

Activity 22

Breed Diversification

- This Year's Model

By Dean Pike

Study Questions:

Why are there different breeds of cattle? What are the desirable traits a rancher looks for when choosing a beef cattle breed? Why does the farmer choose these traits?

Activity:

Students research various breeds of beef cattle, identifying traits specific to the breed.

Curriculum Fit:

Grades 7, 8, 9 - Science

- Animals - reproduction, their environment and their ability to take/produce food.

Grades 7, 8, 9 - Language Learning

- Report writing, research, letter writing

Grades 7, 8, 9 - Drama/Art

- Write TV promotions for beef cattle and perform it on video camera.

Agricultural Concept:

Breed diversification and selective breeding are important and necessary aspects of the cattle industry.

Purpose:

- To help students gain an appreciation for the adaptive value of the various structural and behavioural characteristics of domesticated beef cattle breeds.

Materials Required:

- Brochures, fact sheets and promotional materials from cattle associations describing breed characteristics (see Resource List).
- Magazines containing advertisements for automobiles (may be supplied by students)

Time Required:

Two or three class periods.

Background — For the Teacher

Each breed of cattle (beef or milk) has its own qualities or bred-in adaptations. These qualities have, for almost two hundred years, been selectively bred into the various breeds we recognize today.

As a cattle producer, the rancher must be familiar with the specific adaptive and commercial value of the traits various breeds of cattle possess. Depending on how the cattle are to be used or on the type of environment they are to be raised in, the breeder will choose the most appropriate and desirable breed.

Procedure

Preparation

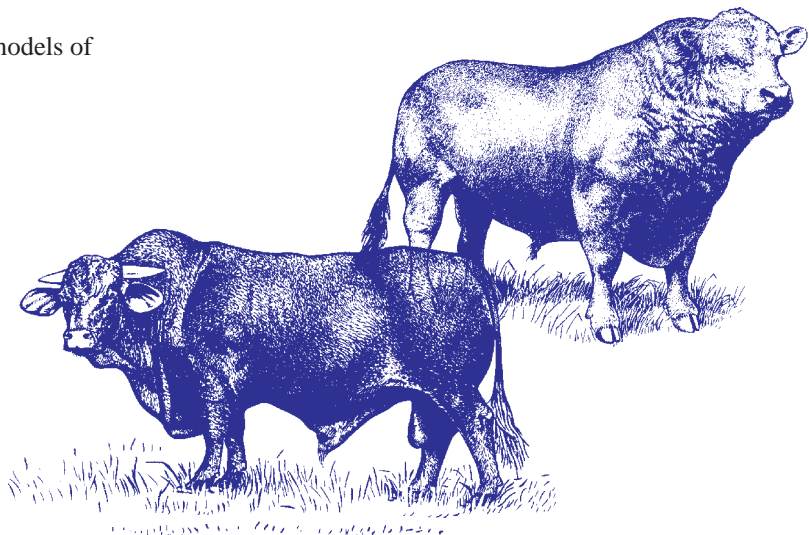
1. Have students write letters to the various cattle associations requesting literature on their breeds.
2. Ask the students to collect automobile advertisements (car or truck) from magazines.

Introduction

3. Present class with a list, or have them prepare a list, of various makes and models of automobiles. In groups of three or four, students identify and record on chart paper specific features offered by the plethora of automobile models, (e.g. acceleration, comfort, versatility, off-road capability). Group discusses desirability of these features.
4. A reporter for each group presents findings to the class.
5. Discuss need for assorted models of automobiles.

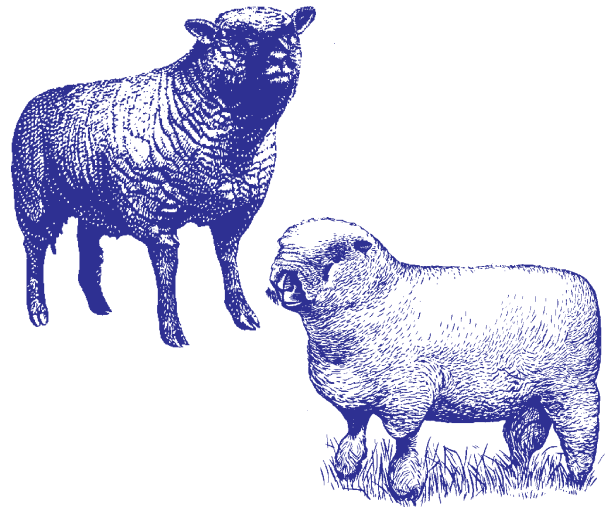
Activity

6. Brainstorm a list of various beef cattle. Complete the list by consulting the included Resource Sheet. Using the concepts from the automobile discussion, the students will suggest reasons for the numerous breeds of beef cattle.
7. In original groups the students use information provided through cattle associations to identify, select and record desirable traits associated with a selected breed of beef cattle. A reporter from each group presents collected information, and posts findings.
8. Using the information collected, the class can suggest possible trait category headings under which groups place each trait. From these categories the students make an evaluation as to which trait they feel is most important. Have them explain their choice.



