



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.

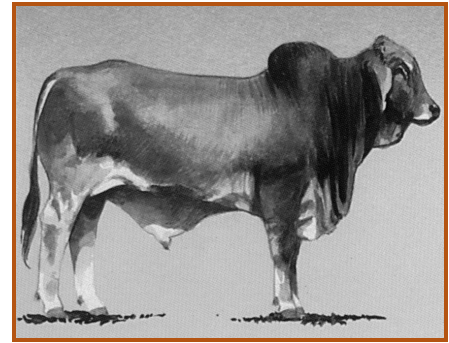
Orders for the revised edition can be placed online at <http://estore.osu-extension.org> or by contacting Ohio State University Extension, Media Distribution, 216 Kottman Hall, 2021 Coffey Rd., Columbus, OH 43210, phone 614.292.1607, email pubs@ag.osu.edu.

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.

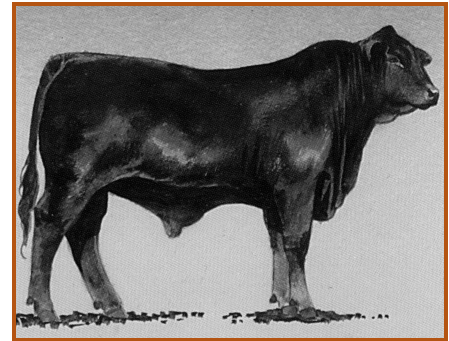
Brahman

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.



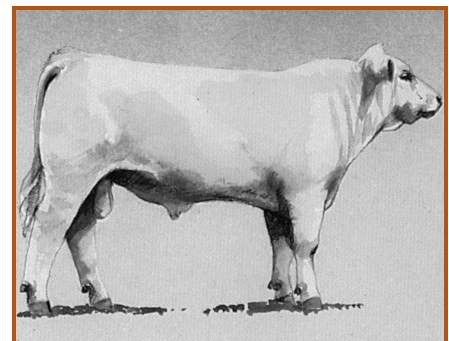
Brangus

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

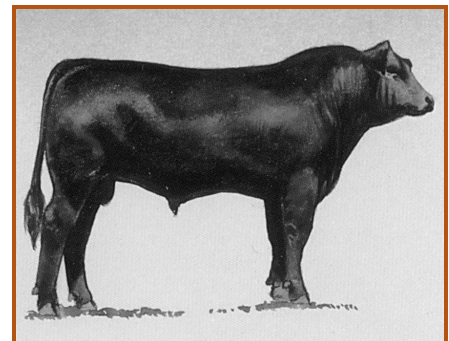
This breed was developed in France and imported into the United States from Mexico in 1936. These animals are large and white. They are noted for their fast growth and lean meat.



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.



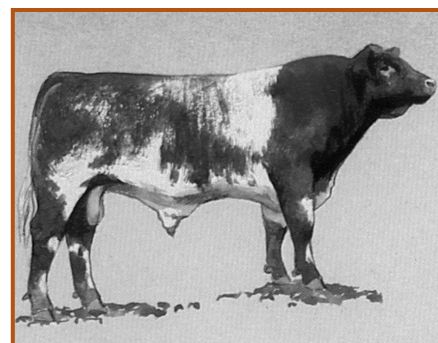
Gelbvieh

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

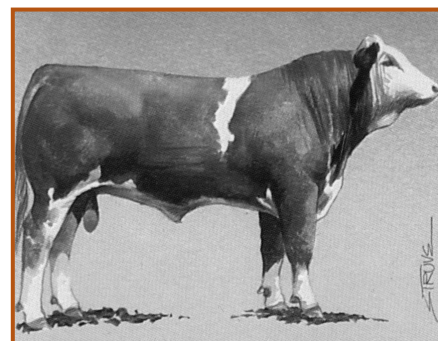
This breed was brought to the United States from England in 1783. These animals can be red, white, or roan in color. They are noted for their good disposition, mothering, and milking abilities.



Simmental description updated.

