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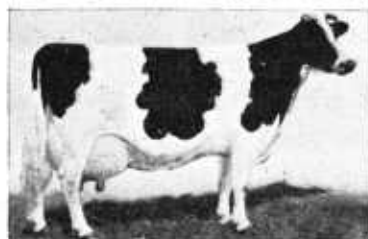
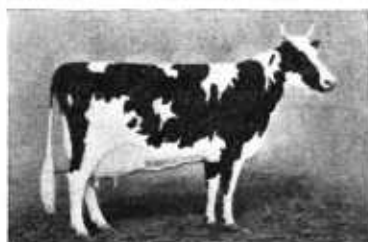
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# U. S. DEPARTMENT OF AGRICULTURE

FARMERS' BULLETIN No. 1443 <sup>REV.</sup>  
*Jan. 1932*

## DAIRY CATTLE BREEDS



**S**EVERAL BREEDS of cattle in the United States are recognized as dairy breeds. Although much alike in what is known as general dairy conformation, these breeds differ to some extent in certain characteristics. What these characteristics are, the factors to consider in selecting a breed, and the history of the origin and development of the breeds are questions of interest to both the beginner and the established breeder of dairy cattle. These are the topics discussed in this bulletin.

This bulletin supersedes Farmers' Bulletin 893, Breeds of Dairy Cattle.

Washington, D. C

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# DAIRY CATTLE BREEDS

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## DAIRY CATTLE IN THE UNITED STATES

ACCORDING to estimates made by the United States Department of Agriculture there were about 33,000,000 dairy cattle of all ages in the United States on January 1, 1929. Three per cent of these cattle, or about 1,000,000, are purebred, and represent six breeds, namely, Ayrshire, Brown Swiss, Dutch Belted, Guernsey, Holstein-Friesian, and Jersey. The improvement that must be made in the 97 per cent that are not purebred must come largely from the 3 per cent that are purebred. Likewise, any increase in the number of our purebred dairy cows, and even the maintenance of our grade dairy herds at their present number and efficiency, will be accomplished principally through the use of purebred bulls. For these reasons purebred dairy cattle have played in the past and will play in the future a very important rôle in the dairy industry of the Nation.

### NUMBER AND DISTRIBUTION OF BREEDS

Tables 1 and 2 show the number and distribution of the various breeds in the United States, by sections and by States. The information in Table 1, showing total number of each breed on January 1, 1920, was brought out by an inquiry sent to 14,000 special livestock reporters of the branch then known as the Bureau of Markets and Crop Estimates of the United States Department of Agriculture. Grades and scrubs were listed with the respective breeds to which they seemed to belong.

Table 2 shows the number of registered purebreds of the dairy breeds on January 1, 1920, as ascertained by the census.

Table 3 gives the average annual production of milk and butterfat of the cows having official yearly records in the breed associations.

TABLE 1.—*Estimated number and percentage of cattle of dairy breeds, including purebreds and grades, in the United States, January 1, 1920, by sections*

Breed	Total	United States	North Atlantic States	North Central, East	North Central, West	South Atlantic States	South Central States	Far West
	<i>Number</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Ayrshire.....	412,000	1.8	5.8	0.8	1.9	0.7	-----	0.8
Brown Swiss.....	170,000	.7	.5	1.3	1.3	.3	-----	.4
Dutch Belted.....	157,000	.7	.5	.2	.6	.3	2.3	-----
Guernsey.....	1,993,000	8.5	10.6	12.1	11.9	8.4	1.3	5.1
Holstein-Friesian.....	11,069,000	47.4	65.3	56.2	54.3	21.1	17.3	58.9
Jersey.....	9,554,000	40.9	17.3	29.4	30.0	69.2	79.1	34.8
Total.....	23,355,000	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 2.—Purebred (registered) cattle of the dairy breeds on farms in 1920, by States and sections, as shown by the census

Division and State	Total	Ayrshire	Brown Swiss	Guernsey	Holstein-Friesian	Jersey	All other breeds <sup>1</sup>
United States.....	916, 602	30, 509	8, 283	79, 446	528, 621	231, 834	37, 909
<b>Geographic divisions:</b>							
New England.....	85, 724	9, 780	349	10, 311	42, 721	20, 305	2, 258
Middle Atlantic.....	239, 764	12, 883	1, 904	21, 114	171, 124	25, 815	6, 924
East North Central.....	289, 859	3, 735	4, 199	29, 640	185, 475	57, 167	9, 643
West North Central.....	106, 907	1, 859	1, 386	8, 250	62, 055	23, 697	9, 720
South Atlantic.....	49, 119	519	43	5, 949	15, 445	25, 245	1, 918
East South Central.....	34, 651	27	3	298	5, 902	27, 024	1, 397
West South Central.....	43, 268	60	13	263	9, 724	30, 650	2, 558
Mountain.....	22, 534	324	146	838	12, 689	6, 926	1, 611
Pacific.....	44, 716	1, 322	240	2, 783	23, 483	15, 005	1, 880
<b>New England:</b>							
Maine.....	15, 683	1, 134	62	1, 836	7, 206	4, 999	446
New Hampshire.....	10, 750	1, 214	75	1, 151	6, 695	1, 348	267
Vermont.....	28, 549	3, 808	59	2, 193	13, 413	8, 446	630
Massachusetts.....	18, 807	1, 880	80	3, 348	10, 006	2, 904	589
Rhode Island.....	1, 651	494	-----	217	542	351	47
Connecticut.....	10, 284	1, 250	73	1, 566	4, 859	2, 257	279
<b>Middle Atlantic:</b>							
New York.....	153, 037	9, 521	1, 347	9, 749	114, 662	13, 411	4, 347
New Jersey.....	11, 538	265	23	1, 747	7, 810	1, 368	325
Pennsylvania.....	75, 189	3, 097	534	9, 618	48, 652	11, 036	2, 252
<b>East North Central:</b>							
Ohio.....	70, 882	1, 021	324	4, 960	38, 327	23, 842	2, 408
Indiana.....	21, 115	509	131	1, 215	8, 477	9, 921	862
Illinois.....	36, 412	202	1, 385	1, 369	25, 124	7, 317	1, 015
Michigan.....	46, 533	291	429	3, 369	32, 702	8, 296	1, 446
Wisconsin.....	114, 917	1, 712	1, 930	18, 727	80, 845	7, 791	3, 912
<b>West North Central:</b>							
Minnesota.....	32, 668	399	483	4, 468	22, 830	2, 508	1, 980
Iowa.....	20, 286	271	447	1, 716	10, 916	3, 629	3, 307
Missouri.....	19, 037	110	135	760	5, 569	10, 708	1, 755
North Dakota.....	4, 797	226	23	346	2, 937	481	784
South Dakota.....	5, 248	85	119	135	4, 027	312	570
Nebraska.....	7, 873	74	38	348	5, 368	1, 275	770
Kansas.....	17, 058	694	141	477	10, 408	4, 784	554
<b>South Atlantic:</b>							
Delaware.....	1, 691	1	-----	246	1, 245	172	27
Maryland.....	8, 668	113	9	1, 867	4, 073	2, 323	283
District of Columbia.....	186	-----	-----	1	175	10	-----
Virginia.....	9, 586	25	-----	1, 696	4, 160	3, 223	482
West Virginia.....	4, 450	272	32	333	1, 134	2, 546	133
North Carolina.....	7, 697	44	1	789	1, 613	4, 978	139
South Carolina.....	5, 184	4	-----	644	1, 008	3, 389	139
Georgia.....	8, 727	14	1	305	1, 700	6, 224	483
Florida.....	2, 930	46	-----	68	337	2, 380	99
<b>East South Central:</b>							
Kentucky.....	8, 829	20	-----	40	2, 046	6, 421	302
Tennessee.....	11, 347	2	1	111	1, 383	9, 424	426
Alabama.....	6, 108	4	2	46	1, 142	4, 608	306
Mississippi.....	8, 367	1	-----	101	1, 331	6, 571	363
<b>West South Central:</b>							
Arkansas.....	6, 950	3	1	19	2, 001	4, 627	299
Louisiana.....	3, 415	1	2	94	1, 009	2, 201	108
Oklahoma.....	9, 539	37	3	91	3, 741	5, 104	563
Texas.....	23, 364	19	7	59	2, 973	18, 718	1, 588
<b>Mountain:</b>							
Montana.....	3, 451	13	54	176	2, 453	560	195
Idaho.....	4, 138	46	48	197	2, 049	1, 579	219
Wyoming.....	1, 071	21	14	31	747	167	91
Colorado.....	6, 448	114	30	241	4, 057	1, 605	401
New Mexico.....	1, 327	-----	-----	42	438	507	340
Arizona.....	2, 772	109	-----	48	1, 778	669	168
Utah.....	2, 922	-----	-----	93	970	1, 706	153
Nevada.....	405	21	-----	10	197	133	44
<b>Pacific:</b>							
Washington.....	12, 720	404	69	941	7, 673	3, 402	231
Oregon.....	12, 852	323	135	697	3, 624	7, 771	302
California.....	19, 144	595	36	1, 145	12, 189	3, 832	1, 347

<sup>1</sup> Including animals reported as purebred, but with breed not specified.

TABLE 3.—Average yearly production of milk and butterfat of the cows of different breeds that have official yearly records

Breed	Cows and heifers	Date	Milk	Butterfat	
				Quantity	Test
	<i>Number</i>		<i>Pounds</i>	<i>Pounds</i>	<i>Per cent</i>
Ayrshire.....	8,373	Jan. 1, 1931	10,376	413.0	3.98
Brown Swiss.....	583	do.....	13,199	528.0	4.00
Dutch Belted.....	71	do.....	10,591	414.9	3.92
Guernsey.....	33,231	Apr. 1, 1931	9,976	493.8	4.95
Holstein.....	37,039	Jan. 1, 1931	16,063	545.0	3.39
Jersey.....	43,983	do.....	8,492	454.8	5.36

## WHAT IS A DAIRY BREED?

The term "dairy breed" has been accepted by stockmen and investigators as referring to the breeds of cattle that are especially well fitted for the production of milk and butterfat. Such breeds represent the efforts made by breeders of many generations toward improving the milking capacity of certain classes of cows. Because of this fact the inherent tendency of purebred dairy cattle to produce milk is greater than that of a native or unimproved cow. This inherent capacity is transmitted to the offspring. As a result, the mating of a purebred dairy animal with a native or scrub produces a grade animal which is superior to the scrub in production and in other dairy characteristics.

A purebred dairy animal is one that meets the requirements for registration laid down by the association for that breed in the United States. A grade is the offspring resulting from mating a purebred with a scrub, or from mating animals not purebred but having close purebred ancestors. The offspring of a purebred and a grade is also a grade, and through progressive improvement such animals become high grade. The names of the breeds (Ayrshire, Brown Swiss, etc.) may refer to either purebreds or grades; but to prevent misunderstanding it is desirable to precede the breed name with the word "purebred" or "grade."

In addition to the breeds of dairy cattle mentioned, certain other breeds having good milking qualities are kept for dairy purposes. Such cattle, which are often referred to as dual-purpose animals because of their ability to produce satisfactory carcasses as well as a good milk flow, include the Shorthorn, Red Polled, and Devon. The qualities of these are discussed in Farmers' Bulletin 612, "Breeds of Beef Cattle."

## REGISTRATION

A purebred dairy animal is one whose sire and dam are eligible to be recorded by name and number in a register of the breed, commonly called the herdbook. An animal thus qualified may itself be recorded in the same herd register, provided the sire and dam are registered, and provided it also qualifies with regard to color. Additional rules and requirements for registration are laid down by the various breed organizations. Copies of these rules may be obtained by writing to the associations concerned, as listed on page 30 of this bulletin.

In addition to the herd register, there is for each breed another register in which are entered the names of purebred cows that have

completed records meeting specified requirements of milk and butterfat production under definite regulations. Bulls that have a certain number of tested daughters are also recorded in this register. This record of tested cows and proved bulls is called by various names—Advanced Registry for the Ayrshires and Dutch Belted, Register of Production for the Brown Swiss, Advanced Register for the Guernseys and Holsteins, and Register of Merit for the Jerseys.

