



SECTION 7 – Part B

North American Limousin Foundation

Rules & Regulations

Section I

Herd Books and Records

1. Limousin Herd Book

The executive officer shall maintain and preserve in the Foundation office a Limousin Herd Book, in which all records of pedigree, identification, sex, date of birth, owner and such performance data submitted on all Limousin animals offered for recording will be kept.

2. Recognition of Certificates

The Foundation shall accept, at face value from breeders, properly executed certificates from the Herd Book Limousin of France and approved affiliate organizations of other countries.

3. Classifications for Registration Purposes

To be registered as a fullblood, purebred or percentage animal in the North American Limousin Foundation herd book, animals must be at least 12% Limousin as computed by the North American Limousin Foundation. The use of percentage figures, rounded down to whole numbers rather than fractions, will be used to express the NALF percent of Limousin blood in an animal.

Fractions	Actual Percentage Limousin Blood	Recorded NALF Percentage
1/8	12.5%	12%
1/4	25.0%	25%
3/8	37.5%	37%
7/16	43.5%	43%
1/2	50.0%	50%
3/4	75.0%	75%
7/8	87.5%	87% (males and females considered purebred)
15/16	93.75%	93%

Animals whose percent Limousin blood falls between these basic fractions will be recorded according to their percent blood as computed by the North American Limousin Foundation after the percentages have been rounded down to whole numbers.

- A. Fullblood: All animals which are of full French ancestry and have not been upgraded from domestic stock are classified as “Fullblood”, or 100 percent Limousin. Recorded as NFF (female) and NFM (male).
- B. Bulls of 93% or greater Limousin blood as computed by the North American Limousin Foundation will be designated as “purebred”, 100% will be used to calculate the NALF percentage of their offspring. Recorded as NPM.
- C. Females of 93% and greater Limousin blood as computed by the North American Limousin Foundation will be designated as “purebred”, 100% will be used to calculate the NALF percentage of their offspring. Recorded as NPF.

- D. Bulls and females of 87% or greater but less than 93% Limousin blood as computed by the North American Limousin Foundation will be considered “purebred”, and the recorded percentage will be used to calculate the NALF percentage of their offspring. Recorded as NPM and NPF respectively.
- E. All progeny of matings of two “purebred” animals will be registered as “purebred.”
- F. In calculating the percentage Limousin of matings in which both animals are not “purebred”, the recorded percentages of each animal are used, except that all “purebred” 93% or greater animals are considered to be 100% for means of calculating the offspring’s percent Limousin.

NALF Percentage Limousin Blood in Calf = (Dam % + Sire %)/2							
Dam % Mated to:	100% Bull	93% Bull	87% Bull	75% Bull	50% Bull	25% Bull	0% Bull
0	50	50	43	37	25	12	0
25	62	62	56	50	37	25	12
50	75	75	68	62	50	37	25
75	87	87	81	75	62	50	37
87	93	93	87	81	68	56	43
93	100	100	93	87	75	62	50
100	100	100	93	87	75	62	50

- G. Females sired by Limousin multiple sire bulls - The North American Limousin Foundation Multiple Sire Program expired January 1, 1990 and was reinstated April 6, 1994. The North American Limousin Foundation Multiple Sire Program was discontinued on April 16, 2008 because of limited application and because of advances in DNA technology.

- H. Known sires not registered with the North American Limousin Foundation must meet the following criteria to be eligible for registration:
- 1) The sire must be registered with a recognized beef breed association.
 - 2) A photocopy of the sire's registration certificate must accompany the North American Limousin Foundation registration application.
 - 3) The animal must be at least 12% Limousin as computed by the North American Limousin Foundation.
- I. Unknown sires are entered into the NALF herdbook with 0% breed composition for all breeds.
- J. All animals must be at least 12% Limousin as computed by the North American Limousin Foundation to be registered.
- K. Specifications for Lim-Flex:
- 1) Animals registered as Lim-Flex must be 25 to 75% Limousin as computed by the North American Limousin Foundation and at least 25% Angus or Red Angus with a maximum allowance of another breed or unknown breed of 12.5% (1/8th). The breed composition requirements for Lim-Flex registered animals can originate from parents of any percent Limousin, Angus and Red Angus blood which meet the sire and dam specifications listed below.
 - 2) Sires of Lim-Flex registered animals must be registered with the North American Limousin Foundation or another breed association and have documented pedigree information for their parents (both sires and dams).
 - 3) Dams of Lim-Flex registered animals must be documented as being sired by a bull registered with the North American Limousin Foundation or another breed association and have known actual percent blood information.
 - 4) Lim-Flex registered animals are issued registration certificates of a different color than those for the North American Limousin Foundation fullblood, purebred and percentage cattle. Registration prefixes of Lim-Flex registered animals are LFM for males and LFF for females.
 - 5) Unregistered cows may be used to produce Lim-Flex calves as long as breed composition, age and sire registration number is documented with the North American Limousin Foundation. These cows must be individually identified and tattooed with a unique herd prefix, tattoo number and birth year letter code. Breed composition must be documented to the nearest 12.5 percent (1/8th) using the

North American Limousin Foundation's sixteen-character breed code (2 characters per eighth). Sires of unregistered cows must be registered with the North American Limousin Foundation or another breed association and be documented in the North American Limousin Foundation herd book in order for offspring to be eligible for Lim-Flex registry. Unregistered cows are assigned registration numbers with a registration prefix of UXF. Cows with the UXF registration prefix do not have any of their own performance data recorded, only their birth date, breed composition and sire registration number. In addition, cows with the UXF prefix are only eligible to have progeny recorded as Lim-Flex. Owners of UXF cows may view UXF EPDs via the secured, members-only portion of the North American Limousin Foundation website.

