RED AND WHITE HOLSTEIN HISTORY



Introduction

How did we get a Red and White
Holstein population in North America
when all of their imported ancestors were
Black and White? Frank Decker who
operated Thendara Farm near Syracuse,

New York from 1918 until 1936 provided some insight on the question. Decker had a great interest in Holstein cattle and obtained his first Holsteins from the Gerrit S. Miller herd. The Miller herd was the first herd whose early members were imported (1869-1879) and whose descendents made a permanent contribution to the breed. Decker detailed the history of the Miller herd in several 1920s publications. A lawyer by profession, Decker offered a plausible explanation for the emergence of Red and White Holsteins from an imported population that was all Black and White.

Decker wrote: "Recorded history is short on detail about the dairy population in the Netherlands before the latter part of the 19th century when nearly all of the imports from Holland came to America. At that time, most of the cattle in the Netherlands were black and white, but some were various shades of red, yellow, dun, and grey. There are reports that black did not become the dominant color until the late 1700s when cattle from Denmark were brought in as replacements for those lost due to floods and disease."

Other writers have commented that Dutch paintings prior to the 18th century show cattle with hair coats of various colors, but none were black and white. Dr. D. L. Bakker of the University of Wageningen (cited in E. Y. Morwick's book *The Chosen Breed*) examined many paintings and wrote in *A History of the Dutch*

Cow that no black and white animals appeared prior to the second half of the eighteenth century.

Dr. J.C. Rennie, Professor of Dairy Science at the University of Guelph and chair of the Canadian Holstein committee that studied the color question in the 1960s, said in his report to the Association: "Early records show that cattle of broken colours entered the Netherlands from Central Europe in the 13th century. Most were red and white. Black and whites were not common until the 18th century."

This discussion will center on the migration of the red hair color trait (often abbreviated in the text as *RC) in both the United States and Canadian Holstein populations and its travel across the border between the two countries. The objective is to identify the primary bloodlines and "carrier" animals that kept the trait viable from the early importations until red and white Holsteins were accepted for registration in the herd books of both countries.

The Beginning

Most of the foundation animals of the U. S. Holstein breed were imported between 1869 and 1885. Many times, the importers were neither farmers nor livestock men, but were businessmen who saw a chance for financial gain while improving the dairy stock in North America by importing "Dutch" cattle. A group of early entrepreneurs formed The Association of Breeders of Thoroughbred Holstein Cattle in the early 1870s and in 1872 published the first of nine volumes of the *Holstein Herd Book*. They decreed that animals of any color other than black and white would not be recorded in their herd book. They also decided that the animals would be known as Holsteins. One of their group, Illinois importer George L. Brown, objected and chastised his colleagues by saying that quality and not color should be the criteria for selection. He also maintained that they should have been called 'Dutch' cattle rather than 'Holsteins.' His protests were to no avail.

Another challenge arose when Thomas Whiting of Concord, Massachusetts, imported a number of cattle from Holland in the early 1870s. Those animals that were not black and white were refused entry to the herd book. This caused a disagreement that festered for several years and ultimately contributed to the formation of the Dutch-Friesian Association and publication of four volumes of the *Dutch-Friesian Herd Book*. A compromise was reached in 1885, and the two organizations became one. Named "The Holstein-Friesian Association," it has endured to the present day, although its name has been shortened to "The Holstein Association." A Western Holstein-Friesian Association was formed in 1892, but issued only one herd book and returned to the fold in 1898.

Two Important Herds

Meaningful numbers of cattle came to the United States from Holland in the 1870s and 1880s. Two herds that imported cattle during that period stand out from the rest in terms of their contribution to the breed and especially to the emergence of the "red factor" in the United States and Canada. The Gerrit S. Miller herd of Peterboro, New York, imported only 53 head, but was a key to breed improvement. Miller's animals were the foundation of many herds in New York and other states. Miller bred cattle until his death in 1937 and kept a detailed journal of daily events on his farm. He identified numerous animals that were born red and were either given away or killed. These included calves from some of his most important breeding females. His greatest sale was that of the ten-year-old female *Johanna* to the Gillette herd of Rosendale, Wisconsin. One of her great-grandsons introduced the red trait to Canada in 1901.

