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# Canadian Dairy Cattle

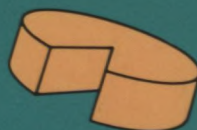
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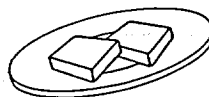
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# Canada



# Canadian Dairy Cattle

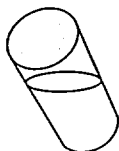


Canada  
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Cattle.

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# Canada

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## Canadian Dairy Cattle

Canada is an internationally recognized source of superbly efficient, quality dairy cattle.

In terms of health and productive efficiency, the Canadian herd is a major source of breeding stock, with Canadian Holsteins purchased by progressive breeders in over 70 countries. Canadian Jerseys, Guernseys, Ayrshires and Brown Swiss are also in strong demand in world markets and are prized for their efficiency and excellence of type.

This recognition has been achieved through the ability and initiative of Canadian breeders and exporters and the development of one of the best dairy cattle improvement systems in existence.

Government, university and breed association programs devoted to animal health, performance testing and recording, sire evaluation, pedigree recording and type classification all contribute to Canada's pre-eminent position in export markets.

Discriminating buyers throughout the world find in Canadian cattle a depth of good breeding unequalled by many other source countries. Soundness of pedigree and reliability of production records are unquestioned.



### Soundness of Pedigree

The reliability of the Canadian pedigree is recognized internationally.

The formation of breed associations and the registration of purebred livestock is controlled under the Animal Pedigree Act. The Holstein Association conducts its own registrations and the other associations use a central recording organization, the Canadian National Livestock Records.

Extended pedigrees provided on request contain detailed information on production and type classification of the animal and its ancestors. They are generated by the breed association and ensure accuracy and completeness. Foreign buyers can be confident in the quality of the animals being purchased.



### Animal Health

Canada is free of serious livestock diseases such as foot-and-mouth disease and rinderpest. The Animal Disease and Protection Act and Regulations provides controls to ensure that these diseases will never become established in Canada. If they should appear, the Act provides for their eradication through immediate slaughter and strict quarantine procedures. Quarantine stations are located at Mirabel, Quebec and Edmonton, Alberta. There is a maximum security quarantine station on Grosse Ile, Quebec, in the St. Lawrence River, which handles cattle from high-risk countries.

Canada's national veterinary service, with approximately 7 000 veterinarians, attends to the needs of all cattle-farming areas. Agriculture Canada's Food Production and Inspection Branch employs 500 veterinarians full time. The remainder are in private practice and ensure the Canadian farming community of up-to-date services and advice necessary to maintain day-to-day animal health.

Canada became officially free of brucellosis in 1985. Surveillance for the disease at livestock markets and abattoirs will continue until at least 1990, as will testing of milk. Canada is one of only six countries to have achieved complete eradication of brucellosis.

Animals are inspected for tuberculosis at routine slaughter, and herds of origin are traced from animals with lesions. If the disease is found, affected herds are completely depopulated. Canada expects to be free of tuberculosis by the end of 1986.

### Registration by Breed

	1981	1982	1983	1984	1985
<b>Ayrshire</b>	11 169	11 777	10 814	11 209	10 733
<b>Brown Swiss</b>	1 188	1 239	1 524	1 347	1 571
<b>Canadienne</b>	590	622	476	559	411
<b>Guernsey</b>	2 195	2 214	1 999	2 272	1 903
<b>Holstein</b>	127 072	140 564	158 472	145 881	149 014
<b>Jersey</b>	6 684	6 625	7 032	6 728	8 092
<b>Total</b>	148 898	163 041	180 317	167 996	171 724

Animals are inspected for tuberculosis at routine slaughter, and herds of origin are traced from animals with lesions. If the disease is found, affected herds are completely depopulated. Canada expects to be free of tuberculosis by the end of 1986.

All tests required by countries importing cattle from Canada are performed by Agriculture Canada's veterinarians or practising veterinarians accredited by that department's Food Production and Inspection Branch, with samples and specimens tested at a federal Animal Pathology Division laboratory.

This painstaking application of modern veterinary science enables the most discriminating importers to buy from the Canadian herd with complete confidence in the health of their purchases.

#### **Performance Testing Programs**

Performance testing has been available in Canada since the early part of this century. These programs have been used extensively for selecting and improving Canadian dairy cattle.



#### **Standards**

To maintain the high level of accuracy and reliability in the system, all Canadian milk recording programs are required to meet the standards established by the Canadian Milk Recording Board, a producer-government-breed association board. The standards include compulsory rotation of the field inspection staff at least semi-annually, 48-hour certification tests for high-producing animals, and stringent checking of animal identification, milk measuring devices and milk analysis equipment. These standards are monitored on a regular basis by Agriculture Canada personnel.

In Canada, emphasis has been placed on supervised testing with special checks to ensure the accuracy of the performance records. Inspection data are collected by full-time independent employees who make unannounced visits 11 to 12 times annually. Butterfat and protein tests are performed on all samples and an optional somatic cell count test is available to monitor mastitis on each cow. Herd owners are required to enroll their entire herd of milking-age cows and every cow must be identified with her registration paper or National Identification Program (NIP) certificate.

#### **Breed Class Average (BCA)**

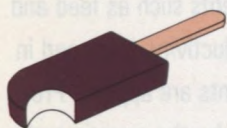
A useful feature of Canadian records is the Breed Class Average (BCA) index. This index compares each cow's yield to a national standard for each age at calving to the nearest month and for the month of the year that the cow calves.

This provides a useful index to compare cows of different ages and cows of the same age that calve in different months of the year. The index is expressed as a percentage of the average yield of all cows for each age and month of calving group that completed records between 1948 and 1952. This system was first adopted in 1954.

