Learning Experiences	Plan to Do	Date Completed	Project Helper's Initials
Conduct a club meeting about raising turkeys.			
Market your turkeys for sale to individuals.			
Give an interview about raising turkeys for radio, TV, or print news.			
Conduct a workshop on raising turkeys for interested 4-H members and clubs.			
Observe the harvesting of a turkey.			
Interview and spend a day with someone who has a career in poultry.			
Modify your experiences or add your own here:			



Leadership/Citizenship Activities

Developing leadership and citizenship skills is an important part of your 4-H experience. As your experience in 4-H grows, you learn to be an effective speaker, practical organizer, and valued contributor to your community. Each year you need to complete **at least two** leadership and citizenship activities. Here are the steps to follow:

1. Leadership and citizenship activities should be different from each year's learning activities and learning experiences. They do not necessarily have to be different each year, but each year you should be able to demonstrate expanded responsibility and leadership. For example, let's say you always attend 4-H camp. At first you simply attend, but over time you might take on leadership roles and eventually become a camp counselor.
2. After reviewing the list of activities on the next two pages, place a check next to the ones you plan to complete this year. You may add to or change your plan at any time.
3. With the approval of your project helper, you may also develop your own leadership and citizenship activity. If you develop your own, use one of the extra rows.
4. Ask your project helper to initial and date the activities you complete.

Leadership and Citizenship Activities	Plan to Do	Date Completed	Project Helper's Initials
Lead the Pledge of Allegiance, a song, or a game at a 4-H meeting.			
Promote 4-H by writing a news story for a local paper or by participating in a radio or television program.			
Give a presentation such as a demonstration, an illustrated talk, or a speech to your club.			
Give a presentation such as a demonstration, an illustrated talk, or a speech to a group other than your club.			
Serve as a host for a 4-H meeting, as the chair of a committee, as an officer of your club, or as a junior leader.			
Participate in a community service project.			
Attend 4-H camp or a leadership conference.			
Serve as clerk, chairperson, or apprentice judge at a 4-H show.			
Serve as a camp counselor.			

Leadership and Citizenship Activities	Plan to Do	Date Completed	Project Helper's Initials
Plan an activity for your club by making tour arrangements, recruiting a speaker, etc.			
Help plan or conduct a quality assurance program, a project quiz bowl, a skillathon, or a judging contest.			
Participate in the annual meeting of a local organization or cooperative.			
Help at a club or county fundraising activity.			
Prepare a window display during national, state, or local 4-H week.			
Visit an elderly person, a hospital patient, or someone else who needs a bit of cheer.			
Do something to improve your neighborhood.			
Help in some way to educate the public about animal-owner responsibilities and animal care problems; offer some solutions.			
Modify your activities or add your own here:			

Raising Turkeys

Turkeys can be raised successfully on small farms, but they require special care and equipment. Be sure you have the right space to keep turkey poults warm and dry, and remember to raise them away from chickens and other birds.

Types of Poults to Purchase

For market turkeys, choose a fast-growing, commercial-type turkey.

The most common variety of turkey in Ohio is the Large White, also called Broad Breasted White or White Holland. Similar in size, but not used by large commercial growers in Ohio, is the Broad Breasted Bronze. With good management, turkeys can be produced efficiently using either of these varieties. Hens grow to live weights of 16–18 pounds at 14 weeks of age; toms can weigh 34–39 pounds at 18 weeks of age. If you are planning to show your turkeys in the market class at the fair, it is best to choose Broad Breasted Whites, as these are the accepted commercial type.

Because of their large size, commercial turkeys are not able to mate naturally. The turkey industry uses artificial insemination to reproduce heavy birds.

Choose heritage varieties or wild turkeys if you like colorful birds or are interested in a breeding project.

Heritage turkeys are shown separately from market birds and usually are kept more for their appearance than for meat. (See pages 29 and 30.) Typically, heritage varieties mate naturally. For heritage turkeys, a ratio of one tom to five hens is often used. Wild turkeys are good flyers and should be kept in a run with a roof, although usually they stay around if feed is available. Eastern strain wild turkeys are native turkeys, so it is necessary to get a permit from the Ohio Department of Natural Resources to keep them. (For a summary of the revised code in Ohio called *Laws: Wild Animal Propagation and Related Activities,* please go to **http://www.dnr.state.oh.us/Portals/9/pdf/pub306.pdf**.) Heritage strain bronze turkeys are similar in appearance to Eastern strain wild turkeys and do not require a permit for ownership. Heritage strains, like Royal Palms, are also good flyers, but are not as likely to leave the area they are fed in. If you have more than one variety of turkey, keep them separate at breeding time to avoid crossbreeding. If pens are not roofed, it might be necessary to trim the flight feathers of one wing to prevent birds from flying from their pens.

According to the American Livestock Breeds Conservancy, the phrase "heritage turkey" is now popularly used to describe naturally mating varieties of turkeys, most of which have standards defined by the American Poultry Association. These are some of the more common heritage turkeys:

- *Small White or Midget White*
- *Black*
- *Bourbon Red*
- *Narragansett*
- *Royal Palm*
- *Slate*
- *Standard Bronze*

For more information about heritage turkeys, go to ***http://albc-usa.org/cpl/turkdefinition.html.***

Flocks usually are started with day-old poults purchased from a hatchery. The poults should come from a National Poultry Improvement Program participating flock and should be free of pullorum, sinusitis, and other diseases. For the fair, be sure to purchase your birds as soon as your county guidelines allow. Check with your local county Extension office for the exact date.

Learning Activities for Types of Poults to Purchase

If you want to learn more about types of poults to purchase, consider these learning activities:

- Get online or go to the library to read about different turkey varieties. Using a separate sheet of paper, write a one-page report about what you learned.
- On a separate sheet of paper, identify and describe the important characteristics of your variety of turkeys.
- Start a personal library about turkeys and their management, or add books to the library you already have.
- Identify and describe three varieties in your project area.

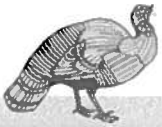
Housing and Equipment

Poults need a dependable source of artificial heat during the first few weeks of life. The first week, the temperature under the brooder should be about 95°F, with room for all of the poults to gather under the brooder. Temperatures away from the brooder can be as low as 72°F, as long as poults are not so far from the brooder that they can't easily warm back up. Clean water and feed should be close by. After the first week, lower the temperature 5°F per week. For a small group of poults, use an infrared bulb, an electric coil, or a shielded electric light.

To brood a hundred or more poults, consider a commercial gas or electric brooder that has a hover and automatic temperature controls. If this type of brooder is used, provide a 100-watt bulb over the area. During the first weeks, confine the poults to the heated area that contains feed and water. Corrugated cardboard, at least 12 inches high and available in rolls, should be placed in a circle about 3 feet from the hover to confine poults during this period. Allow enough space in the circle for poults to move away from the heat source if they become too warm. Check the temperature closely, especially during the first week, adjusting it if the poults show signs of distress (panting if too hot or huddling in groups if too cold). For information, go to **http://4hpoultry.osu.edu** and click "Getting Started with Poultry." Although heat may be stopped at four weeks of age in warm weather, provide heat until six or eight weeks of age in cool weather.

Until six weeks of age, poults on litter without forced air ventilation need at least 1.5 square feet of floor space per poult. When brooding poults on the floor, use 1/8 inch of sand or 1 inch of pine shavings for the first week; then add one inch of chopped straw or shavings per week. During hatching and brooding, do not use slick surfaces such as newspaper, which can cause serious leg problems. Be sure to protect the poults from cats, dogs, and other predators, both during and after the brooding period.

After brooding, the poults can be grown in confinement or in an open yard. If grown in confinement without fan ventilation,



provide at least 10 square feet per bird. If the building is well insulated and ventilated, as little as 5 square feet per tom and 3 square feet per hen may be adequate. Commercially raised turkeys in large buildings may have less floor space (3.8 square feet) per bird, but this is not ideal for 4-H project flocks. Provide at least 16 hours of natural or electric light (one 40-watt bulb every 12 feet) per day.

If poults are placed in a yard after brooding, allow at least 30 square feet of yard space per turkey. A 4-foot fence usually confines turkeys of the heavy variety. Avoid standing water by selecting a well-drained site. Roosts are not needed for commercial birds and may contribute to blisters, bruises, or problems with the keel bone. Heritage varieties are much lighter and will roost if possible. It is helpful to provide turkeys with a shelter to protect them from the sun and rain: 100–180 square feet of roof per 100 turkeys, 7–8 feet off the ground. When coupled with high humidity, temperatures of 90°F or more can cause mortality with heavy-bodied turkeys, particularly when there is insufficient shade or water. Mature and near-mature turkeys do not tolerate high temperatures as well as young turkeys do. On the other hand, under dry conditions, mature turkeys tolerate cold conditions quite well.

