



## **117R *Beef Resource Handbook* Changes in the 2011 Edition**

---

Thank you for your interest in the Ohio 4-H publication 117R *Beef Resource Handbook* (2011). The following pages show the areas in which **significant** changes have been made to the 2000 edition. Pages with only minor changes are not included.

---

To print this document from Adobe Reader or Adobe Professional, select "Document and Markups" from the Comments and Forms menu.

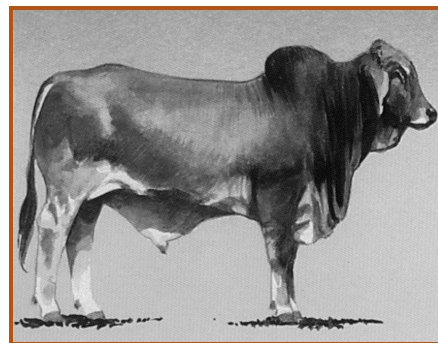
Orders for the revised edition can be placed online at <http://estore.osu-extension.org> or by contacting Ohio State University Extension, Media Distribution, 216 Kottman Hall, 2021 Coffey Rd., Columbus, OH 43210, phone 614.292.1607, email [pubs@ag.osu.edu](mailto:pubs@ag.osu.edu).

Visa and Mastercard accepted. To order with a purchase order, please call Media Distribution at 614.292.1607 Monday through Friday, 8 a.m. to 5 p.m.

Ohio only: Ohio 4-H club advisors, club members, and other Ohio residents get the best price when they order and pick up their purchases at their local county Extension offices.

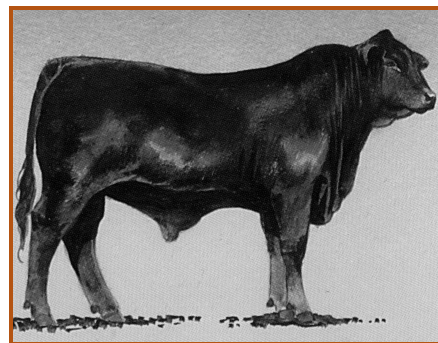
## **Brahman**

This breed was developed in the Southwestern United States by crossing Zebu cattle from India with British breeds. The color of these animals varies from light gray or red to almost black. They are known for their ability to withstand heat and insects.



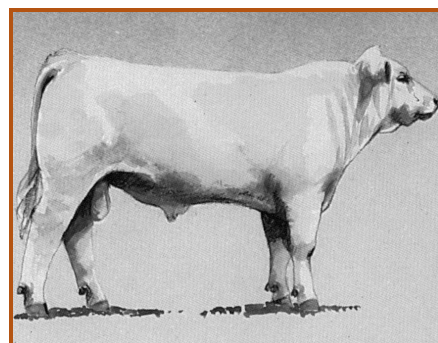
## **Brangus**

This breed was developed by the USDA Experiment Station in Jeanerette, Louisiana, in 1932. Registered Brangus must be 3/8 Brahman and 5/8 Angus, solid black and polled. The Brangus breed was created to combine strengths of the Brahman and Angus breeds.



## **Charolais**

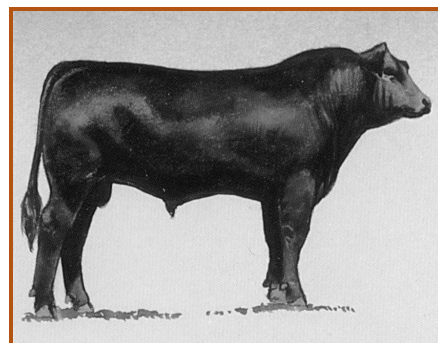
This breed was developed in France and imported into the United States from Mexico in 1936. These animals are large and white. They are noted for their fast growth and lean meat.



## **Chianina**

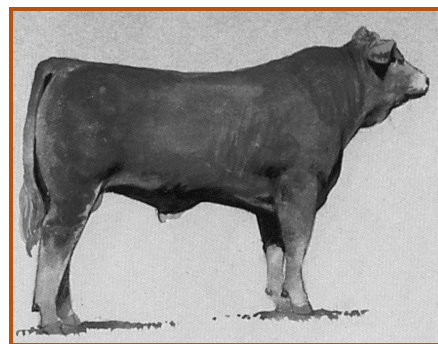
This breed was developed in Italy and was originally white with black skin pigmentation. Today, they can be any color. They are a large breed that can stand six feet tall. They are noted for their working, mothering, and beef producing abilities.