The requirements for admission to this special register of production and the rules under which the records are made vary somewhat with different breeds. Detailed information on this point may be obtained from the breed associations concerned.

#### WHICH BREED TO SELECT

Sometimes too much emphasis is given to the question of which breed to choose, and too little to the matter of getting good individuals—that is, those that are well bred and high producers. There are three points, however, that should be considered in deciding which breed to select. These are: (1) The breed that predominates in the locality where the new herd is to be located, (2) personal preference, and (3) market requirements for the product.

#### THE BREED THAT PREDOMINATES

A dairyman just starting with purebreds may feel that since all his neighbors have one breed of cattle, he should get another breed so as to have a monopoly in the business of selling breeding stock. There is no question about the monopoly, but there would probably be no business to monopolize. It is difficult for an isolated small breeder to dispose of his surplus stock to advantage, while if there are many breeders with the same breed, buyers are attracted to the locality because of the better chance to get the desired animals from one or more of the several breeders.

There are other advantages to a dairyman in having the same breed as his neighbor, such as the possibility of exchanging bulls, and of owning good purebred bulls cooperatively. These advantages are obtained by those having grade herds as well as by those with purebreds. Then there is also the opportunity for taking advantage of special breed sales of surplus stock, and, lastly, the advantage of bringing the community together in other endeavors which usually result where there is but one breed.

#### PERSONAL PREFERENCE

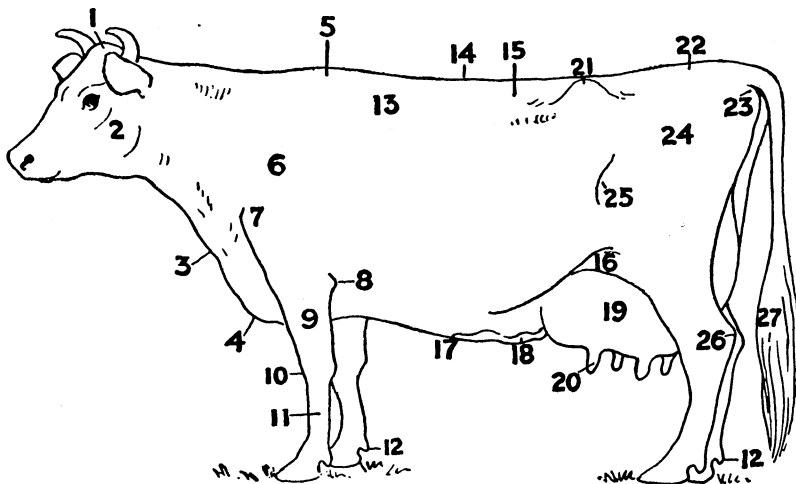
In a district where no breed is established, or in sections where all the different breeds are about equally represented, the prospective breeder must be guided largely by his personal preference. A person usually takes a liking to one breed, for reasons not easily explainable. Naturally he would take more interest in caring for animals of that breed than for those of a breed that he does not like so well.

Personal preference, however, must not overshadow the matter of quality of individual animals. If high-producing individuals of the breed not so well liked are available at reasonable cost, and individuals of the same quality of the breed well liked are not available except at a much higher cost, it may be wiser to select the former, for usually a dairyman soon begins to like a breed with which he is doing well.

MARKET REQUIREMENTS FOR PRODUCT

Market requirements for the product should not be overemphasized in selecting the breed. For a time a dairyman may sell his product in a market where low-testing milk has the advantage, while later the conditions may be changed, and a high-testing milk will sell to better advantage. Obviously, a breeder can not shift from one breed to another to meet the fluctuations in market demands.

When selling to a city milk plant, however, the price paid for the extra butterfat over the basic test, or deducted from the standard



- |                      |               |               |
|----------------------|---------------|---------------|
| 1. POLL              | 10. KNEE      | 19. UDDER     |
| 2. JAW               | 11. SHANK     | 20. TEAT      |
| 3. DEWLAP            | 12. DEW CLAW  | 21. HIP POINT |
| 4. BRISKET           | 13. CROP      | 22. RUMP      |
| 5. WITHERS           | 14. CHINE     | 23. PIN BONE  |
| 6. SHOULDER          | 15. LOIN      | 24. THURL     |
| 7. POINT OF SHOULDER | 16. FLANK     | 25. STIFLE    |
| 8. POINT OF ELBOW    | 17. MILK WELL | 26. HOCK      |
| 9. FOREARM           | 18. MILK VEIN | 27. SWITCH    |

FIGURE 1.—Diagram of cow showing names and location of parts

price when the milk is below basic test, may well be considered in selecting the breed. The point here is that sometimes in some whole-milk markets the differential may favor high-testing milk, and at other times or in other markets it may favor low-testing milk.

In summing up the matter of which breed to select this point should be kept in mind—there are good cows and poor cows in all breeds, and other things being equal, the breeder or dairyman who gets good individuals to begin with will have a good chance for success no matter what breed he selects.



### THE SCORE CARD

Each breed association has a scale of points, or score card, for bulls and cows of that breed. The card gives definite values for the various characteristics of conformation, and emphasizes points requiring special attention from breeders. The purpose of the score card is to teach beginners the art of judging, and also to encourage the formation of what is considered by breeders, through their associations, as the ideal type. It tends to make the breed uniform in appearance. The scale of points for a cow is given in this bulletin with the description of each breed.

In order to make the score cards more useful a diagram is given in Figure 1, which names and locates the various parts referred to on the score cards.

### AYRSHIRE

#### ORIGIN AND HISTORY

The Ayrshire breed originated in southwestern Scotland, in the county of Ayr, in the latter part of the eighteenth century. Doubtless cattle from several neighboring countries were used in the formation of the breed, though there is no record of direct foreign importations to the county of Ayr at that time. While this foreign blood probably had a good effect on the ultimate value of the breed, the substantial and efficient development of the breed seems to have come about mostly through subsequent judicious selection and mating.

#### IMPORTATION AND DISTRIBUTION

The first importations into the United States occurred in 1822. Since then Ayrshires have been imported almost every year, either from Scotland or Canada. As indicated by Tables 1 and 2, there were in 1920 about 30,000 registered Ayrshires in the United States and fewer than 400,000 grades carrying more or less Ayrshire blood. It is estimated that on January 1, 1931, there were about 55,000 registered Ayrshires in the United States.<sup>1</sup> Ayrshires are scattered through practically all the States, though by far the largest numbers are in the Northeastern States.

#### GENERAL CHARACTERISTICS

The Ayrshire has a well-built, stocky body, not heavily covered with flesh, but giving the appearance of great vigor and vitality. The calves weigh from 60 to 80 pounds at birth. The weight of mature bulls varies from 1,500 to 2,000 pounds, with an average of about 1,650 pounds, while mature cows range in weight from 850 to 1,250 pounds, and average about 1,050 pounds.

The color varies from almost pure white to nearly all cherry red or brown, with any combination of these colors. Usually the tail is white. The horns are large, and turn gracefully outward, then forward and back, giving a distinctive appearance to the head.

Ayrshire cows are noted for their symmetrical udders, which extend well forward and back, with no tendency to be pendent. The quarters are generally even, the teats medium in size and well placed.

<sup>1</sup> This figure was obtained by assuming that the relation between the number of animals registered 1914-1920 and the number of living animals in 1920 is the same as the relation between the number of animals registered 1924-1930 and the number of living animals in 1930.

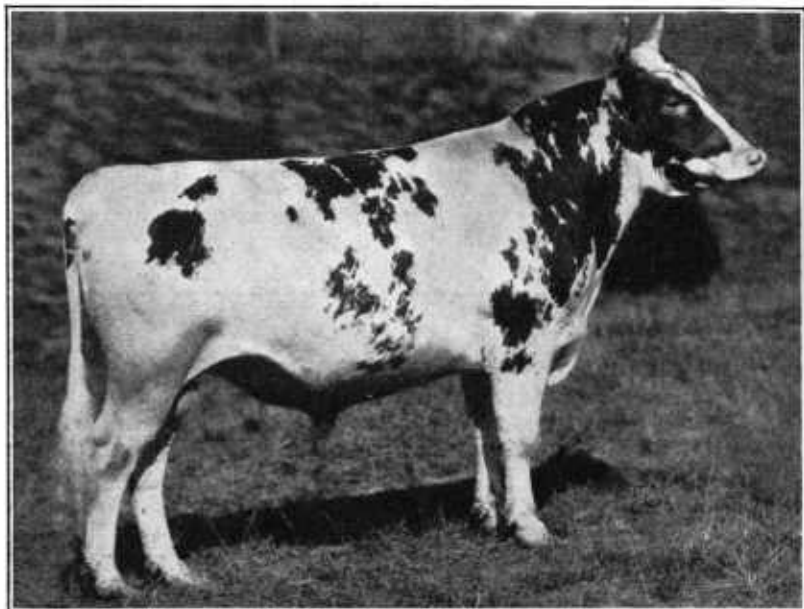


FIGURE 2.—Ayrshire bull, Willoxton Satisfaction 42680. Grand champion, National Dairy Show, 1930

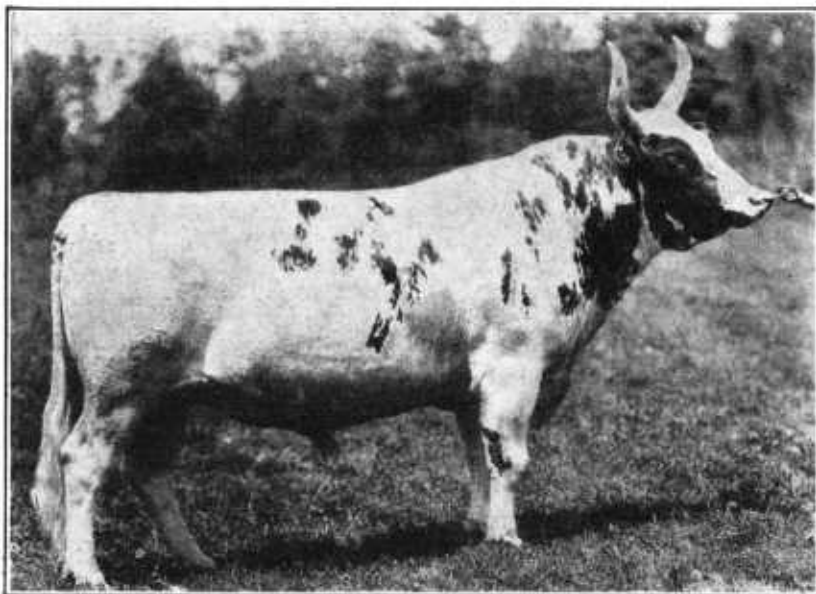


FIGURE 3.—Ayrshire bull, Penhurst Rising Star 20922. Seventy-two of his daughters are in the Advanced Registry

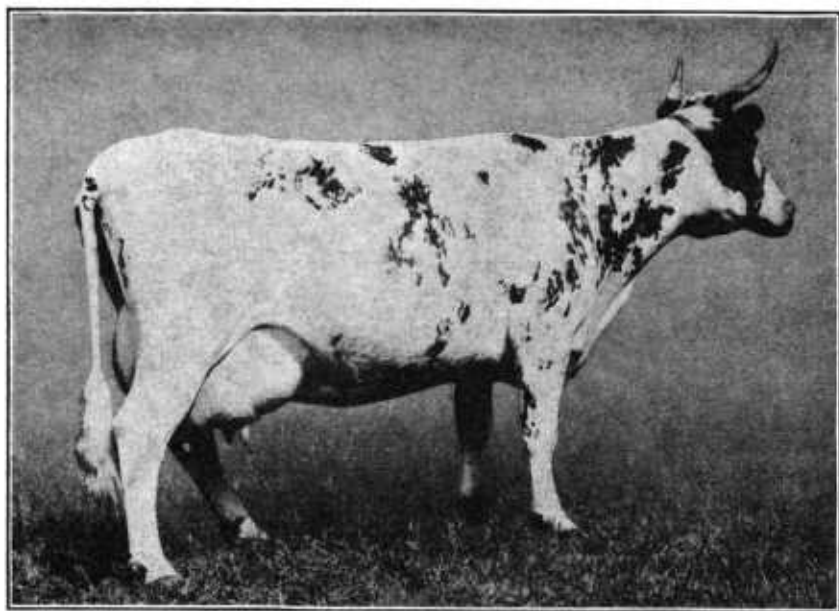


FIGURE 4.—Ayrshire cow, Lily of Willowmoor 22269. Champion butterfat producer of the breed