All UXF prefix cattle are grandfathered into the registry, but no new UXF cattle will be allowed entry into the registry after the effective date of January 1, 2012.

Section II

Requirements for Registration

1. General Eligibility

To be accepted for registration in the herd book of this organization:

- A. Calf must be identified by an ear tattoo. The tattoo is required on the animal prior to the time of application for registration. The ear tattoo shall consist of:
 - 1) The assigned herd prefix letters.
 - 2) The permanent ID of the animal. The permanent ID may contain up to, but not more than, four (4) letters or numbers and a specific letter designating the year of birth. Designating year letters are "A" for 1991 (1969); "B" for 1992 (1970); "C" for 1993 (1971), etc. The letters "I", "O" and "Q" will not be used as year letters. A complete list of year codes is available from the North American Limousin Foundation office. The only letter allowable is the year code, and it must be the last digit on the right. The tattoo cannot be duplicated within one herd on animals of the same sex within the same year.
- B. An official application for entry form must be completed and submitted to the North American Limousin Foundation.
- C. There are no color requirements.

- D. In the absence of actual birth weights reported by a member, the North American Limousin Foundation will use 80 pounds for heifers and 85 pounds for bulls as the standard birth weights to be used for the calculation of adjusted weaning and yearling weights.
- E. Reporting performance data by all breeders on all cattle registered or recorded by the North American Limousin Foundation is optional but strongly recommended as it is this data that serves as the basis for the breed's genetic evaluation program.
- F. Parentage Verification Requirements.

The North American Limousin Foundation will accept parentage results from Zoetis (formerly Pfizer Animal Genetics), and GeneSeek, Inc. laboratories for parent verification.

1) The following rules apply to all AI sires:

- a) Sires born prior to July 1, 1987 must have an identification blood or DNA type on file at the North American Limousin Foundation office.
- b) Sires born between July 1, 1987 and December 31, 1990 must be sire verified through blood or DNA typing.
- c) Sires born after December 31, 1990 must be parent verified to both sire and dam through blood or DNA typing.
- d) Sires born on or after January 1, 2001 must have a DNA type on file and be parent verified through blood or DNA typing. If blood typing is used for parentage verification, sires must have both a DNA type and a blood type on file for offspring to be eligible for registration.
- e) Sires born on or after January 1, 2002 must have a DNA type on file and be parent verified through DNA typing. In cases where one or both parents are deceased and no sample is available for DNA typing, blood typing may be used for parentage verification.
- f) Sires born after January 1, 2009 must be parent verified through STR or SNP typing. If STR typing is used for parentage verification, sires must have both a STR and a SNP type on file for offspring to be eligible for registration.
- g) Sires born on or after January 1, 2011 must have a SNP type on file and be parent verified through SNP typing. In cases where one or both parents are deceased and no sample is available for SNP typing, STR typing may be used for parentage verification.

In cases where an AI sire is already registered with the North American Limousin Foundation, is parent verified through STR typing, and has registered progeny from an AI service - the sire must have a SNP type on file and will be allowed to continue as an AI sire.

- h) All AI sires born on or after January 1, 2015 are required to have a GGP 100K genomic profile on file in addition to parent verification. They must also be tested for any genetic condition (AM, NH, Proto, etc) that they are a potential carrier for. AI sire permits are required on any new AI sire and can be added by contacting the NALF office. Positive tested carriers of genetic defects will not be eligible for AI sire permits.

All sires used in multiple sire embryo transfer programs must be typed according to the rules above prior to breeding. Donor dams may be bred to no more than two (2) sires per flush. Prior to breeding, the North American Limousin Foundation's official laboratory must determine if the resulting offspring can be identified back to the specific AI sire. Limousin and Lim-Flex AI sires used to produce Lim-Flex offspring are subject to the same parentage verification requirements as for Limousin and Lim-Flex AI sires used to produce registered or recorded fullblood, purebred or percentage Limousin offspring. AI sires of other breeds used to produce Lim-Flex offspring are subject to the parentage verification requirements of the sire's breed association of record.

2) The following rules apply to all embryo donor dams:

- a) Donor dams born prior to July 1, 1987 must have an identification blood or DNA type on file at the North American Limousin Foundation office.
- b) Donor dams born on or after July 1, 1987 must be sire verified through blood or DNA typing.
- c) Donor dams born on or after January 1, 2001 must have a DNA type on file and be sire verified through blood or DNA typing. If blood typing is used for sire verification, donor dams must have both a DNA type and a blood type on file for offspring to be eligible for registration.
- d) Donor dams born on or after January 1, 2002 must have a DNA type on file and be sire verified through DNA typing. In cases where the sire is deceased and no sample is available for DNA typing, blood typing may be used for sire verification. In cases where the sire is deceased and no blood type or DNA tissue is available, the sire must be marked dead in the herd book and the donor dam must have an identification DNA type on file at the North American Limousin Foundation office.

- e) Donor dams born on or after January 1, 2009 must be sire verified through STR or SNP typing. If STR typing is used for sire verification, donor dams must have both a STR and a SNP type on file for offspring to be eligible for registration.

In cases where the donor dam has a blood type on file and was sire verified through blood typing, the donor dam and the donor dam's sire are deceased, and no sample is available for STR or SNP typing the donor dam's sire – the ET calf must have a SNP type on file and will be allowed registration using sire verification through STR or SNP only.