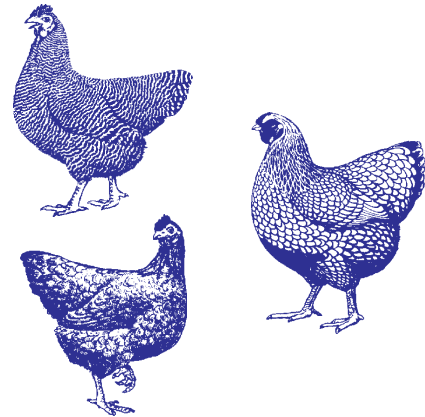
Conclusion

9. Group members write a T.V. promotional/sales advertisement for a fictitious breed of beef cattle.
10. Advertisement is performed and recorded on videotape. Sales techniques may include those seen in car sales ads or furniture “barn” commercials.



Discussion Questions

1. Why are there so many different makes and models of automobiles?
2. What features differentiate one automobile from another?
3. Why does the consumer choose one model over another?
4. Is there an automobile suited to all uses and consumer demands?
5. Why are there so many different breeds of beef cattle?
6. What are some specific traits that a rancher would look for in choosing a breed of beef cattle for his/her specific operation?
7. Why would a rancher choose one breed over another?
8. What traits do you feel would be most important in the production of beef cattle?

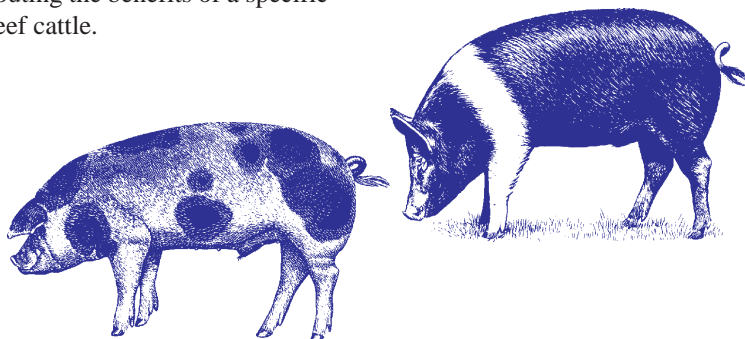


Evaluation Strategies

1. Group participation and contribution to the project.
2. Quality of presentation produced.

Related Activities

1. Major individual or group written research report on a specific breed of beef cattle.
2. Visitation/presentation by cattle association representation. Question and answer session.
3. Presenting, sharing, displaying of individual breed reports.
4. Design a magazine ad or promotional brochure touting the benefits of a specific breed of beef cattle.

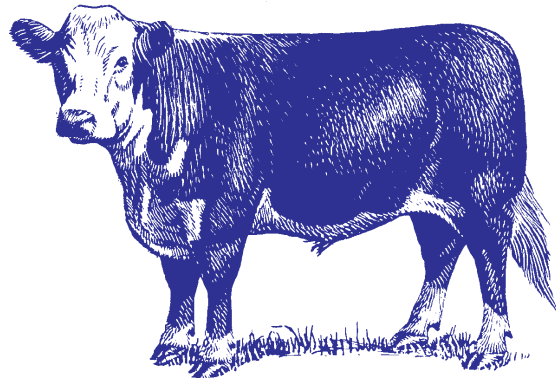


For This Year's Model . . .

Traits Considered by Breeders of Beef Cattle

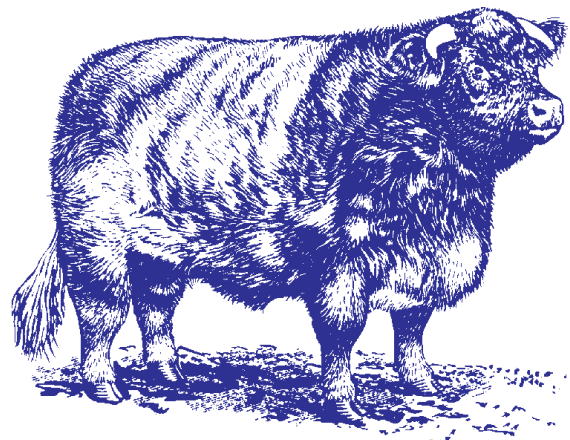
Maternal Traits:

- Age at puberty
- Calving ease
- Birth weight
- Milking Ability
- Mothering Ability
- Longevity (lb. calf weaned/mating opportunity)
(lb. calf weaned/unit of feed input)
- Pelvic area/unit of body weight
- Temperament
- Mature size
- Conformation
- Disease resistance
- Heat/cold tolerance



Terminal or Paternal Traits:

- Growth Rate
 - birth weight
 - weaning weight
 - yearling weight
 - pelvic area/unit body weight
 - efficiency of gain
- Carcass merit
 - fat depth (% of retail product)
 - ribeye area
 - % lean
 - muscling
 - marbling
- Breeding soundness
 - physical
 - scrotal circumference
 - semen motility/morphology
 - libido
- Disease resistance
- Carcass conformation
- Shape and proportions
- Milkability