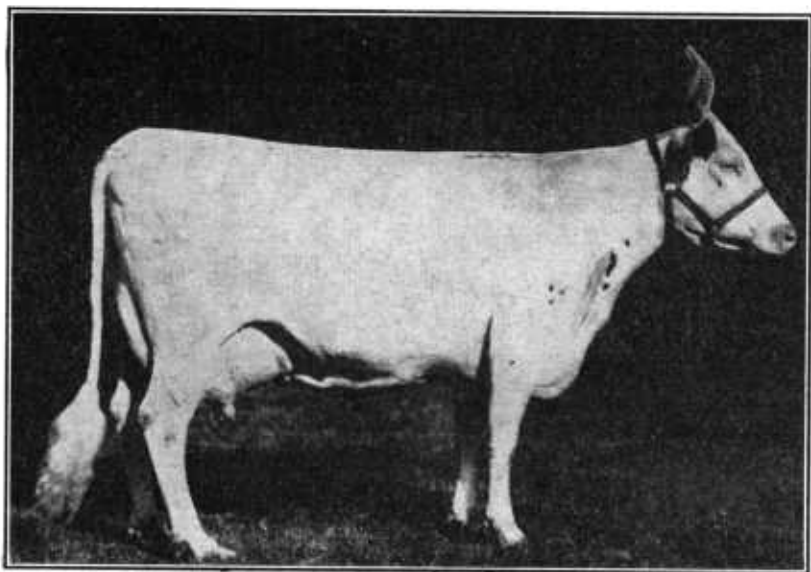


FIGURE 5.—Ayrshire cow, Garclaugh May Mischief 27944. Champion milk producer of the breed

*Scale of points for Ayrshire cow*<sup>2</sup>

## SECTION 1

	Points
Forehead, reasonably broad between the eyes, and slightly dished-----	1
Face, of medium length, clean cut, feminine; the bridge of the nose straight to nostrils-----	1
Muzzle, broad and strong, with large open nostrils-----	2
Jaws, wide at the base, well muscled, and strong-----	1½
Eyes, moderately large, placid, full, and bright-----	1½
Ears, medium size, fine, and carried alertly-----	½
Horns, small at base, not coarse nor too long; inclining upwards-----	1½
Neck, medium length, smoothly blending with shoulders and throat, showing feminine refinement-----	2
Shoulders, long, sloping and tapering from the base to the top of the shoulder blades; neatly and firmly attached to the body wall; tops of the blades not extending to the top of chine-----	5
Chest, full, and wide between and back of forearms; brisket light and refined-----	5
Chine, straight, strong, open jointed, narrow at the top, nicely blending into shoulders and a well-sprung rib-----	3
Crops, full, level with shoulders-----	4
Barrel, medium length, deep, but strongly held up; rib, well sprung; bones long, flat, and wide apart-----	10
Loin, broad, strong, and level with hips-----	4
Rump, long, wide; top line level to tail head, with pin bones nearly level with hip bones; dishing to thurls-----	7
Hips, wide; level with back line; points well defined and not overlaid with fat-----	2
Pin bones, wide apart; nearly level with hips-----	2
Thurls, widely set; slightly below line from hip bones to pins-----	1
Tail, neatly set, level with back line, long and fine-----	1
Flank, deep, slightly arched, and refined-----	1
Thighs, deep, straight and trim when viewed from the side; flat and broad on side when viewed from rear, twist well cut out for udder development, with escutcheon well defined-----	2
Mammary development:	
Attachment of udder, attached well forward with a neat and firm junction at body wall; carried high behind, no evidence of breaking of tissues supporting front quarters nor of dropping of floor of udder--	6
Size and shape of udder, broad, level, capacious, quarters even and of uniform size extending well forward, and high behind; not severely cut between the quarters neither through nor across-----	10
Texture of udder, fine, pliable, and of good quality, with light skin---	4
Size, shape, and placement of teats, convenient size, symmetrical, hanging perpendicular-----	5
Veining and milk wells, mammary veins large, long, tortuous, branching, and entering large orifices; small veins clearly defined on udder--	5
Legs and feet, widely and squarely set under body; clean flat bone; front legs straight, hind legs nearly straight when viewed from rear; hocks neatly and firmly molded; feet round with plenty of depth at heels----	8
Hide and hair, mellow, elastic hide of medium thickness; hair fine and soft--	4
Perfect score-----	100
Actual score-----	
Points to be deducted for deficiency in breed characteristics-----	
Points to be deducted for blemishes, unsoundnesses, or overfitting-----	
Total deductions-----	
Net score-----	

<sup>2</sup> Preliminary report, submitted by a joint committee representing the Ayrshire Breeders' Associations of the United States and Canada. Final report not issued at time of going to press. Section 1 covers anatomy only. In addition to the scale of 100 points (Sec. 1), based on the anatomy of the Ayrshire cow, supplementary schedules are provided covering breed characteristics (Schedule A), and deficiencies caused by blemishes and unsoundnesses (Schedule B). Before completing the scoring of an animal it is urged that both supplementary schedules be studied and the proper deductions made from the net anatomical score. Supplemental Schedule A must be computed and any deductions made under this schedule deducted from result of score of section 1 to complete score of an Ayrshire cow. Supplemental Schedule B is to be used as directed in cases of animals showing unnatural defects or blemishes or extreme overfitting.

## SCHEDULE A

	Points
Style, alert but docile; having an impressive carriage; graceful walk, and above all displaying evidence of outstanding dairy character.....	6
Symmetry and balance, a symmetrical balancing of all the parts and the proper proportioning of the various parts to each other.....	7
Weight, mature cows should weigh from 1,100 to 1,400 pounds, depending on period of lactation.....	5
Color, red of any shade, mahogany, brown, or these with white, or white, each color clearly defined; distinctive red and white markings preferable; markings of solid black or brindle strongly objectionable.....	2
Total, perfect score.....	20
Actual score.....	
Total deductions for deficiency in breed characteristics.....	

## SCHEDULE B

	Deduct up to—
A slight deficiency in one quarter of the udder.....	5
A marked undevelopment of one or more quarters which are not functioning or two slightly deficient quarters.....	15
An udder that has plainly lost evidence of normal attachment and has become entirely pendulous.....	20
Evidence of an obstruction or a side leak in a teat.....	5
An indication of decided lameness which may be permanent.....	10
Lameness plainly indicated to be only temporary.....	3
Minor defects such as blindness in either eye, capped hips, enlarged knees and hocks, slight ruptures, enlarged glands or other blemishes.....	5
Animals of any age presenting unmistakable evidence of extreme overfitting to the point of impairing future usefulness or preventing reasonable discernment of natural conformation.....	25
Total deductions for blemishes and unsoundnesses.....	

## PRODUCTION

Ayrshire milk contains a percentage of butterfat that is about the average of all the dairy breeds. The 8,373 cows and heifers that completed official records up to January 1, 1931, produced an average of 10,376 pounds of milk per cow, containing 413 pounds of butterfat, or 3.98 per cent butterfat.

*Ten highest Ayrshire yearly butterfat and milk production records in the United States*

Butterfat production		Milk production	
Cow	Butterfat	Cow	Milk
	Pounds		Pounds
Lily of Willowmoor 22269.....	955.56	Garclaugh May Mischief 27944.....	25,329
VI's Bountiful Lassie 58096.....	923.21	VI's Bountiful Lassie 58096.....	24,556
Auchenbrain Brown Kate 4th 27943.....	917.60	Mistress Thistle of South Farm 49818.....	23,029
Garclaugh May Mischief 27944.....	894.91	Auchenbrain Brown Kate 4th 27943.....	23,022
Auchenbrain Yellow Kate 3d 36910.....	888.33	Lily of Willowmoor 22269.....	22,596
Agawam Bess Howie 43781.....	876.13	Garclaugh Spottie 27950.....	22,589
Harperland Spicy Lass 40652.....	866.21	Nancy Whitehall 47810.....	22,074
Jean Armour 3d 32219.....	859.65	Jean Armour 3d 32219.....	21,938
Nancy Whitehall 47810.....	858.77	Bloomer's Queen 39119.....	21,820
Bloomer's Queen 39119.....	856.41	Willowmoor May Mischief 2d A 34173.....	21,161

## BULLS

The 10 Ayrshire sires having the largest number of daughters with official yearly records, up to January 1, 1931, are listed below:

*Ten Ayrshire sires having the largest number of Advanced-Registry daughters*

Sire	Number of daughters	Sire	Number of daughters
Penshurst Man O'War 25200.....	82	Baron's Best of Bargenoch 12858 (im- ported).....	53
Penshurst Rising Star 20922.....	72	Netherton Statesman 16431 (imported).....	53
Leto 14560.....	69	Penshurst Sir Robert 20029.....	46
Kate's Champion of Penshurst 18782.....	61	Earle's Choice of Spring Hill 8289.....	43
Beuchan Peter Pan 12971 (imported).....	58		
Finlayston 8882 (imported).....	56		

## BROWN SWISS

## ORIGIN AND HISTORY

The original home of the Brown Swiss breed is in Switzerland, where the breed has been developed during many centuries. It is probably one of the oldest in existence, and it is thought that no outside blood has been introduced since records began.

## IMPORTATION AND DISTRIBUTION

The first importation of Brown Swiss into the United States was made in Massachusetts in 1869 and another in 1882. A number of importations have been made since, but only in small numbers. After 1906 there were only a few importations because of regulations due to the prevalence of the foot-and-mouth disease in Europe. As shown in Tables 1 and 2, there were in 1920 in the United States about 8,000 registered animals and about 162,000 grades carrying more or less Brown Swiss blood. It is estimated that on January 1, 1931, there were about 30,000 registered Brown Swiss in the United States.<sup>3</sup> Brown Swiss are scattered in 37 States, the largest numbers being in Wisconsin, Illinois, New York, Minnesota, Michigan, Iowa, Pennsylvania, and Ohio. Of late years the breed has made notable increase in popularity.

<sup>3</sup> See footnote 1, p. 6.