#### National Identification Program (NIP)

Canada initiated a system for identifying non-pedigree animals in 1972 known as the National Identification Program (NIP). This is administered by the Joint Dairy Breeds Committee. The system was introduced to permit non-registered cows enrolled in milk recording to have national unique numbers so that the records could be useful for evaluating sires. The numbering system used includes a six-or-seven-digit number with an alphabetic suffix whereby a "U" identifies animals with an unknown birthdate or an unknown sire. The first generation with a known sire and birthdate and true breed characteristics is identified with an "A" suffix, second generation with a "B" suffix, etc.

Over 100 000 new cows and calves are identified by this method each year.



#### Sire Evaluation

All supervised records in Canada are utilized by Agriculture Canada to compute sire evaluations and cow indexes. These genetic evaluations are updated semi-annually. The methodology used is the Best Linear Unbiased Prediction (BLUP) method. Sire proofs are based on first lactation records and each proof is compared to a five-year moving base that is updated annually. An official proof is published for bulls with a repeatability of 55 percent or more and daughters in five or more herds. Evaluations for milk, fat, and protein yields are expressed in BCA indexes as deviations from the rolling base. Fat and protein percent deviations are also computed. About 1 300 active bulls are published with each run. Active bulls are defined as bulls with semen available from an artificial insemination centre or having one or more new daughters in the latest evaluation.

#### Cow Evaluation

An estimated Breeding Value Index, commonly known as a Cow Index, is computed semi-annually for all active cows that are performance tested with supervised records. Information on each cow's daughters and sisters is used as well as the sire and dam ratings in order to provide as accurate a rating as possible. The Cow Indexes are also expressed in BCA indexes as deviations from the same five-year rolling base that is used for sires. Indexes are computed on about 510 000 active cows each run, and this information is provided to the owner and also to breed associations for their breed improvement programs. The artificial insemination centres receive a list of the highest-rating cows along with their type classification score in order to identify superior bull dams in their ever-searching quest to make the best better.

**Number of Supervised Records  
Certified in Canada by Breed, 1982-1984**

	1982		1983		1984	
	Reg	NIP	Reg	NIP	Reg	NIP
<b>Ayrshire</b>	20 077	2 151	20 380	2 248	20 639	2 779
<b>Brown Swiss</b>	811	44	840	44	1 132	345
<b>Canadienne</b>	1 467	26	1 308	17	1 243	9
<b>Guernsey</b>	4 141	57	3 865	65	4 050	526
<b>Holstein</b>	184 745	38 226	194 807	43 169	240 113	82 180
<b>Jersey</b>	10 778	156	10 953	239	11 915	1 398
<b>Total</b>	<b>222 019</b>	<b>40 660</b>	<b>232 153</b>	<b>45 722</b>	<b>279 092</b>	<b>87 237</b>

### Artificial Insemination (AI)

Artificial insemination (AI) is used extensively by Canadian dairy cattle breeders as about 90 percent of the calves registered each year are the result of AI services. There is a strong demand for superior proven AI sires. To meet this demand Canadian AI businesses conduct Young Sire Proving Programs whereby specially selected young bulls are sampled in many herds for a short period of time. The number of young bulls tested per year has doubled in the past five years and has reached a level of about 325.

After the sampling period, they are then withdrawn from service until the performance and conformation of the daughters are known. Sires with proven superiority are then returned to wide usage.

This process of selecting, sampling and culling all except superior bulls ensures that the best genetic material is being transmitted and dispersed through Canadian herds.

### Embryo Transfers

Another tool for genetic advancement is embryo transfers. Embryo transfer technology is relatively new, but it is without doubt state of the art in Canada. For many years, breeders have had access to superior quality genetic material through frozen semen, but there is access to only one side of the pedigree, i.e. the sires. Now through embryo transfers, either fresh or frozen, access is possible to both sides of the pedigree, i.e. the dams as well as the sires.

### General Progress

All breeds had a significant genetic improvement during the past 10 years. The average rate of improvement exceeded 120 kg of milk per cow per year or more than 1 200 kg for the period, while the butterfat test remained about even.

### Relation of Genetic Quality to Cost of Production

In all countries the cost of producing milk is influenced (a) by the costs of various requirements such as feed and labour and (b) by the degree of productivity developed in the cattle to which these requirements are applied. Productivity is limited to the levels set by the genetic make-up of the cattle. There is, therefore, a point beyond which production costs cannot be significantly reduced through management. The producing efficiency of a dairy herd is governed by two main factors:



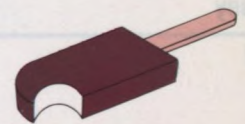
1 388  
87 521

11 818  
328 323

48 722  
323 183

Number of Supervised Records Certified in Canada by Breed, 1982

Breed	1982
Ayrshire	20 073
Brown Swiss	44
Canadiana	1 987
Guernsey	4 141
Holstein	104 745
Jersey	10 778
Total	225 018



### 1. Management

- (a) nutrition
- (b) breeding efficiency (early calving and regular yearly calving)
- (c) animal health
- (d) selection programs
- (e) milking procedures and general care

### 2. Genetic Potential of the Individuals in the Herd

If management levels are not a limiting factor, the dairy cow is allowed to display its genetic potential. Those with higher potentials will outproduce their counterparts.

In many areas of the world where herd management techniques have been improved and veterinary techniques for the maintenance of animal health have been developed, it is now possible, by introducing cattle with a high genetic potential for milk production, to reduce the per-unit cost of production.

It cannot be overemphasized that an investment in sound breeding stock under these conditions can lower or help control production costs throughout the life of any dairy enterprise.





## Type Standards

### *Relationship of Type to Productive Capacity and Longevity*

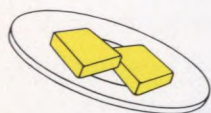
Since the raising of replacement heifers is costly, the longer the average productive life of the herd, the more economical production will be. Type must allow for ease of calving as well as ability to produce at a high level for long periods of time.

A major step towards setting a national-type standard in Canada was the development of the True Type cow and bull models. Committees for each dairy breed studied the best animals available and, through the combined efforts of a sculptor and artist, developed the True Type models.

A second major step was the uniform dairy cow score card developed to blend utility and beauty in Canadian dairy cattle. This score card is applicable to all dairy breeds and emphasizes various parts of the animal in accordance with experience in breeding efficient dairy cattle.