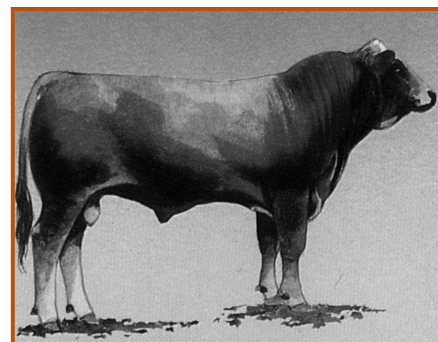
Simmental

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.



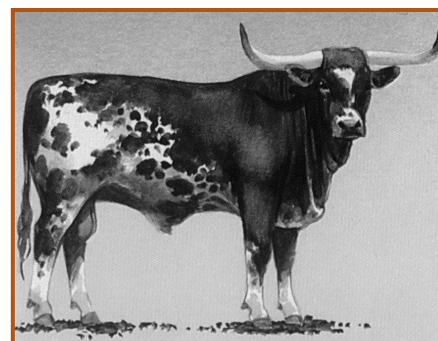
Tarentaise

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 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)



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
awic.nal.usda.gov

Beef Quality Assurance
bqa.org

Livestock Behaviour, Design of Facilities and Humane Slaughter
(Temple Grandin's web page)
grandin.com



Agriculture Libraries

Oklahoma State University Livestock
Virtual Library
afs.okstate.edu/breeds/cattle



Breed Associations

American Angus Association
angus.org

The Angus Society of Australia
angusaustralia.com.au

Canadian Angus Association
cdnangus.ca

New Zealand Angus Association
angusnz.com

Beefmaster Breeders United

beefmasters.org

American Belgian Blue Breeders, Inc.

belgianblue.org

Belgian Blue Beef Herd-Book (Belgium)

hbhhh.be

U.S. Belted Galloway Society

beltie.org

United Braford Breeders

brafords.org

American Brahman Breeders Association

brahman.org

International Brangus Breeders

Association

gobrangus.com

British Blonde Society

britishblondesociety.co.uk

Braunvieh Association of America

braunvieh.org

British White Cattle Association of
America

britishwhite.org

American-International Charolais
Association

charolaisusa.com

Canadian Charolais Association

charolais.com

American Chianina Association

chicattle.org

American Dexter Cattle Association

dextercattle.org

American Gelbvieh Association

gelbvieh.org

American Hereford Association

hereford.org

Australian Poll Hereford Society Limited
(Herefords Australia)

herefordsaustralia.com.au

Canadian Hereford Association

hereford.ca

Hereford Cattle Society (UK)

herefordcattle.org

American Highland Cattle Association

highlandcattleusa.org

Australian Highland Cattle Society, Inc.

highlandcattle.org.au

Canadian Highland Cattle Society

chcs.ca

North American Limousin Foundation

nalf.org

Canadian Limousin Association

limousin.com

American Maine Anjou Association

maine-anjou.org

American Murray Grey Association

murraygreybeefcattle.com

Murray Grey Society

murraygrey.com.au

Red Angus Association of America

redangus.org

American Red Brangus Association

americanredbrangus.org

American Salers Association

salersusa.org

Canadian Salers Association

salerscanada.com

Santa Gertrudis Breeders International

santagertrudis.com

Santa Gertrudis Breeders' (Australia)
Association

santagertrudis.com.au

American Shorthorn Association
shorthorn.org

Beef Shorthorn Society of Australia
beefshorthorn.org.au

American Simmental Association
simmental.org

International Texas Longhorn Association
itla.net



Beef Councils and Cattlemen's Associations

Cattlemen's Beef Board
beefboard.org

Canadian Cattlemen's Association
cattle.ca

Ohio Beef Council
ohiobeef.org

Ohio Cattlemen's Association
ohiocattle.org

National Cattlemen's Beef Association
(NCBA)
beefusa.org



Bull Test Stations

Clemson University Bull Test Program
[clemson.edu/extension/livestock/
livestock/beef/bull_tests](http://clemson.edu/extension/livestock/livestock/beef/bull_tests)

Georgia Bull Evaluation Centers, University
of Georgia
[beef.caes.uga.edu/programs/georgia-bull-
evaluation-centers.html](http://beef.caes.uga.edu/programs/georgia-bull-evaluation-centers.html)

Indiana Beef Evaluation Program,
Purdue University
[ag.purdue.edu/ansc/ibep/Pages/default.
aspx](http://ag.purdue.edu/ansc/ibep/Pages/default.aspx)