- f) Donor dams born on or after January 1, 2011 must have a SNP type on file and be sire verified through SNP typing. In cases where the sire is deceased and no sample is available for SNP typing, STR typing may be used for sire verification.

In cases where a donor dam is already registered with the North American Limousin Foundation, is sire verified through STR typing, and has registered ET progeny - the donor dam must have a SNP type on file and will be allowed to continue as a donor dam.

In cases where the donor dam's sire is deceased and no sample is available for STR or SNP typing, the ET calf can be registered using sire verification through STR or SNP only and must have a SNP type on file.

- g) All donor dams born on or after January 1, 2015 will be required to have a GGP 100K genomic profile on file in addition to sire verification.

Limousin and Lim-Flex donor dams used to produce Lim-Flex embryo transfer offspring are subject to the same parentage verification requirements as for Limousin and Lim-Flex donor dams used to produce registered fullblood, purebred or percentage Limousin embryo transfer offspring. For donor dams of other breeds used to produce Lim-Flex embryo transfer offspring, the North American Limousin Foundation will recognize and record identification blood and DNA types from Zoetis (formerly Pfizer Animal Genetics), and GeneSeek, Inc. or that of the donor dam's breed association of record. Donor dams of other breeds used to produce Lim-Flex embryo transfer offspring are subject to the parentage verification requirements of the donor dam's breed association of record.

- 3) The following rules apply to all embryo transfer (ET) calves in order to be eligible for registration:

- a) ET calves born prior to January 1, 2003 must be parent verified to both sire and dam through blood or DNA typing.

- b) ET calves born on or after January 1, 2003 must be parent verified to both sire and dam through DNA typing.
- c) ET calves born on or after January 1, 2014 must be parent verified to both sire and dam through SNP typing.

Please refer to 2e and 2f for special situations.

Sires and donor dams of Lim-Flex ET calves are subject to the parent verification requirements of their breed association of record and their blood, STR, or SNP type must be on file at the North American Limousin Foundation office.

4) Random Parent Verification Program

As a means of maintaining the integrity of the North American Limousin Foundation's herd book, the Foundation "randomly" chooses animals that must be parent verified. Beginning May 1, 2002, every 2000th animal that is entered into the North American Limousin Foundation herd book must be parent verified through SNP typing. All SNP typing costs are paid by the Foundation. The animal will not be registered and its registration certificate will not be released until parent verification has been completed.

2. Breeding Restrictions

All bulls used in natural mating multiple sire groups must be registered with the North American Limousin Foundation and have DNA identification types on file. Progeny from multiple sire matings (matings using more than one bull per breeding group) are not eligible for registration until positive evidence of sire is furnished through DNA typing. In some situations, both the sire and the dam of the offspring may have to be DNA tested to establish paternity.

- A. Suspected embryo transfer calves born on or after January 1, 2019 who exclude to their donor dams may be registered as natural calves to their registered recipient dam (whether Limousin, Lim-Flex, or foreign registered animal) without dam verification, pending the sire verification of the cleanup bull comes back as Qualified. Recipient dams must be denoted in the birth queue or on the registration application. If DNA is on file for the recipient dam, full parent verification will be run. Calves out of unregistered recipient dams (Foundation Cows) will require genetic defect testing in order to be entered into the herdbook.

3. Foundation Cows

Foundation cows shall be cows of any recognized breed, beef or dairy, or any combination of these breeds. When recording Limousin-sired progeny out of foundation cows, the amount of Limousin blood in any foundation cow shall be assumed to be zero (0). The percentage blood of other breeds is determined by allocating 12.5 percent for each character in the foundation cow's 16-character

breed code (2 characters per 1/8) supplied at the time of her calf's registration. All foundation cows must be identified by an individual number suitably placed on the cow as a tattoo, hot brand, freeze brand or ear tag.

In recent years, several major breed associations have identified several deleterious mutations in their respective breeds. The American Angus Association has identified Arthrogryposis Multiplex (AM), Neuropathic Hydrocephalus (NH), and Contractural Arachnodactyly (CA). The Red Angus Association of America has identified Osteopetrosis (OS). Tibial Hemimelia (TH) and Pulmonary Hypoplasia with Anasarca can be found in the Shorthorn, Maine Anjou, and Chianina breeds. These genetic defects are simply recessive in nature and result in calves that are either born dead or die soon after birth with the exception of CA. CA causes calves that are phenotypically impaired and are typically poor performing throughout their lives.

In order to protect the integrity of the NALF herd book and its members from unknowingly introducing genetics with known defects into the population, cows with undocumented parentage, currently known as foundation cows, that enter the Limousin herd book will be subject to the following rules.

Effective January 1, 2012, any sexually intact offspring of cows with undocumented parentage must meet one of the following requirements to enter the herd book:

- A. The undocumented dam must be tested free of above genetic defects (AM, NH, OS, CA, TH and PHA), or the offspring must be tested free of any defect the undocumented dam proves to carry and given that the sire of the offspring is also tested free or free by pedigree for known genetic defects.
- B. The offspring of an undocumented dam who has not been tested may enter the herd book if tested free of listed genetic defects (AM, NH, OS, CA, TH and PHA).*

* Steers may be registered out of an undocumented dam without the above requirements

4. Breeder Records

Every member is required to keep accurate records of cattle registered or intended for registering. These records must contain the individual herd number of all animals owned by the member and such other information as calving dates and ancestry that will clearly determine the parentage and Limousin blood percentage of all animals offered for recording. Individual herd numbers must be tattooed in the ears of all calves before or at the time they are weaned. All breeder records must be open for inspection at any time by an authorized representative of the North American Limousin Foundation.