Chianina description updated.



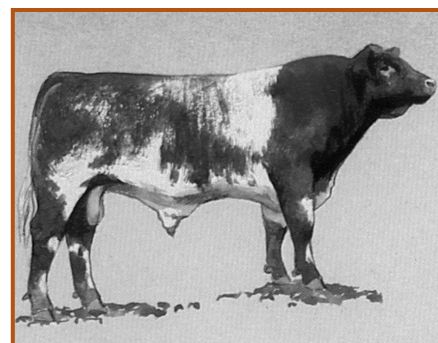
## **Gelbvieh**

This breed originated in Germany. They are solid cream to reddish-yellow in color. These animals are known as a general-purpose breed with good milking abilities.



## Shorthorn

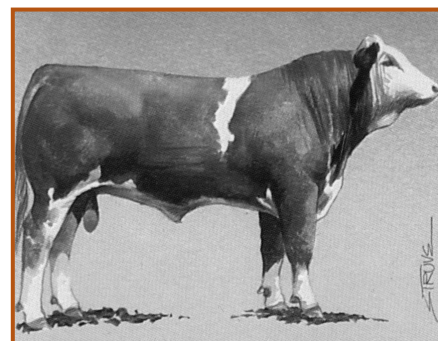
This breed was brought to the United States from England in 1783. These animals can be red, white, or roan in color. They are noted for their good disposition, mothering, and milking abilities.



## Simmental

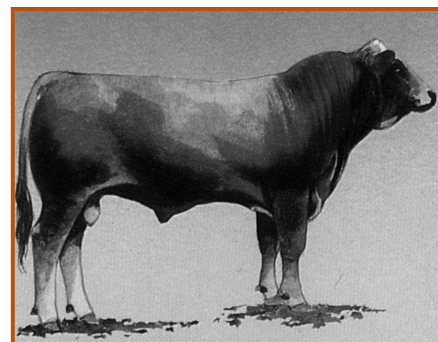
Simmental description updated.

This breed was imported into the United States from Switzerland, France, and Germany. Originally they were known for being red and white spotted but have evolved and can be any color today. They are noted for their fast growth, milking abilities, and meat quality.



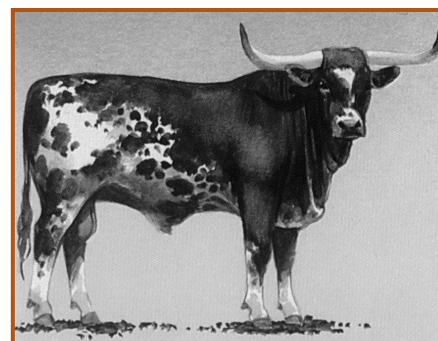
## Tarentaise

This breed originated in the Tarentaise Valley in the French Alpine Mountains. These animals are solid wheat colored, ranging from cherry to dark blonde, and they have black hair around the eyes and pigmented udders and teats. They are noted for easy calving due to adequate pelvic capacity and small calves.



## Texas Longhorn

This breed originated from Spanish Andalusian cattle. These animals have long horns and several different color patterns. They are known for their longevity, hardiness, strong survival instincts, and resistance to disease and parasites.



## Frame Size

Current trends in market cattle frame size have shifted toward moderation. Market cattle should have enough frame to enable them to reach an acceptable market weight (1,100-1,350 lbs.) at 12-18 months of age. Acceptable traits for today's frame size include:

- moderate hip height (frame size 5.0-6.5)
- extra length of body
- long rump



(Figure 2.10a)

## Structural Correctness

While it is not emphasized as greatly as it is with breeding cattle, structural correctness is an important selection criteria when judging market animals. As with breeding cattle, look for animals that:

- stand squarely on front and rear legs
- heavy boned
- move with a long, reaching stride
- nearly level from hooks to pins
- possess adequate set (flex) to the hocks
- have a proper slope to the shoulder



(Figure 2.10b)

Publication  
information updated.

