4-H Beef Series
Master Beef 1 - “Meating” the Challenge of Raising Beef

Member and Leader Manual

This project is for members who are 13 - 14 years of age. Members will learn more about nutrition, rations and feed costs, health and cow/calf care, handling and facilities. Other topics include alternative watering systems, environmental concerns, animal welfare, and “gate to plate” information such as carcass evaluation, marketing, the consumer link and current beef issues. Members can use a market steer or heifer, a breeding heifer, or a continuation heifer as their project animal.

Learning is 3D!

To help you get the most out of your learning, each project meeting has the following parts:

Dream it! Plan for success
Do it! Hands on learning
Dig it! What did you learn?
What Skills Will You Learn?

To complete this project, members must:
• Spend a minimum of 15 - 20 hours completing the project work.
• Complete the listed activities, OR a similar activity that focuses on the same skills, as you and your members may plan other activities.
• Plan and complete the Showcase Challenge
• Complete the Portfolio Page.
• Participate in your club’s Achievement (see the inside back cover for more information about 4-H Achievement).

Achievement (project completion) requirements for 4-H Manitoba apply to this project and are described above. The amount of time spent on project work may exceed the minimum 15 hours, depending on the project that you have chosen and the activities within the project.

This project was selected to be offered by 4-H Manitoba because it provides members with the opportunity to meet Manitoba 4-H project learning objectives. These objectives include technical skills, communication, meeting management, leadership skills, as well as community involvement and real world experiences.

The project manual is a combined resource book, work book and animal record book. It provides material on a variety of topics related to raising beef.
4-H leader assessment of members will occur throughout the project as you observe the progress and learning of each member. Record what you see and hear. Your feedback should be positive and specific (not just “well done”). Share feedback with members often so they can act on your suggestions. How you choose to observe and record is up to you. Remember that members may improve throughout the project year and that records should be updated to reflect when they showed their best learning.

Projects promote technical, communication, meeting management, and leadership skills, as well as community involvement and real-world experiences. In addition to the specific skills members are to learn in each activity, these learning goals for members are important: Following instructions - Working with others - Using supplies safely - Using the key words - Improving with practice - Respecting timelines.

4-H LEADER TIPS FOR SUCCESS!

- Depending on time available, group size and member abilities, you may wish to break the activities in each section into more than one project meeting.

- The internet has lots of interesting websites and educational activities. We do not endorse any website or any products they may sell. Information/products will be used at your own discretion.

- Safety is a number one priority. Care has been taken to create safe, age appropriate activities throughout this manual. As leaders, it is important for you to emphasize safety rules and adapt activities to safely match your members’ abilities. Ensure members have a good understanding of safe practices when using tools, that they use the right safety equipment when necessary, and that good supervision is provided. A quality experience needs to be a safe experience.

- The multiple intelligences theory teaches us that people learn in at least 8 different ways. All individuals will be stronger in some ways of “intelligences” and weaker in others. It follows that the more ways we teach, the more members we will reach. Throughout this project, you will find a mix of teaching and learning methods. Teaching projects using a broad blend will help increase the learning potential of all members.

- Projects are designed to teach many skills, but the 4-H member is always more important than the subject matter. Stress cooperation in the activities to develop teamwork and cooperation skills. These are valuable life skills. Ensure the work is completed in a manner that members feel good about themselves and their efforts. This can be done by assigning tasks based on member’s individual abilities. Modelling and expecting supportive behaviour (i.e. no “put-downs”) in the group also contributes to a positive experience.

- There will be opportunity for experimentation and applying skills that members have learned throughout this project. Experimenting can be frustrating, but learning through trial and error is an important life skill. Explain to members that it is alright to either go on to the next activity or do the activity again if they need the practice. Help the members work through their challenges until they are satisfied with the final results. Creating inventive 4-H members will be very rewarding.

- Celebrating success is an important but sometimes overlooked part of our lives. We encourage you to use the final section to empower the members by celebrating all they have learned in a fun manner. Anything that you do to add to the spirit of fun and the sense of accomplishment of each member will likely be remembered as the highlight of their 4-H year.

Have fun and thanks for your belief in young people!
Showcase Challenge and My Portfolio Page

Showcase Challenge

The "Showcase Challenge" page gets members to think about their accomplishments and explain or demonstrate how they were successful. There is information to help them decide how they will best "Showcase" their learning to family and friends. Have members use their Member Manual to help them in organizing what they have learned. The form of the showcase can vary according to the wishes of the members and leaders, and the member’s ability. Information could be presented in many forms, some of which are: posters, pamphlets, written reports, speeches, computer presentations displays, etc. Suggestions are listed on the Showcase Challenge page at the back of the Member Manual. The best results are almost always obtained when members are allowed to present their information in the style of their choice.

Portfolio Page

Record Keeping is an important part of every 4-H project. "My Portfolio Page" is used to keep track of members’ 4-H experiences. As each member learns skills this is recorded on the portfolio page. When the Portfolio Page has been completed and confirmed by the leader, then it becomes a record of the member’s completion of the project and participation in other 4-H activities beyond the project.

As a final exercise in the project, members and leaders will pull together all this learning in completing the Portfolio Page in the Member Manual. Members and leaders must indicate how they know the member was successful at a particular skill. Leaders will find evidence if they think about what they have observed members doing, what discussions they have had with members, and what the members have produced. If leaders think that members need to go back and improve on any skill, this chart helps them clarify what needs to be done.
Unit 6

“Meating” the Challenge of Raising Beef

Member’s Manual
Printed 2007

Manitoba Agriculture, Food and Rural Initiatives
www.gov.mb.ca/agriculture/
4-H Motto
Learn to do by doing

4-H Pledge
I pledge
My HEAD to clearer thinking
My HEART to greater loyalty
My HANDS to larger service
My HEALTH to better living
For my club, my community, and my country

4-H QUALITY EQUATION PRINCIPLES
Quality People
  Promote responsibility, respect, trust, honesty, fairness, sportsmanship, citizenship, teamwork and caring.
Quality Experiences
  Provide members with personal development and skill development experiences.
Quality Projects
  Promote and value quality effort.
  Promote high quality, safe food production within industry standards.

Table of Contents

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Completion Requirements</td>
<td>3</td>
</tr>
<tr>
<td>Project Evaluation</td>
<td>4</td>
</tr>
<tr>
<td>Leaders/Parents Page</td>
<td>5</td>
</tr>
<tr>
<td>Ideas for Achievement</td>
<td>6</td>
</tr>
<tr>
<td>Selection</td>
<td>16</td>
</tr>
<tr>
<td>Health</td>
<td>35</td>
</tr>
<tr>
<td>Nutrition</td>
<td>49</td>
</tr>
<tr>
<td>Facilities</td>
<td>59</td>
</tr>
<tr>
<td>Beef Links</td>
<td>63</td>
</tr>
<tr>
<td>Handling</td>
<td>68</td>
</tr>
<tr>
<td>Judging</td>
<td>93</td>
</tr>
<tr>
<td>Carcass Evaluation</td>
<td>98</td>
</tr>
</tbody>
</table>

Front cover photo taken by Brenda Warrener
PROJECT COMPLETION REQUIREMENTS

FOR COMPLETION OF THIS PROJECT, EACH MEMBER MUST:

- Complete and display the “My 4-H Record” form at achievement.

- The “Hamburger” icon identifies exercises that need to be completed. They can be found on pages 19, 20, 24, 25, 26, 27, 28, 29, 30, 40, 60, 61, 62, 64, 65, 87, 105, 106. It will state at the top of each page which project the page is for (Market Animal, Heifer, Continuation Heifer, or All Projects).

- Display your project book at your Achievement.

- Display your 4-H project animal at your Achievement.

- If you have more than one project animal, you will need a book for each animal, but you do not need to redo pages all exercises. Complete all required pages in one book but then just the pages that are specific to your project animal only in other book(s).

INTRODUCTION TO “Meating” the Challenge of Raising Beef

In the Unit 6 Project you will learn about:

- Selecting, feeding, caring, and housing a beef calf
- Handling, training, grooming, and showing
- Markets, Consumers, Animal Welfare, and Ethics
- Judging and Carcass Evaluation

IDEAS FOR ACHIEVEMENT:

- The Traditional 4-H Show, a Farm to Farm Achievement, a Skillathon Achievement, and a In the Pen Achievement. See pages 6 - 15 for more details.

SAFE FARMS

When you see the “Stay Safe” icon and the information in a box you will know that this is a safety point or tip.
PROJECT EVALUATION
"MEATING" THE CHALLENGE OF RAISING BEEF

Please help us to make sure the 4-H program provides quality projects. Fill out this form as you work through the book. Your answers will be used to improve the project. After you are done your project, mail this form to:

Provincial 4-H Office
Manitoba Agriculture, Food and Rural Initiatives
1129 Queens Avenue
Brandon, MB. R7A 1L9

Who are you? _____ member _____ leader _____ parent

1. Why did you choose to take this project? ____________________________
   ______________________________________________________________

2. What was the best part of this book? _____________________________
   ______________________________________________________________

3. In this book, what things were too hard or didn’t work? ______________
   ______________________________________________________________

4. What are some neat ideas that would make this book more exciting?
   ______________________________________________________________
   ______________________________________________________________

5. Anything else you would like to tell us? __________________________
   ______________________________________________________________

In case we need to find out more, you may want to add your name:

Name: ___________________ Phone #: ________ Email: ____________
This book is for members who are **thirteen years old**. The books are a combination of manual, workbook, and record book. Members should be able to read and do most of the exercises on their own. If they have more than one project animal, they will need a book for each animal, but you do not need to redo pages that involve **all projects** such as the judging exercise. Complete the pages that are specific to your project animal only.

There are **five main sections in all units** of the books. They are **Selection**, **Health**, **Nutrition**, **Facilities**, and **Handling**. The **title pages** for each section are in the same format in all units. Hopefully this will be helpful when you are at a meeting and working with members who have different books. For example: they may all be working on slightly different material, but they will all be working in the Nutrition Section. As the units progress there will be some different sections added, and some deleted.

The **ACTIVITIES** at the end of each section are optional. Most require a minimum of preparation and resources. They can be completed in **less than 30 minutes**. Some are as short as 10 minutes. Hopefully they will offer leaders some new **ideas for presenting and reviewing the material studied in the section**. Each unit has different activities, so you can choose the ones you think are most suited to your group. Some of these activities can be done by an individual member on their own.

Take time to read over the **Project Completion Requirements and Project Information** with your members. Remind them that any exercise displaying the **Hamburger icon** has to be completed.
IDEAS FOR ACHIEVEMENT

The 4-H Cattle Show has been the traditional achievement for the beef project for many years. The following are some ideas that could coincide with a show or provide an option for clubs who are looking for new ideas for their achievement.

- A Skillathon Achievement
- "Farm to Farm” Achievement
- "In the Pen” Achievement

If you want to provide 4-H members with a learning experience that emphasizes all aspects of production, you might be interested in using the scorecards on the following pages.

The Market Animal Scorecard evaluates in three different areas. The lean yield score emphasizes the importance of producing a high value carcass. The usefulness score evaluates the animal’s traits such as frame, muscling, trimness and correctness. The gain and quality grade score evaluates the rate gain and grade of the animal, which is an indication of how successful the member was at feeding the animal to reach the goal weight.

The Replacement Heifer Scorecard evaluates the various desirable traits and characteristics of a good heifer, the rate of gain, and the breeding success.

