

I am concerned by various pieces of information appearing on the websites of the Jersey Cattle breeders Associations of America, Canada, Australia and New Zealand.

Cross Breeding

Jerseyfying of herds

<http://www.usjersey.com/Programs/expansion.html>



Begin identifying your Jersey genetics today, so that you can reap their added value in the years to come.

With continued use of Registered Jersey sires, you can not only improve your profits from dairying--you can also develop a fully registered herd of Jerseys. The AJCA's **Jersey Expansion** identification service makes it easy and affordable.

Steps in the Jersey Expansion Identification Service

Recording Pedigree Prefix		Minimum Percent Genetics from Registered Jersey Sires
J1	Registered Jersey sire x unknown parentage dam	50.0%
OA	Registered Jersey sire x J1 recorded dam	75.0%
PR	Registered Jersey sire x OA recorded dam	87.5%
GR	Registered Jersey sire x PR recorded dam	93.8%
None	Registered Jersey sire x GR recorded dam	96.9%

50% Jersey Genetics

J1 is the prefix for a female sired by a Registered Jersey bull and out of an other-breed dam. Any female sired by a Registered Jersey bull can be recorded, regardless of the breed of the dam. For application, with instructions, click [here](#).

75% Jersey Genetics

The [OA prefix](#) is assigned to the daughter of the J1 cow and a Registered Jersey bull.

87.5% Jersey Genetics

The daughters of OAs sired by Registered Jersey sires are recorded with the [prefix PR](#).

Subsequent Generations

Fourth-generation females are identified with the [GR prefix](#). Daughters of GR cows are entered in the [Herd Register](#) of the American Jersey Cattle Association.

Identification allows you to use other AJCA services, like [JerseyMate](#). This computerized service recommends matings to bulls of your choice, maximizing lifetime profitability through selection for yield and functional type traits, while controlling for inbreeding.

<http://www.usjersey.com/Programs/geneticrecovery.htm>

GENETIC RECOVERY: *Rules and Procedures*

For more information, contact

[Erick Metzger](#)

There are three steps in the Genetic Recovery identification program, which then lead to registry in the AJCA Herd Register. These steps are:

1. Original Animal (OA): A living female with an unknown Jersey sire, or a dead or unknown female, or the daughter of a Registered Jersey sire out of a [J1 female](#).
2. Provisional Register (PR): A daughter of an OA dam and a known Registered Jersey sire.
3. Genetic Recovery (GR): A daughter of a PR dam and a known Registered Jersey sire.
4. Herd Register: Daughters and sons of GR cows sired by Registered Jersey bulls.

What qualifies for Genetic Recovery?

Only females showing Jersey characteristics are eligible.

How do I determine an OA from a PR?

If the oldest living cow in a family has an unknown sire, she will become an OA. Her daughters sired by Registered bulls will be PRs.

If the oldest living animal in a cow family has a Registered sire, she qualifies for PR registration if an application for her dead or unknown dam is created and submitted (OA step). She may qualify as a GR if her dam was also sired by a Registered bull. In this case, applications for her dead dam (PR step) and grandam (dead or unknown OA) are created and submitted. [Return to top of page](#)

What information is required?

Information which identifies each animal is the key to completing an application. All applications must list **birth dates** and **tattoos**. Tattoos must have at least one number and one letter (other than I, O, Q, or V) in at least one ear (AJCA Voluntary Tattoo Program). Living animals must be tattooed before they are recorded.

For dead animals, birth dates and tattoos can be approximate. For a living OA, the birth date can be estimated if necessary, but tattoo(s) must agree with the legible tattoo(s) in the ear(s). All other applications for living animals must list exact birth dates and tattoos.

The USDA eartag box in the upper right-hand corner of the application should be completed for all animals that have been on DHI test with an eartage number. This is critical for USDA and AJCA to link the cow's registration number with the eartag number in order to correctly access production information and genetic evaluations. When a grade cow receives an AJCA registration number, her identification on DHIA test should be changed from the eartag number to her registration number in order for her PTAs to be received and used by the AJCA. [Return to top of page](#)

Jersey Journal

Genetics

Cloning - Exactly the Same or Different?