*For more information on the selection of beef animals, refer to the Pennsylvania 4-H Livestock Judging Manual that can be found at [www.ohio4h.org/publications](http://www.ohio4h.org/publications) or the Ohio 4-H bulletin 103R Beef, Sheep and Swine Selection and Evaluation. This publication can be purchased at your local Ohio State University Extension office or go to <http://estore.osu-extension.org>.*

*Ohio residents receive the best price when they order and pick up their purchases at their local Extension office.*

## Evaluation of Feeder Calves

The selection and evaluation of feeder calves is very similar to that of market cattle. Keep in mind the feeder calf will eventually become a market animal so meat production should be emphasized. One significant difference when evaluating feeder calves is that finish, or fat cover, is not a priority. In fact, excessively fat feeder calves can be an indication of small frame size or very early maturity.





## Feeder Calf Grading

An important part of raising and marketing feeder cattle in the beef industry involves the feeder calf grades. Because of the wide variation in the type of feeder calves produced, the United States Department of Agriculture (USDA) has established the feeder calf grading system. This system helps categorize calves based on differences in body type. The system provides the buyers uniform information on the kind of calves being purchased. The parts of the USDA Feeder Calf grading system include:

- Frame Size
- Thickness or Muscling
- Thriftiness

### Thriftiness

Thriftiness refers to the apparent health of the calf, size for its age, alertness, and its estimated ability to gain weight rapidly and reach market weight quickly and efficiently.

### Thickness or Muscling

The thickness or muscling of the feeder calf refers to the amount of natural muscling the calf exhibits. The thickness grades given to USDA feeder calves range from 1, which designate a calf with a heavy amount of natural muscling to 4, which is a very light muscled calf. Most of all graded feeder calves are muscle thickness score 1. (Figure 2.13a - 2.13d)

***Each feeder calf receives two grades***

**One is a letter grade is given for the frame size.** (Figures 2.12a-2.12c)

- L** = Large Frame
- M** = Medium Frame
- S** = Small Frame

**The other is the number designating thickness.** (Figures 2.12a-2.12d)

- 1** = Thrifty, moderately thick throughout, predominate beef breeding
- 2** = Thrifty, slightly thick throughout, high proportion beef breeding and slight dairy breeding
- 3** = Thrifty, thin through the forequarter and middle part of the rounds.
- 4** = Thrifty, less thickness than minimum required for No. 3.

### Example

A medium framed, healthy beef cattle with a moderate amount of muscling would be given a grade of “M-1.”

Web address updated.



***For more information on the feeder calf grading system, go to:***

***<http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3060890>***

## Trimming Feet

- Trimming feet should be done on an as needed basis. Allow plenty of time for trimming prior to a show.
- Proper trimming can correct structural problems and help the animal to move more freely.
- Trimming should be done by someone with experience. Permanent injury or movement disorder can be caused by inexperience.

## Show Schedule Hints

- Before you leave home—Are your tattoos legible and are all your registration and health papers in order?
- Are your animals halter broke and do they work with a stick? Practice at home makes for a successful day at the show.
- Arrive at the show in plenty of time.
  - Check-in with the office, give them your paperwork, and find your tie area.
  - Unload the cattle into pre-made tie-outs if available—let them rest. Usually wait to feed and water unless it's hot.
  - Prepare the stall—try to elevate the front of the bed a little.
  - Put up signs, arrange boxes, and equipment.
  - Wash, dry, and condition cattle.
  - Tie in stall with neckties and let cattle relax.
  - Feeding
    - Try to feed the same time each day—usually when everyone around you does.
    - Water either before or after feeding grain—monitor water intake carefully.
    - Feed long hay after the grain pan has been removed in the stall in the AM, and in the tie out in the PM.

- Brush the animals when they are up and keep bedding clean.

Grooming and showing are really fun if you are prepared and have practiced at home. Enjoy the time you spend with your animal. Especially value the time you spend meeting other people and always continue learning.