Heritage varieties handle weather extremes better than commercial birds and may roost outside all year. Much like wild turkeys, heritage varieties tend to have better feather cover than commercial birds and, if fed well, can tolerate a wide range in weather conditions.

Learning Activities for Housing and Equipment

If you want to learn more about housing and equipment, consider these learning activities:

- Identify a minimum of eight pieces of equipment that are used for raising turkeys.
- Make a diagram that describes the housing used for your project.
- Present a report about how to rear turkeys.

Feeding and Management

Feed and water the poults as soon as possible after bringing them home, dipping their beaks in water to help them learn to drink. The first two days, place some feed in egg cartons or on the lid of the poult box. During the time you have your turkeys, feed and water must *always* be available.

Water

Provide a 1-gallon drinking fountain for every fifty poults. Allow 1 linear inch of water trough space per turkey after 8 weeks of age. Water may be piped to the pen and controlled with a float valve, or commercially available waterers may be used. It is important to clean waterers daily, keeping a brush handy to brush them out at cleaning time. Birds might not drink enough water if it is dirty, thus limiting their feed intake and growth. Dirty water also contributes to the spread of disease. If water intake is negatively affected during hot weather, mortality may result.

Feed

For turkeys up to 13 lbs (8 wks), provide at least 1.5 inches of feeder space per bird. For turkeys 13–35 lbs (9–19 wks), provide at

least 2 inches of feeder space. It takes about 92 pounds of feed to raise the average Large White tom turkey to an age of 18 weeks. Weekly growth rate and feed consumption for large turkeys are shown in Table 1 on the next page.

It's a good idea to keep track of your turkeys' growth rates and to compare them to the commercial performance objectives. *Every week or at regular intervals* weigh each bird or, if you have a large flock, weigh a few representative birds. Keep records of their age, weight, weight gain, and feed consumption.

If your scale is not sensitive enough to measure ounces, begin your records when the poults are three weeks old. Just be sure to weigh them at the same regular interval. (Usually, for the sake of convenience, this is weekly.) For each one, keep a chart similar to Table 1.

- To calculate weight gain per day (Gain/Day), start with the current weight, divide by age in weeks, and divide by 7. This is a turkey's average gain per day.
- To calculate weekly consumption, divide how much you feed your flock by the total number of birds. Cumulative consumption is simply the running total of all the weekly consumption amounts.

Once you have these records, you can calculate how much weight your birds are gaining on the feed you are providing. This is called **feed conversion**—a measure of how efficiently a bird converts feed into weight. According to Table 1, at 18 weeks of age a commercially bred Large White tom has a conversion rate of 2.35.

Because turkeys are fast-growing, it is very important to buy correctly formulated turkey feeds. For good health and good growth rates, follow the feed manufacturer's instructions so that your turkeys are on the appropriate diet for their age. Increases in growth rates may be achieved by keeping your market turkeys on a high-protein feed (turkey starter) for longer than is suggested by the feed manufacturer, but doing so does not necessarily give you better overall results. Table 2 on page 21 shows the latest guidelines (1994) of the National Research Council for nutrient requirements of turkeys. Commercial turkey breeder companies may recommend a diet that maintains a slightly higher percentage of protein in the starting and growing rations than is listed in the 1994 NRC guidelines.

During egg production, turkey breeder females should be fed a turkey hen breeder ration. Oyster shells or limestone grit may be useful for free-ranging breeder hens during egg production. Free-ranging turkeys may benefit from access to turkey grit.

Learning Activities for Feeding and Management

If you want to learn more about feeding and management, consider these learning activities:

- Keep performance records like the ones described here for some or all of your turkeys.
- Outline the nutrient requirements for turkeys.
- Explain one function of each five nutrients (protein, energy, minerals, vitamins, water).
- Using five feed ingredients of your choice, balance a ration for turkeys eight weeks of age.

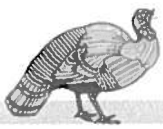


TABLE 1. COMMERCIAL PERFORMANCE OBJECTIVES

Age (weeks) [A]	Target Weight [B]	Gain/Day (lbs) [B÷A÷7]	Feed Consumption (lbs)		Feed Conversion [C÷B]
			Weekly	Cumulative [C]	
Males					
1	0.32	0.046	0.34	0.34	1.05
2	0.88	0.063	0.64	0.98	1.11
3	1.74	0.083	1.09	2.07	1.19
4	2.85	0.102	1.52	3.59	1.26
5	4.18	0.119	1.97	5.56	1.33
6	5.96	0.142	2.78	8.34	1.40
7	8.04	0.164	3.56	11.90	1.48
8	10.37	0.185	4.07	15.97	1.54
9	12.97	0.206	4.91	20.88	1.61
10	15.98	0.228	5.96	26.85	1.68
11	18.89	0.245	6.21	33.06	1.75
12	21.74	0.259	6.73	39.78	1.83
13	24.66	0.271	7.32	47.10	1.91
14	27.64	0.282	7.90	55.00	1.99
15	30.62	0.292	8.38	63.38	2.07
16	33.58	0.300	9.15	72.53	2.16
17	36.51	0.307	9.61	82.15	2.25
18	39.36	0.312	10.35	92.50	2.35
19	42.11	0.317	10.67	103.17	2.45
20	44.74	0.320	10.47	113.64	2.54
21	47.22	0.321	11.02	124.66	2.64
Females					
1	0.30	0.043	0.32	0.32	1.05
2	0.68	0.049	0.46	0.78	1.14
3	1.40	0.067	0.95	1.72	1.23
4	2.32	0.083	1.29	3.02	1.30
5	3.38	0.097	1.72	4.73	1.40
6	4.72	0.112	2.30	7.03	1.49
7	6.24	0.127	2.83	9.86	1.58
8	7.91	0.141	3.19	13.05	1.65
9	9.71	0.154	3.65	16.70	1.72
10	11.61	0.166	4.08	20.78	1.79
11	13.33	0.173	4.28	25.06	1.88
12	14.96	0.178	4.26	29.32	1.96
13	16.69	0.183	4.73	34.05	2.04
14	18.31	0.187	4.77	38.82	2.12

Continued on following page.

Females (continued)					
Age (weeks) [A]	Target Weight [B]	Gain/Day (lbs) [B÷A÷7]	Feed Consumption (lbs)		Feed Conversion [C÷B]
			Weekly	Cumulative [C]	
15	19.85	0.189	5.05	43.87	2.21
16	21.33	0.190	4.98	48.85	2.29
17	22.72	0.191	5.00	53.85	2.37
18	23.99	0.190	5.89	59.74	2.49
19	25.16	0.189	5.18	64.91	2.58
20	26.23	0.187	5.65	70.56	2.69
21	27.10	0.184	5.05	75.61	2.79

Data provided by Nicholas Turkeys for 88 x 700 commercial turkeys for the year 2007. Growth is influenced by many factors including feed, management, and season.

TABLE 2. PROTEIN AND ENERGY REQUIREMENTS OF TURKEYS

Age of toms in weeks	0 to 3	3 to 6	6 to 9	9 to 12	12 to 15	15 to 18	Breeders Holding	Laying Hens
Age of hens in weeks	0 to 3	3 to 6	6 to 9	9 to 12	12 to 14	14 to 16		
Protein	28	26	22	19	16.5	14	12	14
Metabolizable Energy (ME) kcal MEn/kg	2800	2900	3000	3100	3200	3300	2900	2900

From National Research Council, *Nutrient Requirements of Poultry*, 9th ed. (1994).

Preventing Health Problems

To a large extent, the health of your flock depends upon sanitation and avoiding contact with other flocks of turkeys and birds of all kinds. Clean feeders and waterers help prevent coccidiosis and infestations of blackhead and roundworms. When the poults are young, wash the waterer, and supply clean water at least once a day. At the same time, remove any droppings or litter that may be in the feeder. Never use moldy feed or litter. Molds may cause serious respiratory and intestinal problems. Do not use hardwood or cedar sawdust or shavings for bedding. Pine shavings are considered very good bedding. Remove wet or caked bedding and replace with clean dry shavings. It is best to exclude from your pens visitors who have had contact with other poultry or birds within the last 72 hours.

Under some conditions, cannibalism may be a problem. Inadequate floor space, underfeeding, poor nutrition, and bright lights may contribute to this condition. Hatcheries often beak remodel on poults at hatch to help control this problem. Beak remodeling is an accepted management practice and is not counted against the bird in a show situation. Buyers may need to request this service when placing orders. Excessively remodeled beaks may detract from the appearance of heritage varieties intended for show. Cannibalism is not usually a problem with small flocks raised under good conditions.

When raising turkeys for meat, it is advisable to keep the sexes separate after four months of age. Commercially, hens and toms are raised separately due to their marked differences in growth rates and the age they are marketed. Separate

birds if they develop leg problems, as these problems can lead to additional injury from other birds, especially males. Desnooding day-old market turkey poults at the hatchery is another practice that may reduce fighting and resultant injury, but it should not be used on heritage strain turkeys.

