4-H Animal Science Lesson Plan Health and Diseases Level 1.2

Preventable Practices

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Goal (learning objective)

Youth will learn common precautions to take to prevent diseases with their animals and how to keep records of these measures.

Supplies

- Handout 1 "Treatment Record Worksheet for Beef" (enough copies for group
- Handout 2 "Treatment Record Worksheet for Sheep" (enough copies for group)
- Handout 3 "Treatment Record Worksheet for Swine" (enough copies for group)
- Handout 4 "Show Records Worksheet" (enough copies for group)
- Handout 5 "Treatment Records Worksheet Answer Key" (one copy for you)
- Paper and pencils (enough for group)

Pre-lesson preparation

- Read/review lesson and resources.
- Practice the activity.
- Make copies of the handouts listed above.

Lesson directions and outline

Share the following information with the youth:

The health of any animal or herd of animals should be a top priority for an animal owner. It is important to take precautionary measures to ensure your animal(s) do not get diseases. There are several ways that an animal owner can prevent or control health problems. It is also important to document activities that are done with any animal. Preventable Practices:

- Keep your animal's space and living conditions clean. Livestock will always perform better in a comfortable and clean area. Keeping their area clean will also help to keep animals from picking up organisms that cause disease. (Ask youth to name a couple diseases that can be prevented by keeping living areas clean. Ringworm or hoof/foot rot).
- Separate new animals on the farm from existing animals for at least 30 days. Also, separate animals you may have taken to a show from the animals you did not take to the show. Keeping animals that have been in contact with other livestock that are not on your farm is important for disease prevention. When you take an animal to a show it is in contact with many different animals that could harbour diseases that might be transmitted to your animals.
- Vaccinate animals as part of your health program. Many diseases can be prevented before they have a chance to cause harm to your animal using vaccinations. It is also extremely important to keep records of these vaccinations to manage the health of your animals. (Ask youth to name some diseases that veterinarians recommend vaccinating for, then name all examples listed here. Brucellosis, bovine viral diarrhea, tetanus, rabies, pneumonia, black leg.)
- Ensure animals are being fed a proper ration.
 When there is a lack of certain nutrients in a ration, some health problems may occur.
- Keep movement in and out of the animal's area to a minimum. Tracking mud and other debris from pen to pen with equipment or shoes may increase disease spread. It is also important to keep visitors and other animals out of the land your animal is on due to organisms being carried on skin, clothes,



feet, hair, manure, and hides.

- Use clean tools and equipment to clean or treat animals. This includes dehorning tools, tractors, needles, gloves and syringes. Diseases can easily be spread through blood and feces, so when using any tools that encounter either, make sure to replace or clean with disinfectant before use on another animal.
- Make sure equipment like tractors, pitch forks, apple forks, feed scoops, feed pans and water buckets are cleaned regularly. Diseases can easily be spread through blood and feces, so when using any qools or equipment that encounter either spend the time to make sure things are clean.
- Maintain records. From the day you receive your animal to the day it leaves your care, you should maintain feed and health records of your animal. This is the very best way to keep track of expenses, vaccinations, and well-being of your animal. Records are also important if the plan is to sell your animal to a buyer and they need to know the history of the animal before purchase.

Conducting the activity (DO) Activity 1

- 1. Make a list of ways to limit outside contact in and around your animal's area.
- 2. Make a list of ways to keep tools and equipment used on and around animals clean.
- 3. Share your ideas with the group.

Activity 2

- Have youth complete each treatment activity (Handouts 1, 2, and 3) IM= Intramuscular - in the muscle, SQ = Subcutaneous - below the skin, not in the muscle.
- 2. Have youth complete Handout 4, at least one show they would take their animal to.
- 3. Review answers with the group, go through correct answers using the answer key (Handout 5).

What did we learn? (REFLECT)

- Ask: What is one new way you learned about to control disease spread in your herd?
- Ask: What are the benefits of using preventable practices with your animals?
- Ask: Why is keeping records crucial for more than just medications and treatments?

Why is that important? (APPLY)

- Ask: Why is it important to keep records to maintain your health?
- Ask: What benefits do you see by using preventable practices for your animals?
- Ask: How does preventable practices and recordkeeping impact consumers? How does it make you feel as a producer?