## Exercise

- Exercise is necessary. It serves to add muscle tone, increase appetite, and firms over-conditioned animals. Use in moderation.

## Show Day Preparation

*Prior to show day preparation, refer to the show's rules to determine what the fitting limitations are. Some county fairs do not allow certain fitting techniques.*

Paragraph inserted.

This is the day all the hard work, long hours, and patience pay off.

- Allow plenty of time to prepare—about 45 minutes per animal. Rinse and blow dry prior to this time or use an alcohol and water or vinegar spray rinse.
- Work the hair.
- Apply an oil mix and brush and blow in.
- Apply show foam over the entire body. Brush it in and blow it completely dry. The foam holds the hair and brings up the under coat.
- Spray on a product such as Base Coat/Clean Sheen or Zoom Bloom and blow the hair.
- Any sticky substances such as hair sprays or adhesives should be applied near the end of the preparation period.
- Putting up the tail. Some steers are shown with their tails bobbed—this is OK if the tail bone is short enough. Cows with calves are usually shown with the tail switch long and full, not tied up. (Figure 9.08)

All of the resources in this section have been updated.



# Resources

## *In this chapter*

- *Online Resources*
- *Youth Food Animal Quality Assurance Curriculum Guide*
- *Beef Learning Laboratory Kit*

## *Online Resources*

### *Animal Welfare and Ethics*

Animal Welfare Information Center  
<http://awic.nal.usda.gov>

Beef Quality Assurance  
[www.bqa.org](http://www.bqa.org)

Livestock Behaviour, Design of Facilities and Humane Slaughter (Temple Grandin's Web Page)  
[www.grandin.com](http://www.grandin.com)

The Ohio State University  
College of Veterinary Medicine  
<http://vet.osu.edu/preventive-medicine/animal-behavior-and-welfare>

### *Agriculture Libraries*

Oklahoma State University Livestock Virtual Library  
<http://westnilevirus.okstate.edu/library>

National Agricultural Library  
[www.nalusda.gov](http://www.nalusda.gov)

### *Breed Associations*

American Angus Association  
[www.angus.org](http://www.angus.org)

The Angus Society of Australia  
[www.angusaustralia.com.au](http://www.angusaustralia.com.au)

Canadian Angus Association  
[www.cdnangus.ca](http://www.cdnangus.ca)

New Zealand Angus Association  
<http://angusnz.com>

Beefmaster Breeders United  
[www.beefmasters.org](http://www.beefmasters.org)

American Belgian Blue Breeders, Inc.  
[www.belgianblue.org](http://www.belgianblue.org)

Belgian Blue Beef Herd-Book (Belgium)  
[www.hbbbbb.be/accueil\\_en.htm](http://www.hbbbbb.be/accueil_en.htm)

U.S. Belted Galloway Society  
[www.beltie.org](http://www.beltie.org)

United Braford Breeders  
[www.brafords.org](http://www.brafords.org)

American Brahman Breeders Association  
<http://www.brahman.org/>

International Brangus Breeders  
Association  
<http://gobrangus.com>

British Blonde Society  
[www.britishblondesociety.co.uk](http://www.britishblondesociety.co.uk)

Braunvieh Association of America  
[www.braunvieh.org](http://www.braunvieh.org)

British White Cattle Association of  
America  
[www.britishwhite.org](http://www.britishwhite.org)

American-International Charolais  
Association  
[www.charolaisusa.com](http://www.charolaisusa.com)

Canadian Charolais Association  
[www.charolais.com](http://www.charolais.com)

American Chianina Association  
[www.chicattle.org](http://www.chicattle.org)

American Dexter Cattle Association  
[www.dextercattle.org](http://www.dextercattle.org)

American Gelbvieh Association  
[www.gelbvieh.org](http://www.gelbvieh.org)

American Hereford Association  
[www.hereford.org](http://www.hereford.org)

Australian Poll Hereford Society Limited  
(Herefords Australia)  
[www.herefordsaustralia.com.au](http://www.herefordsaustralia.com.au)

Canadian Hereford Association  
[www.hereford.ca](http://www.hereford.ca)

Hereford Cattle Society (UK)  
[www.herefordcattle.org](http://www.herefordcattle.org)