Fowl pox is common in turkeys. It produces wart-like spots or blisters on the head and wattles and, in some cases, ulceration of the mouth and wind pipe. In baby turkeys it can cause poor or uneven growth. Older turkeys recover without treatment in three to four weeks. Successful vaccination provides an immunity lasting about six months. If pox does not occur in your area, there is no need for you to vaccinate.

As mentioned earlier, raising turkeys and chickens together may lead to problems with sinusitis and blackhead. Chickens can harbor the causative agents of sinusitis or blackhead without appearing sick. Sinusitis is caused by a small, bacteria-like organism called *Mycoplasma gallisepticum*. Blackhead, which is common in Ohio, is caused by a microscopic protozoan called *Histomonas meleagridis*. It causes pathological changes in the intestinal tract and liver and, if uncontrolled, can cause high mortality in turkeys.

External parasites such as lice and mites can be controlled by treating birds with an insecticide such as Sevin® or pyrethrins. Observe warnings and follow the directions on the product packaging.

If your flock becomes sick, an accurate diagnosis should be obtained. The problem might be poor nutrition, poor management, or an infectious disease. You must know what is wrong with the turkeys in order to treat them properly and to manage the flock and prevent further losses. Be sure to take birds with typical symptoms or freshly dead birds to a laboratory, and remember to provide an accurate history of the sickness. Diagnostic services are offered by the State Diagnostic Laboratory in Reynoldsburg as well as Extension specialists. Contact your local Extension office for more information.

Learning Activities for Preventing Health Problems

If you want to learn more about preventing health problems, consider these learning activities:

- Identify and compare two common external parasites of your turkeys.
- Outline the nurtient requirements for turkeys.
- List medications currently being used to cure or control poultry disease.
- Demonstrate one way to control cannibalism in turkeys.
- Prepare a written report on a common turkey disease.
- Identify three common internal parasites of your project birds.
- Prepare a written report on sanitation practices that control diseases.

Selecting Turkeys for Show

To select turkeys for show, refer to the Factors in Judging and Selecting Turkeys section on the next page.

Begin by examining birds for defects and parasites. Eliminate those with cuts, tears, bruises, breast blisters, or buttons. It may be helpful to place turkeys on a table to examine them. Examine birds for width, length, and thickness of breast. Always select an alternate bird in case something happens to your first choice.

To see a video on how to judge a market turkey, go to ***http://4hpoultry.osu.edu/Showing%20tips.htm*** *and click on "Phil Clauer talks about Jared Miller's first place market turkey."*

Learning Activities for Selecting Turkeys for Show

If you want to learn more about selecting turkeys for show, consider these learning activities:

- Demonstrate how to select and prepare turkeys for show.
- Exhibit your turkeys at the county or state fair.
- Enter a poultry showmanship contest.
- Prepare a demonstration for the county fair.
- Attend a major turkey show.
- Demonstrate to younger members how to show a turkey.
- Describe the undesirable characteristics of turkeys.

Factors in Judging and Selecting Turkeys

Heritage and wild turkeys are judged based on how well they meet the standards described in the *American Standard of Perfection* published by the American Poultry Association, Inc., as well as the condition of the bird at judging time.

Market turkeys are judged on factors including conformation, fleshing, finish, and defects. Conformation refers primarily to the skeletal system or shape of the bird. This term often is used mistakenly to describe the distribution of flesh on the turkey. The perfect market turkey should resemble a large rectangle in which the breast width equals body depth or thickness. Both the narrow-breasted turkey with a deep body and the wide-breasted bird with a shallow body are at a distinct disadvantage.

Shape includes length, width, and depth, which should be well balanced. All these characteristics are of vital importance in the final evaluation of the bird.

The keel bone (breast bone) should be long, straight, and free of defects such as dents or knobs. It should carry well back between the legs. The back and keel bones should be parallel. In wide-breasted turkeys, the keel bone sometimes curves upward between the legs, resembling the rocker on the bottom of a rocking chair. This is a serious defect.

The back should be long and wide, with a broad spring of ribs.

The body should be full and deep. Body depth must be consistent with breast width. Birds that are extremely deep but are narrow across the back and breast are discriminated against.

Fleshing refers to the amount and distribution of muscle or flesh on the bird. Breasts, drumsticks, and thighs carry the bulk of the meat and should be examined closely.

The more nearly the breast conformation resembles a giant *U,* the better it is. The breast should be wide and full near the front of the body. This width and fullness should extend the entire length of the keel or breast bone. Ideally it should be as wide between the legs as at the widest part. This is unlikely in most cases, but the less taper to the breast, the more meat. Avoid selecting turkeys with a heart-shaped breast.

Drumsticks and thighs should be well developed and carry an abundance of muscle. They should be round, bulging, and firm to the touch.

Finish refers to the amount of fat in and immediately under the skin. Without a good fat cover, a well-fleshed bird loses eye appeal. Poultry should not be fat to the point of being wasty. Abdominal fat should account for less than 10 percent of the total body weight. To judge the amount of fat, in a sparsely feathered area of the breast halfway between the front of the keel and the base of the wing, take a fold of skin between the thumb and forefinger of each hand. Examine it for thickness and coloration. The fold on a Grade A bird is creamy white and thick. The amount of finish considered adequate varies between judges and depends on personal preference.

The presence of any of the following defects lowers the final placing of the bird:

- General defects such as cuts and tears
- Broken or disjointed bones
- Skin or flesh bruises anywhere other than on the wing tip
- Blisters or calluses on the breast
- Insect bites
- External parasites (lice, mites, or fleas)
- Extremely dirty birds
- Pendulous crop

Breast blisters or calluses may vary in size. There may be a slight thickening of skin over the front of the breast bone or a very large, fluid-filled, sac-like bubble covering most of the breast bone.

Occasionally, the crop of the turkey becomes visibly distended—a condition called pendulous crop. A pendulous crop, which is related to the feeding and drinking of a turkey, may seem to appear and disappear over time. Typically, a turkey with a pendulous crop is not processed in industry. Therefore, a pendulous crop is considered a defect in market show.

Feathering defects might also lower the placing of the bird or eliminate it from show. Feathers completely encased in the feather sheath are considered pin feathers and do not protect the skin of the bird as much as older feathers do. Inadequate feathering or barebacks may lead to sunburn in turkeys that are kept outside. Infected feather follicles are a defect, especially on the breast, and may be the result of wet or inadequate bedding.

Almost all of today's market turkeys have white feathers. Even so, feather color is important only to the extent that it might detract from the appearance of the ready-to-cook carcass. (Colored pin feathers sometimes leave dark spots in the flesh.)

Conformation defects to be considered include rocker keels and breast bones that are dented, crooked, knobby, *V*-shaped, or slab-sided. Backs that are narrow, crooked (hunched), roached (arched), or humped; legs and wings that are deformed; and bodies that are definitely wedge-shaped might also lower the placing of the bird. Defects such as crooked toes or beaks are not important and are usually disregarded.

Fleshing defects include breasts that do not carry width well back to the end of the keel (tapered from front to back so they're heart-shaped) and are *V*-shaped or concave rather than full and rounded (*U*-shaped). Other fleshing defects include thin drumsticks and thighs, and backs that are not well-fleshed along the vertebrae or hip bones.

Lack of fat in the wing webs is a finish defect. Thin, reddened, semi-transparent skin in the sparsely feathered areas of the breast and abdomen might also cause disqualification.