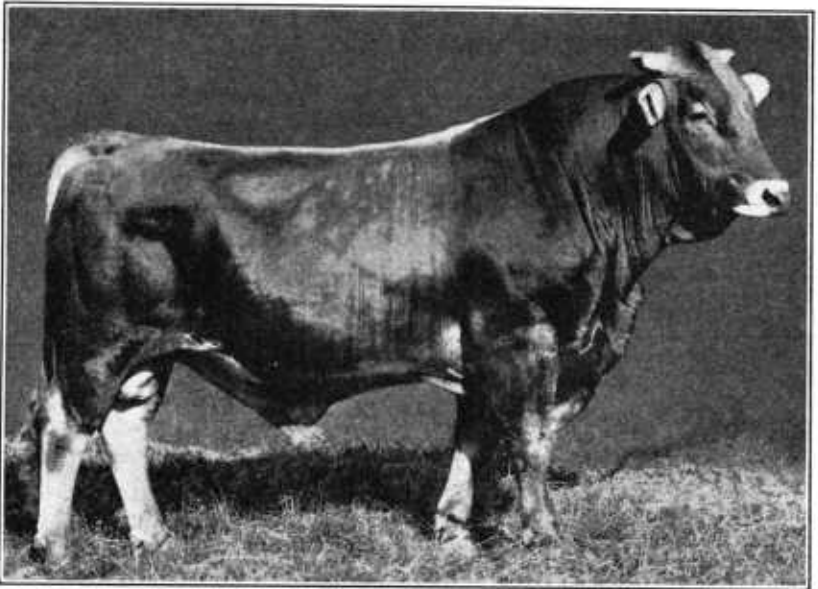


FIGURE 6.—Brown Swiss bull, Reuben 2027. Twenty-five of his daughters are in the Advanced Registry

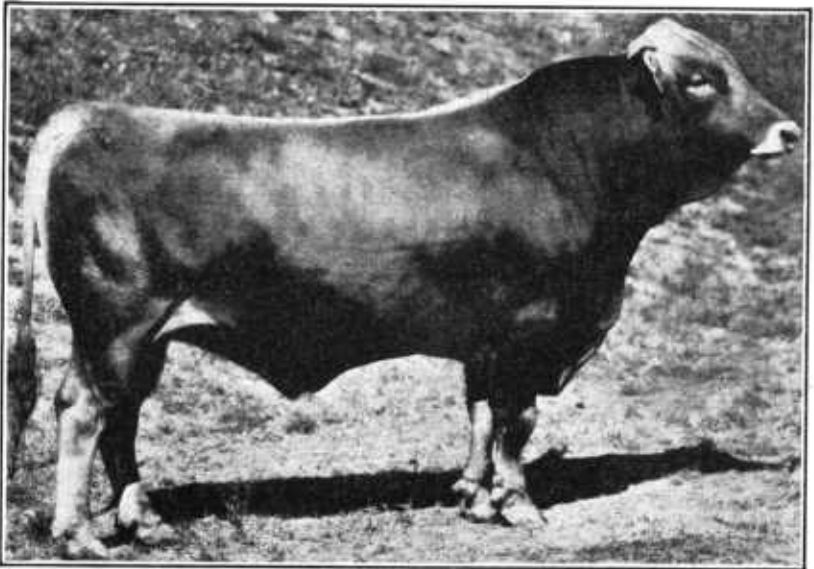


FIGURE 7.—Brown Swiss bull, March Molly 3d's Master 14350. Grand Champion, National Dairy Show, 1930

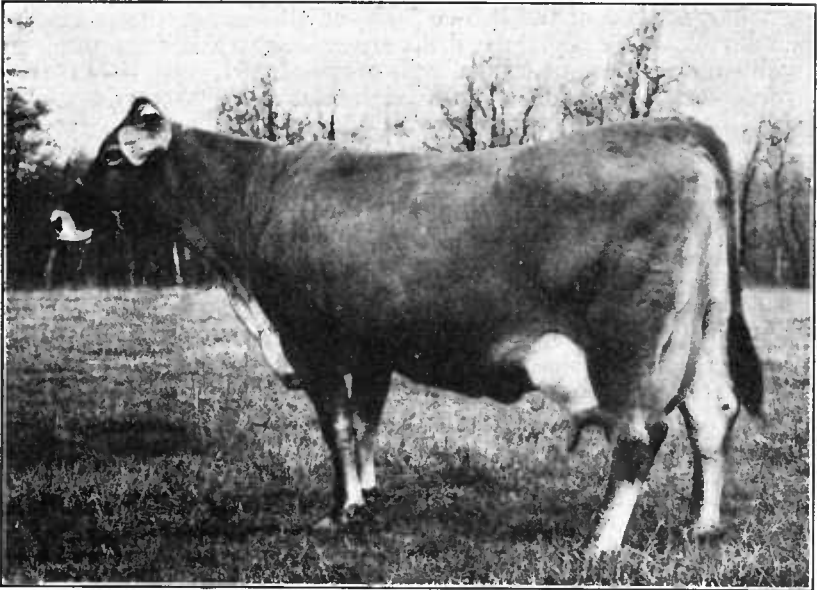


FIGURE 8.—Brown Swiss cow, Swiss Valley Girl 10th 7887. Champion milk and butterfat producer of the breed

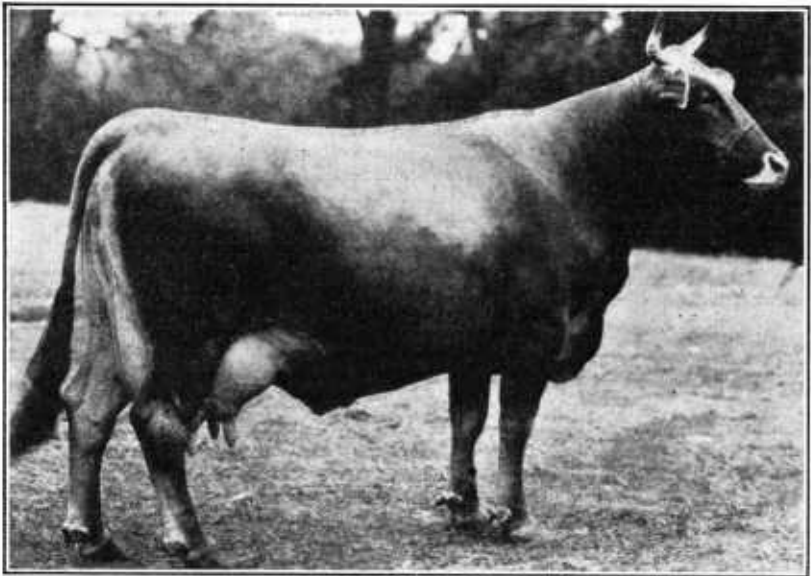


FIGURE 9.—Brown Swiss cow, King's Pebblebrook Phylis Torbel 20002. Grand champion, National Dairy Show, 1930



## GENERAL CHARACTERISTICS

The large frame of the Brown Swiss cattle indicates that they have been developed for service as draft animals as well as for milk. They are substantial in appearance, well proportioned, with the body well covered with flesh. The calves weigh from 65 to 90 pounds at birth. The heifers are slow in maturing. When full grown the cows weigh from 1,100 to 1,500 pounds, averaging about 1,250 pounds; and the bulls range in weight from 1,500 to 2,200 pounds, averaging about 1,750 pounds.

The color of the Brown Swiss varies from dark to light brown, and at some seasons of the year approaches gray. There is usually a light stripe of gray along the back. White splashes near the udder are found on some animals, but white splashes on the sides of the body or on the back are objectionable. The hair between the horns is usually of a lighter shade than that on the body. The nose, switch, tongue, and horn tips are always black, and there is usually a light or mealy ring around the muzzle.

*Scale of points for Brown Swiss cow or heifer*

	Points
Head.....	10
Size and form, medium and rather long.....	2
Face, dished, narrow between horns, and wide between eyes.....	2
Ears, fringed inside with light-colored hair, medium size, and carried alert.....	1
Muzzle, large and square, with mouth surrounded by mealy-colored band, nose and tongue black.....	2
Eyes, full and bright.....	2
Horns, short, not too heavy, regularly set with black tips.....	1
Neck, of good length, throat clean, neatly joined to head and shoulders, moderately thin at the withers.....	5
Fore quarters.....	9
Shoulders, not too heavy and smoothly blending into body.....	4
Chest, deep and full between and back of forelegs.....	4
Brisket, medium.....	1
Body.....	13
Back, level to setting of tail and broad across the loin.....	6
Ribs, long and broad, wide apart, and well sprung.....	3
Barrel, long, deep, and well rounded.....	4
Hind quarters.....	10
Hips, wide, pin bones high and wide apart, rump long and level from hip bones to tail setting.....	6
Thighs, flat and wide apart, giving ample room for udder.....	2
Tail, slender, well set on, with good switch.....	2
Legs, of medium length and straightness, with good hoofs.....	2
Hide.....	5
Medium thickness, mellow and elastic.....	3
Color, shades from dark to light brown, at some seasons of the year gray; white splashes on underline of belly are objectionable but do not disqualify; dark smoky skin objectionable; hair between horns usually of lighter shade than that on body.....	2
Udder.....	32
Size, long, wide, deep but not pendulous or fleshy.....	6
Attachment, firmly attached to the body.....	4
Veins, udder veins well developed and plainly visible.....	2
Balance, extending well up behind and far forward, quarters even.....	5
Sole, nearly level and not indented between teats.....	2
Teats, of good uniform length and size, regularly and squarely placed.....	6
Texture, mellow, free from meatiness.....	7
Mammary veins, large, long, tortuous, elastic, and entering good wells.....	6
Disposition, quiet but alert.....	2
General appearance.....	6
Total.....	100

PRODUCTION

The Brown Swiss produces milk of average quality compared with the other breeds of dairy cattle. The 583 cows and heifers that completed yearly records and were admitted to the Register of Production up to January 1, 1931, have an average yearly production of 13,199 pounds of milk and 528.03 pounds of butterfat per cow, with an average butterfat test of 4 per cent. The 10 highest butterfat and milk producers among the Brown Swiss are listed below.

*Ten highest Brown Swiss yearly butterfat and milk production records in the United States*

Butterfat production		Milk production	
Cow	Butterfat	Cow	Milk
	<i>Pounds</i>		<i>Pounds</i>
Swiss Valley Girl 10th 7887.....	1,106.33	Swiss Valley Girl 10th 7887.....	27,514
June's College Girl 11427.....	1,062.30	Believe 4245.....	25,848
Swiss Girl F. C. 13853.....	1,003.76	Alice Lee 2d 8777.....	24,845
Believe 4245.....	1,002.62	June's College Girl 11427.....	24,572
Forest Girl of Lake View 11998.....	971.34	Forest Girl of Lake View 11998.....	23,556
Millicent of Walhalla 11173.....	961.58	Swiss Girl F. C. 13853.....	23,236
Hawthorne Dairy Maid 6753.....	927.23	Olympe of Walhalla 10309.....	23,023
Alice Lee 2d 8777.....	914.38	Clothilda Werder's Aggie 10691.....	22,809
Miss Dixon 12116.....	891.06	Hawthorne Dairy Maid 6753.....	22,765
Nancy V. 2d 12104.....	885.80	Sterling Pride of Lake View 9530.....	22,597

BULLS

The 10 Brown Swiss sires having the largest number of daughters with official yearly records, up to January 1, 1931, are listed below.

*Ten Brown Swiss sires having the largest number of daughters in Register of Production*

Sire	Number of daughters	Sire	Number of daughters
Reuben 2927.....	25	Swiss Valley Reuben 6074.....	11
Sunny Hill Bob 6170.....	14	Nellie's Stasis 6721.....	11
Vogel's College Boy 5638.....	13	Junker 2365.....	10
College Master 2986.....	12	Coniston 7404.....	10
Ida's College Boy 6663.....	12	Tom Phylis 1769.....	10

DUTCH BELTED

ORIGIN AND HISTORY

The Dutch Belted breed originated in Holland about two centuries ago. The breed gets its name from both the original home and from the distinctive color marking. It has probably been developed from the same cattle as the Holstein-Friesian. The early records show that the Dutch Belted were bred by the nobility of Holland and while the unusual color marking was perhaps the chief basis of selection, the qualities of milk production and dairy refinement were not lost sight of.

IMPORTATION AND DISTRIBUTION

The first importation of Dutch Belted cattle into the United States was made probably in 1838. The first importation of importance, however, was made in 1840 by P. T. Barnum for show purposes.

These cattle later were placed on a farm, and this seems to be the beginning of the Dutch Belted cattle in America. A number were imported from that time on until 1885, and some in 1906 and 1907. Since then no importations have been made on account of the prevalence of foot-and-mouth disease in Europe. It is estimated by the Dutch Belted Association of America that on January 1, 1929, there were 1,800 registered animals of this breed in the United States.

#### GENERAL CHARACTERISTICS

Dutch Belted cattle have the general dairy conformation, which includes fineness of bone and freedom from beefiness. The aim of the breeders of these cattle is to breed animals that have no white other than that of the standard belt around the body. This belt begins back of the shoulder and may extend to the front of the hips but must not be narrower than 6 inches at the narrowest point. There must be no black spots in the belt on females. The width of the belt on each animal tends to be uniform around the body. The remainder of the animal is coal black except that females may have not to exceed 3 inches of white on hind feet above the hoof, and males may have not to exceed 2½ inches of white on one hind foot above the hoof.

