



# THE MURRAY GREY OWNERS HANDBOOK



## USEFUL INFORMATION ABOUT MURRAY GREYS

Contents include a history of the breed, the MG Society & By Laws, the standards of excellence, procedures for registering & performance recording, tips on weighing & measuring, buying & selling, gestation chart & how to use the Murray Grey website.

# Introduction

The Murray Grey Beef Cattle Society is pleased to present the 2021 second edition of the Owners handbook. It gives some useful information for the new owner and also serves as a reference guide for established members.

A full set of Rules and By laws are available from the Murray Grey office at Performance Beef Breeders, PO Box 503, Feilding 4702, however an outline of the important By laws relating to the standards of excellence are included.

Whilst the Society will endeavour to reprint this hand book at intervals, it should be read in conjunction with the latest Society rules and regulations as it may not contain new or amended regulations passed at subsequent Council or Annual General Meetings.

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# History of the Murray Grey breed

Developed almost by accident in the Upper Murray valley on the New South Wales/Victoria border of Australia, the Murray Grey is regarded as Australia's own breed.

Murray Greys are renowned as easy care versatile cattle producing choice quality beef for a variety of markets and discerning consumers.

The first grey calves were born at Thologolong, the Angus stud of the Sutherland family, in the early years of the 20th century. Said to be the offspring of a white or light roan Shorthorn cow, kept as a house cow, and mated to a succession of Angus bulls, she produced 12 of these unusually coloured calves. Kept originally for their unusual colouring and firstly known as Mulberries, these odd cattle were found to grow unusually quickly and were superior converters of feed.

In the 1920's a visitor to the property, Helen Player, was taken by the unusual cattle, she preferred to call them as the 'Goldens' Eventually marrying one of the Sutherland boys, Keith, she nurtured these cattle and the herd continued to grow, until the drought of 1945, when the 'Goldens' along with Angus and Shorthorn herds were sent away for grazing to escape the drought, only eight of her 'Goldens' survived.

In the 1930's a notable Angus breeder, Cleaver Gadd came to buy Angus bulls from Thologolong and was persuaded to take a Grey bull as well, for the price of a steer. Cleaver and his brother Mervyn dissolved their partnership soon after and Mervyn retained both the homestead 'The Glen' and also the Grey bull. As the grey bulls' calves showed some promise, the next year he was put to 30 good Angus heifers as a purely commercial venture. It was late in the 1940's when it was gradually realised that these Grey progeny were something special. When they topped the Newmarket sales with a record price it was decided they should have a name. It was suggested that as they came from the Murray region and they were grey coloured that they were Murray Greys, and the name stuck. They had also been known during this period as the Scottish Greys or the "Grey Galloways" by Mervyn Gadd so it is questionable as to whether the Galloway breed had been responsible for providing the peculiar dilution gene which gave the breed its grey colouring.

The Australian Murray Grey Society was founded in 1960 to register the cattle of several interested commercial breeders and administer the breed. Murray Grey steers and carcasses have won all the major carcass competitions throughout the country and dominate the taste test competitions. Renowned for their ability to 'marble' and without excess subcutaneous fat, the breed has become popular for both grass fed and feed lot production of beef for the Japanese and Asian market and for domestic use, in Australia known as 'supermarket' beef.

In the first half of 1970 a small number of interested cattlemen from New Zealand visited Australia to check out reports that had been made about these new breed of cattle called Murray Greys. A meeting of interested parties was held in July 1970 in Palmerston North and the New Zealand Grey Cattle Society was formed, based mainly on the importation of Tasmanian Grey cattle. A further Society called the Murray Grey Society was formed, but in July 1972 it was decided to join the two Societies as one.

In October 1971 the first shipment of cattle from main land Australia to come to New Zealand for 90 years arrived, comprising of Murray Greys. Earlier shipments of Murray Greys imported by Mr D.K Mackenzie had arrived by diverting them through Tasmania.

More cattle were imported from Australia in the early '70s, but a great number were bred up through the grades by using pure bred Murray Grey bulls over approved Angus females and their subsequent female descendants. The membership in December 1974 was 325 members and steadily increasing. Today there are less than a quarter of that number.

The affairs of the Murray Grey Society are administered by a Council of up to 6, comprising of elected representatives from both the North(4) and South Islands(2). Council members are elected for a 3 year term. A full copy of the Rules and By Laws can be obtained from the Murray Grey Society and is supplied to all new members. A summary of some information regarding frequently asked questions follows.

Performance Beef Breeders (PBB) in Feilding administer the Society providing secretarial and accountancy functions, along with several other services e.g. web site maintenance and facilities for printing, advertising and ear tag orders-as they do for all the major beef breeds.

# Structure of the NZ Murray Grey Society

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## CHARGES

Fees as set by Council are as follows, these are current as at 2021 but may be adjusted from time to time.

### FULL MEMBERSHIP

**\$130+GST P.A.**

No initial joining fee. This enables a member to have full voting rights, one vote per membership paid and access to all performance recording facilities of the Society.

### ASSOCIATE MEMBERSHIP

**\$50+GST P.A.**

No voting rights and usually applicable to members with no cattle.

### JUNIOR MEMBERSHIP

**\$25+GST P.A.**

For full breeding junior members 18yrs and up to 25 years of age with their own prefix are allowed voting rights, junior members below 18 yrs shall not carry voting rights.

### LIFE MEMBERSHIP OF THE SOCIETY

May be conferred by the Council upon persons who, whilst being members of the Society, have contributed significantly to the progress of the breed.

### ANNUAL DAM PRE-LIST

**\$22+GST**

Includes recording on Group Breedplan, is payable per dam over 2 yrs of age and all members are encouraged to take advantage of this programme by submitting weights at birth, 200 days, 400 days and 600 days of age, see section 4 on weighing and performance recording.

### TRANSFERS **\$25+GST PER REGISTERED ANIMAL TRANSFERRED TO NEW OWNERS**

Copies of transfer certificates can be down loaded from the Murray Grey website at [www.murraygreys.co.nz](http://www.murraygreys.co.nz) and when completed and signed should be forwarded, with the

appropriate fees, to the Administrator to ensure the change of ownership details of the animal(s)

### **INSPECTIONS**

Council charges as at cost. Animals submitted for National Sales or admission of base Angus females may need to be inspected at the owners expense.