To encourage improvement of both type and production, official classifiers are employed by the breed association to classify cattle at regular intervals at the request of the breeder. Under certain circumstances these classifiers may travel abroad to assist in those countries where Canadian cattle are now performing. Each of the individual breed associations gives recognition for type qualities as well as for production excellence.

A new classification system in Canada, the Linear Type Classification System, allows the classifier to be more accurate in his assessment of individual animals thus enabling more precise cow evaluations and, ultimately, sire summaries. Linear classification refers to the description of physical characteristics from one biological extreme to another, e.g. large to small, wide to narrow, etc. The classifier describes the trait on a scale from 1 to 9. No evaluation is involved, only description.



**HOLSTEIN ASSOCIATION OF CANADA**  
277513  
**TYPE CLASSIFICATION REPORT**

STABLE NAME OR NO. **DELIGHT** OWNER **BRANTFORD HOLSTEINS** DAM **2400631** POST OFFICE **BRANTFORD**

REGISTRATION OR NIP NO. **2778631** SIZE **320022** BIRTH DATE **24 12 80** LACTATION NO. **3** PREY CLASS **GP**

GENERAL CHARACTERISTICS  
STYLE **9 8 7 6 5 4 3 2 1** LACKS STYLE  NOT DESIRED

ANGULARITY DESIRED **9 8 7 6 5 4 3 2 1**

DEFECTS - TICK AS SLIGHT (✓) OR PRONOUNCED (✓)

01	NARROW	03	SHORT	05	WEAK JAW	07	SHORT NECK
02	COARSE	04	WRY FACE	06	LACKS CHARACTER	08	THIN DRY
09	WINGED	11	WEAK CROPS	14	SHALLOW	17	NARROW LOIN
10	HEAVY	12	WEAK BACK	15	NOT WELL SPRUNG	18	LOW
13	NARROW HEART	16	CLOSE HIB				

SHOULDER

19	SHORT	22	NARROW PINS	25	HIGH	28	RIGID
20	COARSE PELVIS	23	WRY TAIL	26	COARSE	29	RECESSED
21	HIGH PELVIS	24	LOW THURLS	27	ADVANCED	30	ADVANCED ANUS

FEET-REAR

31	WEAK PASTERN	34	CRAMPY	37	FEET-FRONT	39	TOES OUT
32	LACKS BONE	35	THICK THIGHS	38	OPEN TOED	40	OPEN TOED
33	CLOSE SOCKS	36	CHARGE SOCKS				

TEATS

41	TOO DEEP	46	QUARTER	51	CLOSE SIDE	56	BLIND
42	TILTED	47	HARD REAR ATT	52	WEDGED	57	SIDE LEAK
43	HEAVY FORE	48	BULGY FORE	53	FRONT LONG	58	REAR LONG
44	FRONT UNBAL	49	REAR UNBAL	54	FRONT FUNNEL	59	REAR FUNNEL
45	FRONT SHORT	50	REAR SHORT	55	FRONT NOT PLUMB	60	REAR NOT PLUMB

FINAL CLASSIFICATION

CLASS	SCORE	NO.	DATE	YEAR	REG. CANT. CANCELLED	CHARGE UNIT
<b>VG</b>	<b>87</b>	<b>70</b>	<b>10 06 85</b>	<b>85</b>		

COMMENTS

REV. 10/82

### Sire Appraisal Regarding Type of Offspring

The Department of Animal Science at the University of Guelph, in Canada's province of Ontario, conducts a detailed analysis of type characteristics of the progeny of bulls. This information is gathered from official classification forms and distributed throughout Canada.

Bulls of the Holstein, Ayrshire and Guernsey breeds are reported on the percentage of their daughters that are graded Good Plus, Very Good, and Excellent in the final class rating. The Canadian Jersey Cattle Club bases its sire comparisons on the average score of daughters rather than the percent of Good Plus or better.

The reports on each sire under each item in all breeds are significant only when compared with the breed average figures that are listed above the sire's summary. It is important to note that bulls are rated on the difference from the rolling breed average and therefore can always be compared to the average of the current population. Revised semi-annually, the reports are available across Canada in editions for each breed.

The published material facilitates corrective mating and improvement and has had a considerable impact on the development and progress of Canada's national herd. These proofs are used extensively by the AI industry in determining which bulls are to be kept and which ones are to be culled.

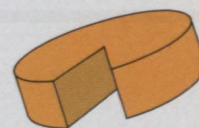
Dairy character – a component of type – is a useful indicator of production and is strongly correlated with genetic productive ability.

Research is constantly underway to find the combination of type characteristics that will allow the highest possible production over the longest period of time.

### Show Ring Standards

The show ring provides the display case for many of Canada's foremost breeders of purebred livestock. It is here that the end products of many years of breeding selection are compared. Judging is based on breed standards as set in True Type models and official score cards.

Productive ability is an integral part of the traditional ring entry requirements. It ensures that the winning animals not only display good type but are capable of producing at a rate commendable for the breed.



### The Canadian Ayrshire

Ayrshires were introduced to Canada in 1821, and an Ayrshire Breeders' Association has existed since 1870. Its prime objective is making accurate registrations, establishing breed standards and improving the productive efficiency of the breed.