The Continuation Heifer (Cow/Calf Pair) Scorecard evaluates the various desirable traits and characteristics of a good cow, body condition, and the characteristics of the calf. This program does not guarantee a winner in the show ring, but it does provide an opportunity for success for every 4-H member.
# Market Animal Scorecard

<table>
<thead>
<tr>
<th>Number</th>
<th>Weight</th>
<th>A.D.G.</th>
<th>Scan Data</th>
</tr>
</thead>
</table>

### ***LEAN YIELD***

<table>
<thead>
<tr>
<th>Yield Grade</th>
<th>Range</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>High 1</td>
<td>&gt;61.0%</td>
<td>20</td>
</tr>
<tr>
<td>Medium 1</td>
<td>60.0-60.9</td>
<td>18</td>
</tr>
<tr>
<td>Low 1</td>
<td>59.0-59.9</td>
<td>16</td>
</tr>
<tr>
<td>High 2</td>
<td>58.0-58.9</td>
<td>14</td>
</tr>
<tr>
<td>Medium 2</td>
<td>56.0-57.9</td>
<td>11</td>
</tr>
<tr>
<td>Low 2</td>
<td>54.0-55.9</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>&lt;53.9%</td>
<td>5</td>
</tr>
</tbody>
</table>

Maximum Score Available: 20

### ***USEFULNESS EVALUATION***

<table>
<thead>
<tr>
<th>Trait</th>
<th>Low</th>
<th>Fair</th>
<th>Avg.</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Muscling</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Total Trimness</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Growth/Frame</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Structure/Balance</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

Maximum Score Available: 36

### ***GAIN & QUALITY GRADE***

<table>
<thead>
<tr>
<th>A.D.G.</th>
<th>B</th>
<th>A</th>
<th>AA or Better</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4 or &lt;</td>
<td>14</td>
<td>30</td>
<td>42</td>
</tr>
<tr>
<td>2.6</td>
<td>17</td>
<td>33</td>
<td>45</td>
</tr>
<tr>
<td>2.8</td>
<td>19</td>
<td>35</td>
<td>47</td>
</tr>
<tr>
<td>3.0</td>
<td>21</td>
<td>37</td>
<td>49</td>
</tr>
<tr>
<td>3.2</td>
<td>23</td>
<td>39</td>
<td>51</td>
</tr>
<tr>
<td>3.4</td>
<td>25</td>
<td>41</td>
<td>53</td>
</tr>
</tbody>
</table>

Maximum Point Spread/Grade: 11

### Comments:

<table>
<thead>
<tr>
<th>Beef Live Weight</th>
<th>Bonuses</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1050</td>
<td>0</td>
</tr>
<tr>
<td>1051-1150</td>
<td>+3</td>
</tr>
<tr>
<td>1151-1350</td>
<td>+5</td>
</tr>
<tr>
<td>1351-1450</td>
<td>+3</td>
</tr>
<tr>
<td>&gt;1451</td>
<td>0</td>
</tr>
</tbody>
</table>

TOTAL (Max. 114)

*Printed Sept. 2004*
## Replacement Heifer Scorecard

<table>
<thead>
<tr>
<th>Number</th>
<th>Weight</th>
<th>A.D.G.</th>
<th>Scan Data</th>
</tr>
</thead>
</table>

### ***USEFULNESS EVALUATION***

**Score Range 1 – 5**

<table>
<thead>
<tr>
<th>Trait</th>
<th>Low</th>
<th>Fair</th>
<th>Avg.</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscling</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Trimness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Growth/Frame</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Balance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Length</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Head and neck</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Legs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Feet</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Udder</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Pins</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Vulva</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Temperament</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Maximum Score Available 60 points**

<table>
<thead>
<tr>
<th>Body Conditioning Score</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.D.G. 1 – 2 lbs/day</td>
<td>5</td>
</tr>
<tr>
<td>BCS 1</td>
<td>0</td>
</tr>
<tr>
<td>BCS 2 or 3</td>
<td>10</td>
</tr>
<tr>
<td>BCS 4 or 5</td>
<td>25</td>
</tr>
<tr>
<td>BCS 6 or 7</td>
<td>15</td>
</tr>
<tr>
<td>BCS 8 or 9</td>
<td>10</td>
</tr>
</tbody>
</table>

**Maximum Score 30 Points**

<table>
<thead>
<tr>
<th>***GAIN ***</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.D.G. 1 – 2 lbs/day</td>
</tr>
<tr>
<td>BCS 1</td>
</tr>
<tr>
<td>BCS 2 or 3</td>
</tr>
<tr>
<td>BCS 4 or 5</td>
</tr>
<tr>
<td>BCS 6 or 7</td>
</tr>
<tr>
<td>BCS 8 or 9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>***BREEDING SUCCESS ***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeding</td>
</tr>
<tr>
<td>Heifer Cycling</td>
</tr>
<tr>
<td>Breeding Attempted</td>
</tr>
<tr>
<td>Heifer Pregnant</td>
</tr>
</tbody>
</table>

**Maximum Score 20 Points**

<table>
<thead>
<tr>
<th>TOTAL SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible 110 points</td>
</tr>
</tbody>
</table>
**Continuation Heifer (Cow/Calf) Scorecard**

<table>
<thead>
<tr>
<th>Number</th>
<th>Weight</th>
<th>A.D.G.</th>
<th>Scan Data</th>
<th>Weight of Calf</th>
<th>A.D.G.</th>
</tr>
</thead>
</table>

### ***USEFULNESS EVALUATION***

<table>
<thead>
<tr>
<th>Trait</th>
<th>Low</th>
<th>Fair</th>
<th>Avg.</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscling</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Trimness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Growth/Frame</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Balance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Length</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Legs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Feet</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Udder/Milk</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Vulva</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Broodiness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Maximum Score Available 50 points**

### ***BODY CONDITION***

<table>
<thead>
<tr>
<th>Body Condition Score</th>
<th>Points</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCS 1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>BCS 2 or 3</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>BCS 4 or 5</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>BCS 6 or 7</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>BCS 8 or 9</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

**Maximum Score 30**

### ***CALF USEFULNESS***

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Low</th>
<th>Fair</th>
<th>Avg.</th>
<th>Good</th>
<th>Exc.</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Alert</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Frame</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Rate of Gain</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**Maximum Score 20**

### TOTAL SCORE

Possible 100 points
SKILLATHON ACHIEVEMENT

The Skillathon can be done in a competitive or non-competitive manner. It is an opportunity for the members to demonstrate the skills they have acquired. The following are some tips that could be helpful in organizing the event.

- Set up at least 4 stations relative to the project. (see ideas on following page)
- Make stations as hands-on as possible.
- Aim for approximately 5 minutes/station for each member to complete the station activities.
- Consider giving a participation token to each member.
- If scoring, 25 marks per station makes an easy score out of 100 (4 stations x 25 marks). Develop a clear system for allocating points at each station. This allows for faster and more consistent scoring.
- Avoid sharing of answers through station layouts or have multiple situations at the station so that everyone does not get the exact same scenario.
- Develop stations with different degrees of difficulties for junior, intermediate and senior participants OR (if ranking) only compare junior participant scores to other junior participants scores.
- Have members rotate through the stations doing their best at each station.

Skillathon Station Ideas

1. Title: Feed Quality
   Supplies: 4 flakes of different hay, judging cards, pencil, Hormel scorecard.
   Set up: Number the 4 flakes of hay and line up on a table.
   Task: Rank the quality of these 4 hay samples from highest quality to lowest quality. State your placings and reasons on a judging card.
   Evaluation: Have an “official hay judge” rank the hay samples and give reasons. Mark reasons by comparing to the “official judging card”. Mark placings by using the Hormel scorecard. (If you want a more advanced level, have feed analyzed and display lab results for members to assess).
2. Title: Feed Stuff Identification

**Supplies:** 5 samples of feed stuff, 10 cards with feed stuff names (5 of which correctly name your feed samples) e.g. rolled oats, barley, trace mineral mix, alfalfa pellets. etc.

**Set up:** Place 5 samples of feed stuff in margarine tubs and line up on a table. Have a tub full of name cards.

**Task:** Identify the feed sample by placing a name card next to it.

**Evaluation:** Count the number of correct identifications.

3. Title: Feed Labels

**Supplies:** Collect copies of 10-15 beef feed tag labels. Write a question on the reverse of the tag that members can find the answer to by reading and understanding the tag. Example questions:

- What is the main ingredient in this feed?
- What type of beef cattle should this be fed to?
- What is the active drug ingredient in this feed?
- What is the crude protein level of this feed?
- How many kgs/lbs. of this feed should be fed daily?
- Are there any dangers with using this feed?
- How long prior to slaughter should this feed be removed?
- How many pounds of ingredients are included in this bag?

**Set up:** Tub with feed tags in it.

**Task:** Select 1-5 (you determine the exact number) feed tags from the bucket. Answer the questions on the reverse of the tag.

**Evaluation:** Count number of correct answers.

4. Title: Meat Cut Identification

**Supplies:** Draw a beef carcass on bristle board or enlarge and laminate a diagram of a beef carcass. Be sure to remove labels. Cut into pieces.

**Set up:** Place “carcass pieces” in a tub.

**Task:** Select 1-4 (you determine the exact number) carcass pieces from the bucket. Answer the following questions about each piece:

1. Name of the cut
2. Where is the cut located on the animal’s body?
3. Quality of cut - low, medium or high.

**Evaluation:** Count the number of correct answers.
5. Title: Quality Assurance
Supplies: Copies of - A scenario for vet prescription
- A poster of a steer

Example:
The steer you are planning on taking to the fair next month is lame in the left front leg. Today your veterinarian has diagnosed the steer's problem as foot rot and has given it an initial treatment at the time of the examination. The veterinarian has left additional medication with you to continue the treatment. The directions on the medication tell you to give the steer 1 cc per 50 kg. body weight once daily for four days, beginning tomorrow, and to give it by intramuscular injection. Your steer weighs 450 kg. Remember, your veterinarian treated the steer today, July 3, 2006 and you will treat it 4 more days as directed. The hold time on this product is 14 days. Look at the label on the following page to determine the answers to these questions:

1. How much will you give the steer each day?
2. How much will you need to treat it for four days?
3. What is the first FULL day the steer could be safely slaughtered for food?
4. On the poster, show the preferred site for the intramuscular injection.

Emily Edwards. DVM
100 Quality Avenue
Hometown, MB R7A 16Z
204-555-5050
Owner: Jennifer Wilson Date: July 3, 2006
Animal ID: Hereford #351 Indications: Foot Rot
Directions: Give 1cc per 50 kg. body weight IM once daily for four days beginning July 4.
Precaution: Avoid injection into muscle of high carcass value.
WARNING: USE OF THIS DRUG MUST BE DISCONTINUED FOR 14 DAYS BEFORE SLAUGHTER OR MARKET FOR FOOD.
Active Ingredients(s) Hydrocillin exp. Date: Sept. 30, 2006

Task: Read the scenario and complete the drug label, and answer the questions.
Evaluation: Count the number of correct blanks in drug label and correct answer to questions.
6. Title: Breed Identification
   Set Up: Lay out photos of cattle breeds on table. Have a tub of name labels.
   Task: Match the name label to the breed picture.
   Evaluation: Count the number of breeds correctly identified.

7. Title: Parts of a Beef Animal
   Supplies: Poster of a beef animal. Plastitak or pins (something to stick on animal parts). Name labels for animal parts.
   Set Up: Put poster on wall. Tub of part labels.
   Task: Match the name label to the animal part.
   Evaluation: Count the number of parts correctly identified.

8. Title: Equipment Identification
   Supplies: 5 grooming supplies. 10 labels of grooming supply names. 10 labels identifying use of grooming supply.
   Set Up: Lay out grooming supplies. Two tubs of labels - one for supply name and one for use.
   Task: Match the name and use to the appropriate grooming supply.
   Evaluation: Count number of correct matches.

9. Title: Herd Records
   Supplies: 10-15 copies of a beef animal pedigree
   Set Up: Have pedigrees in a tub. Copies of questions.
   Task: Select a pedigree from the tub and answer the following questions:
   1. Who owns the animal?
   2. What is the original owner's herd prefix?
   3. What is the animal's birth date?
   4. What sex is the animal?
   5. What did the animal weigh at birth?
   6. Who is the animal's mother?
   7. Who is the animal's father?
   8. Who is the animal's great grandmother?
   9. Is the animal purebred?
   10. What breed is the animal?
   Evaluation: Count the number of correct answers.
10. Title: Show Your Stuff

Supplies: Dependent on task

Set Up: Assign a particular task and have the members demonstrate how it is done (dependent on circumstances, this may be done on a live animal or a model). These could also be used as separate stations. Examples of tasks:

- groom an animal
- prepare a tail for the show ring
- tag an animal
- needle an animal with a specific drug
- halter an animal
- make a rope halter
- tie a quick release knot
- demonstrate five safe handling tips

Evaluation: Determine specific points that you want members to allocate and count the number of points that they demonstrated.

THESE ARE JUST A FEW IDEAS - YOU CAN CREATE OTHER STATIONS TO MATCH THE AGE AND LEVEL OF LEARNING IN YOUR CLUB.

"FARM TO FARM" ACHIEVEMENT

At a "farm to farm" achievement, members travel together to each farm to weigh, and view the members' calves. The scorecards on previous pages could be used for judging. For extra learning, each member could be responsible for setting up one skill station or activity at their farm for the other members to participate in. Activities could be competitive or non-competitive. A potluck meal or windup could be planned for the end of the day, where tokens, awards, etc. could be handed out.

"IN THE PEN" ACHIEVEMENT

Members bring their calves to one location. Calves could be divided into pens according to junior, intermediate, and senior members. There could also be separate pens for heifers, cow/calf pairs and beginning beef. Criteria for judging these animals could be set out ahead of time so everyone is aware of the standards. Scorecards could be made up from those standards for heifers, cow/calves and beginning beef calves. Awards, certificates, etc. could be presented as calves are judged or at the end of the day.
RESPONSIBLE ANIMAL CARE

As a 4-H member, it is your responsibility to treat your animals humanely to allow them to remain healthy and comfortable.

The Five Principles of Animal Care are:

Adequate air, water and feed

Safe housing and sufficient space.

Appropriate complexity of the environment.

Regular (daily) supervision and effective health care.

Sensible handling

Whenever you see the icon of the animals, like the one below, you will be reminded of that responsibility and how it fits into the different sections of your manual and the information you are learning about.

Source: Ontario Farm Council (OFAC), 1992, pg 4.2. "Dr. Frank Hurnik"
Appropriate complexity of the environment. It's important to choose a calf that will adjust to being handled and will feel comfortable in the surroundings you have planned for it.
Market Animal Project

Selecting Your 4-H Calf

There are several characteristics you should look for in a market calf.

- **Frame Size:** The frame of an animal is its skeleton. The animal must have a large enough frame to allow it to grow to the desired weight for selling.

