
4-H Beef Project

Leader

Unit	Page
1 Welcome to the 4-H Beef Project - Introduction	1-1
2 You and Your Beef Project	2-1
3 Digestion in the Beef Animal	3-1
4 Nutrient Requirements of Beef	4-1
5 Feeds for Beef	5-1
6 Parasites of Beef Cattle	6-1
7 Beef Herd Health	7-1
8 Managing Your Market Steer	8-1
9 Beef Cow and Heifer Management	9-1
10 Managing the Beef Herd Sire	10-1
11 Beef Breeding	11-1
12 Calving	12-1
13 The Newborn Calf	13-1
14 Beef Cattle Handling and Facilities	14-1
15 Range and Pasture Management	15-1
16 Record Keeping	16-1
17 The Beef Carcass	17-1
18 Beef Marketing	18-1
19 The Beef Industry Today	19-1
20 Beef Grooming and Showing	20-1
21 Evaluation	21-1
22 Leaders' Activity Guide	22-1

Unit One

Welcome to the 4-H Beef Project

**Dear
4-H Beef
Leader:**

Welcome!

This challenging and exciting format allows you and the 4-H members to have fun while learning about the various aspects of beef production.

**How does
this material
work?**

1. There are three levels in this beef material. In each level there are 20 units. Each unit covers a specific topic or group of topics about one aspect of beef production.
2. The material varies in style and content from one level to the next.

The recommended age groupings are

Level One	9-11 years of age
Level Two	12-14 years of age
Level Three	15-21 years of age

Note that these age groupings are NOT carved in stone! Members may fit into a higher or lower level according to their experience. Please adjust these groupings as required in your club.

3. Each member must complete the specific units, in their level, that your club selects for that year. Encourage your members to begin a binder. Each member can then build on this binder over the project year and future years to create a valuable beef production manual.
4. You are NOT expected to complete all of the units in one year! This will take several years. Plan your project year at your first meeting. Choose the units you wish to cover at your meetings. The number of units and the topics you choose will vary depending upon the number of meetings you hold and the interests of your members. Your club should complete four to six units in each project year.
5. Depending on the interests of your members, you may wish to combine or extend units. Work at your own pace. The material is designed to be flexible.
6. Please note that you are NOT expected to complete all of the activities within each unit. These are provided as suggestions only. You may need to use them to get rolling, or you may not use them at all.

Review:

**Using This
Material**

Step 1

Order a leaders' guide for yourself.

Step 2

Decide on which units you and your members will cover this project year.

Step 3

At the end of your project year, complete the Beef Project Evaluation Form and send it to the provincial 4-H office.

Did you know ... that the following items are available to all 4-H beef clubs?

- *Loans through Alberta Treasury Branches*
- *Livestock Insurance*
- *Implants*

Talk to your regional 4-H specialist, or consult the Beef Fall Leaders'

4-H Livestock Project Regulations

Information package for more information.

These requirements apply to all 4-H livestock projects.

A. 4-H Member Requirements

In order for a 4-H member to receive credit for a club year, the member must

- ❖ Complete project records and have them signed by the club or project leader.
- ❖ Attend a minimum of 70% of club activities.
- ❖ Complete a communication activity.
- ❖ Participate in their 4-H Club Achievement Event.

B. 4-H Livestock Project Minimum Requirements

- ❖ Animals must be registered with the club.
- ❖ Animals must be identified as the 4-H member's project either by a 4-H tag, CCIA tag, breed registration tattoo, or brand, and a bill of sale to or a lease agreement in the name of the member.
- ❖ Replacement of animals can only be done with permission of the achievement sale committee.
- ❖ 4-H members must personally provide the major part of the feeding, care, and management for their animals. (Check with you sale committee for any further definition)
- ❖ The use of tranquilizing products on 4-H animals, immediately proceeding or at any 4-H project event is prohibited. (Tranquilizing products give the handler an unfair advantage in displaying their livestock handling and control skills). Any animal that is tranquilized cannot be shown or sold at a 4-H event.
- ❖ Drugs and some feed additives have withdrawal periods listed on their labels according to the dosage given. It is the legal responsibility of the owner of the animal, to be sold for slaughter, to insure that the withdrawal period has passed. If withdrawal period(s) have not passed at the time of sale, it is the responsibility of the member to tell the 4-H sale committee and the responsibility of the sale committee to communicate this to the potential buyers. Animals that show drug residues at time of slaughter are condemned.

C. Local or Interclub Project Regulations

- ❖ In addition to these basic provincial minimum requirements there may be additional regulations from the local or interclub project committees. It is your responsibility to know these rules and regulations.

Any one violating any of the above requirements will not be able to advance with that project to any 4-H project event, during the remainder of the project year.

Revised
September - 2002

Beef Project Outline

Alberta 4-H offers an opportunity for young people to develop mentally, emotionally and socially through association with others.

Objectives

The 4-H Beef Project gives members an opportunity to:

- Acquire an understanding of beef cattle production and management through the experience of owning, caring for, and maintaining records on beef cattle.
- Develop the skills, patience and understanding of the handling practices essential in working with beef cattle.
- Develop an appreciation of the cattle industry and its importance in the local community, the province and the country.



NOTE:

All 4-H members must meet the **Alberta 4-H Beef Project Policy** requirements (Policy #6.05 is available on the 4-H web site at www.4h.ab.ca under Resources/Policy) and must abide by any regulations put forth by the local beef committees.

Market Beef - Live Unit

- This unit is intended for 4-H members with little or no beef experience.
- A steer or a beef heifer can be fed as a market beef project.
- It provides an opportunity for members to learn about the responsibility involved in caring for a market beef project.
- Each member is to select and provide the majority of the feed, management and care of the market beef project.
- The market beef project must be registered to the 4-H member. Feeding records must be maintained for a minimum of 160 days prior to Achievement Day.
- The club must approve any replacements of the market beef project.

Achievement

- Exhibit project animal.
- Take part in skill competitions as designated by club: showmanship, judging, grooming, project knowledge events.
- Meet 4-H basic member expectations.
- Record book up to date.

The Heifer Unit

- Members will gain more experience in the practical aspects of purebred or commercial beef production.
- With successful development of the heifer, the heifer may be retained for subsequent years in the cow/calf unit.
- Each member is to select and provide care for a beef heifer calf. Records are to be maintained on the heifer from weaning through to Achievement Day and, or breeding time of the following year.
- If the member is carrying both the market beef project and the heifer calf, detailed records are to be kept only on the market beef project, and partial records on the heifer calf. If the member is carrying only the heifer calf, the whole record book must be kept on the heifer calf. Partial records are the animal sections of the record book.

Achievement

- Exhibit heifer.
- Other requirements as in Market Beef - Live Unit.

The Cow/Calf Unit

Two Year Old with Calf and/or Three Year Old with Calf

- The cow must be a previous heifer project carried through to this unit.
- Records must be kept on this unit.

Achievement

- Exhibit cow and calendar year calf (natural pair). (If a member shows an embryo or orphaned calf as part of the pair, show officials must be notified.)
 - Other requirements as in Market Beef - Live Unit.
-

Pen Unit

- This unit is designed for a beef member with at least three years of 4-H beef project experience, who is interested in advanced beef production.
- Each member selects, feeds, manages and markets at least **five** beef animals. (District or Regional guidelines may state at least **three beef animals**.)
- Members must develop a cash flow and business plan for their project.
- Members market their project on their own.
- Members can begin this project any time of the year. Members must arrange to have club leader(s) tour and observe their operation.

Achievement

- Conduct a tour or develop a display for club members highlighting management practices learned, cash flow and business plan.
 - Other requirements as in Market Beef - Live Unit.
-

Novice Beef Unit

- This unit is designed for 4-H beef members with no 4-H beef project experience.
- A member 9 to 11 years of age (Juniors) as of January 1 of the current 4-H year may enroll in this project for one (1) year.
- Each member selects, feeds, manages and exhibits a calendar year calf (January 1 to March 1) of that 4-H year.
- Member must keep records on the animal for at least 90 days prior to the Achievement Day event.
- Members have the option of continuing to exhibit this project as a Market Beef - Live or a Heifer Unit.

Achievement

- Exhibit project animal.
 - Other requirements as in the Market Beef - Live Unit.
-

Market Beef - Carcass Unit

- This unit is intended for 4-H members with at least two years beef experience.
- It provides an opportunity to learn more about the beef industry by following the project from weaning through to the cooler.
- Members can market their project on their own.
- Feeding records must be maintained for the period determined by the club.

Achievement

- Exhibit project.
- Attend Carcass Display.
- Other requirements as in Market Beef - Live Unit.

Green Certificate Unit

- This unit is designed for members at least 15 years of age at the beginning of the club year, who have completed their project studies outlined in Levels 1 to 3 of the beef project.
- Members must arrange with their club leadership to take this as a 4-H project. Members who are taking Green Certificate program through school may also carry this as a 4-H project. Members must have the approval and support of club leadership.
- Requirements of completing a **Green Certificate 4- H Project** are:
- Members must do **three** (3) demonstrations/talks on the training objectives that they are striving for through the Green Certificate program, during the club year that tie in with the club's program plan. Units that are offered by Green Certificate are: **Cow-Calf Beef Production Technician** or **Feedlot Technician**.
- Under **Cow-Calf Beef Production Technician** members cover Training Objectives: Handling Cattle, Maintaining Cattle Health, Operating a Feeding Program, Operating General Farm Equipment, Operating Trucks and Tractors, and Personal Working Skills.
- Under **Feedlot Technician** members cover Training Objectives: Processing and Handling Cattle, Treating Cattle Chute Side, Pen Checking, Feeding Cattle, Operating and Servicing Equipment and Facilities, and Personal Working Skills.

Achievement

- Members complete the requirements of the Green Certificate program.
- Deliver three (3) demonstrations/talks or workshops during the year.
- Develop and present a display or oral presentation on their Green Certificate Unit to their local 4-H club or district council on their project.
- Other requirements as in Market Beef - Live Unit.

Creative Options Project (COP)

- This unit is designed for intermediate (12 to 14 years old) and senior (15 to 20 years old) members as of January 1st of the current club year.
- The members must have completed at least three years of 4-H project work and wish to design their own area of study. In this unit, members select, plan, share and evaluate their own projects.
- Further information on this project is available by ordering the Creative Options Project Member Guide or by contacting the 4-H specialist in your region.

Achievement

- Conduct a tour or develop a display for club members highlighting management practices learned, cash flow and business plan.
- Other requirements as in Market Beef - Live Unit.

Beef Animal Part Identification Key

1. Crest	9. Forearm	17. Stifle Region	26. Ribs
2. Poll	10. Knee	18. Quarter	27. Hooks
3. Face	11. Shank	19. Pin Bone	28. Heart Girth
4. Muzzle	12. Pastern	20. Tail Head	29. Shoulder
5. Dewlap	13. Underline	21. Rump	30. Ear
6. Shoulder Point	14. Dew Claw	22. Loin	31. Rump
7. Brisket	15. Hock	23. Back	32. Cod
8. Chest Floor	16. Flank	24. Crop	33. Twist
		25. Topline	34. Pin Bones

Cuts of Beef Area Identification Key

A. Loin	C. Rump	E. Chuck	G. Flank
B. Rib	D. Round	F. Plate	H. Brisket
			I. Shank

Working With Your Members

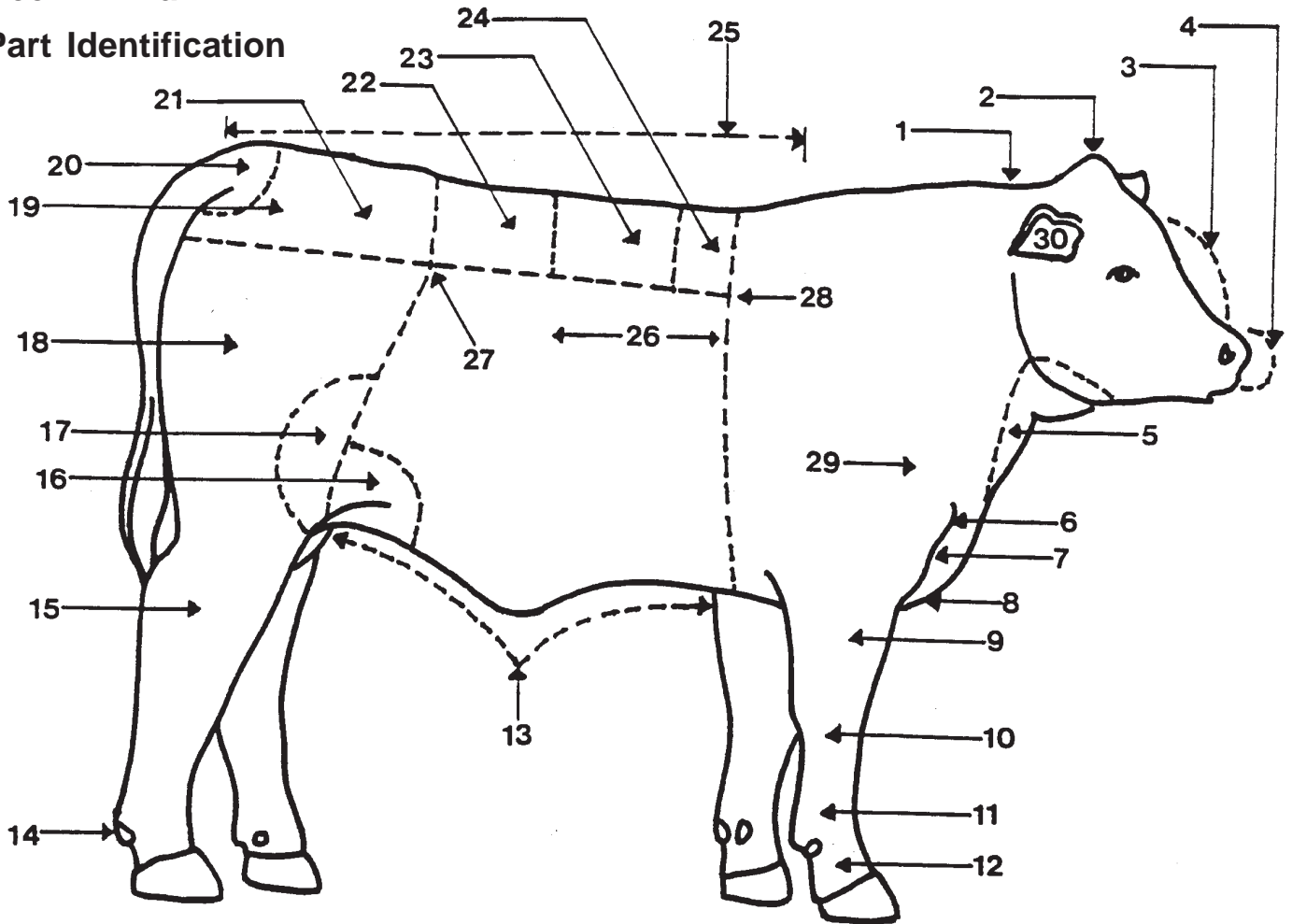
One of the biggest challenges facing 4-H leaders is keeping the interest of the members. By keeping your members interested you will be giving them information they will learn and retain. Keep the following chart in mind when you select activities for your members to do.

Method	Retention	Examples
Reading	members will retain 10% of what they read	Information in member units
Hearing	members will retain 20% of what they hear	Lectures, speakers
Seeing	members will retain 30% of what they see	Pictures, posters, drawing
Hearing and Seeing	members will retain 50% of what they see and hear	Demonstrations, tours, videos
Saying	members will retain 70% of what they personally explain	Discussion groups, expressing ideas
Saying and Doing	members will retain 90% of what they are saying and doing	Giving demonstrations, practising

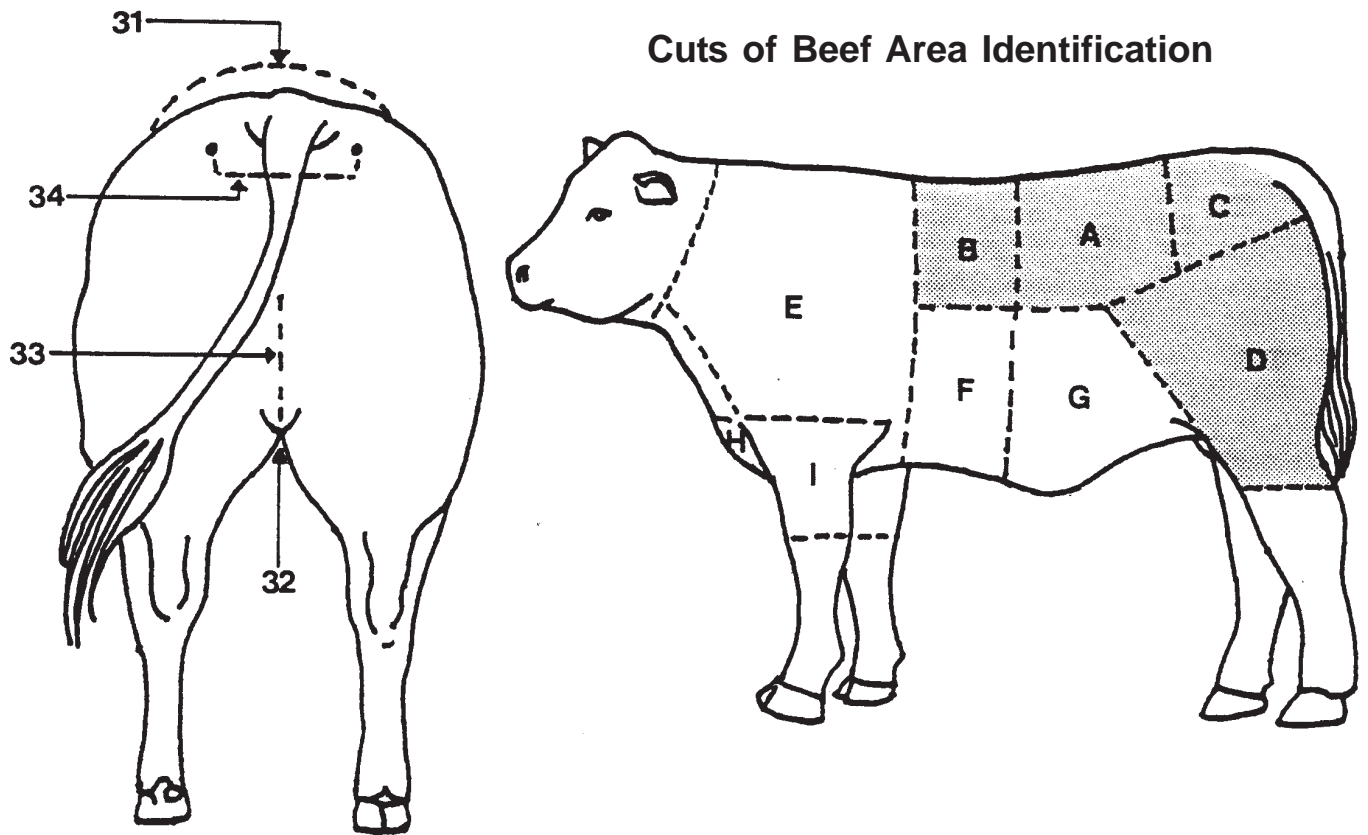
Needless to say, the most effective way of working with your members is for them to “LEARN TO DO BY DOING”.

Beef Animal

Part Identification



Cuts of Beef Area Identification



**Activities:**

1. Spend time getting acquainted with your members in the club. Consult your 4-H Recreation Activities Book or your regional 4-H specialist for activity ideas.
2. Determine your executive for the club.
3. Plan your 4-H project year. The easiest way to learn about the beef breeds is to use an activity and have fun! Following are several ideas of activities you can use in your club to help members learn the beef breeds.
4. “Who Am I?” This activity can be done by members of all ages. Answer “Who am I?” to each of the descriptions on the following page.

“Who Am I?”

Answer the question “Who am I?”. Fill in the breed which corresponds to the description.

1. I often have horns. I am red and white, and am one of the oldest and most numerous breeds in Canada.
Who am I? _____
2. I have one of the largest gene pools in the world. I range in colour from tan to dark red and have white markings. I come from five different European strains.
Who am I? _____
3. I originated in Scotland some 250 years ago. I came to Canada in 1825. I can be red, white or roan.
Who am I? _____
4. I was imported from France in the 1960’s. I am used primarily as a terminal breed in crossbreeding programs. I have dark red and white markings.
Who am I? _____
5. I am noted for my heavy muscling and lean, high yielding carcass. I came to Canada in 1969.
Who am I? _____
6. I was introduced to Canada in 1860. I can be black or red. My polled gene is dominant when crossed with other breeds.
Who am I? _____
7. I am noted for my maternal traits. I came from France to this country in 1973. I have a thick curly red coat.
Who am I? _____

8. I am one of the oldest French breeds. I have developed a polled gene which now represents 30% of all animals registered. My association has been operating the Conception to Consumer program since 1968. I can be white to straw coloured.

Who am I? _____

9. I was the first breed to be developed in Canada by private interests. The foundation stock was selected under Alberta range conditions.

Who am I? _____

10. I was brought to Alberta from the Southern United States. My horns can grow up to seven feet, that's 210 cm, across. I am often bred to first calf heifers because of my ease of calving.

Who am I? _____

In case you, the leaders, did not find all of the answers to this exercise, here they are.

“Who Am I?”

- | | |
|----------------|-------------------|
| 1. Hereford | 6. Angus |
| 2. Simmental | 7. Salers |
| 3. Shorthorn | 8. Charolais |
| 4. Maine-Anjou | 9. Hays Converter |
| 5. Limousin | 10. Longhorn |

“Match My Origin”

Match the breed on the left with the country or region of origin on the right.

Breed	Origin
Angus, Shorthorn, Luining, Galloway and Highland	Southern United States
Charolais, Limousin, Salers and Maine Anjou	Wales
Hereford, South Devon	Germany
Simmental	France
Gelbvieh	Australia
Hays Converter	Switzerland, France and Germany
Murray Grey	Scotland
Pinzgauer	Canada
Longhorn	Austria
Welsh Black	England

Here are the solutions to “Match My Origin”:

Breed	Origin
Angus, Shorthorn, Luing, Galloway and Highland	Scotland
Charolais, Limousin, Salers and Maine Anjou	France
Hereford, South Devon	England
Simmental	Switzerland, France and Germany
Gelbvieh	Germany
Hays Converter	Canada
Murray Grey	Australia
Pinzgauer	Austria
Longhorn	Southern United States
Welsh Black	Wales

“How many breeds can you name?”

In Alberta, there are at least 25 breeds of beef cattle. Work with your 4-H members to see how many you can name. You may wish to put together a game to see who can name the most breeds.

For example, pair up the members, or put them in groups of three, mixing the ages and experiences in each group. Give the groups a time limit of two minutes and see which group came up with the most breeds.

Here are the beef breeds we found in Alberta.

Angus	Highland	Romark
Blonde d’ Aquitane	Limousin	Salers
Braunvieh	Longhorn	Shorthorn
Charolais	Luing	Simmental
Chianina	Maine-Anjou	South Devon
Galloway	Murray Grey	Tarentaise
Gelbvieh	Piedmontese	Welsh Black
Hays Converter	Pinzgauer	any others?
Hereford	Red Poll	

Use some teaching resources.

The Beef Information Centre has some interesting teaching resources which you may be able to use in your clubs. There is a charge for their resources, but they are excellent. Contact the center at

Beef Information Center
215, 6715-8th Street NE
Calgary, Alberta T2E 7H7
(403) 275-5890

<http://www.beefinfo.org>

Suggestions for Planning, Preparing, and Presenting Beef Demonstrations

1. Decide on the subject for your demonstration. Example: showmanship, training, grooming, facilities, feeding, health, breeding, genetics, record keeping, and so on.
2. Gather your materials. Some sources of beef information you might use are Alberta Agriculture, breed publications, library books and magazines, seminars, resource people, veterinarians, feed salesmen, breeders, university and college professors, and so on.
3. Decide on a specific topic in your subject area. A demonstration is most successful if you discuss one specific topic, rather than trying to cover an entire subject area. Example: how to clip a steer, how to implant your growth hormones, and so on.
4. Decide on a title for your demonstration. Make it catchy!
5. Begin by writing your outline. Sort your information. Decide which sources you will use for your demonstration. Your outline should follow this format:
 - Introduction: Say what you are going to do.
 - Body: Show and tell what you said you were going to do. Use illustrations to help teach, enhance and present your information. Live animals will help to illustrate your points.
 - Conclusion: Say what you did. A poster summarizing the main points you discussed is helpful.
6. Prepare your visuals. Remember that people remember more of what they see and hear than what they only hear. Anytime you can use a visual presentation such as a live animal or a picture of some sort, do so.
7. Write down your presentation in the words you want to use for presenting it.
8. Practice, practice, practice!
9. Have fun - if you have fun, your members will enjoy your presentation.

**Ideas For
Beef
Demonstration
Topics**

Selection:

- Parts of the beef animal
- Selecting your 4-H steer
- Selecting a 4-H heifer
- Selecting your herd sire
- Using ROP records for selection
- How to read a pedigree
- Breeds of cattle
- How to read the information on an AI straw

Equipment:

- How to adjust the halter on a calf
- Types of shelters for cattle
- How to build a cattle loading chute
- How to use a weigh scale
- How to build a grooming chute
- How to build a hoof trimming chute
- How to build a round bale feeder
- How to build a tack box

Health:

- How to vaccinate an animal
- How to implant growth hormones
- How to use a balling gun
- Dehorning
- Castrating
- How to trim hooves
- How to restrain an animal
- Keeping breeding records
- Treating an animal for warbles
- Treating an animal for lice
- Drenching an animal

Meats:

- Cuts of meat from a beef carcass
- How a carcass is graded
- Canada's grading system
- Measuring the rib eye
- Uses for beef by-products

Unit Two

You and Your Beef Project

Roll Call

How did you choose your 4-H beef project animal this year?

This roll call will initiate discussion about the criteria the members used when selecting their project animals. You should hear a wide variety of answers. It will start members thinking about the different things which they should consider.

Objectives**Level One**

1. To introduce members to the different choices available to beef producers.
2. To make members aware of the similarities between selecting their project animal and judging livestock.
3. To understand the importance of safety when working with their project animal.

Level Two

4. To become familiar with the characteristics to look for when selecting beef animals.
5. To learn more about buying from auction marts and private sales.
6. To develop a selection plan.

Level Three

7. To share their 4-H experiences as hints for 4-H club members.
 8. To develop an understanding of animal behaviour.
 9. To be aware of and share the benefits of belonging to a 4-H beef club.
-

**Activities:****Level One**

1. British Breeds and Exotic Breeds. Beef Level One - Unit 2, page 2-1.

If you wish to spend more time on this subject with your members, contact your breed associations or your nearest Alberta Agriculture district office for more information.

Some of the answers you will hear are:

The British Breeds - Angus, Shorthorn, Hereford

The Exotic Breeds - Charolais, Simmental, Chianina, Salers, Limousin, Gelbvieh, Maine-Anjou, and so on.

2. Selecting is Really Judging.

Beef Level One - Unit 2, page 2-3.

In this section members should learn that selecting an animal is a form of judging. You may wish to obtain copies of the following units to use as resources:

AG-M22 "Let's Judge"

BF-M21 "Judging Beef"

3. Selection Review. Beef Level One - Unit 2, page 2-5.

Here is the solution to the crossword.



Level Two

4. A Selection Plan. Beef Level Two - Unit 2, page 2-5.

Members are encouraged to develop a plan that they could follow when selecting their next project animal. They should consider these points, and the advantages and disadvantages of each:

where to buy	age
crossbred or purebred	weight
heifer or steer	health
frame size	temperament and disposition
muscling	price

Level Three

5. Use the level three members to share their experiences in working with beef project animals and members.

All Members

6. Videos

Consult your 4-H Video Catalogue for the latest videos available on working with the beef animal.

Unit Three**Digestion in the Beef Animal**

Roll Call

Name an animal.

Is this animal ruminant or monogastric?

Some of the possible answers are

Ruminant	Monogastric
cow	horse
sheep	pig
moose	rabbit
antelope	human
buffalo	bird
deer	ostrich
goat	
giraffe	
llama	
elk	

Objectives**Level One**

1. To learn the difference between a ruminant and a monogastric animal.
2. To find out about digestion.
3. To understand that each component of the digestive system has a specific function.
4. To learn where to find each component of the digestive system in the beef animal.