### **APPROVAL OF SIRES**

All Sires must be tested for genetic diseases as outlined in the By Laws, before calves are eligible for registration. All **AI** sires must be DNA profiled and tested for CA and approved by Council before calves may be registered and a list of those sires which have been previously approved for AI use is available on the Murray Grey web site, however semen may not necessarily still be available from these bulls.

### **REGISTRATION OF A BULL FOR AI**

For use within NZ either imported semen or NZ bred and for export - see By laws section.

### **BREEDERS CLUBS**

Breeders Clubs may operate in any region, under the Rules and By-Laws of the Society and shall remain accountable to the Council of the Society. The Breeders Clubs purpose, being for the regional promotion of the breed at shows and field days and the encouragement and fellowship between members.

### **MEETINGS**

The Council, comprising of members from both North and South Islands, shall meet from time to time as often as they deem expedient and an Annual meeting held at a time to suit, usually May or June, every year, when all members are encouraged to attend so as to have a quorum to vote on Society business.

### **CALVING RETURNS**

Members are required to supply an updated Female Inventory or ADL (Animal Disposal Listing) of animals recorded as being in their ownership prior to the commencement of spring calving season in late June This can be done On line (see the web site for instructions) Your annual dam female charges are based on this so if you do not delete those animals which are no longer in the herd you will be charged for females on the previous years list. Alternatively you may request your Female Inventory/ ADL sheet via mail or email.

Breeders must indicate the presence of the listed females still in their herds and notify of any disposed of in the previous 12 months. The Female Inventory/ADL must be returned to the Society office by the due date, so as the calving sheets can be prepared in good time.

The annual dam listing charges are based on the Female Inventory, if you do not return your amended sheets you will be charged the set annual fee per dam 2yrs and over, for all the as animals listed the previous year.

Calving sheets will be prepared from the females as listed in the inventory and available On Line, or sent out on request.

Once all the calves for the season are born the calving sheets must be filled in with all the relevant details, weight, colour, fate, name and tag number and the calves are then entered onto the recording system. It must be completed as soon after calving so that lists of calves for 200 day weighing can be listed. Full instructions as to how to fill out the forms are supplied with each calving return or instructions for On line calf registration is available on the web site.

## **IDENTIFICATION**

On joining the Society, a member will be required to register a Stud name, for their exclusive use, this will precede the name of all animals bred by the member. The Prefix must not contain more than two words and no prefix other than the breeders' will be permitted as any portion of the animal's name. A number of options may need to be submitted to avoid duplication of previously used prefixes. Once a herd is fully dispersed/sold the prefix may not be used again and should the breeder wish to recommence breeding a new Prefix must be obtained.

On applying for membership the stud will be given a unique herd number which will precede each animals year of birth and unique number on all performance recording and Society documents, known as the herd book number.

A tattoo prefix comprising of two letters will also be allotted, with which to tattoo, firebrand or permanently tag all animals bred by the member. Tattooing is no longer compulsory ID for registered calves and is replaced by the calf NAIT number and tag.

Members buying in new stock should check that the animals which they are buying are clearly identified as those which the transfers indicate.

All cattle must also be identified in accordance with the current AHB (Animal Health Board) regulations and electronic tagging by NAIT system. The need for individual tattoos is being relaxed due to the NAIT ID system but breeders may still like to further identify their animals by a further management tag system, or the use of brass tags.



Calves can be numbered using any combination of numbers as chosen by the owner, for example, starting at #1 each year and using the Society lettering as used in Australia. (The letter R was used in 2020) or consecutive numbers year after year. The chosen animal number, together with the AHB herd number must be printed on the NAIT tag. The Management tag may be coloured, have the animals parentage, the stud name, or the animals unique number either written or printed.

A permanent metal ear tag is acceptable, which could be/or in addition to, the management tag. Ear tags from several suppliers can be ordered through Performance Beef Breeders, Feilding.

### **HINTS ON TATTOOING IF DESIRED AS PERMANENT ID**

Tattooing is not mandatory but if preferred as a permanent mark, animals should be tattooed in between the two ridges of cartilage in the ear. Green tattoo ink is recommended for the dark skin. First wash the inside of the ear with soapy water to remove grease and wipe dry. Select the bare area between the two main cartilage ridges and smear with ink, an old toothbrush is ideal. Test the tattoo first on a piece of paper or card to ensure letters and numbers are correctly placed. Apply ink to the tattoo pins. Using quick firm pressure, apply the tattoo pliers to the ear and release pressure immediately to avoid tearing the ear. Rub the ink well into the puncture marks again using a tooth brush.

# By Laws concerning The Standards of Excellence of Murray Grey cattle

**Updated 17/03/2021**

RESOLVED this day 12/10/1992, pursuant to Rules 3 (1) that the Council do adopt as By -Laws of the Society, the underwritten By -Laws numbered 1 to 10 (inclusive) and that the same come into force at the date of the Resolution.

## **STANDARD OF MURRAY GREY BEEF CATTLE**

The Council shall have the right and the responsibility of inspecting members' cattle and their progeny. Such inspections to be carried out by authorised Inspectors.

## **CLASSES OF CATTLE FOR REGISTRATION**

- a. All cattle must only contain Murray Grey or Black Angus genetics.
- b. The following cattle shall be eligible for registration by the society
  - i. Registered male or female Black Angus cattle  
To be graded as GR0
  - ii. Grey commercial female cattle of known purity  
To be graded as GR0
  - iii. The progeny of GR0 cattle and PB Murray Grey cattle  
To be graded as GR1
  - iv. The progeny of GR1 cattle and PB Murray Grey cattle  
To be graded as GR2
  - v. The progeny of GR2 cattle and PB Murray Grey cattle  
To be graded as PB (Purebred) Once established as PB (87.5% MG or more) then cattle will be assumed to be 100% MG for the purpose of calculations thereafter.

In summary, all cattle that conform to the following matrix will be eligible for registration.