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November 2004

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[Article in Print](#)

In a world of clones, with their identical genes and matching DNA, is there room for individuality? Or, are clones forced to live with some sort of eternal identity crisis?

Some four years after the birth of the first Jersey clone at the University of Tennessee, research is showing that clones look remarkably similar to each other and the cell donor, but carve a path in the world all their own.

For Kisst Jewels Diamond-ETN, one of the breed's earliest commercial clones, show ring success parallels, but does not mirror, that of her cell donor.

"Diamond" was recently named first-place intermediate yearling heifer of the World Dairy Expo Junior Show. Her famous cell donor, PH Jewel, attained success as the Grand Champion of World Dairy Expo in 1999 and Grand Champion of the All American Junior Jersey Show in 2002.

Says California Jersey breeder, John Kisst, Ripon, owner of both individuals, "All three of the clones from 'Jewel' look essentially alike. However, one was a little taller than the others, so we grabbed her for the shows."

"Clones are similar to their cell donor in many ways, but they are their own unique individuals," explained Lannett Edwards, University of Tennessee (UT) Assistant Professor and lead scientist for the UT cloning project. "Many of the similarities depend on the heritability of the traits. Highly heritable traits, like type and production traits, will be more similar among clones and the cell donor. Low heritability traits, like reproduction, will be less similar."

Cloning Today

Since commercial cloning was introduced several years ago, clone numbers have increased yearly, but at a slow rate. To date, the American Jersey Cattle Association (AJCA) has registered 20 clones. Kisst owns three of them; UT owns the rest.

"We have made advances in efficiency in the past few years, but are working on ways to make improvements that will get us where we want to be," remarked Steve Mower, Director of Marketing for Cyagra, the company that cloned "Jewel" and performs an estimated 90 percent of the commercial dairy cattle cloning today.

In 2003, Cyagra delivered 42 cloned dairy calves from 19 cell donors to

dairy producers in the U.S. and Canada. Since 2001, some 71 dairy clones have been delivered by Cyagra and registered with their respective breed associations.

The animals registered by UT are research clones. While the university's first clone was performed to learn more about the cloning process, today's clones are part of a mastitis susceptibility study.

"Our efforts are concentrated on learning how susceptible the animals are to mastitis infections," remarked Edwards.

"Some of the clones were derived from Tenn Sooner HHG Maid, a cow that was chronically infected with mastitis," explained Edwards. "The rest came from Tenn Kent EHE Maid, a cow that was resistant to the infection. Towards this effort, a total of 23 clones have been born alive; 13 have reached maturity."

Ultimately, the performance and disease susceptibility of each clone will be compared to other clones and the cell donor to determine the genetic relationship of mastitis susceptibility.

Hurdles and Advances

A variety of health issues were experienced early on, progress has been made in the technology. In 2000 and 2001, just two to three percent of the embryos transferred by Cyagra resulted in live births. Today, the efficiency rate is 17 percent. The first two UT clones did not live past nine months-of-age. Today, six have freshened and seven are ready to be bred.

"But, the process still isn't perfect," commented Kisst. "It is just not as simple as putting in an embryo. Don't expect rates like flushing, where you might get 75 percent delivered full term."

"We started out with five clones," he explained. "Early on, we lost two that were due in September. Three were carried full term and born in December."

At this point, the cloning process needs to be carried out in a lab and transfers and birthing are done at cloning facilities. Remarked Mower, "Cyagra's goal is to improve technology to the point where cloned embryos can be transferred on the farm."

One of the largest cloning obstacles for farmers is the Food and Drug Administration's (FDA) voluntary moratorium on the release of milk and meat from cloned animals in the food supply. Until the situation is resolved, dairy producers like the University of Tennessee will have to continue dumping milk from cloned dairy cattle.

Genetic Preservation

Until efficiency is improved and FDA issues are addressed, some dairy producers are preserving the genetics of their best animals by preserving the DNA cell line.