Level Two

5. To compare the digestive systems of the ruminant and the monogastric animals.
6. To learn more about digestion in the ruminant animal.

Level Three

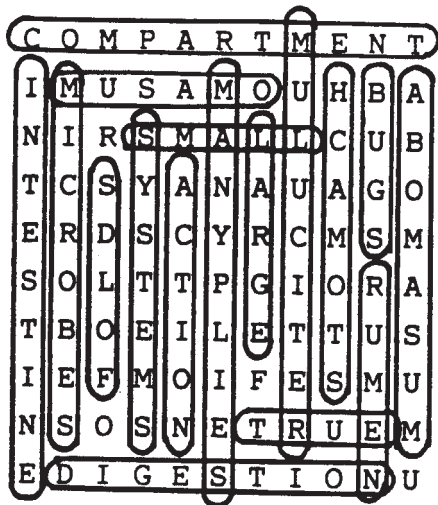
- 7. To learn how the ruminant stomach develops.
- 8. To understand some of the factors which can affect feed intake.



Activities:

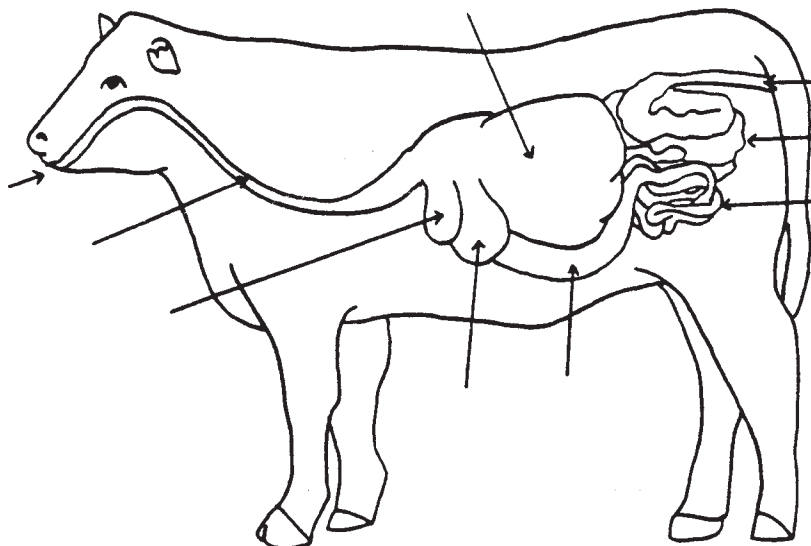
Level One

- 1. "The Digestive System" Word Search Puzzle. Beef Level One-Unit 3, page 3-3.



The remaining letters spell the word to complete this statement
 "The stomach of the beef animal has FOUR compartments."

- 2. Follow the Path. Beef Level One - Unit 3, page 3-4.



Level Two

3. Let's Compare. Beef Level Two - Unit 3, page 3-2.

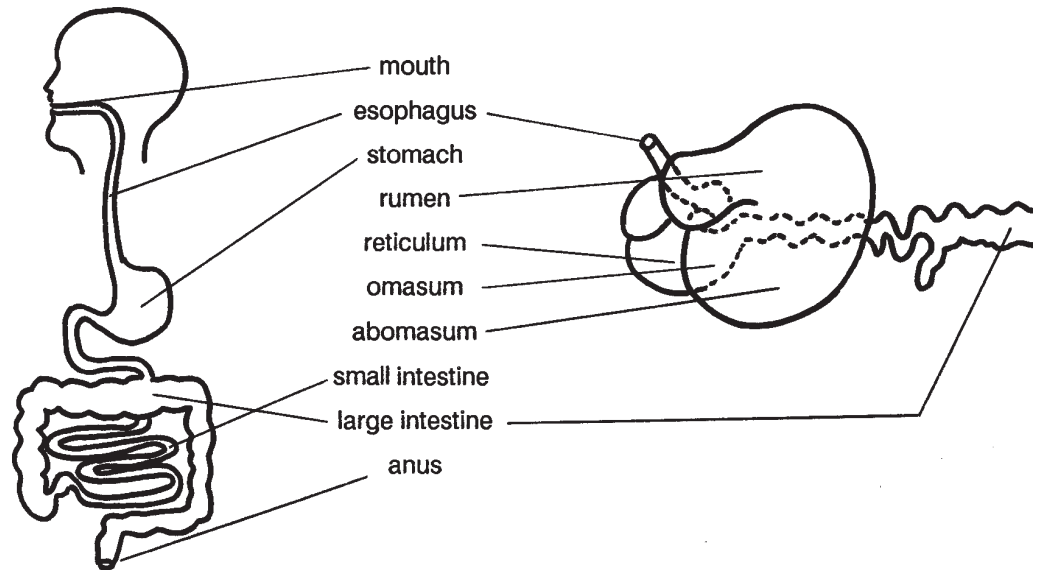
Following are the solutions to this activity.

The Human

You have a monogastric (single stomach) digestive system

The Beef Animal

The beef animal has a ruminant (four compartment) stomach digestive system.



4. Let's Review. Beef Level Two - Unit 3, page 3-5.

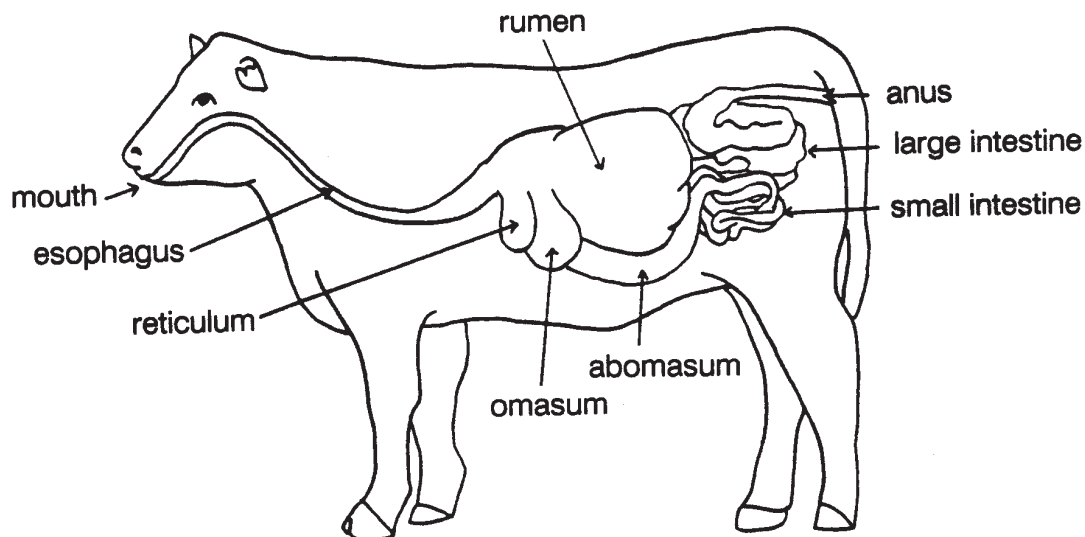
In this activity, members should match up the description and the function with each of the digestive system parts. To do this, they will need to think and to use the information found earlier in the unit and in the junior unit.

Here are the solutions.

Parts of the Digestive System	Description	Function
Mouth	1	B
Esophagus	9	C
Rumen	6	E
Reticulum	7	G
Omasum	4	I
Abomasum	3	A
Small Intestine	5	H
Large Intestine	2	F
Anus	8	D

5. "Label It". Beef Level Two - Unit 3, page 3-4.

Following are the solutions for this exercise.



All Members

6. The level three members can help out in this unit. The information in the level three unit builds from the information in the level one and level two units. Level three members have several interesting topics in their unit.

Have one of the level three members spend a few minutes sharing his or her information with the rest of the club.

7. Identification Activity

Take an outline of the beef digestive system and blow it up to poster size. Make up labels for each part and have your members place these labels on the correct part. This could be an activity for one of your level three members to facilitate.

8. Trivial Pursuit

Digestion would be an excellent topic to use for a game of trivial pursuit. You, or one of your level three members could design a series of questions and a game for all the members of the club to play.

9. Video - 1051 VT Introduction to Livestock Nutrition

This five minute VHS video provides a general overview of digestion and nutrition. The ruminant and monogastric species are compared and contrasted according to the feeds they utilize and the sites of digestion.

For more information on how to obtain this and other videos, consult your 4-H Club Supplies Catalogue.

10. Film - 400-09-1 F The Remarkable Ruminants

The basic structures and functions of a ruminant and digestive system are outlined in simple understandable terms. General interest. Film (23 minutes).

11. Talk to your veterinarian. One of the best ways to demonstrate digestion in the ruminant animal is to use a life size ruminant stomach. Your veterinarian may be able to help you locate one of these for use at your meeting.

Unit Four**Nutrient Requirements of Beef****Roll Call**

Name a nutrient. Name a feed ingredient which is a good source of this nutrient.

This roll call will provide a good introduction to this topic. Some of the answers you should hear are

Nutrient	Good Source of This Nutrient
Water	<ul style="list-style-type: none"> • clean, fresh drinking water which is available to the animals at all times
Protein	<ul style="list-style-type: none"> • soybean meal, canola meal, corn gluten meal, fish meal, meat and bone meal
Energy	<ul style="list-style-type: none"> • grains, forages
Vitamins	<ul style="list-style-type: none"> • forages, grains, sunshine, manufactured in the rumen, vitamin supplements
Minerals	<ul style="list-style-type: none"> • forages, grains, mineral supplements

Objectives**Level One**

1. To introduce the members to the concept of essential nutrients.
2. To create an appreciation of the importance of these nutrients.

Level Two

3. To understand that different animals require different amounts of nutrients.
4. To learn more about the different vitamins and minerals and their importance.

Level Three

5. To learn some of the effects of deficiencies of vitamins and minerals.
6. To understand about energy and how the body uses it.

**Activities:****Level One**

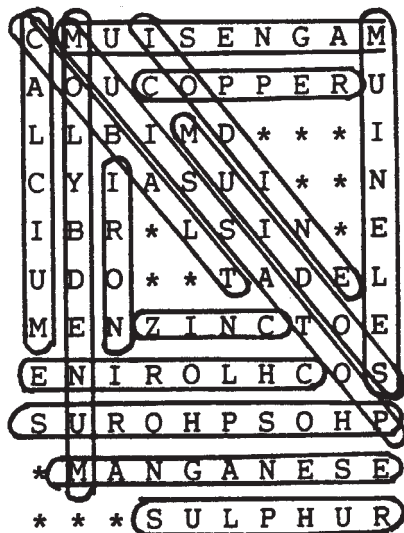
1. Beef Level One - Unit 4, page 4-1. There are five nutrients the beef animal needs in its diet. The answers we are looking for here are

Water, Protein, Energy, Vitamins, Minerals

- 2. Beef Level One - Unit 4, page 4-3. Match up the vitamins on the left with a characteristic on the right.

Vitamin	Characteristic
A *	* ruminants manufacture this vitamin, but humans must receive it in their diet
B *	* needed along with minerals calcium and phosphorus for healthy bones; known as the "sunshine vitamin"
C *	* vitamins in this category include niacin, riboflavin, thiamine and others
D *	* needed for proper blood clotting
E *	* needed for vision, healthy skin, digestion and reproduction
K *	* needed along with the mineral selenium for muscle function

- 3. Beef Level One- Unit 4, page 4-4. Find each of the minerals in the puzzle.



Level Two

- 4. Beef Level Two- Unit 4, page 4-2. Animals have different requirements for nutrients depending upon their body activities. We can divide the animals into the following groups:
 - Maintenance - the bull after breeding season is complete
 - Maintenance plus reproduction - the pregnant cow
 - Maintenance plus growth - the growing calf
 - Maintenance plus production - the lactating cow and the fattening steer

5. Beef Level Two - Unit 4, page 4-4. “Which Vitamin(s)...?”
 1. C is made by the beef animal but not by the human.
 2. D is the “sunshine vitamin”.
 3. A is most often deficient.
 4. A, D, E and K would be supplied if you fed leafy, green forages.
 5. E works together with selenium to cause muscle action.
 6. B and C are made in the rumen.
 7. A is needed for good vision.
 8. D is needed for strong bones.
 9. K is deficient if your animal bleeds heavily from a minor wound.
 10. B and C are not stored in the body.
6. Beef Level Two - Unit 4, page 4-4. Minerals For Beef. Here are the unscrambled minerals.

Macrominerals	Microminerals
1 Sodium	1 Iodine
2 Chlorine	2 Cobalt
3 Calcium	3 Iron
4 Phosphorus	4 Manganese
5 Magnesium	5 Zinc
6 Potassium	6 Selenium
7 Sulfur	7 Copper
	8 Molybdenum

Level Three

7. We have provided the level three members with some interesting information about vitamin and mineral deficiencies and energy. For activities to accompany these topics, we ask that they share the concepts with the club members. Use these level three members!

All Members

“I’ve Made a Feed”

Object of the Game

To be the first player to score a total of 50 points by making complete feeds using the nutrient cards and accumulating points.

Equipment

- One deck of “I’ve Made a Feed” cards for every six people - each deck contains:
 - 12 cards of: energy
 - 6 cards each of: protein
 - macrominerals
 - microminerals
 - vitamins (stored)
 - vitamins (not stored)
 - water
 - 1 card each of: “Super Beef”
 - “Dead Beef”

Instructions

In each hand, try to make a complete feed by getting two energy cards and **one** of each of the following: protein, macrominerals, microminerals, vitamins (stored), vitamins (not stored) and water. You may wish to write this on a large sheet of paper and put it up where the members can refer to it as they play.

1. Use one “complete feed” set of cards for each member playing. Example: if there are four players, make sure that you have eight energy, four protein, and so on in the deck. If there are more than six players, use two complete sets. They can be combined for one large game or members can split into two groups.
2. Prepare a score sheet to record the score of each round.
3. Select a dealer.
4. The dealer shuffles the cards and deals the whole deck out. Some people will have an extra card.
5. Pick up your cards and start sorting them, look for cards that will give you a complete feed. You will want to trade away any cards that you hold duplicates of (except energy - remember that you need two of those).
6. After everyone has had a chance to sort their cards, the dealer says “The pasture gate is open!”.

7. Players start trading with each other by holding out the number of cards they wish to trade and calling “two-two-two” or “three-three-three”, and so on. Cards should be held face down. You must accept back the same number of cards you have traded away. If you wish to trade away two cards, you must accept two cards back.
8. The trading continues until someone in the group has all eight cards required to make a complete feed - or seven cards and the “Super Beef” wild card. When this happens, the person calls “I’ve Made a Feed!”.
9. At this point, the trading stops.

Scoring

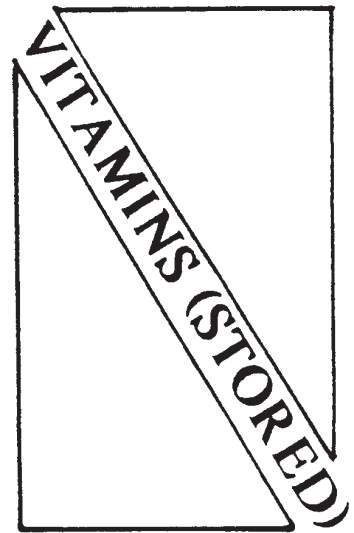
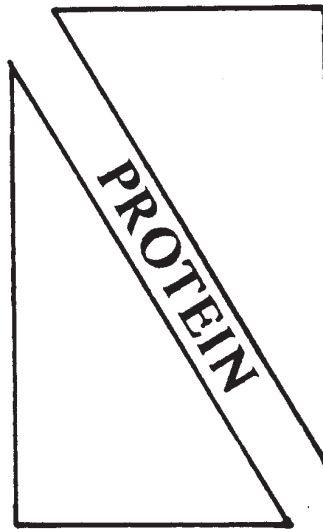
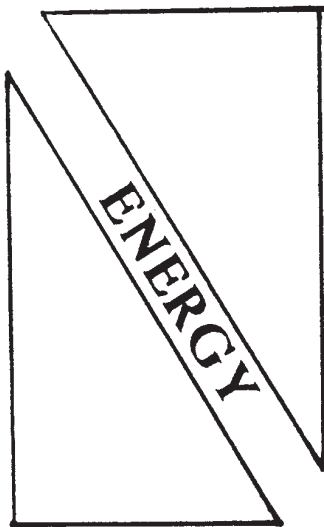
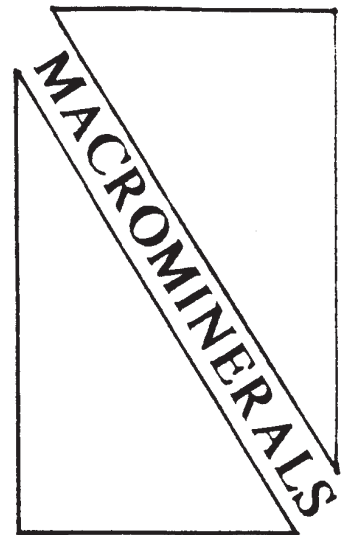
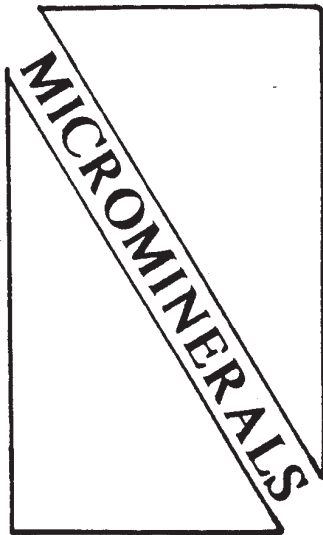
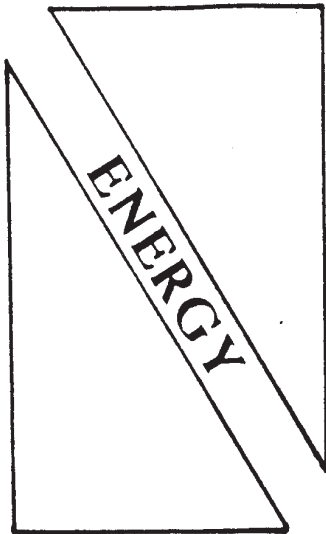
The maker of the feed gets 10 points

If he uses the “Super Beef” he gets 10 extra points

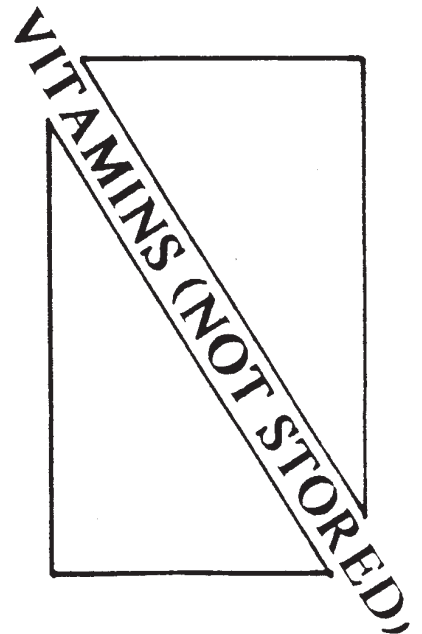
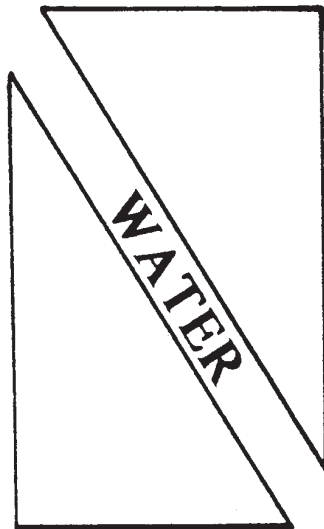
The holder of the “Dead Beef” loses 10 points

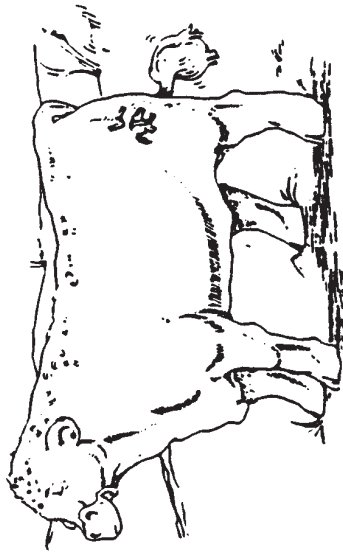
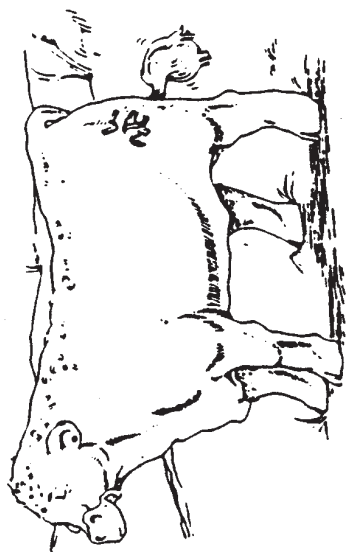
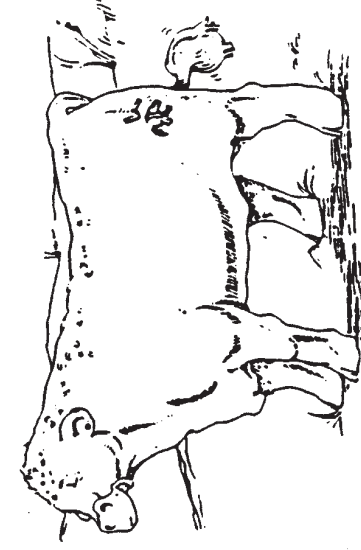
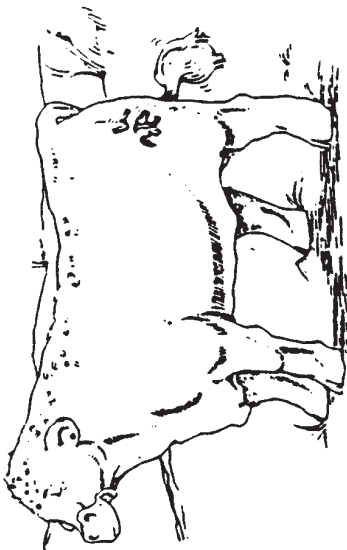
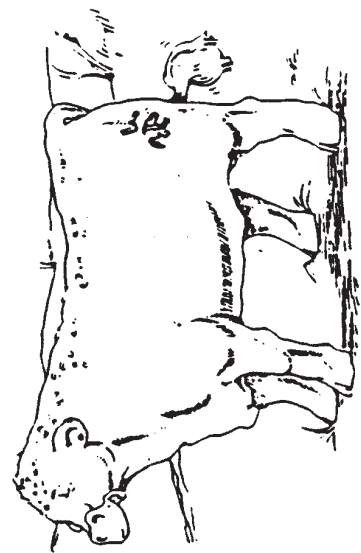
If someone holds the “Super Beef” but is not the first person to make a complete feed, he loses 10 points.

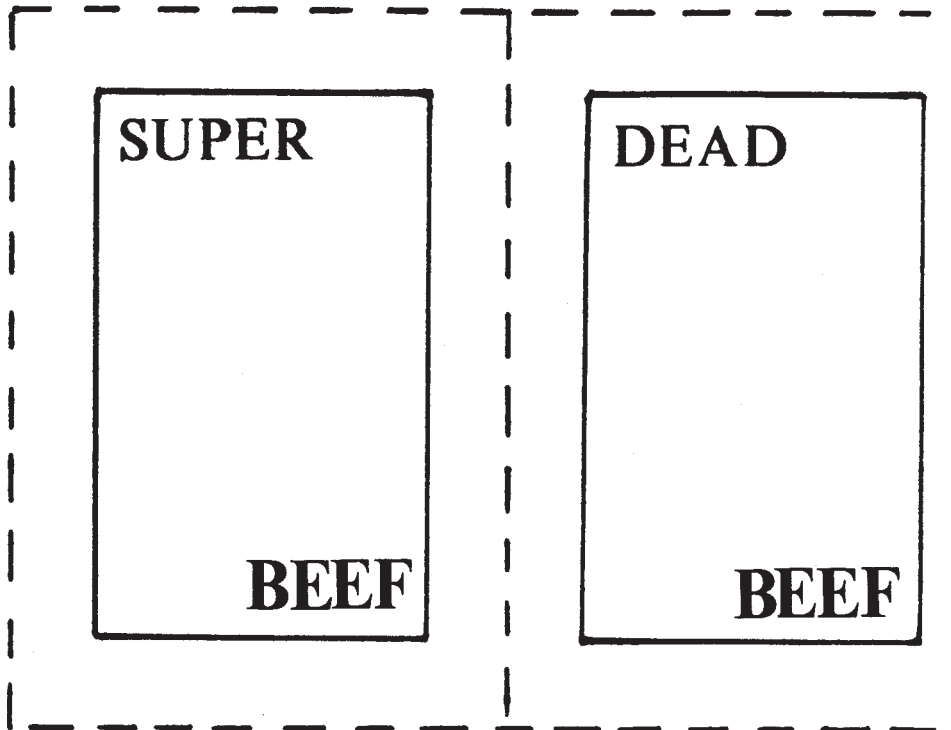
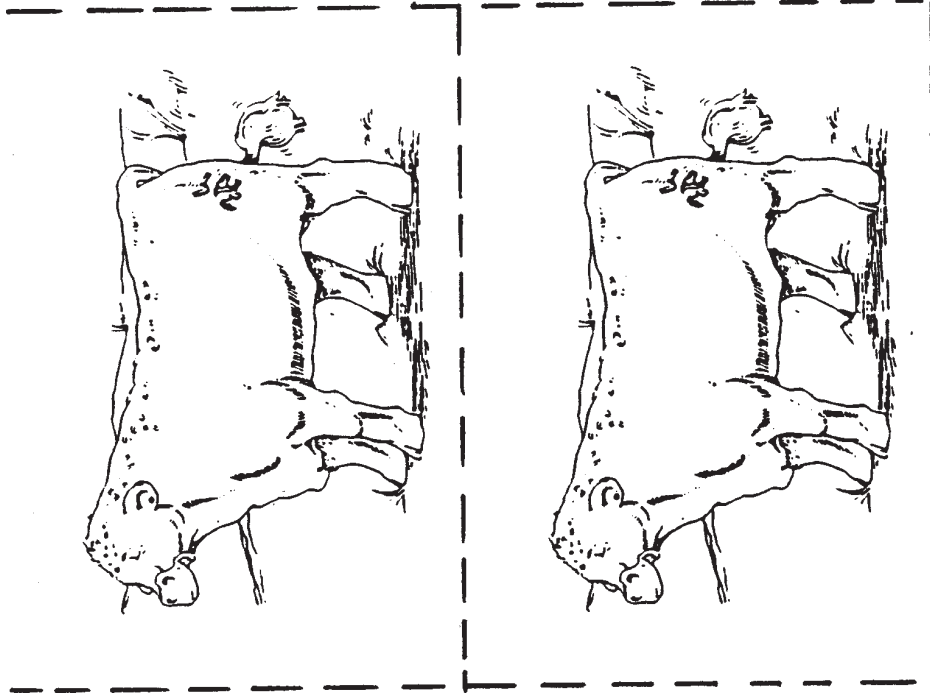
Play continues with more rounds until someone reaches 50 points or you are out of time.



"I've Made a Feed" cards







Thanks to the Ontario Ministry of Agriculture and Food for this activity.

Unit Five

Feeds for Beef

Roll Call

Name a feed ingredient which is used in a ration.

Encourage the members to name any ingredient which comes to mind. Rather than looking for good ingredients, you should be interested in having the members realize what a wide variety of feedstuffs are used for feeding beef. You can get into the least and most desirable later.

You may wish to have a member record all of the different answers on a flip chart or blackboard.

Objectives

In this unit, we have not attempted to cover everything about feeds for beef as this subject is endless. We have selected a limited number of topic areas and concentrated on them. For more information on feeds for beef, consult one of the many specialists in the field.

Level One

1. To understand the difference and similarity between rations and diets.
2. To understand what palatability is.
3. To become aware of the different roughages and grains.
4. To become aware of the factors which affect feed intake.