- **Length, Width and Height:** Look for an animal that is long in the body, even in width from the front to the rear, and fairly tall with a deep body.

- **Muscling:** Looking at the animal from the rear, it should be widest though the stifles region. Thickness through the centre of the round is a good characteristic. If the rear feet are close together the calf could lack muscling.

- **Trimness:** The calf should be trim through the brisket, flank and twist.

- **Health:** Look for a healthy calf; one that is alert, with a smooth hair coat, and shows no signs of disease.

- **Genetic Background:** Study the records of or find out as much as possible about the breeding of the sire and dam.

**Temperament:** Avoid a calf that appears wild and scared, is tramping/kicking, charges or cowers in fear. A calf that is comfortable around people will eat and grow faster.
**Heifer Project**

If you are selecting a breeding heifer you will want to look for the following characteristics.

- **Frame:** A heifer should have a frame that will allow enough growth to carry and deliver a calf successfully. She needs to have ribs that are quite deep and will allow for the extra weight of a calf.

- **Length, Width and Height:** A good heifer should have a long body with a long, level rump and strong topline.

- **Muscling:** Look for a heifer with a deep, long muscled rear quarter.

- **Trimness:** A good heifer should have a feminine head and a neat throat, dewlap, and brisket area.

- **Legs:** A heifer needs to have good legs, strong pasterns, and a correct set of hocks so she can graze and carry the extra weight of an unborn calf.

- **Udder:** The heifer should have an udder with uniform teats.

- **Genetics:** Try to find out what the traits of the sire and dam are.

---

**Temperament:** Choose a heifer that seems calm around people. You will want to be able to handle her and her calf safely.
**Market Animal Project**

Using the following checklist, compare the characteristics of two market animals you are considering for selection OR compare your project calf to another member's calf. Rate each characteristic on a scale of 1 – 10, with 1 being FAIR and 10 being EXCELLENT.

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>CALF 1</th>
<th>CALF 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH, WIDTH AND HEIGHT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSCLING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIMNESS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEMPERAMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEALTH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Photo taken by Bonnie Snezyk

19
Heifer Project

Using the following checklist, compare the characteristics of two heifers you are considering for selection OR compare your project calf to another member’s calf. Rate each characteristic on a scale of 1 - 10, with 1 being FAIR and 10 being EXCELLENT.

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>CALF 1</th>
<th>CALF 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRAME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WIDTH, HEIGHT, AND LENGTH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSCLING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIMNESS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEGS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UDDER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEMPERAMENT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Selection

All Projects

BEEF CATTLE BREEDS

Before selecting your 4-H project calf you may want to learn more about the different breeds and their characteristics. The original beef breeds such as Angus, Shorthorn, and Hereford came from Britain. They fit well into the Canadian climate because they were very hardy. They were small to medium in size, grew quite quickly, and were good milk producers. Around 1960 other breeds of cattle began to come to Canada, mostly from European countries. These included Blonde d’Aquitaine, Charolais, Gelbvieh, Limousin, Simmental, Maine-Anjou, Belgian Blue, Chianina, Marchigiana, Piedmontese, Pinzgauer, Tarentaise and Salers. Most of these breeds are larger than the original British breeds.

When selecting a calf for your project you will want to look closely at the characteristics of the breed or breeds of the available calves to see if they will fit into your project goals. Each breed has certain strengths and weakness. Find out as much as possible about the productivity, performance and temperament of the breed and of the sire and dam of the calf. Some points to consider are:

- Birth weight
- Mature weight
- Type of muscling
- Carcass quality
- Cutability
- Milk production
- Hardiness
- Finishing age
In unit 5 you studied the original breeds including Angus, Shorthorn, Hereford, Red Poll and the Highlander. These are pictures of some of the more common breeds that have come to Canada since 1960.
# Market Animal Project

## SELECTING A MARKET CALF TO MEET YOUR 4-H PROJECT GOALS

<table>
<thead>
<tr>
<th>Age (months)</th>
<th>Frame Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>33.5</td>
</tr>
<tr>
<td>6</td>
<td>34.8</td>
</tr>
<tr>
<td>7</td>
<td>36.0</td>
</tr>
<tr>
<td>8</td>
<td>37.2</td>
</tr>
<tr>
<td>9</td>
<td>38.2</td>
</tr>
<tr>
<td>10</td>
<td>39.2</td>
</tr>
<tr>
<td>11</td>
<td>40.2</td>
</tr>
<tr>
<td>12</td>
<td>41.0</td>
</tr>
<tr>
<td>13</td>
<td>41.8</td>
</tr>
<tr>
<td>14</td>
<td>42.5</td>
</tr>
<tr>
<td>15</td>
<td>43.1</td>
</tr>
<tr>
<td>16</td>
<td>43.6</td>
</tr>
<tr>
<td>17</td>
<td>44.1</td>
</tr>
<tr>
<td>18</td>
<td>44.5</td>
</tr>
<tr>
<td>19</td>
<td>44.9</td>
</tr>
<tr>
<td>20</td>
<td>45.1</td>
</tr>
<tr>
<td>21</td>
<td>45.3</td>
</tr>
</tbody>
</table>
How to Use Frame Scores

The height of a beef animal at a given age can be used to help estimate the growth potential of the animal, as well as its mature size. Cattle with low frame scores are generally small and short, with lighter finish weights. Cattle with high frame scores are usually taller and mature later, with heavier body weights at finish.

In order to determine a frame score, you will need an accurate measurement of hip height. It is important to remember that frame scores can be affected by factors such as level of nutrition and inaccuracy of measurement. Therefore, although frame scores can provide a good source of information, they should only be used as a guide for animal selection in combination with genetic information and weight, health, and overall appearance of the animal.

An initial frame score is very helpful to use in setting goals and “target weights.”

Example: Your steer is 9 months old today and his hip height measurement is 46.5 inches. Find the “9” in the “Age” column and go across until you find a measurement that is close to 46.5. The closest figure to 46.5 is 46.3. Going to the top of that same column, you will find that the frame score is a “5.” Go to animal #5 to determine the approximate finished weight of the animal.

Example: Your steer is a frame score “5” with a target weight of 1200 lbs.
Starting weight = 680 lbs. Target weight = 1200 lbs. Total gain = 1200 - 680 = 520 lbs
ADG = 520 lbs. / 168 days in feeding period = 3.10 lbs./day gain

<table>
<thead>
<tr>
<th>Estimated Target Weight</th>
<th>Starting Weight</th>
<th>Total Gain Required</th>
<th>Days on Feed</th>
<th>Required Average Daily Gain</th>
</tr>
</thead>
</table>

\[
\text{Estimated Target Weight} - \text{Starting Weight} = \text{Total Gain Required} / \text{Days on Feed} = \text{Required Average Daily Gain}
\]
SELECTING A HEIFER PROJECT ANIMAL

If you have selected a replacement/breeding heifer, you will want to choose a heifer that will be large enough to breed at the time you have planned for breeding. Heifers should be a minimum of 65% of their mature weight at the time of breeding. The breed chart on the following page will give you a general idea of the mature cow weight for the various breeds.

Weigh your heifer and answer the following questions to find out how much your calf will have to gain each day to meet your project goals.

1. Weight of Heifer                              __________
2. Estimated Mature Weight                __________
3. Estimated Breeding Weight        Answer # 2_____x 65/100 = _______
4. Estimated Breeding Date                  __________
5. Days in Feed Period (how many days from first day of feeding until estimated breeding date)?                                 __________
6. Weight Gain Required  answer #3_____ - answer #1_____ = _______
7. Average Daily Gain Required  answer #6_____/answer #5 = ________per day

GOALS for your Heifer Project should include:

- Reaching a good breeding weight by your breeding date.
- Having your heifer breed successfully.
CONTINUATION HEIFER (Cow/Calf Pair) PROJECT

If you have selected a Continuation Heifer for your project, you will already have your project animal. Your heifer should be in calf when the project year begins and the calf should be born before the achievement date.

GOALS for your project should include:

- Feeding a ration that will see your heifer continue to grow towards a mature weight.
- Producing a healthy calf.

1. Beginning weight of heifer __________
2. Estimated mature weight __________
3. Weight to gain answer #2_____ - answer #1_____ = ________

AVERAGE MATURE WEIGHTS OF COWS

<table>
<thead>
<tr>
<th>Breed</th>
<th>Average Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limousin</td>
<td>1450 lbs.</td>
</tr>
<tr>
<td>Hereford</td>
<td>1400 lbs.</td>
</tr>
<tr>
<td>Angus</td>
<td>1250 lbs.</td>
</tr>
<tr>
<td>Charolais</td>
<td>1450 lbs.</td>
</tr>
<tr>
<td>Simmental</td>
<td>1400 lbs.</td>
</tr>
<tr>
<td>Shorthorn</td>
<td>1400 lbs.</td>
</tr>
<tr>
<td>Maine Anjou</td>
<td>1600 lbs.</td>
</tr>
<tr>
<td>Murray Grey</td>
<td>1200 lbs.</td>
</tr>
<tr>
<td>Gelbvieh</td>
<td>1300 lbs.</td>
</tr>
<tr>
<td>Salers</td>
<td>1250 lbs.</td>
</tr>
<tr>
<td>Blondes Aquitaine</td>
<td>1300 lbs.</td>
</tr>
<tr>
<td>Dexter</td>
<td>700 lbs.</td>
</tr>
<tr>
<td>South Devon</td>
<td>1300 lbs.</td>
</tr>
<tr>
<td>Luing</td>
<td>1250 lbs.</td>
</tr>
<tr>
<td>Pinzgauer</td>
<td>1400 lbs.</td>
</tr>
</tbody>
</table>

NOTE: These weights are averages for the purebreds of each breed. Be sure to ask your parent or leaders their opinion on how much your animal might weigh when mature.
In the space below, attach a picture of your calf OR draw a picture of your calf OR describe what it looks like including markings, and coloring.

Your calf's name:
All Projects

THE NATIONAL IDENTIFICATION PROGRAM

All cattle are required to have a CCIA approved RFID (radio frequency identification) tag before they leave their herd of origin. The tags function well in extreme climates, and have good readability, increased data integrity, and can be read at a distance. Age verification is a voluntary program whereby producers can store information and have it readily available should it be required.

What is the number on your calf’s CCIA tag?__________

Photo courtesy of the ALLFLEX International Ltd.
All Projects
Note: This 4-H Beef Animal Record can be used for as many years as you are in the Beef Project. You can move it from one project book to another. If birth or other dates are unknown, use approximate dates.

**MY 4-H BEEF ANIMAL RECORD**

<table>
<thead>
<tr>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

| Project Animal |
| Birth Date    |
| Breed         |
| Breed of *Sire* |
| Breed of *Dam* |
| Tag/Tattoos/Brand |
| Birth Weight  |

**CONTINUATION**

<table>
<thead>
<tr>
<th>HEIFER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

| Breeding Date |
| Type of Breeding |
| Sire          |
| Preg. Check Date |
| Birth Date     |
| Calf Birth weight |
| Sex           |
| Tag/Tattoos/Brand |

30
WHO'S THE MYSTERY BREED?
WHO'S THE MYSTERY PRODUCER?

PREPARATION:
- You will need a fairly large room or open area.
- Give each member the description of the different breeds to read over for a few minutes.
- Give each member a breed and its description. Be sure they don't let other members see their breed. The members can work in pairs if there are more members than there are breed types.
- Number the descriptions so the members will know in what order they present their breed.

PLAYING THE GAME:
- The object of the game is to identify both the breed and the producer. You have to guess both to get a point.
- The Mystery Producer has to disguise his voice so he will be hard to identify.
- Mystery Producers will have to give clues about their breed.
- Arrange the members in a large circle with their backs to the circle.
- Have everyone shut their eyes (no peeking). Give this command, “Everyone keep your eyes closed and take five giant steps in whatever direction you want.”
- Now have everyone sit on the floor where they have ended up. They have to keep their eyes closed - except for the first producer.
- Ask for Producer #1 to give one clue about the mystery breed from the description. (Don't forget to disguise your voice)
- The leader asks “Does anyone know our Mystery Breed and Producer?” Take the first hand up. (everyone’s eyes are still closed) If someone guesses correctly they get a point - if they guess incorrectly, they are out until the next round. (So they may not want to guess if they are doubtful). Continue until the mystery person is out of clues or someone guesses both the breed and the producer.
- Regroup into the circle to start each new round.
BREED TYPES:

✓ I am one of the most popular breeds in the country.
✓ Male bulls range from 2400 to 2800 lbs.
✓ Cows average around 1600 lbs.
✓ I am large-framed and muscular with excellent maternal characteristics.
✓ I range in color from light tan to dark red and have white markings.
✓ I am a blend of characteristics from the Rouge, Abundance and Montbeliard of France, the German Fleckvieh, and the Simmental from Switzerland.
I AM A SIMMENTAL.