"The DNA cell line is the base for cloning," explained Mower. "Once you have the cell line established and frozen, it is available for future cloning

and gene marker detection.”

Kisst has preserved the DNA cell line of three other elite cows in his herd. “We are hoping the cloning process gets a little better and the efficiency goes up,” he said. “All three clones look very much like the cell donor. But we’d like to see an udder under them before we go further.”

Only time will tell how “Diamond” and her cloned siblings “Ruby” and “Emerald” perform in comparison to the genetically identical “Jewel.”

<http://jerseysites.usjersey.com/ohiojerseys/elements/Documents/2007/Ohio%20Spring%20Classic%20Sale.pdf>

Ohio cattle sales including clones.

<http://www.jerseycanada.com/whyjersey/problemfree.php>

<http://www.jerseycanada.com/whyjersey/crossbreds.php>

DO YOU HAVE JERSEY-SIRED CROSSBREDS TO REGISTER?

Many commercial dairymen across Canada have been experimenting with crossbreeding, particularly with Jersey crosses. Jersey-cross animals are extremely popular in New Zealand, and are becoming more commonplace in the United States. If you have crossbred progeny, these can still be recorded. In the future, animal movement will be highly dependant upon unique identification and verifiable birthdates, so it is prudent to have papers on all dairy animals whether they are purebred or not. Also, requirements for official milk recording require 80% of first lactation animals to be indentified to maintain publishable status for the herd.

Therefore, if you have progeny of a known Jersey sire, or a grade Jersey with breed characteristics, Jersey Canada can record that animal and issue a paper for her for **only \$8**. This recordation program extends also to progeny of Semex’s Repromax program which exhibit Jersey characteristics.



For more information on crossbred recordation and Jersey Canada’s Grade-Up Program, contact Jersey Canada Registrar Jill Dann at (519) 821-1020 ext. 22 or at jill@jerseycanada.com.

<http://www.semex.com/semex.cgi?lang=en&viewnews=1207933665&sid=12105477376Z>

interesting page on semen company.

<http://www.jersey.com.au/industry.htm>

<http://www.jersey.org.nz/main.cfm?id=13>

Jersey ID Plus

Offer has been extended due to popular demand

SPECIAL OFFER

Several Jersey New Zealand members and new members have taken advantage of our special Jersey ID offer and registered their whole herds.

"Come On" Don't miss out on this.

The offer is:

Jersey New Zealand will register, free of charge, your mature cows that are $\frac{3}{4}$ Jersey or more.

You are required to register all eligible female calves for the next five years (beginning with your 2007 born).

Special Conditions apply. For more details click [here](#)

Jersey ID Plus

Jersey ID Plus

An offer provided by Jersey New Zealand to add value to your Jersey herd. Offer ends has been extended due to popular demand and is available for New Zealand resident herds only.

The offer in a nutshell

You become a member of Jersey New Zealand and register all your female calves that are $\frac{3}{4}$ Jersey or more and that are born this year (07 born) and for the next 4 years (a total of 5 years). In return Jersey New Zealand will register free of charge any unregistered animals J12 or above that are currently in your herd or are 06 born heifer replacements. The offer is subject to special terms and conditions.

How it works: (includes the terms and conditions of the offer)

1. You become a senior member of Jersey New Zealand.
2. You register a herd name (called herd prefix) that is kept for your exclusive use and becomes the first part of the registered name for animals registered by you.
3. Provided the terms of the Jersey ID Plus package are met, Jersey New Zealand will complete free of charge the registration of any unregistered cows and heifers (other than 07 born calves) that are at least $\frac{3}{4}$ Jersey (J12 or more). Registration is in the NZ Jersey Herd Book and is carried out under special conditions contained herein. The work carried out free of charge under these special terms and conditions is called the Start Up Saving.