Level Two

5. To learn more about feed intake.
6. To begin to understand how to formulate rations for beef cattle.

Level Three

7. To gather resources available on feeding beef cattle and to build your club reference library.
8. To research computer programs available for formulating beef rations.
9. To become aware of the practice of feed sampling - why it is done, when it should be done, how to do it, where to send samples and what information can be provided.
10. To put all of the knowledge gained about beef nutrition together.



Activities: Level One

1. The questions asked in this unit are an excellent way to stimulate discussion. Have the members share what they are feeding their animals. It is important for the members to realize that there are other things which they could be using.
2. “True or False”. Beef Level One - Unit 5, page 5-4.

This exercise is another way to stimulate discussion. It also provides a good review of the information in this unit.

1. False. Barley has less energy than wheat but more than corn.
2. True.
3. False. A ration is the amount of feed required by the animal daily. A diet is the mixture or combination of feeds which provide the nutrient requirements.
4. False. Because most Alberta climate conditions are not suited to growing corn, very little corn is used in beef rations. However, in other parts of North America, corn is the most commonly used energy feed.
5. True. Barley is more dense than oats.
6. True. Silage contains approximately 60% moisture. Hay has a low moisture content.
7. True.
8. False. Alfalfa is a legume.
9. False. Beef cattle will consume from 1.4 to 2.7 percent of their bodyweight in dry matter per day.
10. True.
11. True.
12. True.

Level Two

3. Beef Ration Formulation. Beef Level Two - Unit 5, pages 5-3 to 5-8.

Where possible, encourage the members to work through this section, filling in the blanks as they go. Obtain a copy of the National Research Council's Nutrient Requirements for Cattle to help your members understand the amounts of nutrients required.

4. Increase or Decrease. Beef Level Two - Unit 5, page 5-9.

These events cause the animal to increase feed intake: 1, 2, 3, 6 and 7.

These events cause the animal to decrease feed intake: 4, 5 and 8.

Level Three

5. More About Feeds for Beef.

As many resources are available on the subject of feeding beef cattle, we encourage you to gather some of these for your members. A good way of storing and utilizing these is as a resource library for your club. Gathering resources is mentioned as one activity for level three members.

6. Feed Sampling.

In the level three unit, we provided information about feed sampling. You may wish to use this information and, or one of your level three members to explain or demonstrate the importance of feed sampling to the members in your club.

All Members

In Unit 4, Nutrient Requirements of Beef, we provided a card game, "I've Made a Feed". This would be another appropriate time to use this game.

Video - 400-69 VT Forage and Grain Feed Testing. VHS - 15 minutes. The hows and whys of forage and grain testing.

Unit Six**Parasites of Beef Cattle****Roll Call**

Name a parasite.

You will hear some of these answers

roundworms	lice
stomach worms	ticks
tapeworms	lungworms
mange	mites
flies	flukes

Objectives**Level One**

1. To learn what a parasite is.
2. To learn the difference between an internal and an external parasite.
3. To understand how cattle might become infected with parasites, using the roundworm as an example.

Level Two

4. To introduce members to more internal and external parasites, looking at their life cycles and symptoms of infection.
5. To have members understand how parasites affect beef cattle.

Level Three

6. To understand the development and control of warble flies.
7. To learn more about the horn fly and its effect on cattle.
8. To summarize the methods of parasite control.

**Activities:****For the Entire Club . . .**

1. Invite a guest speaker. There are many knowledgeable people out there who may be interested in coming to speak to your club about parasites. Some examples are district Alberta Agriculture specialists, animal health company representatives, entomologists, veterinarians, local producers.
2. See samples of parasites. Your local veterinarian may have bottled samples of worms and other parasites. Keep in mind the saying - "A picture is worth a thousand words." If the members can actually see the parasites, they will get a better feel for the damage they can do.
3. Visit a local producer. Use this meeting to find out how a local producer controls, prevents and treats parasites on his farm.

4. Who Am I? Have members identify each of the following parasites or pests. Remind members that the parasite goes through several stages in its life cycle. There are three clues for each parasite or pest.
- Q1. I am a very tiny mite which burrows into the skin of your cattle. I cause barn itch. If you find me in your herd, you must report me to Agriculture Canada.
- A. Sarcoptic mite.
- Q2. My adults lay eggs or nits on the hair of your cattle. My life cycle is very short - no more than 34 days. There are two types of me - biting and sucking.
- A. Lice.
- Q3. I bother calves aged six to 12 months most often. I cause diarrhea. I am a protozoa.
- A. Coccidiosis.
- Q4. I can live in your cattle for 50 to 70 days. Suspect me if your cattle cough after light exercise. I block the air passages and your cattle will have trouble breathing.
- A. Lungworm.
- Q5. I can live for up to 11 years. I spend part of my life cycle in a snail. I am very hard to find until the animal is slaughtered and I am discovered in the liver.
- A. Liver fluke.
- Q6. Two hosts are needed to complete my life cycle. My larvae are very tiny and can only be seen under the microscope. Look for me when your animal "cries".
- A. Eyeworm.
- Q7. I am the most common internal parasite. I cause harm only when there are many of me. Depending on my species, I can be found in either the abomasum or the small intestine.
- A. Roundworm.
- Q8. I can live in the esophagus or near the spinal cord. My adult looks like a bumblebee. I cut holes in the hide to breathe.
- A. Warble fly.
- Q9. I don't bother calves under four or five months of age. I am an irritating blood sucking pest. I rest on the withers, back or underline of cattle - those places where the tail cannot reach me.
- A. Horn fly.
- Q10. I am very tiny - as small as 250 micrometres in length. I live on the surface of the skin. I cause the most common type of mange.
- A. Chorioptic mite.

Level One

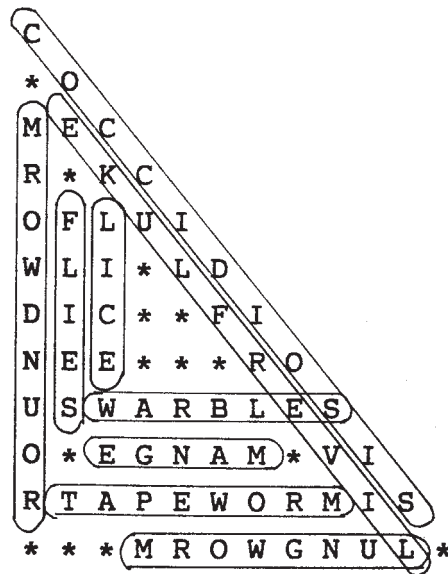
5. Beef Level One - Unit 6, page 6-1. An internal parasite - is an organism which lives inside the body of your animal, getting its life support (food and shelter) from the animal.

Examples: roundworms, tapeworms, coccidiosis, liver flukes, eyeworms and lungworms.

An external parasite - is an organism which lives outside the body of your animal, getting all its life support from your animal.

Examples: mange, warbles, nose bot flies, ticks, and lice.

6. Find the Parasites Beef Level One - Unit 6, page 6-2. These words are in the puzzle - lungworm, tapeworm, mange, warbles, roundworm, flies, lice, liver fluke and coccidiosis.



7. Beef Level One - Unit 6, page 6-4. The way your animal becomes infected will depend on the type of parasite. It may be through sharing corrals, eating grass, or drinking water with infected animals or under infected conditions.

You can prevent your animals from becoming infected by

- following good management practices
- keeping your facilities clean and dry
- following a routine prevention schedule
- recognizing the symptoms of infections.

Level Two

8. Parasite Match 'em Up Beef Level Two - Unit 6, page 6-6.

roundworm *	* caused by a protozoa
coccidiosis *	* difficult to diagnose before slaughter
eyeworms *	* most common internal parasite
lungworms *	* biting or sucking
liver flukes *	* caused by tiny mites
lice *	* bovine parasitic bronchitis
mange *	* two hosts - cattle and flies

Level Three

9. Invite your level three members to share the information they learned about their chosen topic with your club.

Unit Seven**Beef Herd Health****Roll Call**

Name one sign a beef animal shows when it is not healthy.

You may hear some of these answers

fever	dehydrated
depressed	no appetite
weak	rapid breathing
grunting	cough
uncomfortable	restless
droopy ears	runny nose
diarrhea	runny eyes
urinating more	

Objectives**Level One**

1. To learn how to identify healthy and unhealthy animals.
2. To look at how to give medications.
3. To think about preventing disease on the farm.

Level Two

4. To learn how to take the beef animal's temperature.
5. To be able to identify, treat and prevent some diseases found in beef calves.

Level Three

6. To learn more about some of the diseases which can affect feedlot animals.
7. To learn more about vaccinations.
8. To look at herd health management year-round.

**Activities:****For the Entire Club . . .**

1. Invite a guest speaker. A local veterinarian could discuss some of the common diseases he has encountered in beef cattle in your area. The veterinarian may also be able to provide advice on administering drugs or demonstrate some of the equipment he uses.

An animal health sales representative could be invited to discuss certain diseases and how the drugs work to combat these diseases. The representative may also wish to discuss safe handling of drugs, withdrawal periods, labelling and storage.

2. Video - 1002 VT Beef Management Practices-I and 1002-1 VT Beef

Management Practices-II. Consult your 4-H Video Catalogue to find out more about this video.

3. Develop a Jeopardy type game to help all members learn about a variety of different diseases and prevention or treatment techniques. Invite a junior leader, senior member or 4-H volunteer to design this activity.

Level One

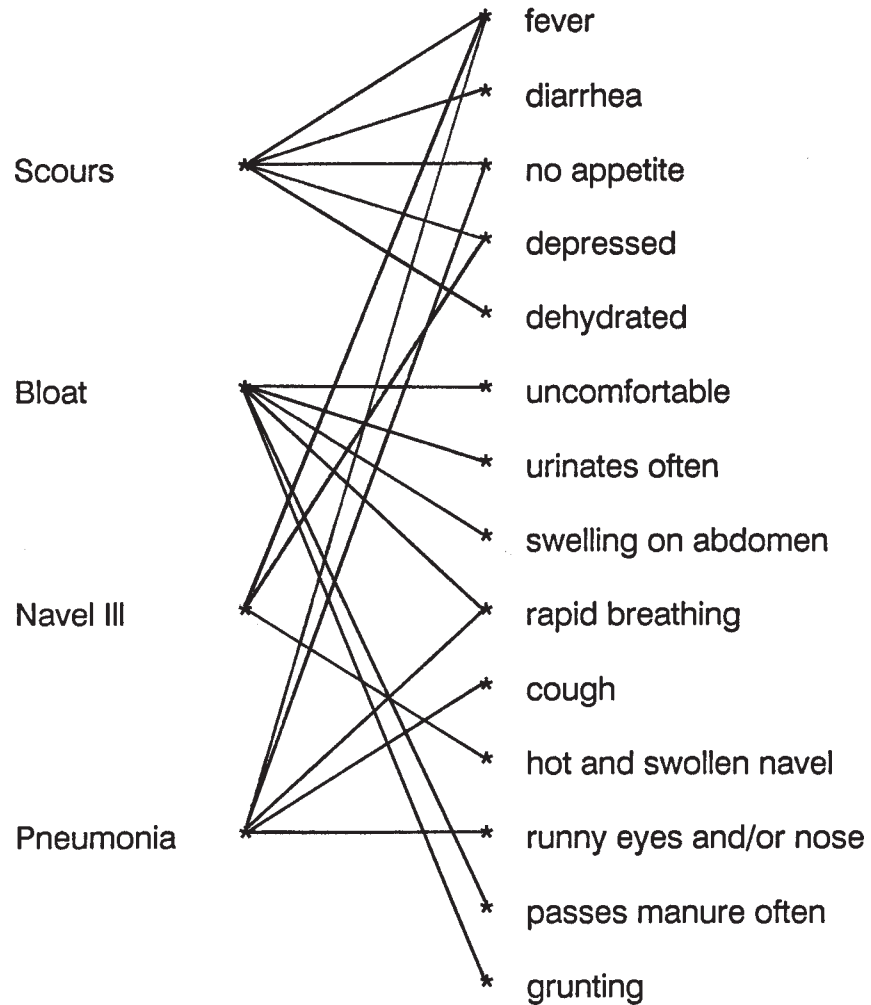
4. The Healthy Calf. Beef Level One - Unit 7, page 7-1. Look at a healthy calf and have your members show you all of the characteristics they can find that indicate the calf is healthy.
5. How are Betsy and Boris? Beef Level One - Unit 7, page 7-3. Boris is healthy and Betsy is unhealthy.
6. Looking at Medicine. Beef Level One - Unit 7, pages 7-3 to 7-4. There are several things which could be demonstrated here: using a balling gun, drenching gun or flexible tube, or injections. Emphasize the importance of following the directions on the bottle.
7. “P” or “N”. Beef Level One - Unit 7, page 7-5.

- | | |
|------|------|
| 1. N | 5. P |
| 2. N | 6. N |
| 3. P | 7. P |
| 4. N | 8. N |

Level Two

8. Taking Your Animal’s Temperature. Beef Level Two - Unit 7, page 7-1. Use the information in this section to demonstrate how to properly take a beef animal’s temperature.
9. “Doctor - I’m Sick”. Beef Level Two - Unit 7, pages 7-4 to 7-5.
 1. Pneumonia might be Buster’s problem.
 2. Flora might have bloat.
 3. James must have navel ill.
 4. Lester is likely suffering from bloat.
 5. Binky’s problem is scours.

10. Know the Symptoms Beef Level Two - Unit 7, page 7-5.



Level Three

11. Invite a level three member(s) to share his or her knowledge of vaccinations or a specific disease with the rest of the club.
12. Discuss herd health preventative measures with your level three members.

Unit Eight**Managing Your Market Steer****Roll Call**

What is the most important part of managing your market steer? Record the answers on a large sheet of paper and put it where all members can see. This will provide a good introduction to some of the topics to be discussed in this unit.

Objectives**Level One**

1. To learn what, when, why, and how, about castration.
2. To learn more about each of the different methods of castration.

Level Two

3. To become aware of the methods and importance of dehorning.
4. To learn about growth stimulants, how they work and the types available.

Level Three

5. To understand the value of preconditioning.

**Activities:****For the entire club . . .**

1. Do a demonstration.

In this unit, demonstrations would be an effective way of helping 4-H members learn the techniques. Have someone give a demonstration of how to:

implant dehorn castrate

2. “This Steer’s On Board”.

This game can be a fun activity for all members in your club. It is designed to get the members thinking about all of the things they need to do to profitably raise a market steer. You will find the games on the last page of this unit. Use these rules

1. You will need
 - one board for every four members
 - one die for each board.
2. Each member should use a coin, button or some other small object as their “man”.
3. Roll the die to determine who goes first.
4. Each member moves spaces according to the number rolled, then follows the direction on the space on which he lands.

5. The first person to land on “On Board” is the winner.
6. Have fun!

Level One

3. Castration. Beef Level One - Unit 8, pages 8-1 to 8-2.

This first page gives members the opportunity to think about castration and their own steer. If the calf has not yet been castrated, they can decide how it should be done and why. You may want to use this as a discussion to introduce the information in the unit.

4. Farm Animal Review. Beef Level One - Unit 8, page 8-3.

Animal	Female	Male	Castrated Male
Sheep	Ewe	Ram	Wether
Cattle	Cow	Bull	Steer
Horse	Mare	Stallion	Gelding
Chicken	Hen	Rooster	Capon
Pig	Sow	Boar	Barrow

5. Now, tell me more . . . Beef Level One - Unit 8, page 8-5.

The instruments which you might use in a non surgical method of castration are the elastrator and burdizzo.

The instruments which you should not use on your calf if he is over six months of age are the knife and elastrator.

Level Two

6. Choose Your Method. Beef Level Two - Unit 8, page 8-3.

This activity provides an opportunity for discussion. Members will choose different methods of dehorning. There is no right or wrong answer, but some answers are better than others.

7. More About Growth Stimulants. Beef Level Two - Unit 8, pages 8-4 to 8-5.

Ralgro

- Ralgro can be used on finishing steers and heifers.
- Implant into the lower portion of the ear about 2.5 cm from the base of the head.
- True - Ralgro should not be used in breeding cattle.

Synovex

- Synovex H is for heifers only. Synovex S is for steers only.
- Implant with Synovex when the animal is 150 kg or more.
- The withdrawal period for Synovex is 0(zero) days.
- Synovex is effective for up to 120 days.

Compudose

- Use Compudose on steers only.
- Compudose is effective up to 200 days.

Rumensin, MGA or both?

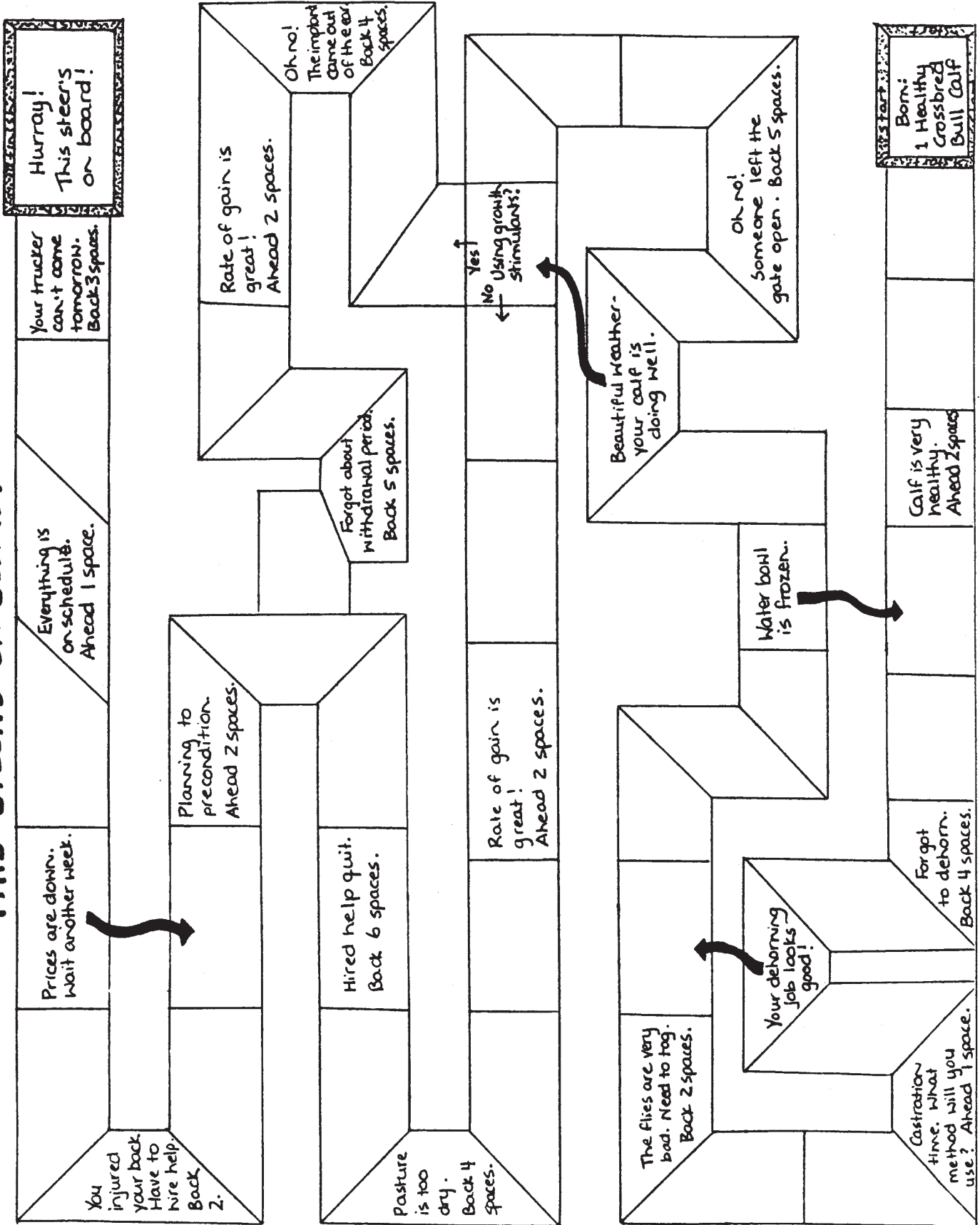
- MGA - Use in feedlot heifers only.
- Rumensin - Use in steers or heifers.
- Rumensin - No withdrawal period.
- MGA - Withdraw at least 24 hours before slaughter.
- both - Increases feed efficiency by approximately 11%.

Level Three

8. Preconditioning

After working through this unit, level three members will have a good understanding of the value of preconditioning. Have the level three members share some information about preconditioning with the rest of the club.

"THIS STEER'S ON BOARD!"



Unit Nine**Beef Cow and Heifer Management**

Roll Call

Tell me one thing you must remember when looking after your beef cows and heifers.

Objectives**Level One**

1. To learn how to manage for healthy cows.
2. To review the nutrients required by cattle.

Level Two

3. To learn about the priority of nutrient usage in beef cattle.
4. To learn about selecting and managing replacement heifers for the herd.
5. To become aware of the importance of culling.

Level Three

6. To learn how, when, and why to condition score beef heifers and cows.
 7. To learn about some of the diseases which can affect beef heifers and cows.
-

**Activities:****For the Entire Club . . .**

1. Invite a guest speaker. Possible topics are
 - cow and heifer diseases
 - condition scoring
 - feeding the heifer

Level One

2. Beef Level One - Unit 9, page 9-1.

The five main nutrients are water, vitamins, minerals, protein and energy.

3. Cow Management - A Word Scramble. Beef Level One - Unit 9, page 9-3.

LYTHEHA		HEALTHY
CTTALIANO		LACTATION
EIADSSE		DISEASE
EGNYER		ENERGY
GNNATEEMMA		MANAGEMENT
TGINOTEAS		GESTATION
EFHIRE		HEIFER

4. Cow Management Review. Beef Level One - Unit 9, page 9-3.

To have healthy calves, you must first have healthy cows. Heifers have greater nutrient requirements than mature cows. Grazing cattle use energy as they move about to find food. Climate affects the cow's nutrient requirements. Cold temperatures, high humidity and strong winds cause the cow's requirements to increase. In early gestation, nutrient requirements do not change very much. However, during the last six to eight weeks before calving, nutrient requirements increase. The cow's nutrient requirements are greatest when she is producing milk.

What three things must you do to keep your cows healthy and productive?

1. Feed them properly.
2. Keep your animals free from disease and injury.
3. Practice good breeding management.

What can you do to practice good management?

- Know the signs a cow shows when in heat.
- Check your cows for signs of heat in the morning and the evening.
- Make sure you have enough healthy fertile bulls.
- Pregnancy check at the end of breeding season.
- Keep accurate records.
- Feed to meet cattle nutrient requirements.
- Adjust feeding programs for individual cows.
- Cull poor performers.

Level Two

5. Minimum Daily Requirements of the Beef Cow.
Beef Level Two - Unit 9, page 9-2.

From the information on the chart, members should note

- Protein, energy and calcium requirements continue to increase as the cow progresses in her pregnancy.
 - Protein, energy and calcium requirements are even greater during lactation than they are during pregnancy.
 - Calcium and protein requirements during lactation are more than double the requirements of early pregnancy.
6. Developing a Successful Culling Program. Beef Level Two - Unit 9, page 9-3.

Why might you cull a cow or heifer from your herd?

- disease (mastitis, prolapse, and so on)
 - injury
 - poor conformation
 - poor growth
 - death
 - reproductive difficulties
7. Would You Cull This Cow or Heifer? Beef Level Two - Unit 9, page 9-4.
1. Yes Mastitis is often a recurring problem in cattle.
 2. No Calves are healthy and no problems are mentioned with the mother.
 3. Yes She is getting older, and will not be able to calve in the next calving season.
 4. Yes Good conformation should be one of your criteria for selecting replacement heifers.
 5. No She is a good performer.

Level Three

8. Invite a level three member(s) to demonstrate condition scoring and explain why, how and when it should be done.
9. Invite a level three member(s) to talk about a disease(s) which affects cows and, or heifers. Have him or her (them) describe how to identify it, and how to prevent it.

Unit Ten**Managing the Beef Herd Sire**

Roll Call

Tell me one thing you must remember when looking after your beef bull(s).

Some of the answers you should hear are

- avoid underfeeding
 - avoid overfeeding
 - give special care to young bulls
 - don't expect them to breed too many cows
 - keep feet in good condition
 - provide room for exercise
 - evaluate semen
 - physically examine bulls
 - cull poor bulls
-

Objectives**Level One**

1. To understand the importance of the herd sire.
2. To introduce how to manage for a healthy bull.

Level Two

3. To learn what to look for when selecting a bull.

Level Three

4. To learn how to manage a young bull.
 5. To become aware of semen collection and evaluation techniques.
 6. To learn about the importance of hoof trimming bulls.
-

**Activities:****For the Entire Club . . .**

1. Invite a veterinarian or an experienced beef producer to discuss and demonstrate how he or she conducts a breeding soundness examination on potential herd sires.
2. Visit an AI centre. Watch how semen is collected from bulls. Look at semen through the microscope and learn more about how it is examined and tested.
3. Judge a class of young bulls as potential herd sires. Discuss the goals you wish to achieve as a breeder and have members base their placings on that. Include reasons and a discussion to conclude.
4. Invite a beef producer to discuss how he or she selects replacement herd sires.

5. Play the board game "HE'S A HAPPENING HERD SIRE" which is in Beef Leader - Unit 10, page 10-4.
 - Use one board game for every four members (photocopy to make extra games).
 - Supply one die for each board.
 - Have members roll the die - highest number goes first.
 - Members need only a coin or button to use as their "man" to move about the board.

Level One

6. Beef Level One - Unit 10, page 10-2.

Deficient means that something is not complete. If something (a mineral or vitamin) is deficient in a diet, there is not enough of it to meet the needs of the animal.

7. Beef Level One - Unit 10, page 10-3.

Why is (are) the herd bull(s) so important?

The bull determines the number of calves born, the length of the calving period, the growth rate of the calves, the calving ease and the genetic value of the herd.

What can you do to keep your herd bull(s) healthy and fertile?

Provide good nutrition, control disease, parasites and health problems, and practice good breeding management. Further information on these is in the junior material.

8. Test Your Bull Knowledge. Beef Level One - Unit 10, page 10-4.

Following is the solution for this matching activity. You may find it fun to make up cards for each of these and have members work on a table to match them up.

easy keepers	*		*	low fertility
maintenance	*		*	determines the number of bulls needed
Vit A deficiency	*		*	desire to breed
bull	*		*	for the small yearling bull
libido	*		*	determines the number of calves born
overfeeding	*		*	abnormal sperm
phosphorus	*		*	causes foot and leg problems
pasture size	*		*	keeps your bull in healthy condition
10 cows	*		*	usually do not need extra gain

Level Two

9. Invite a producer to demonstrate how to accurately measure scrotal circumference of the beef bull and to discuss how he or she uses the results.
10. Let's Review. Beef Level Two - Unit 10, page 10-4.

Using a bull at your meeting, work through these questions with your members.

Level Three

11. Encourage members to spend time discussing the use of young bulls with a farmer.
12. Invite a level three member to explain to other club members why and how semen is collected. Have him or her describe the characteristics of normal semen.
13. Examine the condition of the feet of the cattle in a herd. Do they need trimming? Discuss why or why not. Invite a foot trimmer to demonstrate the proper trimming of feet.

" HE'S A HAPPENING HERD SIRE "

Calving season is very spread out. → Cows calve easily. Go Ahead 2. → Problems with dystocia. Go back 4. → **FINISH** You've got a strong, healthy calf crop.

You didn't pregnancy test. → 90% of your cows are pregnant. Go Ahead 3. → You provide lots of opportunity for exercise. Go Ahead 4. → You give your young sire a rest. Go Ahead 2. → **START** It's time to find herd sires.

Scrotal circumference is over 34cm. Go Ahead 2. → Bulls are very active. High libido. → Will you be using any young sires? → Yes → You put your young sire with 25 cows. Go back 4. → You trim hooves - Go Ahead 3. → Testicle shape and size are normal.

You rest your sires. Go ahead 2. → Bulls look like "easy keepers" → You will need to replace a bull. Go back 2. → Your bull has injured his leg. → Bulls have potential to be good herd sires. → You trim hooves - Go Ahead 3. → Time to plan for breeding soundness exams → 8 weeks to the start of breeding season → **START** It's time to find herd sires.