5. Ownership

- A. The owner of the dam at the time she is bred must document the sire used and whether the mating was by natural service or AI.
- B. The breeder of a calf is the owner of its dam at the time of the mating that produced the calf.
- C. The first owner of a calf is the owner of its dam when the calf was born. All calves must be registered by the first owner. The first owner must be a member of the North American Limousin Foundation and have a valid member number and herd prefix.
- D. The owner of record shall mean the member under whom the animal is recorded at that time.
- E. The owner of record must have a valid member number on file at the North American Limousin Foundation. The owner of record may or may not have a herd prefix.
- F. The Foundation registers cattle containing a certain percentage of Limousin blood or breeding upon application by members of the Foundation. The Foundation makes no attempt to regulate the sale, lease or other use of any Limousin cattle. While applicants for registration or recordation are required to identify the owner of the animal the Foundation does not require the applicant to produce any proof of ownership or otherwise attempt to verify that the person making the application is in fact the owner of the animal. The Foundation makes no representation in its registration or transfer of registration of animals registered with it as to the ownership or validity of claimed ownership of any cattle registered with the Foundation. Further, a transfer of registration or recordation on the record of the Foundation are not to be construed as a conveyance or warranty of legal title by the Foundation and the Foundation assumes no liability towards the purchase, sale, or terms of sale of any cattle registered or recorded with it or the passage of legal title thereto. If a member of the Foundation represents that it owns cattle, which it in fact does not own the Foundation may expel or suspend the membership of the member but the Foundation has no authority to transfer ownership of cattle registered with the Foundation by virtue of the registration.

6. Cow Lease Agreements

- A. In order to participate in a cow lease agreement, both lessor and lessee must be members of the North American Limousin Foundation with valid member numbers and herd prefixes.
- B. Only registered Limousin females may be leased. Progeny of leased cows are eligible for registration only if they result from natural mating.

- C. The lessor shall sign such form as shall be prescribed by the executive officer and file the same with the Foundation, paying the same fee as is established by the Foundation whereupon record of the lease shall be made in the Foundation office. Under the terms of lease, the progeny of leased cow will be recorded by lessee as owner of calf. Lease agreement must accompany application for registration of calf and is valid for the registration of one (1) calf.

7. Twins

Either or both twin calves of the same sex may be recorded by submitting a separate application for each. The bull calf in a set of twins of opposite sex may be recorded at any time. The heifer calf in a mixed set of twins cannot be recorded until the heifer calf is DNA typed to determine if she is a freemartin or until the heifer calf is a proven breeder. For owners opting to prove as breeders heifers that were born as part of mixed-set twins, the late fee shall be waived provided that an application for registry for the female and her calf are submitted at the same time.

8. Change of Name

The name of a recorded animal may be changed for the required fee prior to the sale of its semen or embryos, if no progeny of the animal have been recorded. If the herd prefix is a part of the animal's name, it may not be removed. The Foundation may require an applicant to change an animal's name submitted on an application when the name is deemed inappropriate. No service fee will be required in this event.

9. Duplicate Certificate

The owner of record may request a duplicate certificate by submitting an affidavit as to the loss or destruction of the original, identifying the animal by herd prefix, tattoo and registration number, and by paying the required fee.

10. Imported Cattle

North American Limousin Foundation registration numbers will be assigned to each imported animal to facilitate continuity and control of registration numbers.

11. Embryo Transplants

Before calves born of embryo transplants may be recorded, the calf, sire and donor dam must be DNA typed by Scidera, Inc. (formerly MMI Genomics, Inc.), Pfizer Animal Genetics, or GeneSeek, Inc., and the Embryo Transplant Registration form provided by the Foundation must be filed with the Foundation. Calves must be parent verified prior to registration. No adjustments for age of dam will be made in calculating adjusted weaning and yearling weights for such calves. If available, recipient dam identification, age and breed composition will be used in forming contemporary groups and computing expected progeny differences (EPDs) of embryo transplants.

12. Rules of Repose

- A. If the sire or dam of an animal registered with this Foundation is found to be excluded after eight years from the date of registration of such animal in the North American Limousin Foundation, and parentage cannot be established, the pedigree of such animal as shown on the records shall remain as recorded without change.
- B. If the sire or dam of an animal registered with the North American Limousin Foundation is found to be excluded after January 1, 2010, and parentage cannot be established and the rule of repose does not apply, such animal will have its pedigree changed to denote an unknown parent. In addition, all progeny of the animal will be changed to reflect an unknown ancestor in their pedigrees. Any costs associated with reissuing corrected registration papers are the responsibility of the breeder of the animal that does not parent verify. In the event the breeder of the animal is no longer in business, the North American Limousin Foundation will cover costs of reissuing corrected papers.

Section III

Transfer

1. Change of Ownership

- A. Every change of ownership of each animal recorded in the North American Limousin Foundation's herd book must be officially processed through the Foundation office.
- B. The seller of registered Limousin cattle must provide the buyer with a list of each animal's tattoo and registration number and initiate the official transfer of the papers through the North American Limousin Foundation. The seller is solely responsible to apply for transfers, pay transfer fees and return certificates to the Foundation for all animals sold. The seller is responsible for checking tattoos of each animal and making sure the papers for each cow match her tattoo. Each breeder is responsible for informing the office of all animals sold without registration papers or to slaughter.
- C. It is the buyer's responsibility to confirm that the tattoo and other identification on the animals correspond to the data on the certificate received from the North American Limousin Foundation. Any discrepancies should be reported to the North American Limousin Foundation.