		<b>SIRE</b>			
		<b>GR0</b>	<b>GR1</b>	<b>GR2</b>	<b>PB</b>
<b>DAM</b>	<b>GR0</b>	GR0	GR0	GR0	GR1
	<b>GR1</b>	GR0	GR1	GR1	GR2
	<b>GR2</b>	GR0	GR1	GR2	PB
	<b>PB</b>	GR1	GR2	PB	PB

- c. Imported cattle
  - i. Cattle, embryos or semen imported from members of any MG Association within the International MG Beef Cattle Association will need to be approved by Council.
  - ii. Such imports will have their pedigree compared with the above matrix and will be graded accordingly for New Zealand registration.
  - iii. All imported genetics to be free of defects, Arthrogryposis Multiplex (AM), Neuropathic Hydrocephalus(NH) and Contractural Arachnodactyly (CA).
- d. Council reserves the right to inspect members cattle. Inspections to be carried out by person or persons delegated by Council. Council will have the right to cancel or regrade registrations if deemed necessary.

## **Standard of Excellence**

Cattle should be of the following standard:

### **a. General Appearance**

All cattle should be well balanced, with length, good width spring of rib and smoothness. Undue deposits of fat must be avoided. Animals must have the ability to walk freely.

### **b. Bulls**

Masculine with breed character and capable of natural service and reproduction.

### **c. Females**

Feminine with breed character, prolific and able to rear their progeny.

### **d. Colour**

Grey cattle may be silver, silver grey, grey, light grey, dark grey or black. A minimum of “white” on the underbody is permissible but white elsewhere shall disqualify.

### **e. Head**

Cattle must be naturally polled, with good length from eye to muzzle. The muzzle must be dark in colour, not flesh coloured or spotted. The jaw must be strong, neither undershot or overshot. The eyes should be clear, alert and set wide apart. The ears should be well placed.

### **f. Legs**

The legs must be well placed. The animal should stand true, i.e. equally on all parts of the foot and the feet should be dark in colour and well formed. White feet or claws are not acceptable and shall disqualify.

### **g. Skin**

Pink is most undesirable. Skin should be dark coloured, loose and supple.

**h.** All cattle must be of good constitution.

## **ARTIFICIAL INSEMINATION**

### **Exporting Genetic Material**

1. Any bull from which semen is to be drawn for **International use** must first be approved by Council.
2. All inspection costs are to be borne by the owner of the bull. A registration fee of \$100 is payable by the owner on proof that the bull is a successful donor.
3. All semen rights transfer with the sale of the bull **except** if a vendor signs an agreement with the purchaser to retain semen for use in the vendor's herd only.
4. All National and International sires for AI use shall be DNA profiled and blood typed and tested free of TB and Mannosidosis and meet all other criteria required by MPI or the importing country.
5. The Council may at its discretion, withdraw approval for any bull for AI insemination and its decision will be final and binding upon all persons affected thereby.

### **Importing Genetic Material**

1. An imported bull or semen for National or Private stud use shall be accompanied by its registration certificate, blood type and/ or DNA certificate and be **TESTED** free of Mannosidosis and TB. The said certificates to be lodged with the Society.
2. Imported semen or embryos shall be registered with the NZ Murray Grey Beef Cattle Society for a fee of \$100+gst per bull or donor female, payable by the importer, before progeny can be accepted for registration. (Effective from 17/03/2021)
3. Registration to be approved by Council.
4. Imported bull or semen for National or private use to be tested free of genetic defects: Arthrogryposis Multiplex (AM), Neuropathic Hydrocephalus (NH) and Contractural Arachnodactyly (CA)

### **Embryo Transplants**

1. All international donor females shall require council approval.
2. All inspection costs will be borne by the owner of the donor females.

3. On proof of successful embryo collection, a fee of \$100+gst per donor female is payable to the Society. A certificate, signed by the technician, stating the date of collection and/or implant is to be lodged with the Society and a prescribed registration fee payable.
4. Export or National embryos shall be accompanied by a blood type and DNA of sire and dam as well as certificates stating the sire and dam are Mannosidosis and TB free.
5. Embryos to be confirmed as coming from parents tested clear of the genetic defects; Arthrogryposis Multiplex (AM), Neuropathic Hydrocephalus (NH) and Contractural Arachnodactyly (CA)

### **INSPECTIONS AND TRANSFERS**

- a. All Angus or Commercial Murray Grey females must be inspected by the Society's Inspector and identified appropriately.
- b. All other animals can be transferred without inspection.
- c. Every full member who transfers a registered or recorded animal shall within fourteen (14) days shall complete a transfer form and forward it to the office.
- d. Fees as set from time to time by the Council are payable for the Dam Prelist and for Transfers.
- e. Dam Prelist fees will be charged for upon receipt of the Animal Disposal List (ADL). Fines will be imposed for the late arrival of the Calf Returns. (See Branding and Tattooing, Section C)

### **BRANDING AND TATTOOING**

- a. All calves must be identified with a NAIT compliant primary EID tag, an AHB compliant secondary visual tag; tattooed, or brass tagged not later than weaning time.
- b. All cattle for export must be properly identified.
- c. All calving returns should be completed by 31st January and in the hands of the office by 20th February in each year.

### **HERD BOOK REGULATIONS**

- a. Entries will be received subject to the decision of Council as to their eligibility for inclusion in the Society Register and any entry may be refused if deemed necessary in the interest of the Society.

- b. The onus of providing to the satisfaction of the Council the ancestry of all animals submitted for registration and the accuracy of particulars thereof, shall rest on the applicant in all cases.
- c. All eligible animals recorded in the annual calf return will be registered automatically.
- d. A recorded DNA profile and a Contractural Arachnodactyly (CA) test is required for SIREs of all registered cattle born from 1/6/15.
- e. Random DNA Fingerprinting will be implemented at the Society's expense.
- f. Any changes or disputes involving the pedigrees of registered animals, where the Council feels genetic parentage is in question, a DNA Fingerprinting test will be asked for at the breeders expense.

## **TATTOO BRAND**

Each member may apply to the Society for a distinctive tattoo brand or fire brand.

## **STUD PREFIX**

- a. Each member shall be required to register with the Society a Stud Prefix for their exclusive use and apply it to the names of all animals bred by them. No Prefix to contain more than two words. No prefix other than the breeder's will be permitted as any portion of an animal's name.
- b. No member shall use the term "Dispersal Sale" unless the member is parting with the whole of the herd registered with the Society. When a member advertises and holds a dispersal sale, no progeny borne of any female animal owned and registered with the Society at that date shall be eligible for registration by the member after 90 days of the Dispersal Sale. A "Dispersal" sale means the disposal of the entire herd and at the same time the breeder must relinquish the herd prefix. If breeding is recommenced, a new Prefix must be obtained.