Bulls should receive 25 g Photos plus 25 g Back 5 spaces. → Bulls look like "easy keepers" → You will need to replace a bull. Go back 2. → Your bulls look strong + healthy. Go Ahead 3. → Bulls have potential to be good herd sires. → You trim hooves - Go Ahead 3. → Time to plan for breeding soundness exams → 8 weeks to the start of breeding season → **START** It's time to find herd sires.

Unit Eleven**Beef Breeding**

Roll Call

Tell me one thing you know about breeding beef cattle.

This should provide a good introduction into this topic. Record the answers on a blackboard or a large sheet of paper. A page from the classified ads section of your newspaper works well for recording and displaying information.

Objectives**Level One**

1. To introduce members to the reproductive cycle of the beef female.
2. To learn how to identify cows in the different stages of heat.
3. To learn the difference between natural and artificial breeding.

Level Two

4. To learn the structures of the male and female reproductive systems.
5. To become aware of the importance of pregnancy testing females.
6. To become aware of the importance of maintaining short calving intervals.

Level Three

7. To introduce the technique of artificial insemination.
 8. To learn about synchronized breeding programs.
 9. To learn about the heat detection aids which are available.
-

**Activities:****For the Entire Club . . .**

1. Divide your members into two groups. Give each group a large sheet of paper and a marker. Give one group the topic of natural breeding and the other artificial insemination. Have each group come up with as many advantages as they can for their method of breeding.

Debrief this activity by discussing the advantages and disadvantages of each method of breeding. Point out that individual farmer preference also affects the method he or she chooses.

2. Debate. Give half your club members the topic of natural breeding and the other half the topic of artificial insemination. Give the teams 15 minutes to prepare their information for a debate on artificial insemination vs. natural breeding. You may want to invite one member to moderate the debate.
3. Invite an artificial insemination technician to demonstrate and discuss artificial insemination of beef cattle. Display the vial of semen and have members look at the information on it.

4. Show a video. Consult your 4-H Video Catalogue to find out more about available videos and how you can obtain them for use in your club.

Level One

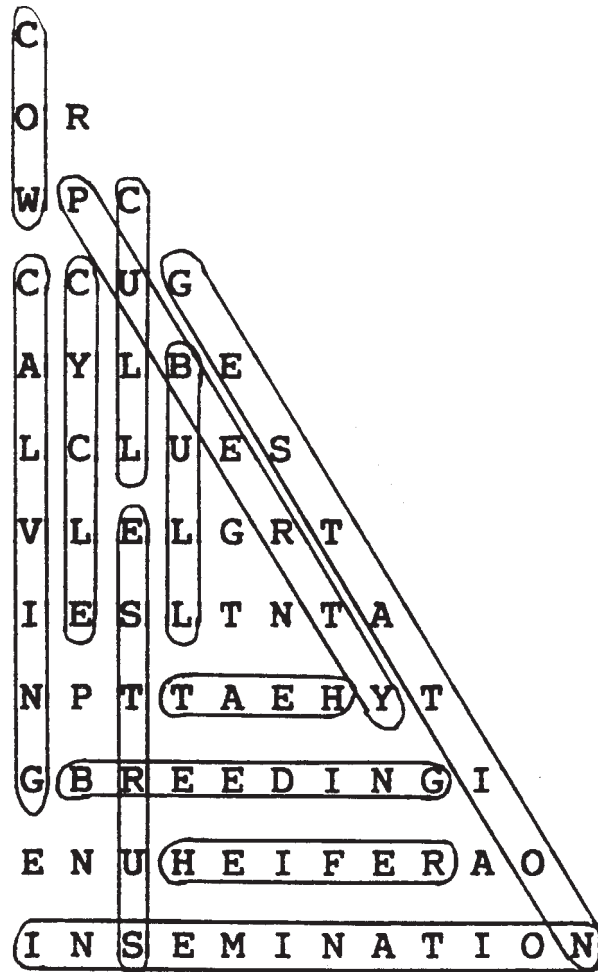
5. Beef Level One - Unit 11, page 11-1.

If this cow was bred....	Watch her for signs of heat at this time....
Betsy was bred on September 15th.	October 6th
Susan was bred two days ago.	19 days from today
Samantha was bred 15 days ago.	6 days from today
Lisa was bred this morning.	21 days from today

6. If you are holding this meeting at a farm during breeding season, have members identify the cows that are in heat. If it is not breeding season, invite a producer to discuss how and when he or she identifies females in heat.
7. Gestation Period. Beef Level One - Unit 11, page 11-2.

To help members understand how long this period of gestation really is, have them figure out when a cow will calve, given her breeding date. Using today as the breeding date, the cow will calve approximately 283 days from today. Then give members more dates of breeding and have them become familiar with figuring out due dates. Point out that this date is only approximate and can range anywhere from two weeks before to two weeks after. Only 4% actually calve on their due date.

8. Find the Repro Word. Beef Level One - Unit 11, page 11-4.



“At the end of the breeding season, you want all of your cows and heifers to be P R E G N A N T.”

Level Two

9. Is Your Cow Pregnant? Beef Level Two - Unit 11, page 11-3.

Some of the advantages of early pregnancy detection are

- It gives early warning of breeding problems such as infertility, abortions, and so on.
 - You can avoid further expenses on non-pregnant cows by culling them immediately.
 - If you want to keep the non-pregnant cow and rebreed her, you can do it immediately without extending the calving season any longer.
 - It can guarantee pregnancy in females you are selling pregnant or for breeding purposes.
10. Invite a veterinarian or experienced beef producer to demonstrate and discuss pregnancy detection in beef females.

11. The Calving Interval. Beef Level Two - Unit 11, page 11-4.

Working in groups of two or three, have members sit down and figure out the calving intervals and decide whether or not they would keep these cows. Come together as a large group and make some decisions about these cows. Not all members will agree, but they should be able to explain why and how they decided. The answers are not as important as the learning which will occur through discussion.

12. Repro Summary. Beef Level Two - Unit 11, page 11-5.

gestation	*-----*	approximately 283 days
palpation	* *	ideal calving interval
estrus	* *	hormone which gives the bull his masculine appearance
testicles	* *	where the fetus or baby calf grows and develops during pregnancy
testosterone	* *	semen is placed in the female reproductive tract using artificial techniques
12 months	* *	occurs about every 21 days
calving interval	* *	almond shaped
uterus	* *	produce the sperm
AI	* *	pregnancy test
ovaries	* *	length of time between the birth of one calf and the next

Level Three

- 13. Have a level three member display and discuss the information on a straw of semen.
- 14. Have your level three members work together to provide a display and discussion of heat detection aids which can be used in the beef industry.

Unit Twelve**Calving**

Roll Call

How can you tell your cow will soon calve?

Some of the answers you will hear include:

- udder begins to fill with milk or “bags up”
 - her belly “drops” or looks heavier
 - vulva relaxes
 - ligaments on both sides of the tail head relax and sink
 - becomes restless
 - isolates herself from other cattle
 - lies down and gets up often
 - raises her tail head
 - stops eating
 - tries to urinate often
 - discharges a thick mucus from the vulva.
-

Objectives**Level One**

1. To recognize the signs a cow shows when calving is near.
2. To recognize the stages of labour the cow goes through in calving.
3. To know the normal birthing position of the calf.

Level Two

4. To understand how dystocia can affect the calf, the cow and the beef producer.
5. To learn how the position of the calf can be corrected.
6. To learn how to correctly assist the delivery of the calf.

Level Three

7. To become aware of some of the problems the cow may encounter after calving.
 8. To learn about some of the other problems that may be encountered during calving.
 9. To think about coping with calving.
-

**Activities:****For the Entire Club . . .**

1. Show a Video.

Consult your 4-H Video Catalogue to find out more about videos which are available for use in your club.

2. View a Calving.
If possible, view a calving on a beef or dairy farm.
3. Invite a veterinarian or experienced beef producer to discuss how he or she deals with calving season and the problems which may occur.

Level One

4. Which Stage? Beef Level One - Unit 12, page 12-3.

Following are the solutions. Encourage the members to ask questions as they work through this exercise.

- II Suzy has been straining for 20 minutes.
- I Marylou is wandering restlessly around the calving pen.
- I Belinda's water sac has just broken.
- II Betsy has just laid down in the straw. Half an hour ago she was really uneasy and nervous.
- II You can see the front legs of a calf coming out of Maisy.
- I Lisa is bawling and very restless.
- III Candy just delivered a strong healthy heifer calf 10 minutes ago.

5. Put It In Order. Beef Level One - Unit 12, page 12-4.

Following are the solutions. As you work through the exercise, discuss which stage these steps occur in. This is indicated in brackets.

- 1 Udder fills with milk. (I)
- 11 Calf nurses for the first time. (III)
- 2 Mother becomes restless. (I)
- 4 Contractions about 15 minutes apart. (I)
- 6 Calf enters birth canal. (I)
- 8 Calf's front legs and head appear. (II)
- 12 Afterbirth comes out. (III)
- 3 Calf changes position in uterus. (I)
- 9 Calf's head and shoulders appear. (II)
- 7 Contractions are two minutes (or less) apart. (II)
- 5 Water sac is broken. (I)
- 10 Calf's hips and hind legs appear. (II)

Level Two

6. Identify the Problem. Beef Level Two - Unit 12, page 12-5.

The solutions are as follows:

1. Front feet first with the head bent down between the knees.
2. Front feet first with the head twisted backwards.
3. Breech calf - backwards with rear legs tucked under its body.
4. Normal forward birthing position.
5. Head and one leg first with other leg crossed over neck.
6. Breech calf - backwards with hind feet first.

Information about how to correct these problems is in the intermediate unit.

7. Demonstrate the proper use of calving chains on a volunteer. Have your volunteer bend slightly at the waist and hold his or her arms out in front as if he or she was going to dive. Attach the chains loosely on his or her wrists. Follow the directions in Beef Level Two - Unit 12, pages 12-3 to 12-4.
8. Have members share any experiences they have had or seen in delivering calves.

Level Three

9. Invite a level three member(s) to share information on another calving problem.
10. Invite a level three member(s) to share information on his or her (their) survey on calving ease.

Unit Thirteen**The Newborn Calf**

Roll Call

When was your project calf born?

Objectives**Level One**

1. To learn about the importance of making sure the calf receives colostrum soon after birth.
2. To learn about the contents of colostrum.
3. To know the characteristics of a healthy calf.

Level Two

4. To review the importance of colostrum for the newborn calf.
5. To learn about calf scours and pneumonia and how they can affect the newborn calf.

Level Three

6. To learn about creep feeding calves.
 7. To study the behaviour of the newborn calf and its mother.
 8. To learn about and demonstrate how to freeze colostrum.
-

**Activities:****For the Entire Club . . .**

1. Consult your 4-H Video Catalogue to find out about videos and how to obtain them for use in your club. One suggestion is video 422-5 VT *The Lively Calf*.
2. Illustrate how much milk a calf needs. Ask members how much milk they should feed a 54.5 kg (120 lb) calf per day during nice weather and during cold weather.

Nice Weather - approximately 5.5 to 7.5 kg (12-15 lbs)

Very Cold Weather - approximately 7.5 to 8.0 kg (15-18 lbs)

To help them understand exactly how much this is, have them measure this out by filling a pail with what they think is 3 kg of water. Three kg would be the approximate amount for one feeding for a 60 kg calf. (A calf should eat 10 to 12% of its bodyweight in milk per day.) Use a bathroom scale to find out who came the closest to this amount.

Level One

3. The Healthy Calf. Beef Level One - Unit 13, page 13-1.

Lead a discussion about the healthy calf. Ask members how they can tell when a calf is healthy. You may want to take them to a pen with calves and have the members answer while they look at the calves.

Signs that a calf is healthy include:

- bright eyes
- good appetite
- steady on legs
- moves about easily
- raised head and ears
- active
- healthy, shiny hair coat

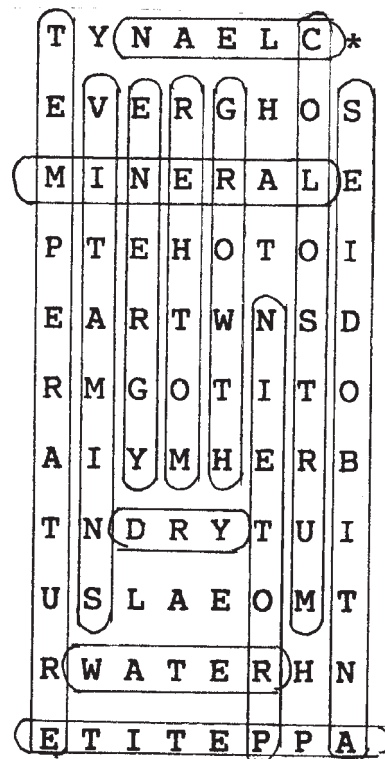
4. Demonstrate how to dip the navel. Show the product(s) which should be used.
5. If possible, show members a sample of colostrum and a sample of whole milk. (If you cannot get colostrum, maybe a neighbouring dairy farmer would give you some.) On a piece of paper beside each, create a list of the characteristics. Include visual and content characteristics. On Beef Level One - Unit 13, page 13-2 you will find the contents of each.
6. Demonstrate how to correctly take the temperature and determine the respiration rate of a calf. More information is on Beef Level One - Unit 13, page 13-3. Have members practice.
7. The First Month. Beef Level One - Unit 13, page 13-4.
1. The best milk for the calf comes from its mother.
 2. The most important things the calf receives from the colostrum are the antibodies.
 3. Vitamins and minerals are also found in the colostrum.
 4. It is important to make sure that your newborn calf receives the colostrum as quickly as possible.
 5. If you have extra colostrum, it is a good idea to freeze it.
 6. When you feed a calf artificially, you feed it milk replacer in place of milk.
 7. Your goal is to raise strong, healthy calves.
 8. Feeding the newborn calf properly is important for its future growth.
 9. Be sure to provide a good supply of fresh, clean water.

If you want to take this further, work with members to create two lists, one with the characteristics of a healthy calf and the other with the characteristics of a not-so-healthy calf.

Level Two

8. Let's Review About Colostrum. Beef Level Two - Unit 13, page 13-1.
 1. Colostrum is important for newborn calves because it supplies disease fighters called antibodies.
 2. A young calf should receive approximately 10 to 12% of its bodyweight in colostrum per day.
 3. Colostrum can be frozen so you always have a supply available.
 4. Colostrum is also high in vitamin A, protein and contains a laxative.
 5. The newborn calf can absorb the nutrients from the colostrum for only the first 12 to 24 hours after birth.
 6. Colostrum is thick, rich and yellowish in colour.
 7. If the calf is unable to suckle, you can give it colostrum using an esophageal tube.
9. What's The Problem. Beef Level Two - Unit 13, page 13-4.
 1. Charlie shows the symptoms of pneumonia. Keep him in a warm and dry place. Make sure he gets enough colostrum or milk and contact your veterinarian for advice on antibiotics.
 2. Lindy could possibly have calf scours. However, you cannot be sure. Contact your veterinarian and have him or her identify the problem. If the problem is enteritis, isolate the calf, feed it electrolytes and antibiotics as recommended by the veterinarian.
 3. The twins show the symptoms of nutritional scours. Clean and disinfect the pails, your clothes and their pens. Make sure they are in a clean and dry area, and receive electrolytes and the proper amount of milk (10-12% of their bodyweight per day). Contact your veterinarian if their condition does not soon improve.
10. Invite a producer or a veterinarian to display different electrolyte solutions and demonstrate how they should be fed. Have him or her talk about when and how he or she decides if a calf needs electrolytes.

11. Keep Your Newborn Calves Healthy. Beef Level Two - Unit 13, page 13-4.



The remaining letters spell the word which completes this sentence:

“As a beef producer, one of your goals is to produce strong, healthy calves.”

Level Three

12. Invite senior members to share information with other members in the club about creep feeding, the behaviour of the newborn calf and its mother, or freezing colostrum.

Unit Fourteen**Beef Cattle Handling and Facilities**

Roll Call

What is one thing to remember when working with beef cattle?

Objectives**Level One**

1. To understand the basics of cattle behaviour.
2. To learn how to make a quick release knot.
3. To learn about other knots which can be used.

Level Two

4. To learn the purpose of and be able to identify each part of cattle handling facilities.

Level Three

5. To understand more about cattle behaviour.
 6. To learn and demonstrate how to make an adjustable rope halter.
 7. To know the recommended dimensions of various cattle handling facilities.
-

**Activities:****For the Entire Club . . .**

1. Invite a guest speaker. Here are some suggestions:
 - trucker to discuss hauling and handling beef cattle
 - rancher to discuss ropes and, or working with cattle
 - someone experienced with building and designing beef cattle facilities to discuss how and why she or he builds these facilities.
2. View a video. Consult your 4-H Video Catalogue to find out what videos would be suitable for you and your club members.
3. Demonstrate how to load and transport beef cattle. Experienced beef handlers will have their own tips on what works best for them and why. Include loading for both market and show.

Level One

4. The Quick Release Knot. Beef Level One - Unit 14, page 14-2. It is important that all people working with cattle know how to make and release this knot. Spend time with your members practising how to make the quick release knot. Show them how firmly it holds when stressed and how to release it with a simple tug. You may want to tie a halter around a calf and tie the calf to a post using this knot.

5. Let's Work. Beef Level One - Unit 14, pages 14-2 to 14-3. Members can have fun working their way through this maze on their own or in groups. Add more situations if you like.
6. Release It. Beef Level One - Unit 14, page 14-4. This activity is designed to get members thinking not only about the knot but also about working with their animals. Some ideas are listed below. Encourage the members to come up with their own ideas - anything they can relate to this topic is fair game.

Q - quick, quiet, quality	R - restrain, rope halter
U - untie	E - excited
I - avoids injury	L - loop, little
C - cattle, control, good	E - emergency
K - kick	A - active
	S - safety, sharp feet
	E - easy to untie

7. More Knots. Beef Level One - Unit 14, page 14-4. If you have the time and interest, create each of these knots to show your members. Have them practice tying these knots themselves. Discuss when and why you might use them.

Level Two

8. If possible, tour a farm with a variety of cattle handling facilities. Invite the host(s) to show members how each of the parts of the facilities work. Discuss the advantages and disadvantages of each part as you view it.

9. Looking at Beef Facilities. Beef Level Two - Unit 14, page 14-4.

headgate	*	*	used to move cattle in single file into the working chute
loading chute	*	*	lines up and holds the cattle in single file ready to enter the headgate or squeeze
squeeze	*	*	safely and securely restrains cattle
crowding pen	*	*	allows you to separate an animal from the group
cutting gate	*	*	prevents an animal from moving forward or back
back stop	*	*	prevents an animal from backing up
cattle guard	*	*	prevents an animal from kicking the worker
man gate	*	*	holds the animal by its sides, giving you greater control
scale	*	*	used for weighing the animal
kick bars	*	*	holds cattle before they enter the working area
working chute	*	*	for the safety and convenience of the worker
holding pen	*	*	used to move cattle up, usually onto a truck
blocking gate	*	*	allows you and a vehicle, but not the cattle, to enter a pen or yard

10. The Large Working Corral. Beef Level Two - Unit 14, page 14-5.

1. loading ramp	9. scale
2. fencing	10. curved chute
3. gate	11. cat walk
4. waterer	12. man gate
5. holding pen	13. squeeze with headgate
6. crowding gate	14. sorting gate
7. collecting area	15. concrete
8. crowding pen	

11. What Do You Think. Beef Level Two - Unit 14, page 14-6.

Following are some thoughts about each of the cattle handling facilities.

Encourage your members to discuss and come up with their own thoughts.

1. The chute is slippery because the cattle are bringing mud and, or wet feet up the chute. It should be located in a dry area.
2. Chutes should only be wide enough to handle one animal at a time.
3. This person will find that she or he will need to have some sort of facility, especially when working with older and untrained cattle.
4. The bright light shining in the eyes of cattle makes them stop. They cannot see where they are going. The area should be lit, but don't shine the light into their eyes.

Level Three

12. Invite a level three member(s) to present a short skit to demonstrate the behaviour of cattle.
13. Invite a level three member(s) to demonstrate how to make an adjustable rope halter. You may want to have several level three members each make a rope halter. Your whole club could then judge a class of rope halters to practise judging skills.

Unit Fifteen**Range and Pasture Management**

Roll Call

What is one thing you might find on the land where you graze your cattle?

This question should provide a good introduction to this unit. Encourage members to use their imagination. Answers will include everything from fences, plants and gates to cattle, horses and wild animals.

Objectives**Level One**

1. To learn the difference between range and pasture land.
2. To learn why and how to properly manage range and, or pasture land.
3. To become familiar with different types of range and pasture plants.

Level Two

4. To be able to determine the stocking rate for range or pasture land.
5. To become familiar with the factors which can affect how the land is grazed.
6. To realize that forages differ in their values.

Level Three

7. To know the differences between types of grazing systems.
8. To be able to determine range condition.
9. To learn more about plants which can harm cattle.

Note for all leaders:

The 4-H Range Project, a supplemental project specially designed for young members, is available to 4-H clubs. Contact your regional 4-H specialist for more information.

**Activities:****For the Entire Club . . .**

1. Invite a guest speaker. Suggestions include the following:
 - A member of a forage association to discuss range management, choosing a pasture site, forage quality or poisonous plants.
 - A veterinarian to discuss poisonous plants, symptoms, treatment and diagnosis of poisoning.
 - A range management or grazing specialist to discuss any aspect of range management.
 - A grazing reserve manager to discuss his or her reserve.

2. Show a video. Consult your 4-H Video Catalogue or your local district agriculture office to find out more about videos available for use in your club.
3. View and tour a large range. Make sure members notice the variety of land areas and plants.

Level One

4. Range or Pasture? Beef Level One - Unit 15, page 15-1.

Invite members to share information about their farm or ranch. How much land is range and how much is pasture? What differences do they notice between these? Take a few minutes to identify whether certain local land is range or pasture.

5. Good Range and Pasture Management. Beef Level One - Unit 15, page 15-2.

Emphasize the importance of practising good management of your range and, or pasture.

Using a large sheet of paper, such as a sheet from the classified ads section of your newspaper, a blackboard or a white board, divide it in two by drawing a line down the centre. Put the heading "Good" (a well-managed range or pasture) on one side and "Bad" (a poorly managed range or pasture) on the other.

Ask members to tell you the characteristics of the pasture on each side. Have members record them. Conclude your discussion by asking members which one they would rather have. Emphasize again the importance of practising good pasture and, or range management.

6. Word Scramble. Beef Level One - Unit 15, page 15-3.

ZAERG	- graze
RSTUPAE	- pasture
NMGEAA	- manage
NGREA	- range
SSBRHU	- shrubs
BROFS	- forbs
SSSEARG	- grasses
SSHRUE	- rushes
DGSSEE	- sedges

7. Range Review. Beef Level One - Unit 15, page 15-4.

Use this page however you wish in your club, but try to avoid assigning it for "homework". All of the solutions can be found in the level one material.

Level Two

8. The Stocking Rate. Beef Level Two - Unit 15, pages 15-1 to 15-2.

Lots of information is available on this topic. If you want more for your members, contact your local Alberta Agriculture office and they can point you in the right direction. You may want to practise measuring the forage production on the land by following the method in the level two material, or other recommended methods. Emphasize that the production will vary among different ranges or pasture and depending on soil, topography, climate and condition of pasture.

9. Pete's Problem. Beef Level Two - Unit 15, page 15-2.

Encourage members to help Pete solve his problem. Have members work in teams, or if your club is small, work together as a group to figure out how long Pete should put his 10 cows on the field.

Information given:

- 10 cows
- one cow eats 12 kg of forage per day
- 20 hectares of land
- 500 kg of forage per hectare - but we know that with good grazing management, you only graze half of this forage or 250 kg.

Solution:

- one cow will eat 12 kg of forage per day
- 10 cows will eat $10 \times 12 = 120$ kg of forage per day
- The field produces 20×250 kg = 5000 kg of available forage (Remember we will only be grazing half and you need to remember the 25% wastage factor.)
- $5000 \text{ kg} : 150 \text{ kg/day} = 33$ days

Therefore, Pete should put his cows out on this land for approximately 33 days or five weeks.

If you wish, design a problem (or have a level three member do it) which is specific to your local conditions. Have members work together to solve it.

10. Range Review. Beef Level Two - Unit 15, page 15-4.

- | | |
|-----------------|---------------|
| 1. range | 6. varies |
| 2. pasture | 7. units |
| 3. good | 8. rate |
| 4. palatability | 9. month |
| 5. animals | 10. trampling |

Level Three

11. Grazing Systems. Beef Level Three - Unit 15, pages 15-1 to 15-2.

There are several ways you can approach this topic:

- Invite someone to speak about his or her grazing system and how and why it works for him or her.
- Have members work together to plan a grazing system for a specific land area.
- Have a level three member(s) explain, in a brief presentation to other members, all about grazing systems.
- Have a level three member(s) design his or her (their) plan and share it with other members of the club.

12. Range Condition. Beef Level Three - Unit 15, page 15-3.

Encourage members to practise determining range condition.

13. Poisonous Plants. Beef Level Three - Unit 15, page 15-4.

Encourage level three members to learn more about plants which can harm their livestock. A good way of doing this is to have them share their information with the rest of the club.

Unit Sixteen**Record Keeping****Roll Call**

What is one record you keep on your (or a neighbour's) farm? Encourage members to think of any kind of record - from long distance phone calls and household food expenses to feed, veterinary and breeding costs.

Objectives**Level One**

1. To understand why records are kept on farms.
2. To learn some of the different types of records which are kept on farms.

Level Two

3. To look at what is involved in deciding on a farm record keeping system.
4. To learn about performance records for beef cattle, using weaning weights as examples.
5. To look at the farm records on a specific farm.

Level Three

6. To decide which method of keeping farm records is best for individual operations and why.
7. To learn about different computer record keeping programs available on the market today.
8. To learn how to use records to identify breeding goals.

**Activities:****For the Entire Club . . .**

1. Because the systems used for keeping records vary greatly from farm to farm, only a limited amount of specific information has been included in this unit. Members will benefit most from looking at actual farm records and record keeping systems and holding discussions with people in the business.

Invite a guest speaker. Suggestions include:

- A local bank manager to discuss his or her views on the types of records and information important in the business of lending or borrowing money.
- A beef specialist or farm management specialist to discuss the record keeping assistance available from the provincial agriculture department.
- A local beef producer to discuss his or her methods of farm record keeping.
- A local computer supplier to discuss current trends in computer usage.

- An accountant to discuss farm accounting practices.
- A local auction mart representative to discuss how she or he keeps records.

Level One

2. Pedigrees. Beef Level One - Unit 16, page 16-2.

If someone in your club has an interest in family histories, you could have a lot of fun with this section. If someone has a family history book, have him or her bring it to the meeting so members can have a look and see what kinds of things are included. A simple pedigree or family tree is in the member unit. Encourage members to complete this for their family. You might want to have members do the same for a dog, pet or their calf.

3. What Would You Do ... Beef Level One - Unit 16, page 16-4.

The objective of this activity is to help level one members understand how good record keeping systems will help them begin to solve problems. Encourage members to answer each of the questions. Have them think of how good records would help them with each situation. Following are some ideas for solutions.

- A If you always carry a notebook and pencil in your pocket, you could jot down the numbers of the cows, calves and weights. It would only take a few seconds, and you could transfer them to your records later, when you have time.
- B Check your breeding records. You should know that the length of the gestation period is 283 days. The cow or heifer will calve approximately 283 days after being successfully bred.
- C One of the things you might want to include in your breeding records each year is the length of time from the first calving of the season to the last calving. By keeping this record, you can compare your numbers over the years and see what your trend is.
- D It is important to enter all of your information into the computer or your farm record books to keep your records up-to-date and accurate. Set aside a period of time every week or two weeks for entering data. By using the same time period every week, it will be easier to schedule your other work around this time. You might want to set an alternate time as well.
- E If your records are complete, all your feed costs will be included. Simply look at the totals for the previous years and compare these numbers to what you have spent on feed so far this year. Keep your records up-to-date and you will have some very accurate information.

Level Two

4. Where and how do you keep farm records? Beef Level Two - Unit 16, page 16-1.
5. Performance Records on Beef Cattle. Beef Level Two - Unit 16, page 16-3.

The weaning weight is just one of several performance records which can be used as a management tool on the beef farm.

