Poultry Health and Welfare

Core Area: Animal Science

Unit: Poultry Industry

Lesson # 12: Poultry Health and Welfare

California CTE Standards (Agriculture)

D1.1 Understand appropriate space and location requirements for habitat, housing, feed, and water.

D1.2 Understand how to select habitat and housing conditions and materials (such as indoor and outdoor housing, fencing materials, air flow/ventilation, and shelters) to meet the needs of various animal species.

- **D6.1** Understand the signs of normal health in contrast to illness and disease.
- **D6.2** Understand the importance of animal behavior in diagnosing animal sickness and disease.
- **D6.3** Understand the common pathogens, vectors, and hosts that cause disease in animals.
- **D6.4** Understand prevention, control, and treatment practices related to pests and parasites.
- **D6.7** Understand the impacts on local, national, and global economies as well as to consumers and producers when animal diseases are not appropriately contained and eradicated.
- **D9.2** Understand public concerns for animal welfare in the context of housing, behavior, nutrition, transportation, disposal, and harvest.
- **D9.3** Understand federal and state animal welfare laws and regulations, such as those for abandoned and neglected animals, animal fighting, euthanasia, and medical research.
- **D9.4** Understand the regulations for humane transport and harvest of animals, such as those delineated by the U.S. Department of Agriculture, Food Safety and Inspection Service, and the Humane Methods of Slaughter Act.
- **D10.1** Know how to synthesize and implement optimum requirements for diet, genetics, habitat, and behavior in the production of large and small animals.
- **FS 4.1** Understand past, present, and future technological advances as they relate to a chosen pathway.
- **FS 4.3** Understand the influence of current and emerging technology on selected segments of the economy.
- **FS 8.1** Know major local, district, state, and federal regulatory agencies and entities that affect industry and how they enforce laws and regulations.
- **FS 11.0** Demonstration and Application.

California Academic Standards

English Language Arts, Listening and Speaking (Grades 9-10)

1.1 Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

- **1.7** Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
- **2.2a** Deliver expository presentations that marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.

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.
- 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:

- 1. Field, Thomas G., and Robert E. Taylor. <u>Scientific Farm Animal Production: An Introduction to Animal Science</u>. 8th ed. New Jersey: Pearson, 2004.
- 2. United State Department of Agriculture http://www.usda.gov
- 3. University of California, Davis Poultry page http://animalscience.ucdavis.edu/avian
- American Farm Bureau Federation, Conversations On Animal Care http://ConversationsOnCare.com
- 5. Animal Agriculture Aliance.org http://www.animalagalliance.org/
- Dr. Temple Grandin, World renowned Animal Behaviorist, Author, and Animal Scientist http://www.Grandin.com

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. Is 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/Country
 - a. California Poultry Federation, Farm Bureau Federation, National Poultry Improvement Plan, US Poultry & Egg, 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 techniques causing concern:
 - i. Induced molting
 - 1. Physically causing birds to start 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?

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.
 - 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 that 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 Grower 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.
- General Care
 - a. No throwing or stomping on birds.
 - b. No throwing live birds in the trash.

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.
 - 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.
 - 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 have been in place in the industry since the late 1980s.
 - 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. United States 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 marketing poultry and eggs.
- IV. California Poultry Federation
 - a. All CPF member companies must comply with these standards and guidelines.
 - i. CPF represents local California producers.
 - b. Established standards for the following areas:
 - i. Commercial Broiler and Broiler Breeder Operations
 - ii. Commercial Turkeys and Turkey Breeder Operations
 - iii. Hatchery Operations
 - iv. Livehaul Catching and Loading Crews
 - v. Live Receiving, Uploading, Shackling, and Processing

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. California Poultry Industry produces sales of an average of \$2.5 billion annually.
 - b. Provides jobs for over 25,000 people.
 - c. One of the largest agriculture industries in California.
 - d. Only healthy, well taken care of birds will provide meat and produce eggs.
 - i. Sick or Dead Birds = No \$... which is NO benefit to grower!!
- II. Future Laws (Does anyone know what law was just passed in Nov. of 2008?)
 - 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 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; 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 eight to 16 times more henhouses.
- d. Estimated 76% 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 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

В	1. Animal Welfare
D	2. Disease
E	3. Proposition
Α	4. Regulation
С	5. Veterinarian

Part Two: T / F

- 1. T 8. F 15. F
- 2. T 9. T 16. F
- 3. F 10. T 17. T
- 4. F 11. F 18. F
- 5. T 12. T 19. F
- 6. T 13. T 20. T
- 7. T 14. F 21. T

Poultry Health and Welfare Student Note Sheet 1

I.	What is Anim	al?
	a. The	of abuse and exploitation of animals by humans by
	mainta	nining appropriate standards of accommodation, feeding and general care,
		evention and treatment of disease and the assurance of freedom from
	•	sment, and unnecessary discomfort and pain. (According to Saunders
		rehensive Veterinary Dictionary, 2007.)
II.		for Animal Health and Welfare?
		ain parties involved:
	i.	(Individual or Multiple Parties)
		Includes Manager/Operator of Facility
	ii.	
		Additional health care and disease prevention
	iii.	/Professional Association or Organization
		1. State
		a. California Poultry
		2. Federal
		a. United States Department of
III.		in Poultry Industry
	a. Trends	s and techniques causing:
	i.	Induced
		1causing birds to start molting.
		density and spacing (The amount of space available/bird)
		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.