✓ I am known for ease of calving.
✓ I am known for good milk production.
✓ Bulls weigh around 2500 lbs.
✓ Mature cows weight about 1500 lbs.
✓ I am solid dark red in color and have a thick, curly hair coat.
I AM A SAVER

✓ I showed excellent feed conversion in feedlot tests.
✓ This breed tested graded A1 or A2 in a recent test.
✓ I have strong mothering instincts.
✓ I am red, white or roan in color.
✓ There are both horned and polled varieties.
✓ I came from Scotland in 1825.
I AM A SHORTHORN

✓ I am small to medium in size.
✓ Bulls weigh around 2000 lbs.
✓ Cows weight around 1200 lbs.
✓ I have excellent mothering characteristics.
✓ I am a solid red in color.
✓ I am polled.
I AM A RED POLL
✓ Mature bulls weigh between 2200 and 2800 lbs.
✓ Cows weigh around 1400 lbs.
✓ I am noted for both my meat and milk production.
✓ My breed originated in England.
✓ My name is two words.
✓ My name is the same as a part of England.

I AM A SOUTH DEVON

✓ Bulls weigh from 1300 to 2000 lbs.
✓ Cows weigh from 900 to 1400 lbs.
✓ I am very docile.
✓ I am an easy calver.
✓ I adapt well to northern climates.
✓ I am a Shorthorn-Highland cross developed in Scotland about twenty years ago.

I AM A LUING

✓ Mature bulls weigh from 1800 to 2200 lbs.
✓ Cows weigh from 1000 to 1300 lbs.
✓ I am an easy calver.
✓ I have a good temperament.
✓ I am polled and have a dark coloring that resists eye diseases.
✓ I come from Australia.

I AM A MURRAY GREY

✓ Bulls weigh from 2000 to 2400 lbs.
✓ Cows weigh from 1300 to 1600 lbs.
✓ I have good mothering characteristics.
✓ I have very good growth rate and carcass quality.
✓ I have distinctive white markings.
✓ I come from Austria.

I AM A PINZGAUER
✓ Mature bulls weigh about 2400 lbs.
✓ Cows weigh around 1400 to 1600 lbs.
✓ I have heavy muscling.
✓ I have excellent lean meat and a high yielding carcass.
✓ I am a solid red color that protects it from sun related diseases.
✓ I am one of the ancient breeds from France and came to Canada in 1969.
I AM A LIMOUSIN

✓ Bulls weigh between 2200 and 2300 lbs.
✓ Cows weigh between 1300 and 1500 lbs.
✓ I am very hardy.
✓ I adapt easily to difficult conditions.
✓ I am red with a white face, brisket, and underside.
✓ I came from the British Isles in the 1860's
I AM A HEREFORD

✓ Bulls weigh around 2300 lbs.
✓ Cows weigh around 1250 lbs.
✓ I have good mothering characteristics.
✓ I can handle difficult grazing conditions.
✓ I am black or red in color and polled.
✓ I came from Scotland to Canada in 1860.
I AM AN ANGUS

✓ Bulls weigh around 2500 lbs.
✓ Cows weigh around 1600 lbs.
✓ Some are polled and some have horns.
✓ I grow rapidly, and produce a lean, high yielding carcass.
✓ I am white to straw colored.
✓ I am one of the oldest French breeds.
I AM A CHAROLAIS
Regular (daily) supervision and effective health care, to prevent illness and initiate prompt assistance when required.
**All Projects**

Diseases that affect beef cattle are often easier to prevent than they are to treat. Diseases can be introduced to your cattle by new animals, humans, wild animals, birds, and insects. New animals should be *isolated* and vaccinated. A pest control program will help to minimize diseases carried by birds, animals and insects. Being aware of stressful practices and situations can help to prevent illness.

Using practices like dehorning and castrating improve the meat quality and ensure a safe environment for the animals and the people who work with them.

### Parasites

<table>
<thead>
<tr>
<th>PARASITE</th>
<th>SYMPTOMS</th>
<th>PREVENTION</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>COCCIDIOSIS</td>
<td>Diarrhea (bloody or watery), weight loss, dehydration.</td>
<td>Keep feed and water away from manure.</td>
<td>Monitor coccidian levels by testing manure. Medications.</td>
</tr>
<tr>
<td>LUNGWORM</td>
<td>Coughing, rough coat, lower weight gain.</td>
<td>Avoid pasturing boggy places.</td>
<td>Deworming medications.</td>
</tr>
<tr>
<td>LIVER FLUKE</td>
<td>Lower weight gain, decreased milk production, poor feed efficiency.</td>
<td>Prevent cattle from feeding or drinking in boggy areas by offering other sources</td>
<td>Deworming medications.</td>
</tr>
<tr>
<td>EYE WORM</td>
<td>Cloudy, tearing, swollen eyes. Pus in eye.</td>
<td>Insecticidal ear tags.</td>
<td>Treat infection with antibiotics.</td>
</tr>
<tr>
<td>LICE</td>
<td>Scratching, poor hair coat, restless.</td>
<td>Uncrowded living area, and good ventilation.</td>
<td>Systemic insecticides, powders and sprays.</td>
</tr>
<tr>
<td>MANGE MITES</td>
<td>Uncomfortable, scratching, scabs.</td>
<td>Clean, uncrowded living conditions.</td>
<td>Treat with medications on advice of vet.</td>
</tr>
<tr>
<td>HORN FLIES</td>
<td>Restless, running, pink eye.</td>
<td>Proper manure handling to control egg laying.</td>
<td>Sprays, back-rubbers, insecticidal ear tags.</td>
</tr>
<tr>
<td>WARBLE FLIES</td>
<td>Running or gadding, reduced weight gain, meat and hide damage.</td>
<td>Open areas in pastures where animals can benefit from wind.</td>
<td>Systemic treatments.</td>
</tr>
</tbody>
</table>

36
All Projects Vaccinations

There are several vaccinations for beef cattle. Some are combined to give immunity for more than one disease. Some vaccines protect animals from viruses, while others protect against bacterial disease. Vaccines use either a live or killed virus or bacteria to cause the animal to develop antibodies to fight off the unwanted disease. Vaccines are effective only if they are used properly. They have to be stored properly, given to animals in good health, given at the proper time and boosted with another shot if required. Always read the label and instructions.

Proper Injection Techniques:

- Follow withdrawal periods.
- Keep records identifying what each animal has been given.
- To ensure that the meat quality of the animal will not be damaged, give all injections in the neck - not the rump or thigh.
- Use clean needles - change the needle every 10 - 15 animals.
- Safely discard dirty, dull or bent needles.
- Dispose of needles in proper packaging so that those who handle garbage will not be injured by them.
- Be sure injection site is clean.
- Use transfer needles (double-edged needle) to move contents from one bottle to another.
- Give no more than 10ml (cc) in one injection site and leave a several inch space between sites.
- Restrain cattle to reduce injury to the animal and yourself.
AN OUNCE OF PREVENTION IS WORTH A POUND OF CURE!!
Health

**All Projects**

**ILLNESS/DISEASE**
Prevent/Good Practices
Check Symptoms
Diagnose Illness
Treat Illness

- Pink Eye
- Foot Rot
- Grain Overload
- External Parasites
- Internal Parasites
- Bloat
- Ring Worm
- Hardware
- Shipping Fever

*Sound Herd Management is the best prevention!!*
# My Animal Health Record

<table>
<thead>
<tr>
<th>DATE</th>
<th>DISEASE</th>
<th>VACCINATION</th>
<th>DOSEAGE</th>
<th>ROUTE</th>
<th>SITE</th>
<th>TIME</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL COST**

_______
YOU ARE ON THE HEALTH HOT SEAT

PREPARATION:
- Cut up the list of practices. Put them in a hat or bowl to be drawn out by the members when it is their turn for the Hot Seat.
- Cut out the WHY, WHEN, HOW, WHERE questions for each practice and give them out to the members.
- Members should be reminded that giving appropriate answers to people who ask questions about beef management practices is very important. Reviewing these responses ensures that they will be prepared when they are asked questions by the public and people who are not familiar with beef management practices.

THE ACTIVITY:
- If there are not enough practices for each member to have one, make the group into pairs or small groups OR have older members take the Hot Seat role and younger members asking the questions.
- The first participant draws a practice from the hat and takes the HOT SEAT. They announce to the rest of the group what their chosen practice is.
- Members who have the WHY, WHEN, HOW, and WHERE for that practice take turns asking their question.
- The member on the Hot Seat answers the questions to the best of their knowledge.
- After each answer the member with the question can read out the answer below the question to see if it matches with the answer that the Hot Seat participant gave.
- Leaders can add any other information about the practice that may relate to that practice or give hints and tips to help out the Hot Seat participants.
- The activity continues until all members have had a turn or all practice slips are drawn from the hat.
# TOPICS FOR HOT SEAT PARTICIPANTS

<table>
<thead>
<tr>
<th>Topic</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHEMICAL DEHORNING</strong></td>
<td>What are your questions on chemical dehorning?</td>
</tr>
<tr>
<td><strong>ELECTRIC DEHORNING</strong></td>
<td>What are your questions about electric dehorning?</td>
</tr>
<tr>
<td><strong>DEHORNING WITH GOUGERS</strong></td>
<td>What are your questions about dehorning with gougers?</td>
</tr>
<tr>
<td><strong>DEHORNING WITH WIRES</strong></td>
<td>What are your questions about dehorning with wires?</td>
</tr>
<tr>
<td><strong>DEHORNING</strong></td>
<td>What are your questions about dehorning cattle?</td>
</tr>
<tr>
<td><strong>CASTRATING CATTLE</strong></td>
<td>What are your questions about castrating cattle?</td>
</tr>
<tr>
<td><strong>CASTRATING WITH THE KNIFE METHOD</strong></td>
<td>What are your questions about castrating with the knife?</td>
</tr>
<tr>
<td><strong>EMASCULATOR CASTRATING</strong></td>
<td>What are your questions about using an emasculator?</td>
</tr>
<tr>
<td><strong>BURDIZZO CASTRATION</strong></td>
<td>What are your questions about burdizzo castration?</td>
</tr>
<tr>
<td><strong>ELASTRATOR CASTRATION</strong></td>
<td>What are your questions about elastrator castration?</td>
</tr>
<tr>
<td><strong>WHY do you use CHEMICAL DEHORNING?</strong></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td></td>
</tr>
<tr>
<td>I like to dehorn my animals when they are young. There is less blood flow to the horns when they are young so it is less painful.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>WHEN do you use CHEMICAL DEHORNING?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>You use chemical dehorning when the animals are less than two weeks of age.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>HOW do you use CHEMICAL DEHORNING?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>First, you clip around the base of the horn. Then you spread Vaseline around on the area you have clipped so the paste will not burn the hide around the horn. You rub the paste on the horn area on an area no larger than a quarter.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>WHERE do you do the CHEMICAL DEHORNING?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>You need to apply chemical dehorning in an area like a barn where the calf will stay dry until the paste has dried. The mother cow should be kept away from the calf until the paste is dry so she won’t lick the paste. The calf should be properly restrained in a squeeze or head gate so that the paste can be applied safely and properly.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>WHY do you use ELECTRIC DEHORNING?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>I like to use Electric Dehorning because I like to dehorn while the animal is still young. That causes less stress for the animal.</td>
</tr>
<tr>
<td>WHEN do you use ELECTRIC DEHORNING?</td>
</tr>
<tr>
<td>-------------------------------------</td>
</tr>
<tr>
<td>You can use electric dehorning any time up to five months of age.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HOW do you use ELECTRIC DEHORNING?</th>
</tr>
</thead>
<tbody>
<tr>
<td>An electric iron is held to the horn for 15-20 seconds. The burnt area and horn bud will peel off in four to six weeks.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHERE do you do ELECTRIC DEHORNING?</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is important to keep the animal from moving so that the iron is applied correctly. It should be in a squeeze and head gate.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHY do you use GOUGERS for dehorning your animals?</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use GOUGERS when the animals are still quite young and the horns are not very large. It is best to dehorn as young as possible.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHEN do you use GOUGERS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gougers should be used on animals with horns that are less than 3.5 cm. or 1.5 inches.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HOW do you use GOUGERS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The gouger scoops out the horn very quickly and when done when the horn is still small, it causes very little bleeding.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHERE do you use GOUGERS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The animal needs to be kept very still so the horn can be removed quickly and safely.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHY do you use WIRES for dehorning your animals?</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use wires for dehorning when the horns are too large for gouging, paste, or electric dehorning.</td>
</tr>
<tr>
<td>WHEN do you use WIRES for dehorning?</td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td>You can use wires on any animal whose horns are too large for gouging. You should try to do it in cooler weather to lessen the risk of infection.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HOW do you use WIRES for dehorning?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The wire is used by moving it back and forth in a sawing motion. The wire allows a close cut and the sawing helps to seal off the horn so it doesn't bleed as much.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHERE do you use WIRES for dehorning?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using wires takes a little longer than some other methods so it's very important to have the animals properly restrained.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHY do you DEHORN cattle?</th>
</tr>
</thead>
<tbody>
<tr>
<td>I dehorn my cattle for health and safety reasons. Cattle with horns sometimes hurt other animals with their horns. Some horns make it impossible for animals to use feeders. Working around animals with horns can be dangerous for people handling the animals.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHEN do you DEHORN cattle?</th>
</tr>
</thead>
<tbody>
<tr>
<td>I dehorn my cattle as young as possible. There is less pain and stress for the animal when it is young.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HOW do you DEHORN cattle?</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are different methods of dehorning, depending upon the age of the animal and the size of the horns.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHERE do you DEHORN cattle?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle should be kept still and safe by using proper restraining methods.</td>
</tr>
<tr>
<td><strong>WHY do you CASTRATE CATTLE?</strong></td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>I castrate my cattle so there will be less fighting among the herd. Castrated males produce a better quality carcass. To eliminate the possibility of in-breeding.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>WHEN do you CASTRATE CATTLE?</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>There are different methods of castrating depending upon the age of the animal.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>HOW do you CASTRATE CATTLE?</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods include both surgical and non-surgical methods.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>WHERE do you CASTRATE cattle?</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle need to be properly controlled in a chute or head-gate to ensure the procedure is done correctly and safely.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>WHY do you use the KNIFE METHOD of castrating?</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I use the knife method for castrating because it is 100% effective. I can use it on animals that are too old for some of the other methods.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>WHEN do you use the KNIFE METHOD of castrating?</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I use the knife method on animals that are too old for elastrators. I am careful to treat with antibiotics to prevent infection.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>HOW do you use the KNIFE METHOD of castrating?</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>After disinfecting the instruments I make an incision on the side or the scrotum or remove the bottom third of the scrotum. There is less pain when the cut is made below the testicles. The testicle is removed through the opening I made after it is separated from the spermatic cord.</td>
<td></td>
</tr>
</tbody>
</table>
**WHY do you use EMASCULATOR CASTRATION?**

I use the emasculator because it is 100% effective. You don’t run the risk of having to do the procedure twice.