To calculate May's 205 day adjusted weaning weight:

$$205 \text{ day wt} = \frac{(202 - 25)}{220} \times 205 + 25 = 190 \text{ kg}$$

Because the dam is eight years old, there is no need to make any adjustment. May's adjusted 205 day weaning weight is 190 kg.

May and Allie both have 205 day weaning weights which are above average for their group. They have the genetic potential to be superior animals.

6. Looking at a Farm. Beef Level Two - Unit 16, page 16-5.

This exercise will be valuable to help members further understand the benefits that records can provide.

Level Three

7. All three of the activities in the level three unit will help members further understand the benefits of record keeping on the farm.

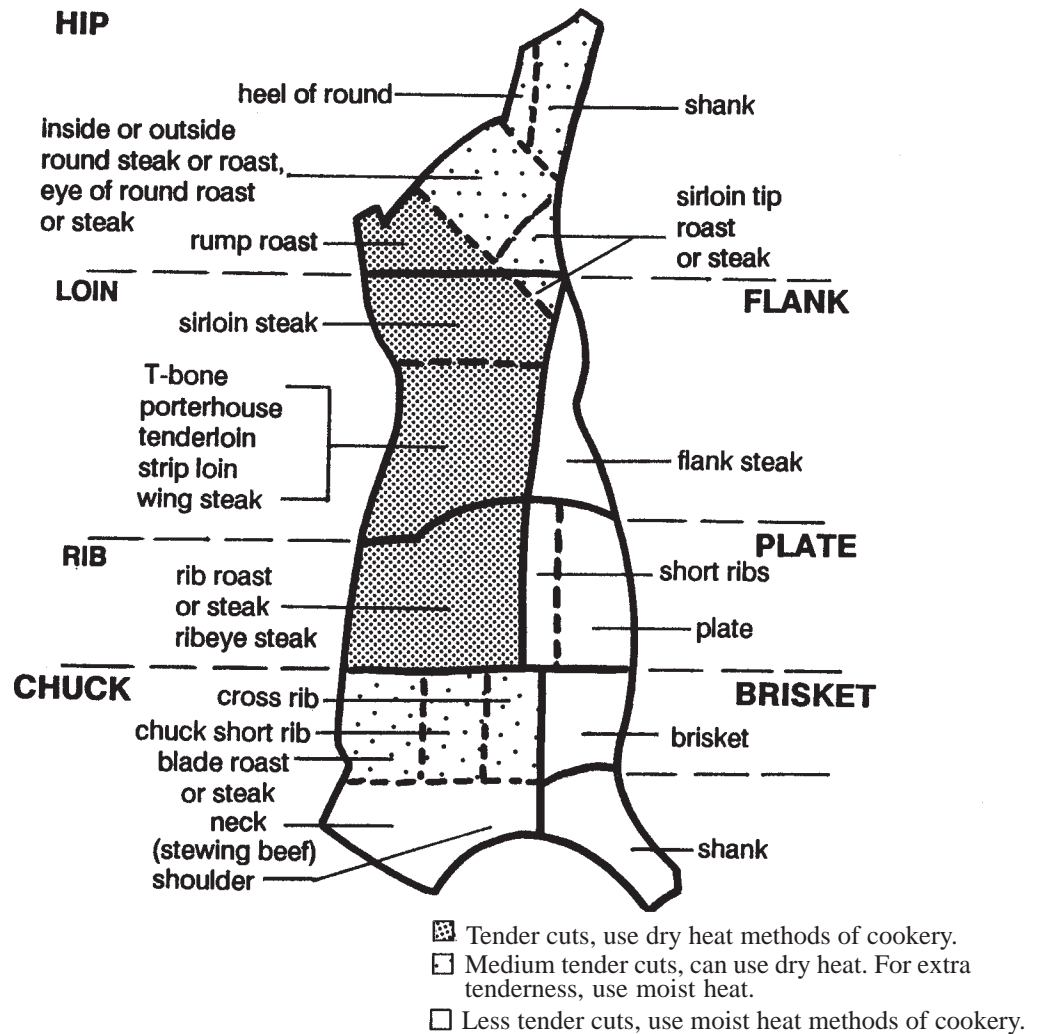
Unit Seventeen

The Beef Carcass

Roll Call

Name a beef cut.

Beef Cuts Chart



Objectives

Level One

1. To learn what makes up a carcass.
2. To learn what the parts of the carcass are.
3. To learn why and how we grade beef.
4. To become familiar with some of the carcass terminology.
5. To learn where to find the parts of the carcass on the live animal.

Level Two

6. To learn what the consumer looks for in purchasing beef.
7. To learn how to produce a desirable carcass.
8. To become familiar with the concept of heritability and how it affects carcass traits.
9. To learn some of the other uses of beef.

Level Three

10. To become aware of some of the issues facing beef producers today.
11. To understand the recent changes to Canada's beef grading system.

We must produce the quality of beef demanded by our market.

Background Information

It is easy for 4-H members to lose sight of the overall objective of the beef industry. This objective is to continuously improve the genetics of the beef animal in order to provide a profitable, consistent and high quality product to meet the demand of the consumer. Members can get caught up in the show ring aspects of beef production because the ribbons, trophies and awards are viewed as determinants of success.

We want the members to become interested in producing a quality carcass which can be produced economically. Most often, this has nothing to do with the show ring or the placing on Achievement Day. It is essential that the members gain a sound understanding of the beef animal and what it should look like underneath the hide - that is what the consumer is paying for.

A strong understanding of the beef carcass will assist members in their future cattle decisions. It will also make them more mindful of the many issues surrounding beef production today.

Ideas for the whole club ...



Activities:

1. Visit a packing plant, local slaughterhouse or a butcher.
2. Mark the live animal.

Using chalk or powder, draw lines on the live beef animal to show where the beef cuts are located. Have the members feel the animal to determine the amount of muscle or fat in each area.

As an additional activity, take pictures of the marked animal. Keep them on file for future reference.

3. Do a consumer survey.

At the end of this unit is a sample consumer survey. Have the members use this, or design their own, to determine consumer buying habits, tastes and preferences. A local grocery store or butcher shop is an excellent place to find consumers. Discuss the findings as a club. Prepare a summary of your findings. You may even want to have your results published in the local newspaper.

4. Beef Tasting Extravaganza or Mystery Beef Dinner.

Have a beef tasting extravaganza or dinner involving all the 4-H families. Have each family prepare a different beef dish. In order to have a wide variety of dishes, select the recipes at the beginning and have each family draw one from a hat.

Share the dishes so everyone has a chance to taste them all. Prepare an information card for each with the cut, the method of preparation and the recipe.

5. Carcass Quiz.

Design a beef carcass quiz for all members to complete. This would be a good exercise for a senior member or junior leader.

6. Have a guest speaker.

The Alberta Cattle Commission has representatives who are knowledgeable in many areas. Some of these areas include:

- current issues facing beef producers
- the Commission's proactive approach to marketing beef
- changing consumer tastes
- tastes according to ethnic backgrounds
- entering new markets.

Contact the Cattle Commission, or your local breed association and find out who they might recommend as speakers in your area.

7. Carcass Judging.

Have a carcass judging competition either in conjunction with your Achievement Day or at a meeting. Members, leaders and parents can all take part in this activity. Judge a class of live steers, or take photos of them. Judge the carcasses, and compare placing to that of the live animals.

8. Limerick Contest.

This activity will help your members learn more about beef in a fun and crazy way. Have members make up limericks either by themselves or in pairs or groups. Invite the parents to try their creative hands too. Use carcass and beef terminology.

Limericks are verses rhyming in a specific pattern. Following are two examples:

Example 1

There was a young fella named Leif
and boy he sure liked his beef
T-bone or stew

anything that would moo
gave his fish loving family much grief.

Example 2

There was a young man who liked steak
he went to the restaurant to take
a sample food
but it tasted so rude
It was tofu! Boy, what a mistake!

Now make up your own to share with the members!

9. RAP

I'm sure that the members are all familiar with rap. Let's see how creative everyone can be. Here's an example:

We are 4-H members and we love our first class beef
(rap rap rap rap - you know what I mean)
We want you to realize what we sell is quality
(rap rap rap rap ...)
Sirloin, steak, stew or roast,
We've got the recipe to make you the perfect host.
Eat our beef and soon you will see
Why you should support our industry.
(rap rap rap rap ...)

You can really have a lot of fun with this activity!

Level One

1. Beef Level One - Unit 17, page 17-1.

1. A four letter word for the most valuable part of the carcass is meat.
2. The consumer is the person or people who buy your product. They determine the type of product you, the beef producer, should be producing.
3. Meat, the edible part of the carcass, is muscle.

2. Beef Level One - Unit 17, page 17-2.

There are three main parts of the carcass. These are

1. muscle
2. fat
3. bone

3. Why do we grade beef? Beef Level One - Unit 17, page 17-3.

To tell the difference between breeds.

FALSE

To give the consumer a consistent quality product.

TRUE

- To reward the producer for producing top quality beef. TRUE
- To set a standard to compare carcass qualities. TRUE
- To indicate to the consumer the qualities of colour, marbling, tenderness, juiciness, flavour and amount of fat. TRUE

Who grades beef carcasses? d) meat graders

Is beef grading necessary?

Some of the benefits of having our meat products graded are

- the quality of beef is consistent
- a standard for the producer to meet
- ensures that all producers in our country produce a top quality product
- colour, marbling, tenderness, juiciness and fat are consistent.

4. Why is inspection important? Beef Level One - Unit 17, page 17-3.

Inspection guarantees that the carcasses meet rigid standards of sanitation, hygiene, product handling, packaging and labelling. In other words, the product is handled for the safety of the consumer. Any carcass which does not meet these regulations is condemned and destroyed.

5. Grading Review. Beef Level One - Unit 17, page 17-6.

1. Suppose your carcass graded Canada A1.

What price would you receive for it today? (*answer will vary depending on the date*)

Is it youthful or mature meat? youthful

Is it bright or dark red meat? bright

Will it be made into hamburger? (*part of all carcasses are made into hamburger*)

2. Suppose you culled a seven year old cow from your herd.

What grade would it be? D

It will have these characteristics:

older darker meat tougher fat darker fat

Level Two

6. Beef Level Two - Unit 17, page 17-1.

What happens to the rest of the animal which is not considered to be part of the carcass? This includes the feet, horns, internal organs, and so on. These items are

used for the production of by products and specialty products (liver, kidney, sweetbreads, heart, tongue, tripe, and so on).

7. Beef Level Two - Unit 17, page 17-1.

Products from the beef animal go into making many materials. Mark the items you think contain some part of the beef animal. All of the items mentioned come from some part of the beef animal.

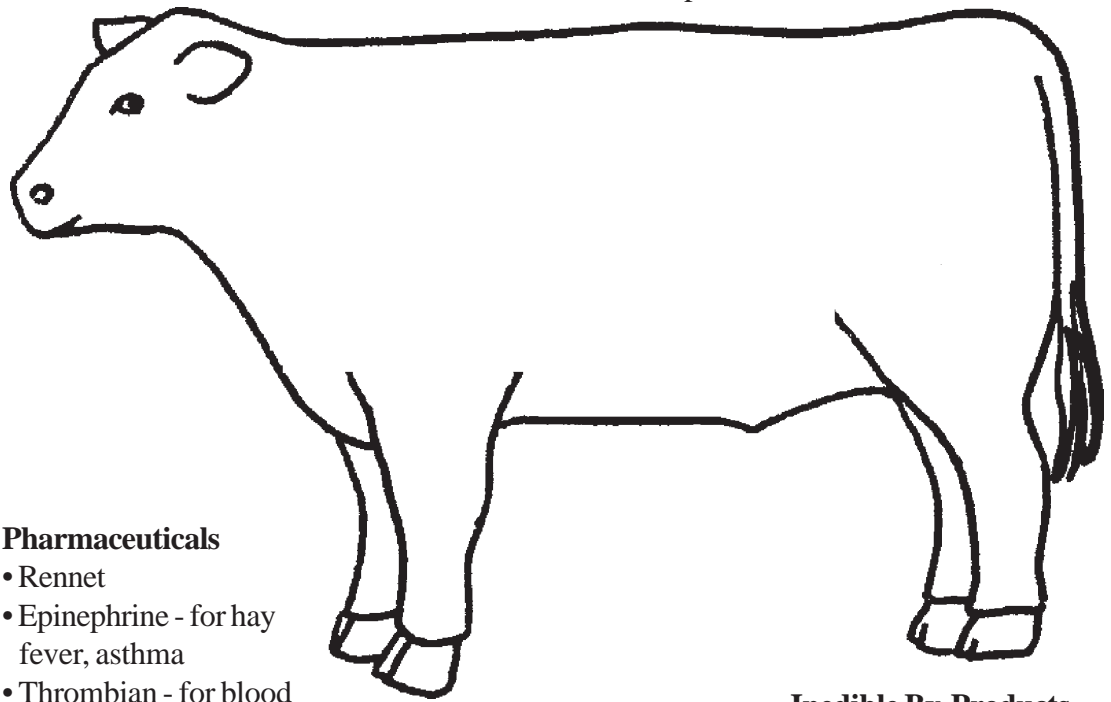
454 kg animal (1,000 lbs)

435 lbs (196.8 kg) Retail Beef

- Steaks
- Ground beef
- Roasts
- Stew Beef

Variety Meats

- Liver
- Kidney
- Sweetbreads
- Heart
- Tongue
- Tripe



Pharmaceuticals

- Rennet
- Epinephrine - for hay fever, asthma
- Thrombin - for blood clotting
- Insulin - for diabetes
- Heparin - anti-coagulant
- TSH - stimulates thyroid
- ACTH - corticotropin
- Estrogen
- Thyroid extract

Edible By-Products

- Oleo oil & stock for margarine & shortening
- Gelatin
- Marshmallows
- Canned meat
- Natural sausage casings
- Ice cream

Inedible By-Products

- Leather
- Sports equipment
- Surgical sutures
- Soap
- Cosmetics
- Buttons
- China
- Photographic film
- Sandpaper
- Violin strings
- Camel hair rushes
- Explosives

Item	Used to Make
Amino acids from body protein	margarine, shortening, gum candies
Gelatin from bones and horns	marshmallows, ice cream, canned meats
Intestines	sausage casings
Hair from animal's ears	artist brushes
Glycerine from tallow	lipstick, handcream, toothpaste, cough medicine, soaps, candles, crayons
Bones, horns and hooves	china, piano keys

To find out more information on these and other products, talk to your local butcher or slaughter plant.

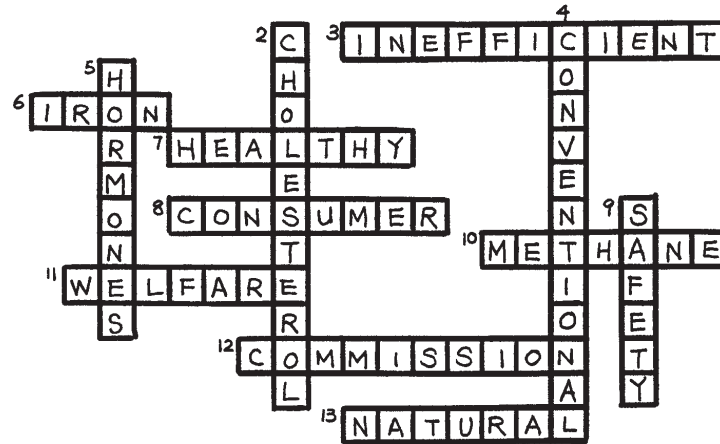
8. The Beef Carcass - A Quick Review. Beef Level Two - Unit 17, page 17-6.

The scrambled and unscrambled words are

smluec	muscle
estre	steer
ccssaar	carcass
nmcroue	consumer
cntpreions	perceptions
eadrg	grade
yuiaqtl	quality

Level Three

9. Topic 1: The Consumer Beef Level Three - Unit 17, page 17-1.



Sample Consumer Survey

1. Are you the main food purchaser in the family?
YES or NO
2. Do you normally purchase beef as part of your weekly shopping?
YES or NO
3. Do you eat more or less of each of these than beef?
Chicken MORE or LESS
Pork MORE or LESS
Fish MORE or LESS
4. Do you view beef as healthy and wholesome? Why or why not?

5. Which of these factors are important to you when selecting beef products?
_____ price _____ packaging _____ colour _____ brand
_____ fat amount _____ marbling _____ fat colour _____ quantity
6. What cuts or types of beef do you buy most often?

7. Do you consider beef production to be environmentally safe?

8. Would you buy a product call “natural beef” over the regular beef products? Why or why not?

9. Do you feel that meat produced in Canada is unsafe in any way?

Unit Eighteen**Beef Marketing**

Roll Call

What do you think of when you hear the word “marketing”?

It is likely that everything mentioned will have something to do with marketing. If you want to spend more time with your club members on the topic of marketing, there is further information, including activities, in the level one section of this unit.

Objectives**Level One**

1. To understand the concept of marketing and how it applies to the beef industry and others.
2. To recognize how many people are involved in moving beef from the field to the table.
3. To become familiar with the characteristics of the beef industry and beef marketing at the national, provincial and local levels.

Level Two

4. To become aware of the different options for marketing beef cattle in Canada.
5. To learn the difference between marketing live and on the rail and to determine which is currently most desirable for individual producers.

Level Three

6. To learn how the beef cycle affects the beef market and the producers.
 7. To encourage members to have some fun with the topic of beef marketing.
-

**Activities:****For the Entire Club . . .**

1. Invite a guest speaker. Suggestions include:
 - A cattle buyer to discuss how she or he buys cattle and to provide ideas to the sellers about how they can make informed decisions.
 - An operator of a local auction mart to explain his or her operation.
 - A local producer to talk about how she or he buys and, or sells cattle and why.
 - A representative of a packing house to talk about what she or he looks for in cattle coming in.
2. If you have a slaughter house, packing plant or auction mart in your local area, you may want to arrange a tour for your members. Keep in mind that this may be difficult for some of your members, so check with them ahead of time to make sure it would be acceptable.

Level One

3. Market It. Beef Level One - Unit 18, page 18-2.

Spend time with your level one (or all) members working through this activity. They can work individually or in small groups or teams to plan how they would market their goods or services.

Some ideas for goods and services are lemonade at a lemonade stand, grass cutting for homes in the neighbourhood, picking up recyclable items, delivering newspapers or flyers, raking leaves in the neighbourhood, making and selling Christmas cards, decorations or crafts.

4. Journey to the Table. Beef Level One - Unit 18, page 18-3.

The objective of this activity is to help members realize that many people are involved in moving beef from the field to the table.

1. veterinarian	6. butcher	10. researcher
2. auctioneer	7. waiter	11. barn builder
3. trucker	8. equipment worker	12. farmer
4. accountant	9. ranch hand	13. grader
5. rail worker		

5. Provincial and Local Beef Markets. Beef Level One - Unit 18, page 18-4.
Spend time discussing the characteristics of your provincial beef industry. For more information contact your local Alberta Agriculture district office. Discuss your local area. Topography and characteristics may make your area quite different from other parts of the province and country.

Level Two

6. Options for Marketing Beef Cattle.

This topic provides lots of opportunity for discussion. Invite members to share how they market on their farm. Members should find that everyone will market cattle a little differently. Stress that there is no right or wrong method. Generally, small producers will handle marketing very differently than large producers. Encourage members to look at other options available and decide how they would suit their operation.

7. Rail Grading.

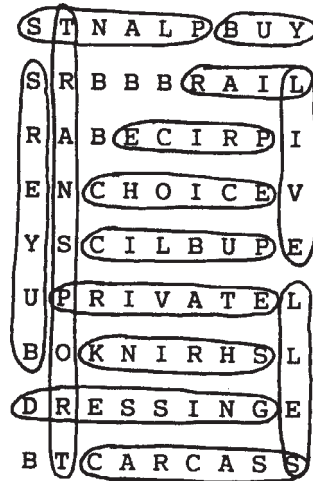
Invite a speaker to come and talk about rail grading. Suggestions are local producer, buyer or packing plant representative.

8. Rail or Live. Beef Level Two - Unit 18, pages 18-3 to 18-4.

Together with your members, work through the method of deciding which is most suitable today. Have members find price information by looking in newspapers, contacting local marts, listening to the radio or television, talking to their Alberta Agriculture district office or talking to producers or the Cattle Commission.

9. Let's Market. Beef Level Two - Unit 18, page 18-5.

I found these words buy, buyers, carcass, choice, dressing, live, plants, price, private, public, rail, sell, shrink, transport.



Level Three

10. The Beef Cycle. Beef Level Three - Unit 18, pages 18-1 to 18-3.

Encourage members to talk about the beef cycle and look at where we are today. Discuss predictions for prices next year, in three years and in five years.

11. Encourage your level three members to get involved in creating and leading some fun activities for the rest of the members in your club.

Unit Nineteen**The Beef Industry Today**

Roll Call

Name a person who is involved in the beef industry.

Objectives**Level One**

1. To understand where they fit in the beef industry.
2. To learn about consumers and how they decide.

Level Two

3. To learn more about some of the factors which directly affect the beef industry.
4. To understand some of the changes which have occurred in the beef industry over the last 25 years.
5. To learn more about how consumer demand affects the industry.

Level Three

6. To become aware of the complexity of the beef industry.
 7. To find out more about the sensitive issues which affect the beef industry.
 8. To become aware of the effect the media and advertising can have upon the beef industry.
-

**Activities:**

Ideas for the whole club . . .

1. Invite a speaker.

There are many people in the beef industry you can call upon to share their expertise, opinions and ideas about beef production. Select a topic of interest to you and your members and invite a speaker. Make sure you invite the 4-H parents and friends to take part in the meeting.

Some suggestions for speakers include:

- beef production specialist
- veterinarian
- game farmer
- Alberta Beef Producers representative
- local feedlot operator
- representative from Canada Beef Export Federation
- your butcher/meat cutter

Ideas for topics include:

- animal welfare
- consumer perception of the beef product
- food safety
- cattle and the environment
- beef as a nutritious product
- the beef cycle
- new opportunities for beef
- grading system
- marbling and tenderness
- free trade

2. **Beef Information Night.**

Ambitious members and leaders may wish to hold a beef information night for the local community. This can be both fun and educational. As a club, plan and implement the evening together with your local agricultural society.

This type of activity would help to

- provide a community service
- instill a sense of purpose in your members
- help people learn more about the beef industry
- give people experience in program planning
- give people experience in working as a team
- possibly raise money for the club

Advertise the event throughout your community. Use posters, radio, newspapers, flyers and announcements. See if you can obtain sponsorship from the butcher shop, grocery store or auction mart.

3. **“The Crazy Beef Producer”.**

Here’s an idea for an activity which both members and adults can play. It will take some time and space to play, so hold it in a place where there is lots of room to move around. It is a good activity to use to introduce members to some of the issues facing beef producers.

- A) Prepare cards with the labels listed below. Have one card for each participant. Double up the labels or add some more ideas if you have more participants.

feed supplier	politician	butcher
veterinarian	game rancher	organic beef producer
banker	animal welfare activist	acreage owner
retail store owner	government representative	lobbyist
vegetarian	consumer	

- B) Prepare an obstacle course. This should be made of tasks to be accomplished. Some ideas are climbing over a board fence, climbing through the front seat of a truck, passing around a full pitcher of water, making a sandwich from five specific items, singing a song, colouring a picture, eating three crackers, or anything else you can think of. Use your imagination and make sure everything is safe.
- C) Have each participant draw a card. Have each participant picture him or herself as the person on the card and describe how he or she would relate to the beef industry.
- D) Tie all of the participants together, in a circle, using a long rope. Explain to the participants that the group is a beef producer trying to make a living producing beef. The obstacle course represents the industry. The beef producer (the entire group) must proceed through the industry (the obstacle course) toward their ultimate goal which is production of a top quality beef product.
- E) Send the group on their way through the obstacle course.
- F) Once the riotous event is over, and everyone has had a chance to catch their breath, sit down and discuss the exercise.

Discuss how the entire group accomplished the tasks assigned.

Key points are

- The farmer (like the group) needs to cooperate with the various elements (the other group members) in order to accomplish his goals.
- No part of the group was independent from the other parts.

- G) Spend time discussing the influence the different people have on the beef industry. You may wish to record the discussion for future reference.

Examples are

Politician:

Makes major decisions which affect the industry. Often, interest or lobby groups can influence him. Name some of these groups.

Government:

Government regulations, although very necessary, may slow down the processes, take too long and may be difficult to change. What would it be like without any government support or regulations?

Feed Supplier:

This person is affected by the crop production situation, grain prices, feed availability, and feed quality. How do these affect his profit margin and the cattle producer's profit margin?

Animal Welfare Activist:

These people have certain opinions on humane beef practices and production which may differ from the producer's. How might these affect the producer, demand for beef and consumer perception?

4. Inter Club Activity.

For those of you who enjoy interaction with other clubs in your district or region, organize an interclub activity based on the topic of *The Beef Industry Today*. Some ideas are a trivial pursuit night organized by senior members, a potluck supper with a guest speaker, or an impromptu speaking competition.

Level One

5. Where do you fit? Beef Level One - Unit 19, page 19-1.

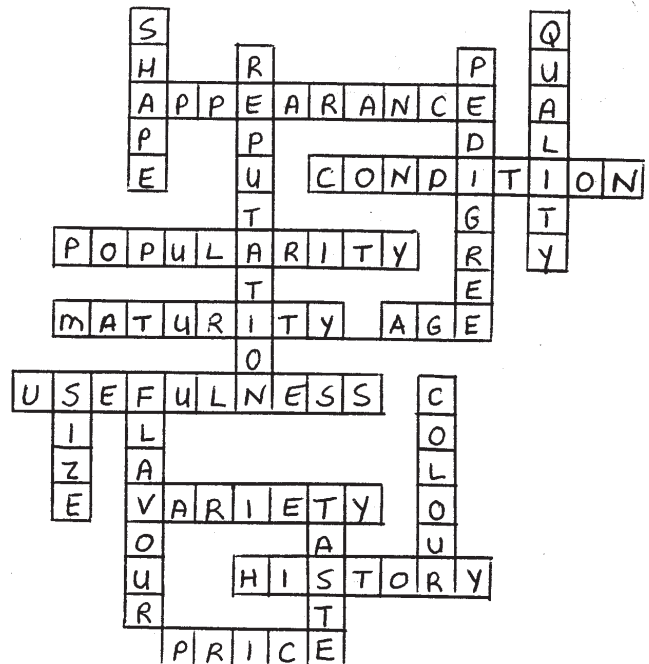
In this section, it is important that the members understand the key role the beef producer plays in the agriculture industry. Discuss the importance of producing beef. In Canada there are over 25 million people. Most of these people eat beef. One steer goes a long way in feeding some of these people.

6. The Power of Choice . . . Beef Level One - Unit 19, page 19-3.

Consumers make choices when they make a purchase. Discuss how different things can help to influence the choice a consumer makes. Have the members provide input on how they decide.

7. Wrapping Up. Beef Level One - Unit 19, page 19-4.

Following are the solutions to the crossword puzzle. Discuss how each of these things can have an effect on the consumer's decision.



Level Two

8. **Factors Affecting the Beef Industry Today. Beef Level Two - Unit 19, page 19-1.**

This crossword puzzle is designed to lead into a discussion on the members' views of how the beef industry can be affected by different factors. Here's a few ideas:

Prefer - beef vs chicken or pork, why

Antibiotics - cost vs results, people are scared of side effects

Choices - made in the supermarket - packaging, cost, appearance

Family - cost to feed, fast meals, time for preparing

Genetics - availability to the breeder, AI vs natural breeding

Grade - ability to produce Canada A1 beef, cull cows

Economical - those who can't make money get out of business

Efficient - large herds vs small herds, cow calf vs finishing

Chemophobias - fear of drugs

Perception - what the people think of beef

Natural - the extra cost of it, actually "natural"

Lean - how much is too fat?

Quality - fat colour and quantity, meat colour, texture

Sustainable - is our agriculture system self supporting?

Cholesterol - the effect recent cholesterol scares have had on beef

Health - of the animals, consumers

Safety - of people working with animals, of the product

Fat - how much is too much?

Castration - humane, healthy, effects

9. **Today's Beef Industry. Beef Level Two - Unit 19, page 19-2.**

The beef industry has changed over the years in response to customer demands, the feeds available, the genetics available and the changing farmer.