The second herd was that of Smiths and Powell of Syracuse, New York, who imported about 1300 head of Holsteins from Holland. They (along with Miller) had a major impact on the fortunes of the breed and were largely responsible for their area of upstate New York becoming known as the "cradle of the breed." Smiths

and Powell's number one contribution to the red trait was *Clothilde*. She was imported as a bred heifer and produced seven daughters, but no sons. She was a red carrier, as were several of her daughters. Her best-known daughter, *Clothilde* 4th, carried the red trait and passed it to her son *Clothilde* 4ths *Imperial*. He sired the bull *Aaggie Cornelia 5ths Clothilde Imperial* (purchased from Smiths and Powell by the Gillette herd of Rosendale, Wisconsin) who had a number of *RC offspring in the Gillette herd. One of the likely carriers was *Johanna Rue the* 4th, dam of the bull that went to Canada in 1901. Many other imported animals undoubtedly carried the trait, but none were as well authenticated as *Clothilde*.

How many imports carried the red trait? An April 2003 *Holstein International* article authored by Doug Savage estimated 25% or more. Dr. Lee Majeskie's work at Kansas State University in the 1960s gave a similar value. Canada's early Holstein population was the result of imports from the United States, so it is reasonable to assume that the percentage of red carriers would be the same for both countries. Only a small number of carriers were identified over the hundred-year span from the early importations until they were accepted into the Canadian and American herd books in 1969 and 1970 respectively. Most of the early accounts of red calves being born to black and white parents were never documented. A few stories of "reds" born to elite parents persist over time, much like the "folklore" that is handed down within our own family histories. A word of caution: we tend to credit the ancestor with the highest (closest) relationship to a red-carrier animal as the one that transmitted the trait. Often times it is the other parental line that has passed it on, even though the ancestor responsible may have entered the pedigree several generations earlier.

Red and White Dairy Cattle Association (RWDCA)

The Red and White Dairy Cattle Society began registry procedures in 1964 in the United States. Its first members were Milking Shorthorn breeders, who wanted a dairy registry for the cattle they had bred in prior years, including some red and

white Holsteins. The name was changed to the Red and White Dairy Cattle Association in 1966. John Gage (Duallyn Farm) of Eudora, Kansas, was a Kansas City lawyer and a principal founder of the breed. He did the legal work required to establish the organization. Gage encouraged both the United States and Canadian Holstein Associations to register Red and Whites for several years before it actually happened. Gage was also president of the American Milking Shorthorn Association. When Milking Shorthorn breeders were looking for potential outcrosses to improve milk production, red and white Holsteins came into the picture. The RWDCA had adopted an "open herd book" policy, and the Red and White Holstein became the major player. After several years with an uncertain future, the RWDCA came under the management of the Elmer Carpenter family of Crystal Springs. Pennsylvania. The present-day breed office and its publication, *The Red Bloodlines*, is managed and edited by John and Joan Carpenter.

Milestones

Larry Moore began to buy and breed Red and White Holsteins in the late 1940s. He advertised regularly for high quality red and whites out of registered stock and purchased many of them from Canadian herds. His first herd sire was *Larry-Moore King*, obtained from Winterthur Farms in 1947. Visitors to the Moore herd in 1951 reported that it contained a number of older cows of Winterthur breeding. Winterthur was well-known as a major source of red in U. S. Holstein circles. Moore called his cattle "Colorsteins" and established his own registration system. He ultimately was able to get his records of parentage accepted and published in the U. S. Holstein Herd Book. The earliest birth date located on a Red and White animal from Moore's records was 1938. Moore was quoted in the July 1951 *Canadian Holstein Journal* as saying that "only the best red and whites have been kept, therefore, they will be better than the black and whites." Moore went on to develop an all Red and White herd and to establish a breeding stud, using many of his own bulls, which operated until his death. He was an aggressive

businessman and contributed to the early formation of the Red and White Dairy Cattle Society.

