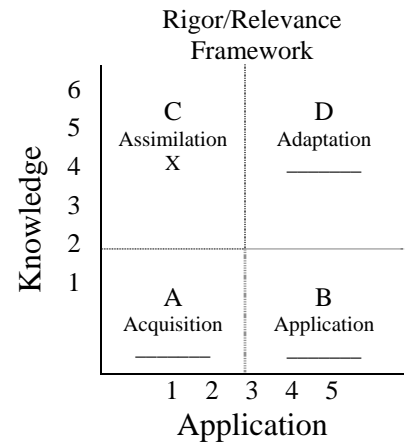


**Dairy Cattle Evaluation
Feet and Legs
Lesson 5**

Area and/or Course: Animal Science/Dairy

Teacher Goal(s):

1. Students to gain exposure to the components of feet and legs
2. Students to understand why feet and legs are important in the assessment of dairy cattle.
3. Student to have the ability to describe the feet and legs using proper terminology.



Lesson Title: Feet and Legs

Objectives:

The student will be able to (TSWBT). (OR Skill Set numbers in parentheses at the end of the objective statement.)

1. Master the parts of the dairy cow. (AGPC 01.05.04.01)
2. Demonstrate understanding of feet and legs in relation to dairy cattle evaluation. (AGPC 01.05.04.02)
3. Gain experience in terms related to feet and legs to be used for oral reasons. (AGPC 01.05.04.04)

CIM/CAM Standard met by Objectives:

<u>Page</u>	<u>Category</u>	<u>Subject</u>	<u>Common Curr. Goal</u>	<u>Benchmark & Number</u>
1. E-20	English	Communication	Tech. Speak	10:1
2. S-6	Science	Life Science	Organisms	8:1,4
3. S-8	Science	Life Science	Heredity	8:1,2,3

Materials, Equipment, Audio-visual aids:

1. Power Point
2. Quiz
3. Class handout
4. Parts of the cow quiz
5. Reasons notes handout

References:

1. Hoards Dairyman
2. American Jersey Cattle Club
3. Holstein Foundation
4. Oregon State University Dairy Cattle Evaluation Extension Publication
5. World Holstein Friesian Association

Frame Quiz

Review Yesterday's Lesson:

During our last lesson, we talked about frame and its' components. Who can tell me one of the 5 components of frame?

1. Rump
2. Stature
3. Front end
4. Back
5. Breed Characteristics

Remember the frame components are the skeletal parts of the cow excluding the feet and legs.

At this time we will present the reasons you prepared using mammary system, dairy character, and frame.

Set:

Today we will be talking about feet and legs. Why would this trait be important? It is fair to say that feet and legs along with the mammary system are the 2 single most important traits.

Summary:

At the completion of the class today, you will be able to:

- 1 Describe the components of feet and legs
- 2 Understand why feet and legs are important in the assessment of dairy cattle
- 3 Describe feet and legs using proper terminology

Subject Matter Outline/Problem and Solution
(Application Points lace in throughout lesson) (Modeling,
Guided Practice, and Content)

Parts of the cow

1. Feet and Legs
 - a. Can she move freely?
 - b. Feet
 - c. Hocks
 - d. Pasterns
 - e. Rear legs
 - i. Rear view
 - ii. Side view

2. Picture of Faye and Sally

Strategy – includes Teacher Activity,
Student Activity, Questions/Answers
and Objectives

Students are taking notes.

Go over parts of the cow.

Q: Why are feet and legs important?

A: Cows need to have the ability to
move from point A to point B.

During the frame lesson, we talked
about two-way traits in relation to
the rump.

Q: What is a two-way trait?

A: When a trait does not fit into the
“more the better” category, it is a
two way trait.

Q: Who can give me an example of
a two-way trait in reference to the
rump?

A: Levelness from hooks to pins

Nearly all of the feet and leg traits
are two-way traits.

Q: Looking at these two animals,
who has a more correct set to her
leg?

A: Bottom cow (Sally) Why?

Q: Who do you think is older?
Why?

A: Top cow (Faye)

1. Weaker in the pasterns
2. More set to the leg
3. More body capacity
4. More depth of udder

10. Rear Legs-Rear View

- a. Straight
- b. Wide apart
- c. Feet squarely placed

11. Trait Picture of Rear Legs-Rear View

12. Rear Legs-Side View

- a. A moderate set (angle) to the hock
- b. Excessive set is called “sickle hocked”
- c. Straight with no set is called “post legged”

A: The bottom cow (Sally) has a steeper foot angle and she is also stronger in the pastern.

Q: Who is older?

A: Faye (top cow)

We want the cows to track straight a head.