	From	To
A	large, exotic steer	moderate sized crossbred steers
B	small cow/calf herd	larger cow/calf herd
C	larger steak	moderate or small sized steak
D	home finished steers	custom feedlot

10. Consumer Demand - Food For Thought. Beef Level Two - Unit 19, page 19-3.

Consumer demand affects the beef industry in many ways. Most importantly, we need the consumers to want our product. By keeping it in demand, we can produce more of it and be sure that it will sell. When the customer demands a leaner product, we need to start producing a leaner product.

What is it that affects consumer demand?

- price
- appearance
- information received - true or false
- health and cholesterol levels

How do you think the average consumer perceives beef? The answer to this will vary with each member as they are all consumers themselves and each of them will perceive it differently.

It is important that the cattle producer understands how we want the consumer to perceive beef as this will directly affect the things we do when producing beef.

What can the producers do to help consumers perceive beef in a positive way? The beef producer should be sensitive to today's issues and be aware of how they can affect him.

Issues Related to Consumer Demand:

- Portions demanded by the consumer. The consumer is looking for a smaller well-marbled steak. The days of the 16-ounce serving are gone. Concerns about cholesterol, high blood pressure and balanced diets have dictated smaller portions of red meat.
- Natural or organic beef – a portion of the consumers are demanding a product that is in their minds, more wholesome than the “industrialized” product. NO antibiotics, implants or feed additives.
- Direct marketing to consumers rather than through Sobey’s, Safeway, etc. Knowing the supplier (farmer or ranch) is a niche market that is growing. Perception of a better product because the consumer knows where it is coming from.
- BSE and food safety is front and center with consumers. CCIA CFIA, veterinarians, the feed industry, producers are pharmaceutical suppliers are all involved with the production of a safe and healthy product. No part of the industry works in isolation.
- What are producers doing differently to protect the environment? They are looking after the riparian areas on their land, putting together manure management plans,
- Know what the consumer needs for beef products, influences the type of animal we raise. The marketing plans that are in place to promote beef:
 - Certified Angus Beef
 - Natural/Organic Beef
 - Antibiotic or Hormone Free
 - Grass finished
- Dehorning, branding and feedlot environment are all issues that are currently under review.

Level Three

11. Level three members have some interesting activities in their unit material. The information they gather here would be good to share with all members in your club.

Unit Twenty**Beef Grooming and Showing**

Objectives

For all members: To learn more about grooming and showing beef cattle.

It is important to note that there is much more to grooming and showing than we could possibly include in this unit. This information is intended to be an introduction only. For further information on grooming and showing, contact your breed associations, local beef breeders, judges or other experienced people in your area.

**Activities:**

1. Invite a guest speaker.

There are many grooming and showing professionals in your local area who would be willing to share their expertise with 4-H members. Invite one to come to your meeting and talk about grooming or showing today. Have him or her provide a demonstration. You can have members actively take part by pretending to be animals in a show ring, moving as the judge requests.

2. Show a video.

There are several available for use by your 4-H club. Refer to your 4-H Video catalogue. Contact your breed associations to find out more.

3. The Memory Game.

When discussing preparing the show box for show day, try this quick, fun memory game to introduce the topic.

Show members a complete show box containing items needed for grooming or showing beef cattle. Put in many different items. Allow members to view the show box for 30 seconds.

Have members make a list of all of the items they saw in the box. If many members are inexperienced with grooming and showing, have members work in teams.

Some items you may want to include are bucket, clean rags, clippers (different sizes), curry comb, brush, rope halter, leather halter, blanket, show stick, and so on.

4. The Fast List.

Have members work in pairs to make a list of the items to put in their show box for Achievement Day. Give members two minutes to list as many items as they can, along with a use for each item.

Set up the lists like this

Item	Use
Clean Rags	to wipe the ears or your clippers
Show Stick	for showing animal
and so on	

5. Hold a grooming and showing workshop.

There are many options for this. You could hold a short workshop on washing and drying, clipping, final show preparation or showmanship. You could hold a full day workshop where members bring halter broken animals and groom them. You could hold mock competitions to help members learn the specifics about showing. No matter what type of workshop you hold, make sure the members have an opportunity to do some “hands-on” learning. This is especially important for younger and inexperienced members.

Senior and more experienced members often have a wealth of knowledge about grooming and showing. You may want to invite one or more of these members to conduct the workshop. It would be a valuable learning experience for them.

6. Show Ring Competition.

Show ring competitions are becoming more popular across the province. These competitions, in which members practise acting as judge and, or ringperson, give members another opportunity to develop their skills. The following information on the responsibilities of the judge and the ringperson will be helpful to you.

The Judge

The judge of 4-H competitions should

- Have a sincere interest in the development of the skills and knowledge of 4-H members.
- Arrive at the show location well in advance of the start of the show, and check in with the secretary or a show committee member.
- Always act in a professional manner.
- Remain unbiased.
- Be aware of time constraints.
- Be familiar with the show regulations and rules.
- Report any unprofessional or unethical practices to a member(s) of the show committee.
- Communicate with the ringperson before the show begins; decide how animals will enter the ring, parade, line up and exit the ring and who will indicate this to members.
- Use common signals to direct movement in the ring.
 - To move around the ring - move arm and hand around in circular motion.

- To stop - hold up arm with palm out.
- Be prepared to give tactful and professional reasons.
 - Publicly to the top placings in a large class or all placings in a small class.
 - Individually to all members.
 - Arrange to line up the animals so they can be viewed easily by the audience.

The Ringperson

The ringperson of 4-H competitions should

- Help the judge.
- Communicate with the judge before the show begins; know who is responsible for which duties.
- Handle every class at that show in the same manner.
- Keep animals moving in straight lines and large circles.
- Assist exhibitors with difficult animals.
- Direct members to the correct locations in the ring.
- Give directions to members on how to exit and enter the ring.
- Keep the animals, exhibitors and show moving along smoothly and in an organized manner.
- Not express opinions or comments unless asked to do so.

Hints for Organizing a Beef Show

Organizing a show is a big responsibility and requires a lot of work. Don't try to do it all yourself. Recruit volunteers (members, leaders, parents, friends and neighbours) to help with the event.

The key to a successful event lies in organization. Make sure all committee members know who will be responsible for which duties. Use a check-list.

You will need to consider these duties.

Show location	Master of Ceremonies	Advertising
Show date	Show time	Cleaning up after show
Booking facilities	Registrations	Presenting ribbons
Supplying Straw	Catalogues and programs	Setting up stalls
Checking ear tags	Ordering awards	Checking papers
Payments: * judges * facilities * refreshments * awards	Judges for each competition: * contact * confirm * brief before show	Thank you: * judges * facilities * volunteers * any others
Audio system	Insurance	Recorder
Ringperson(s)		

Video: 421 VT Producing a Cattle Show. Available through Alberta Agriculture, Food and Rural Development Film Library. Phone (780) 427-2127.

Ten Commandments for Parents of Youngsters Showing Cattle

1. THOU SHALT NOT feed, train and care for the animal, for thou art trying to teach the child responsibility.
2. THOU SHALT forgive a child for making mistakes in the show ring for thou hath made mistakes too.
3. THOU SHALT NOT get mad when thy child forgets items in the showbox, for one day thou may forget the showbox.
4. THOU SHALT help the show management, for they are doing a job thou would not want to do.
5. THOU SHALT see that thy child is on time for all show activities, for thou would not want to wait on another.
6. THOU SHALT be sure that the child has animals entered and registration papers in order by the designated time.
7. THOU SHALT teach the child that winning a blue ribbon is a desirable goal, but making friends along the way is a more worthy goal.
8. THOU SHALT NOT complain about the judge, for it is his opinion that has been sought.
9. THOU SHALT remember that livestock projects are teaching projects, not necessarily money-making projects.
10. THOU SHALT remember that the livestock project is a family project that shall be enjoyed and supported by the entire family.

By: Clyde D. Lane Jr., University of Tennessee

Beef Project Evaluation

Your input is a valuable asset to the 4-H program!

As you go through the project year, make your comments and suggestions about the project on this form. When your project is completed, mail this form to us. We want to hear from you!

Beef Project Evaluation
4-H AND AGRICULTURE EDUCATION BRANCH
ALBERTA AGRICULTURE AND RURAL DEVELOPMENT
7000 113 ST NW RM 200
EDMONTON AB T6H 5T6

Please tell me:

Evaluation Date

Which units did you complete this year?

Is there anything else you would like to see included in the project material? Record book?

Did you enjoy the activities?

Is there any information you would like to see added?

(over)

Thank you for taking the time to provide us with this information.

TABLE OF CONTENTS

Welcome – Volunteer Leaders	1
a. Beef Project Objectives.....	1
b. Completion of a 4-H Beef Project Year	1
c. 4-H Beef Project Books	1
d. 4-H Beef Record Books.....	2
e. Recognized Beef Project Options	2
Introduction	3
a. About This Book.....	3
b. Background	3
c. Expectations	3
d. Motivation	3
e. Working With Your Members.....	4
f. How Can This Book Be Used.....	4
Creation, Presentation and Getting Started	5
a. Creation	5
b. Presentation	5
c. Getting Started	7
Beef Project Games & Activities	9
Terminology	9
Activity 1 – Terminology Turmoil.....	11
Activity 2 – Matching Moos.....	15
Activity 3 - My Long Lost Twin.....	21
Activity 4 – Creative Concentration.....	27
Activity 5 – Critter Crossword.....	33
Scavenger Hunt Bingo	39
Run, Rope, Release Relay	41
Down It Goes.....	43
Activity 1 – Digestive System Puzzle.....	45
Activity 2 – Digestive System Parts And Their Function.....	47
Picture the Parts	53
Activity 1 – Identification	55
Activity 2 – Fill In The Blanks	59

Skillathon 65
We Survived 71
Bibliography 73

WELCOME – VOLUNTEER LEADERS

Welcome to teaching our most important resource – our young people. We are excited that you have chosen to become involved in the 4-H Beef Program. We hope you have a great time working with your 4-H members as they make new friends, take part in 4-H activities, work with their beef projects and learn more about being a responsible owner.

This is a supplemental resource to the Beef Project Books. It outlines the beef project plus provides some teaching hints and techniques that you can use.

Beef Project Objectives:

Alberta 4-H offers an opportunity for young people to develop mentally, emotionally and socially through association with others.

The 4-H Beef Project gives members an opportunity to:

- Acquire an understanding of beef cattle production and management through the experience of owning, caring for, and maintaining records on beef cattle.
- Develop the skills, patience and understanding of the handling practices essential in working with beef cattle.
- Develop an appreciation of the cattle industry and its importance in the local community, the province and the country.

Please note:

All 4-H members must meet the Alberta 4-H Beef Project Policy #605 requirements and must abide by any regulations put forth by the local beef committees.

Completion of a 4-H Beef Project Year:

To complete a 4-H beef project, members must:

- Complete a record book for each project.
- Take part in at least 70 per cent of designated club activities.
- Take part in the Achievement Day event.
- Complete a communications activity.
- Enroll in one of the projects available.

4-H Beef Project Books

The project books are presented in three levels – Junior, Intermediate, and Senior. The beef materials include activities for members to complete.

If members have an interest in a beef project that is not listed or does not have any available 4-H resources, they are encouraged with your direction as a leader to take the Creative Options Project.

4-H Beef Record Books

Members use the 4-H Market Beef Project Record Book and/or the Beef Breeding Record Book. It is the member's responsibility to provide the majority of the feed, management and care of their beef project animal. Feeding records on the member's beef project animal must be maintained for the specified number of days (as outlined with each project) prior to the Achievement Day event.

Projects Include:

Beef Breeding Projects

Must be registered with the club by January 1st of the current club year.

- Heifer (heifer raised for show and bred for production)
- Two or Three Year Old Cow Calf (continuation of the heifer project to a mature animal)

Market Beef Projects

Must be registered with the club by December 1st of the current club year.

- Market beef - live (steer or heifer raised for show and slaughter and then marketed usually at the 4-H club sale)
- Market beef - carcass (steer or heifer to be raised with the intent of slaughter for carcass evaluation and sale through private means)
- Members may register only one market beef - live project.
- Members may sell only one market beef project animal at the local achievement day sale. Show and sale committees will provide clarification and local requirements
- The market beef must be born in the calendar year in which it is registered.
- The market beef project must be on feed for a minimum of 160 days.

Other Beef Project Options

Must be registered with the club by December 1st of the current club year.

- Beef Pen (three or more beef animals raised for breeding or private sale)
- Novice Beef (a calendar year calf raised for show)
- Beef Creative Options - A self-designed beef project which has club approval. Project can not be marketed at the 4-H Beef Sale.
- Green Certificate - Level One - Cow-Calf - Beef Technician
Level Two - Cow-Calf - Beef Supervisor
Level One - Feedlot - Beef Technician
Level Two - Feedlot - Beef Supervisor

INTRODUCTION

About This Book

This is the first publication of the Beef Project Leaders' Activity Guide. As explained in the previous pages, 4-H Beef Club Members are required to fill out a record book for each project they have and use the Level 1, 2, and 3 Project Books as learning resources to gain knowledge of their project animals. Many of the activities in this publication use information provided by the project and/or record books. This Beef Project Leaders' Activity Guide is designed to compliment what has already been produced for beef club members and leaders. The goal of this publication is to make learning fun. It uses interactive, fun and educational activities to teach project material.

Background

It is through my experiences as a 4-H member, leader and parent that I have been able to compile the games and activities that you will find in this publication. The activities included come from a variety of sources. Ideas from other leaders, parents and members have contributed to the content of this book.

Expectations

As with all organizations, the expectations of those involved differs greatly. In our 4-H club, we posed the question to both members and parents - "What do you expect to get out of 4-H?" What we found was that most members and parents don't have unrealistically high expectations. What's most important to the members is that they have some fun. Parents know the importance of learning, and want their children to gain knowledge. It is in keeping with these two trains of thought – fun and education - that I have compiled this collection of activities.

Motivation

Kids need to be motivated to learn and providing fun is the greatest motivator of all. When you motivate members to learn using fun and creative techniques the rewards for members, parents, and leaders are endless. Members start to see that 4-H is fun – yes, even meetings can be fun. As a leader, you observe your members gaining knowledge and developing skills - skills such as communication, leadership, co-operation, taking initiative, coaching, group dynamics, team building, conflict resolution, etc. The enthusiasm of your membership grows. Parents see their children's enjoyment and want to become more involved. You feel rewarded as a leader.

Sherry Dechant

Manning, Alberta

Volunteer 4-H Beef Leader

Working with your Members

This chart is taken from the 4-H Beef Project Leaders' Manual. It may help to keep this information in mind when selecting activities for your members.

Method	Retention	Examples
Reading	Members will retain 10% of what they read	Information in member units
Hearing	Members will retain 20% of what they hear	Lectures, speakers
Seeing	Members will retain 30% of what they see	Pictures, posters, drawing
Hearing and Seeing	Members will retain 50% of what they see and hear	Demonstrations, tours, videos
Saying	Members will retain 70% of what they personally explain	Discussion groups, expressing ideas
Saying and Doing	Members will retain 90% of what they are saying and doing	Giving demonstrations, practicing

How Can This Book Be Used?

The games and activities included in this publication exemplify the "Learn To Do By Doing" 4-H motto. This book can be used by anyone. Members can use it as a Senior Opportunities, or Creative Options or Junior Leader Project. Leaders can use it to help teach project material, or they can enlist the help of parents or other 4-H enthusiasts, to organize games and activities to present at meetings, leading clinics, gatherings, etc. Inevitably, however your club decides to use the publication, your 4-H program will be enhanced.

At the beginning of each activity the source of the material used to create the activity is listed. By going to the correct level and unit of the project book you can get more information on the topic to add to the game or activity. Each section has a short introduction, a list of items that need to be done in preparation for playing the game and lastly instructions on how to present the game. Remember, use your imagination, be creative and enlist the help of others.

CREATION, PRESENTATION AND GETTING STARTED

Creation

Consider the following points when preparing games:

1. Think big!! Larger versions of the games make them more eye appealing and make group work easier.
2. You don't have to use standard 8½" x 11" sheets of paper - use larger paper, colored paper, colored corrugated cardboard, plywood or pre-cut boards of various wood types or sizes. Tip - An exacto knife works well for cutting corrugated cardboard.
3. Self-adhesive Velcro has many uses in creating games.
4. Check out your local building supply store, craft store or hardware store for these items and others that may make your games and activities easier to create and use.

Presentation

The effectiveness of any particular game or activity largely depends on how it is presented. Use the presentation suggestions provided with each activity, or use your imagination (or the imagination of others in your club. To create your own original ideas that will make the activities more fun.

Consider the following:

- Should the activity be done as a group or individually?
- Would the use of an overhead projector help?
- Would it help to have a handout for members?
- Would the use of a microphone help?
- Should juniors, intermediates and seniors each make up a separate group?
- Should you combine members making an even number of juniors, intermediates and seniors in each group?

Use group leaders when facilitating games that require groups:

- Vary whom you choose as group leader.
- Do not always pick the 'natural' leaders. Choose members that are quiet and don't normally jump up and volunteer.
- As 4-H leaders we want to develop the skills of all our members.
- It is amazing the confidence members develop when they are put in the position of 'leader'.

For each activity in this publication I have outlined at least one way to present the game. With some activities I have suggested alternatives when presenting. Use your creativity and imagination to make the games work more effectively for your situation. The games

can be used as is or as guidelines to create activities for your club's individual needs. When looking at the activities, ask yourself "Who, What, Where, When, Why and How?"

1. Who is best suited to teach this particular activity?
 - A member? A Parent? A Leader?
 - Who am I trying to teach?
 - Seniors? Intermediates? Juniors? Boys? Girls?
2. What type of activity do I want?
 - A short activity or a long activity?
 - What kind of knowledge do I want to teach?
3. Where are we?
 - In a hall? Outside? At an arena? Some activities are more suited to a certain location.
 - At a meeting, leading clinic, project day etc. – do we have access to the materials we need to do the activity?
4. When are we doing the activity?
 - Beginning, middle or end of the year – some activities are better to play early in the year as they provide basic information, some work better when your members have gained more knowledge.
 - Morning, afternoon, evening – is the time frame long enough to complete the activity?
5. Why are we playing this particular game?
 - Are there certain skills we want to develop in our members? For example, leadership, communication, co-operation, confidence, etc.
6. How is the best way to present the game?

Stations - As you read through the activities you may notice my reference to the use of stations. Some of the activities I have described are fairly short. If you divide your members into groups, you can have one activity at each station and have the groups rotate through the stations.

Getting Started

Remember the following points as you get started:

1. Children learn best when they are having fun.
2. Children love to interact with others.
3. Not all children learn the same way.
4. Varying presentation methods helps address varied learning styles.
5. Enlist the help of other leaders, parents and members when preparing and presenting the activities in this book.
6. Use group leaders when facilitating games that require different groups.
7. Award small prizes to the winners of games. This isn't essential but it provides a way to encourage and reward members, as well as provide incentive to be involved. Prizes can be simple. Examples below.
 - a. Shop at a dollar or bargain store. They have lots of inexpensive, fun items.
 - b. Buy small candies. They can be purchased by the tub and put into sandwich bags.
 - c. Rather than giving items as prizes, give rewards i.e. the winning (or losing group can have snacks first, the winning (or losing group can serve the other group, or the parents at refreshment time, the winning (or losing group can help clean up before going home, etc.
8. To make better use of time at your meetings and to keep members more involved in activities use stations and rotate groups through different activities.

BEEF PROJECT **GAMES AND ACTIVITIES**

Terminology

This section teaches some of the cattle terminology that is included in the project books. I have suggested five different activities. Each one teaches different terminology in a different way. You can mix and match the words and definitions and the presentation methods. For instance, you can use the 'Critter Crossword' meanings and definitions to create cards as done in 'Matching Moos'. You can use the words from 'Terminology Twinning' to create a word search.

Presentation Alternatives

The activities in this terminology section can be used:

1. As short activities:
 - a. Members can participate individually or as a group.
 - b. You can use small groups or large groups.
2. As longer activities:
 - a. Make each game a station.
 - b. Divide members into groups
 - c. Have them rotate through any or all five game stations.

ACTIVITY 1: TERMINOLOGY TURMOIL

Source

Unit 14, Beef Cattle Handling and Facilities - Levels 1, 2 and 3

Introduction

This activity is simple. Members must find the words hidden in the word search. Although this may seem too simple, sometimes we need to remember the age and experience level of our members. Some of the terminology we expect 4-H members to know is complex. By starting simple, with word recognition, members become familiar with some of the words before actually learning the meanings. This is the first step in learning words and their meanings.

Preparation

1. Photocopy enough sheets for each individual or group.
2. Use colored paper to make the game appear more appealing.
3. Use different colored paper for each group.

Presentation Options

1. Allow participants a set amount of time to complete the entire word search or put a time limit on how long they can search for words.
2. After the completion of this part of the game have an older member act as leader and go through the words one by one asking members to try and give their meanings.
3. The older member could assign each group a few of the words, give them ten minutes to find the meanings of the words in their Project Books and let each group present their words to the rest of the club.
4. Each member of the group could give one definition or the groups could elect a group leader to do the speaking. The time frame you have to complete this activity may dictate how you do this.

Name _____

Date _____

Terminology Turmoil

Find each of the following words.

ALERT	CONTROL	HEADGATE	PATIENCE
BACK STOP	CROWDING PEN	HOLDING PEN	POINT OF BALANCE
CAUTIOUS	DEAD END	KICK BAR	RAMP
CHARGING	ELECTRIC PROD	KICKING	SHARP TURN
CHUTE	FLIGHT ZONE	KNOT	TEXAS GATE
CIRCULAR	HALTER	PANEL	WHIP

G B A C K S T O P C D C O I C H A R G I N G A
 P O I N T O F B A L A N C E C O N T R O L C C
 R A E R T L R N D P U N F L I G H T Z O N E O
 C O A L N G U Z K I C T H I H E A D G A T E C
 H R A T E W E R A H L C O C W R I T U I G E G
 O I O G H C R D A W E C I N P G P N I W B T A
 L S R W O A T A E E N I T T K A N P R G R A C
 D U E P D K L R L H A S S T E G R A M P E G R
 I O N T O I I T I U P A T I E N C E I E F S A
 N I T N U Z N C E C C D D E A D E N D G S A N
 G T R E O H E G K R P R D C G K W T A W N X I
 P U E L P H C T P B L R I G G H D A T C A E U
 E A L I N E A C I E A O O C K I C K I N G T C
 N C A A T A N E A O N R R D R P G T U O E C P
 C C U N I P S H A R P T U R N I T T O R A A L
 E O R H O I U T A T R R G D W H C N K L T L F

Terminology Turmoil

Answer Key

CHARGING	KNOT	DEADEND	ELECTRICPROD
WHIP	CROWDINGPEN	POINTOFBALANCE	RAMP
CIRCULAR	SHARPTURN	ALERT	CHUTE
HEADGATE	KICKING	TEXASGATE	HOLDINGPEN
PATIENCE	CONTROL	KICKBAR	FLIGHTZONE
CAUTIOUS	BACKSTOP	HALTER	PANEL

B A C K S T O P C H A R G I N G
 P O I N T O F B A L A N C E C O N T R O L
 E P F L I G H T Z O N E
 C L I T H E A D G A T E
 H R E H L O E
 O O H C R W E N T
 L S W A T A N K A
 D U E D K L R L A R A M P G
 I O T I I T I U P A T I E N C E S
 N I T U N C E C C D E A D E N D A
 G T R H G K R P R X
 P U E C P B R I E
 E A L E A O C K I C K I N G T
 N C A N R D
 S H A R P T U R N

NOTE: You can create your own word searches using the website www.edhelper.com

ACTIVITY 2: MATCHING MOOS

Source

Unit 21, 4-H Judging Manual, Sec 2: Page 2 - Judging Beef

Introduction

This game uses a set of cards – half the cards have a terminology word typed on them, the other half has definitions. The cards are matched together pairing the definition with the word it describes.

Preparation

1. Make cards using the Market Moos terminology sheets provided.
 - a. Photocopy the sheets using colored paper.
 - b. Cut cards apart.
 - c. Cards can be laminated and kept for future use.
2. Use the sheets included as a guide and make as many other matching word and definition cards as you like.
3. Put the terminology title or game name on the back of the cards.
4. For different topics use different colored paper. The more appealing a game looks the more members will want to play it.

Note: Before playing this game ask members to read over the unit that the words are taken from. That way they will be familiar with the words before the game begins and feel a sense of success when they are able to pair words and definitions.

Presentation

1. Lay cards face up on the floor or on a table.
2. In small groups have members pair up the terminology words with their definitions.
3. Most children like races so as members start to know the words better make pairing up the words with their definitions a race. Time how quickly they can complete the pairing up.
4. If the words are too difficult when you first play the game allow the members to have the appropriate level books open to the right unit. Remember we are not testing them; we are trying to teach them in a fun way. It's okay if they get the words paired up with the correct definition by reading the Project Books. Members are still learning the terminology.

MARKET MOOS - Market Steer Terminology

JUDGING

MARKET MOOS - Market Steer Terminology

- **The art of visually comparing and ranking beef cattle**

MARKET MOOS - Market Steer Terminology

MEATINESS

MARKET MOOS - Market Steer Terminology

- **The degree of muscling**
- **A meaty animal will have superior muscling**

MARKET MOOS - Market Steer Terminology

STYLE

MARKET MOOS - Market Steer Terminology

- **Way of going, alertness, gait, coloring**
- **This is often referred to as eye appeal**

MARKET MOOS - Market Steer Terminology

GRADE

MARKET MOOS - Market Steer Terminology

- **The description a carcass receives based on maturity of the carcass, the quality (color, texture, and firmness of the muscle and fat) and the meat yield**

<p>MARKET MOOS - Market Steer Terminology</p> <h1><i>TRIMNESS</i></h1>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• Freedom from excess fat or finish• This can be determined by looking at places where fat tends to accumulate – the brisket, flank and twist
<p>MARKET MOOS - Market Steer Terminology</p> <h1>MUSCLE</h1>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• Red meat or lean• That part of the carcass which is not bone or fat
<p>MARKET MOOS - Market Steer Terminology</p> <h1><i>FRAME</i></h1>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• Skeleton size• This can be determined by looking at bone length and width and is easy to see in areas where there is nothing but bone, such as the cannon bones
<p>MARKET MOOS - Market Steer Terminology</p> <h1>CONFORMATION</h1>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• The overall structure of the animal

<p>MARKET MOOS - Market Steer Terminology</p> <p><i>UNDER-FINISHED</i></p>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• The animal doesn't have enough fat cover to fall into a desired grade
<p>MARKET MOOS - Market Steer Terminology</p> <p>CARCASS</p>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• The part of the animal which remains after the removal of the head, feet, hide and internal organs• Composed of bone, muscle, fat and connective tissue
<p>MARKET MOOS - Market Steer Terminology</p> <p><i>FINISH</i></p>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• The amount of fat covering on a market animal
<p>MARKET MOOS - Market Steer Terminology</p> <p>STRUCTURE</p>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• Must be sound or free from any defects which inhibit performance• Must be correct and show the desired structural traits

<p>MARKET MOOS - Market Steer Terminology</p> <h1><i>CUTABILITY</i></h1>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• The saleable meat in proportion to the total carcass• A high cutability, or high proportion of red meat to bone and fat, is desirable
<p>MARKET MOOS - Market Steer Terminology</p> <h1>OVER-FINISHED</h1>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• The animal has too much fat cover
<p>MARKET MOOS - Market Steer Terminology</p> <h1><i>BALANCE</i></h1>	<p>MARKET MOOS - Market Steer Terminology</p> <ul style="list-style-type: none">• The overall view of the animal, including how well the parts blend into one another and how freely and smoothly the animal moves

ACTIVITY 3: MY LONG LOST TWIN

Source

Unit 17, The Beef Carcass - Level 1, 2 and 3

Sec 2: Page 4, 4-H Judging Manual - Judging Beef

Introduction

As well as teaching terminology, this game encourages communication, public speaking and interaction between members. It provides the opportunity to pair members with a partner. Members receive a card that has a term or definition on it. They are asked to search out the person that has the definition to their term or vice versa.

