

Assuring Quality: A program for youth livestock producers

Daily Care and Management

Activity for 2008

Daily Care and Management Activity 4: Proper Medication Labels

Resources Needed:

- Drinking cups**
- Bottles**
- Paper**
- Pencils**

Before the Meeting:

- 1. Fill six empty bottles with flat soda, water, lemon water, strong tea, regular tea, stale water, regular soda, and kool-aid**
- 2. Have the water and regular tea with labels that are easy to read, three labels smeared and hard to read, and three bottles without a label**

To Complete the Activity:

- 1. Give each student a piece of paper, pencil, and 8 drinking cups. Tell them to write the numbers 1-8 on the paper.**
- 2. Have the students pour a little liquid from the bottle into the cup and take a drink. Tell them to write down on the paper what they think they are drinking.**
- 3. Have the youth complete the worksheet or read the questions out loud.**

Questions:

- 1. Did you feel comfortable drinking the liquid even though you might not have known what it was? Why?**
- 2. What clues did you use to help you identify some of the liquids?**
- 3. Using the clues, how sure were you of the identity of the liquid?**
- 4. What could be done different so you know what you are drinking?**
- 5. Why were some of the drinks easier to identify than others?**
- 6. Why is proper labeling of medication important?**
- 7. What is the first thing you'll look at on a medicine bottle?**

Proper Medication Labels—Student Worksheet

1. Did you feel comfortable drinking the liquid even though you might not have known what it was? Why?
2. What clues did you use to help you identify some of the liquids?
3. Using the clues, how sure were you of the identify of the liquid?
4. What could be done different so you know what you were drinking?
5. Why were some of the drinks easier to identify than others?
6. Why is proper labeling of medication important?
7. What is the first thing you'll look at on a medicine bottle?

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Daily Care and Management Activities

Activity for 2008

Daily Care and Management Activity 1: Caring for your Animal

Resources Needed:

- Copies of the following worksheet**
- Pencils**

Procedure:

Have youth complete the following worksheet. This will get them thinking about their animals and the care they provide to them.

Questions:

- 1. What species of animals do you have?**
- 2. Who is your current vet? How often do you call your vet?**
- 3. Who watches your animals when you are away? How do they know what to do?**
- 4. What do you do to tell animals apart?**
- 5. What kind of record keeping system do you have?**
- 6. What type of shelter and bedding do you use for your animals?**
- 7. Where is the water located and how much do they get each day?**
- 8. Where is the medicine?**
- 9. Where do you give injections on your animal?**
- 10. What practices do you use when handling your animal?**
- 11. What items would you like to learn more about?**
- 12. What is one of your livestock goals for next year?**

Have each student list one or two items they would like to learn more about and how they will start to learn about them.

Have a couple of students say one of their goal and what they will do to accomplish the goal.

Tell the students, these are some of the things you will be learning about through the quality assurance program. While there are some practices that won't be done until they are older, these are all practices that must be done to ensure the safety of the food product for the consumer. You are the owner of the animal so you must take responsibility for the care of the animal.

Caring for your Animals—Student Worksheet

- 1. What species of animal do you have?**
- 2. Who is your vet? How often do you talk to your vet?**
- 3. Who cares for your animals when you are away? How do they know what to do?**
- 4. What do you do to tell your animals apart?**
- 5. What kind of record keeping system do you use?**
- 6. What type of shelter and bedding do you use for your animals?**
- 7. Where is the water located and how much do they get everyday?**
- 8. Where is the medicine?**
- 9. Where do you give injections in your animal?**
- 10. What practices do you use when handling your animal?**
- 11. What would you like to learn more about?**
- 12. What is one of your livestock goals for next year?**

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Daily Care and Management Activities

Activity for 2008

Daily Care and Management Activity 2: Feeding, Water, and Space

Resources Needed:

Rice Krispie Treats for everyone (enough for seconds)

Spatula

Plates or Napkins

Drinking cups

Beverage of choice- enough for each youth plus extra

Masking Tape

Before the Meeting:

1. Make the rice krispie treat and cut into small square so the youth will want more
2. Fill the drinking cups with the beverage- if using larger cups, don't fill too full so some ask for more
3. Mark off 3 small squares in the room so when the youth get the food they all have to stand in the square. Another square will be so all the youth have to stand in there when getting their beverage. Another small square is for them to all start eating in.