Sample Market Turkey Scoresheet

	Bird #1	Bird #2	Bird #3	Bird #4
Breast (20)				
Legs (5)				
Thighs (5)				
Feathering (3)				
Color/Health (2)				
Defects* (-0)				
Total per bird				
Total for all birds				
Pen uniformity** (10)				
Knowledge*** (50)				
Grand Total				

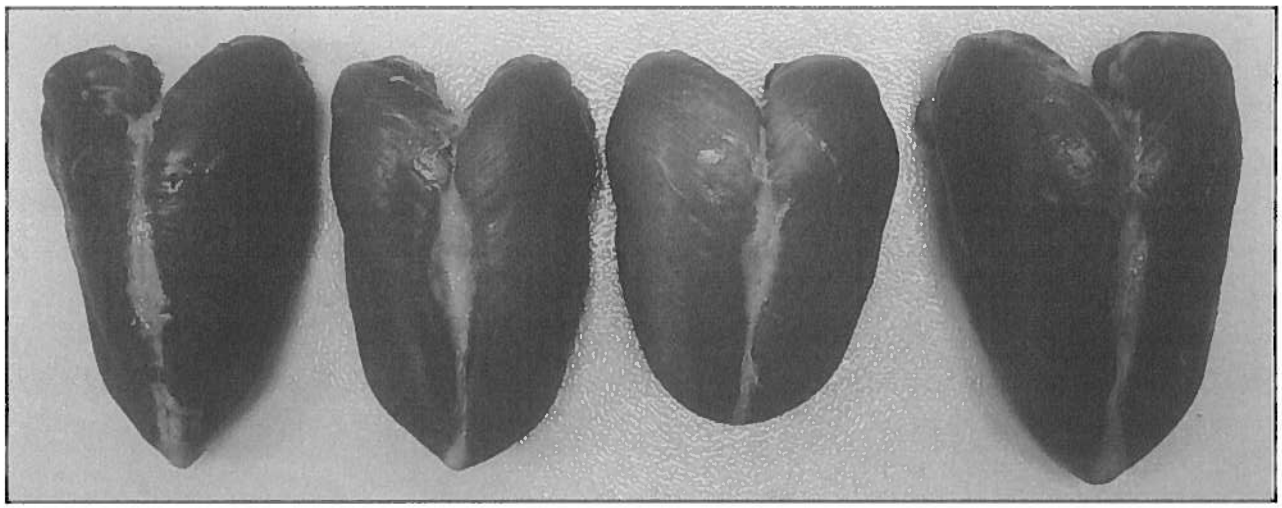
* Defects = Blisters, bruises, sores, scabs, cuts, infected feather follicles, broken bones, manure burns, unwashed birds, lice, and any other factors that lower show quality or carcass quality

** Pen Uniformity = Consistency within the pen, including matching weight, maturity level, color, health, etc., among all birds

***Knowledge = Exhibitor's knowledge about brooding, rearing, selection, and decision-making with his/her flock

You Be the Judge

Here's the scenario. You are a judge at a poultry contest. The broiler breasts below are being judged on a live market bird. All other things about the live birds are similar, including the depth of the breasts. How would you place them, and why? (See the next page for the answer.)



A B C D

Learning Activities for Judging and Selecting Turkeys

If you want to learn more about judging and selecting turkeys, consider these learning activities:

- Describe the ideal turkey of a variety you own.
- Describe the defects that might disqualify a turkey from a show.
- Explain to younger members how to transport a turkey to a show.

Marketing

If you have raised more turkeys than you need, consider selling the extra birds, either alive or processed. Sometimes it is more convenient to have them custom-processed at a small poultry processing plant. Although state and federal laws regulate the processing of poultry for sale, limited direct sales of home-grown and home-processed turkeys may be exempt. For details, contact the city or county health departments or the Ohio Department of Agriculture, Bureau of Meat Inspection.

Learning Activities for Marketing

If you want to learn more about marketing, consider these learning activities:

- Prepare a report on grades of turkeys. Use a separate sheet of paper.
- Explain good points and faults of a market carcass.
- Using a separate sheet of paper, trace the marketing of a turkey from the farm to the consumer.

Exploring Careers in Poultry Science

Choosing a career is an important decision that everyone must make. Knowing your interests and learning about career opportunities that reflect those interests help in setting and attaining your career goals. Your 4-H projects, events, and activities may lead you to education or training for a career in poultry science.

The poultry industry continues to grow and change, evolving with technology as well as with consumer needs. This growth has created new careers for those with interest in public service, industrial research and development, agribusiness, and production.

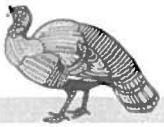
Public Service Careers

"Public service" refers to career options with a government agency.

Teaching. A successful teacher in poultry science has a broad knowledge of biological and physical sciences in addition to good training in agriculture. Teaching positions are available but usually require education beyond the Bachelor of Science degree.

Research. Special training in genetics, nutrition, physiology, biotechnology, poultry food technology, poultry management, poultry and egg processing, economics, marketing, or pathology is required of researchers in poultry science. There are positions in federal or state experiment stations for those who enjoy the challenge of research. At the university level, a position may include teaching, research, or Extension work.

Answer to You Be the Judge: Most judges would place B-C-D-A and would prefer that the breast width carries to the end of the keel. D and A loose width too quickly. In a market class, it's all about conformation. Typically we know nothing about growth rate.



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Strutting Toms

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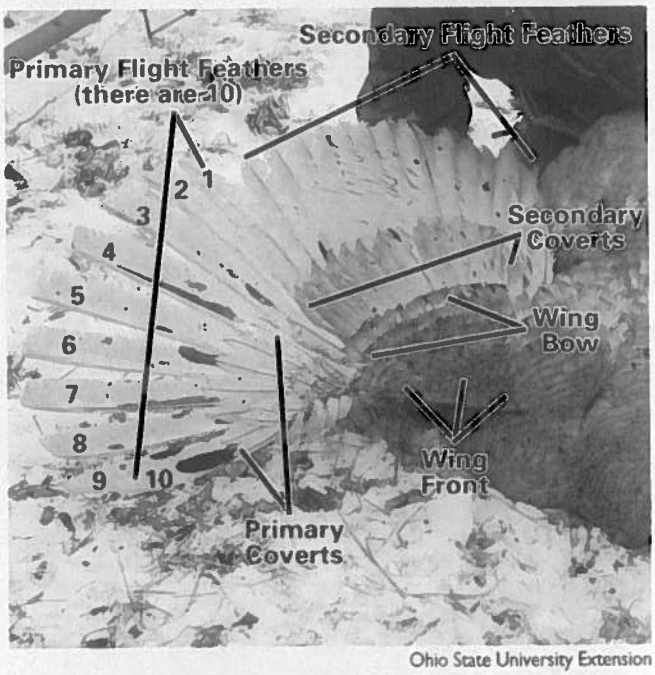
This Tom turkey is strutting to impress a hen. Notice the red and blue coloration on the head and neck. The red color is caused by oxygenated blood (arterial) and the blue by venous. Talk about display!

Ohio State University Extension

This photo, taken just two minutes later, shows the same tom after being caught and held. Notice the change in the caruncles and the reduction in the size of the snood. These changes can occur quickly depending on the tom's mood.

Wing Feathers



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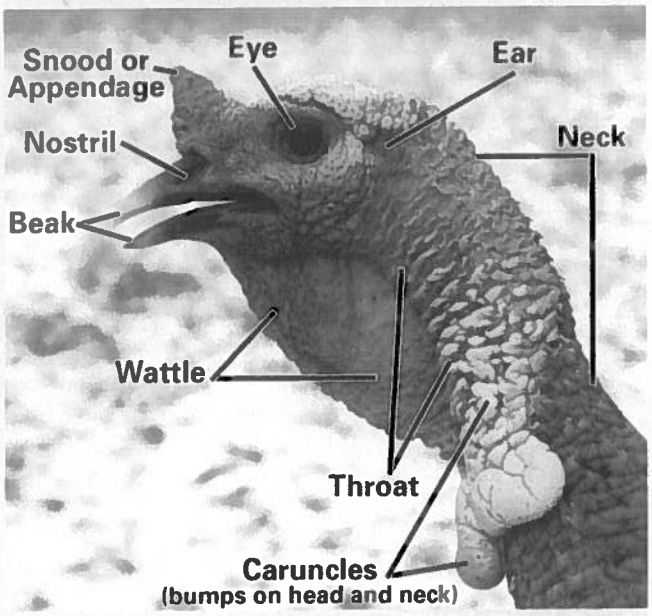
Turkey Head and Neck



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Heritage Turkey Varieties

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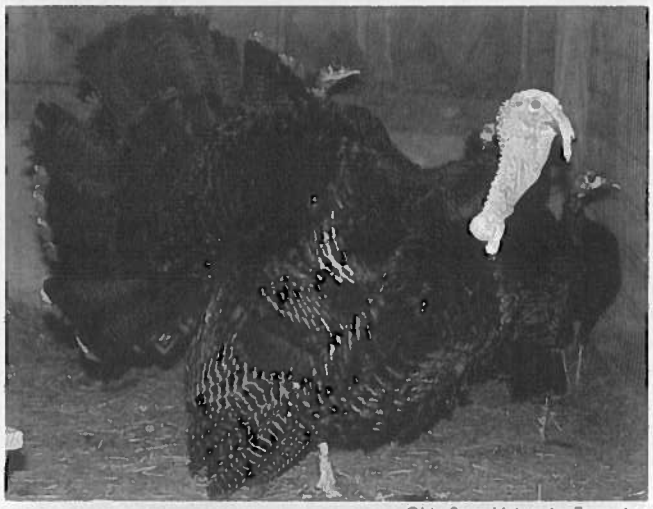
Eastern strain wild turkeys