American Highland Cattle Association  
[www.highlandcattleusa.org](http://www.highlandcattleusa.org)

Australian Highland Cattle Society, Inc.  
[www.highlandcattle.org.au](http://www.highlandcattle.org.au)

Canadian Highland Cattle Society  
[www.chcs.ca/eindex.htm](http://www.chcs.ca/eindex.htm)

North American Limousin Foundation  
[www.nalf.org](http://www.nalf.org)

Canadian Limousin Association  
[www.limousin.com](http://www.limousin.com)

American Maine Anjou Association  
[www.maine-anjou.org](http://www.maine-anjou.org)

American Murray Grey Association  
[www.murraygreybeefcattle.com](http://www.murraygreybeefcattle.com)

Murray Grey Society  
[www.murraygrey.com.au](http://www.murraygrey.com.au)

Red Angus Association of America  
<http://redangus.org>

American Red Brangus Association  
[www.americanredbrangus.org](http://www.americanredbrangus.org)

American Salers Association  
[www.salersusa.org](http://www.salersusa.org)

Canadian Salers Association  
[www.salerscanada.com](http://www.salerscanada.com)

Santa Gertrudis Breeders International  
<http://santagertrudis.com>



Santa Gertrudis Breeders' (Australia)  
Association

[www.santagertrudis.com.au](http://www.santagertrudis.com.au)

American Shorthorn Association

[www.shorthorn.org](http://www.shorthorn.org)

Beef Shorthorn Society of Australia

[www.beefshorthorn.org.au/cms](http://www.beefshorthorn.org.au/cms)

American Simmental Association

[www.simmental.org](http://www.simmental.org)

International Texas Longhorn Association

[www.itla.net](http://www.itla.net)



## ***Beef Councils and Cattlemen's Associations***

Cattlemen's Beef Board

[www.beefboard.org](http://www.beefboard.org)

Canadian Cattlemen's Association

[www.cattle.ca](http://www.cattle.ca)

Ohio Beef Council

[www.ohiobeef.org](http://www.ohiobeef.org)

Ohio Cattlemen's Association

[www.ohiocattle.org](http://www.ohiocattle.org)

National Cattlemen's Beef Association  
(NCBA)

[www.beefusa.org](http://www.beefusa.org)



## ***Bull Test Stations***

Clemson University Bull Test Program

[www.clemson.edu/extension/livestock/  
livestock/beef/bull\\_tests](http://www.clemson.edu/extension/livestock/livestock/beef/bull_tests)

Georgia Bull Evaluation Centers,  
University of Georgia

[www.caes.uga.edu/commodities/  
animals/beef](http://www.caes.uga.edu/commodities/animals/beef)

Indiana Beef Evaluation Program,  
Purdue University

[www.ansc.purdue.edu/ibep](http://www.ansc.purdue.edu/ibep)

Oklahoma BEEF Inc.,  
Oklahoma State University

[www.ansi.okstate.edu/outreach-extension/  
beef](http://www.ansi.okstate.edu/outreach-extension/beef)

Pennsylvania Bull Testing Program,  
Penn State University

[http://www.livestockevaluationcenter.com/  
BullTesting.aspx](http://www.livestockevaluationcenter.com/BullTesting.aspx)



## ***Extension and USDA Resources***

Colorado State University Extension  
Livestock Publications

[www.ext.colostate.edu/pubs/pubs.  
html#ag\\_livestock](http://www.ext.colostate.edu/pubs/pubs.html#ag_livestock)

National 4-H Curriculum

[www.4-h.org](http://www.4-h.org)

National Directory of State Extension  
Services

[www.csrees.usda.gov/qlinks/extension.  
html](http://www.csrees.usda.gov/qlinks/extension.html)

University of Nebraska-Lincoln

[www.ianrpubs.unl.edu](http://www.ianrpubs.unl.edu)

Ohio State University Extension  
Fact Sheets

<http://ohioline.osu.edu>

Ohio State University Extension  
Publications

<http://estore.osu-extension.org>

Oklahoma State University  
Cow-Calf Corner

<http://cowcalfcorner.okstate.edu>

USDA Publications

<http://USDA.gov>

Virginia Cooperative Extension  
Publications

<http://pubs.ext.vt.edu>



## ***Governmental Departments of Agriculture***

Ohio Department of Agriculture

[www.agri.ohio.gov](http://www.agri.ohio.gov)

