Lesson # 12

Poultry Health and Welfare

Core Area: Animal Science

Unit: Poultry Industry

Lesson # 12: Poultry Health and Welfare

National Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards:

AS.03.01 Prescribe and implement a prevention and treatment program for animal diseases, parasites and other disorders.
AS.06.01 Demonstrate safe animal handling and management techniques.
AS.06.02 Implement procedures to ensure that animal products are safe.
AS.07.01 Design animal housing, equipment and handling facilities for the major systems of animal production.
FPP.01.02 Work effectively with industry organizations, groups and regulatory agencies affecting the food products and processing industry.

Student Learning Objectives. Instruction in this lesson should result in students achieving the following objectives:

1. Students will be able to identify the three parties responsible for an animal’s health and welfare.
2. Students will be able to list and describe state and national programs focused on ensuring proper poultry health and welfare.
3. Students will be able to list and describe the facts and economic impact about current laws effecting animal welfare. Students will be able to source additional information regarding animal welfare.
List of Resources. The following resources may be useful in teaching this lesson:


List of Equipment, Tools, Supplies, and Facilities

- Computer and Data Projector
- Internet Connection
- PowerPoint Presentation
- Copies of Student Handouts
- Copies of Student Worksheets

Terms. The following terms are presented in this lesson (shown in bold italics):

- Animal Welfare
- Disease
- Proposition
- Regulation
- Veterinarian

Interest Approach. Use an interest approach that will prepare the students for the lesson.

*With the guidance from the instructor, have students discuss animal welfare. Ask students what is animal welfare? After students have shared their ideas about animal welfare, introduce the objectives of this lesson and present definition of animal welfare.*
SUMMARY OF CONTENT AND TEACHING STRATEGIES

Objective 1: Students will be able to identify the three parties responsible for an animal’s health and welfare.

Anticipated Problem: What is animal welfare? Who is responsible for ensuring an animal’s health and welfare? What are some of the current animal welfare issues?

(Distribute Poultry Health and Welfare Student Note Sheet 1, refer to PowerPoint slides 2-6)

I. What is Animal Welfare?
   a. Defined as relating to demanding that animals are provided with environments and management to meet their intrinsic physiological and behavioral needs.
   b. The avoidance of abuse and exploitation of animals by humans by maintaining appropriate standards of accommodation, feeding and general care, the prevention and treatment of disease and the assurance of freedom from harassment, and unnecessary discomfort and pain. (According to Saunders Comprehensive Veterinary Dictionary, 2007.)

II. Who is Responsible for Animal Health and Welfare?
   a. 3 main parties involved:
      i. Owner (individual or multiple parties)
         1. Includes Manager/Operator of Facility
      ii. Veterinarian
         1. Additional health care and disease prevention
      iii. Government/Professional Association or Organization
         1. State/National
            a. US Poultry & Egg Association, State Poultry Associations, Farm Bureau Federation, National Poultry Improvement Plan, National Chicken Council, National Turkey Federation, United Egg Producers
         2. Federal
            a. United States Department of Agriculture
III. Current Issues in Poultry Industry
   a. Trends and technique issues:
      i. Induced molting
      ii. Bird Density and spacing (the amount of space available/bird).
      iii. Availability of food and water
      iv. Ventilation of housing
      v. Health Care
         1. Antibiotics
         2. Vaccinations
         3. Biosecurity
      vi. Beak and toe conditioning
      vii. Handling and treatment during transportation and harvesting.

**Activity/Teacher Notes:** Lead students in a review of information covered in Objective 1. Sample questions: Name three people responsible for the health and welfare of an animal. What are some of the trend causing animal welfare concerns in the poultry industry?

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**Objective 2:** Students will be able to list and describe state and national programs focused on ensuring proper poultry health and welfare.