**WHEN do you use the EMASCULATOR CASTRATION?**

I use emasculator castration on animals that are under 220 kgs. or 500 lbs.

**HOW do you apply EMASCULATOR CASTRATION?**

You place the emasculator over the cord as close as possible to the body. You then squeeze the handle which crushes the cord and cuts off the testicle. You need to maintain the pressure on the cord for at least 10 seconds.

**WHERE do you use EMASCULATOR CASTRATION?**

The animal being castrated has to be secured to ensure safety for the person doing the surgery, and to keep the animal from injuring itself.

**WHY do you use BURDIZZO CASTRATION?**

I use burdizzo castration because it is a non-surgical method. There is no incision so there is less chance of infection.

**WHEN DO YOU USE BURDIZZO CASTRATION?**

The burdizzo castration works best on animals that are over five months, and up to about a year. You can use this method in any season because there is no incision that might attract flies, etc.
### HOW DO YOU USE THE BURDIZZO METHOD OF CASTRATION?

The burdizzo is a blunt jaw pincher which crushes the spermatic cord and blood vessels that lead to the testicles. You have to find the testicle and the cord in the scrotum, then pull the cord to the side of the scrotum with your thumb and index finger. Then you clamp the cord with the burdizzo and hold it in that position for five seconds.

### WHERE DO YOU USE THE BURDIZZO METHOD OF CASTRATION?

You need to hold the animal in a head gate system that allows you to work from behind on the animal while keeping the animal still. You also need someone to hold the tail back over the animal’s back so the person using the burdizzo won’t be kicked.

### WHY do you use ELASTRATOR CASTRATION?

I use elastrator castration because I like to castrate while the calf is small and easy to handle. It is also less stressful than castration at an older age.

### WHEN do you use ELASTRATOR CASTRATION?

Elastrator castration can be used from birth up to one month of age.

### HOW do you use ELASTRO CASTRATION?

You place the rubber band on the elastrator, open it wide and slide the band up over the testicles near the body. You check to be sure both testicles are in the scrotum, and then release the band.

### WHERE do you use ELASTRATOR CASTRATION?

Elastrator castration can be done outside or inside. If the calf is quite young they can often be held still by hand. If they are a little bigger you might have to run them down a chute.
Adequate air, water, and feed, according to the biological requirements of each species.
GRAINS FOR BEEF ANIMALS

Grains are an important source of energy for beef animals. There are a variety of grains that can be fed, and diets can include more than one grain.

Wheat: Wheat is high in energy. It should be fed in small amounts along with other grain. It is important to grind the wheat quite coarsely because grinding it too fine might cause bloat.

Barley: Barley is an excellent source of energy and is the grain most often used in feeding beef animals in Manitoba. It has more energy than oats, but less than wheat.

Oats: Oats are a good starter grain for beef animals because the animals like the taste and texture. They have less energy than barley, and there is less chance of the animals bloating on oats.

Corn: Corn is the grain used most often for beef animals in North America, but it is not used as much in the prairie provinces of Canada because it can’t be grown successfully in many areas. Corn is usually mixed with other grains or a protein supplement. It is low in calcium, but high in phosphorus.

Grain is often rolled or crushed into smaller pieces to make it more palatable and digestible.
Nutrition

All Projects

Feeding Your Calf to Meet Your Target Weight

Move your calculations from page 24, 25, or 26 to the boxes below.

- Starting Weight
- Starting Weight Date
- Target End Weight
- End Weight Date

Expected ADG (average daily gain) to reach target weight by end weight date.

Continuation Heifer Projects: The Body Condition Score sheet on the following page is a useful tool in helping you determine if rations are fitting your animal’s needs, especially after they have calved.
**BODY CONDITION SCORING**

1. Bone structure is sharp to the touch and easily visible. There is no evidence of fat deposits or muscling.
2. No evidence of fat and some muscle loss in the hindquarters. Bones feel sharp to the touch and are easily seen with space between them.
3. Very little fat cover over the loin, back and fore ribs. Backbone is still visible. Spaces between the spinal bones is somewhat less.

4. Fore ribs are not noticeable but the 12th and 13th ribs are still noticeable. The spinal bones feel rounded, rather than sharp.
5. The 12th and 13th ribs are not visible. Spinal bones can only be felt with firm pressure and feel rounded. Spaces between the bones are not visible. Areas on each side of the tailhead are starting to fill.

6. Ribs are fully covered and not noticeable. Hindquarters are plump and full. Springiness over the fore ribs and on the side of the tailhead. Some brisket fat.
7. Spinal bones can only be felt with firm pressure. Spaces are barely seen. Abundant fat cover on either side of the tailhead. Fat in the brisket.
8. Animal has a smooth, blocky appearance. Bone structure disappears. Fat cover is thick and spongy. Brisket is full.
9. Bone structure is not seen or easily felt. Tailhead is buried in fat. Animal may have trouble moving around because of excess fat.

Diagram courtesy of the Institute of Agriculture and Natural Resources, University of Nebraska
RATIONS FOR YEARLING ANIMALS

If you buy a prepared ration or your animal is being fed along with other yearlings on your farm then you may already have a ration that works for you. If not you may want to try the rations given on the next page.

The following rations may not be the most cost saving, but they are simple and effective. They work well if you are feeding your 4-H calves individually or in small groups. They are a good starting point for learning about rations for beef cattle. These rations work best if the calves are fed twice a day – morning and night. The roughage should be fed after the grain has been eaten. A continuous supply of fresh water is important for good results.

The following are descriptions of the different feeds.

Barley: either rolled or coarsely ground
Corn: either rolled corn or whole corn. (Avoid finely ground grains).
Oats: whole oats or rolled
Beet Pulp: dried beet pulp
Molasses: either dry or liquid
Supplement: An all natural supplement containing at least 40 percent protein with no urea and containing mid-level ionophore.
Hay: Prairie or grass hay.

Ration 1 can be used up to starting date at 1.5 percent of body weight daily with free choice of prairie or grass hay. Always change grain amounts slowly and blend rations when moving to the next ration level.

A starting ration is used to accustom animals to the feed. Any changes to a feeding program must be carried out gradually to prevent digestive problems, such as founder or acidosis

A growing ration is used to grow the animal out to a certain weight over a period of time. It is necessary to have a growing ration so the calf does not fatten at a light weight.

Finishing rations generally consist of 80 percent grain and 20 percent roughage. These rations carry the cow to an acceptable slaughter weight and provide cattle with the energy necessary to deposit fat.
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Barley 396 kg</td>
<td>Barley 499 kg</td>
</tr>
<tr>
<td>Oats 396 kg</td>
<td>Oats 301 kg</td>
</tr>
<tr>
<td>Supplement 40% 86.2 kg</td>
<td>Supplement 40% 79.4 kg</td>
</tr>
<tr>
<td>Molasses 22.7 kg</td>
<td>Molasses 22.7 kg</td>
</tr>
<tr>
<td>Grass Hay 2.7 kg/day</td>
<td>Grass Hay 2.4 kg/day</td>
</tr>
<tr>
<td>Salt &amp; Mineral free choice</td>
<td>Salt &amp; mineral free choice</td>
</tr>
<tr>
<td>Total Consumption 3.6-5.9 kg/day</td>
<td>Total Consumption 4.5-6.8 kg/day</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ration 3: Fed 20-30 Days</th>
<th>Ration 4: Fed until Animals are Marketed (120+ days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barley 608 kg</td>
<td>Barley 713 kg</td>
</tr>
<tr>
<td>Oats 204 kg</td>
<td>Oats 104 kg</td>
</tr>
<tr>
<td>Supplement 40% 72.6 kg</td>
<td>Supplement 40% 68 kg</td>
</tr>
<tr>
<td>Molasses 22.7 kg</td>
<td>Molasses 22.7 kg</td>
</tr>
<tr>
<td>Grass Hay 5.0 kg/day</td>
<td>Grass Hay 1.4-1.8 kg/day</td>
</tr>
<tr>
<td>Salt &amp; Mineral Free Choice</td>
<td>Free choice salt &amp; mineral</td>
</tr>
<tr>
<td>Total Consumption 3.6-5.9 kg/day</td>
<td>Total Consumption 10-14 kg/day</td>
</tr>
</tbody>
</table>

Beet Pulp - may substitute 23 g of beet pulp for 23 kg of oats - useful for hair growth for show
How Much Does My Calf Eat?

If you have made good rations for your beef animal, it will grow to achieve your goals. Achieving your goals by your target date means that you made the best use of your feed and the money you spent on the feed.

STEPS TO FINDING TOTAL FEED USED:

- List each type of feed you used in your ration in kg or lb.
- Keep track of how much of each type of feed you used.
- Keep track of how many days you used that type of feed.
- Be sure to include vitamins and salt.

EXAMPLE:

<table>
<thead>
<tr>
<th>Type of Feed</th>
<th>Days on Feed</th>
<th>Feed amount/Day</th>
<th>Total Amount Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ration #1:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td>30</td>
<td>8kg</td>
<td>240kg</td>
</tr>
<tr>
<td>Barley</td>
<td>30</td>
<td>2kg</td>
<td>60kg</td>
</tr>
<tr>
<td>Grass hay</td>
<td>30</td>
<td>20kg</td>
<td>600kg</td>
</tr>
<tr>
<td>Minerals</td>
<td>30</td>
<td>Trace</td>
<td>1kg</td>
</tr>
<tr>
<td>Salt</td>
<td>30</td>
<td>Trace</td>
<td>1kg</td>
</tr>
</tbody>
</table>

Ration #2:

<table>
<thead>
<tr>
<th>Type of Feed</th>
<th>Days on Feed</th>
<th>Feed amount/Day</th>
<th>Total Amount Used</th>
</tr>
</thead>
</table>
Keep track of how much feed your animal eats on the chart below.

<table>
<thead>
<tr>
<th>Type of Feed</th>
<th>Days on Feed</th>
<th>Feed Amount/day</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DODGING THE QUESTIONS

PREPARATION:

- Have a copy of the questions on the following page ready for a leader or senior member to ask the participants.
- You will need an area large enough to make a circle that will allow the team in the circle enough room to move away from the ball. The circle can just be imaginary, or you could make a boundary with chalk or masking tape.
- A softer, fairly large ball.
- The leader can add extra questions if they want the game to last longer.
- A five minute time limit for each round works well.