Oklahoma BEEF Inc.,
Oklahoma State University
beefextension.com

Pennsylvania Bull Testing Program,
Penn State University
[livestockevaluationcenter.com/
BullTesting.aspx](http://livestockevaluationcenter.com/BullTesting.aspx)



Extension and USDA Resources

Colorado State University Extension
Livestock Publications
extension.colostate.edu/publications-2

National 4-H Curriculum
4-h.org

National Directory of State Extension
Services
[nifa.usda.gov/land-grant-colleges-and-
universities-partner-website-directory](http://nifa.usda.gov/land-grant-colleges-and-universities-partner-website-directory)

University of Nebraska-Lincoln
extensionpubs.unl.edu

Ohio State University Extension
Fact Sheets

ohioline.osu.edu

Ohio State University Extension
Publications

extensionpubs.osu.edu

Oklahoma State University
Cow-Calf Corner

sunup.okstate.edu/category/cc

USDA Publications

USDA.gov

Virginia Cooperative Extension Publications

pubs.ext.vt.edu



Governmental Departments of Agriculture

Ohio Department of Agriculture

agri.ohio.gov

United States Department of Agriculture

USDA.gov



Meat Science

American Meat Institute (AMI)

meatinstitute.org

Tyson Fresh Meats

tysonfoods.com/sustainability

U.S. Meat Animal Research Center

ars.usda.gov/plains-area/clay-center-ne/marc

U.S. Meat Export Federation (USMEF)

usmef.org



The Ohio State University

College of Food, Agricultural, and
Environmental Sciences

cfaes.osu.edu

Ohio State University Extension

extension.osu.edu

Ohio State University Beef Team

beef.osu.edu

Department of Animal Sciences

ansci.osu.edu

Ohio Agricultural Research and
Development Center

oardc.osu.edu

Agricultural Technical Institute

ati.osu.edu



Online Publications

The Cattle Pages

cattlepages.com

The Cattleman Magazine

tscra.org/what-we-do/the-cattleman-magazine



Veterinary Science

The Ohio State University

College of Veterinary Medicine

vet.osu.edu

Center for Animal Health and Productivity,
University of Pennsylvania

vet.upenn.edu/research/centers-initiatives/center/center-for-animal-health-and-productivity



Youth Food Animal Quality Assurance Curriculum Guide

Youth involved in food animal exhibitions, by definition, are food animal producers. Youth food animal producers, at the culmination of the project, will sell their animal(s) and food products which are intended for human consumption.

The Ohio Department of Agriculture (ODA) mandates that all youth exhibiting food animal projects participate annually in quality assurance programming. OSU Extension provides the leadership for implementing quality assurance programs, in partnership with agricultural education and agricultural societies.

Contact your local OSU Extension office for dates the program is offered. Please visit ohio4h.org/AQCA for more information.



Beef Learning Lab 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 titled "Quality Assurance and Animal Care" and accompanying videotape with seven 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 Lab Kit visit extensionpubs.osu.edu.



The information in this Resources section was:

- Developed by: Jodi P. Black, State Extension Associate, 4-H/Animal Science,
Ohio State University Extension, 4-H Youth Development/Animal Sciences
R. Warren Flood, Instructional Design Intern,
Ohio State University Extension, 4-H Youth Development
John Grimes, Extension Agent, Agriculture and Natural Resources,
Ohio State University Extension, Highland County
Laura Jane Murphy, Extension Agent, 4-H Youth Development,
Ohio State University Extension, Athens County
Nancy Y. Snook, Extension Agent, 4-H/Youth Development, Cooperative Extension Service,
University of Kentucky, College of Agriculture, McCracken County
- Reviewed by: Andrea Auker, Student Assistant, 4-H/Animal Sciences, The Ohio State University College of
Food, Agricultural, and Environmental Sciences (CFAES) Department of Animal Science
Ronnie E. Silcox, Extension Animal Scientist, Cooperative Extension Service,
University of Georgia
Jeanne M. Osborne, Associate to the Chair, Department of Animal Sciences,
Ohio State CFAES
- 2019 update: Elizabeth Share, Program Specialist, Ohio 4-H Youth Development,
Ohio State University Extension