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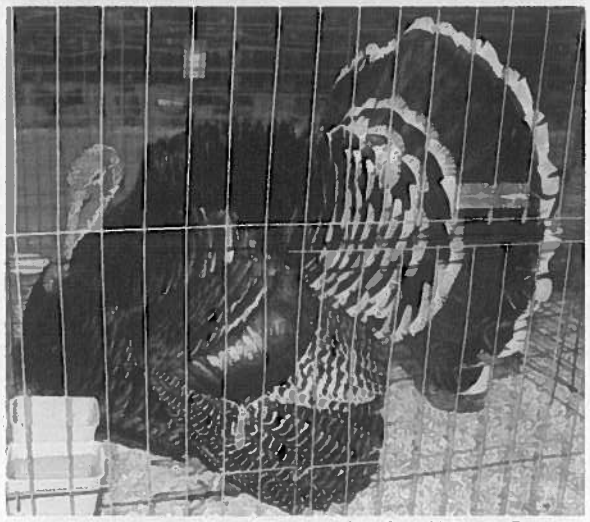
Eastern strain wild turkey tom with hens

Ohio State University Extension

Heritage bronze tom



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Heritage bronze tom

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Narragansett toms

Ohio State University Extension

Slate tom

Ohio State University Extension

Bourbon Red

Ohio State University Extension

A trio of heritage toms

Ohio State University Extension

Royal Palm

Ohio State University Extension

Black tom

Ohio State University Extension

Two pairs of strutting toms

Extension Service. If you want a career that offers variety, challenge, rewards, leadership, initiative, and creativity, the Extension service might be for you. County Extension educators are well-trained college graduates. To serve the needs of the people, the educators must have a background in a variety of agricultural subjects. The poultry specialist interprets technical reports and uses the information to help the broiler and egg industry improve productivity and efficiency.

Poultry and Egg Grading. Poultry graders determine and certify the class, quality, and condition of poultry, shell eggs, and egg products. They assign the correct USDA grade to poultry and ensure correct labeling and packaging of various types of poultry. A poultry grader usually has a Bachelor or Master of Science degree in poultry science, animal science, or food technology.

Agriculture Careers

The poultry industry is a worldwide agribusiness that needs people with degrees in business and marketing. Here are some opportunities that are available:

- Marketing and sales
- Business management
- Research and development
- Quality control
- Accounting and finance
- Legal affairs

Production and Management Careers

Are you interested in producing broilers, turkeys, or eggs? Do you enjoy working on a farm or working closely with nature? There are many farm-related jobs in the industry:

- Breeder flock management
- Hatchery management
- Poultry production
- Feed mill management
- Company service representative
- Poultry and egg processing plant management

With the variety of poultry careers, it may be difficult to select the right one for you, or it may be necessary to seek advice from several sources.

Learning Activities for Careers in Poultry Science

If you want to learn more about careers in poultry science, consider these learning activities:

- Briefly describe four careers associated with the poultry industry.
- Interview a breeder to learn about his or her career path.

Animal Care and Welfare

The purpose of the Animal Care and Welfare section is two-fold:

- To increase awareness of the issues of animal well-being and quality assurance
- To encourage you to reflect on your values concerning these issues

Privileges, Responsibilities, and Rewards

Everyone associated with livestock, either on the farm or in the show ring, is responsible for the well-being of their animals. As a 4-H member, you need to learn to care properly for your projects and develop acceptable livestock husbandry skills. These are the privileges, responsibilities, and rewards you can expect from the 4-H program.

Privileges

- To know as much about your project as possible
- To receive information to raise the project
- To be given a variety of experiences relating to project work
- To be given sound guidance and direction
- To ask questions and share concerns
- To be recognized

Responsibilities

- To treat humanely all livestock projects in your possession
- To be sincere and believe in the value of a job well done
- To be loyal to the values and ideals of the 4-H program
- To accept the guidance and decisions of the program coordinators
- To be willing to learn and participate in training programs and meetings
- To continue learning throughout your years of 4-H membership
- To follow good practices, ensuring a safe, wholesome product of the highest quality

Rewards

- To enjoy satisfaction from a job well done
- To receive both public and personal recognition
- To learn new skills, receive special training, and experience personal growth
- To make new friends and have fun
- To feel good about producing a wholesome, consumable product
- To realize that you are important and that you can make a difference

Animal Well-Being

As a 4-H member, you need to be aware of the things you can do with your own animals to promote animal well-being. You need to set goals and develop a plan that positively impacts your animals' well-being on the farm, in your backyard, and at the fair.

You can complete some tasks before you obtain your turkeys. First, think about the size they will be as they grow to maturity.

Are your facilities large enough for them to exercise? Are there hazards such as protruding nails, broken boards, or wires in the pen? Can the turkeys reach any potentially dangerous objects such as electrical boxes or poisonous plants? Think about the type and quantity of bedding that is needed to keep your turkeys dry and warm or cool. You should have an ample supply of clean water available to them at all times. A designated feeding area should be kept free of manure, urine, and bedding.

Once your turkeys arrive and are in your care, providing them with a balanced ration is an important first step. Processed feeds, supplements, and pre-mixes are available. Be sure your turkeys are receiving the nutrition they need in relation to age, growth cycle, and purpose.

Animal Health

Know Your Vet

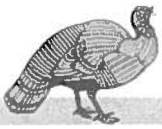
When questions or concerns arise, involve your veterinarian. Develop a veterinarian-client-patient relationship (VCPR). This relationship requires that the veterinarian has seen and has knowledge of your flock (the patients) and has discussed a health plan or any treatments with the owner (client). Your veterinarian can be very helpful in developing a health care program for your turkeys. Your plan should include an appropriate schedule for internal/external parasite control, etc.

Using Medicine

You should check with your veterinarian before administering treatments, especially if there is any question about the diagnosis and the medication you are planning to use.

A **withdrawal time** may be indicated on the label of certain medications. This is the period of time that must pass between the last treatment and the time the turkey is slaughtered. For example, if a medication with a 14-day withdrawal period were to be given on August 1, the withdrawal would be complete on August 15, which would be the earliest date the turkey could be processed for human consumption. It is important that you follow directions for withdrawal time as given by the label or as prescribed by your veterinarian.

In addition to the withdrawal time, the label of a drug lists the animal species for which the drug is approved, the dosage to be administered, how it is to be given, and for what diseases/conditions it can be used as a treatment. Any use other than that which is printed on the label can be directed or prescribed only by your veterinarian. For example, a neighbor's turkeys are sick and a veterinarian has treated them using twice the dose listed on the label of an over-the-counter (OTC) product. Your turkeys become ill and are showing the same symptoms. You may *not* use the neighbor's double dose for your animal without a veterinarian examining and prescribing the specific treatment. Any deviation from the label directions when using a drug is referred to as **extra-label drug use**. Unless directed by a veterinarian who has established a VCPR, *extra-label drug use is illegal*.



Medication Label

Understanding medication labels and inserts is important for ALL animal owners and care providers. READ all labels carefully. Show your understanding of the medication label below by identifying all nine parts in the blanks provided.

Active ingredient	Name of drug
Cautions and warnings	Quantity
Expiration date	Storage
Lot number	Withholding times
Name of distributor	

1. _____ ***OMNIBIOTIC***

(Oxytetracycline HCI) 2. _____

Directions for use: See package insert.

3. _____

Warning: The use of this drug must be discontinued for 5 days before treated animals are slaughtered for food. Do not administer to chickens or turkeys producing eggs for human consumption. Do not administer this product with milk or milk replacers.

4. _____

Store below 25°C (77°F). 5. _____
For animal use only.

6. _____

Net Contents: 4.78 oz
Distributed by
USA Animal Health, Inc. 7. _____

EQ771-3 8. _____ 9. _____ **2/11/YR**

Medication Insert

Before administering any drug to an animal, READ the label carefully. Show your understanding of the medication insert below by identifying all ten parts in the blanks provided.

Active ingredient	Route of administration
Approved uses	Sizes available
Cautions and warnings	Species and animal class
Dosages	Storage requirements
Name of drug	Withholding times

OMNIBIOTIC 1. _____

(Oxytetracycline HCl) 2. _____

For use in beef cattle, chickens, dairy cattle, sheep, swine, and turkeys. 3. _____

Active Ingredient: Omnibiotic is a broad-spectrum antibiotic containing oxytetracycline HCl.

Indications in *Turkey*: Hexamitiasis caused by *Hexamita meleagridis* and infectious synovitis caused by *Mycoplasma synoviae*. In growing turkeys, complicating bacterial organisms associated with bluecomb (transmissible enteritis coronaviral enteritis). 4. _____

Recommended Daily Dosage for Turkeys 5. _____

	Dosage	Packs/2 gal stock solution		Gal of stock solution per tub
		4.78 oz (135.5 g)	9.55 oz (270.7 g)	
Hexamitiasis caused by *Hexamita meleagridis*	200–400 mg/gal	1/2–1	1/4–1/2	60–30
Infectious synovitis caused by *Mycoplasma synoviae*	400 mg/gal	1	1/2	30
Growing turkeys, complicating bacterial organisms associated with bluecomb (transmissible enteritis coronaviral enteritis)	25 mg/lb body weight daily	Varies with age and water consumption	Varies with age and water consumption	Varies with age and water consumption
Medicate continuously at first clinical signs of disease; continue for 7–14 consecutive days. If improvement is not noted within 24–48 hours, consult a poultry diagnostic laboratory or poultry pathologist to determine diagnosis and advice on dosage.				