## **INTERNATIONAL MURRAY GREY BEEF CATTLE ASSOCIATION**

- a. The NZ Murray Grey Beef Cattle Society (Inc) is a member of the IMGBCA.
- b. Animals/Genetics registered or eligible for registration with other member associations of the IMGBCA may be registered with NZ Murray Grey Beef Cattle Society (Inc) provided that:
  - i. They are bred from only Murray Grey cattle of known purity or Black Angus cattle of established purity, or

- ii. The sire is at least fifteen/sixteenths Murray Grey blood,
- iii. The NZ Murray Grey Beef Cattle Society (Inc) will accept International Females of 7/8 purity into the New Zealand International Register.
- iv. Cattle to be tested clear of the genetic defects: Arthrogryposis Multiplex (AM), Neuropathic Hydrocephalus (NH) and Contractural Arachnodactyly (CA)
- c. Animals/Genetics imported from other member associations of IMGBCA and registered with the Murray Grey Beef Cattle Society (Inc) will have the letters IMP and the code depicting the country of origin as part of their name. The code depicting the country of origin must also become part of the registered tattoo.
- d. Animals or the donor animals of genetics imported from other member associations of IMGBCA shall be:
  - i. Approved by an inspector appointed by the Council for that purpose.
  - ii. Certified as having been subjected to examinations and tests as may be determined by the Council from time to time.
- e. The registration of animals imported from other member associations will be subject to Council approval.

### **CHANGES OF SIRE OF MURRAY GREY BULLS**

The sire should not be changed whether using Murray Grey bulls live or by Artificial Insemination (AI) under 17 days from the previous service. However, if due to unforeseen circumstances this is necessary, then the AI Certificate of the second sire (if by AI) and evidence of sire verification DNA of the resultant calves must accompany the Calving Sheets.

### **EMBRYO TRANSPLANTS**

The NZ Murray Grey Beef Cattle Society (Inc) will not recognize or register any progeny that is born as a result of Embryo Transplants unless the under mentioned procedures are followed:

1. Within 60 days of the Embryo Transplant a signed Veterinary certificate or Technicians form must be supplied to the Society by the Veterinarian or Technician declaring that he or she removed the fertilised eggs from the donor cow, giving the donor cow's identification particulars and then placed the eggs in the recipient cow, with all other relevant information required.
2. A blood type certificate or DNA Fingerprinting record (when available) of the donor female shall also be furnished.

3. An insemination certificate naming the service sire shall also be furnished with the egg transfer certificate.
4. A fee is payable to the Society on filing the necessary certificates.
5. If the owner of the transplanted egg or frozen eggs, is other than the owner of the donor cow, then within 100 days of the egg transplant, the transferee owner will be required to obtain an Embryo Entitlement Form, complete the transfer section on such form and file it with the Society.
6. For the Transfer of Ownership of the embryo, at a National Sale or for Export, the Sire and Dam must be approved and a Registration fee of \$50 paid to the Society.
7. Embryo Implants from frozen egg stock shall be recorded on the appropriate Society form -"Embryo Implant - Frozen Eggs" and filed with the Society, giving all information as required. If the owner of the transplanted egg from frozen stock is other than the owner of the original frozen stock as recorded on the Vet Certificate or Technicians form or on the Embryo Entitlement Form then a transfer form will have to be completed.
8. All progeny from Embryo Transplants or Egg Transfers shall be designated in the Herd Register and all other records with an ET immediately after the name of the animal and before the identification.
9. The Council reserves the right to refuse to register, or expunge a previous registration, of progeny born by embryo transplant which may appear not to be of true Murray Grey type.
10. These By Laws are subject to alteration by the Council at any time.

**As at 17 March 2021**



# Registrations & Performance Recording

The calf is allocated a unique name and number at birth by the breeder. The prefix will always be that of the breeder, chosen when the stud was registered with the Society. The prefix is followed by a chosen name or number plus an allocated farm number. The animal also has a 'herd book number' which is a 10 digit number, which incorporates the 4 digit registered stud number, the last two digits of the year of birth and its consecutive identification number on farm, and stays with the animal throughout its life. The number is quoted on any transfer or sale document and is a means of tracking performance data in EBV (Estimated Breeding values) for an individual animal.

Once the calf is born and the calving returns are filled in and returned to the Administrator, that animal's details are recorded as to its parentage and later when further performance data are added, i.e. weight and measurements, e.g. scanning data, then the data is accumulated for that particular animal's life time record.

The Calving Return will be mailed/supplied on line, to every member who has registered cattle over 2 years old, in June. This must be filled in and once all the calves are born the details as to birth date, weight, sire and dam, colour etc, it is returned to the Administrator. The animal's details will be put into the ABRI Breedplan system and then appear on line and access can be gained to its full pedigree, its performance data (if any) and will continue to accumulate as further progeny are born.

The option to submit calving returns and routine data collection from weighing is also available online.

The annual fee per cow that the Society charges covers the recording system for every registered animal. For those who wish to partake in the performance recording system run by ABRI in Australia, namely International Group Breedplan, after the animal is birth registered you will be issued with a programme which lists the animals born and the dates when their performance weighing is due i.e when the animals in the group average age is 200 days, 400 days and 600 days.

To participate in this recording scheme you need to weigh your calves at birth (within 24 hours) and then at the suggested average ages for 200, 400 and 600 days of age. These weights are submitted to the office either On line or via sheets which may be downloaded and filled in by hand.

The system generates the data to provide an EBV (Estimated Breeding Value) for each animal. These can be accessed on line once the data is uploaded. The higher the accuracy %age of data the more reliable it is and is an additional aid to choosing the best animals for the purpose for which you are selecting.

Further details re the EBV system are explained by going to the ABRI web site or clicking on description of EBV's at the bottom of the EBV enquiry page on the Society website [www.murraygreys.co.nz](http://www.murraygreys.co.nz) or under the headings Cattle/Recording on the website.

Once your animals EBV data has been accepted and processed you will be issued with an interim group report for you herd, listing all your cattle and their relevant sires and dams-even if you used AI or bought in stock. You can access these monthly updates for your herd once you have a membership Log and also see the International Group Breedplan Summary, listing the trait leaders of the breed.