Harold J. Shaw, while president of the U. S. Holstein Association, addressed the 1952 Canadian Holstein Convention. He told of a sire in an artificial insemination (A I) unit in the states that was a carrier of red coat color. Although the A I unit reported the condition and advised breeders as to its mode of inheritance, almost a third of the breeding unit's Holstein services that year were to that red-carrier bull. U. S. Holstein Secretary Norton also told the Canadian audience that American A I units had used 67 red factor bulls that had sired 8250 registered progeny. This may have been the first time the "red factor" was openly discussed at a Holstein breed convention. However, in spite of the Shaw and Norton remarks, delegates at the 1952 United States Holstein convention rejected any change to the color-marking rules.

How was the red trait able to survive the attempts to eradicate it that came from all sides of the Holstein industry? First, the mode of inheritance: As with any recessive, it is difficult to completely eliminate a trait from a population when it is hidden or masked by the dominant in the heterozygous state. Such is the case in Holsteins, since black is dominant to red, and if an animal inherits a red gene from one parent and a black gene from the other, the calf will have black hair. Sacrificing the red animals seemed like an easy solution to the problem, but breeders could not eliminate what they could not see. The usual way of finding out that an animal was a carrier was when it became the parent of a red calf. Even when the calf was killed or sent to a grade herd, it is unlikely the herd owner did anything to remove the dam from his herd and only hoped that she would not have another red calf. Many red calves, born in both countries prior to the 1970s, were quietly disposed of, even though some had elite pedigrees.

Secondly, thousands of Holsteins were imported from Canada each year, and many were carriers. Canadian Holstein Secretary Clemons reported to his Board

of Directors that more than 14,000 Holsteins were exported to the United States in 1964 and again in 1965. This was at a time when both countries were debating the "red question." While the United States was trying to eliminate the red trait, the Canadian imports simply counter-balanced the U. S. effort to reduce its incidence.

From the beginning, Canada was the main source of breeding stock for U. S. Red and Whites. Norm Williams of Odessa, Missouri, and Larry Moore of Suamico, Wisconsin, regularly advertised in the 1950s in the *Canadian Holstein Journal* for good quality red and white cattle. Stuart Smale, St. Marys, Ontario, was one of the early Canadians to support the new U. S. breed organization. He started a herd in 1955 with the purchase of two cows and by 1973 had a herd of 18 registered Red and Whites. The herd book was "open" as long as a red and white or Holstein sire was used. Don Albrecht of Canada was another early and enthusiastic supporter of the breed in both countries.

Canada's number one "red carrier" sire in the 1940s was *A B C Reflection Sovereign*. His sons and grandsons in the 1950s and 60s spread the red gene throughout Canada and increased its frequency in the United States. Three of the biggest names siring Red and Whites in the United States were *Rosafe Citation R, Roeland Reflection Sovereign,* and *Chambric A B C,* all sons of "ABC." "Citation R" likely had the biggest impact of any red carrier sire in U. S. breeding circles. The November 1962 Canadian A I sire report listed 476 bulls in ten A I units, and 41 were identified as red carriers. The red trait was readily available in Canadian Holstein genetics.

The Debate

Early on, there was criticism of the policy of the Canadian A I units to remove bulls found to carry red. A number of bulls credited with doing a superior job of breed improvement were slaughtered or exported. The studs were simply supporting the Canadian Holstein breed policy that said: "the intent of the policy is to prevent the intensification of the red recessive in the breed. When semen is offered, the phrase 'carries the red factor' must be included in the ad. It is the official policy of the Association to discourage excessive promotion and the use of semen from unproven bulls which are known as carriers of the red factor." They later refined their "red-carrier" policy with reference to A I sires and said that: "the intent of the policy is to prevent an intensification of the red recessive in the breed while still permitting intelligent breeders to utilize the superior genes of any red carrier sire that has an outstanding proof for production and type." It became obvious that A I was the primary way of finding out which bulls were *red carriers." Prior to A I, few red carrier sires were uncovered because their service was limited to one or a few herds. Such herds often had no carrier females, and there was only a twenty-five percent chance that a carrier bull mated to a carrier female would produce a red calf. If a red and white calf was dropped, it was often concealed and quietly removed from the herd.