2. Transfer of Recorded Animal (Excludes Foundation Cows)

- A. All recorded animals may be transferred by use of the Application or Transfer form on the reverse side of the registration certificate.

- B. If the cow has been bred prior to transfer, the Pregnant Dam section on the transfer application must be completed by the seller.
- C. If the cow is transferred with the calf at side, the owner of the cow when the calf was born, must identify the calf by actual ear tattoo and apply for registration and transfer on a Registration Application form. The owner of the dam at the time the calf is born must record the calf.

3. Transfer of Pregnant Foundation Cows

- A. Foundation cows are not subject to transfer on the Foundation books in their own right as they are not recorded Limousin animals. However, the breeder must maintain a record of the origin of the Limousin fetus they carry.
- B. The seller of a pregnant foundation cow must furnish to the buyer the breeding date and sire information.

4. Transfer of Embryos

If the owner of an embryo transplant calf is not the owner of the donor dam, a transfer form, available from the North American Limousin Foundation office must be signed by the owner of the donor dam and submitted as soon as possible after the sale of the embryo. Two forms are available: one for fresh embryos and one for frozen embryos.

5. Date of Transfer

The transfer date shall be the date the animal leaves the seller's property.

6. Transfer of Registration Certificate Without Signature of Owner

Whenever legal title to a registered animal passes to another by reason of death of the recorded owner, by reason of foreclosure of any lien or by any order or decree of court, or otherwise by operation of law, the Foundation may transfer the registration of such animal to the new owner:

- A. Upon order of a court of competent jurisdiction or other satisfactory proof of authority for the transfer;
- B. Upon payment of the transfer fee and reasonable cost and expenses of investigation; and
- C. Upon satisfaction of such other requirements as may be defined by the Foundation.

Section IV

Error, Fraud and Responsibility

1. Erroneous Entry

Should any animal be admitted to entry or transferred through error, misrepresentation or fraud, the North American Limousin Foundation, on discovery, of same shall declare the entry or transfer void, together with any entries that may have been made of descendants of such animals. When an animal has been transferred or entered through misrepresentation or fraud, the North American Limousin Foundation may refuse to record any subsequent entry or transfer until that person has had his/her right to a hearing and appeal as stated in Article VII of the by-laws.

2. Prohibited Acts

- A. No member shall offer to the Foundation for registry or transfer any animal which such member knew or should have known was not eligible for registry or transfer.
- B. No member shall represent any animal owned or managed by such member to be a registered Limousin unless it is registered in the North American Limousin Foundation herd book or by a member of the International Limousin Council.
- C. Without in any way limiting any of the foregoing provisions, no member shall:
 - 1) represent an unregistered animal as a registered Limousin;
 - 2) represent one registered Limousin as another registered Limousin;
 - 3) sell or offer for sale as a registered Limousin an animal which is neither registered nor eligible for registry as a Limousin.
- D. No member shall indulge in any practices in the breeding of Limousin cattle or in the maintenance, or lack of maintenance, of records which will impair the reliability of the records of the Foundation.
- E. No member shall furnish to the Foundation or to any of its officers, staff or other authorized representatives, information with respect to an animal if the information is not true and correct to the best of the information and belief of said member. Information with respect to an animal includes, but is not limited to, any material fact as to name, sex, date of birth, description, breeder, owner, sire, dam or identification of said animal.
- F. No member shall refuse any reasonable request to assist the Foundation, its officers, committees or agents in locating, identifying and inspecting any animal or an ancestor thereof in such member's ownership or control, which has been registered or for which application to register has been made, and no member shall refuse to answer promptly and truthfully any Foundation inquiry concerning any such animal or ancestor thereof.

- G. No member shall refuse a Foundation request for the return of a registration certificate, either before, after or pending the hearing to determine eligibility for continued registration or participation privileges in Foundation approved events.
- H. No member shall conspire with another person or persons to intentionally violate the rules of the Foundation, including the provisions of these by-laws, and no member shall knowingly contribute to or cooperate with another person or persons, either by affirmative action or inaction to violate the rules of the Foundation, including these by-laws.
- I. No member shall do anything detrimental to the interest of the Foundation or to the programs, policies and objectives of the Foundation or the harmonious relationship of its members as determined by the North American Limousin Foundation board of directors.
- J. No member shall do any other act which in the opinion of the North American Limousin Foundation board of directors may be prejudicial to the best interest of this Foundation or of the Limousin breed.

3. Responsibility

Every certificate of registration or transfer of ownership is based on statements in the application thereof; the Foundation shall never be responsible for damages which may be caused by any certificate issued on erroneous or fraudulent information, or damages arising out of any action taken under the provision of the rules and regulations.

4. Responsibility for Recording

The first owner of a Limousin animal (owner of the dam when the animal is born) is solely responsible to accomplish the recording of the animal. The second owner cannot record the animal.

Section V

Recording Requirements for Artificially Inseminated Cattle

All artificial insemination must be done in compliance with the Foundation's rules and regulations. Particular attention should be paid to parentage verification rules for AI sires (see section II, 1, F, 1 of Rules and Regulations). Records detailing the date of service, name and registration number of sire, and name and identification of the cow served should be maintained.

Section VI

Fees

Complete information on fees for registrations, transfers, supplies and other services is on the North American Limousin Foundation self-billing worksheet and order form. Registration fees for inactive (non-dues paying) founding, lifetime, annual and junior members and all associate members are double the listed rates.

Any new annual or junior member has ninety (90) days from the date of membership in which to record any Limousin cattle currently owned or owned at the time of birth for the fee established for animals under 120 days of age, regardless of the age of the animals.

