

Tips and Tricks to Blue-Ribbon Beef Cows



Photo courtesy of Mitchell Family Shorthorns <http://www.mitchellfamilyshorthorns.com/#forsale>
Photo is cropped



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Purpose of this packet.

The purpose of this packet is to provide basic information to 4-H members and other interested parties about beef cattle. Many members, especially those just beginning, are unsure of where to start or what to learn in regards to a beef 4-H project. This packet discusses different breeds and types, diseases, and specific issues related to the project. While this packet is by no means all-inclusive of what is required to raise beef cattle, it is a good starting point.

his packet will encompass topics such as disease and treatment, types, and other related information that will work to better the reader's understanding of their project. The primary goal is to help facilitate a more confident and prepared member that will continue to develop skills and greater personal and project growth in their desired project area.

Please Note: Market animals intended for auction must follow the rules and regulations of the Clackamas County Junior Livestock Auction (CCJLA). This is NOT a 4-H administered program but we do partner with them at the county fair to widen youth opportunities. The committee only allows youth in 4-H and FFA (in yearlong educational programs) to participate. For CCJLA information and schedule, please visit: <https://ccjla.wordpress.com/>

This packet was developed in 2020 for families beginning in the beef project area.

Common Terminology

1. Bottle calf/Bummer: Calf raised on a bottle
2. Bos Taurus: Scientific name for cattle
3. Brucellosis: Infectious disease caused by brucella bacteria that can spread to humans; Untreatable; Symptoms include abortion, stillborns, testicular swelling in bulls, and more
4. Bull: Uncastrated male bovine
5. Calving: The process of birthing for cows
6. Colostrum: First milk consumed by calves after birth
7. Cow: Female bovine over a year old; General term for cattle
8. Cross-bred: An animal with two or more breeds present in its bloodline
9. Cull: Removing an animal from your herd due to lack of need for that animal in your program
10. Cutability: Yielded lean meat portion from carcass that can be sold
11. Expected Progeny Differences: Expected performance differences of calves from dam and sire in comparison to breed registry
12. Finish: How much/degree of fat is present on the animal
13. Freemartin: Twin female cow that exhibits some male characteristics; not able to reproduce
14. Heifer: Female under the age of one
15. Marbling: Fat flecks in portions of meat that is lean; higher marbling, higher grade of meat
16. Purebred: An animal that only has one breed present in its bloodline
17. Springer: Cow near calving
18. Steer: Castrated male bovine
19. Weaning: Removing the calf from the cow to keep it from nursing