The first World-Friesian Conference was held in Amsterdam in September 1964 with 17 countries participating. Canadian Holstein Secretary George M. Clemons reported on the subject of color markings as follows: "There was no support for a separate herd book. The F R S (Red and White) herd book in the Netherlands has had a separate book for 80 years. The number of registrations has been pretty stable and is a small figure in light of total registrations." Clemons quoted one participant as saying "It has no useful part in dairy economics in Friesland. Black and Whites are THE breed, so don't promote the competition as it will just become a nuisance." This perception was contradicted by a 1981 report from the Netherlands Herd Book Society that at the time recorded a majority of the pedigreed cattle in Holland. They indicated a breakdown of 71% Black and White Friesian and 28% Red and Whites.

The question in the late 1960s was: Should Holstein Canada start a registry for Red and White Holsteins? A herd book that accepted Red and Whites

(regardless of origin) had already been established in the United States. After much debate, a recommendation was made that a separate herd book for Canadian Red and Whites be established and to then move to an integrated herd book, when it became acceptable to the major Canadian (export) markets.

Early Registrations and Sales

The sales ring began to heighten interest in the new breed. The first National Red and White sale was held on October 11, 1968, at Madison, Wisconsin, with 39 head sold. Nearly half of them went to South America. Top price was \$1100 for a six-month-old bull out of a Citation R daughter. Well-known bulls such as Rosafe Citation R, Pabst A Prince, SRD Advancer Three, and Stewarthaven Inka Reflection had one or more progeny in the sale. By 1970 breeder and sale manager ads for the sale of individual animals began to appear in the press.

Early Canadian red and white sales did show that the majority of their consignments were exported. Hays International held the first All-Canadian Red and White sale in November 1971 with 45 head offered. All but three head were exported. A young female, *Meadolake Annette-Red*, was sold to Cuba for \$6000. The only bull in the sale went to Brazil for \$2500. A December 1973 All-Canadian Red and White sale averaged \$1266 on 42 head; all but two were exported. Their 1974 sale of 29 head averaged \$1239 with only four head staying in Canada.

The U. S. Holstein-Friesian Association and its membership worked diligently from its early days until 1970 to eliminate the red trait from the registered population. However, once the door was open, red and whites began to appear in some of the more elite herds. The rush to get the best of Canadian breeding even prior to the opening of the herd book brought red calves to many dairymen who had never even seen one.

Alternate Herd Book

Canadian Red and Whites became eligible for registration in the herd book on July 1, 1969. This was done through an alternate book that included black and whites that did not meet color requirements for the main registry book. Red and Whites were to be listed with the suffix –RED and Black and Whites with ineligible markings would be registered with the suffix –ALT. Both groups and all of their progeny would be listed only in the Alternate book and the suffixes had to be part of the name. Examination of the Canadian herd books issued from 1970 to 1976 revealed that all "–Alt" and "-Red" animals were listed in the regular herd book in registration number order and were identified with an "A" in front of their number. The "Alternates" were separate in name only. The "A" in front of the registration number was discontinued in 1976 and the "–Alt" suffix was dropped in 1980, but "–Red" was continued. It did not bar the registration of animals whose hair turned from red to black.

Number of Registrations

The U. S. Holstein Association decided not to have a separate herd book for red and whites and "off-color" animals. The suffixes of –Red and –OC would be used, and numbering would be consecutive. The first red and white Holsteins were recorded in Volume 214 of the Holstein-Friesian Herd Book with an "R" in front of their number. There were 212 males and 1191 females recorded in the initial group of "red" registrations.