For females (registered, recorded for pedigree only and foundation) enrolled in the Limousin Inventory Management Program (LIMS), there will be an annual per cow assessment. Payment of LIMS cow assessment entitles calves born in that inventory year to be registered and transferred (limited to first transfer of calf). The annual assessment on LIMS cows used as donor dams will cover the registration and transfer of the first calf—whether natural or ET—out of the cow that year. The annual assessment on LIMS cows used as recipient dams will cover the registration and transfer of the first ET calf out of the cow that year. The entitlement to register and transfer calves out of LIMS-assessed cows will accompany the cow's transfer to the new owner. Regular transfer fees will apply for females over 24 months of age and males over 30 months of age at time of transfer (i.e., sale date).

All fees must be received in the Foundation office before work can be processed. Non-LIMS registrations are billed according to the age of the animal on the day the application is received in the Foundation office.

Section VII

Genetic Defects and Abnormalities

1. Reporting

In order to maintain a viable breed relatively free of undesirable genetic factors or other conditions, and to ensure that today's breeding practices will help tomorrow's animals stay free of undesirable traits, every Foundation member or owner of animals registered with the Foundation, shall have the duty to report to the Foundation any occurrence or evidence of any abnormal condition or genetic defect in such person's animals. The duty to report arises upon the receipt by or knowledge of an owner of any information that would lead a person to inquire into the possibility that an animal carries or possesses a genetic defect or other condition.

2. Monitoring

The North American Limousin Foundation shall receive, keep on file and monitor all information concerning genetic abnormalities or other conditions of any animal registered with the Foundation. The file shall be cross-referenced by sire, by breeder and by abnormality. The North American Limousin Foundation may designate animals as “Under Investigation” in any manner it deems necessary or convenient. This is not a final action and does not designate an animal as a proven carrier.

Each case will be handled on an individual basis. The owner reporting a genetic abnormality or other condition, and the Foundation, will be informed of any findings, diagnosis or test results. An effort will be made to diagnose all cases whether the problem is genetic or caused by other factors or conditions.

3. Definition and Special Action

A deleterious genetic factor or other condition is defined as one that causes death or impairment of the usefulness of the animal. The North American Limousin Foundation board of directors shall, from time to time, based upon the advice of its scientific advisors, determine what deleterious genetic factors or other conditions will receive special attention and monitoring.

4. Classification

The Foundation shall release or publish, in any convenient or necessary manner as it determines, information regarding any animal that has been classified as a “proven carrier” of a deleterious genetic factor or factors the animal possesses. Without the Foundation or any of its officers, directors, employees or agents becoming liable for damages or otherwise for such release and disclosure, the Foundation may release and disclose such information to any of its members, to others who register animals, transfer registration certificates or otherwise use the privileges of the Foundation and who may request the same.

- A. The North American Limousin board of directors, with the advice of its scientific advisors, will determine the criteria by which an animal shall be classified a “proven carrier” for each deleterious genetic factor or other condition.
- B. The expense of any test or tests to determine whether an animal is “proven clean” or a “proven carrier” will be the responsibility of the owner of the animal.

5. Ethics

The Foundation considers it an unethical practice to offer for sale a breeding animal or semen from an animal registered with the Foundation which is known to carry a deleterious genetic factor or other condition, as defined by the Foundation, without first informing the potential buyer or buyers of this fact. Any advertising, descriptive material or pedigree initiated by the owner of any animal which is a “proven carrier” of a detrimental genetic factor or condition, as defined by

the Foundation, shall include a statement identifying the deleterious genetic factor or other condition which the animal in question possesses. Any effort to conceal such information is considered to be equally unethical. Any person who had engaged in such unethical practice may be subject to suspension or expulsion from membership and from denial of use of the Foundation.

6. Specific Defects

A. Identifying Suspect Animals

- 1) Any animal with a documented carrier of AM, CA, NH, OS, TH, PHA, or protophyria in the pedigree, unless the intermediary ancestors are tested-free or designated pedigree-free.
- 2) Any sire or embryo donor dam with 1/8 blood or more of the defective gene source (breed, line, herd) unless the intermediary ancestors are tested-free or pedigree-free.

B. Required Testing

- 1) 50 most-used sires (managed and paid by NALF).
- 2) All suspect A.I. sires.
- 3) All suspect natural sires.
- 4) All progeny of suspect sires, if the suspect sire DNA is unavailable for testing.
- 5) All suspect donor dams.

C. Managing these policies

- 1) Genetic abnormality designations will be real-time. Test completions (DNA determination of carrier or free) will affect animals in downstream pedigrees.
- 2) Progeny (If untested suspect sires or suspect donor dams) that has performance data submitted or request to be registered requires compliance (DNA testing).
- 3) For any untested donor or donor dam, 1/8 or more suspect breed, with pedigree suspects not tested defectfree or their pedigree not traceable to designated-free ancestors will be defined as suspect.

We recognize this allows tested-carrier and potential-carrier females (1680 daughters for example) to enter the NALF database as “commercial Angus cow” and avoid the suspect label. However, labeling commercial Angus females as suspects would create exceptional processing resources and member testing expenses. By a very wide margin, the most cost-effective method to

manage genetics is through sire testing. The above recommendations put almost all NALF policy pressure and member social pressure on the bulls where results will be most effective.

Section VIII

LIMS - Limousin Inventory Management System

LIMS will adhere to Beef Improvement Federation (BIF) guidelines for inventory-based breed association recording.