Cuts of Meat

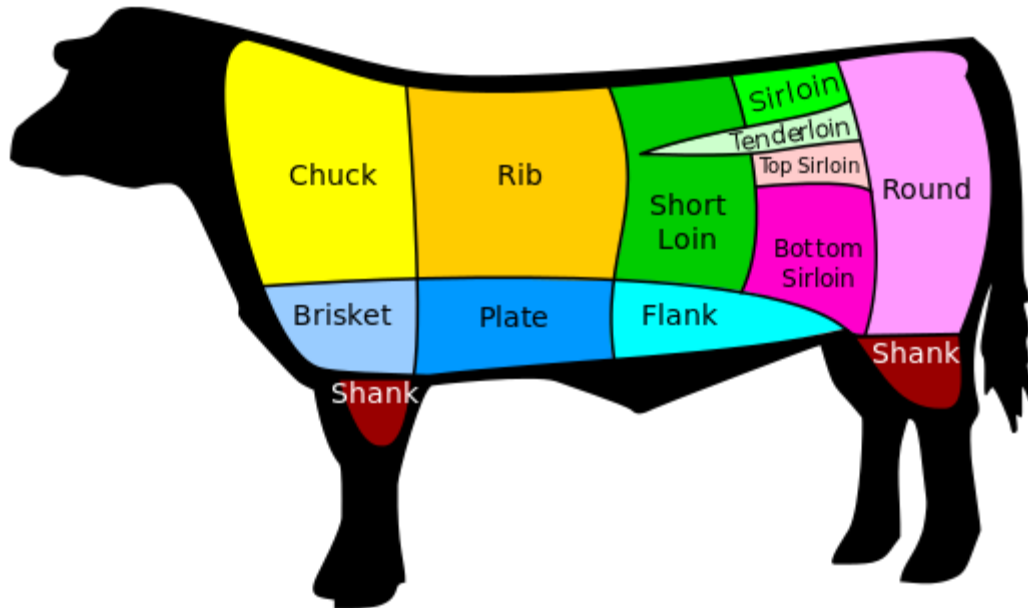
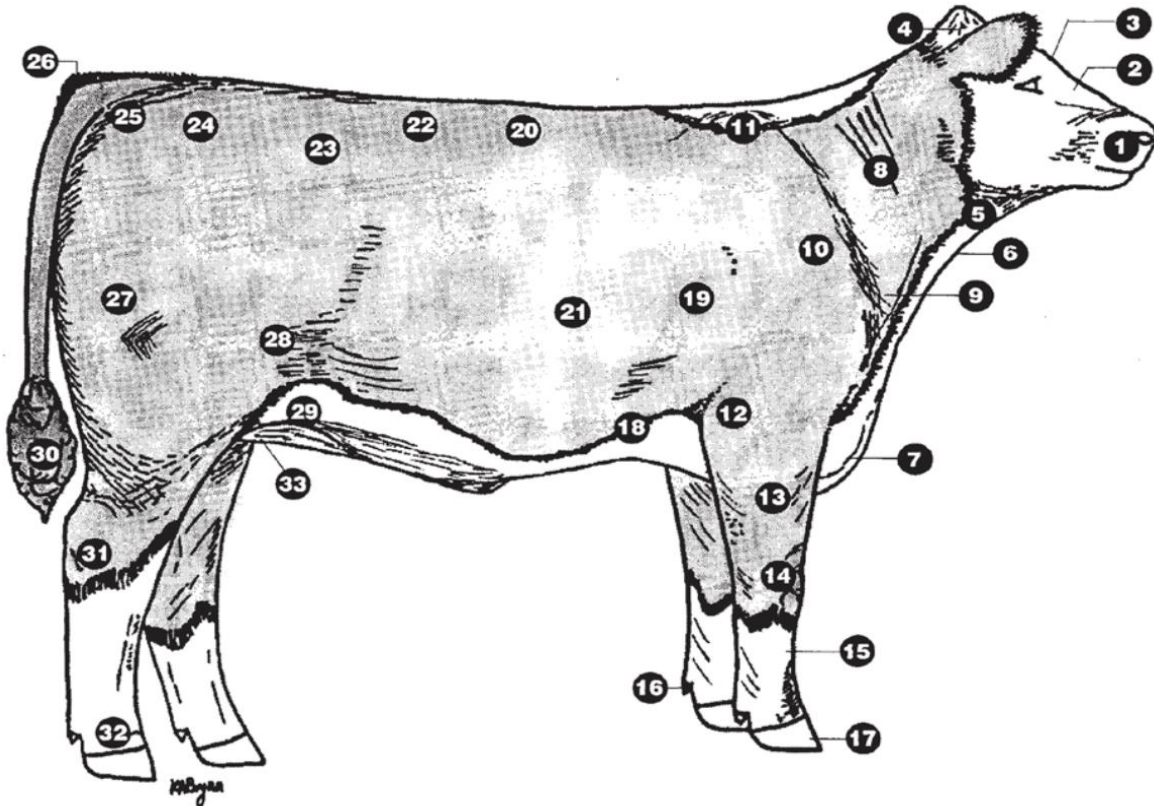


Photo courtesy of Ysangkok

- Steaks come from the plate, flank, round, tenderloin, sirloin, rib, and the short loin.
- A 1000 lb. live steer can yield about 450 lbs. of meat.
- There are eight U.S. beef quality grades. In order of highest grade to lowest: Prime, Choice, Select, Standard, Commercial, Utility, Cutter, and Canner.
- The tenderloin is the most expensive cut of beef.
 - The filet mignon comes from the tenderloin, which is a close second to the tenderloin in terms of price.

Parts of a Beef Cow

The parts of a beef cow and the cuts of meat on a beef animal are different. The parts of a beef cow are the physiological parts of a beef cow while the cuts of meat are the parts we consume. However, there are sometimes overlap between the physiological and consumable parts.