United States Department of Agriculture

<http://USDA.gov>



## ***Meat Science***

American Meat Institute (AMI)

[www.meatami.com](http://www.meatami.com)

Tyson Fresh Meats

[www.tysonfoods.com/Business-to-Business/Fresh-Meats.aspx](http://www.tysonfoods.com/Business-to-Business/Fresh-Meats.aspx)

U.S. Meat Animal Research Center

[www.ars.usda.gov/main/docs.htm?docid=2340](http://www.ars.usda.gov/main/docs.htm?docid=2340)

U.S. Meat Export Federation (USMEF)

<http://usmef.org>



## ***The Ohio State University***

College of Food, Agricultural, and  
Environmental Sciences

<http://cfaes.osu.edu>

Ohio State University Extension

<http://extension.osu.edu>

Ohio State University Beef Team

<http://beef.osu.edu>

Department of Animal Sciences

[www.ag.ohio-state.edu/~ansci/index.php](http://www.ag.ohio-state.edu/~ansci/index.php)

Ohio Agricultural Research and  
Development Center

[www.oardc.ohio-state.edu](http://www.oardc.ohio-state.edu)

Agricultural Technical Institute

<http://ati.osu.edu>



## ***Online Publications***

The Cattle Pages

[www.cattlepages.com](http://www.cattlepages.com)

The Cattleman Magazine

[www.thecattlemanmagazine.com](http://www.thecattlemanmagazine.com)



## ***Veterinary Science***

The Ohio State University  
College of Veterinary Medicine

<http://vet.osu.edu>

NetVet

<http://netvet.wustl.edu>

Center for Animal Health and  
Productivity, University of Pennsylvania

<http://cahpwww.vet.upenn.edu>



## *Youth Food Animal Quality Assurance Curriculum Guide*

This curriculum guide was designed by educators for educators to teach youth education in the areas of quality assurance and animal welfare. It includes presentation style notes with lesson plans, supporting factual information, web resources for additional technical information, and hands-on experiential learning activities.

A supplemental CD is included for the reproduction of materials to be used for educational programs and includes supporting materials for the activities that were not included in the curriculum guide.

The authors ensured that this guide would make it easy to consistently be implemented by volunteers, with the guidance of extension professionals, agricultural educators, and agricultural societies.

If you plan to use this guide outside of Ohio, check with your state's requirements due to this curriculum being specific to Ohio's youth livestock project regulations.

Please contact Paul Kuber for more information at [kuber.2@osu.edu](mailto:kuber.2@osu.edu) or 614-247-8305.

To order, contact Michelle Milligan at [milligan.4@osu.edu](mailto:milligan.4@osu.edu) or 614-292-7374 or 2029 Fyffe Court, 221A Animal Sciences Building, Columbus, Ohio 43210.



## *Beef Learning Laboratory Kit*

This kit is useful in enhancing the educational component of club meetings, conducting interview judging and conducting skillathons. It includes:

- Educator's curriculum guide entitled "Quality Assurance and Animal Care" and accompanying videotape with 7 teaching segments
- Animal medication product label poster
- Animal medication product insert poster
- Medication bottle and syringe style pipette
- Animal skeleton structure poster
- Animal handling and management poster
- Animal part identification poster
- Structural correctness poster, focusing on feet and leg characteristics
- Wholesale meat cut poster
- Color breed identification photos with breed name tags and breed trait descriptions
- Color retail meat identification photos
- Resource materials master for educator/leader

All posters, photographs, and label tags are laminated with answer keys on reverse side. Velcro is included for label tags. Packaged with a durable carrying case for easy use, storage, and transportation.

To order the **Beef Learning Laboratory Kit** contact:

Ohio 4-H Youth Development  
2201 Fred Taylor Drive  
Columbus, OH 43210  
(614) 292-9772  
[www.ohio4h.org/learninglabkits](http://www.ohio4h.org/learninglabkits)