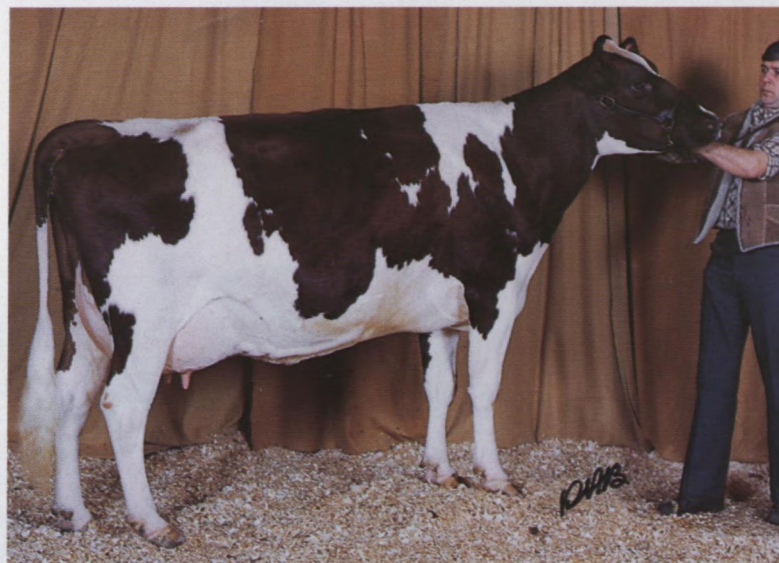
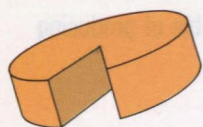
The Ayrshire breed is famous for its hardy, vigorous qualities. It has performed well in the past under adverse conditions and has an established record for longevity, symmetry and high-quality udders, firmly attached – qualities that make it saleable and profitable.

Through the years, Canadian Ayrshire breeders have developed a strain that is more upstanding and angular than the original from Scotland. They have continued to emphasize quality udders along with style and balance, keeping the breed in continued strong demand on the international market.

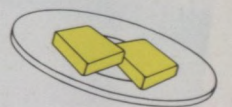
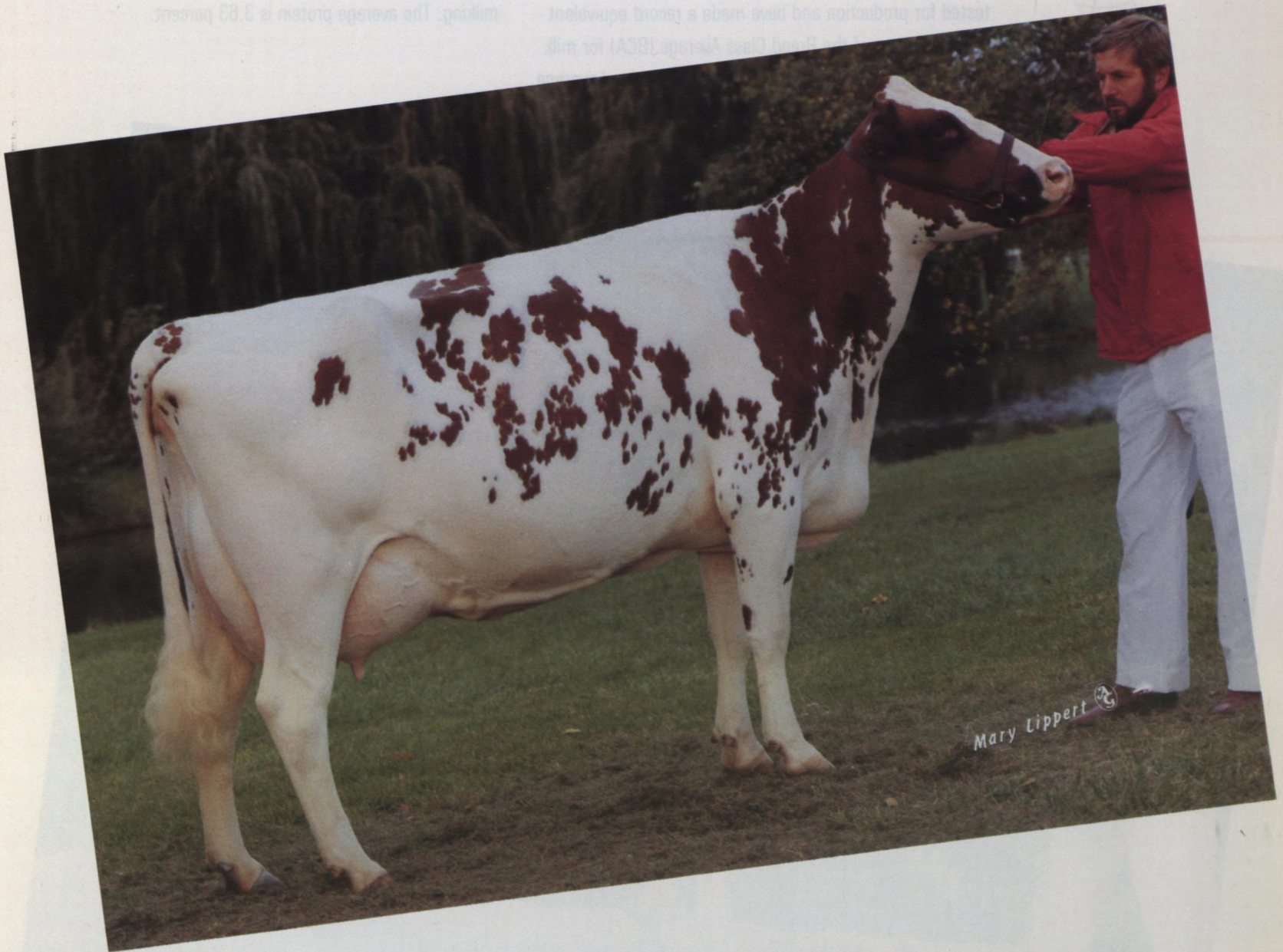
The high solids content of Ayrshire milk makes it ideal for processing into dairy products and for consumption in fluid form and blending with other lower-composition milk to provide products that meet consumer demands. The 1984 national average for all cows on the official testing program is 5 631 kg (12 388 lb) milk and 228 kg (502 lb) butterfat, i.e. 4.05 percent in 305 days on twice-daily milking. The average protein is 3.41 percent.

Over the last 25 years, the average milk production of the Canadian Ayrshire cows on an official milk recording program has increased by more than 50 percent. This is an impressive achievement and represents the most significant improvement in all the Canadian dairy breeds. Progressive Ayrshire breeders have recognized the importance of both type and production and their efforts have been rewarded.