Preparation

1. There are two master sheets to use as guides for creating cards for this game. Master One has a term or it's definition on each card. Master Two has terms and their definitions on each card. Use the format on Master One if you have older members or if you have played the game a lot. Use Master Two if you have younger members or if you are playing the game for the first time. Once members start to know the definitions, using the format on Master One would provide more of a challenge.
2. Have a member make up the cards ahead of time. They can make the cards using the computer or free hand on sheets of paper. By involving members in the preparation it gives you a break as leader, gets more members involved in the games, and provides the opportunity for members to develop skills.
3. Although there are only two master sheets, there is a list of terms and their definitions to use when creating cards. An alternate way to make the cards would be to provide a picture as the definition, instead of words. This would make the game more interesting for members. An example would be to supply pictures of grooming supplies or breeds of cattle.

Presentation

1. Before starting the game have a member count how many people are playing.
2. Hand out one word or definition to each participant. This is a great opportunity to involve parents and perhaps siblings. Use as many cards as you have participants. Be sure that both the word and its definition are used.
3. Explain the theme of the game – using the terms that are included, the theme would be 'Carcass Terminology'. Explain to the members that they will need to find their 'twin'. Their twin is the person that has the card that matches theirs.
4. Have someone say go and allow participants time to search for their twin.
5. It is helpful to have one member as the facilitator of this game. They can have a sheet that provides all the words with their definitions and therefore help participants that are

having difficulty finding their twin. (This would only be necessary if you used the cards that don't have both the word and its' definition on the same card..

6. Once all participants have found their 'Long Lost Twin' have each pair read out their word and definition.

MASTER 1 - MY LONG LOST TWIN – Carcass Terminology

My Long Lost Twin
CANADA GRADE D

My Long Lost Twin
MATURE COWS

MASTER 2 - MY LONG LOST TWIN – Carcass Terminology

My Long Lost Twin
CANADA GRADE D
MATURE COWS

My Long Lost Twin
CANADA GRADE D
MATURE COWS

My Long Lost Twin Terms and Definitions

For Carcass Terminology

1. **Canada Grade A** – Meat from youthful animals
 - Muscle is bright red, firm and fine grained
 - Fat is firm and white
2. **Canada Grade A1** – Carcasses with 59% or more lean yield content
3. **Canada Grade A2** – Carcasses with 54% to 58% lean yield content
4. **Canada Grade A3** – Carcasses with 53% or less lean yield content
5. **AAA** – small amount of marbling
6. **AA** – slight amounts of marbling
7. **A** – trace amounts of marbling
8. **Canada Grade B** – Meat from youthful animals
 - Lacks adequate fat cover
 - Fat may be yellow
 - Meat may be darker colored
9. **Canada Grade B1** – Lacks sufficient marbling or external fat to qualify for Grade A
10. **Canada Grade B2** – Lacks adequate muscling
11. **Canada Grade B3** – Has yellow fat
12. **Canada Grade B4** – Has a dark meat color
13. **Canada Grade D** – Mature cows
14. **Canada Grade E** – Mature bulls
15. **Dark Cutters** – Meat a very, dark red color
16. **Implants** – Help animal reach market weight at a younger age and reach physiological maturity at a later age
17. **By-products** – The rest of the animal not considered to be part of the carcass
18. **Natural Beef** – Claims this beef is more wholesome, healthy and environmentally friendly than other beef
 - In fact all beef must pass exactly the same tests and standards of quality
19. **Carcass** – The end product you market
20. **Consumer** – The person who buys your product
21. **Marbling** – Amount of fat within the meat
 - Looks like little white flecks in the meat

ACTIVITY 4: CREATIVE CONCENTRATION

Source

Sec 2: 4-H Judging Manual - Judging Beef

Introduction





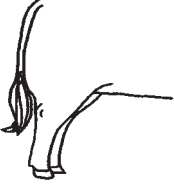



This game is similar to the concentration game played with a regular deck of cards. Players take turns flipping over cards to find the match.

Preparation

1. Before playing the game have a member, parent or other leader create cards to use for this game.
2. The terms are included on the sheets following.
3. Pages can be photocopied on colored paper, laminated and therefore kept for later use.

Presentation

1. Appoint a team leader. The leader will determine who goes first.
2. Lay the cards out on a table face down.
3. Members take turns turning over two cards in an attempt to find two that match.
4. If a participant finds a match they get another turn.
5. You can allow a player to continue turning cards until they don't find a match or you can limit how many matches a player can find on one turn.
6. Once all the cards have been turned over and paired up allow members to read their card and the definition or show the picture, to the rest of the group.
7. As members get better at knowing which cards go together, make new cards that have the term on one card and the picture on the other card.

<p>CONCENTRATION - Judging Terminology</p> <p><i>CORRECT LEG PLACEMENT</i></p> 	<p>CONCENTRATION - Judging Terminology</p> <p><i>Correct Leg Placement</i></p> 
<p>CONCENTRATION - Judging Terminology</p> <p><i>SICKLE-HOCKED</i></p> 	<p>CONCENTRATION - Judging Terminology</p> <p><i>Sickle-Hocked</i></p> 
<p>CONCENTRATION - Judging Terminology</p> <p><i>POST-LEGGED</i></p> 	<p>CONCENTRATION - Judging Terminology</p> <p><i>Post-Legged</i></p> 
<p>CONCENTRATION - Judging Terminology</p> <p><i>CORRECT LEG PLACEMENT</i></p> 	<p>CONCENTRATION - Judging Terminology</p> <p><i>Correct Leg Placement</i></p> 

CONCENTRATION - Judging Terminology

BOW LEGGED



CONCENTRATION - Judging Terminology

Bow Legged



CONCENTRATION - Judging Terminology

COW HOCKED



CONCENTRATION - Judging Terminology

Cow Hocked



CONCENTRATION - Judging Terminology

***REAR LEG:
CORRECT
PASTERN SET***



CONCENTRATION - Judging Terminology

***Rear Leg:
Correct
Pastern Set***



CONCENTRATION - Judging Terminology









***REAR LEG:
WEAK PASTERN***



CONCENTRATION - Judging Terminology

***Rear Leg:
Weak Pastern***



<p>CONCENTRATION - Judging Terminology</p> <p><i>CORRECT PASTERNS SET & STRAIGHT FRONT LEG</i></p> 	<p>CONCENTRATION - Judging Terminology</p> <p><i>Correct Pastern Set & Straight Front Leg</i></p> 
<p>CONCENTRATION - Judging Terminology</p> <p><i>STRAIGHT FRONT LEG & WEAK PASTERNS</i></p> 	<p>CONCENTRATION - Judging Terminology</p> <p><i>Straight Front Leg & Weak Pastern</i></p> 
<p>CONCENTRATION - Judging Terminology</p> <p><i>BACK AT THE KNEE</i></p> 	<p>CONCENTRATION - Judging Terminology</p> <p><i>Back at the Knee</i></p> 
<p>CONCENTRATION - Judging Terminology</p> <p><i>BUCK-KNEED</i></p> 	<p>CONCENTRATION - Judging Terminology</p> <p><i>Buck- Kneed</i></p> 

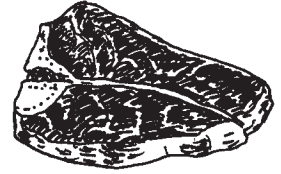
CONCENTRATION - Judging
Terminology

T-BONE STEAK WITH MARBLING



CONCENTRATION -
Judging Terminology

T-Bone Steak With Marbling



CONCENTRATION - Judging
Terminology

T-BONE STEAK WITHOUT MARBLING



CONCENTRATION -
Judging Terminology

T-Bone Steak Without Marbling



ACTIVITY 5: CRITTER CROSSWORD

Source

Sec 2: 4-H Judging Manual - Judging Beef

Introduction

This game uses a crossword puzzle to help members learn terminology.

Preparation

1. Photocopy the crossword puzzle. Use colored paper and make as many copies as you have members or groups.
2. If you are using the overhead option (as described below), copy the puzzle onto a overhead sheet.
3. When you first use the crossword puzzle fill in some of the letters on the puzzle beforehand to make it easier to solve. The more you play the crossword the more members will begin to know the terms and the less clue letters you will need to provide.

Presentation

1. Find a creative way to divide members into groups.
2. Assign a group leader for each group.
3. Hand out one copy of the puzzle to each member (or to each group). The group members are more likely to participate and offer solutions to the clues if they have their own copy of the puzzle. Each member can complete their own sheet so they have it to put in their record books. The group leader should complete the master copy to use when the game is done.
4. Let the groups solve the crossword puzzle together.
5. You can allow members as much time as they need or put a time limit.
6. To make it more interesting you can challenge groups to be the first one done.
7. The reward for finishing first could be:
 - a. One at a time, members in the winning group go through the crossword puzzle clues and give the solutions to the other groups.
 - b. Have each member stand up and face the members when giving their clue.
 - c. Be sure that all members of the group participate.
 - d. Use your group leader to facilitate this.

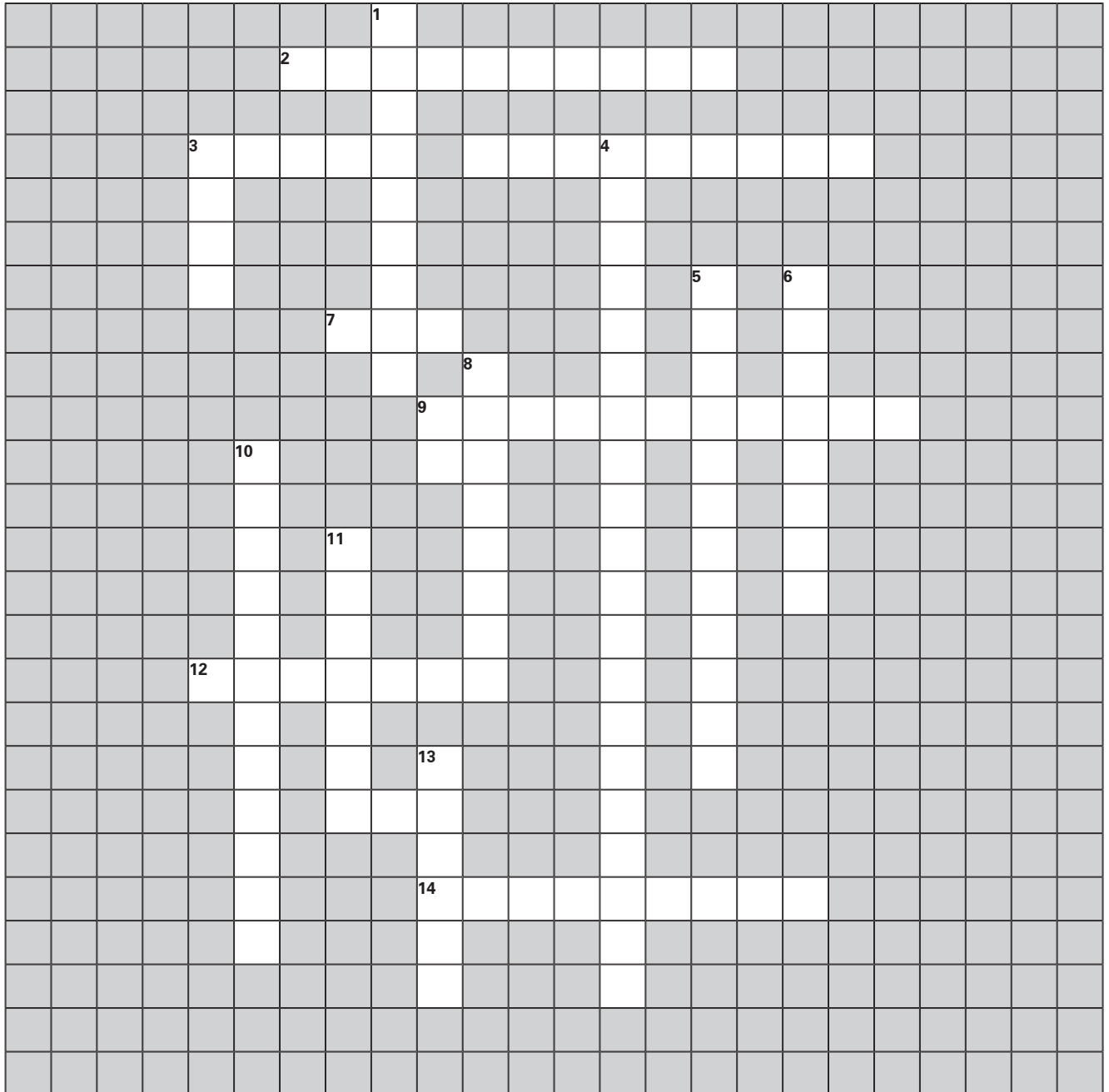
Option - This game could be used as one station in a rotation of games. This game could also be done use of an overhead projector, especially in a small club where all members could complete the crossword as one group.

Name _____

Date _____

Critter Crossword

Complete the puzzle.



Down

1. The amount of fat and muscle an animal is carrying, means the same thing as finish does on a market steer.
3. Rugged and massive, crest over the neck region, scrotum large and hangs straight, sheath compact and close to the body.
4. Good mother, easy calver, producer of progeny with good rate of gain.
5. The portion of a trait which is carried on from ancestors, traits vary.
6. Term used to describe heifers and cows, refinement of head, neck and shoulders, smooth muscling.
8. Also means volume or depth.
10. The overall structure of the animal.
11. The art of visually comparing and ranking beef cattle.
13. Refined about the head, neck and shoulders, signs of udder development, pins below hooks with good distance between pins.

Across

2. Indicates a good mother of adequate size, able to carry calf, good udder and teat development and disposition.
3. Shape of head, length of body, height, color markings and other characteristics as defined by the Breed Associations as characteristics of that breed (2 words - include space in puzzle..)
7. Producing one shows refinement, udder balance, 4 functioning teats.
9. Term used to describe bulls, massiveness and strength.
12. Offspring of calves of a female or bull.
14. Successful breeder, able to conceive and carry a calf.

Critter Crossword Answer Key

								C													
						B	R	O	O	D	I	N	E	S	S						
								N													
						B	R	E	E	D		C	H	A	R	A	C	T	E	R	
						U				I				E							
						L				T				P							
						L				I				R	H		F				
									C	O	W			O	E		E				
									N		C			D		R		M			
										M	A	S	C	U	L	I	N	I	T	Y	
							C						P		C		T		N		
							O						A		T		A		I		
							N		J				C		I		B		T		
							F		U				I		V		I		Y		
							O		D				T		E		L				
							P		R	O	G	E	N	Y		C		I			
							M		I						A		T				
							A		N				H		P		Y				
							T		G				E		A						
							I						I		C						
							O						F	E	R	T	I	L	I	T	Y
							N						E				T				
													R				Y				

NOTE: You can create your own crossword puzzles using the website www.edhelper.com

SCAVENGER HUNT BINGO

Source

Your own knowledge and creativity.

Introduction

This is a game that can be played at a leading clinic, club meeting, interclub activity or when watching or attending a cattle show. It teaches members to identify breeds, traits and characteristics of cattle. It can also promote communication between members. It helps teach project material and provides members with an opportunity to interact.

Preparation

1. Photocopy the Bingo Card on colored paper.
2. Because this activity can be also be played at a meeting, an interclub activity or while attending a cattle show or fair, be sure the boxes suit the occasion. You can change some of the boxes or create a brand new bingo card depending on the occasion.
 - a. For a club bingo card have members find "someone with blue eyes", "a favorite hockey team", "more than three siblings" etc.
 - b. For an interclub bingo card have members find "someone from a particular area", "going to a particular school", "belonging to a certain type of 4-H club", etc.
 - c. When attending a cattle show have members find "the breed with the most or least cattle being exhibited", "the name of a director for a certain breed association", "a bull that weighs over 2000lbs.", "a cow with a calf born in April", etc.
3. Members can complete their card individually or be paired with another member.

Presentation

1. Decide what you are playing for – a full card, one line, two lines etc.
2. Pass out one bingo card to each member, or group of two members.
3. Give a time limit.
4. When time is up, collect the cards and check them or go through them with the members as a group.
5. The games are meant for learning. By going through them together members gain knowledge and have the opportunity to do some public speaking.
6. Award a small prize to the winner(s).

Scavenger Hunt Bingo – Leading Clinic

Write down the member and the name of the calf that fits the description, plus answer the question if there is one. You should use a different calf and member whenever possible.

A Hereford sired calf	The names of five 4-H calves	A Limousin X calf	A member that didn't bring their project animal	A British X calf
A calf that weighs over 1000lbs	A 'true' Black Angus X calf <i>(Not just a black calf.)</i>	A calf that is thick in its stifle	A Charolais X calf	The type of hay a calf is eating
A purebred female	A Red Angus sired calf	A finished steer	A member with more than one project animal	A calf that has oats as part of its' ration
A calf that is on a rolled barley ration	Find an RWF <i>(Red white face.)</i>	A feminine calf	A brockle faced calf	A steer that was castrated with a knife
A steer that was not castrated with a knife	An Exotic X calf	A Simmental X heifer	A steer that is eating beef supplement with rumensin	A calf with good disposition

RUN, ROPE, RELEASE RELAY

Source

Unit 14, Beef Cattle Handling and Facilities – Level 1

Introduction

This game can be played at a meeting or a leading clinic. It teaches members how to tie a quick release knot. The knot has this name because it can be quickly untied to free your animal. This game will teach members to tie the knot quickly and competently.

Preparation

Bring enough rope halters so that there is one for every two or three members.

Presentation

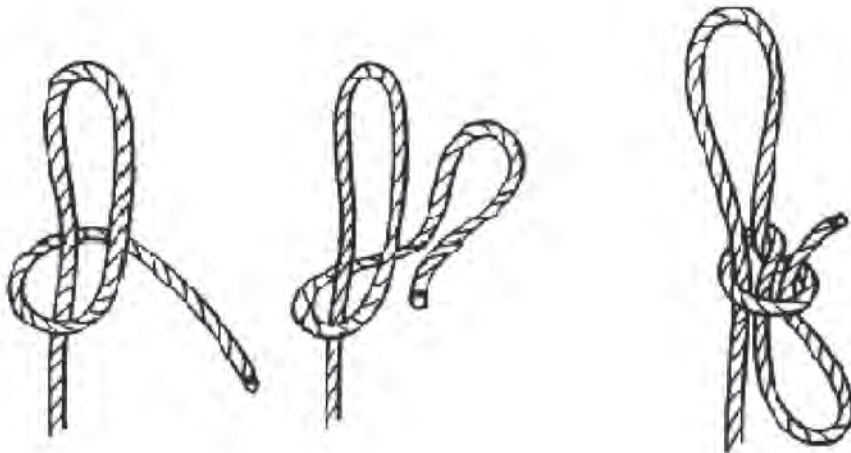
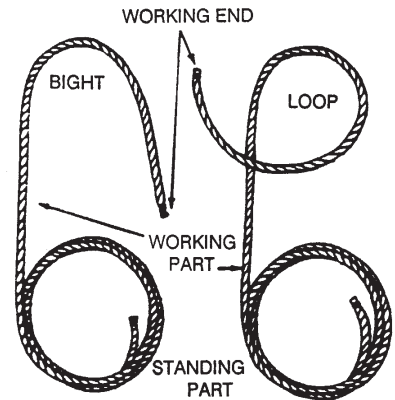
1. Put members in groups of two or three.
2. Be sure at least one of the group members knows how to tie the quick release knot. Use parents and leaders if necessary.
3. Give members time to practice tying the knot in their small groups.
4. Once they all seem to know it, divide them into two or three relay teams.
5. Have them line up at one end of the hall. At the other end of the hall provide a rope halter and something to tie it to. Have one for each relay team. A chair leg, table leg, parent or leader can all work as a fence post or fence rail in a pinch.
6. When all teams are lined up and ready to go have someone start the relay.
7. One at a time members run down to where the rope halter is and tie it to the 'post' using the quick release knot. This member should also undo it to show they have tied the knot correctly. You should have one person watching to make sure the knot is tied properly.
8. Whether the member ties the knot correctly or not, have them run back to their team and tag the next person.
 - a. If they successfully tied and untied the knot their turn is over.
 - b. If they were not successful tying the knot correctly, when all members of their team are done they have to go again.
9. Before starting the relay, if you have members that are unsure if they can tie the knot themselves, allow them to have a second member run down and tie the knot with them. This way the member that can't tie will be encouraged to have a little help and won't have to take a second turn and slow their team down. There's nothing wrong with working together.

The Quick Release Knot

When tying your beef cattle, always use the quick release knot. It has this name because it can always be quickly released to free your animal.

To make a quick release knot:

1. Hold the standing part (the end you are not using to make the knot) of the rope in your left hand and the working part (the end you are using to make the knot) in your right hand.
2. Leave 25 to 30 cm of the working part of the rope below your left hand. Form a bight (turn in the rope where it does not cross over itself).
3. Wrap the working part of the rope over the top and around the back of your bight.
4. Make another bight in the working part of your rope and insert this into the loop (turn in the rope where it crosses over itself).
5. Grasp the standing part of the rope and pull to shape and secure the knot.



NOTE: Do not use the quick release knot around the neck or body of your animal. It should be used only to tie your animal to the fence post or corral.

DOWN IT GOES

The following two activities teach members the parts of the digestive system and their functions. The first activity is a digestive system puzzle. Members are asked to put pieces of the digestive system together. The second activity is a matching game where members match the function of each part with its name.

1. Down It Goes - Digestive System Puzzle

Source

Unit 3, Digestion in the Beef Animal – Level 1 and 2

Introduction

This activity provides a fun way to create a digestive system. It uses digestive system parts as puzzle pieces that members put together.

Preparations

Option 1

- a. Photocopy the digestive system Masters 1 and 2 provided.
- b. Use Master 1 as the backboard (the sheet you will fit the puzzle pieces onto).
- c. Using Master 2, color each part a different color. Cut out the different parts.
- d. You can leave the part names off the master and copy their names onto small pieces of paper. This way, using fun tack members can stick the names on the parts once the puzzle is complete.
- e. All materials can be laminated and kept for future use.

Note: If you are dividing members into groups and having all the groups put the puzzle together at the same time be sure you have enough copies of the materials for each group. You would only need one copy of the materials if you played this game as part of a station rotation.

Option 2

- a. This game can be made bigger with the use of colored corrugated cardboard and an overhead projector.
- b. The cardboard can be purchased at a building supply store.
- c. Put your cardboard on the wall.
- d. Project the image (using an overhead projector) from Master 1 onto the cardboard and trace around it. This creates your Digestive System backboard.
- e. Create the puzzle pieces the same way, using Master 2 and the corrugated cardboard. A thinner cardboard may be desired, as this would make the pieces a lot easier to cut out.

- f. Create part name cards by writing the name of the part on a small piece of cardboard.
- g. Self-adhesive Velcro can be used to attach the puzzle pieces and the part name cards to the digestive system backboard.

Presentation

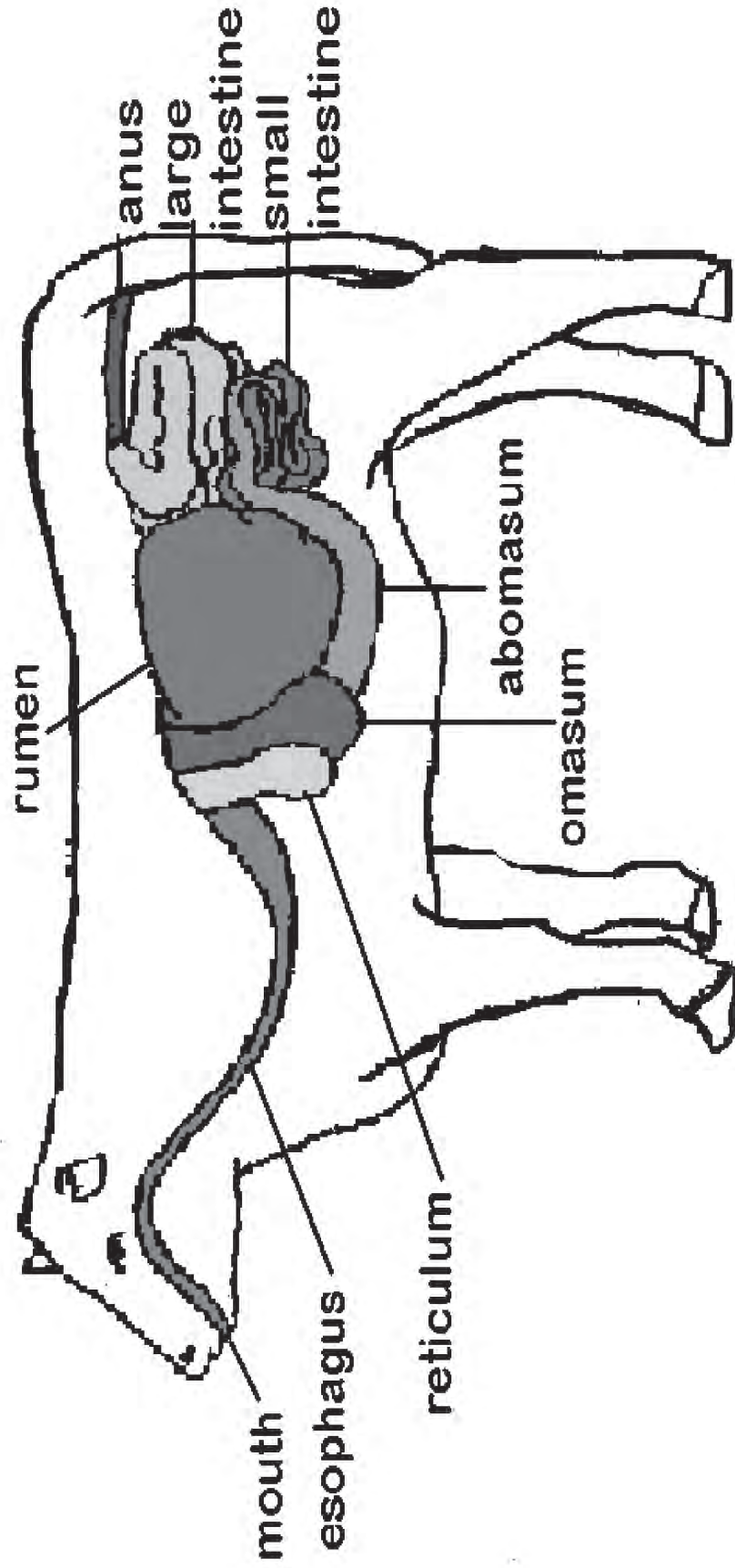
Option 1

- a. Divide members up into small groups.
- b. Be sure there are not more participants in the group than there are digestive system parts.
- c. Have each participant take one part and try to fit it on the puzzle backboard.
- d. This is a simple activity, but it teaches members the names of the parts and where they go in the digestive system.
- e. Once the puzzle is put together move on to the second activity as described below.