To Complete the Activity:

1. Have all the youth stand in the square with the treats and get a treat.
2. Have all the youth get a beverage while standing in the square.
3. Have all the youth stand in the other square and try to eat and drink. After a couple of minutes, they can go back to their seats and continue on.
4. Tell the students they can get more food and water, but they need to ask. When they ask tell them to wait a little bit.
5. After completing the daily care and management slide on water and housing let students get more food and water if they wish, and discuss the following questions with the youth.

Questions:

1. How did you feel with everyone in the small space trying to get food?
2. How did you feel when everyone was trying to get drinks at the same time?
3. How did you feel when you were trying to eat and have your space?

4. How many of your still wanted more food and water?

5. Why do your animals need plenty of space to eat?

This ensures all animals are eating, they are getting the proper amount of feed, and they are getting the necessary nutrition.

6. How does the amount of space for eating affect the animal?

Without the proper amount of space, some animals may not eat or they may eat when there is room. They may not be getting the best nutrition, and you will start to see a decline in the herd due to decrease nutrition and lack of feeding space.

7. What is the importance of water to your animals?

Water is considered the most important nutrient. It is important to regulate body temperature, distribute other nutrients throughout the body, carry waste products out, and lubricate joints.

Animals will die more quickly without water than they will if any other nutrients are withheld. Usually animals can only survive 1-3 days without water.

8. Do you provide a set amount of water each day or is there a continuous supply for the animals?

9. What are the advantages and disadvantages of a set amount of water?

Advantages: Can tell if the animal is drinking more or less than usual, forces you to check on the animal, the water is always clean.

Disadvantages: More work, have to check on the animal more during periods of hot weather.

10. What are the advantages and disadvantages of a continuous supply of water?

Advantages: Animal always has water-they never run out.

Disadvantages: Water may not get cleaned as often, water may be less desirable.

11. What species needs the most water? Least?

Cattle: They need 10-14 gallons a day. Least: Swine and sheep-they need 1.5-3.0 gallons a day.

Rule of thumb: 1 gallon of water daily for every 100 pounds of body weight

12. What factors change the amount of water needed?

The age and weight of the animal. The environment.

***In hot, humid weather conditions, animals may consume **double** the amount of water.**

13. Why do animals need their space?

Space allows the animal to stand, lie down, feel comfortable in the environment and prevents overcrowding. Overcrowding can increase competition and can also increase the rate disease is spreading through the herd.

14. What determines how much space each animal needs?

Age, body size, weight, species of animal

15. What can be done to improve your current facilities for food, water, and space?

Student Worksheet Activity 2:

- 1. How did you feel with everyone in the small space trying to get food?**
- 2. How did you feel when everyone was trying to get drinks at the same time?**
- 3. How did you feel when you were trying to eat and have your space?**
- 4. How many of you still wanted more food and water?**
- 5. Why do your animals need plenty of space to eat?**
- 6. How does the amount of space for eating affect the animal?**
- 7. What is the importance of water to your animals?**
- 8. Do you provide a set amount of water each day or is there a continuous supply for the animals?**
- 9. What are the advantages and disadvantages of a set amount of water?**
- 10. What are the advantages and disadvantages of a continuous supply of water?**
- 11. What species needs the most water? Least?**

12. What factors change the amount of water needed?

13. Why do animals need their space?

14. What determines how much space each animal needs?

15. What can be done to improve your current facilities for food, water, and space?

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Daily Care and Management

Activity for 2008

Daily Care and Management Activity 2: Feed Mixing

Resources Needed:

M&Ms	Mike & Ikes
Peanuts	Raisins
Chocolate Chips	Pretzels
Worksheet	Bowls
Pencils	Napkins

Before the Meeting:

- 1. Put each of the food items in bowls.**
- 2. Make copies of the worksheet. One for each youth.**

To Complete the Activity:

- 1. Divide the youth into two groups.**
- 2. Give each group a copy of the “recipe” for the ration.**
- 3. Have each group complete the “recipe” the best they can.**
- 4. Each youth can get some candy and complete the worksheet.**
- 5. Discuss the questions after each youth has completed the worksheet.**

Questions:

- 1. Is each recipe evenly distributed?**
- 2. Why is distribution important?**
- 3. Were ingredients mixed accurately? Why?**
- 4. What difference does mixing accurately make?**
- 5. What other ways are there to mix rations?**
- 6. Why is mixing rations important?**

“Recipe” One:

Small handful of raisins

Lots M&Ms

5- Peanuts

Mix everything together in the specified amount of each ingredient.

Couple handfuls of chocolate chips

15- Mike & Ikes

Small bag of pretzels

“Recipe” Two:

1 cup raisins

1 cup M&Ms

1 cup Peanuts

Mix everything together in the specified amount of each ingredient.

1 cup chocolate chips

$\frac{1}{4}$ cup Mike & Ikes

$\frac{1}{2}$ cup Pretzels

Student Worksheet Questions:

1. Is each recipe evenly distributed?
2. Why is distribution important?
3. Were ingredients mixed accurately? Why?
4. What difference does mixing accurately make?
5. What other ways are there to mix ratios?
6. Why is mixing ratios important?

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Daily Care and Management Activities

Swine Identification

Daily Care and Management Activity 3: Identification- Swine Focus
(Complete either the swine focus or non-swine focus)

Resources needed:

Copies of the following pig faces

Pencils

Ear notcher (optional)

Procedure:

- A. Provide each youth with one or more copies of the pig face.
- B. Depending on the size of the group provide each youth with a different ear notch number, or divide the group into smaller sections, with each section receiving an ear notch number.
- C. Have youth draw the ear notch number on the pig face.
- D. Optional: Demonstrate how to use the actual ear notcher. Have youth volunteer to notch their pig's (paper) ears.
- E. Discuss the following questions:
 1. What do the right and left ear signify? Why are there higher numbers that can be used on one ear than the other?
Left - pig number; Right - litter number.
The right ear can have higher numbers since there is an unlimited number of litter numbers, based only on the number of sows a producer has. In contrast, a litter will not usually be over 15 or 16 pigs, so there is not a need for numbers higher than 1, 3 and 9.
 2. Is eartnotching a temporary or permanent form of ID?
Permanent
 3. What are other forms of permanent ID?
Branding, tattoos
 4. What are some methods of ID that are not permanent?
Ear tags are most common, also brisket tags, ankle bands
 5. Why is it important to have animals identified?
Proof of ownership, good management (match calves up with cows, keep records on weaning weights, etc), record medications

6. Why should animals that receive a medication be identified?

So you know if there is a chance of any medication being left in the animals tissues that could result in a residue in the carcass or the milk, also you can keep track of how long you've been treating it, what different things you've treated it for, whether it keeps having the same problems over again.

Assuring Quality: A guide for youth livestock producers

Daily Care and Management

Activity for 2008

Daily Care and Management: Activity 3-Non-Swine focus

Resources needed:

Cardboard

Ear tattooer and ink

A. Ask youth: What animals are tattooed?

Beef heifers for 4-H, sometimes dairy, dairy goats, sheep. Registered animals are often tattooed, depends on requirements of specific breed.

B. Demonstrate how to use a tattoo pliers on a piece of cardboard.

C. Depending on size of group and how many tattoo pliers are available, you may divide youth into smaller groups with an adult or older youth with each group and have the youth tattoo the cardboard; or simply ask for a couple of volunteers that would like to try doing the tattooing.