The Ayrshire breeders in collaboration with the artificial insemination centres, have succeeded in testing more young sires than breeders in other Canadian associations in relation to the size of its population. This bodes well for the future of Ayrshires.



**The Ayrshire  
breed is  
famous for its  
hardy, vigorous  
qualities.**



### The Canadian Guernsey

The first recorded importation of Guernseys into Canada was in 1878.

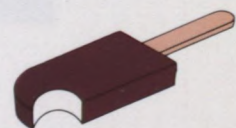
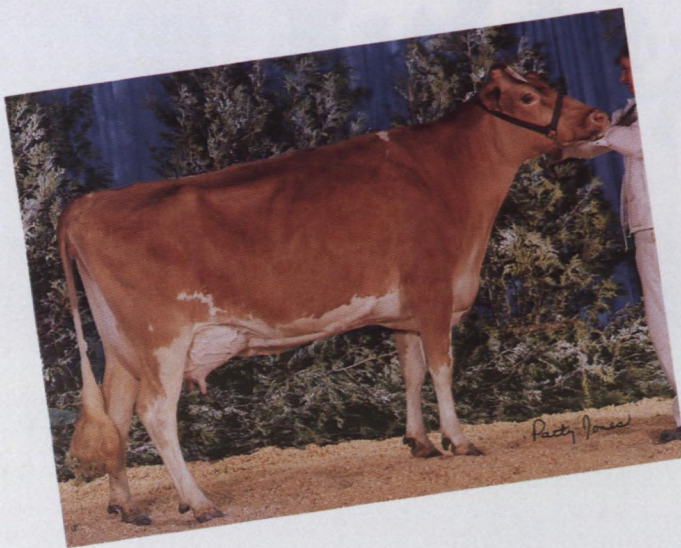
In 1905, the Canadian Guernsey Breeders' Association was organized and incorporated to facilitate registration of progeny and encourage breed improvement and promotion.

All animals sired by a registered Guernsey bull and out of a registered Guernsey female are eligible for registration. Bulls, however, must be out of cows that have been classified Good Plus or better under the approved herd classification program. The dams must also have been officially tested for production and have made a record equivalent to 125 percent of the Breed Class Average (BCA) for milk and butterfat and have a plus deviation to the herd average before the bulls may qualify for registration.

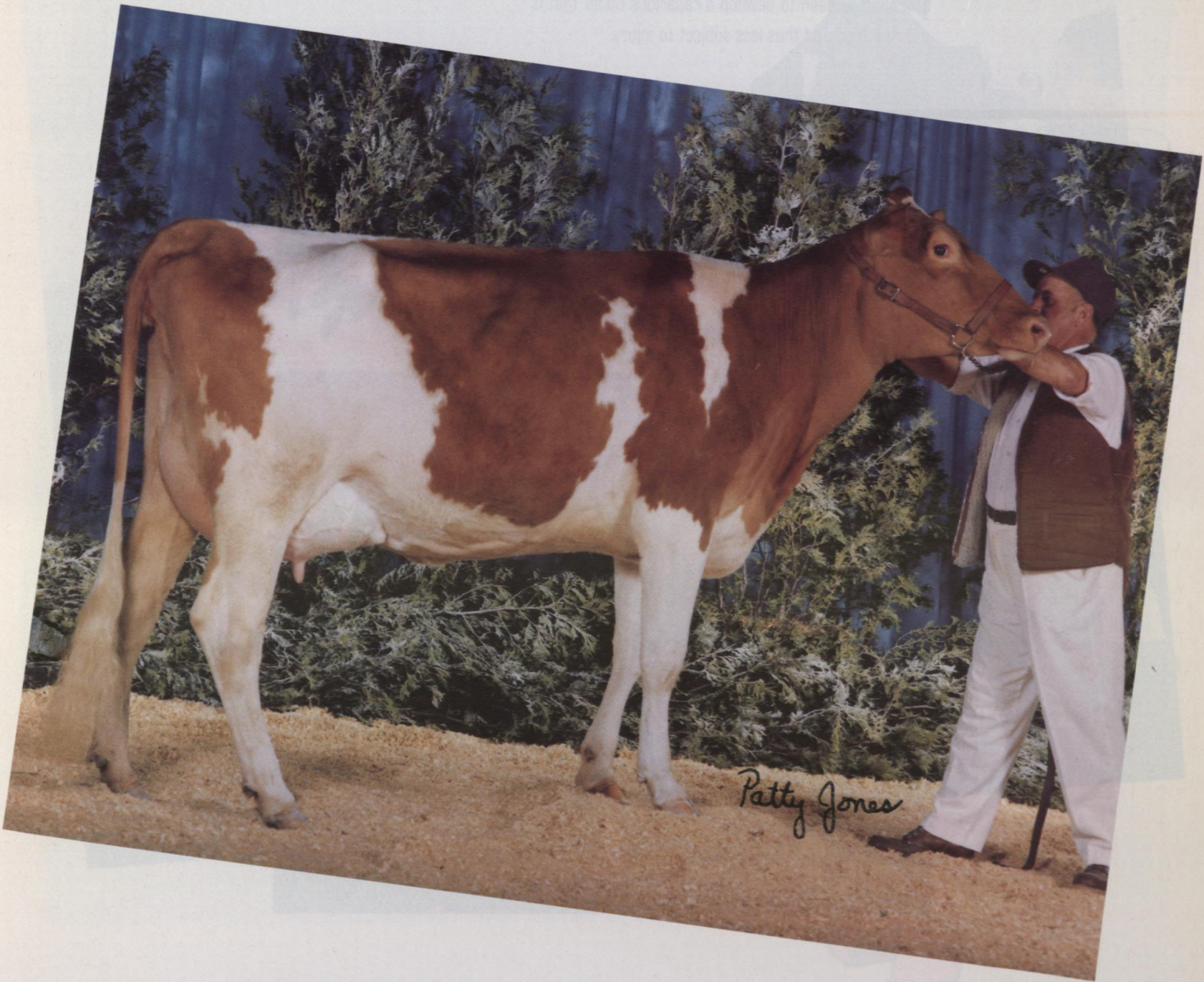
Guernsey milk is popular because of its high carotene content which endows it with an attractive appearance. Its high non-fat solids content includes more protein, more lactose and more minerals than average milk.