Calves at birth range in weight from 60 to 90 pounds. Well-developed mature cows weigh from 1,000 to 1,500 pounds, averaging about 1,200 pounds; and bulls from 1,500 to 2,000 pounds, averaging about 1,700 pounds.

#### *Scale of points for Dutch Belted cow*

Body color, black, with a clearly defined continuous white belt. The belt to be of medium width, beginning behind the shoulder and extending nearly to the hips.....	8
Head, comparatively long and somewhat dishing; broad between the eyes. Poll, prominent; muzzle, fine; dark tongue.....	6
Eyes, black, full and mild. Horns long compared with their diameter.....	4
Neck, fine and moderately thin and should harmonize in symmetry with the head and shoulders.....	6
Shoulders, fine at top, becoming deep and broad as they extend backward and downward, with a low chest.....	4
Barrel, large and deep with well-developed abdomen; ribs well rounded and free from fat.....	10
Hips, broad, and chine level, with full loin.....	10
Rump, high, long, and broad.....	6
Hind quarters, long and deep, rear line incurving; tail long, slim, tapering to a full switch.....	8
Legs, short, clean, standing well apart.....	3
Udder, large, well-developed front and rear; teats of convenient size and apart; mammary veins large, long, and crooked, entering large orifices.....	20
Escutcheon.....	2
Hair, fine and soft; skin of moderate thickness of a rich, dark, or yellow color.....	3
Quiet disposition and free from excessive fat.....	4
General condition and apparent constitution.....	6
Perfection.....	100

#### PRODUCTION

By referring to Table 3 it will be seen that in the percentage of butterfat contained in her milk the Dutch Belted cow ranks between the Holstein and the Ayrshire. The 71 Dutch Belted cows and heifers that finished yearly official records up to January 1, 1931, show an average production of 10,591 pounds of milk and 414.89 pounds of butterfat, with an average test of 3.92 per cent.

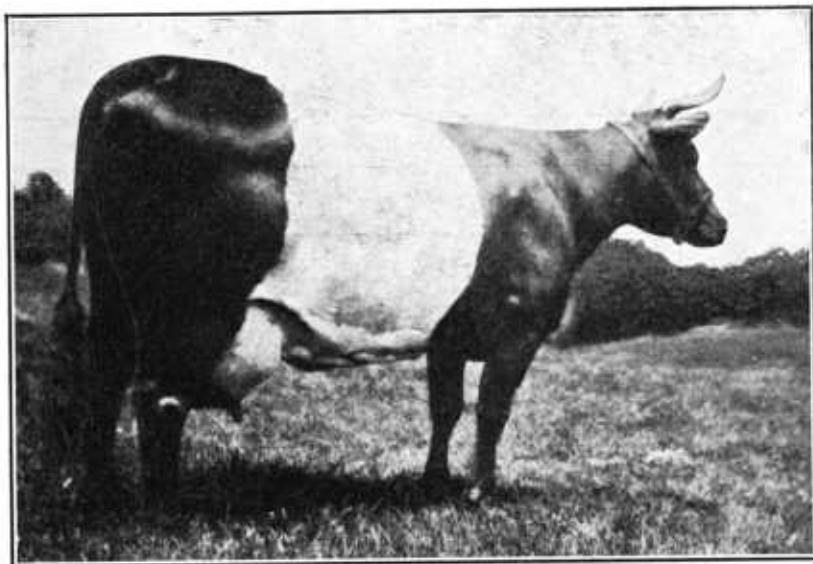


FIGURE 10.—Dutch Belted cow, Loraine of Brunswick 3020. Leading butterfat and milk producer of the breed

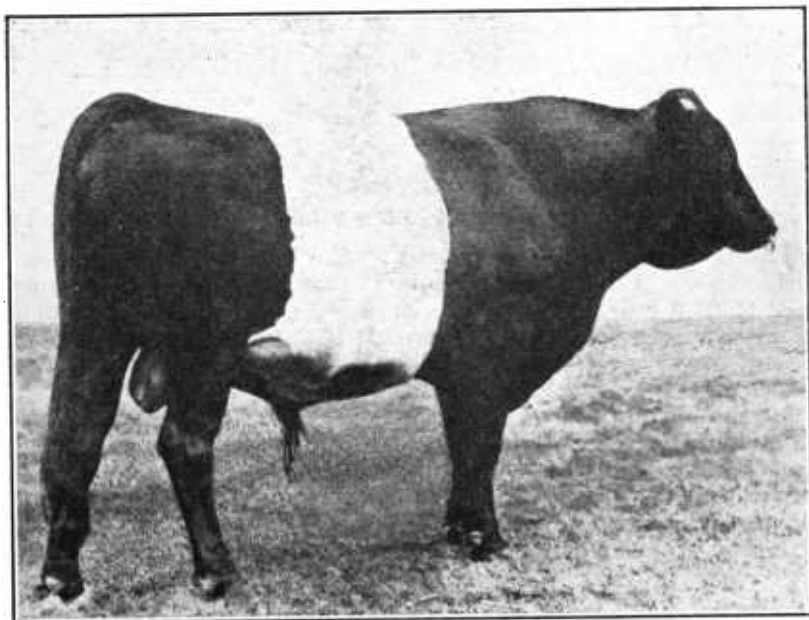


FIGURE 11.—Dutch Belted bull, Keith 934. He has nine daughters in the Advanced Registry

The 10 highest producers of butterfat and milk among Dutch Belted cows are listed below.

*Ten highest Dutch Belted yearly butterfat and milk production records in the United States*

Butterfat production		Milk production	
Cow	Butterfat	Cow	Milk
	<i>Pounds</i>		<i>Pounds</i>
Loraine of Brunswick 3020.....	816.53	Loraine of Brunswick 3020.....	18,211
Marilyn 3232.....	793.17	Gem of Columbia 2038.....	17,268
Gloria 3231.....	780.09	Marilyn 3232.....	16,878
Green River Neritta 3d 3065.....	691.69	Gloria 3231.....	16,546
Eunice Ann 3423.....	681.37	Green River Neritta 3d 3065.....	16,074
Angelina 2641.....	668.07	Green River Neritta 2d 2958.....	16,055
Gem of Columbia 2038.....	633.86	Angelina 2641.....	16,023
Green River Neritta 2d 2958.....	582.18	Eunice Ann 3423.....	14,935
Glenbeulah's Beauty 2172.....	531.19	Elsie Blossom 2829.....	14,688
Florida Lee 2654.....	522.65	Green Hills Circe 3525.....	13,749

#### BULLS

The 10 Dutch Belted sires having the largest number of daughters with official records, up to January 1, 1931, are listed below.

*Ten Dutch Belted sires having the largest number of Advanced Register daughters*

Sire	Number of daughters	Sire	Number of daughters
Keith 934.....	9	Sutton's Gay Lad 494.....	4
Salvador 2d 1448.....	8	Wonder of Lakeview 1483.....	3
Samoset 1134.....	5	Salvador 1319.....	3
Michigan Prince 1258.....	5	Glenbeulah's Duke 1092.....	3
Defendant 1185.....	5	Bruce W. 729.....	3

#### GUERNSEY

##### ORIGIN AND HISTORY

The Guernsey breed originated in the Channel Islands, near the north coast of France. It is thought that this breed has been developed from a cross between the large red and brindle cattle of Normandy and the small red cattle of Brittany, in France. The exact date of origin is unknown, but it was probably in the latter part of the seventeenth century or before.

All the cattle in the Channel Islands were at one time known as Alderneys. After laws had been enacted forbidding the importation of cattle from the Continent or between the islands of Guernsey and Jersey, two distinct breeds came to be recognized. The one on the islands of Alderney, Sark, and Guernsey became known as the Guernsey breed and the one on Jersey Island as the Jersey breed.

##### IMPORTATION AND DISTRIBUTION

The first cattle from the Channel Islands brought to America were called Alderneys. They were imported in the latter part of the eighteenth century and may have been either Guernsey or Jersey

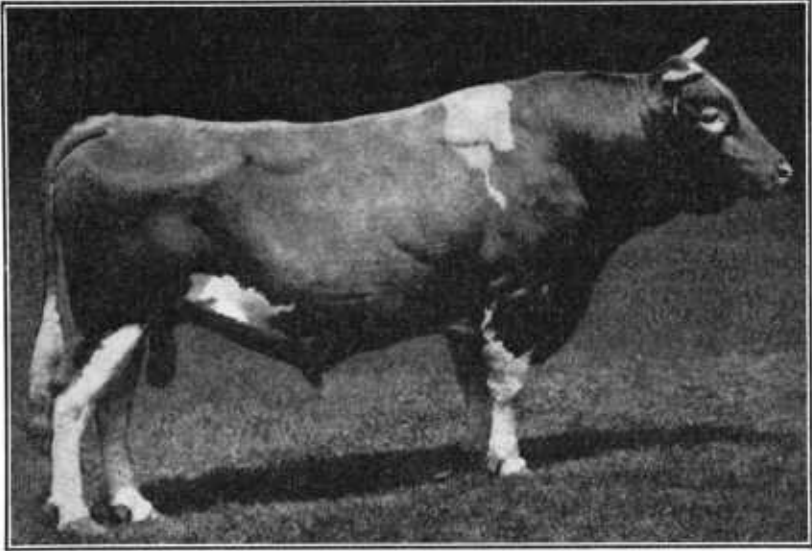


FIGURE 12.—Guernsey bull, Yeoman's King of the May 17053. He has 110 daughters in the Advanced Registry

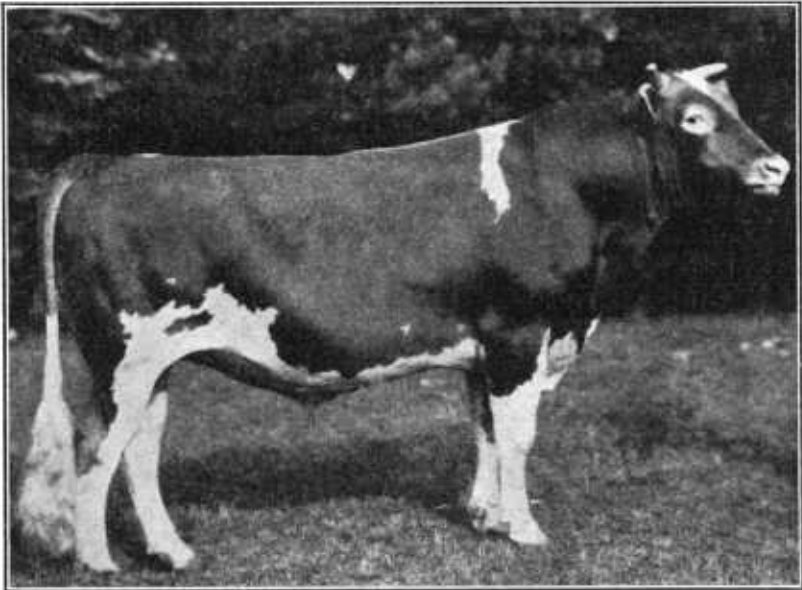


FIGURE 13.—Guernsey bull, Fernbrook King Hendrick 122009. Grand Champion, National Dairy Show, 1930

cattle. The first animals recorded in the herdbook of the American Guernsey Cattle Club were brought over in 1830. A few more were imported in the next two decades, but not until about 1870 were extensive importations made. Since that time importations have been made nearly every year.