ACTIVITY:

- Divide the members into two teams
- Each team should get equal amount of turns in the circle.
- The team on the outside of the circle arrange themselves all around the edge of the circle.
- The other team is in the circle.
- The team outside the circle team throw the ball into the circle, trying to hit players in the circle.
- If a player is hit in the circle, the team on the outside gets a chance to answer a question and earn a point. The person who is hit has to step out of the circle and sit on the sideline until the next round.
- The team throwing the ball will want to pass the ball quickly attempting to tag as many of the people in the circle as possible within the time limit. The more they tag, the more chances they will have to be asked questions and to earn points.
- The teams switch places when either the participants in the circle have all been tagged by the ball OR the five minute deadline is up. Then the teams change places.
QUESTIONS FOR DODGE THE QUESTION GAME

TRUE OR FALSE

1. A ration is how much of each ingredient in the diet is fed to the animal. T
2. A diet is what ingredients or feeds are fed to the animal. T
3. Wheat is lower in energy than barley. F
4. To determine an estimated end weight for your animal you could do a head measurement. F
5. ADG stands for Average Daily Gain. T
6. Grain is often rolled or crushed to make it more palatable and digestible. T
7. Oats are a good starter grain for beef animals. T
8. Protein can be found in salt. F
9. Dry Matter is the stuff found in animals' brains. F
10. You need to know what food value is in the feed to know how much to feed. T
11. Barley has more energy than oats. T
12. There is less chance of an animal bloating on barley than wheat. T
13. Phosphorus is a grain. F
14. CA stands for Carcass Additions. F
15. A feed test analyses the quality of the feed. T
16. Mature open cows require more daily nutrient than growing animals. F
17. Labs can do a feed analysis. T
18. Roughage has fibre in it. T
19. Silage is a mineral. F
20. Water is an important fibre. F
21. It is important to grind wheat coarsely instead of really fine so animals will be less likely to bloat on it.  T

22. Corn is the most used grain in North American for feed.  T

23. A nutrient requirement chart tells you how much of each nutrient is required for an animal of your type and size.  T

24. TDN stands for Total Digestible Nutrients.  T

25. Protein can be found in water.  F

26. Overfeeding can result in too much fat on the carcass.  T

27. Palatability is how fast a calf gains weight.  F

28. Hay provides some roughage.  T

29. DE stands for Double Energy.  F

30. The best way to be sure you are feeding the right amount of feed is to have the feed tested.  T

31. A and E are vitamins that are important to good beef health.  T

32. Hay is a grain.  F

33. A feed analysis can be done by your local vet.  F

34. Snow is just as good for your animals as water.  F

35. How coarse or fine you grind a grain makes a difference on how it is digested by the animal.  T

36. Wheat is usually fed along with other grain.  T

37. Corn is low in calcium and high in phosphorus.  T

38. Vitamin J and K are important for good beef health.  F

39. Weather can determine the value of feed.  T

40. It is possible to overfeed or underfeed without a feed test.  T
Safe housing and sufficient space, to prevent injuries and ensure normal health and growth.
QUALITY PRODUCTS – IT ALL STARTS HERE ON THE FARM

Quality is an important word when we talk about beef production. When we think about quality, we should be thinking of more than just the finished product, because a quality product comes from a producer who runs a quality operation. That includes facilities such as water, feed, and shelter, and management practices such as breeding and manure management. Safety for animals and the people working with the animals is also an important part of the beef operation. Take the following check list and do a “Walk-About” to check things out where your 4-H calf is cared for. Use the member check-lists to generate discussion.

SAFETY FOR ANIMALS AND PEOPLE

Check(√) the following items as being safe or unsafe and gives reasons for each. If you need more room for your reasons attach another page. Example: Your round bale feeder may have broken section that could cut an animal or worker.

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>SAFE</th>
<th>UNSAFE</th>
<th>REASONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handling Facility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal Transportation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shelter Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Operation costs are often the difference between profit and loss in a beef operation. It's important that we have the right facilities for the operation we are running, and that those facilities be run as efficiently as possible. Check (√) the facilities where your calf is cared for as being efficient or inefficient and give reasons for your decisions. Are they doing the job you want them to do? Example: Are there enough feeders for all animals to eat at the same time or do they have to crowd or push.

<table>
<thead>
<tr>
<th>FACILITIES</th>
<th>EFFICIENT</th>
<th>INEFFICIENT</th>
<th>REASONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shelter Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handling Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Facilities

Beef Producers and Beef Consumers are becoming more aware of the natural environment around us, and are realizing that we all need to do our part to keep our air, soil, and water clean for future generations. Consider how each of the following items might be affecting the environment where your calf is being cared for. Can you think of any solutions for possible problems? Example: The cattle drink out of the river. When animal manure gets into the river it is environmentally unfriendly.

<table>
<thead>
<tr>
<th>FACILITIES</th>
<th>ENVIRONMENTALLY FRIENDLY</th>
<th>ENVIRONMENTALLY UNFRIENDLY</th>
<th>PROBLEMS AND POSSIBLE SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shelter Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manure Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handling Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MARKETS
CONSUMERS
ANIMAL
WELFARE
AND ETHICS

HOW ARE THEY RELATED?
In your opinion, briefly describe how the following words affect our beef markets, and consumer opinion and demand. Discuss your answers with the rest of the group.

ANTIBIOTICS: Are consumers worried about antibiotics being in the meat they buy? How can we as beef producers help to ensure this doesn’t happen?

CHOLESTEROL: Why are people worried about cholesterol? What does it have to do with beef?

NATURAL: What do you think when you see signs saying “natural food”? Do you think that natural is always better?

QUALITY: Does the word “quality” give you confidence in your food?

ECONOMICAL: How important is economical (cheaper) to consumers?

MEAT GRADE: Do you think most consumers understand what the different meat grades mean? Do you know?

CHOICES: Consumers have many choices when it comes to buying meat. What could you tell them that might convince them that beef is a good choice?
People have different opinions on animal welfare issues. Do the following activity sheet and then discuss your opinions with other members.

WHERE DO YOU STAND?

Circle your responses. Remember, there are no right or wrong answer - only opinions.

SA - strongly agree  A - agree  U - undecided  D - disagree  SD - strongly disagree

Humans have “domain” over every living thing that moves on Earth. SA A U D SD

Animals are here for the use of humankind. SA A U D SD

Stray and or seriously ill dogs should be put to sleep. SA A U D SD

I feel bad when my parents set mouse traps. SA A U D SD

I would not think twice about killing a mosquito. SA A U D SD

Keeping animals in cages is wrong. SA A U D SD

Animals feel pain. SA A U D SD

Humans can stand less pain than most dogs, hogs and cattle. SA A U D SD
Cowboys riding bulls in rodeos are hurting those bulls.

It’s wrong to shear a sheep.

If I was a sheep producer, I would kill a fox or coyote rather than allow it into my herd.

Farmers treat their pets differently from food animals.

Allowing food animals to run free would drive up the cost of meat.

Farmers don’t really care about the well-being of the animals they sell.

By actually touching and feeling, I can learn more about an animal than by watching a video or computer.

I would kill a rabid skunk or a coyote with mange.

The way I handle my animals can affect their behaviour and make them more or less tame.

Some animals are naturally more wild and difficult to handle than others.
THE NEWSPAPER REVIEW

PREPARATION:

- Have members and leaders bring a variety of magazines and newspapers to the meeting. Try to find some agricultural magazines, some general public magazines and a few that might be more specific to city living.
- You will need scissors, glue, and mural paper or poster board.
- Each poster will have a TITLE and two SUB-TITLES. The titles will be MARKETS, CONSUMERS, ANIMAL WELFARE AND ETHICS. Under each of these titles make the sub-title POSITIVE AND NEGATIVE

  Example:

  MARKETS

  POSITIVE        NEGATIVE

ACTIVITY:

- Have members search through the papers looking for articles about anything related to beef animals and the topics of Markets, Consumers, Animal Welfare and Ethics.
- Be sure members mark on each one, what paper or magazine it came from.
- Have members sort their articles into the categories of Markets, Consumers, Animal Welfare and Ethics. Some will overlap from one category to another.
- Then have them glue their article on the posters under the sub-titles. They will have to decide whether the article was a POSITIVE article for beef producers or a NEGATIVE article from the beef producers’ point of view.
- Discuss how the four titles are related and try to find examples of that relation in the articles. For example: An article about a consumer getting E Coli from undercooked meat affected the Consumer, and the Market.
All Projects  CODE OF CONDUCT

The following describes general responsibilities of __________________ and all persons in his or her authority in the proper care and handling of their animal(s).

✓ To provide food, water and care necessary to protect the health and welfare of my animals.
✓ To provide a safe and healthy environment for my animals that is clean, well ventilated, and provides ample space.
✓ To provide a well-planned disease prevention program to protect the health of my herd or flock. This includes a strong veterinarian/client relationship.
✓ To use humane and sanitary methods when it becomes necessary to dispose of my animals.
✓ To make timely inspections of all animals to evaluate the health and insure that all basic requirements are being met.
✓ To insure proper handling techniques are used to eliminate any undue stress or injury when manual manipulation is necessary.
✓ To provide transportation for my animals that avoids undue stress or injury caused by overcrowding, excessive time in transit, or improper handling when loading or unloading.
✓ The wilful mistreatment of my animals or the mistreatment of any animal will not be tolerated. In cases of mistreatment, I will notify the proper authorities.
✓ To make management decisions based on scientific fact and to consider the welfare of my animals.
✓ To learn about species-specific quality assurance programs.

I have read, understand and commit to the above statements.

__________________________  4-H Member

__________________________  4-H Leader

__________________________  Parent/Guardian

Adapted from:
Ohio Farm Animal Care Commission, Box 479, Two Nationwide Plaza Columbus, OH 43216-0479
Sensible Handling through all stages of the animal’s life, to avoid unnecessary suffering.
How do you feel when someone stands very close, looking directly at you and starts talking to you? Do you feel like backing up a little? Do you wish they would back off a little? Cattle, like people need some “personal space”.

The distance which an animal will tolerate without moving is called its flight zone. When someone moves into that zone, the animal will usually move away. Of course, this doesn’t apply to animals that are handled regularly, like your 4-H animal. Handling facilities work best if we remember to use the flight zone as a handling tool. The diagram indicates the best location for encouraging animals to move or stop.

Remember that the flight zone increases when you come at an animal head-on. It also increases when the animal gets excited. The flight zone will decrease when animals are allowed to go down a chute in single file (follow the leader).
TRAINING YOUR CALF FOR SHOW

All Projects

Using the Halter

➢ Place the halter on the calf’s head with the lead on the left side. Put the cross strap that goes over the nose 2 to 3 inches below the eye.

➢ Do not have the halter so big that the nose-cross piece is down by the mouth.

Start Early

Success in beef cattle showmanship must start at home with halter breaking the calf.

➢ Start by tying the calf for an hour, working up to 3 to 5 hours a day. During this time, brush and talk to your calf. This will assist in calming the calf and allow it to become accustomed to you.

➢ Be sure to tie the calf with a quick release knot so you can quickly and safely untie the calf if necessary.

➢ Training a calf to walk, stop, and set up takes work and patience.

➢ At first lead the calf to and from feed and water.

➢ Later, lead the calf around for short practice sessions to teach it to set up in response to the halter and show stick.
Handling

- Have another person handle the calf while you are at the halter; this trains the calf to remain calm under a judge’s close inspection.
- When leading, walk on the calf’s left side with the lead in your right hand.
- Hold your hand 6 to 12 inches from the animal’s head on the lead strap. (This is near the junction of the chain and leather strap.)
- Firmly grip the lead so your thumb is up and toward you with your little finger nearest the chain. Your wrist is stronger this way and provides better control over the animal.
- Measure the lead strap to be just long enough for control (about shoulder width). It must not touch the ground; if the lead can reach the ground, you or the calf may step on it.
- To prevent injury, do not wrap the halter strap around your hand or fingers.

Photo taken by Bonnie Snezyk
Handling

Using the Show Stick

Four basic uses for the show stick include:

- Assisting in placing the feet.
- Calming and controlling the animal.
- Keeping the top level.
- For scotch-driving the animal.

When setting up your calf

- Switch the lead strap from the right hand to your left hand quickly and smoothly.
- Switch the show stick from the left hand to your right hand.
- Slowly scratch the calf’s belly a couple of times to help calm the calf.
- Set the calf’s feet in the appropriate position.

Remember, you have two tools in your hands to set the feet -- the lead and the show stick.

- Set the rear feet first. To move a rear foot back, push backward on the lead and use the show stick to press (do not jab) the soft tissue between the toes in the cleft of the hoof.

Photo courtesy of Brenda Warrener
Handling

- To move a rear foot forward, pull on the lead and use the show stick to apply pressure under the dew claw.
- When the rear feet are too close together, apply pressure to the inside of the leg just above the hoof or at the hock, and the calf should stand wider.
- You can move its front feet by using your boot or show stick to apply pressure on the foot while pushing or pulling with the halter lead in the desired direction you want the foot to move. Younger, less experienced members are safer using the show stick.

Proper use of show stick on feet.

Placement of the feet depends on what view is desired for the judge and what makes the calf look its best.

- When cattle are lined up side by side in a straight line, the feet should be set on all four corners (bearing a full share of the calf’s weight). On this view, the judge is looking at the rear and front of the calf.
- When the cattle are lined on the profile (head to tail), set the feet as if a professional photographer is taking a picture. Stagger the rear feet so your near side foot is slightly in front of the foot closest to the judge.
Handling

- As the judge moves to the rear of the calf on profile, an experienced exhibitor will again square the feet. As the judge moves back to the side view, profile the rear feet again.

  **A heel-to-toe look works best for a profile set-up.**

- The heel of one foot is parallel with the toe of the other foot.
- The front feet are set squared or staggered less than the rear feet.
- The toe of the front foot away from the judge should be set back half the width of the hoof on the judge’s side.
- By setting the feet in this manner, you give the judge a perception of depth and thickness.
- It also makes it easier to correct a top line and rump structure.

  Set up when viewed on the profile.

Photo taken by Bonnie Snezyk
Handling

When using the show stick to correct a top line

- Apply pressure at the navel or flank with the hook of the show stick if the top is weak and needs to be raised.
- If the rump is steep and the loin is high, apply pressure to this area to bring it down.
- Continue to scratch the calf’s belly to keep it calm.