D. Discuss the following questions:

1. Is tattooing a temporary or permanent form of ID?

Permanent

2. What are other forms of permanent ID?

Branding, earnotching

3. What are some methods of ID that are not permanent?

Ear tags are most common, also brisket tags, ankle bands

4. Why is it important to have animals identified?

Proof of ownership, good management (match calves up with cows, keep records on weaning weights, breed registration records, etc), record medications

5. Why should animals that receive a medication be identified?

So you know if there is a chance of any medication being left in the animals tissues that could result in a residue in the carcass or the milk, also you can keep track of

how long you've been treating it, what different things you've treated it for, whether it keeps having the same problems over again.

6. Are there any disadvantages to using tattoos as a form of identification, especially for uses such as recording medications?

They are hard to read, need to restrain animals to read them, even then they are sometimes difficult to read. In comparison, ear tags are usually fairly easy to read.

7. So why are tattoos used then?

Because they are permanent, they don't get lost and can't be changed.

Assuring Quality: A guide for youth livestock producers

Daily Care and Management

Activity for 2008

Daily Care and Management—Dairy Cow Activity: Proper Milking Procedures

Resources Needed:

- Mud**
- Bucket of Water**
- Paper Towels**

Before the Meeting:

- 1. Get two to three buckets of water and small pail of mud.**
- 2. Get paper towels, rag, sponge, and milking units together**

Background information:

Milking time is harvest time, the time to reap the return from your feeding and management investments. Proper milking procedures play a major role in maximizing this harvest and assuring the highest quality dairy products for consumers.

Understanding the cow's milk let-down is the first step in proper milking; the timing of milking procedures is built around the let-down time. Proper sanitary techniques are also crucial to milk quantity and quality. Finally, building these procedures into a workable, regular routine assures the same excellent harvest every milking, in the shortest amount of time. A good milking routine uses the producer's labor efficiently while yielding large quantities of quality milk.

During the meeting:

- 1. Divide the youth into several groups if numbers allow.**
- 2. Have each group designate one person as the "cow", who then gets his or her hands dirty. The fingers represent the teats, and**

- the rest of the hand is the udder. Allow hands to dry with the mud before proceeding.
3. Have each person in the group clean the teats. Get all the mud off with water and a sponge, and dry with a paper towel. Explain to the group that it's necessary to clean the teats before milking for sanitation and to keep any dirt and mud out of the milk.
 4. Demonstrate "stripping" to the group and have each person try it. Stripping gives the worker the opportunity to look at the milk for discoloration and also mastitis. Remember, some mastitis can be seen with the naked eye. Any cows that have mastitis should be treated and the milk should be dumped because it affects the quality of all the milk in the bulk tank.
 5. Show a video on milking demonstration.
 6. Discuss the questions as a group.

Dairy Cow—Milking Techniques Student Worksheet

1. Why is understanding the cow so important?

You will be able to figure out when the proper milking time is and the proper let-down. The cow will produce better when the timing and understanding are right.

2. How does premilking sanitation affect milk quantity and quality and the time it takes to milk?

The premilking procedures prepare the cow for milk let-down. The sanitation keeps that cow's milk from getting contaminated and getting in with the other cows' milk.

3. Why is it important to have a good milking routine?

A good routine lets the cow know when they are going to get milked and allows milk let-down. A routine also prevents contamination and keeps the quality and quantity up.

4. Why is it important to have cows clean before milking?

Clean cows mean clean milk. Dirt and other particles can't enter the milk keeping the lines and the tank clean. A little bit of dirt or mud can ruin the whole batch of milk.

- 5. Can you think of other examples at home where cleanliness and routines make things easier, faster, and better?**

Assuring Quality: A guide for youth livestock producers

Activity for 2008

Daily Care and Management: Dairy Activity 2: Residues

Background Information (Avoid reading to participants):

Consumers want to know the products they buy at the grocery store are free of harmful residues. So avoiding such residues in animals raised for food is an important part of a Total Quality Management program.

A residue is substance that remains in an animal's body tissues after the animals has been exposed to that substance. The substance can enter the animal's body as a feed or water additive, as an injection or external treatment, or simply by accident. Some substances leave an animal's body tissues a few hours after the exposure, but others many remain several months; some may never entirely leave certain tissues.