- | | | |
|---------------------|------------------------------|---|
| 1 muzzle | 13 forearm | 25 pin bone |
| 2 face | 14 knee | 26 tailhead |
| 3 forehead | 15 cannon | 27 quarter |
| 4 poll | 16 dewclaw | 28 stifle |
| 5 throat | 17 hoof | 29 rear flank |
| 6 dewlap | 18 lower forerib, fore flank | 30 switch |
| 7 brisket | 19 forerib | 31 hock |
| 8 neck | 20 back or top | 32 pastern |
| 9 point of shoulder | 21 rib | 33 udder (cow, heifer),
cod (steer),
scrotum (bull) |
| 10 shoulder | 22 loin | |
| 11 top of shoulder | 23 hook or hip | |
| 12 elbow | 24 rump | |

Photo courtesy of Mississippi State University Extension

Common Diseases and Treatments

In the table below are some common diseases and ailments found in cattle as well as a handful of pertinent details in each column. This list is far from all-inclusive and is just a sampling of what can be found, both of diseases and ailments and in the following columns. In columns two through five are common details related to that disease/ailment.

Disease/Ailment	Symptoms	Treatment	Prevention	Other Details
Foot Scald	-Limping -Bad smell between toes -Gray scum, inflammation, redness, and moisture present between toes.	-Trim and clean foot -Antibiotics at discretion of a veterinarian -Some have animals stand in zinc sulfate (8 lbs. to 10-gals. water) for at least 10 min. a day until healed.	-Keep living and congregation areas clean from feces through regular cleaning -Keep out of mud -Quarantine infected cattle	-More common in winter and fall -Placing Hoof-N-Heel or iodine (but not both) on infection can help heal foot scald
Strongyle worms	-Anemia -Lethargy -Weight loss -Pale gums and paleness under eyelids	-Deworm according to bottle instructions	-Feed animals in feeders and not directly on the ground -Rotate cattle between pastures	-It's an internal parasite -In some cases it may be beneficial to increase animal's protein intake upon quarantine
Scours (Severe diarrhea)	-Refusal to eat -Diarrhea present on legs -Watery diarrhea white-ish or gray-ish in color	-Anti-diarrheal -Electrolytes in water -Antibiotic if applicable at discretion of vet	-Wash bottles of bottle calves regularly -Slowly introduce new feed	-Occurs easily in calves raised on bottles if bottles go unwashed -Can occur in calves not used to

				<p>creep feed</p> <ul style="list-style-type: none"> -There are multiple bacterias that can cause scours
Brucellosis	<ul style="list-style-type: none"> -Testicular swelling in bulls -Abortion and stillborn calves -Calves weak at birth -Infection in placenta 	<ul style="list-style-type: none"> -There is no treatment 	<ul style="list-style-type: none"> -Vaccination -Keeping up with good biosecurity and sanitation 	<ul style="list-style-type: none"> -Testing can be done on samples of milk or blood. -It can spread to humans, dogs, goats, and pigs -You can get it from infected meat, unpasteurized products, and coming into contact with an infected placenta
Calf Pneumonia	<ul style="list-style-type: none"> -Fever -Depression -Coughing -Discharge from the nose -Eating less -Rattly breathing 	<ul style="list-style-type: none"> -Antibiotics and other medication at discretion of veterinarian. 	<ul style="list-style-type: none"> -Good ventilation in barns to prevent ammonia build up -Ensuring calves are getting enough colostrum which contains antibodies 	<ul style="list-style-type: none"> -Can be more pronounced in certain seasons -There are multiple reasons of what causes this since it's multifactorial

***DISCLAIMER:** Author and editor are not veterinarians and only provide this information as a personal reference. They are not responsible for outcomes. Consult a veterinarian for veterinary advice and treatment.*

Breeds

In the beef cattle world, there are hundreds of recognized breeds, all with a wide variety of purposes and uses. Their capabilities vary as equally as they do widely. Below are six breeds of beef cattle selected to show the reader a variety of cattle that have different uses or combination of uses. Listed after are some characteristics to the breed that make it unique, breed characteristics, or are strong suits of that breed.

Angus



Photo courtesy of Silbeira Bros. Angus
<http://www.silveirabros.com/champion-intermediate-female-2017-american-royal/>
Photo is cropped

- They come in two colors: Red and black.
 - A recessive gene causes the red color found on red Angus.
- Sunburned udders and eye cancer are rarely a problem in either color of Angus.
- Angus are very fertile with long life spans. One recorded cow lived to be 35 years of age and birthed 29 calves.
- They are the most popular breed in America with 324,266 Angus registered in 2005.