Performance recording is based mainly in obtaining and submitting weights at the appropriate age.

For recording weights for EBV purposes animals must be weighed on scales and weights submitted in kilos. Birth weights must be taken within 24 hours of birth using platform or clock-face scales (not weigh tapes) There are various systems for weighing calves, ranging from the load bars and platform type typically used for adult cattle and also hanging the calf in a sling from a suspended scale or even standing on the scales yourself holding the calf, and then deducting the weight of the person from the total.

Weigh tapes, whilst they can be useful when used as a rough guide on older animals, the degree of accuracy when used on newborn calves has been found to vary by up to 5kgs on the same animal when compared to scales. Research on comparisons has found that weigh tapes tend to underestimate high birth weights and overestimate low birth weights.

# Tips for New Owners

## BUYING AND SELLING CATTLE

Knowing where to source cattle can sometimes be a problem for those new to the industry. The breed website and NZ Facebook page are a good place to start. There is a list of members with registered cattle accessed through the members area map. Contacting breeders in a particular area can often lead to the possibility of cattle for sale or contacts to follow up. Cattle may be offered for sale at an annual National sale on line and some studs conduct their own annual sales. By advertising on line in the Sale and Wanted section of the MG web site, or in the annual "Progress" magazine can facilitate buying or selling cattle. Check out the authenticity of 'pure bred' stock prior to purchase if you intend to register them. There are many so called purebreds at sale yards and on line that have either a crossbred ancestry or that the pedigree cannot be proven.

## GESTATION TABLE

Based on 283 days pregnancy, remember that gestation length can vary 10 days either side of due date.

<b>MATED</b>	<b>1 JAN</b>	<b>8 JAN</b>	<b>15 JAN</b>	<b>22 JAN</b>	<b>29 JAN</b>
DUE	11 OCT	18 OCT	25 OCT	1 NOV	8 NOV
<b>MATED</b>	<b>5 FEB</b>	<b>12 FEB</b>	<b>19 FEB</b>	<b>26 FEB</b>	<b>5 MAR</b>
DUE	14 NOV	21 NOV	28 NOV	5 DEC	12 DEC
<b>MATED</b>	<b>12 MAR</b>	<b>19 MAR</b>	<b>26 MAR</b>	<b>2 APR</b>	<b>9 APR</b>
DUE	19 DEC	26 DEC	2 JAN	9 JAN	16 JAN
<b>MATED</b>	<b>16 APR</b>	<b>23 APR</b>	<b>30 APR</b>	<b>7 MAY</b>	<b>14 MAY</b>
DUE	23 JAN	30 JAN	6 FEB	13 FEB	20 FEB
<b>MATED</b>	<b>21 MAY</b>	<b>28 MAY</b>	<b>4 JUNE</b>	<b>11 JUNE</b>	<b>18 JUNE</b>
DUE	27 FEB	6 MAR	13 MAR	20 MAR	27 MAR
<b>MATED</b>	<b>25 JUNE</b>	<b>2 JULY</b>	<b>9 JULY</b>	<b>16 JULY</b>	<b>23 JULY</b>
DUE	3 APR	10 APR	17 APR	24 APR	1 MAY
<b>MATED</b>	<b>30 JULY</b>	<b>6 AUG</b>	<b>13 AUG</b>	<b>20 AUG</b>	<b>27 AUG</b>
DUE	8 MAY	15 MAY	22 MAY	29 MAY	5 JUNE
<b>MATED</b>	<b>3 SEPT</b>	<b>10 SEPT</b>	<b>17 SEPT</b>	<b>24 SEPT</b>	<b>1 OCT</b>
DUE	12 JUNE	19 JUNE	26 JUNE	3 JULY	10 JULY
<b>MATED</b>	<b>8 OCT</b>	<b>15 OCT</b>	<b>22 OCT</b>	<b>29 OCT</b>	<b>5 NOV</b>
DUE	17 JULY	24 JULY	31 JULY	7 AUG	14 AUG
<b>MATED</b>	<b>12 NOV</b>	<b>19 NOV</b>	<b>26 NOV</b>	<b>3 DEC</b>	<b>10 DEC</b>
DUE	21 AUG	28 AUG	4 SEPT	11 SEPT	18 SEPT
<b>MATED</b>	<b>17 DEC</b>	<b>24 DEC</b>			
DUE	25 SEPT	2 OCT			

## BREEDING UP

The Murray Grey breed in New Zealand has been either bred up from imported Murray Greys or from inspected and approved New Zealand Angus.

From time to time the Murray Grey Society may amend the rules relating to the make-up of the breed. Australia and New Zealand have recently amended the rules, allowing the introduction of Angus blood on both the male and female side.

### Inbreeding

Usually described as the mating together of two animals which are closely related, in which case several of their ancestors will occur on both sides of the pedigree. Close inbreeding, i.e. the mating of full siblings, or parent to offspring may highlight a genetic weakness and can lead to 'inbreeding depression' which is a decline in reproductive fitness and vigour in the offspring.

Inbreeding which is less extreme, e.g. mating of half siblings or cousins, can, if both animals are good, result in a uniform offspring. However it may highlight any genetic weakness which is hidden in the individuals.

By using the Mating predictor on the EBV website and entering the herd numbers of the proposed bull and female-apart from showing what the proposed off spring EBV's might be, it will also show the inbreeding co-efficient percentage. By clicking on the Inbreeding Coefficient words it will take you to a full explanation of its relevance. Briefly a coefficient over 10% may result in reduced performance.

**Table.** Inbreeding coefficients for various inbred relationships

RELATIONSHIP	INBREEDING COEFFICIENT (%) *
Animal mated to its own parent (eg Sire / daughter)	25%
Half sib matings (parents have a common sire or dam)	12.5%
Full sib matings (parents have a common sire and dam)	25%
Animal has a single common great grand parent	3.1%

\* minimum value, will be higher if ancestors are themselves inbred

### Line breeding

Technically line breeding is a form of inbreeding, the aim of which seeks to concentrate the genetic impact of a single individual within a population. Whilst some of the bad effects of in-breeding can also develop with line breeding (concentration of genetic defects etc

and reduced reproductive performance) by the judicious mating of less closely related individuals –e.g. half sibs and cousins, the benefits can be achieved at a lower risk.