1. Fees, Billing and Payment Arrangements Associated with LIMS

- A. There will be an annual \$36 per cow LIMS assessment on all assessed active females that are 16 months of age and older at time of assessment. There will be no annual LIMS assessment on bulls.
- B. Billing will take place in two equal installments. Spring assessed cows will be billed \$18 on February 25 and \$18 on July 25 to complete the season. Fall assessed cows will be billed \$18 on July 25 and \$18 on February 25 to complete the season.
- C. LIMS members are expected to participate on a yearly basis and not bounce on and off the program. To encourage continuous participation, NALF is implementing whole herd reinstatement fees. If a LIMS herd chooses to return to LIMS after being removed by Staff for noncompliance or after choosing to leave the program; NALF will charge \$46/cow enrolled instead of \$36/cow for the first year back on LIMS. This only applies to herds removed from LIMS after January 1, 2017.
- D. LIMS members are expected to remain in good financial standing with the association and an active member. If an account is locked due to billing issues, NALF will remove the herd from the LIMS program. Member will be eligible to re-join the program 1 year from the date the account balance was paid off. Herd will be subject to whole herd reinstatement fee to join LIMS again.
- E. Payment of LIMS cow assessment entitles calf born in that inventory year to be registered and transferred (limit to first transfer of calf). Regular transfer fees will apply for animals over 30 months of age at time of transfer (i.e., sale date). LIMS members will also receive a 5% discount on LD genomic profile and a LIMS certified seal will be added to all animals in the LIMS assessed herd.
- F. The entitlement to register and transfer calves out of LIMS-assessed cows at LIMS rates will accompany the cow's transfer to the new owner.

- G. Partnership cows will be the responsibility of the primary owner of the cow. The primary owner is defined as the partner associated with the address on file for the partnership. Leased cows will be the responsibility of the owner on file of the cow. Changes to partnership and leased cow responsibilities may be arranged by contacting the NALF office.
- H. If a Master account is on LIMS, all linked accounts are automatically enrolled as well. Linked accounts may participate in LIMS only if the Master account is in LIMS.
- I. ET calves will be registered and transferred free of charge only if recipient dam is enrolled in the LIMS program. Recipient dam information must be provided at the time of the ET calf registration in order to qualify for the free registration and transfer. Normal ET registration and transfer rates will apply to ET calves out of non-LIMS recipient cows. DNA parentage testing requirements and fees will apply to any ET calf, regardless of recipient's LIMS status.
- J. 100% of active females 16 months of age and older must be enrolled (NPF, NFF, LFF, NXF). Failure to comply will result in full removal from the program.
 - 1) If a cow needs to be reinstated to the program, it will cost \$50 and missing data must be provided.
 - 2) Exceptions: Foundation cows, Foreign animals, and donor dams – these animals do not count towards the 100% rule.
- K. A LIMS cow can skip ONLY 2 seasons in a row. After that, the animal is removed from the program. Example: a potential Spring 2015 cow skips to Fall. Fall 2015 comes around and the member decides to skip the cow to Spring 2016. This cow must be enrolled in Spring 2016 or will be removed and considered noncompliant (subject to \$50 reinstatement fee).

Exceptions:

- 1) Foreign animals: Allowed to skip seasons with no limits as long as the proper code is selected at time of enrollment.
- 2) Foundation Cows: Allowed to skip seasons with no limits as long as the proper code is selected indicating that she is a recipient female and not carrying an ET calf.
- 3) Donor Cows: Allowed to skip seasons with no limits as long as the donor dam code is selected and she is not expected to have a natural calf that year.

2. Policies

- A. LIMS is optional for active Founder, Lifetime, Junior, and Annual NALF members. It is not an option for inactive members.

- B. LIMS members are required to manage all herd records electronically through the NALF Digital-Beef member site. LIMS is not available via paper or non-electronic submission. All work is expected to be done online.
- C. LIMS members are required to have a current email address on their account. The majority of communications will be done through email.
- D. If a member decides to participate in LIMS for a given year, that member will be responsible for paying all annual assessments incurred, whether the member disperses during that year or decides for some other reason to no longer participate. NALF will not refund assessments paid by these members.
- E. The LIMS calendar will provide the deadlines and what is expected on each date. These dates do not change from year to year and may fall on a weekend.
- F. LIMS production seasons:
 - 1) Spring: January – May 31
 - 2) Fall: June 1 – December 31
- G. Enrollment for Spring season runs from December 1– February 15 and Fall season enrollment period runs from May 1– July 15. During this period, LIMS members should:
 - 1) Opt in or out of the program prior to Feb 15 for Spring season and July 15 for Fall season.
 - 2) Designate any animals that need to be moved to the next season.
 - 3) Dispose of females no longer in the herd.
 - 4) Mark any foreign, recipient females, and donor dams appropriately.
 - 5) Calving data is due for previous year's enrollment and no progeny codes required if no calf was born.
 - 6) Weaning data due (weight/docility) for previous year's Spring enrollment or a disposal code must be entered for the calf.
- H. Opting into the LIMS program acknowledges acceptance of single automated enrollment process. On February 15, NALF will automatically enroll all females that are classified as active and part of your Spring inventory. On July 15, the system will automatically enroll all females that are classified as active and part of your Fall inventory.