Caution: Medication for use in drinking water only. Not for use in liquid feed supplements. 6. _____

Prepare fresh solutions every 24 hours. Store below 25°C (77°F). 7. _____

Note: The concentration of drug required in medicated water must be adequate to compensate for variation in the age of the animal, the feed consumption rate, and the environmental temperature and humidity, each of which affects water consumption.

8. _____

Warning: Use as a sole source of oxytetracycline. Do not administer to turkeys, cattle, or sheep within 5 days of slaughter. Zero-day slaughter withdrawal in swine. Do not administer to chickens or turkeys producing eggs for human consumption. Do not administer this product with milk or milk replacers. Administer 1 hour before or 2 hours after feeding milk or milk replacers. A milk discard period has not been established for this product in lactating dairy cattle. Do not use in female dairy cattle 20 months or older. 9. _____

How Supplied: Omnibiotic is available in 4.78 oz (135.5 g) and 9.55 oz (270.0 g) packets of soluble powder. 10. _____

Animal Identification

Typically, individual poultry animals are not identified. In commercial operations, identification is impractical because of the large number of animals. As a 4-H member, you may be asked to use a leg band or a wing band to identify your animals for fair.

Know Your Animal

Training animals and acquainting yourself with them needs to begin at an early age or as soon as you acquire them. If at all possible, you should spend time with your birds daily. As you work with your turkeys, you and the birds develop trust and become accustomed to each other's movements. You also become aware of what sounds or sights bother your turkeys and in which direction they tend to jump or shy away. Handling your turkeys daily also helps you recognize any abnormal behavior that could signal illness, stress, or pain. The longer you avoid working with your turkeys, the more difficult training and preparation for show becomes. The two *P's*—practice and patience—usually pay off.

From the day you acquire your turkeys until the day they leave your care, you should maintain feed and treatment records. This is important for their day-to-day care and for anyone who might later purchase your birds. This is also the best way to keep track of the kinds and amounts of project expenses.

Finally, if you plan to exhibit your turkeys for show, continue the same quality care program throughout the exhibition as you did at home. This starts by loading and hauling them safely and with concern for their well-being. The exhibition facilities should be prepared and checked ahead of time, just as you prepared your facilities at home when you first acquired your turkeys. Continually watch your birds for signs of stress, pain, or illness. Exercise your turkeys daily. Clean, feed, and water them regularly.

Above all, enjoy your turkey project experience. You should feel good about the knowledge you gain and the quality care program you develop and implement with your turkey project.

Quality Assurance

With your livestock project comes new responsibilities. You are now a member of the livestock industry. The livestock industry, just like any industry, provides a product to the consumer. Even producers of breeding stock are providing seed stock for future production.

Many businesses have a quality assurance department to make sure their products are of the highest quality. Businesses pay attention to quality assurance because it helps build consumer satisfaction. Consumers decide whether to buy a product based on their perception of the value of that product. When quality is high, consumers buy again. Livestock products must be safe, wholesome, and produced in a manner that meets consumer approval.

Who is in charge of quality assurance in the livestock industry? When you feed a turkey and sell it, who is responsible for assuring that it is a high-quality product? You? The breeder? The buyer? Everyone involved in the livestock industry is obligated to do his or her part to provide a quality product to the buyer.

Quality assurance in the livestock industry begins with providing the right genetics and continues with the proper husbandry of the live animal. Quality assurance involves producing a healthy animal by providing for the animal's needs. Basic animal needs include water, food, shelter, and care. Proper attention to animal husbandry helps assure a high-quality animal.

Good animal husbandry requires an understanding of many different sciences, including nutrition, environmental design, genetics, veterinary health, production, and economics. To learn more, consult a 4-H advisor, an Extension educator, a veterinarian, or a poultry industry expert.

See page 39 for a code of practices from the Ohio Farm Animal Care Commission.

Quality Assurance and Your Turkeys

Turkey producers usually treat an entire flock rather than individual animals. For this reason, the veterinarian-client-patient relationship (VCPR) for a turkey producer is somewhat different. A veterinarian might be familiar with you and your flock but not with your individual turkeys.

If you suspect you have a sick turkey, isolate the affected bird and, if it does not improve in a few days, consult your veterinarian. Your vet might want to see the turkey or want to make suggestions about possible causes or treatments.

Once they've been vaccinated at the hatchery, turkeys and other poultry are rarely treated by injection. When medication is needed, often the whole flock is treated through use of a supplement to their water supply or medicated feed.

Quality assurance is the responsibility of everyone who raises animals for food. Make sure you know how all aspects of quality assurance apply to your project.

Good Production Practices. These ten Good Production Practices (GPPs) summarize what quality assurance is all about. Review them annually, and make sure you have a quality assurance program in place that addresses each one of them.

GPP 1: Identify and track all treated animals.

GPP 2: Maintain medication and treatment records.

GPP 3: Properly store, label, and account for all animal health and medicated feeds.

GPP 4: Use veterinary prescription drugs or FDA-approved drugs in an extra-label manner only when there is a valid veterinary-client-patient relationship.

GPP 5: Educate all employees and family members on proper administration techniques.

GPP 6: Use drug residue tests when appropriate.

GPP 7: Establish an efficient and effective animal health management plan.

GPP 8: Provide proper animal handling and care.

GPP 9: Follow appropriate feed processor procedures and feed tag recommendations.

GPP 10: Review and update your quality assurance program at least once a year.

Ohio Farm Animal Care Commission

a vital part of the Ohio Livestock Coalition
P.O. Box 479, Two Nationwide Plaza, Columbus, OH 43216-0479
Office: 614-249-2435; Fax: 614-249-2200

Policy Statement

The Ohio Farm Animal Care Commission was organized in 1990 in the state of Ohio to provide leadership on matters related to farm animal care. The commission has dedicated itself to the promotion of sound animal husbandry practices in the care and efficient production of animals used for food and fiber. The use of proper animal husbandry practices minimizes stress, improves animal efficiency and profitability for the farmer, and ensures a safe, healthy, and wholesome product to the consumer at a reasonable price.

The Ohio Farm Animal Care Commission believes animals play a vital part of human existence and therefore, deserve our protection and compassion. Humans have had an inseparable relationship with animals and nature, as people have served as their sole caretakers for centuries. Yet, humanity is answerable to another set of laws and concepts that is uniquely a product of human society. Animals cannot be made subject to the laws that we as human beings are governed by and therefore, do not have the rights of humans.

The Ohio Farm Animal Care Commission firmly believes that all animals use other animals for their existence. Thus, the responsible use of animals by humans is natural and appropriate.

The Ohio Farm Animal Care Commission believes that farmers take pride in their responsibility to provide proper care for their animals and endorses the following Code of Practices.

Code of Practices

The following describes general responsibilities of the farmer and all persons in his or her authority in the proper care and handling of animals raised for food and fiber.

- To provide food, water, and care necessary to protect the health and welfare of my animals.
- To provide a safe and healthy environment for my animals that is clean, well ventilated, and provides ample space.
- To provide a well-planned disease prevention program to protect the health of my herd or flock. This includes a strong veterinarian-client relationship.
- To use humane and sanitary methods when it becomes necessary to dispose of my animals.
- To make timely inspections of all animals to evaluate their health and ensure that all basic requirements are being met.
- To ensure proper handling techniques are used to eliminate any undue stress or injury when manual manipulation is necessary.
- To provide transportation for my animals that avoids undue stress or injury caused by overcrowding, excessive time in transit, or improper handling when loading or unloading.
- To ensure that the willful mistreatment of my animals or the mistreatment of any animal will not be tolerated. In cases of mistreatment, I will notify the proper authorities.
- To make management decisions based on scientific fact and to consider the welfare of my animals.
- To encourage livestock producers to complete species-specific quality assurance programs.

Planning for the Care of Your Turkeys

Taking an animal project is a big responsibility that often requires the involvement and help of your family, advisor, or friends. Before you begin, think about the scope of your project and who will be involved with your animal's care. Talk to everyone you are counting on for help, and be sure you can answer these questions.

What am I, the 4-H member, responsible for on a daily, weekly, monthly, and project year basis?

_____

_____

_____

- Who, if anyone, is helping me in the direct care of my project animals? _____

_____

_____

_____

- How are the supplies for this project being provided? _____

_____

_____

_____

Discuss the answers to these questions with everyone involved and ask them to sign in the spaces below.