Shorthorn



Photo courtesy of Mitchell Family Shorthorns
<http://www.mitchellfamilyshorthorns.com/#for-sale>

- Shorthorns come in five recognized colors: Red, Roan, White, Red and White, and Red with White Marks.
- This breed is used for beef as well as milking. However, milking shorthorns have their own separate breed association from the beef association.
- Despite their name this breed is polled, meaning they do not have horns.
- They are fairly early maturing cattle with heifers reaching puberty at just under a year old at 359 days old.

Hereford



Photo courtesy of Harvie Ranching
https://harvieranching.com/females_hereford.html

- This breed was first brought to America in 1817 by a Kentucky statesman.
- This breed comes in only one color variety: Red and white. However, white may appear in a variety of places on the animal just as red coloring may appear in the white and still be considered registerable.
- Another breed called the Miniature Hereford are the forefathers (and mothers!) of today's standard sized Hereford breed.
- Hereford cattle were the first to be acknowledged as a true breed that were English cattle.

Simmental



Photo courtesy of K-Ler Cattle
<https://www.kaehlercattle.com/champions>
Photo is cropped

- In this breed's first lactation cycle they can produce up to 13,227.7 lbs of milk while future lactations following can produce up to 19,841.6 lbs of milk. That is quite a bit for a beef cow!
- While this breed can be a variety of colors, their face is always partially white which is a characteristic that carries over to their crossbred offspring.
- Simmentals are considered one of the oldest breeds in the world.
- They can be either polled or horned, dependent on the individual cow's genetic history.

Limousin



Photo courtesy of Linhart Limousin
<https://linhartlimousin.com/winners.html>

- Limousin cattle used to be used as draft animals
- With this breed if they are 100% Limousin then they are called fullbloods. Those that are 93% Limousin or higher are called purebreds.
- There are no color specifications attached to this breed so all colors are acceptable.
- Lim-Flex cattle are those who are between 25%-75% Limousin while also having at least 25%-75% Angus present. If another breed is present in the bloodline it can be no more than 12.5%.
 - This hybrid is very recent having come into the world in 2002 and can, in fact, be registered with the National American Limousin Foundation (NALF.) To find out more stipulations regarding this, check out NALF's website.

Charolais



Photo courtesy of Circle Cee Charolais
<https://ciclecee.com/females.htm>
Photo is cropped

- Purebred Charolais cattle may only come in three colors: Light cream, light straw, or white with pink skin.
- Dark noses are prohibited among the breed and is considered a disqualification.
- The American International Charolais Association allows for up to eight people to own a single calf, heifer, cow, or bull.
- There is a colored division of Charolais cattle. These cattle are disqualified from purebred registry but may be registered in this division as long as they are not black cattle, which is not accepted in the colored division.

Grooming and Clipping

Grooming

It is important to start working with your cow when they are young, it will make grooming easier and quicker for when they are older. Starting them young helps to train their hair and get them used to being touched by your grooming equipment. When it comes to clipping and fitting them it is strongly encouraged that you speak with a leader, superintendent, extension agent, or breeder to find assistance in learning how to clip and fit your cow, heifer, or steer. It is strongly encouraged you speak to one of the previously listed people to help you decide how much hair is appropriate to take trim off your animal when preparing it for show. The below diagram gives you a general ideal of how to trim your animal