While showing, always keep the point of the show stick down for safety.

- Keep the stick in your left hand at the handle or about one-third of the way down when walking. This allows its use as an additional control tool if needed.
- If the calf is moving too fast, hold the portion of the stick between your left hand and tip or hook end in front of the calf’s nose.
- To scotch-drive, push forward on the halter with your right hand, and touch the calf with the show stick on its side or rump. This makes the calf think someone is behind it, and it should start to walk.
- “Scotch-driving” is needed when the calf will not lead or walk and no one is around to help you get started.
Handling

All Projects     SHOWING YOUR CALF

Showmanship is an area over which you have the most control when exhibiting your beef cattle. In showmanship, you are judged on your ability to control and present an animal to bring out its best characteristics. Advanced planning and hard work are important keys to becoming a good exhibitor.

Showing beef cattle generates enthusiasm and competition in the show ring and teaches valuable life skills, which include responsibility, making decisions, learning to win or lose graciously, and to instill character. A good showman has a sense for effectively presenting an animal in competition.

- Before the show, walk over the show ring to find any low spots on the surface. This will help you avoid these areas when setting up your calf. If possible, position the calf so the front feet are placed on higher ground than the rear feet.
- Dress neatly and wear sturdy boots (leather are best) for safety. If the calf steps on your foot, its foot will slip off a leather boot more easily than it will slip off a canvas shoe.
- Enter the show ring promptly when the class is called.
- If there are exhibitor numbers, wear the number on the left side so it does not interfere with use of the show stick or leading the calf.
- Know where to line up and how the classes will move through the show ring. If you are not in the first class, watch a class or two to learn specific techniques or show style the judge prefers.
Handling

Using the Comb or Cloth

- With haired cattle, carry a scotch comb in your right back pocket or in a comb sheath, with the teeth away from you for safety.
- Use the scotch comb to groom the hair that becomes messed up from the judge’s handling your calf or from another animal bumping into your calf.
- You can use the corner of the comb to level the loin.
- If showing American breeds with short hair, carry a wipe cloth (bandana). You can use the cloth in the same manner as the scotch comb to groom the hair while in the show ring.

When pulling into line

- "Check" your calf a few feet before reaching your destination to slow the calf. To check the calf, lift up slightly on the halter so the calf knows you are about to stop.
- When walking into the ring, line up where the ring steward indicates. If you are third or fourth in the ring, line up even with the other calves, leaving 3 or 4 feet on both sides of your calf. This allows ample room for all exhibitors to set up.
Handling

- Smoothly, yet quickly, get the calf set up with its head high. Be alert, keep a close eye on the calf, keep the feet set square, stay straight in line, and know where the judge is located.
- If your calf is not set square and the judge is nearby, set up your calf. Most judges will wait for you to present the calf at his best.
- Always give the judge the view he is seeking. Try not to stand between the judge and the calf.

When it is time to walk the cattle --

- Move as the judge or ring steward instructs.
- Assist the member in front of you in moving a calf if he/she is having trouble. Tap the calf's rump with your stick, or preferably put your show stick in your right hand and twist the tail of the calf in front of you with your left. Do not pass the slower animal.
- Let your calf walk out freely. Move at an easy pace, not too slow or too fast.

When it is time to stop on the profile -- Stop in a straight line head to tail.

- Remember to "check" the calf and then stop by lifting the head.
- Allow 4 to 6 feet between your calf and the one in front. This allows the judge space to move freely around the cattle and helps to prevent calves from mounting or disturbing others in the line.
Handling

- Position the feet as discussed earlier.
- Keep the top line level and the calf’s head up.

Locate the judge and wait calmly.
- Do not "saw" your calf in half with rapid stick movement while waiting for the judge. Use slow deliberate strokes with the show stick.
- Do not make noises or rattle the chain of the halter.
- The judge may handle the cattle and ask a few questions. As the judge moves around the calf, move a half step back to allow the judge a full view.
- Be prepared to answer questions such as weight, birth date, sire, dam, pregnancy status of your heifer, feeding program, parts of the animal, yield grade, quality grade, and the retail cuts of beef.
- If your calf has not moved and the judge has gone to the next animal, use the scotch comb or wipe cloth to fix any hair that is messed up.
- If your calf has moved out of line, pull out in a clockwise circle and bring the calf back into line.
- Set up and then fix the hair if necessary.

Be alert and aware of the judge. Look for a sign or motion to be pulled into line for placing.
- This may be another profile or side by side line.
Handling

- As the judge pulls cattle from the profile line, empty spaces occur. As spaces between cattle become empty, move forward in the line.
- Remember to allow proper distance between calves, and set the calf up at its best.
- By moving forward and filling the empty spaces, it becomes easier for the judge to make comparisons. Once pulled into a side by side line, you are nearing the end of the class.
- Stay alert and set the calf up as positions may continue to be switched.

When turning an animal --

- Always turn to the right (clockwise) unless the ring steward gives other instructions. (Most Manitoba judges accept turning either way, but be sure to ask before the class begins.)
- Pushing the calf’s head away from you prevents the possibility of the calf stepping on your foot, causing harm to you or the calf.
- Note that you pass back through the same hole you left, then to the proper position.
- If positioned up to a rail, do not turn around in the line. Back the calf out by pushing back on the halter with your left hand and applying pressure with your right hand at the point of the shoulder.
- Pull into the line at the instructed position.
Handling

Switching from position 4 to position 2

Reseting in the same position using position 3

**Courtesy and Sportsmanship**

- Keep straight lines so the judge can compare all the animals.
- If you are blocking the view of another animal and have space, move so the judge can see all the animals; however, if you are the one hidden, it is your responsibility to be where the calf can be seen. Do not rely on other members since they may not have room to move.
- Avoid bumping, crowding, or hitting other animals.
- If your calf becomes nervous or unruly, remain calm, be patient, and never get discouraged or lose your temper.
Handling

When the judge starts his reasons, the class is over but your job is not. Continue to work hard and display good sportsmanship.

- Leave the ring in an orderly manner as instructed by the ring steward, and pick up your awards.
- Congratulate the class winners and those who stood ahead of you, or be a gracious winner and encourage those who stood below.

Remember - Showing is a learning experience.

- Leave the ring knowing you have given your best effort.
- Learn from your mistakes.
- Watch other exhibitors, and improve your skills for the next show.
- You are always a winner just by having participated in a worthwhile learning activity.
Equipment For Grooming

**Brushes:**

There are a lot of different brushes you can buy, but you can do a good job of grooming with just a good wash and a finishing brush.

- A wash brush made of plastic with soft bristles or a plastic wash mitt. Brushing while washing helps to get the animal cleaner.
- A rice root brush is excellent for training the hair of the animal as it is good for brushing the hair forward. It helps to remove dead hair from the animal.

**Combs:**

There are a couple of combs that are excellent for grooming.

- Scotch Combs do a good job of grooming the hair in a forward and upward direction. The points of the comb are quite sharp so be careful not to scrape the animal.
- A Fluffer Comb is like a scotch comb, except that the teeth of the comb are further apart. This allows the hair to pop or fluff as the comb is run through the hair.
Handling

**Blow Dryer:**

Although a blow dryer is not a necessity, it is useful for drying, cleaning dust off an animal, and training the hair. Some come with a heating element that speeds drying which is very useful in colder weather.

**Clippers:**

If you are going to show your animal you will probably want to borrow or buy a set of clippers. There are different clippers on the market. It is best to choose a set with a good motor and interchangeable heads. Heads can be changed for clipping longer body hair or for close clipping of hair.

- **Sheep Head blade for longer hair**
- **Flat head blade for close cutting**

**Scissors:**

Scissors can be a valuable tool for finishing touches. It’s important to have a pair that are sharp because the hair can be quite coarse.
GROOMING PRODUCTS

There is a wide variety of grooming products, and some can be very expensive. Often, the less expensive or home-made products are just as effective.

Soaps/Shampoos

- A mild soap product such as dish soap or shampoo is inexpensive and works well for general washing.
- Some of the commercial livestock shampoos tend to be very drying.

Adhesives

Adhesives are used to keep the hair in place. There are three basic types of adhesives.

- Standard or Leg Adhesive: is rather heavy and slower to dry than other types. It will do for use anywhere on the animal but is especially good on the legs.
- Tail Adhesive: is much like the standard, except that it dries quickly. It is often used for setting tail heads and forming the bush of the tail. It can also be used on the legs when a fuller appearance is needed.
- Body Adhesive: is very light and dries slowly. It is useful in setting body hair and it allows for easy combing through the hair after it has set.

Adhesive Remover

It’s important to have a good adhesive remover for cleaning adhesives out of the hair after the show. Leaving the adhesive in could damage the hair.
Handling

Show Foams/Shaving Cream

Foams or shaving cream are sometimes applied to help set hard to manage hair.

Spray/Oils/Hair Coat Enhancement

These products are used to add sheen and lustre to the hair. Some products can be used daily for hair training purposes, while others are only to be used the day of the show.

---

All Projects

COSTS FOR GROOMING/SHOWING SUPPLIES

<table>
<thead>
<tr>
<th>ITEM</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL COSTS

87
GROOMING FOR THE SHOW

Before beginning to groom take a close look at your animal and try to get a mental picture of how you want it to look when you have finished grooming. Study your animal and decide what it’s strong and weak points are. You will want to make the weak points look as good as possible, and really bring out the strong points. A lot will depend on the hair type your animal has. Long-haired breeds are usually shown with the hair brushed up, while short-haired breeds are shown with the hair brushed down for a slick, more natural appearance. The time of year also makes a difference in how much hair the animal will have.

Let’s take a look at grooming, from the first washing to the show ring.

Washing

- Wet the animal from the top down. Apply soap into the stream of water to be sure all the soap doesn’t end up on the top of the animal.
- Take your scrub brush and scrub the entire body. The face, legs and underline can be difficult to work on, so spend some extra time getting them clean.
- Rinse the animal from front to back, top to bottom. Be sure all of the soap is rinsed out or your calf might end up with flakey dandruff.

Photo taken by Bonnie Snezyk
Handling

Drying

- If you have a blow dryer, be sure that you dry all parts of the animal. The face, the legs, and the belly are the most difficult to dry.
- Try to keep the movement of the dryer consistent. If you blow from several different directions, the hair will be going in several different directions.
- Blow from front to back, and keep the direction of the nozzle at the same type of angle you use when brushing.
- You may want to brush as you blow.

Brushing/Combing

- Brushing/Combing is a very important step in training the hair of the animal. Brushing early in the year will encourage hair growth, stimulate natural hair oils for extra sheen, and keep your animal much cleaner.
- Long-haired animals can be brushed forward and slightly up. Brush the entire body. Don’t forget the outside and inside of the legs.
Clipping

- Clipping should only be done after the animal is clean and dry.
- Do your first clipping several days before the show. You can do touch up work a day or two before the show.
- Before you begin to clip, stand back and decide what the strengths and weaknesses of your calf are. Think about how you want to clip the animal to make it look its best.

Clipping the Head:

- Clip the face from the poll forward. You want a really short, close clip job on the face.
- Clip from the face down the dewlap to the brisket.

Photo taken by Bonnie Snezyk
Clipping the Body:

- You will get a more even clip job if you use both hands. Steady the clippers with one hand and hold the clippers with your other hand. Put the free hand under your clippers to help you guide your way through the hair.
- When clipping try to make the body look square, especially over the top line and in the hind quarters.
- If you leave the hip hair a little longer it can be blended into the hip and hind quarter to make it look more level. The area close to the tail is trimmed very short.
- When clipping the legs make them look as square as possible. Don’t take off too much of the hair.
- When clipping, try to blend in every part of the body so there are no sudden or hard lines. The animal should look as natural as possible.
Handling

Fitting
Fitting is the finishing touches that you do on the day of the show.

- Wash and dry your calf.
- Pull the hair up on the legs with your scotch comb. Spray adhesive on the hair as you comb to hold it in place. This is called boning.
- The legs should look as straight as possible.
- Bone the back legs up to the twist, which is about halfway up the hindquarter.
- After boning, you may need to do a little shaping with the clippers.
- If you have a short-haired animal, be sure the knees are really clean as dirt and stains will show up more on short haired animals.
- Work at small areas at a time, check it out, make corrections and then move on to a new area.
- Groom the body by combing upward and forward.
- Spray an oil base conditioner on the hair coat of the body.

Remember that no two animals are exactly alike and that your methods of grooming will change with the hair type and the build of the animal. Groom and fit to bring out the animal's best characteristics.

Photo taken by Bonnie Snezyk
PICTURE THIS!

Use the following lists of handling, training, grooming, and showing words to play a combination game of pictionary and charades.

PREPARATION:

❖ You will need a black board and chalk, flip chart or mural paper and markers.
❖ Someone will have to time each round. One or two minutes is usually a good time frame for each turn.
❖ Add or change words to suit your numbers and age group.