To protect our food supply, the FDA establishes and enforces rules about acceptable levels of particular residues. For some substances, no amount of residue is acceptable. The FDA also establishes withdrawal times for products to ensure that unacceptable residues are not in a product when it is marketed. It is illegal to sell animals or animals products that contain residues exceeding FDA limits.

Random tests at slaughter or processing facilities indicate which food producers are not following the regulations. If illegal levels of a residue are found in the tissue of a slaughtered animals or in milk or eggs, the USDA will require a facility not accept animals or products from the noncomplying producer until tests indicate products from the at producer are safe. If milk with unacceptable residue levels contaminates milk, the noncomplying producer is responsible for the cost of all the adulterated milk. The loss of a market can cause substantial economic loss for the producer. In addition, legal actions can be taken against those who don not follow the guidelines.

Perhaps the worst consequence of violating the FDA guidelines is loss of consumer confidence in food products from animals. Consumers are increasingly health conscious. They demand that their food be lean and wholesome. They fear hat people with allergic tendencies may have severe allergic reactions if traces of medications are present in the meat they eat. Although such reactions are not likely, it is important that residue in animal products be kept below FDA limits.

Resources Needed:

Clear Glasses (enough for each group of two or three to have one glass)

Chocolate Milk

Pencils

Paper

Water

To Complete the Activity:

- 1. Divide youth into groups of two or three. Give each group one clear glass filled with chocolate milk, pencils, and paper.**
- 2. Each group should designate someone to write and someone to drink the milk.**
- 3. Have someone from each group drink the milk and fill the glass with water.**
- 4. Record the observations.**
- 5. Dump the water and refill the glass with water.**
- 6. Record the observations.**
- 7. Continue dumping the water and refilling the glass with water until the glass appears clear.**

Discussion Questions:

- 1. Why was the water cloudy after the milk was drank?
Some of the milk was still in the glass (Explain to the youth what residues are and explain some of the background information)**
- 2. After a period of time, the water became clear. Why?**
- 3. What practices can be done to avoid residues?**
- 4. What are consequences of residues?**
- 5. Why do some residues occur?**
- 6. As a dairy producer, where do you see some residues?
Mastitis can be thought of as a residue. A cow with mastitis can contaminate all the milk from the cows on your farm. It can also contaminate other producers milk also during delivery to the plant.**



Assuring Quality: A guide for youth livestock producers— Animal Health Activity

Dairy Cow Health Activity

Medications and Animal Health Products: Giving Injections

Background information (Avoid reading to participants):
Medications can be given to livestock in several different ways. Your vet not only helps you select the most appropriate medications but also the best way to administer.

Medication may be given orally, by IV, or injection.

Oral medications are given by mouth, either directly or mixed with feed or water. Mixing with food or water is a convenient way to medicate groups of animals. Medicated feed usually is used when the medication needs to be given over a period of time such as for disease prevention or growth. Water is a way to treat sick animals who are off their feed. The concentration of medicine in water is usually higher than the concentration in feed.

Injections are given with a syringe and needle. Although usually more expensive than other types of medications, injections are often the best treatment when immediate and rapid recovery is needed, or for immunization. Read the labels on injectable medications to learn where they should be given. IM injections are put into the muscle tissue and SQ injections are given just under the skin. IV injections are deposited directly into the bloodstream and require more skill to administer.

Resources Needed:

- 1. Bananas and Oranges (1 for every two or three youth)-older oranges and firm bananas work better**
- 2. Cotton balls soaked in rubbing alcohol**
- 3. Towels or newspaper to cover the table for cleanup**
- 4. Sharp knife (for leaders only)**

5. Additional adult supervision
6. 10 Syringes (3cc)
7. 10 Needles (18 X $\frac{3}{4}$)
8. 2 small (10 cc) rubber top bottles
9. Food coloring

Procedure:

1. Demonstrate IM and SQ injections, including how to properly load a syringe. Steps include:
 - a. Obtain a sterilized syringe.
 - b. Swab the rubber plug on the top of the bottle with a cotton ball soaked in alcohol or other appropriate disinfectant.
 - c. Pull the syringe back to fill it with about the same amount, or slightly less, air as the dose of medicine.
 - d. Push the needle through the rubber plug on the bottle and push the plunger in, forcing air into the bottle.
 - e. Slowly draw the plunger back, drawing the medicine into the syringe. Fill to the correct dosage. Be sure no air bubbles are in the syringe.
 - f. Withdraw the needle from the bottle.
 - g. For an IM injection, use an orange or banana and insert the needle straight into the fruit, perpendicular to the outer surface. Often, bananas provide a more visual distribution of the “medicine”, as there is greater contrast in color with the banana flesh.
 - h. **Slowly** push the plunger in. Leave the needle in place for at least 2 seconds after all the “medicine” has been injected. This helps reduce leakback.
 - i. For a SQ injection, a banana works best for the demonstration. Insert the needle at an angle so that is just goes under the peel and not into the “meat” of the fruit.
 - j. Remove needle from fruit and disinfect.
2. Have 4-H'ers give an IM injection in the banana or orange. Only use .5 cc of colored water or LESS to inject. Usually there is a maximum of 2-3 injections per orange, possibly 4-5 per banana (depending on how small of pieces you cut them into in advance) before the water starts leaking back out right

away. 4-H'ers don't need to go through the disinfecting process, but should be aware that this is proper procedure. Cut open the oranges so youth can see how the product is distributed throughout the fruit.

3. Next, have the youth give a SQ injection.
4. Again, cut open the fruit. The product should be between the fruit and the peel, not distributed throughout.
5. Discuss the questions.

Discussion Questions:

1. Which type of injection was easier to do? Why?

IM is usually easier because you just push the needle straight in, as compared to SQ, where you have to be concerned about not getting in too deep, but adequately under the skin.

2. Would it be harder or easier to get the injection in the right place on an animal?

Animals are harder because they don't stand still. It is probably easier to determine where the skin ends because the skin will slide around over the tissues.

3. If IM is easier to give, why isn't it the preferred method?

The muscle becomes part of the meat. This causes inflammation in the tissue and leaves an abscess, even when given correctly. There is less irritation and problems with SQ injections.

Assuring Quality: A guide for youth livestock producers—Daily Care and Management

Daily Care and Management---Rabbit and Poultry Activity: Sharing Responsibility for a Quality Product

Resources Needed:

Paper

Pencils

Background Information:

Throughout the Total Quality Management program, we have explored the practices necessary to provide a safe, quality food product to consumers. Some of these practices affect the eating quality of our products, while others impact the safety of our products for consumption.

Selection techniques, health care, feeding, and environmental factors affect the eating quality of an animal product. Proper observation of withdrawal requirements, control of animal stress, proper handling, and good sanitation practices will help assure consumers that the product is safe for people of all ages.

Ensuring quality and safety of animal products calls for a partnership between producers, industry, government, and the consumer.

During the Meeting:

1. Divide the youth into groups of three or four. Provide each group with a piece of paper and pencil. Have each group choose an animal product whose production process they will trace from the farm to the consumer's plate. Examples are eggs, rabbit meat, rabbit fur, chicken breast, chicken patties.

- 2. Ask each group to write the name of their product at the top of their paper, and divide the paper into three columns. In the first column, they should list each step a product takes on the way to the consumer's plate (ie-farm, marketplace, packing plant, wholesaler, retailer, consumer). In the second column, they should list who is responsible for the quality of the product in the step they listed. In the third column, they should list who is responsible for the safety of the product in each step.**

Note: You may need to help the youth by posting a list of some possible quality and safety partners, including USDA Inspection Service, USDA Grading Service, State Department of Agriculture, Food and Drug Administration, consumer, producer, trucker, meat market manager.

Daily Care and Management Activity—Student Worksheet

- 1. Who are some of the people involved in assuring a safe food supply?**
- 2. Where did you find yourself on the list? Why is your role critical?**
- 3. How can producers ensure their product reaches the consumer as a quality, safe product?**
- 4. How can you strengthen your partnerships with others who are working to ensure a quality, safe food supply?**