Red and Whites registered in the Canadian herd book numbered 281 in 1969 and 243 in 1970. It was suggested that the low numbers were due to many head being exported to other countries and thus never registered in the Canadian Association. In the first two years use of the "Alternate" category, only 25 percent were listed as –Red, and the other 75 percent had the –Alt suffix. A closer look

revealed that many of the "Alts" had a red and white parent. Confusion as to how to register the "off-color ones" may have kept the number of animals registered as "-Reds" below what it should have been. During the period from 1970 to 1976, the number of Red and White registrations increased slowly but remained below one percent of all registrations.

Black/Red

An American Breeders Service (ABS) ad in the *Canadian Holstein Journal* in 1974 on *Hanover-Hill Triple Threat* mentioned a color variant that was not "true red." Its existence was undoubtedly common knowledge among breeders in both countries, but up until that time it had not been mentioned in print. The ad said: "He was born red and white and registered as such, but with age turned black." The hair coat color change became known as "Black/Red"(B/R) and sometimes as "Telstar/Red," since the condition appeared in calves sired by *Roybrook Telstar*. Telstar was the sire of Triple Threat, but nothing had been in print about Telstar (then over 10 years old) having the trait until the ABS ad appeared. Professor Rennie described the condition as follows: "There are several variants from "true" red inheritance. The first one that was discovered was called Black/Red. The calf would be red at birth but would turn black or partially or mostly black with some reddish hairs down the backline, around the muzzle and at the poll. This usually happened by six months of age."

Some believe that the condition made its first appearance with "Telstar," but other references described the condition long before Telstar was born. The earliest reference was found in the June 15th 1889 issue of *The Holstein-Friesian Register*. A letter to the editor (from C. G. L. of Slingerlands, New York) stated "a calf may be red and white when born, and in a few weeks, at the shedding of the first hair, assume the black and white, as was related by Mr. Sweet of Michigan at one of our annual meetings, in his own experience." Another reference was found in the December 1926 issue of the *Holstein Breeder and Dairyman*, a

publication of the defunct "Harrisburg Association." The item quoted a British Friesian report that said in part: "In those cases where the calf is a very dark red, better described as a rusty brown, then the probability is that when the calf coat is shed the red hair will change to jet black." There is also a reference in Morwick's book to *Montvic Rag Apple Sovereign* having sired calves that were born a brownish-black and not as black as they should have been.

"Black/Reds" were often discriminated against when sold and were barred from Red and White-sponsored shows. In 1984 Holstein Canada considered recoding B/R bulls that had always been coded simply as "red carriers," a designation that was not acceptable to all buyers. The breed agreed to change after checking with other breed associations and with the A I Industry. In 1987, Holstein Canada and the Canadian A I Industry modified their coding procedures to distinguish between "Black/Red" and "true red" color patterns for bulls. Holstein Canada dropped the suffix "Red" as a part of the name in 1990, but continue to carry it as part of the "birth date and other codes" field.

Red Pathways in Canada

Documentation of the arrival of the red trait in Canada came as early as 1901 with the purchase of *Johanna Rue 4ths Lad* by the Richardson herd of Caledonia, Ontario. The young bull was bred by the Gillette herd of Rosendale, Wisconsin, and was a mating of *Sarcastic Lad* to *Johanna Rue 4th*. While a case can be made for the sire, it seems more likely that the dam was the source of the red trait. She was a daughter of *Aaggie Cornelia 5ths Clothilde Imperial* (*RC) bought by Gillettes from the Smiths and Powell herd. His sire was *Clothilde 4ths Imperial*, a son of *Clothilde 4th*, who was a daughter of the imported *Clothilde* who is credited with being a primary source of the red trait in both the United States and Canada.