### **Line crossing or Out-crossing**

Is when there is no ancestral link between the blood lines of male or female lines, but they are of the same 'breed' Any genetic weakness may be harder to spot, but any weakness in structure or behaviour should still be rigorously culled. Uniformity within a herd may be harder to achieve when line crossing is practiced in every generation.

### **Cross breeding**

The mating together of two different breeds may introduce hybrid vigour, where an animal performs better than either of its parents. The disadvantage of this is that two separate breeds may have to be maintained to continue the hybrid status. This practice may include the use of a Terminal sire over a maternal breed cow to produce well-muscled, fast growing offspring from a type of female renowned for reproductive traits like easy calving, good milk production and weaning an efficient calf. Many of the composite and 'new' breeds arose from the hybrid vigour expressed by the crossing of separate established breeds-the Murray Grey being just such a hybrid.

### **Breeding records**

As outlined in the section on registration, you will be provided with a Female Inventory/ADL (Animal Disposal Listing) annually, on which to record where animals have been sold, culled or otherwise left your herd during the year. Any animals purchased will automatically show on this list if their transfer from the previous owner has been lodged by the vendor with the Society.

If an animal does not appear, check with the vendor that the appropriate paper work has been sent to the Society. Transfer forms can be downloaded from the Murray Grey website or obtained from the Murray Grey Administrator at Performance Beef Breeders.

Once your numbers for the year have been corrected on the database you will be sent a list of all females, 2 years and over, on a Calving return list. Once calving is completed for the season you are asked to complete all the details requested and return to the Administrator. The Forms come with full explanations as to how to be completed.

### **Use of Sire Verification**

If calves are from a sire which you do not own, i.e. by AI, or by the use of a Lease bull, the return will need to be accompanied by the appropriate forms regarding the use of the AI or leased Sire.

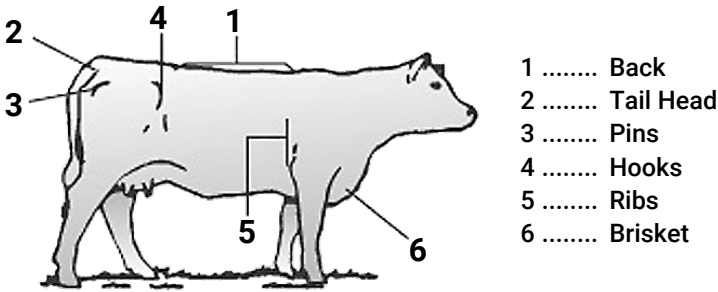
Once the calf data has been downloaded on to the system you will receive sheets listing all your animals which will need weighing at the 200, 400 and 600 day target dates. Scan data and mature cow weights can also be added.

**STRUCTURE**

Correct structure is important in any breeding animal, as many of the faults are either highly heritable and/or will prevent the animal from serving or calving without problems.

There are several publications which outline the degree of faults in correct structure.

To be able to recognise the anatomical features used in these diagrams the points of the beast are identified below.



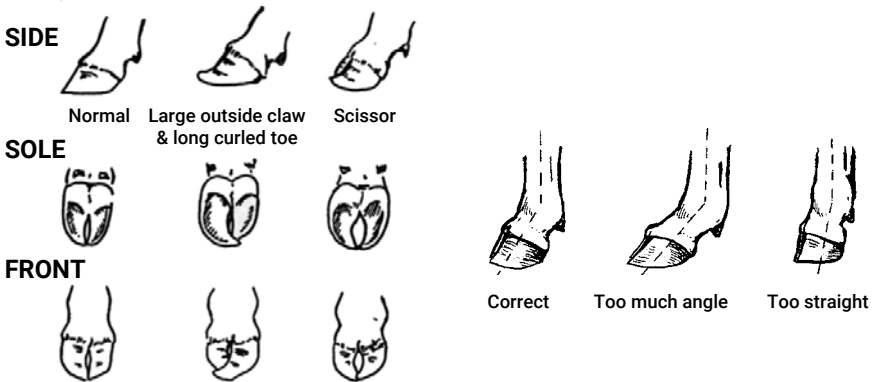
Murray Greys are considered to be moderate framed cattle, that is between Frame scores 4 and 6. The frame score is measured at the hips and height for age compared to a table dependant on sex and age.

A summary is as follows. These are broad measurements used over all breeds of cattle to be used as a guide only.

Frame Size	Up to 12 mths	13 to 18 mths	19 to 30 mths	Over 30 mths
<b>Small</b>	Up to 90 cm	Up To 110 cm	Up to 120 cm	Up to 130 cm
<b>Medium</b>	91 to 110 cm	111 to 120 cm	121 to 135 cm	131 to 145 cm
<b>Large</b>	Over 110 cm	Over 120 cm	Over 135 cm	Over 145 cm

A good reference site for diagrams of structural faults can be found on the Breedplan website [www.breedplan.une.edu.au](http://www.breedplan.une.edu.au) "Understanding structural soundness EBV's"

Illustrations are examples of correct and incorrect feet:



Examples of the ideal relationship between measurements of a beef animal linear measurements as described on the website [www.bovineengineering.com/linear](http://www.bovineengineering.com/linear) by Gearld Fry

### Female Standards

1. Hearth girth  $\geq$  top line (the larger the girth the better)
2. Shoulder width = Rump length ( $\pm 1$ cm is allowed).
3. Rump length is 38-40% of body (2/3rds) length
4. Flank is a minimum 5cm larger then hearth girth (a higher # is better).
5. Rump width is minimum 40% of rump height.
6. Rump width is 6cm wider than rump length.

### Male Standards

1. Hearth girth  $\geq$  top line (the larger the girth the better).
2. Rump length is 38-40% of body (2/3rds) length.
3. Rump length is 44% or more of body (2/3rds) length.
4. Shoulder width is 5cm plus wider than rump is long.
5. Flank is 0-5cm larger than heart girth.
6. Frame score of 4.5 – 5.5 works best.
7. Scrotal at widest point should be 38-40 centimetres as a yearling.

## WHAT COLOUR IS THIS CALF?

The Murray Grey standards say that coat colour can be silver, silver grey, grey, light grey dark grey or black. The calving return sheets state to register the colour calf which range in colour from silver through to shades of grey and black as per the Standard, as S, SG, LG, G DG,B. The NZ registry allows the registration of black calves in the normal register. (In Australia there is a separate registry BF or Black factor) so a black calf colour will thus be denoted by B.