ACTIVITY:

❖ Divide the members into two teams.
❖ First participant on Team 1 comes up to the front. You show the participant what word he/she has to describe.
❖ First the participant uses his body to explain which category the word comes from, and how many words it has in it. For example they might make a brushing movement for the grooming category and then hold up two fingers for two words.
❖ The participant then turns to the drawing board and starts to draw a picture that they hope will help their team members to guess the correct words.
❖ If a correct answer is given within the time limit the team gets a point.
❖ If there is no correct answer, the opposing team can have one guess to earn a point.
❖ Team 2 then takes a turn.
❖ Game continues until all words have been used or a set time limit is up.
## WORD LISTS FOR PICTURE THIS!

<table>
<thead>
<tr>
<th><strong>HANDLING</strong></th>
<th><strong>TRAINING</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>FLIGHT ZONE</td>
<td>CORRECT POSITION OF HALTER</td>
</tr>
<tr>
<td>POINT OF BALANCE</td>
<td>LEAD STRAP</td>
</tr>
<tr>
<td>FOLLOW THE LEADER</td>
<td>DON'T WRAP LEAD STRAP AROUND YOUR HAND.</td>
</tr>
<tr>
<td>BLIND SPOT</td>
<td>SHOW STICK (CANE)</td>
</tr>
<tr>
<td>CURVED CHUTE</td>
<td>SETTING UP YOUR CALF</td>
</tr>
<tr>
<td>ROPE HALTER</td>
<td>PROFILE SET-UP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SHOWING</strong></th>
<th><strong>GROOMING</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>WEAR STURDY BOOTS</td>
<td>SCOTCH COMB</td>
</tr>
<tr>
<td>SHOW RING</td>
<td>BLOW DRYER</td>
</tr>
<tr>
<td>JUDGE</td>
<td>CLIPPERS</td>
</tr>
<tr>
<td>SWITCHING FROM POSITION 2 TO</td>
<td>WASHING YOUR CALF</td>
</tr>
<tr>
<td>POSITION 4</td>
<td>CLEANING THE HOOVES</td>
</tr>
<tr>
<td>BE A GOOD SPORT</td>
<td>BRUSHING YOUR ANIMAL</td>
</tr>
</tbody>
</table>

---

94
JUDGING COW/ CALF PAIRS
When we judge cow/calf pairs we look for the same qualities in a cow that we look for in a heifer. Some key points to remember are:

- **Femininity** - The head, neck and shoulders should be refined and blend into the rest of the body. Cows should have smoother muscling than bulls. There should be muscling evident, but not as much as in market steers.

- **Broodiness** - These include points that would indicate that the cow will be a good mother, and include an udder that is capable of producing a good quantity of milk and uniform teat development. A good temperament is also important.

- **Capacity** - In cows this refers to having enough internal size to carry a calf. A good spring of rib and depth through the chest and heart are indicators of the internal size.

- **Condition** - Look for a muscular healthy cow that is not fat.

- **Structure** - Good feet and legs are a must for cows as they will have to carry the extra weight of a calf and walk to graze for feed.

- **The Calf** - The calf should be healthy and alert. It should move freely, and have lots of energy. Is the calf’s conformation better than its mother? It is not a productive cow if it produces calves with qualities that are not as good as the mother's qualities. The calf should be of a size and frame that will allow it to either finish properly or become productive breeding stock.
Using the Score Card on page 112, judge the following four pairs of Cow/Calves.

Cow/Calf Pair #1

Cow/Calf Pair #2
MANITOBA
4-H JUDGING CARD

NAME or NUMBER: _______________________
4-H CLUB: ______________________________
AGE: ___________________________________

NAME OF CLASS: _________________________

PLACINGS:

<table>
<thead>
<tr>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>PLACINGS SCORE</th>
<th>REASONS SCORE</th>
</tr>
</thead>
</table>

WRITE REASONS BELOW (give main points):

I place _______ over _______ because:  
________________________________________________________________________

I place _______ over _______ because:  
________________________________________________________________________

I place _______ over _______ because:  
________________________________________________________________________

MAIN REASON FOR BOTTOM PLACING:
CARCASS EVALUATION

WHAT IS A CARCASS?

CUTS OF THE CARCASS
JUDGING A CARCASS CLASS

Judging a carcass class is very much like judging a market steer class except now you can actually see the meat. You don’t have to imagine what it is like under the hide of the animal. Instead of handling the outside of the animal, you can examine the meat close up. You will place the carcasses from highest to lowest quality according to the Canadian beef grading system.

These are the steps you should follow when evaluating the carcasses:

- **Determine the maturity.** You can determine this by looking at the amount of bone ossification or hardening.
- **Check the color of the muscle and fat.** Look for bright red meat and a white fat cover.
- **Check the yield.** Look between the 12\(^{th}\) and 13\(^{th}\) rib and see how much fat there is. A Canada Prime carcass must be greater than or equal to 2mm.

![Diagram of beef carcass parts](Diagram courtesy of the Canadian Beef Information Centre)
THE GRADES OF BEEF

Canada Grade A has these characteristics:

- Meat from youthful animals
- Muscle is bright red, firm and fine grained
- The fat covering is firm and white.

There are three grades of beef in Canada. The difference between the grades is the amount of fat. Within these grades, the carcass is also graded A, AA, or AAA with A having the smallest amount of marbling and AAA having the greatest amount of marbling.

- A1 which is the leanest A, AA, or AAA
- A2 - A, AA, or AAA
- A3 which is the fattest A, AA, or AAA

Canada Grade B has these characteristics:

- Meat from youthful animals
- Carcass lacks enough fat cover
- May have yellow colored fat and darker colored meat

There are four different Canada Grade B grades:

- B1 lacks sufficient marbling
- B2 has yellow fat
- B3 lacks adequate muscling
- B4 has a dark meat color
Carcass Evaluation

**Canada Grade D has the following characteristics:**
- Meat from mature cows

There are four different Grade D grades:
- D1 will have excellent muscling and sufficient fat cover
- D2
- D3
- D4 will have the least muscling and fat cover of the D grades.

**Canada Grade E has the following characteristics:**
- Meat from mature bulls

**Terms for Judging Carcasses**

**Connective Tissue:**
- Includes tendons, ligaments and cartilage that help hold the body parts together.

**Gristle:**
- Is the heavy deposits of connective tissue found in the muscle. If there is a lot of gristle, the meat will be tough and hard to chew. The gristle will look like white or colorless ribbons or threads in the meat. The amount of gristle will tell you a lot about the maturity and quality of the meat.
Carcass Evaluation

Cartilage:
- Is connective tissue that may be replaced by bone as the animal matures. In the mature animal, cartilage is only found in places where there needs to be flexibility such as the ears and joints. It can help you determine the age or maturity of an animal.

Maturity:
- Is the age of the animal that produced the carcass. It can be determined by the degree of bone ossification or hardening of cartilage into bone. Maturity is very important to the quality of the meat.

Marbling:
- Is the amount, size and distribution of fat within the meat. It does not include the outside covering found on many cuts or large fat deposits within the muscle. It looks more like little white flecks in the meat. Marbling is what gives meat flavour and tenderness.

Diagram courtesy of the Canadian Beef Information Centre
Using the section information about carcasses, judge and place the following carcasses, giving reasons beside each carcass for your decisions.

<table>
<thead>
<tr>
<th>Beef Carcass 1</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image-url" alt="Beef Carcass 1 Image 1" /></td>
<td><img src="image-url" alt="Beef Carcass 1 Image 2" /></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beef Carcass 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image-url" alt="Beef Carcass 2 Image 1" /></td>
<td><img src="image-url" alt="Beef Carcass 2 Image 2" /></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th><strong>Beef Carcass 3</strong></th>
<th><img src="image1" alt="Image of Beef Carcass 3" /></th>
<th><img src="image2" alt="Image of Beef Meat 3" /></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Beef Carcass 4</strong></th>
<th><img src="image3" alt="Image of Beef Carcass 4" /></th>
<th><img src="image4" alt="Image of Beef Meat 4" /></th>
</tr>
</thead>
</table>

Activity courtesy of the American Meat Science Association

106
Thank-you to the following for sharing their information and resources:

Manitoba Agriculture, Food and Rural Initiatives (MAFRI)

Saskatchewan 4-H Council

Alberta 4-H Council

Alberta Agriculture, Food and Rural Initiatives

Texas Association of Extension 4-H Agents

Ohio State University - Agriculture and Natural Resources

John Popp - Farm Production Extension - Livestock

Brenda Warrener

Bonnie Snezyk
Now that you have finished this project, it is time to think about how you will share your experiences and knowledge with others. You may put your new skills to work by helping at a community event or at your club Achievement or teaching others about your topic. The goal of the Showcase Challenge is to help highlight your new skills and help you understand how you can use them. It can be an opportunity to receive feedback from others on your project. So go back through your manual and find some highlights of your learning (what you are proud of) and think about how you will “showcase” it.

Dream it!

Here are some Showcase Challenge Suggestions:

- Demonstrate something you made or learned about
- Act out a play
- Teach a class
- Use your new skills to help with the Club Achievement plans
- Make a poster or display
- Make a video or slideshow
- Organize a special event
- Or come up with your own idea. It is up to you and your leader!

My Showcase Challenge Plan

My showcase idea: ____________________________

______________________________________________________________________________________

What materials and resources do I need? ____________________________

______________________________________________________________________________________

Who do I need to help me? ____________________________

______________________________________________________________________________________

When do I need to have things done by? ____________________________
Do it!
Insert or attach your finished product or a photo of you sharing your skills in your Showcase Challenge.

Dig it!
Now that you have showcased your project skills;
• How did your Showcase Challenge go?

• What would you do differently next time?

• How will you use your new skills in the future? (in different situations?)
## My 4-H Portfolio Page

Name: ___________________ Date: ___________ Year in 4-H: ______

Club: ________________ Hours Spent on 4-H: ______ (Project and Other 4-H Activities)

### Project Name: ________________  Skills Chart

To be completed by the leader and the member based on observations and conversations throughout the project. **This generic 4-H Portfolio Page is for use with all projects without a project specific 4-H Portfolio Page printed in the manual.**

<table>
<thead>
<tr>
<th>Meeting Date</th>
<th>Activities we did…</th>
<th>Skills I learned…</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>During your project you did activities to help you learn new skills. Identify these activities below.</td>
<td>Identify the skills learned in the activities completed in your project.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional Comments/Activities:

---

### Leader Point of Praise!

I am most impressed by…

I acknowledge that the member has completed the 4-H project requirements.

Leader’s Signature: ____________________________
Above and Beyond!
In addition to project skills, 4-H also increases skills in meeting management, communications, leadership, community involvement through participation in club, area, or provincial 4-H events or activities. List below any activities you participated in this year in 4-H.
(Some examples include Executive Positions Held, Workshops, Communication, Community Service, Rally, Bonspiels, Conferences, Judging, Camps, Trips, Awards, Representation to Area or Provincial Councils, etc)

_____________________________________       _______________________________________
_____________________________________       _______________________________________
_____________________________________       _______________________________________
_____________________________________       _______________________________________
_____________________________________       _______________________________________
_____________________________________       _______________________________________ 

**Feel Free to add additional pages that include awards, certificates, new clippings, photos or other items that describe your 4-H involvement.

Member Point of Pride!

What I learned...

What I need to improve on...

What I want others to notice...

Member’s Signature: _______________________________

Point of Praise! Another’s perspective on your achievements in 4-H.
(community professionals, 4-H club head leader, friends of 4-H)

I am most impressed by...

I believe that you have learned...

In the future I encourage you to...

Signature: _______________________________
4-H Achievement

4-H Achievement is... a 4-H club celebration when members have completed their projects. Achievements are planned by the club to give recognition to members and leaders for their accomplishments in their 4-H projects and club activities.

A 4-H Achievement can take many different formats: from choosing a theme, to member project displays, to members using their new skills for the event (entertainment, food, decorating, photographer, etc.), to members presenting their project to the whole group, the options are endless and open to the creativity of the members and leaders in each club!

Clubs may also plan their Achievement to promote 4-H to the community or to recognize sponsors and others who have helped the club.

Members and leaders - be sure to check your project books for the project completion requirements, so you will be ready for your club’s Achievement celebration!

If you have any questions, comments or suggestions for this or other 4-H projects contact:

Manitoba 4-H Projects
Manitoba Agriculture
1129 Queens Avenue
Brandon, MB R7A 1L9

Email: 4h@gov.mb.ca

Phone: 204-726-6613
Fax: 204-726-6260

This manual is for educational use only and is not intended as professional advice.

For more information about 4-H and the many 4-H opportunities available please visit

http://www.gov.mb.ca/agriculture/4-h/
What is 4-H?

4-H is an international youth organization involving more than 7 million members in 80 countries around the world.

In Canada, 4-H began in 1913 in Roland, Manitoba as a community-based organization dedicated to growth and development of rural youth. Today's 4-H program reaches both farm and non-farm youth across Canada. The motto of “Learn To Do By Doing” is embodied in the program, as 4-H focuses on skill development as well as personal development of life skills such as communications, leadership and citizenship.

4-H Motto

“Learn To Do By Doing”

4-H Pledge

I pledge,
My HEAD to clearer thinking,
My HEART to greater loyalty,
My HANDS to larger service,
My HEALTH to better living,
For my club, my community, and my country.

All project materials are available in alternate format upon request.

Manitoba 4-H project material is developed by Manitoba Agriculture