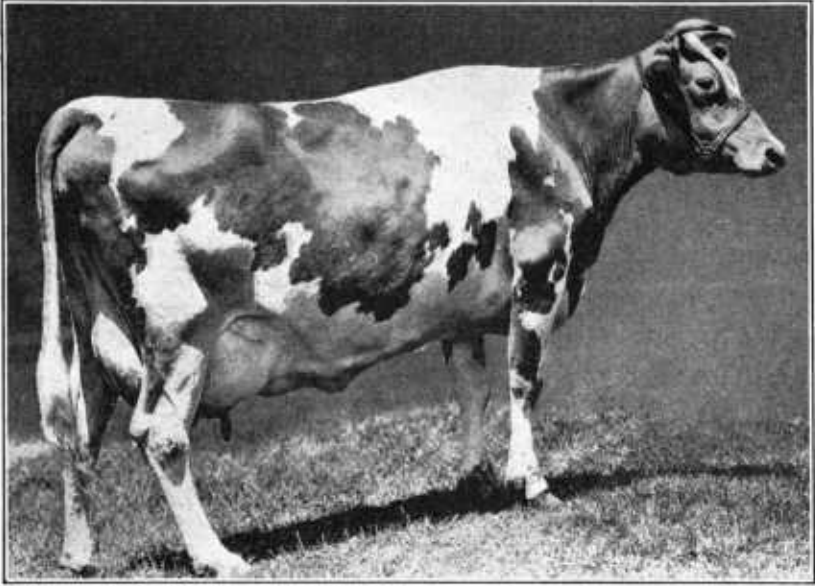


FIGURE 14.—Guernsey cow, Anesthesia Faith of Hill Stead 114354. Champion butterfat producer of the breed

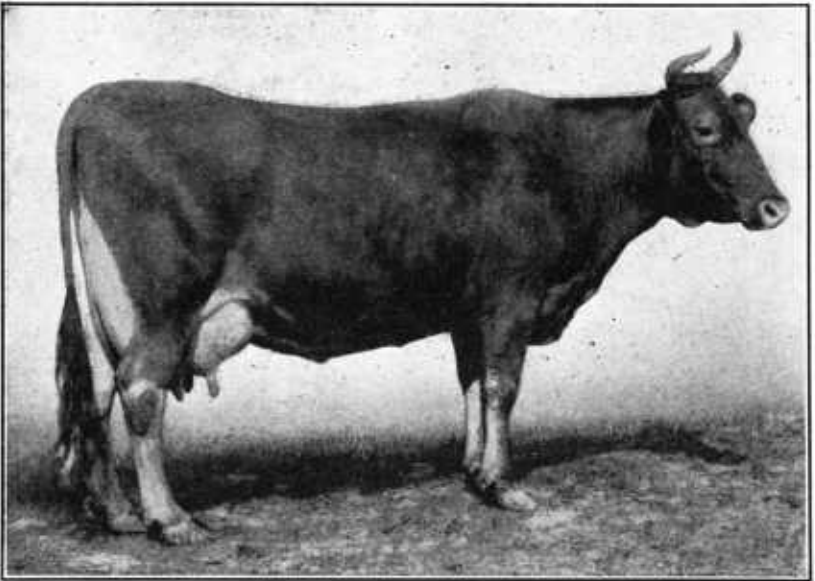


FIGURE 15.—Guernsey cow, Murne Cowan 19597. Champion milk producer of the breed

According to Tables 1 and 2, there were in 1920 about 80,000 registered Guernsey cattle in the United States and about 1,900,000 grades. It is estimated that on January 1, 1931, there were about 196,000 registered Guernseys in the United States.<sup>4</sup>

<sup>4</sup> See footnote 1, p. 6.

## GENERAL CHARACTERISTICS

In size the Guernseys are about equal to the Ayrshires and slightly smaller than the Brown Swiss. The calves weigh from 55 to 85 pounds at birth and reach maturity early. When mature the cows weigh from 800 to 1,400 pounds, averaging about 1,050; and the bulls from 1,200 to 2,200 pounds, averaging about 1,600 pounds.

The color of the Guernseys is fawn and white, with fawn predominating. A light cherry red with white is also found. Sometimes white may be entirely lacking except on the legs. The switch is usually white and the tongue light in color. The horns are of moderate size and amber in color. The skin is yellow.

*Scale of points for Guernsey cow*

Style and symmetry, attractive individuality revealing vigor, femininity and breed character; a harmonious blending and correlation of parts; an active well-balanced walk.....	5
Head, moderately long, clean-cut, showing femininity and breed character; a lean face; wide mouth and broad muzzle with open nostrils; strong jaws; full bright eyes with gentle expression; forehead broad between the eyes and moderately dishing; bridge of nose straight.....	5
Horns, yellow, small at base; of medium length; inclining forward; not too spreading.....	1
Neck, long and thin; clean throat, smoothly blending into shoulders.....	2
Withers, chine rising above shoulder blades, with open vertebrae.....	2
Shoulders, shoulder blades set smoothly against chine and chest wall, forming neat junction with the body.....	2
Chest, wide, and deep at heart with least possible depression back of the shoulders.....	4
Back, appearing straight from withers to hips.....	5
Loin, strong, broad, and nearly level laterally; width carried forward to junction with the ribs.....	3
Hips, wide apart, approximately level with the back; free from excess tissue.....	2
Rump, long, continuing with level of the back; approximately level between hip bone and pin bones. Pin bones well apart.....	4
Thurls, wide apart and high.....	2
Barrel, deep and long, with well-sprung ribs. Individual ribs, long, flat, wide apart, and free from excess tissue.....	10
Thighs, incurving when viewed from side, thin and wide apart when viewed from rear; well cut up between thighs.....	2
Legs, flat flinty bone, tendons clearly defined; front legs straight; hind legs nearly upright from hock to pastern, set wide apart and nearly straight when viewed from behind. Pastern, strong and springy.....	2
Hide, loose and pliable, and not thick, with oily feeling; hair, fine and silky.....	3
Tail, long, tapering with neat, strong, level attachment, neatly set between pin bones; fine bone and hair; nicely balanced switch.....	2
Udder, uniformly fine in texture; free from meatiness; covered with pliable velvety skin.....	3
Veins prominent.....	1
Attachment to body: Strong, long, and wide.....	4
Extending well forward; extending well up behind.....	4
Sole: Level between teats.....	2
Teats: Of even convenient size; cylindrical in shape; well apart and squarely placed, plumb.....	3
Mammary veins, long, tortuous, prominent, and branching, with large numerous wells.....	3
Secretions indicating color of product, indicated by the pigment secretion of skin which should be a deep yellow inclining toward orange in color; especially discernible in the ear, at the end of bone of tail, around the eyes and nose, on the udder and teats, and at the base of horns; hoofs and horns amber colored.....	20
Color markings, a shade of fawn with white markings.....	2
Size, mature cows, about 1,100 pounds in milking condition.....	2
Total.....	100



## PRODUCTION

Guernsey milk has a high per cent of butterfat and a yellow color. Up to April 1, 1931, 33,231 official Guernsey records were completed. Of this number 27,222 were initial records and 6,009 were reentry records. The average of these 33,231 records is 9,976 pounds of milk and 493.8 pounds of butterfat, the average butterfat test being 4.95 per cent.

The 10 highest butterfat and milk producers among the Guernseys are listed below.

*Ten highest Guernsey yearly butterfat and milk production records in the United States*

Butterfat production		Milk production	
Cow	Butterfat	Cow	Milk
	<i>Pounds</i>		<i>Pounds</i>
Anesthesia Faith of Hill Stead 114354.....	1, 112. 50	Murne Cowan 19597.....	24, 008
Countess Frue 43785.....	1, 103. 30	Topsy of Thousand Springs 137339.....	22, 000
Murne Cowan 19597.....	1, 098. 20	Pet of La Grange 2d 48429.....	21, 968
May Rilma 22761.....	1, 073. 40	Peterkin's Beauty of Fairview S. 112241.....	21, 111
Gertrude Claire 99550.....	1, 020. 00	Katherine's Trixie 100396.....	21, 071
Nella Jay 4th 38233.....	1, 019. 30	Gertrude Claire 99550.....	20, 738
Langwater Nancy 27943.....	1, 011. 70	Nella Jay 4th 38233.....	20, 710
Dairy Maid Queen of Spring Hill 74067.....	1, 011. 20	Molly's Lassie 86472.....	20, 592
Proud Dora of Echo Glade 151373.....	1, 007. 10	St. Austell Daffodil 84890.....	20, 491
Langwater Hope 27946.....	1, 003. 20	Miss Daisy of Maple Hill 72610.....	20, 315

## BULLS

The 10 Guernsey sires having the largest number of daughters with official yearly records, up to March 10, 1931, are listed below.

*Ten Guernsey sires having the largest number of Advanced-Register daughters*

Sire	Number of daughters	Sire	Number of daughters
Governor of the Chêne (R. G. A. S. 1297 P. S.).....	114	Florham Laddie 20431.....	66
Yeoman's King of the May 17053.....	110	Langwater Foremost 39191, A. R.....	65
Langwater Demonstrator 16451.....	77	Galaxy's Sequel 16904 (imported).....	53
Masher's Sequel 11462 (imported).....	70	Ne Plus Ultra 15265.....	48
Clara's Sequel 29414 (imported).....	66	Beda's May King 11893.....	48

## HOLSTEIN-FRIESIAN

## ORIGIN AND HISTORY

The cattle from which our present Holstein-Friesian breed has descended were developed in northern Holland, especially in the Province of Friesland, and in the neighboring Provinces of northern Germany. The time of their origin as a recognized distinct breed is unknown, but it is probable that they have been selected for their dairy qualities for about 2,000 years.

Before 1885 there were two associations furthering the interests of this breed in the United States. One maintained a Holstein herdbook, and the other a Dutch-Friesian herdbook. In 1885 the two associations were combined into the Holstein-Friesian Association of

America, and from that time on only one herd register has been maintained. This is known as the Holstein-Friesian herdbook. While the official name of the breed is Holstein-Friesian the single word "Holstein" is more common in ordinary use.

#### IMPORTATION AND DISTRIBUTION

The first importations of Holsteins into the United States were made in 1795, and afterwards a few were brought in from time to time up to 1879, following which heavy importations were made each year until 1887. Thereafter only a few were imported up to 1905, and since then, because of the prevalence of foot-and-mouth disease in Europe, very few have been imported.

According to Tables 1 and 2 there were in 1920 about 528,000 registered Holsteins in the United States and about 10,500,000 grades. It is estimated that on January 1, 1931, there were about 755,000 registered Holsteins in the United States.<sup>5</sup> Holstein cattle are found throughout all the 48 States though by far the largest number are in New York, Wisconsin, Pennsylvania, Ohio, Michigan, and Illinois, in the order named. These six States contain more than 60 per cent of the registered Holstein cattle in the United States.

#### GENERAL CHARACTERISTICS

The Holsteins are the largest of the dairy breeds. They have large frames, not heavily covered with flesh. The calves weigh from 70 to 105 pounds at birth. The mature bulls weigh from 1,600 to 2,200, and average about 1,900 pounds; and the mature cows weigh from 1,100 to 1,750, and average about 1,250 pounds. The color is black and white, with the colors sharply defined rather than blended. They may be nearly all white or black, but no solid-color animal can be registered.

#### *Scale of points for Holstein-Friesian cow*

Forehead, broad between the eyes; dishing.....	2
Face, of medium length; clean cut; feminine; the bridge of the nose straight..	1
Muzzle, broad, with strong lips; nostrils, large and open; jaws, strong.....	3
Ears, of medium size; of fine texture; well carried.....	1
Eyes, large; full; mild; bright.....	2
Horns, small; tapering finely toward the tips; set moderately narrow at base; inclining forward; well curved inward.....	1
Neck, long; fine and clean at junction with the head; evenly and smoothly joined to shoulder.....	3
Shoulders, slightly lower than the hips; smooth and rounding over tops; moderately broad and full at sides.....	3
Crops, full; level with the shoulders.....	5
Chine, straight; strong; broadly developed, with open vertebræ.....	4
Loin and hips, broad; level or nearly level between the hip bones; level and strong laterally; spreading from chine broadly and nearly level; hip bones fairly prominent.....	6
Rump, long; broad with roomy pelvis; nearly level laterally; full above the thurls; carried out straight to tail head.....	6
Pin bones, wide between; nearly level with hips.....	2
Thurls, high; broad through.....	2
Tail head and tail, strong at base without coarseness; the setting well back; tail long, tapering finely to a full switch.....	2
Chest, deep; wide; well filled and smooth in the brisket; broad between the forearms; full in the foreflanks.....	6
Barrel, long; deep; well rounded; strongly and trimly held up.....	9
Flanks, deep; full.....	2

<sup>5</sup> See footnote 1, p. 6.