Poultry Health and Welfare Student Note Sheet 2

١.	National			
	a	F	 Poultry Improvement Plan	
	i.	Main objec	tive of this program is to effectively	poultry and
			ducts throughout the United States.	
	ii.	NPIP provi	des that poultry and pou	ıltry product
		shipments	are disease free.	
	iii.		es that producers are free from the following	:
			orum-Typhoid (P-T)	
			oplasma gallisepticum (MG)	
			oplasma Synoviae (MS)	
			oplasma Meleagridis (MM)	
			nonella Enteritidis (SE)	
п	National Poo		Influenza (AI)	
11.	National Reg		partment of (USDA)	١
			eral Laws or Acts that establish guidelines for	
		the poultry		animal wentere for
	ii.		mmends Critical Points for Anim	al Welfare.
			Mechanical Chick Handling D	
			try Farms	
			. Ammonia level not over ppm	
		b	available for mechanical ventil	lation systems.
		C	. Birds should be able to move at least n	neter away as a
			person walks through them.	
		C	. Birds must be able to lie down in cages with	nout having to be
			or on top of another bird.	
			Care	
			throwing or stomping on birds	
	National Dis		. No throwing live birds in the	-
III.	National Pla			
	a. ⊑yy_ i	H	ens e (UEP) adopted g	uidalinas far animal
	1.	welfare.		
			eloped by an independent third party Scientific	: Advisory
		1. 201		, ravioury
		2. Anin	 nal Husbandry Guidelines for Egg Laying Floc	ks provides
			guidelines for all aspects of egg produ	
		follo	wing:	
			- Cage configuration	
			- Handling	
			- Beak trimming	
			- Transportation and slaughter	
			- Cage space	
			- Molting	
			- Cage free guidelines	

i. The _	(NCC) developed The NCC Animal Welfare
	elines and Audit Checklist.
1.	To assist companies in ensuring and verifying a high level ofexists.
2	
2.	Has been widely adopted within the The physical of animals is very important to the broiler
3.	chicken industry
1	chicken industry. Only animals can be utilized for human food.
	Based guidelines cover every phase of the chicken's life and
5.	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
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c. Turkeys	
i. The N	lational Federation (NTF) developed Humane Production
	elines 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
	s Poultry & Egg Association
	orld's and most poultry organization.
	Formed in 1947, the association has affiliations in 27 states and
	member companies Represent the entire industry as an "" association.
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.	Provideandwith all aspects of raising and
	marketing poultry and eggs.
IV. California Poultry _	nber companies must comply with these standards and
a. All CPF men	hber companies must comply with these standards and
i. CPF_	local California producers
	for the following areas:
	Broiler and Broiler Breeder Operations
	nercial Turkeys and Turkey Operations
iii. Hatch	ery

b. Broiler Chickens

iν.	Livehaul Catching and _	Crews
٧.	Receiving,	Uploading, Shackling, and Processing

Poultry Health and Welfare Student Note Sheet 3

I.			to Consider
	a.	Califo	rnia Poultry Industry produces sales of an average of \$ billion annually
			des jobs for over people
			of the agriculture industries in California
	d.		nealthy, well taken care of birds will provide meat and produce eggs
			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.		rnia Proposition Standards for Confining Farm Animals
			Passed on November 4 th , 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.
			Farmers must implement new housing systems by January 1,
III.			Effects?
	a.		are the effects laws like these, passed by the have on the well-
			of the animals?
		l.	Are they really the for the health and welfare of the animals?
		II. 	Are the chickens really off? What about the ?
			What about the:
		IV.	should be deciding what is best for the well-being of the animals?
			1. Veterinarians
			2. Farmers/Ranchers
11.7	□ oto	to Con	3. Urban Public
IV.		to Con	
			of all California Egg Laying Hen Farms are family owned and run
			egg laying hens (99% of Farms Family owned and run)
	ر. ط	Califo	rnia Farms produce billion eggs annually rnia farms produce 2/3 of the eggs by Californians
	u.	Unito	d States – One of Food Supplies in the World
	€.		Eggs shipped from other countries;
		1.	4. less safe, disease
\/	Δnims	ام/۸/ اد	are Effects of Prop 2
٧.			early's, Egg Laying Hens were moved indoors into modern housing
	α.		es with cage systems.
			Protected frompredators
			Bio-Secure environment, from other animal/bird disease
			Easily heat and cool, environment
			from outside parasites, disease
			More labor efficient and sustainable
			Better for the
		vii.	Under this new law, these cage systems areusable.
			, , , , , , , , , , , , , , , , , , , ,

√I. Po	ssik	ole	Effects of Prop 2
	a.		6 of the California \$648 million egg industry and accompanying economic
			could be lost by 2015 (Source: UC Davis Economic Impact Study)
	b.		es a significant of the three and half thousand jobs the egg industry
		emplo	
	C.	Family	/ farmers will have to build eight to 16 times more henhouses
	d.	Estima	ated% increase in egg production costs.
√II.	Wł	nere ca	n 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.a	animalagalliance.org
			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.

Your poster or PowerPoint presentation should include the followin by your teacher:	g as specified
Tasks: In groups determined by your instructor, you will create an education PowerPoint for a short presentation to the public emphasizing the inproper animal health and welfare to the poultry industry.	•
Objective: Create an educational poster or presentation demonstration importance of proper animal health and welfare to the California Poster or presentation demonstration.	0
Poultry Health and Welfare Public Education	on Project

Date:

Period:

Resources:

Name:

- 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
 - Always verify that the information you're using is factual and not opinion based. Beware of .com web sites.
 - 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.