Resources

- Ohio State University Extension. (2011). Health Maintenance. *Beef resource handbook* (pages 5-1 through 5-6 and 12-1 through 12-15).
- Ohio State University Extension. (2008). Herd Management and Diseases. *Goat resource handbook* (pages 85-93).
- Ohio State University Extension. (2011). Health Maintenance and Diseases. *Sheep resource handbook for market and breeding projects* (pages 67-72).
- Ohio State University Extension. (2000). Diseases & Their Control. *Swine resource handbook for market and breeding projects* (pages 9-1 through 9-14 and 24-5 through 24-17).

Quality Assurance Medication Label/Treatment Record Activity

"Ben," #123, the Hereford steer you plan to exhibit at the fair next month, is lame in the left front leg. Today the veterinarian has diagnosed the steer's problem as foot rot and gave "Ben" an initial treatment at the time of the examination. The veterinarian has left additional, prescribed medication with you to continue the treatment. The directions on the medication instruct you to give the steer 1cc per 100 pounds body weight, once daily, for 3 days. You are to begin tomorrow and to give it by intramuscular injection. Your steer weighs 1,000 pounds. Remember, your veterinarian treated the steer today, April 3, 20XX, around 5:00 p.m. and you will treat it three more days as directed.

The hold (withdrawal) time on this product is 14 days.

	April 20XX										
S	S M T W R F										
			1	2	3	4					
5	6	7	8	9	10	11					
12	13	14	15	16	17	18					
19					24	25					
26	27	28	29	30							

Bottle Label

.V.М. е. 3000	Owner: Jennifer Wilson Date: April 3, 20XX
D.V.M. Ive. 13000 55	Animal ID: Hereford #123 - Ben Indications: Foot Rot
ds, D.1 ity Ave 0H 43(.5555	Directions: 1cc per 100 lbs. body weight, IM once daily, for 3 days
2	Precaution: Avoid the muscle tissues of high carcass value
Едwaı) Qual town, .4.555	Warning: >>> Use of this drug must be discontinued for 14 days
	before slaughter or market for food <<<
Emily 10 Home 6.	Product/Active Ingredient(s): Hydrocillin
	Expiration Date: September 30, 20XX

Treatment Record

			for Vacc	ines, Drugs/Medica	tions, and Medicate	ed Feed		
Event (date/time)	Animal Identification	Condition	Estimated Weight	Treatment Given (Medication, amount, route of administration)	(who performed	Withdrawl (meat/milk/eggs, days/hours)	Result (recovered, sold, died)	Withdrawl Completed Date

GPP #2.

Youth Quality Assurance Medicine Label/Treatment Record Activity Sheet (Sheep)

Today is **May 15, 20XX** Your name is **Lynn Monroe**. Your Suffolk market lamb "Elmo" (**ear tag #3159**) that you are planning to take to the county fair July 2–7, 20XX is lame on the left front leg. When you examine it, you find the foot smells bad and the hoof wall is separating from the sole. These findings lead you to believe the lamb has **foot rot**. The veterinarian who regularly cares for your animals is **Angela Adams, D.V.M**. She examined the animal and gave you (prescribed) the bottle of medication listed below and instructed you to give the treatment today at 3:00 p.m.. Your lamb weighs about 100 pounds.

Using the information on the label of the bottle, please fill in ALL of the information in the first row of the treatment chart below.

BOTTLE LABEL

ANGELA ADAMS, 100 Quality Ave Hometown, OH 614-555-505	enue 43200
OWNER: _Lynn Monroe_	DATE May 15, 20XX
ANIMAL ID: Lamb #3159	INDICATIONS: Foot rot
DIRECTIONS: Give 5 ml (cc) intramuscularly on May 1	5.20XX.
PRECAUTION: Avoid the muscle tissues of high carca	ss value.
WARNING: USE OF THIS DRUG MUST BE DISCON	TINUED FOR 10 days BEFORE
SLAUGHTER OR MARKET FOR FOOD.	
PRODUCT/ACTIVE INGREDIENT(S): Biomycin	20
EXPIRATION DATE: August 15, 20XX	

	MAY 20XX										
		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							

	Treatment Record for Vaccines, Drugs/Medications, and Medicated Feed									
Animal Identification Condition (modigation amount (who performed (meat/milk/aggs (recovered sold								Withdrawl Completed Date		

Quality Assurance Medication Label/Treatment Record Activity

Today is July 12, 20XX, and your name is Jenny Jones. Two days ago the market hog, "Spot" (a 200 lb. blue-butt barrow with the ear notch 36–7), you have been raising since April started having breathing difficulty. Yesterday, Spot failed to eat and would not move around unless forced to do so. At your request, Dr. Bruce E. Losis, the local veterinarian, has examined your hog and diagnosed his problem as pneumonia. He administered medications at that time and recorded the treatment on your chart (not shown). He also left you with more medicine for you to give today. You have just finished giving the follow-up medication as the veterinarian had directed.