Thighs, wide; deep; straight behind; wide and moderately full at the outside; twist well cut out and filled with development of udder; escutcheon well defined.....	2
Mammary veins, large, tortuous, entering large orifices or double extension; with additional developments, such as branches and connections entering numerous orifices.....	8
Udder, capacious; flexible; quarters even and of uniform texture, filling the space in the rear below the twist, extending well forward; broad and well attached.....	14
Teats, well formed; plumb; of convenient size; properly placed.....	4
Legs, medium length; clean; nearly straight; wide apart; firmly and squarely set under the body; arms wide, strong, and tapering.....	4
Hair and hide, hair healthy in appearance; fine and soft; hide of medium thickness; mellow and loose.....	8
Total.....	100

#### PRODUCTION

The Holsteins produce a larger quantity of milk, with a lower butterfat content, than any other dairy breed. The milk is not so highly colored as that from the Guernseys and Jerseys.

The 37,039 official records of Holstein cows and heifers that were completed up to January 1, 1931, show an average yearly production of 16,063 pounds of milk and 545.0 pounds of butterfat, the average test being 3.39 per cent.

The 10 highest butterfat and milk producers among the Holsteins are listed below.

#### Ten highest Holstein yearly butterfat and milk production records in the United States

Butterfat production		Milk production	
Cow	Butterfat	Cow	Milk
	<i>Pounds</i>		<i>Pounds</i>
De Kol Plus Segis Dixie 295135 <sup>1</sup> .....	1,349.31	Segis Pietertje Prospect 221846.....	37,381
Daisy Aaggie Ormsby 3d 571569.....	1,286.23	Helm Veeman Woodcrest 486877.....	36,218
May Walker Ollie Homestead 300043.....	1,218.59	Kolrain Marion Finderne 317396.....	35,340
Hollywood Lillith Palmyra Abbekerk 400491.....	1,206.79	Kolrain Finderne Bess 291570.....	35,085
Duchess Skylark Ormsby 124514.....	1,205.09	Kathleen Triumph 1032712.....	34,972
Carnation Walker Hazelwood 834565.....	1,198.85	Nooksack Lunde Oregon De Kol 301119.....	34,511
Bess Johanna Ormsby 263431.....	1,198.09	Queen Carlotta De Kol 311674.....	34,430
Redfield Segis Johanna 735950.....	1,182.93	Adirondac Wietske Dairy Maid 204072.....	34,402
Finderne Pride Johanna Rue 121083.....	1,176.47	Grahamholm Colantha Pauline Segis 405465.....	34,292
Queen Bessie Pietertje Ormsby 648084.....	1,172.75	Princess Aaggie Polkadot De Kol 372024.....	34,071

<sup>1</sup> Canadian cow.

#### BULLS

The 10 Holstein-Friesian sires having the largest number of daughters with yearly records, up to January 1, 1931, are listed below.

#### Ten Holstein sires with the largest number of yearly-record daughters

Sire	Number of daughters	Sire	Number of daughters
King of the Ormsbys 178078.....	108	Dutchland Colantha Sir Inka 50699.....	74
Matador Segis Walker 148839.....	97	Judge Segis 80912.....	74
Sir Inka Prilly Segis 80914.....	80	Sir Johanna Fayne 42147.....	73
King Segis Alcartra Prilly 192705.....	79	Colantha Sir Walker Korndyke 95460.....	70
King Pontiac Champion 53418.....	75	Sir Pietertje Ormsby Mercedes 44931.....	70

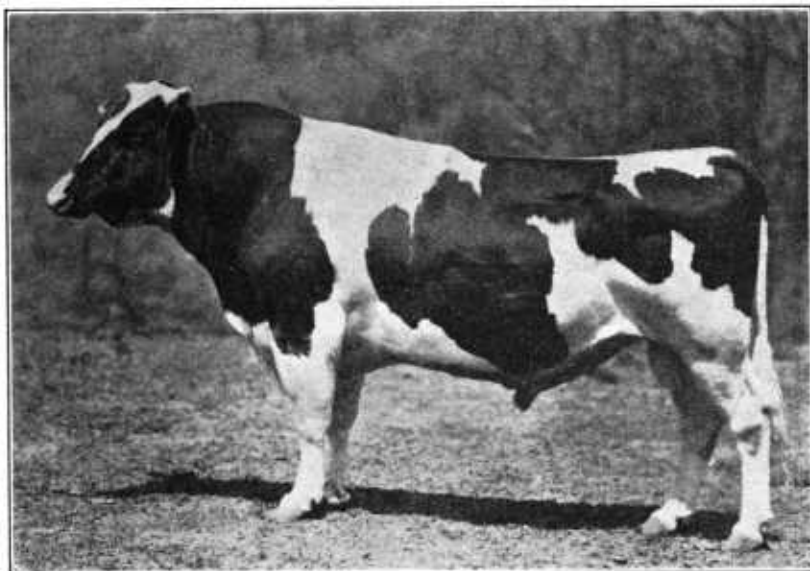


FIGURE 16.—Holstein bull, King of the Ormsbys 178073. He has 108 yearly-record daughters in the Advanced Register

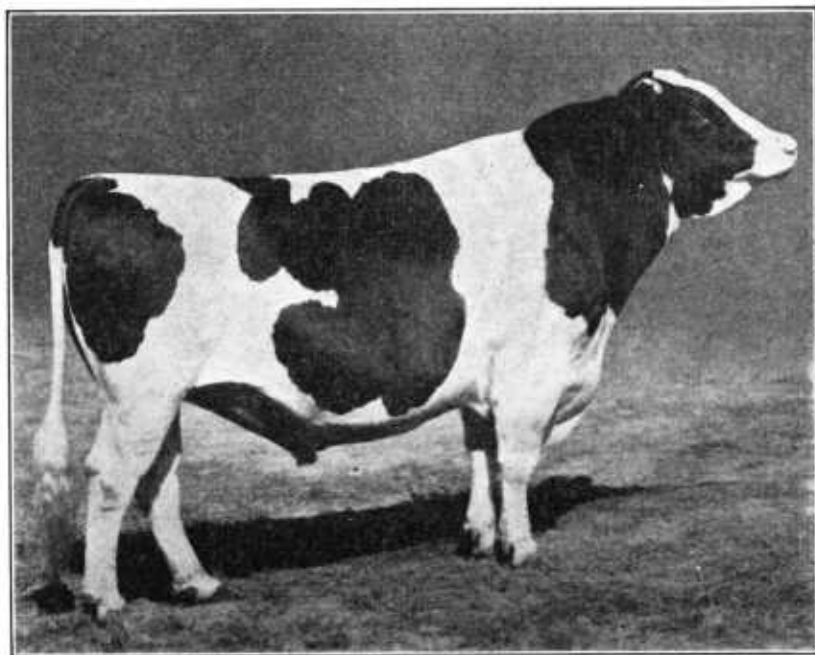


FIGURE 17.—Holstein bull, Sir Fobes Ormsby Hengerveld 412147. Grand champion, National Dairy Show, 1930

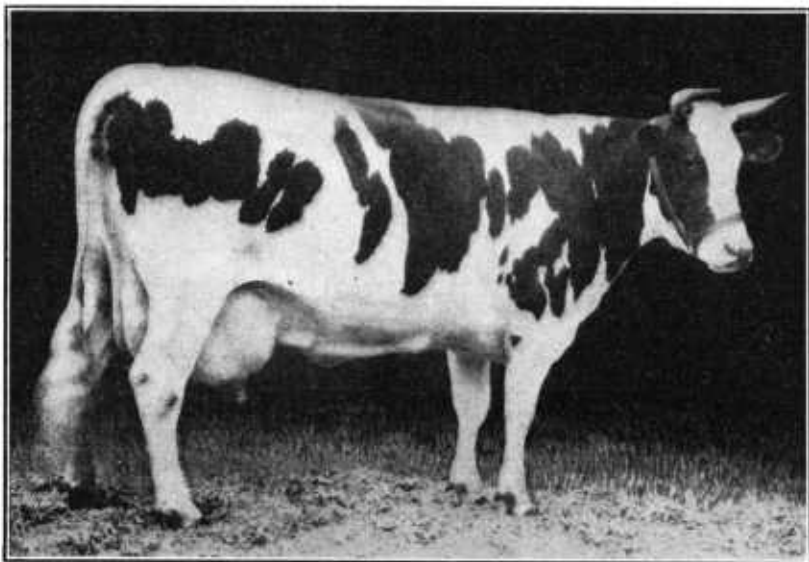


FIGURE 18.—Holstein cow, Segis Pietertje Prospect 221846. Has highest yearly milk record of all the breeds

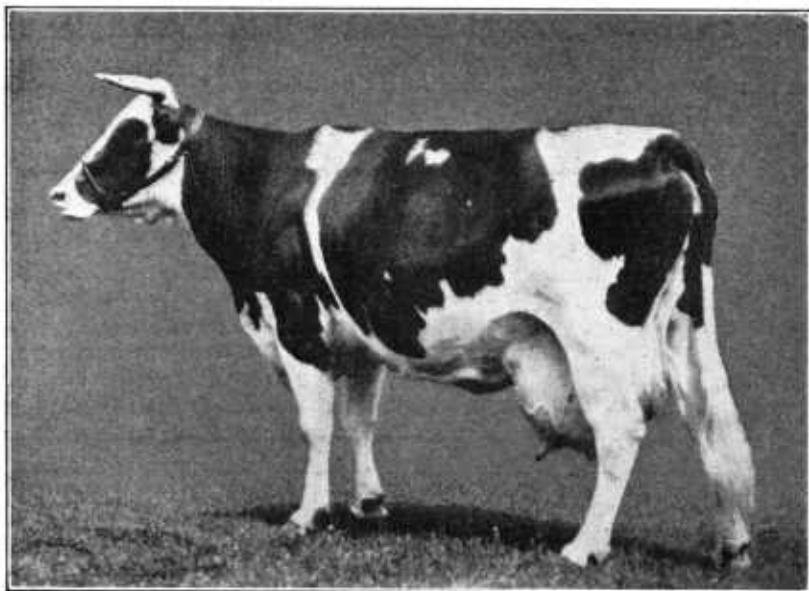


FIGURE 19.—Daisy Aaggie Ormsby 3d 571569. Has highest yearly butterfat record of all the breeds in the United States

**JERSEY****ORIGIN AND HISTORY**

The Jersey breed originated in the Island of Jersey, one of the group of Channel Islands, between England and France. In 1789 a law was passed prohibiting the importation of cattle into Jersey Island except for immediate slaughter. Shortly afterwards the cattle on that island became known by the name of Jersey instead of Alderney. No outside blood has been introduced since that time.

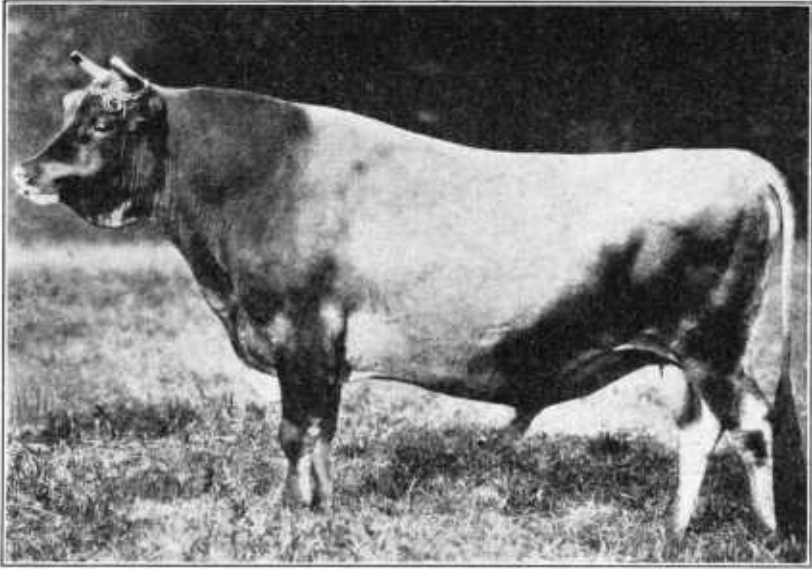


FIGURE 20—Jersey bull, Dairylike Majesty 198188. He has 126 daughters in the Register of Merit

**IMPORTATION AND DISTRIBUTION**

The first importation of Jerseys into the United States was made in 1850. A few more were brought over about 20 years later, and from 1870 to 1890 there were numerous importations. Since 1890 many Jerseys have been imported every year.