**Anticipated Problem:** What state and national *regulations* exist to ensure the proper health and welfare of poultry?

*(Distribute Poultry Health and Welfare Student Note Sheet 2, refer to PowerPoint slides 7-13)*

I. National Regulations
   a. National Poultry Improvement Plan
      i. Main objective of this program is to effectively improve poultry and poultry products throughout the United States.
      ii. NPIP provides certification that poultry and poultry product shipments are disease free.
      iii. NPIP certifies that producers are free from the following *diseases*:
         1. Pullorum-Typhoid (P-T)
         2. Mycoplasma gallisepticum (MG)
         3. Mycoplasma Synoviae (MS)
         4. Mycoplasma Meleagridis (MM)
         5. Salmonella Enteritidis (SE)
         6. Avian Influenza (AI)

II. National Regulations
   a. United States Department of Agriculture (USDA)
      i. No Federal Laws or Acts establish guidelines for animal welfare for the poultry industry.
      ii. USDA recommends Critical Control Points for Animal Welfare.
         1. Hatcheries – Mechanical Chick Handling Devices
2. Poultry Grow out Farms
   a. Ammonia level not over 25ppm.
   b. Backup available for mechanical ventilation systems.
   c. Birds should be able to move at least 1 meter away as a person walks through them.
   d. Birds must be able to lie down in cages without having to be below or on top of another bird.

3. General Care
   a. No throwing or stepping on birds.
   b. Proper disposal of culled birds.

III. National Plans/Guidelines
   a. Egg Laying Hens
      i. In 2002, the United Egg Producers (UEP) adopted guidelines for animal welfare.
         1. Developed by an independent third party Scientific Advisory Committee.
         2. Animal Husbandry Guidelines for Egg Laying Flocks provides science-based guidelines for all aspects of egg production, including the following:
            a. Cage configuration
            b. Handling
            c. Beak trimming
            d. Transportation and slaughter
            e. Cage space per bird
            f. Molting
            g. Cage free guidelines
   b. Broiler Chickens
      i. The National Chicken Council (NCC) developed The *NCC Animal Welfare Guidelines and Audit Checklist*.
         1. To assist companies in ensuring and verifying a high level of welfare exists.
         2. Has been widely adopted within the industry.
         3. The physical well-being of animals is very important to the broiler chicken industry.
         4. Only healthy animals can be utilized for human food.
         5. Science Based guidelines cover every phase of the chicken's life and offers recommendations for proper treatment. Among other things, it includes chapters on:
            a. Education, training and planning
            b. Best practices on the farm
            c. Appropriate comfort and shelter
            d. Proper nutrition and feeding
            e. Catching and transportation
            f. Health care
            g. Processing
c. Turkeys
   i. The National Turkey Federation (NTF) developed Humane Production Guidelines in place in the industry since the late 1980s.
      1. The most recent guidelines identify control points in turkey production and processing, and provide recommendations to ensure animal welfare standards in the following areas:
         a. Farm safety and security
         b. Hatching
         c. Facilities and equipment
         d. Feed and water supply
         e. Maintenance
         f. Bird comfort
         g. Training

d. U. S. Poultry & Egg Association
   i. The world's largest and most active poultry organization.
      1. Formed in 1947, the association has affiliations in 27 states and member companies worldwide.
      2. Represent the entire industry as an “All Feather” association.
      3. Membership includes producers and processors of broilers, turkeys, ducks, eggs, and breeding stock, as well as allied companies.
      4. Provide assistance and guidance with all aspects of raising and processing poultry and eggs.

IV. State Poultry Associations
   a. Represent local producers with respect to local and state legislation.
   b. May establish standards and guidelines at the state level for broiler, turkey and egg operations.

Activity/Teacher Notes: Lead students in a review of information covered in Objective 2. Sample questions: What state organization provides guidelines for proper poultry health and welfare? What is the NPIP? What does it provide? What is the United Egg Producers (UEP)? What does it provide?

Objective 3: Students will be able to list and describe the facts and economic impact about current laws effecting animal welfare. Students will be able to source additional information regarding animal welfare.

Anticipated Problem: What are the current laws effecting poultry welfare? What are the welfare and economic effects of these laws? Where can I learn more about animal welfare?

(Distribute Poultry Health and Welfare Student Note Sheet 3, refer to PowerPoint slides 13-20)
I. Facts to Consider
   a. Poultry Industry produces sales of approximately $60.0 billion annually.
   b. Provides jobs for over 400,000 people.
   c. One of the largest agriculture industries in U.S.
   d. Only healthy, well taken care of birds will efficiently and cost effectively provide meat and produce eggs.