The female *May Walker Inka Segis* was purchased by A. C. Hardy at the Minnesota Holstein Company dispersal in 1927. Hardy took her to his farm at Brockville, Ontario, where she became a conduit for several branches of the family in Canada. Her Canadian-born son, *Sir Inka Walker Fobes* (sired by her younger brother), was the sire of *Sir Inka Palmyra* who was bought by Spring Farm of Streetsville, Ontario. There he sired *Spring Farm Bearli Palmyra*, the sire of *Spring Farm Bonnie Palmyra*. "Bonnie Palmyra" was a major *RC sire at Rockwood Farms of St. Norbert, Manitoba. Several of his *RC sons were also used at Rockwood. Rockwood animals carrying the red trait went to other important herds as consignments at major breed sales. *May Walker Inka Segis* later went to New Hampshire and appeared in the ancestry of several members of the Baker Farm herd.

The sire *Brookholm Inka* was imported from Minnesota in the early 1920s by Raymondale Farm of Quebec. He contributed the red trait to the Raymondale, Abegweit, and Brown Corporation herds of eastern Canada. Both the female *Raymondale Jewel* and the bull *Abegweit King Abbekerk* were progeny of *Brookholm Inka* and had the red factor. It is of interest that R. P. Crane of Austin, Minnesota, was the breeder of *Brookholm Inka*. That is also the address of the Minnesota Holstein Company, a herd that is identified as being the foundation for key members of the early Red and White population.

The Minnesota Holstein Company herd made still another major contribution. As Melvin Scholl, a well-known Holstein historian, tells the story in his book *Arnewood*, E. H. Maytag, owner of Maytag Farm, was able to get his favorite cow bred to *Sir Inka May* just before the bull was to leave for Carnation Farms. The mating resulted in a bull calf that was named *Prince Ormsby Inka May*. He sired the female *Ormsby DeKol Aaltje Pontiac* *RC who was the dam of *Posch Ormsby Fobes 14th*. The latter went to Winterthur Farms and sired numerous offspring that carried the red trait. Winterthur furnished many sires to A I units and to fellow Holstein breeders. The descendents of P O F 14th are found in the ancestry of

red and whites, particularly in the northeastern part of the United States. Winterthur cattle were also the foundation of the Larry Moore herd of Red and Whites.

The easiest pathway to trace when looking at the migration of the red trait in Canada is to work back through the ancestry of ABC's sire, *Montvic Rag Apple Sovereign*. Sovereign was sired by *Emperor of Mount Victoria* (*RC), a bull bought from H. O. Norris's Wimbledon herd of Annapolis, Maryland, in 1938. His sire was *Carnation Emperor* (*RC,) a Carnation-bred bull from a mating of *Governor of Carnation* and *Carnation Inka Empress* (*RC), a daughter of *Sir Inka May*. *Sir Inka May* is credited with having an early and important influence in keeping the red trait viable in the United States. However, his dam *May Walker Ollie Homestead* had two other progeny that also made significant contributions to the "red cause." She was the dam of the female *May Walker Inka Segis*, mentioned earlier as being purchased by A. C. Hardy of Brockville, Ontario. *May Walker Ollie Homestead*'s youngest son, *Sir Bess Ormsby May*, was purchased by Osborndale of Derby, Connecticut, at the Minnesota Holstein Company dispersal in 1927. He sired numerous red carriers at Osborndale, and sales of his offspring spread the trait to other influential herds.

Prominent sires across the border

The sire *Agro-Acres Marquis Ned* (*RC) was born in 1964 and was extremely popular in Canada, siring a number of well-known Red and White females that were imported by U. S. breeders. Among them were *Blue-Haven Rose Ned-Red* and *Innkip Rocket Hanna-Red*. Other popular red-carrier sires of Canadian breeding that were in service shortly before or during the time the registration question was being debated were: *Roeland Reflection Sovereign, Elmcroft Pontiac Chieftain, Mooreville Rocket Kemp, Laningdale Regent Reflector,* and *Roybrook Telstar*.