Signature of 4-H member _____ Date _____

Signature of parent/guardian _____ Date _____

Signature of parent/guardian _____ Date _____

Signature _____ Date _____

Signature _____ Date _____

Signature _____ Date _____

The Care You Give Your Animals

When you are just beginning your project, it is helpful to assess the way in which you care for your animals. The list below can help you determine your level of responsibility. Place a check next to the activities you already do. Then, review the list again to see where you can improve. You may even notice activities for which you are ready to assume responsibility. Complete this activity every year you take the project.

At the Beginning of Your Project	I am already doing	I want to improve
Prepare the facilities before I purchase my project animals.	❑	❑
Provide adequate housing and bedding.	❑	❑
Provide access to clean, fresh feed and water.	❑	❑
Control internal and external parasites.	❑	❑
Train animals to be handled at a young age.	❑	❑
Develop a health program to prevent disease.	❑	❑
Observe animals daily, and immediately treat those that need care.	❑	❑
Identify animals (leg band, wing band, etc.), if appropriate.	❑	❑
Keep records of vaccines, medication, and medicated feed.	❑	❑
Be aware of animal comfort at all stages of production.	❑	❑
Use proper techniques for vaccination and treatment.	❑	❑
Observe and follow label directions on medications and on feed.	❑	❑
Sort and load animals safely and with concern for them.	❑	❑

Adapted from *Iowa State University Extension v1-1042DJH Oct. 1991.*

After deciding which areas you want to improve, describe how you are going to make these improvements. _____

_____

_____

At the End of Your Project

Did you improve the care you provide your turkeys? _____

What worked well? _____

_____

What would you change? _____

_____

My Animals' Housing

Adequate food and shelter for your animals is the cornerstone of providing high quality care. In the space below, attach one or more photos or draw sketches of your turkeys' housing. Your picture should show sheltered areas, yard space, and the locations of feed and water. Complete this activity every year you do this project.

Answer these questions:

Why is it important that shelter is available throughout the year? _____

_____

What is the ventilation like, if any, in your turkeys' pen? _____

_____

How are your turkeys supplied with fresh water? _____

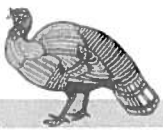
_____

What improvements have been made recently in your turkeys' housing? _____

_____

What improvements, if any, would you still like to make? _____

_____



Feed Tag Activity (a)

TURKEY PRESTARTER MEDICATED

Complete Feed for Poults

For the prevention of coccidiosis in growing turkeys caused by *Eimeria adenoeides, Eimeria meleagrimitis,* and *Eimeria gallapavonis*

ACTIVE INGREDIENTS

Halofuginone Hydrobromide..... 1.90 g/ton

GUARANTEED ANALYSIS

Crude Protein (Min.)	26.00%
Lysine (Min.)	1.55%
Methionine (Min.)	0.60%
Crude Fat (Min.)	2.00%
Crude Fiber (Max.)	5.00%
Calcium (Min.)	1.15%
Calcium (Max.)	1.65%
Phosphorus (Min.)	0.90%
Salt (Min.)	0.15%
Salt (Max.)	0.65%

INGREDIENTS

Grain Products, Plant Protein Products, Animal Protein Products, Calcium Phosphate, Animal Fat, Ground Limestone, Methionine Supplement, L-Lysine Monohydrochloride, Calcium Propionate, Salt Choline Chloride, Zinc Oxide, Copper Sulfate, Manganous Oxide, Manganese Sulfate, Ferrous Sulfate, Calcium Iodate, Sodium Selenite, Vitamin A Acetate, Vitamin D-3 Supplement, Vitamin E Supplement, Menadione Dimethylpyrimidinol Bisulphite, Niacin, Calcium Pantothenate, Riboflavin Supplement, Vitamin B-12 Supplement, Biotin, Folic Acid, Thiamine Mononitrate, Ryridoxine Hydrochloride.

FEEDING DIRECTIONS

Feed as the only ration to starting poults from 1 day to 21 days of age. Refer to current feeding schedules for feeding according to body weight or consumption.

WARNING

Feed continuously as the sole source in complete ration. Withdraw 7 days before slaughter.

MANUFACTURED BY SKILLATHON FEEDS

Turkey Prestarter Feed Tag Questions

1. What is the main ingredient in this feed?

   _____

2. What is the active drug ingredient?

   _____

3. What is the crude protein level?

   _____

4. For how many days prior to slaughter should this feed be removed?

   _____

5. What is the crude fat level of this diet?

   _____

6. Is ground limestone included in the ingredients of this diet?

   _____

7. This ration should be fed to turkey poults of what age?

   _____

Feed Tag Activity (b)

It is important for every animal owner and care provider to know how to read a feed tag. Tape or staple one feed tag, supplement tag, or feed mix receipt to this page from rations you feed to your project animal. Answer the questions below. If you do not purchase feed, write your ration formula or type of forage fed below. If possible, for each year of the project, use a food tag from a different food product.

1. Is there any medication in this ration? _____

2. What mineral and/or vitamins are added to this ration? _____

3. What is the minimum crude protein level in this feed? _____

4. What is the main ingredient in this feed? _____

5. How much of this should be fed to your animal? _____

Treatment Record Activity (a)

Read the following treatment scenario. Using the information, medication label, and calendar provided, answer the questions and complete the treatment record.

Treatment Scenario

Today is May 12. You notice several of the flock of ten Large White turkeys you purchased three weeks ago are coughing and have watery eyes and a discharge from their nostrils. These are the only poultry animals you have. The flock did not eat nearly as much feed the past day as usual. Because you can tell your turkeys are sick, you take two to the local veterinarian for diagnosis and treatment. The veterinarian diagnoses the condition as a respiratory infection called air sacculitis and tells you that while he does not carry the needed medication, Superbiotic™, it is available as an over-the-counter (OTC) drug at the nearby farm supply center. He tells you to medicate the turkey's drinking water starting today, continue for a total of four days, and replace the medicated water with clear water on the morning of May 16.

MAY						
SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Superbiotic

(10% Hydrocycline Tartrate)

A broad-spectrum antibiotic for oral administration in the treatment and prevention of respiratory diseases of poultry caused by susceptible bacteria.

Directions: Mix the contents of this packet in ten gallons of drinking water. This medicated drinking water should be the sole source of drinking water during the period of medication, which must not exceed 14 days.

WARNING: Discontinue use in poultry five days before slaughter.

Store below 77°F. Keep packet dry.
Net Contents: 25 grams
Distributed by USA Animal Health, Inc.

Treatment Record Activity (b)

Questions for Activity

1. How much of the Superbiotic™ do you use?

   _____

   _____

   _____

2. How is Superbiotic™ administered to your turkeys? Through injection, orally, in their food, or in their water?

   _____

   _____

   _____

3. According to the label, your turkeys can drink nothing but treated water during this time. True or false?

   _____

   _____

   _____

4. Assume your turkeys are market weight. If you discontinue treatment on May 16, when are your turkeys ready for market?

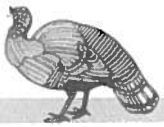
   _____

   _____

   _____

Treatment Date & Time	Animal ID • Name • Species • ID Number • Description	Condition Being Treated For	Estimated Weight	Treatment Given: Medication Dispensed, Amount and Route	Instructed Milk/Meat Withdrawal	Results	Date & Time Withdrawal Complete	If this is an extra label or Rx drug, list the licensed veterinarian's name, address & phone number who prescribed or directed the treatment.
			X			X		

X=This information was not supplied in the situation; therefore, you do not need to complete this box.



Treatment Record Activity (c)

Answers for Activity

1. How much of the Superbiotic™ do you use?

   The entire packet (25 grams)

2. How is Superbiotic™ administered to your turkeys? Through injection, orally, in their food, or in their water?

   In their water

3. According to the label, your turkeys can drink nothing but treated water during this time. True or false?

   True. The medicated drinking water should be the sole source of drinking water during the period of medication.

4. Assume your turkeys are market weight. If you discontinue treatment on May 16, when are your turkeys ready for market?

   May 21. According to the label, the medication must be discontinued 5 days before slaughter.

Treatment Date & Time	Animal ID • Name • Species • ID Number • Description	Condition Being Treated For	Estimated Weight	Treatment Given: Medication Dispensed, Amount and Route	Instructed Milk/Meat Withdrawal	Results	Date & Time Withdrawal Complete	If this is an extra label or Rx drug, list the licensed veterinarian's name, address & phone number who prescribed or directed the treatment.
May 15	20 turkeys	Air Sacculitis	X	Superbiotic: 1 packet/10 gallons of drinking water	5 days	X	May 20	(This block should be left blank to indicate that no extra label or Rx drug was given.)

X=This information was not supplied in the situation; therefore, you do not need to complete this box.