	July 20XX									
S	Μ	Т	W	R	F	S				
		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						

Bottle Label

.1 0	Owner: Jenny Jones	Date: July 11, 20XX			
V.M. ~e.)	Animal ID: Hog #36-7	Indications: Pneumonia			
E Losis, D. Quality Av own, OH 4 4.555.5050	Directions: give 5 ml (cc) subcut	aneously on July 12			
	Precaution: Use care in injections to avoid infections				
	Warning: >>>Use of this drug must be discontinued for 7 days before slaughter or market for food<<<				
Bruce] 100 Hometo 61	Product/Active Ingredient(s): Biomycin				
Br Hc	Expiration Date: August 01, 20XX				

	Treatment Record for Vaccines, Drugs/Medications, and Medicated Feed									
Event (date and time) Animal Identification Condition Estimated Weight Treatment Given (mediaciton, amount, (who performed Name of Person (mediaciton, amount, Name of Person						····	Result (recovered, sold, died)	Withdrawl Completed Date		

HEALTH AND DISEASES: PREVENTABLE PRACTICES – HANDOUT 4

	Show Records for Activies and Shows that your animals have attended										
	Event (date and time)	Animal Identification	Show	City, State	r animals have atten Contact with Animals? (yes/no)	Travel Time	Separation Time (time needed to be separated from the rest of herd)	Completed Separation Time			
Beef											
Lamb											
Swine											

HEALTH AND DISEASES: PREVENTABLE PRACTICES – HANDOUT 5 Answer Keys

Beef:

	Treatment Record										
Treatment (date and time)	Animal Identification (name, species, sex, ID number, description)	Condition being treated	Estimated weight	Treatment given (medication dispensed, amount and route of administration) >>> also include product lot/ serial number if available <<<	Person who gave treatment (print name)	Instructed (meat/milk/egg) Withdrawal (days/hours)	Results (recovered, sold, or died)	Withdrawal Completed (date and time)			
Apr 03, 'XX @ 5:00 p.m.	Ben•Beef Steer #123 Hereford	Foot Rot	1,000 lbs.	Hydrocillin, 10cc IM	Emily Edwards	14 days meat	X	04-17-XX 5:00 p.m.			
Apr 04, 'XX @ 5:00 p.m.	Ben•Beef Steer #123 Hereford	Foot Rot	1,000 lbs.	Hydrocillin, 10cc IM	Roger Wilson	14 days meat	X	04-18-XX 5:00 p.m.			
Apr 05, 'XX @ 5:00 p.m.	Ben•Beef Steer #123 Hereford	Foot Rot	1,000 lbs.	Hydrocillin, 10cc IM	Roger Wilson	14 days meat	X	04-19-XX 5:00 p.m.			
Apr 06, 'XX @ 5:00 p.m.	Ben • Beef Steer #123 Hereford	Foot Rot	1,000 lbs.	Hydrocillin, 10cc IM	Roger Wilson	14 days meat	X	04-20-XX 5:00 p.m.			

Lamb:

Treatment Date & Time	Animal ID • Name • Species • ID Number • Description	Condition Being Treated	Estimated Weight	Treatment Given (Medication Dispensed, Amount and Route of Administration) Also include product lot/serial # if available	Print Name of Person Who Gave Treatment	Instructed Milk/Meat Withdrawal	Results/ Comments (recovered, sold, or died)	Date & Time Withdrawal Complete
May 15, 2001 3:00 p.m.	Elmo Mkt lamb #3159 Suffolk	Foot rot	100 lbs.	Biomycin 5 ml IM	Lynn Monroe	10 days Meat	Х	May 25, 2001- 3:00 p.m.

Swine:

Treatment Record

for Vaccines, Drugs/Medications, and Medicated Feeds

July 12, 'XX @ 2:00 p.m.	Spot • Market Hog #36-7 • Barrow Blue-Butt	Pneumonia	200 lbs.	Biomycin 5 ml (cc) SQ	Jenny Jones	7 days meat	X	07-19-XX 2:00 p.m.
Treatment (date and time)	Animal Identification (name, species, sex, ID number, description)	Condition being treated	Estimated ` weight	Treatment given (medication dispensed, amount and route of administration also include product lot/serial number if available)	Person who gave treatment (print name)	Instructed (meat/milk/egg) Withdrawal (days/hours)	Results (recovered, sold, or died)	Withdrawal Completed (date and time)