II. Current and Future Laws
   a. California Proposition 2 – Standards for Confining Farm Animals
      i. Passed on November 4th, 2008.
      ii. Adds chapter to California Health and Safety Code to prohibit the confinement of certain farm animals in a manner that does not allow them to turn around freely, lie down, stand up, and fully extend their limbs.
      iii. Covers three types of confinement: egg laying hen cages, veal crates, and sow gestation crates.
      iv. Farmers must implement new housing systems by January 1, 2015.

III. Positive or Negative Effects?
   a. What are the effects laws like these, passed by the general public, have on the well-being of the animals?
      i. Are they really the best for the health and welfare of the animals?
      ii. Are the chickens really better off?
      iii. What about the economy?
      iv. Who should be deciding what is best for the well-being of the animals?
         1. Veterinarians
         2. Farmers/Ranchers
         3. Urban Public

IV. Facts to Consider
   a. 99% of all California Egg Laying Hen farms are family owned and run.
   b. 19 million egg laying hens (99% of farms are family owned and run).
   c. California Farms produce 5 billion eggs annually.
   d. California farms produce 2/3 of the eggs consumed by Californians.
   e. United States – One of Safest Food Supplies in the World.
      i. Eggs shipped from other countries; maybe less safe, more disease.

V. Animal Welfare Effects of Prop 2
   a. In the early 1930’s, Egg Laying Hens were moved indoors into modern housing facilities with cage systems.
      i. Protected from outside predators.
      ii. Biosecure environment, safe from other animal/bird disease.
      iii. Easily heat and cool, comfortable environment.
      iv. Protected from outside parasites, disease.
      v. More labor efficient and sustainable.
      vi. Better for the environment.
      vii. Under this new law, these cage systems are no longer usable.

VI. Possible Economic Effects of Prop 2
   a. 95% of the California $648 million egg industry and accompanying economic output could be lost by 2015. (Source: UC Davis Economic Impact Study)
   b. Includes a significant loss of the three and half thousand jobs the egg industry employs.
c. Family farmers will have to build many more henhouses to produce same quantity of eggs.
d. Egg production costs will increase.

VII. Where can I Learn More About Animal Welfare?

a. www.ConversationsOnCare.com
   i. Where America's farmers have put together factual information about how they care for the animals they raise.
   ii. Simply put, they care because healthy animals mean healthy food for you and your family.
   iii. See the steps every American farmer and rancher takes to ensure that their animals receive the best possible care, seven days a week, 52 weeks a year.

b. www.animalagalliance.org
   i. The Alliance also works with animal producers to promote compliance with its “Principles of Animal Care.”
   ii. What are the Principles of Animal Care?
      1. To promote animal well-being and produce animal food products of the highest quality.
   iii. The Animal Agriculture Alliance includes individuals, companies, and organizations who are interested in helping consumers better understand the role animal agriculture plays in providing a safe, abundant food supply to a hungry world.

Activity/Teacher Notes: Lead students in a review of information covered in Objective 3. Sample questions: What Has the passing of Proposition 2 really provided for the better health and welfare of poultry? Are the modern cage systems better for animal welfare? What impact will future laws have on the California Poultry Industry?

Review/Summary. Focus the review of the lesson around the student learning objectives. Ask students to explain the content associated with each objective. Use their responses as the basis for determining any areas that need to be covered again.

Application. Application can involve students completing the Poultry Health and Welfare Public Education Project provided along with this lesson.

Evaluation. Evaluation should focus on student achievement of the objectives for the lesson. Various techniques can be used, such as a written test. A sample test is attached.

Answers to Sample Test:

Part One: Matching

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Poultry Health and Welfare Student Note Sheet 1

I. What is Animal ____________?
   a. The ______________ of abuse and exploitation of animals by humans by
      maintaining appropriate standards of accommodation, feeding and general care,
      the prevention and treatment of disease and the assurance of freedom from
      harassment, and unnecessary discomfort and pain. (According to Saunders
      Comprehensive Veterinary Dictionary, 2007.)