Canadian Guernseys have become larger, longer and more upstanding in stature and sharper in dairy character. This has resulted in a cow that will average close to 510 kg (1 300 lb) in weight, stand 135 to 140 cm (54 to 56 in.) high at the withers and has an udder that is well attached and carried above the hocks.

In production, the breed has increased nationally and the BCAs went from 147 for milk and 141 for fat in 1983 to 151 for milk and 145 for fat in 1984. The average production in 1984 for all cows on the official testing program is 5 106 kg (11 233 lb) milk and 245 kg (539 lb) butterfat, i.e. 4.80 percent in 305 days on twice-daily milking. The average protein is 3.63 percent.



**Guernsey milk  
is popular  
because of its  
high carotene  
content.**



*Patty Jones*

### The Canadian Holstein

Holstein cows first arrived in Canada in 1881. The most recent importation was from Holland – ancestral home of the breed – in 1905. Foundation cattle were selected for their large size and excellent milking qualities, and Canadian breeders have since worked to improve these characteristics. The result is a large cow normally weighing about 680 kg (1 500 lb) in milking condition and capable of heavy production.

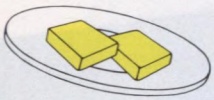
A mature bull should weigh approximately 1 045 kg (2 300 lb) and many reach 1 360 kg (3 000 lb).

Canadian breeders have placed particular emphasis on the development of udders and Canadian Holsteins are now noted for the shape, quality and attachment of the udder. The aim has been to develop a capacious udder that is not too deep and thus less subject to injury.

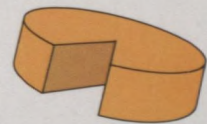
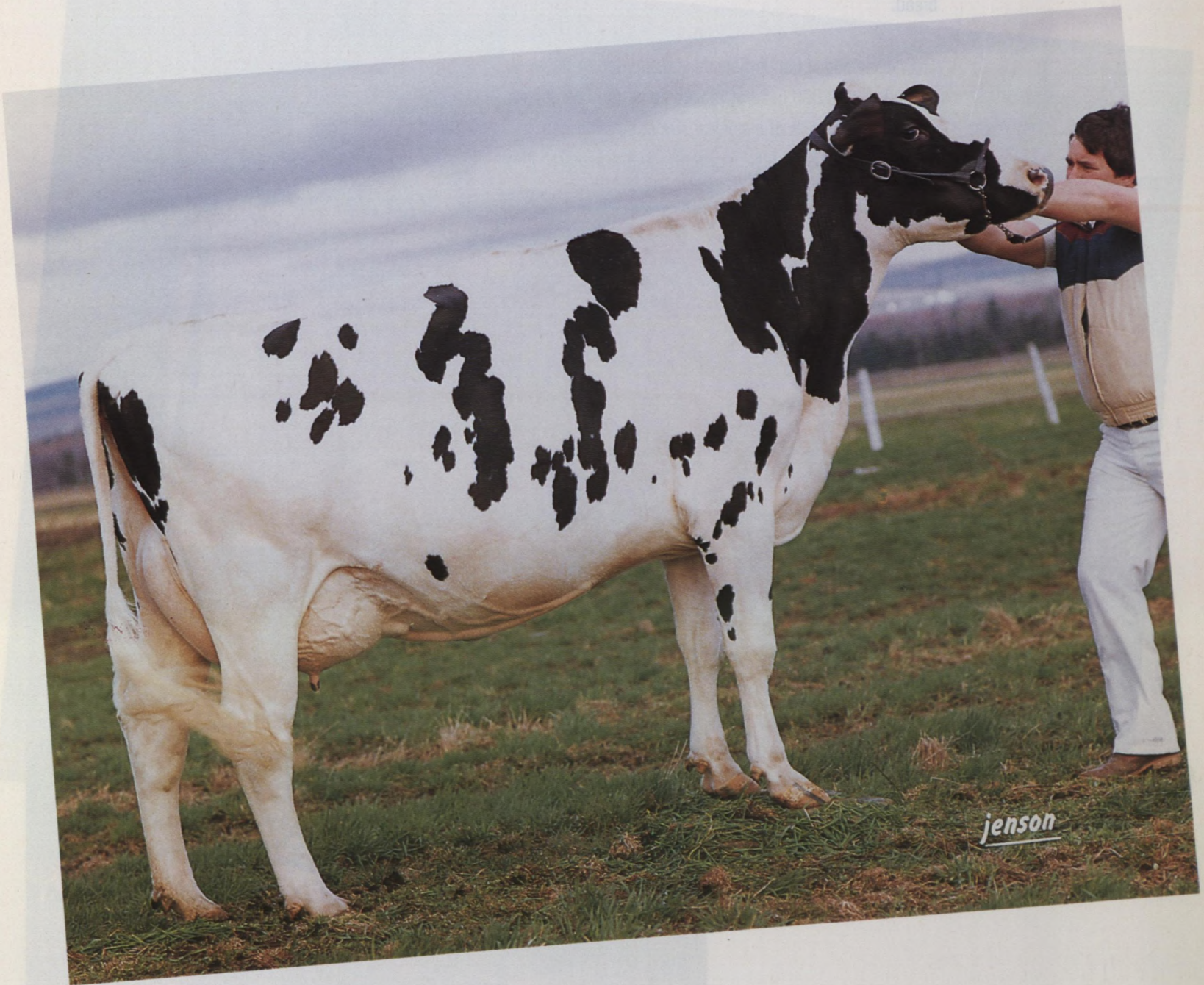
So successful have Canadian breeders been that 88 percent of all production records certified in Canada are now Holsteins. Other countries have been quick to take advantage of Canadian foundation animals and breeding stock has been sold to over 70 countries. Progeny from elite sires are in worldwide demand.