Cattle Associations and Addresses:

Canadian Angus Association
Box 3209
Regina, Saskatchewan S4P 3H1
Telephone: 757-6885 Fax: 522-5363

Canadian Angus Breeders
c/o J. Lee
R.R. 1 Airdrie, Alberta T4B 2A3
Telephone and Fax: 948-5877

Canadian Belgian Blue Association
R.R. 1
Inglewood, Ontario L0N 1K0
Telephone: 838-0073 Fax 838-3869

Canadian Red Poll Cattle Association
R.R. 3
Ponoka, Alberta T0C 2H0
Telephone: 783-5951

Canadian Limousin Association
5663 Burleigh Crescent, S.E.
Calgary, Alberta T2H 1Z7

Canadian Hereford Association
5160 Skyline Way, N.E.
Calgary, Alberta T2E 6V1
Telephone: 275-2662 Fax 295-1333

Alberta Welsh Black Association
Box 477
Hanna, Alberta T0J 1P0
Telephone: 854-2135

Canadian Red Angus Promotion Society
Box 413
Sundre, Alberta T0M 1X0
Telephone: 638-2276

Canadian Simmental Association
13, 4101 - 19 Street, N.E.
Calgary, Alberta T2E 7C4
Telephone: 250-7979

General:

Alberta Cattle Breeders Association
P.O. Box 1060, Station M
Calgary, Alberta T2P 2K8
Telephone: 261-0266

Alberta Galloway Association
Box 1, Site 5, R.R. 1
Dewinton, Alberta T0L 0X0
Telephone: 548-6622

Canadian Main-Anjou Association
110, 3016 - 19 Street, N.E.
Calgary, Alberta T2E 6Y9
Telephone: 291-7077 Fax: 291-0274

Canadian Gelbvieh Association
123A, 2116 - 27 Avenue, N.E.
Calgary, Alberta T2E 7A6
Telephone and Fax: 250-8640

Gelbvieh Association of Alberta
R.R. 2
Camrose, Alberta T4V 2N1
Telephone: 672-9950

Canadian Blonde d'Aquitaine
1608 A, Centre Street, North
Calgary, Alberta T2E 2R9
Telephone: 276-5771

Alberta Shorthorn Association
Box 47
Mirror, Alberta T0B 3C0
Telephone: 788-2271

Canadian Charolais Association
2320 - 41 Avenue, N.E.
Calgary, Alberta T2E 6W8
Telephone: 250-9242 Fax: 291-9324

Canadian Piedmontese Association
P.O. Box 605
Red Deer, Alberta T4N 5G6
Telephone: 347-2788

TEACHER RESOURCE

Cattle Associations and Addresses — cont'd

Alberta Piedmontese Association
Box 28
St. Michael, Alberta T0B 4B0
Telephone: 896-3781

Salers Association of Canada
#330, 2216 - 27 Avenue, N.E.
Calgary, Alberta T2E 7A6
Telephone: 291-2621 Fax: 291-2176

Alberta Aberdeen-Angus Breeders Club
P.O. Box 605
Red Deer, AB T4N 5G6

Alberta Ayrshire Breeders Club
R.R.#1
Gibbons AB TOA 1N0

Alberta Blonde d'Aquitaine Association
R.R.#2
Airdrie AB T4B 2A4

Alberta Canada All Breeds Association
P.O. Box 99
Red Deer AB T4N 5E7

Alberta Charolais Association
R.R.#1
Hardisty AB T4N 5E7

Alberta Cow Calf Association
Box 720
Elk Point AB TOA 1A0

Alberta Guernsey Breeders Association
Box 1040
Glenwood AB TOK 2R0

Alberta Hereford Association
Box 910
Innisfail AB TOM 1A0

Alberta Holstein Association
Box 1522
Lacombe AB TOC 1S0

Alberta Jersey Cattle Club
R.R. # 1
Crossfield AB TOM OSO

Alberta Limousin Association
P.O. Box
Red Deer AB T4N 5E7

Alberta Maine-Anjou Association
P.O. Box 386
Cochrane AB TOL OWO

Alberta Salers Association
Box 5097
Airdrie AB T4B 2B2

Alberta Simmental Association
Box 605
Red Deer AB T4N 5G6

Alberta Texas Longhorn Association
P.O. Box 605
Red Deer AB T4N 5G6

Canadian Dehy Association
#4, 10008 - 29A Aveune
Edmonton AB T6N 1A8

Canadian Hays Converter Association
#200 5940 MacLeod Trail South
Calgary AB T2H 2G0

Canadian Pinzgauer Association
c/o Terry Place
Box 248
Nanton AB TOL 1R0

Canadian Romagnola-Marchigiana Association
P.O. Box #37
Priddis AB TOL 1W0

Canadian South Devon Association
Box 667
Olds AB TOM 1P0

Canadian Tarentaise Association
Box 5097
Airdrie AB T4B 2B2