II. Who is _______________ for Animal Health and Welfare?
   a. ___ main parties involved:
      i. ______________ (Individual or Multiple Parties)
         1. Includes Manager/Operator of Facility
      ii. ______________
         1. Additional health care and disease prevention
      iii. ______________/Professional Association or Organization
         1. State
            a. California Poultry ________________
         2. Federal
            a. United States Department of ________________

III. Current _______________ in Poultry Industry
   a. Trends and techniques causing ________________:
      i. Induced ________________
         1. ________________ causing birds to start molting.
      ii. __________ density and spacing (The amount of space available/bird)
      iii. Availability of food and __________
      iv. Ventilation of ________________
      v. __________ Care
         1. Antibiotics
         2. ________________
         3. Biosecurity
      vi. Beak and toe ________________
      vii. ________________ and treatment during transportation and harvesting.
I. National ________________
   a. ______________ Poultry Improvement Plan
      i. Main objective of this program is to effectively ______________ poultry and
         poultry products throughout the United States.
      ii. NPIP provides ______________ that poultry and poultry product
          shipments are disease free.
      iii. NPIP certifies that producers are free from the following ______________:
           1. Pullorum-Typhoid (P-T)
           2. Mycoplasma gallisepticum (MG)
           3. Mycoplasma Synoviae (MS)
           4. Mycoplasma Meleagridis (MM)
           5. Salmonella Enteritidis (SE)
           6. ____________ Influenza (AI)

II. National Regulations
   a. United States Department of ________________ (USDA)
      i. _____ Federal Laws or Acts that establish guidelines for animal welfare for
         the poultry industry.
      ii. USDA recommends Critical __________ Points for Animal Welfare.
          1. ______________ - Mechanical Chick Handling Devices
          2. Poultry ____________ Farms
             a. Ammonia level not over ____ ppm
             b. ________ available for mechanical ventilation systems.
             c. Birds should be able to move at least ___ meter away as a
                person walks through them.
             d. Birds must be able to lie down in cages without having to be
                ________ or on top of another bird.
          3. ____________ Care
             a. ________ throwing or stomping on birds
             b. No throwing live birds in the ____________

III. National Plans/Guidelines
   a. Egg _________ Hens
      i. In 2002, the ________________ (UEP) adopted guidelines for animal
         welfare.
         1. Developed by an independent third party Scientific Advisory
            ____________.
         2. Animal Husbandry Guidelines for Egg Laying Flocks provides
            _________ guidelines for all aspects of egg production, including the
            following:
            - Cage configuration
            - Handling
            - Beak trimming
            - Transportation and slaughter
            - Cage space ____________
            - Molting
            - Cage free guidelines
b. Broiler Chickens
   i. The ___________ (NCC) developed The NCC Animal Welfare Guidelines and Audit Checklist.
      1. To assist companies in ensuring and verifying a high level of ______ exists.
      2. Has been widely adopted within the __________.
      3. The physical ___________ of animals is very important to the broiler chicken industry.
      4. Only ___________ animals can be utilized for human food.
      5. _______ Based guidelines cover every phase of the chicken's life and offers recommendations for proper treatment. Among other things, it includes chapters on:
         - Education, training and planning
         - Best practices on the farm
         - Appropriate ___________
         - Proper nutrition and feeding
         - ___________ and transportation
         - Health _______
         - Processing

   c. Turkeys
      i. The National __________ Federation (NTF) developed Humane Production Guidelines have been in place in the industry since the late 1980s.
      1. The most ___________ guidelines identify control points in turkey production and processing, and provide recommendations to ensure animal welfare standards in the following areas:
         - Farm _______ and security
         - Hatching
         - Facilities and equipment
         - ___________ supply
         - Maintenance
         - Bird _______
         - Training

   d. United States Poultry & Egg Association
      i. The world's __________ and most _______ poultry organization.
      1. Formed in 1947, the association has affiliations in 27 states and member companies __________.
      2. Represent the entire industry as an “__________” association.
      3. Membership includes producers and processors of broilers, turkeys, ducks, ________, and breeding stock, as well as allied companies.
      4. Provide ___________ and ___________ with all aspects of raising and marketing poultry and eggs.

IV. California Poultry __________
   a. All CPF member companies must comply with these standards and ___________
      i. CPF ___________ local California producers
   b. Established ___________ for the following areas:
      i. ___________ Broiler and Broiler Breeder Operations
      ii. Commercial Turkeys and Turkey ___________ Operations
      iii. Hatchery ___________
iv. Livehaul Catching and ___________ Crews  
v. ___________ Receiving, Uploading, Shackling, and Processing
I. _________ to Consider
   a. California Poultry Industry produces sales of an average of $____ billion annually
   b. Provides jobs for over _________ people
   c. One of the ____________ agriculture industries in California
   d. Only healthy, well taken care of birds will provide meat and produce eggs
      i. Sick or Dead Birds = _____ $ ... which is NO benefit to grower!!