The word 'grey' can confuse as the colour is not grey as in a mix of black and white (often referred to blue in some breeds) but tends to be more a shades of dun, beige and chocolate, tending to the browner shades. Cows are also often dappled, especially the grey ones, in their summer coats as well.

Calves are often born with a grey appearance and these coats then tend to go whiter or browner as they age so it is often hard for the uninitiated to classify a future colour by the initial birth coat.

Silver is the lightest colour and is typified by an all over white coat, overlying a dark skin which gives the silver sheen as different to the stark white of a breed like a Charolais or Shorthorn where white hair overlays a pink skin.



**Silver calf**



**Silver Grey calf**

Silver Grey is probably the most typical colour of Murray Grey calves. This soft grey colouring may turn a creamier white to creamy light or dark honey colour as the animal matures.





**Grey calf**



**Dark Grey calf**

Light Grey, Grey and Dark Grey are shadings from grey through to dark chocolate, easier to tell apart if you have some of each colour. These shades mature to shades of brown, probably best described as fawn, milk chocolate and dark chocolate in the adults.



Some examples of how calves change as they grow up, this grey calf, from a light grey cow got paler as she got older, and the third photo as a 2 yr old in winter coat with her own silver grey calf.



Calves that seem to start out quite grey can end up turning a deep silver grey or honey colour. This calf out of a dark grey cow lightened after he dried, note the light, dry rings around his nose and eyes, to light grey and by the time he was weaned was dark silver. He was registered as Silver Grey.

Black calves are unmistakably jet black, although they can appear to be dark brown especially inside the back legs when first born and as they lose their baby coat.



**Black calf at one month**



**same animal at 18 months**

# The Inheritance of Colour in Murray Grey

The probabilities of likely progeny colour are depicted in the following tables. These were compiled from the registrations in the first three herd books by Milton Grant of the Kurrawen stud in New South Wales and published in the book, "Murray Greys" by Tim Hewat in 1972. This table shows the likelihood of calf colour, according to colour of sire and dam, for the simplification of the tables the Silver and Silver Greys have been combined.

<b>BULL COLOUR - SILVER GREY</b>				
<b>DAM COLOUR</b>	Silver Grey	Grey	Dark Grey	Black
<b>CALF COLOUR</b>				
Silver Grey	88%	12%	0%	0%
Grey	56.66%	36.67%	6.67%	0%
Dark Grey	30%	50%	20%	0%
Black	0%	60%	40%	0%
<b>BULL COLOUR - GREY</b>				
<b>DAM COLOUR</b>	Silver Grey	Grey	Dark Grey	Black
<b>CALF COLOUR</b>				
Silver Grey	56.66%	36.67%	6.67%	0%
Grey	25%	50%	22.22%	2.78%
Dark Grey	8.33%	45.83%	37.5%	8.33%
Black	0%	16.67%	66.67%	16.67%
<b>BULL COLOUR - DARK GREY</b>				
<b>DAM COLOUR</b>	Silver Grey	Grey	Dark Grey	Black
<b>CALF COLOUR</b>				
Silver Grey	30%	50%	20%	0%
Grey	8.33%	45.83%	37.5%	8.33%
Dark Grey	0%	18.75%	50%	31.25%
Black	0%	0%	50%	50%

## **SO WHERE DID THE COLOUR COME FROM?**

Though the story goes that the first Murray Grey calf was born in 1905, the result of a mating between an Angus bull and a Shorthorn cow, one must go further back than these two animals to find out just why the grey colouring was so dominant in all twelve of this particular cow's calves, to different Angus sires. If we accept that only one foundation cow was involved and that she was a Shorthorn, where then did the Shorthorn originate? The Holderness cattle from the East Riding of Yorkshire, the Teeswater cattle of the North Riding were red, roan or white and said to have been descended from Dutch cattle, together with the British Wild White cattle that roamed wild in similar area to the Shorthorns. These wild cattle were white with black points.

The Angus is said to have originated from the Angus Doddie and the Buchan Humlie cattle of East-Central Scotland in the eighteenth century. They were predominantly black with some reds. The Scottish Angus herd book, started in 1862 also included the Galloway, which came in black, brown and dun, and also some with a distinctive belt of white. Some Angus have a greyish undercoat and others reddish.

Stock from Scandinavia may also have played a part in the development of the cattle in Scotland as invaders from there who later settled in Scotland would have brought their own cattle as well. Eventually the black was settled upon as the colour, possibly just because that was the preference at the time.

So in summary it can be assumed that the Murray Grey owes its origins to the combination of these particular sets of genes from the white Shorthorn cow which incorporated the Holderness, Teeswater and Wild White cattle of North East England and from the Angus bulls through which were channelled the genes from the Angus Doddie, the Buchan Humlie and the Norse cattle. Together these genes did not produce a freak or a 'sport' but a combination, which we now know as hybrid vigour and which produces a series of dominant effects such as colour, polledness, docile temperament, efficient feed conversion, great mothering and milking ability and which now breeds true to type in each subsequent generation.

from **"The case of the curious colour"**

by **W.A.Beattie in the book "Murray Greys" by Tim Hewat**

# Notes on using Murray Grey website

[www.murraygreys.co.nz](http://www.murraygreys.co.nz)

This website contains the electronic version of a Herd book, where all pedigrees of registered NZ Murray Greys are displayed.

There are also a number of features available on the website which are both informative and functional for Murray Grey members as well as the public.

News items regarding anything to do with the breed can be posted. Contact the MG Society office if you have news, sale or Show results or photos you would like to share.

Cattle for Sale and Wanted can be displayed, including semen and embryos.

Forms which need to be submitted for various purposes can be downloaded, such as Transfer certificates and A.I. certificates which must accompany Calf registrations for calves bred by AI.

All cattle which are registered with the NZ MG Society can be found on line by going to Animal or EBV enquiry. If the breeder has performance recorded the animal (ie recorded and submitted the appropriate data) then their performance data and also their full pedigree can be found by going to EBV enquiry and entering the animal name.

There are a number of options. If you want to find an animal, enter the complete name, if you want to find say all the bull calves from a particular breeder, enter the herd prefix, the calving year, then go to the appropriate drop down menu eg animal is male etc.