Your approximate Start Up Saving will be: (Note: the exact amount will be finalised following the relevant processing of registrations)

Name: _____ Pptn code _____ Herd code _____

Herd fee \$450

_____ cows @ \$4.75 _____

_____ Rsg 2 yr or IC Hfrs @ \$6.75 _____

Estimated Start Up Saving (GST exclusive) =====

Note: The Start Up Saving is subject to the terms and conditions of the Jersey ID Plus package contained herein.

4. This offer is only available for herds with records on the National Database and the Start Up registrations and Start Up Saving will be based on records available on the National Database at the time Start Up animals are processed.

5. The Start Up Registrations are processed using Jersey New Zealand's e-registration option whereby its computers assign a registered status and name to the cows currently in your herd (and to your rising 2 yr old or in calf heifers) that are at least $\frac{3}{4}$ jersey (J12 or more). The registered name will consist of your herd prefix and the birth identification numbers of the cow. Note: Registration can be carried out with different names assigned but the standard registration charge will apply. Any "fix ups" instigated by you following computer processing will be charged at standard rates.

6. The Start Up Saving calculated above will be written off in equal amounts over 5 years (the Write Off Period) provided the annual crop of female calves J12 or more are registered using the All Registered option at standard registration fees each year. All Registered means all female calves J12 or more on the location at the time of registration. You get to choose which naming option you want to use at the relevant fee. Where naming option instructions are not received by 31 March in any year, Jersey New Zealand will automatically carry out the registrations using the computer generated names option and invoice you accordingly.

7. Where the member ceases farming or wishes to stop registering during the 5 year Write Off Period, an amount of the Start Up Saving will be immediately payable to Jersey New Zealand as a Start Up Penalty, calculated as follows:

A. Total Start Up Saving _____

B. The number of years following acceptance of

the Jersey ID Plus offer that All Registered registrations

were completed for female calves J12 or more _____

Start Up Penalty = A divided by 5 multiplied by (5 – B) =====

Note: Where B is 5 or greater, no Start Up Penalty will apply.

8. Jersey ID Plus is available for existing senior members where all or part of the herd is not registered, under the same terms and conditions.

Anyone interested in the Jersey ID Plus offer should either contact the Jersey New Zealand office or download an application form for Jersey ID Plus. Note: You must be a member of Jersey New Zealand so send in a membership application when applying for Jersey ID Plus.

[New Members Application](#)

Click [here](#) to find out about registration into the NZ Jersey Herd Book and how it works

Evidence of genetic faults from a prize bull (Australia)

<http://www.jersey.com.au/cgi-bin/cutecast/cutecast.pl?session=RCMvJWy3EItavew2E1fNgm6duE&forum=1&thread=1107>

Closed Herds

Chillingham Whites

The Wild White Cattle of Chillingham

From an article by the Dowager Countess of Tankerville

Patron, Chillingham Wild Cattle Association, Ltd.



The Chillingham Wild Cattle are one of the original herds of emparked wild cattle and still roam in their natural surroundings over about 300 acres of Chillingham Park in Northumberland. They are not recorded in the White Park Cattle Herdbook, but the two breeds share a common origin in the wild cattle that populated Britain in ancient times. Many of the behavioural traits described here can still be seen in the domesticated herds of White Park Cattle that are managed extensively.

Though their origin is uncertain, the existing herd is thought to have been at Chillingham for at least the past 700 years. Before that, it is probable that they roamed the great forest which extended from the North Sea coast to the Clyde estuary; and it is presumed that when, some time in the 13th century, the King of England gave permission for Chillingham Castle to be "castellated and crenolated" and for a park wall to be built, the herd was corralled for purposes of food. The successful capture of a number of wild cattle in those days would not only have eased the local food situation, but would also have made it impossible for raiders to take such cattle back with them across the border since, being wild and extremely fierce, they could not have been driven like their domestic cousins.

As to their ancestors, the shape of the skull and the manner in which the horns' grow out from it are similar to the Aurochs (*bos primogenius*) and quite different from the skull of the Roman importation (*bos longifrons*). It is thought by many therefore that the Chillingham Wild Cattle are the direct descendants of the original ox which roamed these islands before the dawn of history. How they came to

be white is another interesting matter for speculation. They invariably breed true to type and have never been known to throw a coloured, or even partly coloured, calf.