All current Canadian records for milk production are held by Holsteins. This milk-producing ability has made them the most popular choice of breeders who supply the Canadian milk market. The 1984 national average for all cows on the official testing program is 6 842 kg (15 052 lb) milk and 257 kg (565 lb) butterfat, i.e. 3.76 percent in 305 days in twice-daily milking. The average protein is 3.21 percent.

The size and vigour of the breed have made it increasingly popular in dairy beef production. Rapid daily gain has made Holstein bull calves economical in veal production. Holstein steers have also been finding their way into beef feedlots in recent years.



# Holsteins hold all current Canadian records for milk production.





### The Canadian Jersey

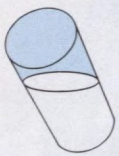
The Canadian Jersey has been developed from imports of superior breeding stock mainly from Jersey with a few from England. These importations started about a century ago, but in more recent times some genetic material has been imported from the United States.

Over 50 years ago, the Canadian cow Brampton Basilua established a world championship butterfat production record of 596.1 kg (1 313 lb) of fat with 8 631.4 kg (19 012 lb) of milk in three-times-daily milking. This amazing record stood for many years and it would be difficult to name any one cow that has made greater contributions to the breed.

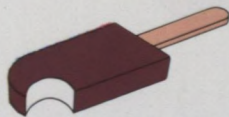
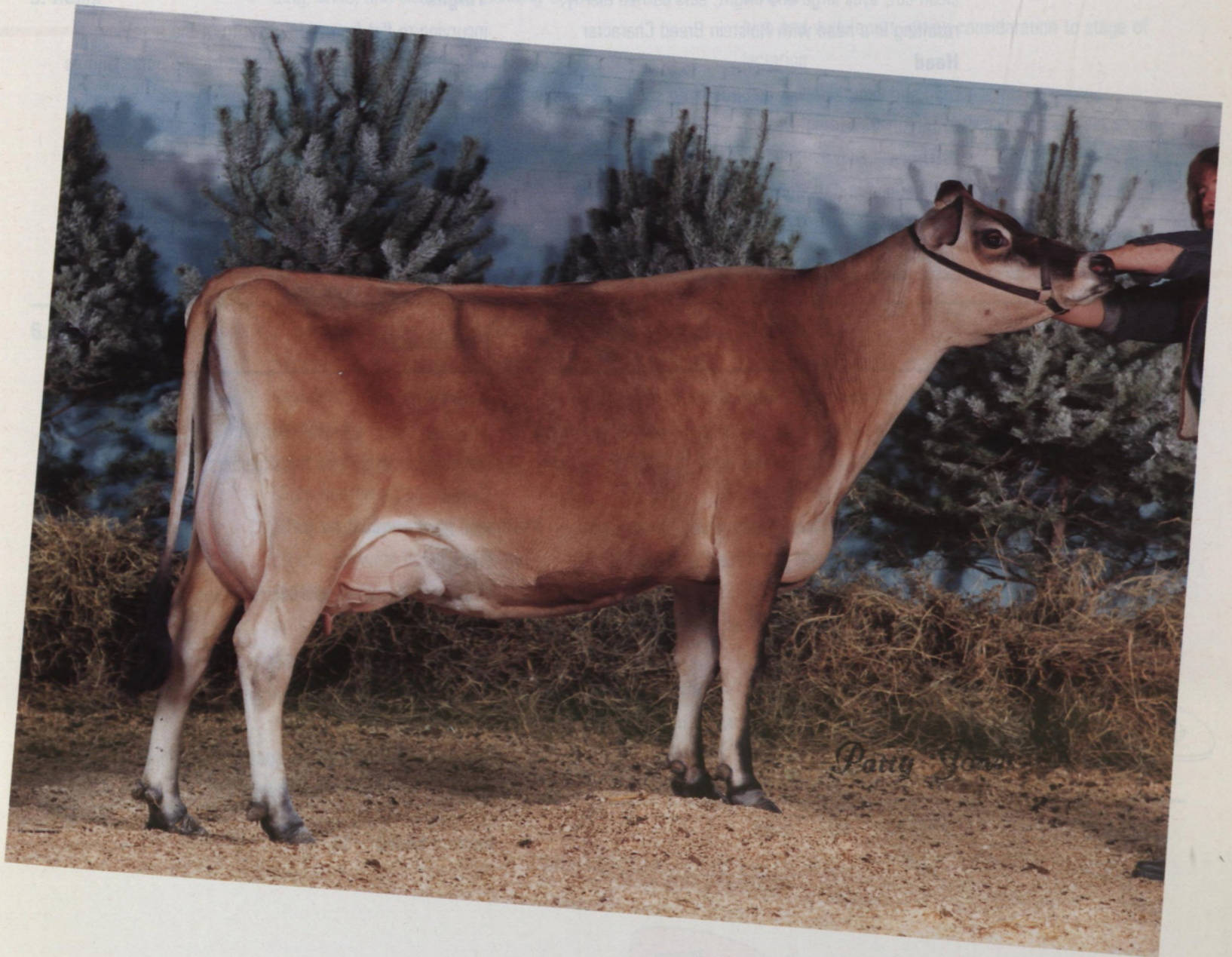
The Jersey population in Canada is estimated at between 35 000 and 40 000 head of registered cattle. The Jersey cow is, on the basis of individual size and weight, an efficient converter of feed into food – her production may vary from 9 to 25 times her body weight.

This breed stands up well to rigorous winters, despite a misleading refinement of appearance: in tropical climates the natural dun or fawn colour protects from heat and direct sunlight, so that production and butterfat content of the milk are maintained at a consistently high level.

High production within the breed is considered of paramount importance. The 1984 national average for all cows on the official testing program is 4 484 kg (9 865 lb) milk and 227 kg (499 lb) butterfat, i.e. 5.06 percent in 305 days in twice-daily milking. The average protein is 3.90 percent.