If you want to find all the registered bull calves in NZ for say 2020, do not enter a name or prefix but enter the calving year and then select from the menu, animal is male/female. If you then want to select further scroll down and put in the parameters for the EBV you are seeking e.g. min/ max birth weight EBV, minimum weaning weight EBV and so on. This will then only show all those animals which fall within your desired parameters. Because the programme shows a maximum of 400 animals at once you may need to either look at them in several blocks, or just select the animals which fit. They can be listed by breeder, by ascending or descending order of best first or any criteria you choose from the drop down menu.

Explanations of each trait or EBV can be found by scrolling to the bottom of the EBV enquiry selection criteria page and going to 'Description of EBV's.'

The Mating Predictor facility allows you to enter the names of two or more animals and predict the possible expected EBV's from any progeny resulting from a particular bull over one or more cows.

Enter the full herd book number of the sire, which includes his herd number, birth year and individual number and then enter one female or the year of birth of a group of females and

either the herd number or other listing e.g. Any or My Ownership. The results will display the pedigrees, the expected EBV's and the degree of inbreeding from each mating.

There is a Member log in feature; it consists of your 4 digit herd number plus a password which can be obtained by contacting the MG Administrator at Performance Beef Breeders-contacts on the Home page. This facility allows you list all the females in your ownership, whatever their stud prefix. Your own herd data will also be available on this section, once you have submitted weighing data, calf returns etc

The data is updated monthly as further weights are entered on line from anyone who has similarly bred cattle which may affect the data of your own herd.

The recent addition of the Dairy Index to the EBV traits on NZ born animals shows how well the mix of traits in bulls which are most desirable for cross breeding with dairy females to produce maximum benefit for the dairy farmer using a Murray Grey bull.

If you want to find all the registered bull calves in NZ for say, 2011, do not enter a name or prefix but enter the calving year and then select from the menu, animal is male/female. If you then want to select further scroll down and put in the parameters for the EBV you are seeking e.g. min/ max birth weight EBV, minimum weaning weight EBV and so on. This will then only show all those animals which fall within your desired parameters. Because the programme shows a maximum of 400 animals at once you may need to either look at them in several blocks, or just select the animals which fit. They can be listed by breeder, by ascending or descending order of best first or any criteria you choose from the drop down menu.

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The recent addition of the Dairy Index to the EBV traits shows how well the mix of traits in bulls which are most desirable for cross breeding with dairy females to produce maximum benefit for the dairy farmer using a Murray Grey bull.

## **WHAT IS THE DAIRY INDEX?**

When you look at an animals EBV's (Estimated Breeding values) you will see a column marked Dairy Index \$\$ on the extreme right.

The Dairy Index estimates the genetic differences between animals in net profitability per cow joined, for an example commercial dairy herd targeting the production of dairy beef progeny from dairy cows and heifers where all progeny are slaughtered. Steers are assumed marketed at 450 kg live weight (240 kg carcass weight and 6 mm fat depth) at 16 months of age. While calving ease is by far the most important profit driver in the Index, growth and to a lesser extent meat yield also contribute.

The Dairy Index relates to typical commercial dairy herd producing dairy beef through the use of Murray Grey bulls. It is not suitable for use when selecting bulls for a self replacing purebred Murray Grey breeding program. All selection indexes are reported as an EBV, in units of relative earning capacity (\$) for a given production/market scenario. They reflect both the short term profit generated by a sire through the sale of his progeny, and the longer term profit generated by his daughters in a self replacing cow herd (where applicable).

All selection index values have been derived using Breed Object technology. More detailed information regarding the Dairy Index can be provided. If you have any further queries regarding New Zealand Murray Grey Selection Indexes, please do not hesitate to contact staff at the New Zealand Murray Grey Beef Cattle Society.

# Glossary of Terms

<b>AHB</b>	Animal health Board
<b>AI</b>	Artificial Insemination
<b>ET</b>	Embryo Transplant
<b>ADL</b>	Animal Disposal Listing, must be adjusted annually to account for movements in and out of your herd
<b>CA</b>	Contractural Arachnodactyly, a genetic deformity occurring in mainly Angus and Murray Grey breeds
<b>DNA</b>	Deoxyribonucleic acid

**Female Inventory (Known formerly as the ADL)**

A list of female animals 2 years and over in your herd updated annually

**Genotype** the genetic make-up of an animal, not necessarily visible

**NAIT** National Animal Identification and Tracing scheme

**NS** Natural Service

**RWB** Run with a bull

**Phenotype** The physical appearance of a particular animal





# Birthplace of the Murray Grey Breed

**Inscription on the monument situated at Thologolong station, Victoria, Australia which reads:**

THE BIRTHPLACE OF THE MURRAY GREY

Australia's beef cattle breed, the Murray Grey, originated here in the Upper Murray Valley's Thologolong District.

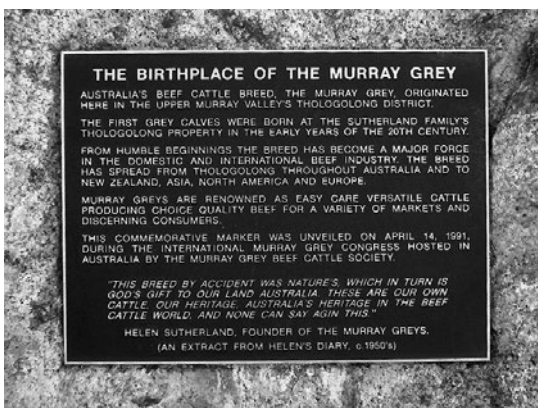
The first grey calves were born at the Sutherland family's Thologolong property in the early years of the 20th Century.

From humble beginnings the breed has become a major force in the domestic and international beef industry. The breed has spread from Thologolong throughout Australia and to New Zealand, Asia, North America and Europe.

Murray Greys are renowned as easy care versatile cattle producing choice quality beef for a variety of markets and discerning consumers.

This commemorative marker was unveiled on April 14, 1991 during the International Murray Grey Congress hosted in Australia by the Murray Grey Beef Cattle Society.

"This breed by accident was nature's, which in turn is God's gift to our land Australia. These are our own cattle, our heritage, Australia's heritage in the beef cattle world, and none can say agin this." Helen Sutherland, founder of the Murray Greys. (An extract from Helen's diary, c.1950's)





# NOTES & SOCIETY UPDATES



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