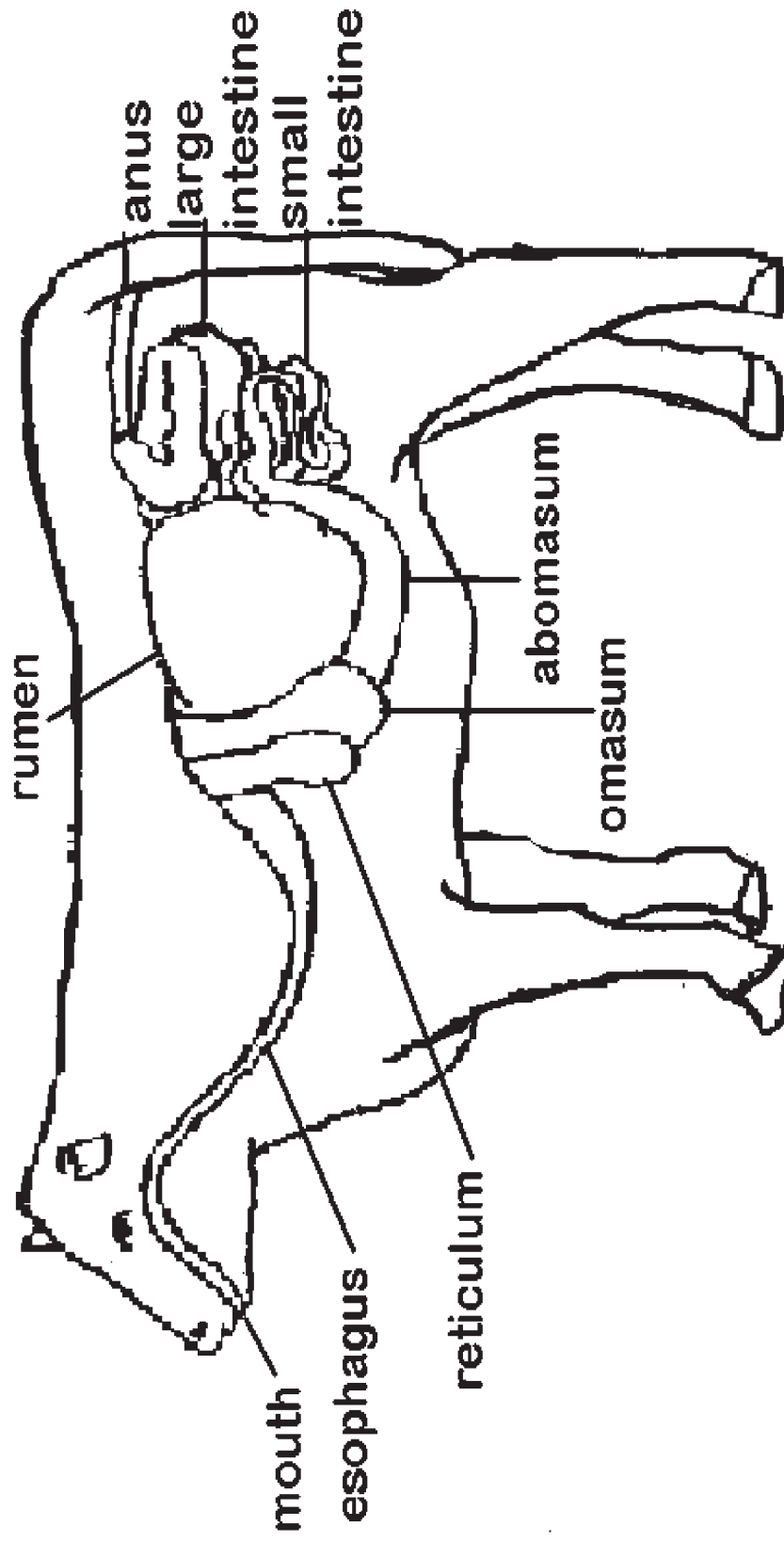
Option 2

- a. As members become familiar with the digestive system parts – write the names of the parts on cards, small pieces of paper, or pieces of corrugated cardboard.
- b. Once the puzzle is together have members put the part name card on each part.

MASTER 1: DOWN IT GOES: DIGESTIVE SYSTEM PUZZLE



MASTER 2: DOWN IT GOES: DIGESTIVE SYSTEM PUZZLE



2. Down It Goes: Digestive System Parts and Their Function

Source

Unit 3, Digestion in the Beef Animal – Level 1 and 2

Introduction

After completing Activity 1 members will know the names of the digestive system parts. Activity 2 uses game cards to explain the function of each of these parts.

Preparation

1. Photocopy the game card sheets using colored paper.
2. Cut the cards apart.
3. These can be laminated and kept for later use.

Presentation

Option 1

- a. Divide members up into small groups.
- b. Give each group a copy of the game cards.
- c. Have the members match the part card with its function card.

Option 2

- a. Play the game like 'My Long Lost Twin' - give each participant one card and allow them time to find their twin – that is the match to the card they are holding.

Option 3

- a. This option can be done as a large group or in smaller groups.
- b. Put the terms on a blackboard or white board.
- c. Pass out their functions.
- d. Have members fun tack their function to the part it describes.
- e. This can be done the opposite way - by writing the function of the part on the board and passing out the parts.

NOTE: When you are done pairing the parts with their functions, have members read out, to the rest of the group, the digestive system parts and functions. One person can point to the part on the puzzle.

GAME CARDS: **DOWN IT GOES** **DIGESTIVE SYSTEM PARTS AND THEIR FUNCTIONS**

<p>DOWN IT GOES – Digestive System Parts</p> <p>MOUTH</p>	<p>DOWN IT GOES – Digestive System Parts</p> <ul style="list-style-type: none">• Takes the food into the body.• The food is broken up into smaller bits by the chewing and grinding of the teeth.
<p>DOWN IT GOES – Digestive System Parts</p> <p><i>ESOPHAGUS</i></p>	<p>DOWN IT GOES – Digestive System Parts</p> <ul style="list-style-type: none">• The long tube or tunnel that runs from the mouth down to the stomach.
<p>DOWN IT GOES – Digestive System Parts</p> <p>STOMACH</p>	<p>DOWN IT GOES – Digestive System Parts</p> <ul style="list-style-type: none">• The beef animal's has four distinct compartments. This is how we know he or she is a ruminant.• Each part has its own special job.

DOWN IT GOES – Digestive System Parts***RUMEN*****DOWN IT GOES – Digestive System Parts**

- First part of the stomach.
- Largest compartment.
- Also called “paunch”.
- Microbes attack food and help break it down.

DOWN IT GOES – Digestive System Parts**RETICULUM****DOWN IT GOES – Digestive System Functions**

- Second part of the stomach.
- Also called “honey-comb”.
- Fine material sent to next compartment.
- Coarser food sent back up to the mouth for chewing—called “chewing the cud”.

DOWN IT GOES – Digestive System Parts***OMASUM*****DOWN IT GOES – Digestive System Functions**

- Third compartment of the stomach.
- Also called “manypiles”.
- Squeezes fluids out of food material.

<p>DOWN IT GOES – Digestive System Parts</p> <p>ABOMASUM</p>	<p>DOWN IT GOES – Digestive System Functions</p> <ul style="list-style-type: none"> • Fourth and last compartment of the stomach. • Also called “true stomach” because it is similar to humans. • Contains digestive juices that help break down food even more.
<p>DOWN IT GOES – Digestive System Parts</p> <p><i>SMALL INTESTINE</i></p>	<p>DOWN IT GOES – Digestive System Functions</p> <ul style="list-style-type: none"> • Very long, thin, coiled tube. • Juices are found here that help change food to a form which the body can absorb.
<p>DOWN IT GOES – Digestive System Parts</p> <p>LARGE INTESTINE</p>	<p>DOWN IT GOES – Digestive System Functions</p> <ul style="list-style-type: none"> • Shorter, fatter tube. • Absorbs what is left of the liquid in the material and adds mucus to help material travel more easily.
<p>DOWN IT GOES – Digestive System Parts</p> <p><i>ANUS</i></p>	<p>DOWN IT GOES – Digestive System Functions</p> <ul style="list-style-type: none"> • Opening in body through which the waste material passes – this waste is the remains or undigested food, which we refer to as manure.

PICTURE **THE PARTS**

The following two activities are designed to teach members the parts of a beef animal and familiarize them with the wholesale cuts of meat. These activities can be used exactly as outlined or you can use the materials to create your own identification activity.

ACTIVITY 1: IDENTIFICATION

Source

Unit 1, Introduction - Welcome to the 4-H Beef Project – Level 1

Unit 17, The Beef Carcass – Level 1

Introduction

The pictures included with this activity are taken right out of the Level 1 Project Book. Use them to create large identification boards.

Preparation

1. Using an overhead projector and Master One and Two, draw the beef animals onto large pieces of colored, corrugated cardboard (available at building supply stores) or regular cardboard – approximately 19" x 24". If you have some artistic talent you can just free hand the picture onto the cardboard.
2. Beside the numbers and letters, stick a small piece of self-adhesive pile Velcro. This will be used to fasten the part cards to.
3. To create the part cards cut out small pieces of cardboard – about 1.5cm x 5cm. Write the name of each part on a card.
4. Adhere a piece of hook Velcro to the back of each part card. Now these part cards can be fastened to the **Picture The Parts – Identification Boards**.
5. Make a copy of Master One and Two on sheets of 8.5" x 11" paper.
6. Fill in the parts with a pen or pencil and use this as an answer key or use the Fill In The Blanks answer key.
7. Tape the answer key to the back of the Picture The Parts Identification boards you have just created, for easy reference.

Presentation

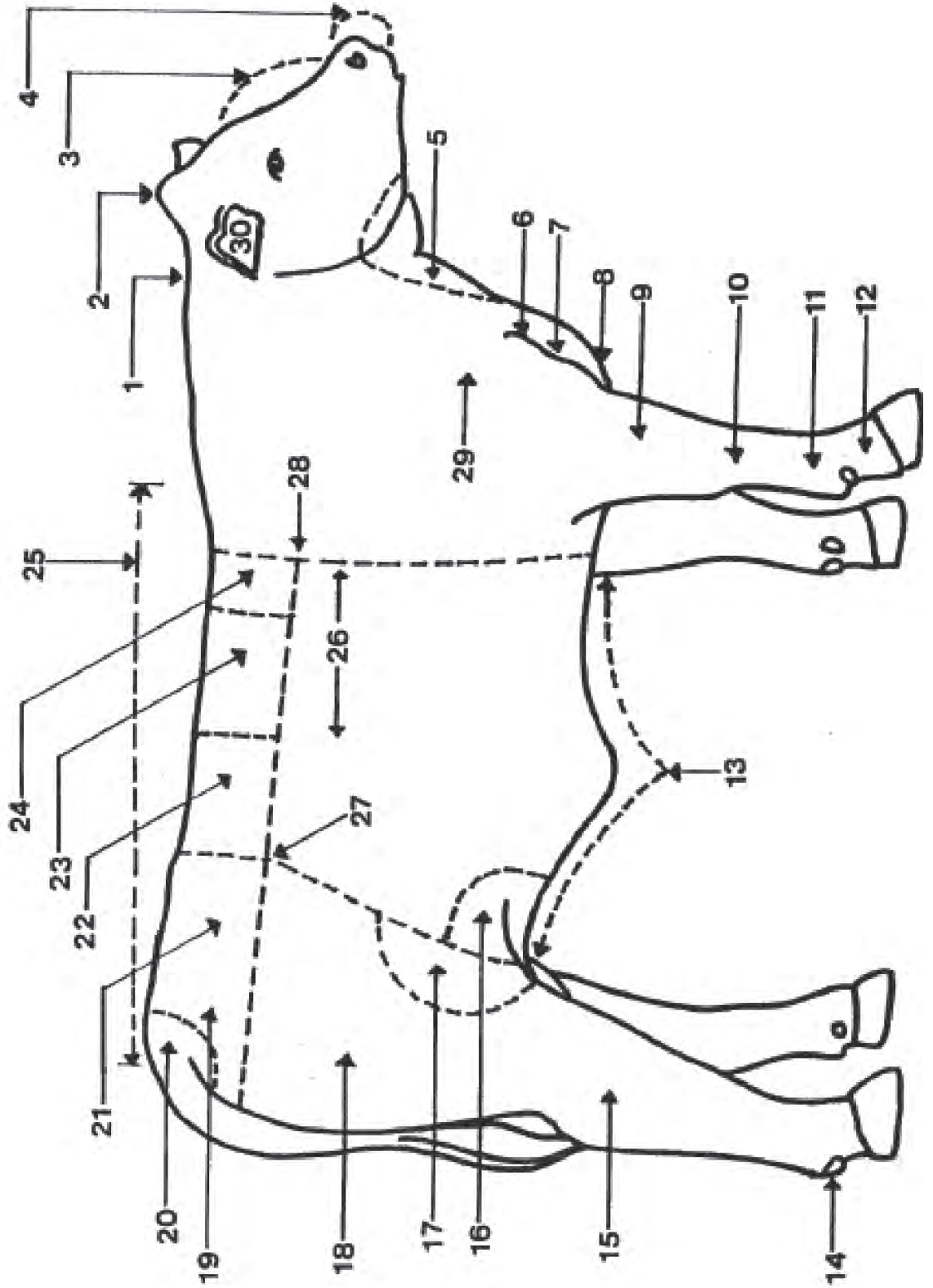
Once you have created your Picture The Parts Identification Boards there are a number of different ways you can use them. I have suggested two.

1. Bring the boards to your general meetings:
 - a. Before the official business of your meeting begins have members try putting the part cards on the Identification Boards.
 - b. You could ask a couple of members to look after the boards and have them encourage others to help complete them.
 - c. As long as the answers are on the back of the boards, members can self-check to make sure they are correctly identifying the parts.

2. Once members become more familiar with wholesale cuts and animal parts you can facilitate a timed relay.
 - a. Divide members into equal groups. Four in a group works well.
 - b. Time each group to see how quickly they can identify the parts.
 - c. Make a substantial deduction for incorrect answers to encourage members to take the time to identify the parts correctly. Perhaps one minute could be added on to their time as a penalty for each incorrect answer.
 - d. To make this work as a timed relay, you may have to provide another activity for members to do so as they are not watching and waiting for their turn. The busier 4-Hers are at their meetings the more they enjoy them.

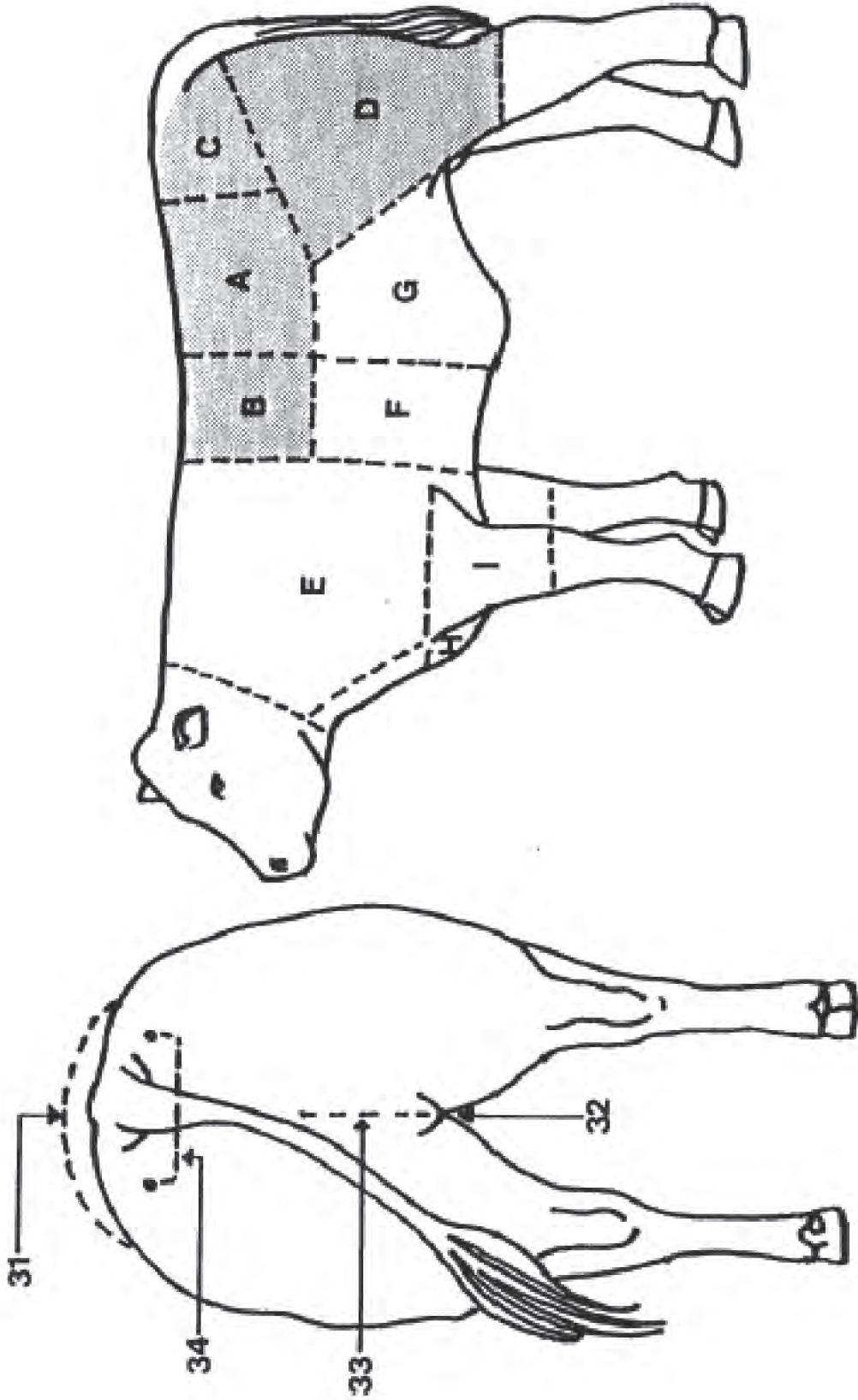
MASTER 1: PICTURE THE PARTS – IDENTIFICATION

Parts of the Beef Animal



MASTER 2: PICTURE THE PARTS - IDENTIFICATION

Parts of the Beef Animal & Wholesale Cuts of a Beef Carcass



ACTIVITY 2: **FILL IN THE BLANKS**

Source

Unit 1, Introduction - Welcome to the 4-H Beef Project – Level 1

Unit 17, The Beef Carcass – Level 1

Introduction

This activity is similar to the one provided in the Level One beef project book, however, rather than having members try and remember the part names, the names are provided and the members need to find their locations.

Preparation

1. Photocopy enough Picture The Parts - Fill In The Blanks question sheets for each group or member participating. You will also need the Masters from the Picture The Parts Identification activity. Photocopy enough copies of the Master 1 and 2 Identification sheets for each group or member.
2. Make as many copies of the answer key as you feel are necessary.

Presentation

1. Divide members into four groups. You can have anywhere from 3 to 5 participants in each group.
2. Give each group a copy of the Master 1 and Master 2 Picture The Parts Identification sheets and a copy of the Picture The Parts - Fill In The Blanks sheet.
3. Each of the four groups will work at the same time. There is no need to time this activity, however, you may need to put a time limit on how long members work at it.
4. Each group will not have to identify all the parts. Each group will identify different parts. This way the activity will encourage such skills as communication, public speaking, leadership, co-operation and working together.
5. Group 1 will look for all the parts in column 1 – starting with the brisket. Group 2 will look for all the parts in column 2 – starting with the topline. Group 3 will look for all the parts in column 3 – starting with the knee. Group 4 will complete the bottom part of the sheet – Wholesale Cuts Of A Beef Carcass and the Cuts of Beef Quiz.
6. At the specified time or when all the groups have completed their portion of the activity bring the entire group together to share what they have learned.
7. Each group will identify to the rest of the club the location of the parts on their list. If you created a parts identification board for the Picture The Parts Identification game you can use this board for group members to show where their parts are located. If not have someone from their group hold up their Master Sheets, point to the location of the part and give its' correct number. Encourage groups to let everyone in their group participate in this sharing part of the activity.

8. Groups can complete their sheets with the correct numbers as other groups provide this information.

ACTIVITY 2: **FILL IN THE BLANKS**

Parts of the Beef Animal

(fill in the blank with the correct number from the diagram)

- | | | |
|-------------------|-----------------|--------------------|
| ___ Brisket | ___ Topline | ___ Knee |
| ___ Dewlap | ___ Muzzle | ___ Dewclaw |
| ___ Rump | ___ Poll | ___ Back |
| ___ Underline | ___ Ribs | ___ Shoulder |
| ___ Crest | ___ Pastern | ___ Shank |
| ___ Hock | ___ Crop | ___ Ear |
| ___ Pin bones | ___ Forearm | ___ Shoulder point |
| ___ Stifle region | ___ Face | ___ Flank |
| ___ Cod | ___ Quarter | ___ Tail head |
| ___ Heart girth | ___ Chest floor | ___ Twist |
| ___ Hooks | ___ Loin | |

Wholesale Cuts of a Beef Carcass

(fill in the blank with the correct letter from the diagram)

- | | |
|-------------|-----------|
| ___ Rump | ___ Shank |
| ___ Brisket | ___ Rib |
| ___ Chuck | ___ Plate |
| ___ Loin | ___ Flank |
| ___ Round | |

Cuts of Beef Quiz

(fill in the blank with the best answer)

1. The diagonal line through the calf separates the _____ (high, low) priced cuts and the _____ (high, low) priced cuts.

2. The _____ (high, low) priced cuts are _____ (shaded, not shaded).

3. The _____ (high, low) priced cuts are _____ (shaded, not shaded).

ACTIVITY 2: **FILL IN THE BLANKS ANSWERS**

Parts of the Beef Animal

(fill in the blank with the correct number from the diagram)

7 Brisket	25 Topline	10 Knee
5 Dewlap	4 Muzzle	14 Dewclaw
21 Rump	2 Poll	23 Back
13 Underline	26 Ribs	29 Shoulder
1 Crest	12 Pastern	11 Shank
15 Hock	24 Crop	30 Ear
19 Pin bones	9 Forearm	6 Shoulder point
17 Stifle region	3 Face	16 Flank
31 Cod	18 Quarter	20 Tail head
28 Heart girth	8 Chest floor	32 Twist
27 Hooks	22 Loin	

Wholesale Cuts of a Beef Carcass

(fill in the blank with the correct letter from the diagram)

C Rump	I Shank
H Brisket	B Rib
E Chuck	F Plate
A Loin	G Flank
D Round	

Cuts of Beef Quiz

(fill in the blank with the best answer from the brackets)

1. The diagonal line through the calf separates the **high** (high, low) priced cuts and the **low** (high, low) priced cuts.
2. The **high** (high, low) priced cuts are **shaded** (shaded, not shaded..)
3. The **low** (high, low) priced cuts are **not shaded** (shaded, not shaded..)

SKILLATHON

Source

Unit 7, Beef Herd Health - Level 1

Unit 8, Managing Your Market Steer - Levels 1 and 2

Unit 12, Calving – Levels 1 and 2

Personal Knowledge – It is great to draw on the personal knowledge of those who help with the activity, rather than using the Project books as your only reference.

Introduction

Not all 4-H beef club members live on working cattle ranches, and even those who do are not necessarily exposed to the many jobs that need to be done on a cattle ranch. For this activity, a member, or group of members, gathers items that are used on a cattle ranch. At a meeting or project activity day, other members see this equipment and have a chance to simulate how it is used.

Preparation

1. It is a good idea to form an organizing committee to facilitate this activity. A group of members should be able to facilitate this activity with minimal assistance from a parent or leader.
2. The committee needs to collect a variety of items that are used on a cattle ranch. Some suggestions are provided. Collect as many or as few of the items as you think you will be able to obtain and use.
3. The number of items you want to collect will depend on how long you have to do the activity and where you are doing it.
4. The organizing committee can call on other members and parents to supply some of the items listed.
5. Each family could be responsible for one set of items. This family could also be responsible for showing and explaining the use of each item. If the family doesn't want to do it themselves they could find someone they know to help them out. This could be a friend, sibling or parent. The key is to make sure there is someone who is willing to show members how each item works.
6. Because this is an activity that you would do at a meeting you won't have a live animal to show how the tools are used. There are other alternatives. Members can simply look at each instrument and get a feel for how it works. With a little imagination someone could create a way to simulate the activities. The use of videos, magazines, photographs or even stuffed animals may help.
7. Once you have decided who will bring what, organize the items into stations.

8. The facilitators of this activity should number each item at each station. This way members can do an identification game before discussing how the items supplied are used.
9. Make signs for each station. Be creative. The station for cattle identification items could be called "Who's Who." The station for Oral Calf Feeding could be called "Baby! Baby!"

Suggestions of Items to Bring:

1. Cattle Identification
 - a. Variety of Ear Tags
 - i. Traditional plain tags with or without stamped numbers
 - ii. Breed Specific Tags
 - iii. CCIA (explain the CCIA tagging system)
 - iv. RFID tags (explain the RFID tagging system)
 - v. Metal ear tags
 - b. Tagging Ink or Pen – used to identify sire, dam or breed information on the tags
 - c. Tagging Pliers – different types for different types of tags
 - d. Brisket Tags
 - e. Branding
 - i. Electric Brand
 - ii. Hot Iron Brands
 - iii. Freeze Brands
2. Castration Tools
 - a. Knife
 - b. Burdizzo
 - c. Elastrator
 - d. Emasculator
3. Dehorning
 - a. Chemical Dehorning
 - b. Electric Dehorning
 - c. Gougers or Scoopers
 - i. Wire
 - ii. Saw
 - iii. Clippers

4. Clippers
 - a. Flathead
 - b. Sheep shear
 - c. Smaller variety
5. Calving Supplies
 - a. Calf puller
 - b. Plastic or latex gloves
 - c. Chains and handles
 - d. Scalpel (used for C-sections)
6. Oral Calf Feeding
 - a. Oral calf feeder
 - b. Powdered colostrum
 - c. Electrolytes
7. Cattle Handling Devices
 - a. Sorting sticks – a variety of types
 - b. Sorting paddles
 - c. Stock prod
8. Administering Drugs
 - a. Balling Gun and Boluses
 - i. Smaller balling gun for calves
 - ii. Calf boluses
 - iii. Larger balling gun for cows
 - iv. Cow boluses
 - b. Vaccines
 - i. Vaccination gun
 - ii. Sample bottles of vaccine
 - c. Antibiotics
 - i. Disposable syringe and needles
 - ii. Sample bottles of antibiotics
 - d. Parasite treatments
 - i. Variety of guns used to administer
 - ii. Labels from different brands of parasite treatment

- e. Administration sites
 - i. Front shoulder vs. hind quarter
- f. Ways to Administer
 - i. Subcutaneous
 - ii. Intramuscular
 - iii. Intravenous

NOTE: Be sure all items supplied are clean and safe to handle.

Presentation

1. Divide members into small groups. Each level could make up a group – Seniors - Group 1, Intermediates - Group 2, Juniors - Group 3. This way the station leaders can supply age appropriate information. If you have a large number of members at any one level divide the members into more than one group.
2. Each group starts at a different station.
3. Members rotate through stations one at a time.
4. This is a two-part activity.
 - a. For the first part the whole group can work together or members can divide into smaller groups of two or three. The articles at the station will be numbered. The members will use a sheet of paper and try to identify each item. Allow just a few minutes for members to do this. Once the members have had time to go through each station once they will continue rotating through a second time.
 - b. The second time, members will be told the correct name of each item and the station leaders will label each item with its name. Members will also be shown how the item works. The station leaders will give the members a chance to handle and use the items themselves and allow them to ask questions. Allow 10 – 15 minutes for this part of the activity.

This activity may be quite time consuming, which is fine if you have a lot of time to devote to it, if not, one of the options below may appeal to you.

Option 1

Members could simply go to each station once to learn the name and use of the tools rather than rotating through the stations twice.

Option 2

Have each member (or senior member) bring 1-2 items to the meeting. Set them all up on a table and have members work in pairs to see how many items they can identify. (Pairing a younger and an older member may be helpful). As a group the club could discuss the way each item is used. Provide a prize for the pair that identifies the most items.

'WE SURVIVED'

Introduction

As a way to encourage participation in activities at meetings and reward members for surviving all of them, one of our 4-H leaders suggested a Survivor-type game. We decided to award members points for participation in the activities and also for being on the winning group or team. We often reward members for their accomplishments. This provides incentive for members to continue to improve, but sometimes there are other ways to provide this incentive. 'We Survived' puts emphasis on participation, and 'winning' can only be accomplished as a group. Members are rewarded for taking part, and are encouraged to work together as a group or team, where they may be rewarded further.

Preparation

1. The first thing you need is a poster or chart to keep track of the points that are awarded to each member.
2. We were able to create this using a commercial size printer. This type of printer creates large, poster-sized documents.
3. If you don't have access to such a printer, enlist the help of someone who likes to make posters.
4. The *We Survived Point Saver* that follows is a sample of the type of poster you need. Use your own creativity and personalize it for your club.

Presentation

1. 'We Survived' is something that is completed at each meeting or function.
2. Find a volunteer that will help keep track of 'We Survived' points.
3. Ask them to bring the Point Saver to every meeting.
4. Post it on the wall where everyone can see it.
5. After the activities are done have your volunteer award points to the participants and to the winning groups.
6. Award two points for participating and one point for being on the winning team or group. Write these points on the Point Saver.
7. Some activities won't have winners, but be sure and award all participants two points for being involved.
8. At the end of the year, at our Awards Night we gave Survivor Prizes to the two members with the most points. This isn't necessary but again it provides incentive to succeed in another way.
9. You may want to use a different point system. It might be better to focus only on participation. Give more points for participating rather than worrying about who wins or loses. Use whatever system you feel will be the greatest benefit to your membership.

BIBLIOGRAPHY

1. www.edHelper.com
2. www.4h.ab.ca
3. Beef Project Books – Levels 1, 2 and 3
Leaders Manual

**Government
of Alberta ■**

4-H and Agriculture Education Branch
1994