In recent years, it has been possible to obtain live blood samples from several of the wild cattle just prior to their deaths. Dr. J. G. Hall of the Edinburgh Animal Breeding Research Organisation has analysed these samples from the genetic point of view and has found the blood grouping to be unique amongst western European cattle. Their origin therefore still remains a mystery.

The genetic aspect is also of interest. For the past 700 years they have been inbreeding and, as far as one can tell for records of their distant past are scant, the only effect has been that they are now somewhat smaller than they used to be. Old skulls found in the park have shown this. Their remarkable survival may be due to the fact that the fittest and strongest bull becomes "King" and the leader of the herd. He remains King for just as long as no other bull can successfully challenge him in combat, and during his tenn of kingship, he will sire all the calves that are born. Nature seems thus to have ensured the carrying forward of only the best available blood.



When a bull wants to fight, he will come out a little way from the herd and will then start to bellow - perhaps "hoot" is the more descriptive word - and to paw up the ground. Presently, the King bull may accept the challenge, in which case he too will come out from the herd, and facing the challenger at a few yards distance, will go through the same performance. After a time, and quite suddenly, one of them will attack; but after a short round of perhaps only half a minute, both bulls will start grazing, each keeping a watchful eye to see whether he can catch the other off his guard. Then, once more quite suddenly, a further round may take place. This pattern of behaviour will go on until one of the bulls seems to acknowledge defeat. The loser will then slink away into temporary banishment and live for a

while away from, but in sight of, the herd. During this time he is usually irritable and very dangerous to approach. Close observation has shown that apart from these more serious fights which are motivated by a desire to become "King" and to reap the rewards thereof, there occur many minor skirmishes between bulls - and indeed between cows and their sons - which are merely a form of 'training exercise'.

Strangely enough, the bulls seldom injure each other very seriously in fighting, and only on three occasions during this century has one of them been killed in this way. One instance took place during the summer of 1939 when a bull that had been in temporary exile, instead of returning quietly to the herd, came back trumpeting defiance. The King Bull and another came out to meet him and a three cornered fight ensued. Only the beginning of this fight was actually witnessed, but the next morning the bull which had attempted the fighting comeback was found dead with an eye out. It is assumed that, accidentally getting a horn thrust in the eye, he threw up his head, whereupon one of the other two butted him full force in the chest. At any rate, an examination showed that the organs of the thorax had been smashed more or less to a pulp, so the force of the impact may be imagined. The skeleton of this animal is now in the Hancock Museum, Newcastle-upon-Tyne. In more recent times this museum has acquired a family group of three stuffed animals for exhibition.

Between the two world wars the strength of the herd had been fairly constant at around 35 to 40 animals. In January, 1947, it was 33. Then came the most severe winter that anyone in north Northumberland could remember. In the previous year spring droughts followed by summer floods had decimated hay crops in Northumberland, and stocks of fodder were well below average. Thus by the time that the fourth blizzard struck the area in March, causing snow drifts of up to 40 feet in the Park, there was hardly any hay left. Despite valiant attempts to get hay and straw to the Wild Cattle, 20 of them perished, leaving 8 cows, 5 bulls, and no young stock.

During the next 12 months no calves were born and it was feared that the herd might face extinction. Then, to everyone's relief, a healthy calf (albeit a bull) was born in August 1948, and as the statistics overleaf portray, the herd very gradually began to replenish its numbers.

In 1967 a major outbreak of Foot and Mouth disease in Northumberland posed a severe threat to the future of the herd. Although the disease came within two miles of the park catastrophe on this occasion was averted. However, such good fortune could not be trusted to last in the future and it was therefore decided to set up a small reserve herd in Scotland.