Hanover-Hill Triple Threat had a huge influence on Holstein breeding in both the United States and Canada during the 1970s and 80s. He was considered a good mate for the daughters of Elevation, Bootmaker, and other highly-rated sires from both countries, despite the fact that he carried the Black/Red trait. Glenafton Enhancer was dominant in the 1980s as a sire of sons for A I units. He was a Roybrook Starlite son, and the red factor came from his dam, Glenafton Gina Lea-Red, a Citation R Maple daughter.

Headliner Canadian Herds

Canadian headliner herds such as Romandale, Rosafe, Springbank, Rockwood, Spring Farm, and Glenafton, with their many sales and interchange of breeding stock, were certain to have the red trait whether they wanted it or not. Heavy use of *Montvic Rag Apple Sovereign* and *A B C Reflection Sovereign* and their sons and grandsons, along with the Palmyra line, guaranteed it. Romandale and Rosafe were heavy merchandisers, largely along A B C lines.

Tom Dent's Springbank herd made the news when he purchased *Montvic Rag Apple Sovereign* as a calf at the 1942 Mount Victoria dispersal. The bull's immense popularity and A I service near the end of his career further spread the red trait. According to Morwick, a former Springbank employee estimated that seven to ten percent of the Sovereign calves were born red and were eliminated. If the employees' statement is reasonably accurate, it would mean that more than forty percent of the herd were carrier animals. During the period from 1937 to 1941, a bull named "Captivator" sired over twenty female calves that were registered by Dent. If Captivator was a carrier of red coat color and most of his daughters were mated to Sovereign, it would help explain how it was possible to get such a high incidence of red calves in a single herd. It also indicates that the red trait was solidly embedded in the Springbank herd before Sovereign saw any service.

The other herds mentioned may not have had the resources that Rosafe and Romandale had, but they did carry on successful sales programs. Sales to other Canadian herds and exports to the United States and elsewhere made red coat color a moneymaker in the last decades of the 20th century.

There was considerably less movement of breeding stock from the United States to Canada. Mention has been made of *Johanna Rues 4ths Lad, Brookholm Inka, Emperor of Mount Victoria*, and the female *May Walker Inka Segis*. Some early RWDCA sires, including those with Duallyn and Hayssen prefixes, made their way to Canada. However, the two U. S. bulls that had the most influence on Canadian breeding of Red and Whites were *Citation R Maple* and *Hanover Hill Triple Threat*.

What of the future?

E. Y. Morwick, in his book *The Chosen Breed,* summed it up most succinctly when he said: "The breed badly needs a red sire that will transmit production, stature, and dairy quality. The race is on to breed the great red cow and the superior transmitting red bull. Being the breeder of that 'one good one' will be better than winning the lottery."

The Red and White breed has come a long way since it was founded. Great strides have been made in both production and type, and the best of them can go head-to-head with their black and white counterparts. However, the breed does need more herds that are committed to breeding cattle that will produce consistent results in future generations.

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This effort has been greatly aided by the writings of two Canadian authors. First, the two-volume work entitled *The Chosen Breed* by E. Y. Morwick is a truly remarkable dairy reference work. It is particularly valuable for those with little knowledge of Canadian Holstein breeding. Secondly, Doug Savage's writings in the publication *Holstein International* on the history of the "red" trait and its impact on the future of all dairy breeds, both in and outside of North America, present a challenge to the breeding industry.

Much use was made of the United States and Canadian Holstein herd books, their breed publications, and the several histories written by experts from past generations. It is intended that this account be as accurate and informative as possible. Anyone who has additional information or corrections to the text is encouraged to contact the author.

Dr. Larry W. Specht
Professor Emeritus of Dairy Science
324 Henning Building
Penn State University
University Park, PA 16802

For more information, contact Dr. Larry W. Specht at lws1@psu.edu. Copyright 2007 Department of Dairy and Animal Science, Penn State das.psu.edu

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