Picture on right is ideal.

This is a two-way trait.

We want the leg to have adequate set, not too much and not too straight.

If you stand all day with your knees locked, this is equivalent to a cow having a leg that is too straight. This is known as posty legged.

It is important that cows have the correct set to their leg. If they have too much, this is called sickle hocked. Both extremes will cause other parts of the animal to prematurely wear.

The Brown Swiss breed is known for straight legs.

Q: Would a cow who is sickle hocked normally have strong or weak pasterns?

<p>13. Trait picture of rear legs-side view</p> <p>14. Feet and Legs Terms</p> <ol style="list-style-type: none"> a. Straighter in her rear legs as viewed from behind (the side), faulting 2 for... b. More correct set to the hock, noting the straight (set) leg on 3 <p>15. Feet and Legs Terms</p> <ol style="list-style-type: none"> a. Cleaner through the hock, faulting 2 for being puffy in the left hock b. Handles her rear legs more correctly on the walk, faulting 3 for... <p>16. Feet and Legs Terms</p> <ol style="list-style-type: none"> a. A cleaner, flatter hock (leg bone) b. Flatter leg bone c. Stronger in pasterns <p>17. Feet and Legs Terms</p> <ol style="list-style-type: none"> a. Shorter in the pasterns b. Deeper in the heel (and shorter in the toe) <p>18. Feet and Legs Terms</p> <ol style="list-style-type: none"> a. Walks more correctly on her front feet, noting that 4 toes out b. "Tracks straighter ahead on those front feet" 	<p>A: Weak</p> <p>Q: Would a cow who is posty legged usually have strong or weak pasterns?</p> <p>A: Strong</p> <p><i>Middle picture is ideal.</i></p> <p>Q: What is flatness of bone correlated with?</p> <p>A: Dairy Character.</p> <p>Q: Will pasterns last longer if they are long or short?</p> <p>A: Short</p> <p>Some animals who are open at the point of elbow and or are weak in the crops will toe out with their front feet.</p>
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<p>19. Feet and Legs Terms</p> <ul style="list-style-type: none"> a. “Walks (or stands) more comfortably on her rear legs” b. “Walks straight at you” <p>20. Feet and Legs Terms</p> <ul style="list-style-type: none"> a. Stands and walks on a more correct foot and leg b. Steps down on a foot that is deeper in the heel <p>21. Summary</p> <ul style="list-style-type: none"> a. What are the 4 traits evaluated as part of the feet and legs? b. What 2 views do we utilize for evaluating rear legs? c. Why do we use 2 way traits? <p>22. Time to Practice</p> <ul style="list-style-type: none"> a. Place the classes b. Take notes for reasons <p>23. Placing</p> <ul style="list-style-type: none"> – Brown Swiss <ul style="list-style-type: none"> • 4-1-2-3 with cuts of 3-5-2 – Guernsey <ul style="list-style-type: none"> • 3-4-1-2 with cuts of 4-1-4 – Holstein <ul style="list-style-type: none"> • 3-4-1-2 with cuts of 2-5-1 <p>Reasons (click on speaker to listen)</p> <ul style="list-style-type: none"> – Brown Swiss – Guernsey – Holstein 	<p>Generally these animals will be very weak in their front end.</p> <p>Deep in the heel is usually directly correlated to foot angle</p> <ul style="list-style-type: none"> 1. Feet 2. Hocks 3. Pasterns 4. Rear legs <ul style="list-style-type: none"> 1. Side 2. Rear <p>To better describe traits when more isn't better. For example, slope of the rump.</p> <p>Be sure to take good notes. All of the classes are 4 year olds.</p> <p>You will find scores for various placings for the classes in the back of the Instructor Manual under “Contest #1”.</p>
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Closure: Summary or Conclusion

(Go back through the pictures for a review of identification)

No matter what the rest of the cow looks like, if she cannot move from the stall to the parlor, is she worth anything? We need to remember when evaluating feet and legs that they change with age. Generally we are more critical of 2 year-olds with bad legs versus 5 or 6 year-old cows.

Next time we meet, you will be quizzed on this material. Remember to keep studying the parts of the cow. In addition, you will be giving reasons next time on the notes you took today.

Evaluation: (Authentic Forms of Evaluation, Quizzes, Written Exam – something you grade).

<u>Item</u>	<u>Obj. Number</u>
1. Complete the quiz	1-3

Assignments: (Student Activities involved in lesson/designed to meet objectives but not graded).

<u>Item</u>	<u>Obj. Number</u>
1. Complete the handout	1-3

Attachments:

1. Quiz
2. Handout
3. Power Point
4. Reasons notes handout