The Jerseys are more evenly distributed in the United States than any other breed. There were about 232,000 registered and about 9,300,000 grade Jerseys in this country in 1920, well scattered throughout all the 48 States. It is estimated that on January 1, 1931, there were about 371,000 registered Jerseys in the United States.<sup>6</sup>

**GENERAL CHARACTERISTICS**

The Jersey is the smallest of the breeds discussed in this bulletin. The calves weigh from 40 to 75 pounds at birth. The heifers develop rapidly and mature sufficiently to drop the first calf at 24 months of age. The mature cows weigh from 700 to 1,200 pounds, averaging about 900 pounds, and the bulls weigh from 1,200 to 1,800, averaging about 1,500 pounds.

The color of Jerseys is usually some shade of fawn or cream color, though different shades of mouse color, gray, and brown are common and some individuals approach black. They may be solid color of

<sup>6</sup> See footnote 1, p. 6.

any of these shades, or spotted with white. The muzzles and tongues are usually black or lead colored, but light-colored tongues are not uncommon, and around the muzzle is a white or mealy ring.

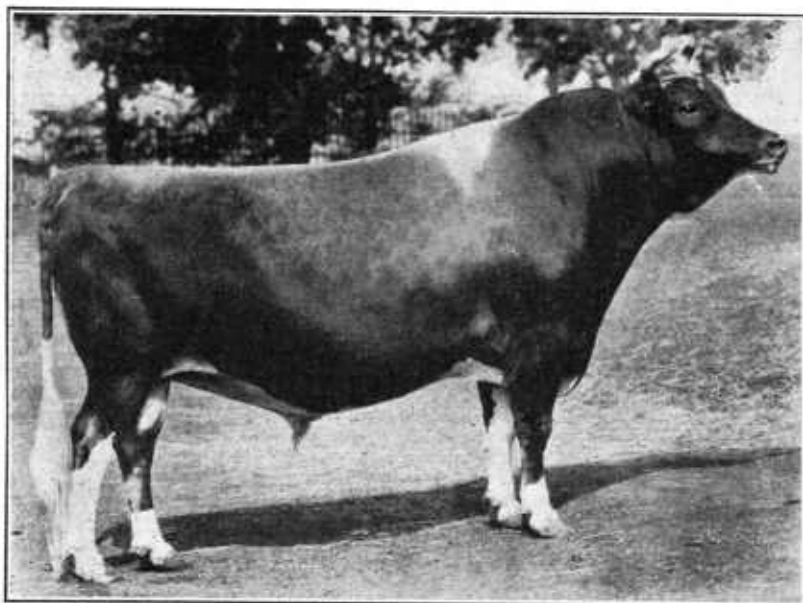


FIGURE 21.—Jersey bull, February Fern's Noble 308129. Grand champion, National Dairy Show, 1930

*Scale of points for Jersey cow*

DAIRY TEMPERAMENT AND CONSTITUTION

Head, 7:		
A.	Medium size, lean; face dished; broad between eyes; horns medium size, incurving-----	3
B.	Eyes full and placid; ears medium size, fine, carried alert; muzzle broad, with wide-open nostrils and muscular lips; jaw strong----	4
Neck, 4:		
	Thin, rather long, with clean throat, neatly joined to head and shoulders..	4
Body, 37:		
A.	Shoulders light, good distance through from point to point, but thin at withers; chest deep and full between and just back of forelegs--	5
B.	Ribs amply sprung and wide apart, giving wedge shape, with deep, large abdomen, firmly held up, with strong, muscular development..	10
C.	Back straight and strong, with prominent spinal processes; loins broad and strong-----	5
D.	Rump long to tail setting, and level from hip bones to rump bones..	6
E.	Hip bones high and wide apart-----	3
F.	Thighs flat and wide apart, giving ample room for udder-----	3
G.	Legs proportionate to size and of fine quality, well apart, with good feet, and not to weave or cross in walking-----	2
H.	Hide loose and mellow-----	2
I.	Tail thin, long, with good switch, not coarse at setting on-----	1
	MAMMARY DEVELOPMENT	
Udder, 26:		
A.	Large size, flexible, and not fleshy-----	6
B.	Broad, level or spherical, not deeply cut between teats-----	4
C.	Fore udder full and well rounded, running well forward of front teats..	10
D.	Rear udder well rounded, and well out and up behind-----	6
Teats, 8:		
	Of good and uniform length and size, regularly and squarely placed----	8
Milk veins, 4:		
	Large, long, tortuous and elastic, entering large and numerous orifices..	4

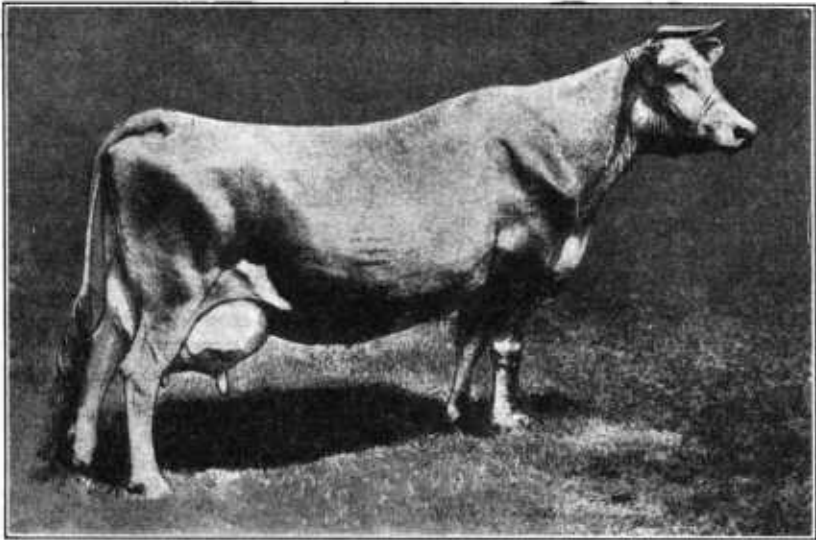


FIGURE 22.—Jersey cow, Abigail of Hillside 457241. Champion milk and butterfat producer of the breed

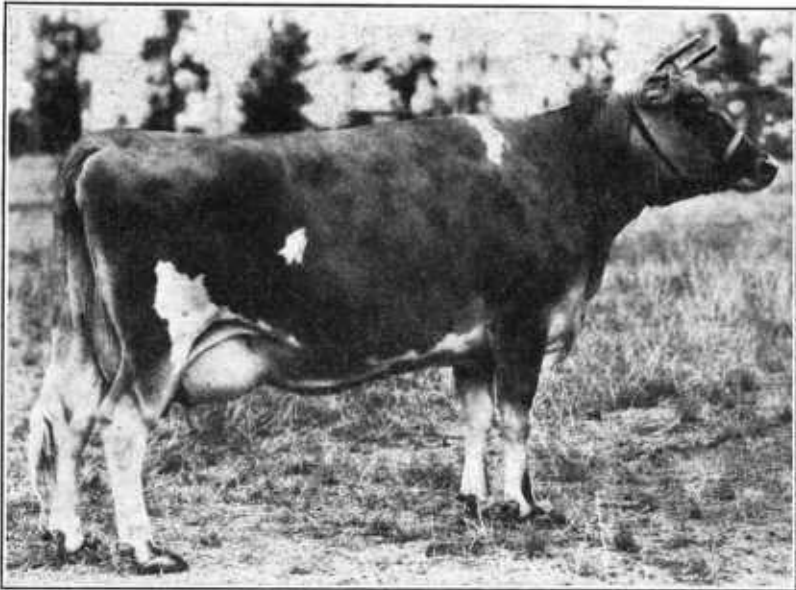


FIGURE 23.—Jersey cow, Blonde's Cuning Mouse 657030. Grand champion, National Dairy Show, 1930

SIZE AND GENERAL APPEARANCE

Size, 4:		
Mature cows, 800 to 1,000 pounds.....		4
General appearance, 10:		
A symmetrical balancing of all the parts, and a proportion of parts to one another, depending on size of animal, with the general appearance of a high-class animal, with capacity for feed and productiveness at pail.....		10
Total score.....		100



## PRODUCTION

Jersey milk is yellow and rich in butterfat. To January 1, 1931, 43,983 Register-of-Merit yearly records had been completed by Jersey cows. The average of these records made by cows of all ages in both the 305 and 365 day divisions is 454.80 pounds of butterfat and 8,492 pounds of milk a year, with an average test of 5.36 per cent. Of this group, 26,068 were 365-day records that averaged 480.48 pounds of butterfat, and 8,960 pounds of milk. The 305-day records averaged 420.46 pounds of butterfat, and 7,886 pounds of milk.

The 10 highest butterfat and milk producers among the Jerseys are listed below:

*Ten highest Jersey yearly butterfat and milk production records in the United States*

Butterfat production		Milk production	
Cow	Butterfat	Cow	Milk
	<i>Pounds</i>		<i>Pounds</i>
Abigail of Hillside 457241.....	1,197.51	Abigail of Hillside 457241.....	23,677
Darling's Jolly Lassie 435948.....	1,141.28	Madeline of Hillside 389336.....	20,624
Groff's Constance 367292.....	1,130.09	Fauvic's Star 313018.....	20,616
Prince's Emma of H. S. F. 359390.....	1,109.99	Fauvic Ruth 385463.....	19,805
California's Rinda's Insie 565559.....	1,073.41	Passport 219742.....	19,695
Imp. Cancalaise 696129.....	1,072.37	Red Lady 396118.....	19,608
Lad's Iota 350672.....	1,048.07	Sybil's Miss May 477787.....	19,239
Fauvic Ruth 385463.....	1,047.28	Lad's Likeness 338246.....	19,223
Imperial Isabel 447661.....	1,045.14	Eminent's Jimp's Owl 297471.....	19,099
Madeline of Hillside 389336.....	1,044.05	Raleigh's Torono's Meme 544207.....	19,076

## BULLS

The 10 Jersey sires having the largest number of daughters with official yearly records, up to March 31, 1931, are listed below:

*Ten Jersey sires with largest number of daughters in Register of Merit*

Sire	Number of daughters	Sire	Number of daughters
Dairylike Majesty 198148.....	126	Royal Majesty of St. Cloud 89541.....	83
Pogis 99th of Hood Farm 94502.....	121	Hood Farm Pogis 9th 55552.....	79
Sophie 19th's Tormentor 113302.....	101	Hood Farm Torono 60326.....	73
Sybil's Gamboge 174663.....	88	Spermfild Owl's Progress 163331.....	71
Imported Oxford You'll Do 111860.....	84	Imported Golden Fern's Noble 145762.....	66

## BREED ASSOCIATIONS

The various breed associations and clubs maintain offices and forces whose duty it is (1) to keep the herdbooks for their respective breeds; (2) to keep a record of the animals that have qualified for the additional registration because of meritorious performance; and (3) to further the interest of the breed in other ways. The official names of these organizations and their addresses are as follows:

- American Guernsey Cattle Club, Peterboro, N. H.
- American Jersey Cattle Club, 324 West Twenty-third Street, New York City.
- Ayrshire Breeders' Association of the United States of America, Brandon, Vt.
- Brown Swiss Cattle Breeders' Association, Beloit, Wis.
- Dutch Belted Cattle Association of America, Rockville, Conn.
- Holstein-Friesian Association of America, Brattleboro, Vt.