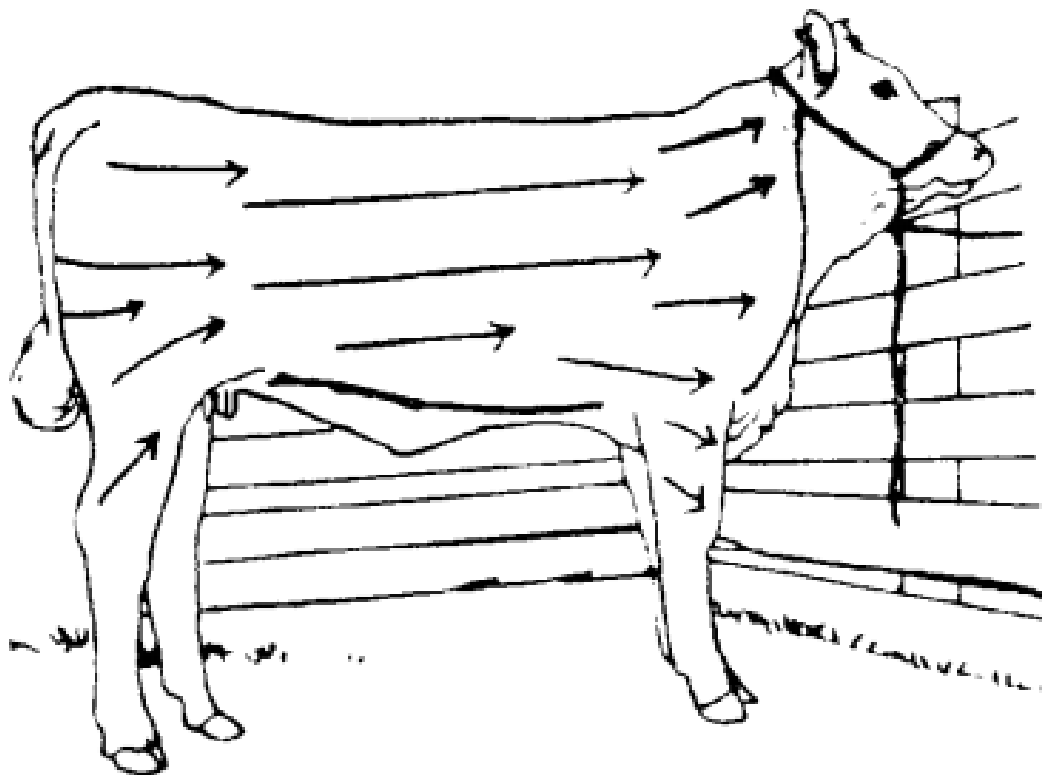


Image courtesy of B.C 4-H Beef Member Manual
Image is cropped

Foot trimming

When it comes to trimming the hooves of your animal it is ***highly encouraged*** that a professional perform the hoof trimming as special squeeze shoes and clippers are required to trim their hooves. These are very large animals with a lot of strength behind their kick and even friendly ones that were raised on bottles can kick out with a back leg and hurt you. It is advisable to speak with a leader, superintendent, extension agent, or breeder to locate a professional to trim your animal's hooves. Below is a diagram of the parts of a hoof and how they look properly trimmed.