With regard to the care of these animals, the fact that they are wild renders normal agricultural practices inappropriate. They will eat only meadow hay and occasionally straw, and they will refuse grain and concentrates. Even in the 1947 winter when they were severely starved, they would not touch the oats and cattle cake offered to them. They never go under cover or seek any shelter other than the lee side of a wood, except when searching for food. In olden days they would have roamed over huge areas in search of winter food, and it is only because they are confined to their present 300 acres that it is necessary to feed them hay in winter. It is important therefore that such hay is spread on open ground and in a different spot every day in order to keep them on the move and on clean ground. Neither is it possible to give the cattle any veterinary attention. However, they seldom suffer from any disease; perhaps because they are not interfered with by man. Similarly, if a cow gets into difficulties during calving, nothing can be done to assist her. Thus when cows grow old they sometimes die in this manner, and under such circumstances, the calf is usually found to have been dead for some time.

The cows have their calves away from the herd, and for the first week or so, the calves are hidden. Sometimes one will come across one of these lying in the bracken, quite still and with its chin on the ground, in a kind of 'form' rather like that of a hare. But should the mother happen to see anyone in the

vicinity of her calf, she will immediately attack. In due course the calf is brought into the herd by means of an introduction ceremony. When the cow and calf approach the herd, the King bull will come out to meet them and escort them in. Other cows will then inspect the calf and sniff it, as if to decide whether it should be admitted to the herd. Once this is 'agreed', the cows will pay no further attention to the new calf which thereafter remains with the herd.



The Chillingham Wild Cattle Association was formed in 1939 as a Charitable Organisation to take over the care and maintenance of the herd. At that time the then Lord, Tankerville had become aware that the steadily increasing costs of maintaining the herd (which was his family's private property) were rising beyond his private means. When in subsequent years it became clear that this Association was capable of standing on its own feet financially, he arranged to bequeath the Ownership of the herd to the Association. This took effect upon his death in 1971.

A further threat to the herd arose after the death of the 9th Earl of Tankerville in 1980, when the decision was taken to sell the Chillingham Estate. However, as a result of the personal intervention of the Duke of Northumberland, the park and its surrounding woodlands were purchased by the Sir James Knott Charitable Trust. This trust is justly renowned for its interest in preserving rural Northumberland. The trust's first action upon assuming ownership of the Park was to grant the Association a new Lease of

the grazing rights for 999 years, thus ensuring the future of the Wild Cattle at Chillingham for the foreseeable future.

Anyone wishing to apply for membership of the Chillingham Wild Cattle Association should write to: The Secretary, Wardens Cottage, Chillingham, Alnwick, Northumberland. NE66 5NP. Telephone 01668 215 250.

Extracts from Oklahoma State University site about the differences between Old Jerseys and the US version.

<http://www.ansi.okstate.edu/breeds/cattle/jersey/>

Jersey



provided by Hoard's Dairyman

The Jersey breed originated on the Island of Jersey, a small British island in the English Channel off the coast of France. The Jersey is one of the oldest dairy breeds, having been reported by authorities as being purebred for nearly six centuries.

The breed was known in England as early as 1771 and was regarded very favorably because of its milk and butterfat production. At that early date, the cattle of Jersey island were commonly

referred to as Alderney cattle although the cattle of this island were later referred to only as Jerseys. Jersey cattle were brought to the United States in the 1850's.

Adaptable to a wide range of climatic and geographical conditions, outstanding Jersey herds are found from Denmark to Australia and New Zealand, from Canada to South America, and from South Africa to Japan. They are excellent grazers and perform well in intensive grazing programs. They are more tolerant of heat than the larger breeds. With an average weight of 900 pounds, the Jersey produces more pounds of milk per pound of body weight than any other breed. Most Jerseys produce far in excess of 13 times their bodyweight in milk each lactation.

The modern Jersey breed is unexcelled in dairy type. Breeders in the United States commonly referred to two distinct types of Jerseys in the past, these being the Island and the American; this distinction is not commonly made at present. It should be recalled that this is a different usage of the word "type" than is usually implied and refers to the general size and quality of the animal rather than to its use for dairy purposes. The Island-type Jerseys excelled in refinement and those qualities that were deemed necessary to win in the show ring. Refinement and beauty of such cattle in mature form led to the marked