Show Ring Ethics

Livestock shows are one of the most visible components of 4-H. Much of the public's contact with 4-H is at the county fair, where show ring events draw large crowds. What the audience sees reflects on the total 4-H program and the entire livestock industry. How are you contributing to that image?

The desire to win at any cost has tarnished the records of 4-H members personally and livestock shows in general. Why have YOU chosen to show an animal? What motivates some to act dishonestly in the show ring?

Competition, if you keep it in perspective, can be a positive tool to help develop important skills in your life. Many 4-H alumni who showed animals during their 4-H years attribute successes in their careers to the diverse skills gained as a 4-H member. You use decision-making skills and critical thinking techniques to select your animal and choose a feeding program. Answering the judges' questions in a confident manner helps you gain poise, which is beneficial in many other situations. Good sportsmanship is a characteristic we all need. Certainly self-esteem is affected in the show ring when people watch and applaud your performance.

Is your only goal to win, or do you want to get more out of it than that? Your ability to think while paying attention to the judge, your animal, and other exhibitors is an important skill. Keeping a level head and staying composed will be good practice for other challenges in your life. Many long-lasting friendships are developed from showing animals.

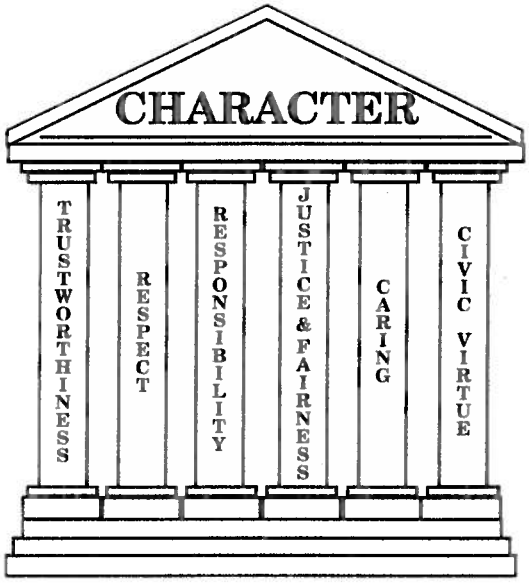
Proper training of your animal for the show ring should only include techniques that offer no risk of injury or pain to the animal. If a TV camera were present while working with your animal, would you do anything differently than you normally do? Putting in many long hours of practice with your animal is the only way to achieve a polished, confident look while getting your animal to respond completely to your commands.

The effects of unethical practices on animals can be harmful or even fatal. If your animal goes to slaughter and residues are found in the tissue, the animal will be rejected. How does this reflect on you and the animal industry?

Even if you do win, your moment in the spotlight with a champion is short lived. Think about what will stay with you after the thrill of winning has worn off. What image of the meat industry did consumers perceive while watching you present your animal?

It is wrong to use unethical techniques to train, feed, or show your animal. If you see others behaving unethically, don't turn your back. Tell a committee member or show official.

Pillars of Character



Source: Josephson's Institute of Ethics

More Questions about Your Project

1. Do your project animals have any special needs and considerations related to their care and welfare? If so, describe them here.

2. Are your animals permanently identified? Describe your system of permanent identification here.

3. What is extra-label drug use? When is it allowed?

4. What is a medication withdrawal time? During this project year, have you administered any medications that required a withdrawal time? If so, list them here.

5. How do you think a consumer would view the way your turkeys are housed? Fed? Handled?

6. List the six pillars of character.

7. Choose one pillar of character and explain how it is demonstrated in your behavior as you complete this project. (Choose a different one than last year.)

8. In the last year, what have you seen or heard about that you think is unethical in terms of animal care and welfare? Why is this wrong?

9. Did you show a turkey last year? If so, describe your behavior when you found out the results. Did you demonstrate good sportsmanship?

Animal Records

Why Keep Records?

Keeping accurate records requires time and effort, but all of your hard work pays off when you

- learn all about your turkeys—feed requirements and costs, types of equipment needed and costs, veterinary care and costs, training, behaviors, interactions with your turkeys.
- plan and budget for future projects.
- understand and apply business concepts when making decisions about purchasing or breeding turkeys, feed, equipment, and housing.
- practice responsible animal ownership, care, and welfare.
- learn how to set realistic goals.
- have information needed to apply for awards and scholarships.
- complete applications and resumes for colleges and jobs.

About the Records

This section is designed for individual animal records. If you have more than one project animal, copy the following pages as needed before you begin. Each project animal should have its own complete set of records. Include all your records with this book for project evaluation.

Computerized Records

Many turkey producers now rely on computers to make record keeping more accurate and efficient. If you choose to keep computerized records, you may attach printouts of those records where appropriate.

Receipts

It is a good habit to keep receipts for all the items you purchase throughout your project—animals, feed, medication, equipment, supplies, etc. Your county may even require you to keep all receipts and to bring them to judging. Check your county's requirements and guidelines. The last page of this book has been set aside for you to attach an envelope in which to store receipts.

Project Pictures

In the spaces provided, attach a picture of your project animals at both the beginning and the end of your project.

Animals' names: _____

Animals' ID#s (optional): _____

Animals' description: _____

_____

My project animals at the beginning of my project.

My project animals at the end of my project.

Year _____ Treatment Record

Treatment Date & Time	Animal ID • Name • Species • ID Number • Description	Condition Being Treated For	Estimated Weight	Treatment Given: Medication Dispensed, Amount, and Route	Instructed Milk/Meat Withdrawal	Results	Date & Time Withdrawal Complete	If this is an extra label or Rx drug, list the licensed veterinarian's name, address & phone number who prescribed or directed the treatment.
5/15/YR 6:00 AM	*20 turkeys*	*Air Saccuitis*	*NA*	*Superbiotic: 1 packet/10 gallons*	*5 days*	*NA*	*5/20/YR*	*NA*

Record of Livability

Date Hatched	Number of Poults	Death Loss				Total Loss
		1st and 2nd Week	3rd and 4th Week	2nd Month	3rd Month to Market	

Estimated Budget

Making an estimated budget for your project helps you determine approximately how much it is going to cost to keep your turkeys. Using the form below, estimate your income and expenses. These are not actual amounts, just estimates of what you think the actual amounts are going to be. Preparing a budget allows you to plan for your project and prepare financially for animal ownership.

Estimated Income	
Value of animal(s) kept at end of project year	
Income from animals sold	
Premiums	
Miscellaneous income	
Total Estimated Income	
Estimated Expenses	
Value of animal(s) at beginning of project	
Feed expenses (Use Table 1: Commercial Performance Objectives.)	
Equipment expenses	
Veterinary, medical, and health expenses	
Miscellaneous expenses	
Total Estimated Expenses	
Estimated Net Profit or Loss (Total Estimated Income minus Total Estimated Expenses)	

Record your actual expenses and income for this project year on the record pages for Inventory Value; Feed Expenses; Veterinary, Medical, and Health Expenses; Miscellaneous Expenses; and Income Record.

Inventory Value

	Beginning of Project		End of Project	
	Number	Value	Number	Value
Mature turkeys				
Poults				
Brooder house				
Feeders, etc.				
Other equipment				
Total			**Total**	
Inventory Gain or Loss (Subtract total beginning value from total end value.)				

Feed Expenses

Date	Kind	Weight	Price Per Unit	Total Cost
Total			**Total**	

Veterinary, Medical, and Health Expenses

Date	Reason	Quantity	Price Per Unit	Total Cost
			Total	

Miscellaneous Expenses

Date	Item	Quantity	Price Per Unit	Total Cost
			Total	

Income Record

Date	Item	Quantity	Price Per Unit	Total Received
			Total	

Profit or Loss Statement

The Profit or Loss Statement is a record of all income and expenses related to your project.

Complete the Profit or Loss Statement below by referring to the record pages for Inventory Value; Feed Expenses; Veterinary, Medical, and Health Expenses; Miscellaneous Expenses; and Income.

Income	
Value of animal(s) kept at end of project year	
Income from animals sold	
Premiums	
Miscellaneous income	
Total Income	
Expenses	
Value of animal(s) at beginning of project	
Feed expenses (Use Table 1: Commercial Performance Objectives.)	
Equipment expenses	
Veterinary, medical, and health expenses	
Miscellaneous expenses	
Total Expenses	
Net Profit or Loss (Total Income minus Total Expenses)	

After you have completed the Profit or Loss Statement, compare it to the Estimated Budget you made at the beginning of the project. Are they close? You may want to discuss your income and expenses with your project helper.

Receipts

Your county may require you to keep all receipts for your project. If you are required to keep receipts, attach an envelope for receipts to this project and record book for project evaluation.

I pledge
My Head to clearer thinking,
My Heart to greater loyalty,
My Hands to larger service, and
My Health to better living,
for my club, my community,
my country, and my world.

www.ohio4h.org

THE OHIO STATE UNIVERSITY EXTENSION