II. ____________ Laws (Does anyone know what law was just passed in Nov. of 08?)
   a. California Proposition ___ - Standards for Confining Farm Animals
      i. Passed on November 4th, 2008
      ii. Adds ____________ to California Health and Safety Code to prohibit the
          confinement of certain farm animals in a manner that does not allow them to
          turn around freely, lie down, stand up, and fully extend their limbs.
      iii. Covers three types of confinement: egg _________ cages, veal crates, and
           sow gestation crates.
      iv. Farmers must implement new housing systems by January 1, ______.

III. Positive or ______________ Effects?
   a. What are the effects laws like these, passed by the __________ have on the well-
     being of the animals?
      i. Are they really the ______ for the health and welfare of the animals?
      ii. Are the chickens really __________ off?
      iii. What about the __________?
      iv. _______ should be deciding what is best for the well-being of the animals?
         1. Veterinarians
         2. Farmers/Ranchers
         3. Urban Public

IV. Facts to Consider
   a. _____% of all California Egg Laying Hen Farms are family owned and run
   b. 19 ______________ egg laying hens (99% of Farms Family owned and run)
   c. California Farms produce __ billion eggs annually
   d. California farms produce 2/3 of the eggs ____________ by Californians
   e. United States – One of __________ Food Supplies in the World
      i. Eggs shipped from other countries;
      4. less safe, _______ disease

V. Animal Welfare Effects of Prop 2
   a. In the early ______’s, Egg Laying Hens were moved indoors into modern housing
      facilities with cage systems.
      i. Protected from ___________predators
      ii. Bio-Secure environment, _______ from other animal/bird disease
      iii. Easily heat and cool, _____________ environment
      iv. ______________ from outside parasites, disease
      v. More labor efficient and sustainable
      vi. Better for the ____________
      vii. Under this new law, these cage systems are _____________usable.
VI. Possible ____________ Effects of Prop 2
   a. _____% of the California $648 million egg industry and accompanying economic output could be lost by 2015 (Source: UC Davis Economic Impact Study)
   b. Includes a significant _______ of the three and half thousand jobs the egg industry employs
   c. Family farmers will have to build eight to 16 times more henhouses
   d. Estimated ___% increase in egg production costs.

VII. Where can I Learn More About Animal Welfare?
   a. www.ConversationsOnCare.com
      i. Where America's farmers have put together _______ information about how they care for the animals they raise.
      ii. Simply put, they care because _______ animals mean healthy food for you and your family.
      iii. See the steps every _____________ and rancher takes to ensure that their animals receive the best possible care, seven days a week, 52 weeks a year.
   b. www.animalagalliance.org
      i. The Alliance also works with animal _______ to promote compliance with its ‘Principles of Animal Care.’
      ii. What are the ___________ of Animal Care?
         5. To promote animal __________ and produce animal food products of the highest quality.
      iii. The Animal Agriculture Alliance includes individuals, companies, and organizations who are interested in helping consumers better understand the role ________________ plays in providing a safe, abundant food supply to a hungry world.
Poultry Health and Welfare Public Education Project

Objective: Create an educational poster or presentation demonstrating the importance of proper animal health and welfare to the California Poultry Industry.

Tasks:
In groups determined by your instructor, you will create an educational poster or PowerPoint for a short presentation to the public emphasizing the importance of proper animal health and welfare to the poultry industry.

Your poster or PowerPoint presentation should include the following as specified by your teacher:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Resources:
• Information presented in this lesson will be useful in creating your poster or presentation.
• California Poultry Federation Video - http://www.youtube.com/watch?v=Qp34NHxvXXo
• Web resources
  o Always verify that the information you’re using is factual and not opinion based. Beware of .com web sites.
  o Web resources that might be helpful:
    ▪ California Poultry Federation
    ▪ United States Department of Agriculture
    ▪ National Chicken Council

Tips for Success:
• Remember, it’s an educational presentation for the public…. be informative and professional.
• Be creative and have fun.