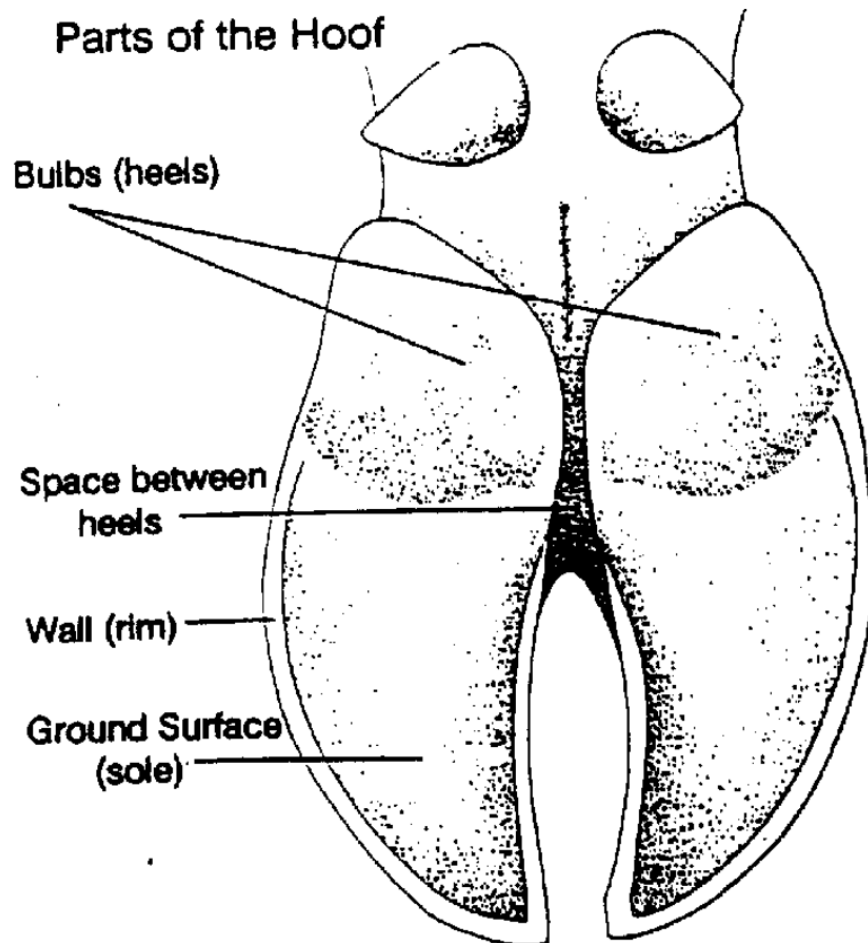


Image courtesy of B.C. 4-H Beef Member Manual
Image is cropped

Fast Facts

- Despite popular belief, cattle can't see red. They're red-green colorblind.
- Cattle have roughly 22,000 genes which was discovered in 2009.
- Cattle hear frequencies that are higher and lower better than humans can.
- The most expensive cow ever sold (named Missy) was purchased for \$1.2 million.
- In Madhya Pradesh, an Indian state in Asia, you can be jailed for up to seven years if convicted for killing a cow or taking it somewhere for slaughter.
- One cow hide can be used to make 12 basketballs, 20 footballs, or 144 baseballs.
- Insulin not only comes from pigs, but also comes from cattle to be used to treat and manage diabetes.
- A single American will consume approximately 65 pounds of beef in a year.
- 45% of the beef cow is used for meat while about 53% will be used for other things such as glue production, soap, and gelatins. Almost the whole animal is used and very little goes to waste.
- At birth calves normally weigh between 70 lbs and 80 lbs.

Getting Ready for Clackamas County Fair

The Clackamas County Fair is held in August. Information pertaining to the show, such as breeds and market classes can all be found in the Clackamas County Fairbook (see link below.) All market beef must weigh a minimum amount in order to sell. Weight information can be obtained from the beef superintendent. Below, is important information pertaining to fair:

In General

- Members ***MUST*** participate in showmanship.
- Members and their clubs will be responsible for setting up and decorating their area at fair.
- Good sportsmanship and herdsmanship are strongly emphasized.
- Members are expected to care for animals themselves, including clipping, feeding, and caring for the animal, both at home and at fair.
 - Club members or members from another club enrolled in 4-H may help with these tasks but the sole responsibility falls on the member.

Market Classes

- Only those who receive a blue ribbon in their market class may sell in the auction.
- For those who do not meet market class requirements they will be placed in the Non-Auction Market Beef class.
- Market classes are broken down by weight.

Breed Classes

- Less than three 4-H members in a breed class will result in the member cattle being placed in the Other Breeds class.
- Cattle must be dehorned. A scur up to two inches is permitted.
- A bull may be shown as long as it is a junior calf.

Clackamas County 4-H Fairbook:

<https://extension.oregonstate.edu/sites/default/files/documents/11866/2019-cc4-h-fairbook.pdf>

Resources

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2. <https://www.ag.ndsu.edu/stutsmancountyextension/news-articles/beef-terminology>
3. <https://cattle-exchange.drovers.com/content/cattle-glossary-terms>
4. <https://a-z-animals.com/animals/cow/>
5. <http://www.thecattlesite.com/diseaseinfo/202/brucellosis/>
6. https://commons.wikimedia.org/wiki/File:US_Beef_cuts.svg
7. https://www.ecrater.com/p/28876611/cuts-of-beef-chart-18x28-45cm?gps=1&id=798776763097&gclid=EAIaIQobChMIw7T2yKrt5AIVBFYMCh083woSEAQYAiABEgJvRvD_BwE
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32. <https://charolaisusa.com/members/rules.html>

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 35. <https://extension.oregonstate.edu/sites/default/files/documents/11866/2019-cc4-h-fairbook.pdf>
 36. <http://mentalfloss.com/article/550594/facts-about-cows>
 37. <http://www.dairymoos.com/interesting-facts-about-cows/>
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