**The Jersey is  
an efficient  
converter of  
feed into food.**



## Dairy Cow Score Card

### 1. General Appearance

Attractive individuality indicating femininity, vigour, strength, stretch, size, and stature; with harmonious blending and proportional balance of all parts, and impressive

carriage. Consider all parts of a cow in evaluating general appearance

**Perfect score 20**

### 2. Dairy Character

Evidence of milking ability, angularity, and general openness, without weakness; freedom from coarseness, giving due regard to stage of lactation

#### Head

clean cut; eyes large and bright; ears carried alertly; resulting in a head with Holstein Breed Character

#### Head

Long and lean, blending smoothly into shoulder; clean cut about the throat, dewlap, and brisket

#### Withers

well defined and wedge-shaped, with the dorsal processes of the vertebrae rising slightly above the shoulder blades

#### Ribs

wide apart; rib bones wide, flat, and long

#### Flanks

deep and refined

#### Thighs

incurving to flat from side view; from the rear view, wide apart, providing ample room for the udder and its rear attachment

#### Skin

loose and pliable. Hair fine

#### Udder

soft and pliable; free from excess tissue or edema

#### Bone

flat, strong, and clean cut

**Perfect score 14**

### 3. Capacity

Head with adequate strength and size; mid-section relatively large in proportion to size of animal, providing ample capacity, strength and vigour

#### Head

broad muzzle with large, open nostrils; jaws meeting properly; strong lower jaw; broad forehead

#### Shoulder Blades

set smoothly against chest wall and withers, forming neat junction with the body

#### Chest

wide floor, resulting in ample width between legs

#### Heart Girth

large and deep; full at elbows with well sprung fore ribs blending smoothly into the shoulders

#### Crops

well filled

#### Back

strong and straight, with vertebrae well defined

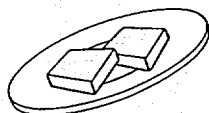
#### Loin

broad and slightly arched; vertebrae well defined; attachment to hip bones high and wide

#### Mid-section

long ribs highly and widely sprung, with depth and width tending to increase toward rear

**Perfect score 14**



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**4. Feet and Legs**

Clean and strong boned, with shape and movement of feet and legs resulting in proper carriage of the animal

**Feet**

short and well rounded, with deep heel; toes slightly spaced

**Legs**

*Pasterns* strong, of medium length, and flexible

*Fore Legs* straight and wide apart, with feet squarely placed

*Hind Legs* nearly perpendicular from hock to pastern from the side view; straight and wide apart from the rear view; hocks cleanly moulded.

*Bone* flat, strong, and flinty, with tendons well defined

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**Perfect score 12**

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**5. Rump**

Long, wide, and clean cut, blending desirably with the loin

**Hips**

wide but not prominent, slightly higher than pins

**Pins**

wide apart and free from patchiness

**Thurls**

high and wide apart, giving consideration to stage of lactation

**Tail-head**

refined, carrying out level with backline and set slightly higher than pins.

**Tail**

long and slender

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**Perfect score 10**

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**6. Mammary System**

A strongly attached, well balanced, level udder of fine texture indicating heavy production and a long period of usefulness

**Udder**

symmetrical, of moderate length, width, and depth; slight quartering on sides

**Median Suspensory Ligament**

strong, showing definite cleavage between halves

**Udder Texture**

soft, pliable, elastic, and well collapsed after milking

**Fore Udder**

firm and smooth attachment to body wall; of moderate length; quarters evenly balanced

**Rear Udder**

attached high, wide, and strong; slightly rounded; uniform width from top to floor; quarters evenly balanced

**Teats**

uniform size, of medium length and diameter, cylindrical, and plumb; from side view teats placed in centre of each quarter, and from rear view teats slightly closer to inside than outside of each quarter

**Mammary Veins**

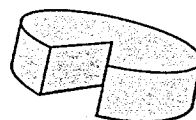
long, tortuous, and branching. Udder veining is desirable

Scores for parts are not assigned in type classification

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**Perfect score 30**

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**Total 100**

### **Sound Investment – High Return**

Highly efficient, disease-free cattle, sound in type and ancestry, can result only from long and widespread application of well-founded exacting principles. Canadian dairy cattle embody these qualities.

Under good management their offspring will deliver high performance through many generations and far into the future. An investment in Canadian breeding stock is an investment in the future – those who buy Canadian, invest wisely.

### **Trade Services**

Canadian government trade commissioners are located at Canadian embassies, high commissions and consulates throughout the world. These officers welcome enquiries and can offer sound advice on trade with Canada, contacts within the industry, travel arrangements, and can provide other assistance to buyers.

In addition, international banking and insurance facilities, animal health inspection services, and livestock transport and documentation services are available on short notice.

### **Dairy Breed Associations in Canada**

#### **Ayrshire Breeders' Association of Canada**

1160 Carling Avenue  
Ottawa, Ontario, Canada  
K1Z 7K6  
Tel: (613) 728-8192

#### **Canadian Brown Swiss Association**

343 Waterloo Avenue  
Guelph, Ontario, Canada  
N1H 3K1  
Tel: (519) 821-2811

#### **Canadian Cattle Breeders' Association**

211 – 12th Avenue South  
Apt. 2  
Sherbrooke, Quebec, Canada  
J1G 2V5  
Tel: (819) 567-1258

#### **The Canadian Guernsey Breeders' Association**

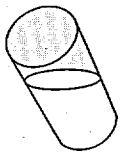
368 Woolwich Street  
Guelph, Ontario, Canada  
N1H 3W6  
Tel: (519) 836-2141


#### **Canadian Jersey Cattle Club**

343 Waterloo Avenue  
Guelph, Ontario, Canada  
N1H 3K1  
Tel: (519) 821-1020

#### **Holstein Association of Canada**

P.O. Box 610  
Brantford, Ontario, Canada  
N3T 5R4  
Tel: (519) 756-8300



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For further information, please contact:

Agriculture, Fish and Food Products Bureau  
Department of External Affairs  
Ottawa, Ontario, Canada  
K1A 0G2

or the nearest Canadian Trade Office