- 1) Late enrollment edits are allowed as follows at an additional cost of \$10/animal regardless of if an animal is being added or removed from inventory. This applies solely to enrollment issues. There is no late deadline option for calving and weaning data.
 - a) Spring season – late edits can be requested between Feb 16 and Feb 23.
 - b) Fall season – late edits can be requested between July 16 and July 23.
- I. For members with both spring and fall calving herds, both herds must be either LIMS or non-LIMS (cannot have one season on LIMS and the other season not on LIMS).
- J. LIMS cows must have either a calf record or a REASON code for no calf reported on an annual basis. If the calf is not registered within the proper timeline, the calf will be subject to normal registration rates. Failure to provide the calving records will result in the cow receiving a LIMS Noncompliant disposal code and removed from LIMS. Cow can be reinstated for a \$50 fee and must provide missing calving data.
 - 1) Example: Spring calf born April 2015 must be registered by February 15, 2016 to receive the registration free of charge. A Fall calf born November 2015 must be registered by July 15, 2016 to receive the registration free of charge.
- K. All progeny recorded from LIMS enrolled cows must have a weaning weight, date, and docility score or a disposal code entered for the calf indicated the animal to be dead or sold prior to weaning. You have one year to provide this information (deadlines Feb 15 and July 15). Failure to provide the weaning records will result in the cow receiving a LIMS Noncompliant disposal code and removed from LIMS. Cow can be reinstated for a \$50 fee and must provide missing weaning data.

Section IX

DNA Tests and Testing

1. Reporting

Genetic testing is the analysis of chromosomes (DNA), proteins, and certain metabolites in order to detect heritable genotypes, mutations, phenotypes, or karyotypes. The North American Limousin Foundation recognizes and agrees that DNA tests are based upon scientific, biologic analysis and assessment of statistical probabilities. The lab believes that there is a range of probabilities and does not assure 100% accuracy. The lab may fail, from time to time, and either (i) not be able to make a determination or (ii) make an incorrect determination. The lab performing the testing assumes responsibility for the accuracy of its test. Results of DNA testing are displayed on an

animal's record as reported by the respective lab. Results may only be removed or altered only by the lab which originally reported those results.

2. Genotypes by Pedigree

In general cases of simple recessive genes, when two homozygotes are mated together the resulting progeny will be homozygous for the trait. The North American Limousin Foundation uses this principle in regards to genetic abnormalities, color and polled traits.

- A. Genetic Abnormalities: Progeny of animals that are designated as free of a genetic condition either by parentage or test are considered free of the condition in perpetuity due to the inherent low occurrence rate of those abnormalities in a population.
- B. Qualitative Traits: Progeny of animals that are tested homozygous for qualitative traits (i.e. black coat color, polled) are considered homozygous by pedigree. Subsequent progeny of homozygous by pedigree and/or homozygous by test animals will be designated homozygous by pedigree for three generations.
 - 1) Animals that are tested homozygous will be designated with a "T" (ex. Homo Black (T)).
 - 2) Animals designated homozygous by pedigree will be designated with a "P" and their generation (ex. Homo Black (P-1)). Homozygous by pedigree is dependent on the accuracy of an animal's pedigree and the accuracy of the original tests in its pedigree.

Section X

North American Limousin Foundation Guidelines and Rules on Gene Edited Cattle

NALF may accept registrations of Limousin, Lim-Flex® and percentage Limousin cattle that have an intentional genomic alteration (IGA) produced by genome editing, subject to the following restrictions. Eligibility for registration will be restricted to those animals possessing an IGA that has been appropriately reviewed and approved by the applicable regulatory agency-currently the U.S. Food and Drug Administration (FDA). Additionally, animals with an IGA applying for registration will be subject to review and approval by the NALF Board of Directors, who will consider the impact of introducing the IGA into the NALF herdbook, informed by scientific and industry standards and practices at the time application is reviewed. A current list of approved traits will be provided to membership for animals eligible for gene editing into the NALF herdbook. (Currently the list would include horn/polled, color, hair shedding and Myostatin). Further additional traits would be reviewed by the NALF board as technology develops new trait editing possibilities become available.

1. Application for Registration

Members submitting registration applications for genome-edited animal must follow all current rules for registration of Limousin & Lim-Flex® animals. Additionally, all animals resulting from genome editing must be parent-verified through a NALF official service laboratory. The member applying for registration must provide documentation describing the IGA introduced and the proposed functional difference the IGA creates in the genome-edited animal.

2. Animal Naming

“GE” (Gene Edited) will appear in the name of all genome-edited animals as GEF (Founder) or GED (Descendants) suffix.

3. Gene Edited

All Gene Edited Founder (GEF) and Gene Edited Descendant (GED) animals that are submitted for registration will be subject to review and a registration fee. The Foundation (NALF), reserves the right to deny registration on any gene-edited animal that it determines, in its sole and absolute discretion, does not advance Limousin and Lim-Flex® influenced seedstock.

In addition to the general requirements, the following shall also be required for registration or recordation of calves produced by gene editing based on site-directed nucleases (GE) technology.

4. Obligations of Applicant

Applicants submitting an application for registration of Gene Edited Founders (GEF) are obligated to notify NALF when an animal being submitted for registration

is the result of gene editing. Applicants must provide documentation to validate what allele was introgressed and where in the genome this occurred, and confirm that it is present and functional in the animal that is being submitted for registration. All documentation submitted to and received from the Food and Drug Administration (FDA) and/or United States Department of Agriculture (USDA) must be provided to NALF.

5. Registration Categories

All gene edited animals that are registered will be subject to classification according to appropriate breed percent and category based on general requirement for NALF registration Categories in addition to the following information. The category listed will include the indication of “Gene Edited Founder” or “Gene Edited Descendant.”

6. Registration Information

- A. All existing NALF requirements for registration of calves resulting from gene editing will apply.

- B. Registration of GEF animals shall be made on the Embryo Registration Application/Report of the Limousin DigitalBeef online submission (website). The flush date of the embryo must be provided.
- C. Registration of GED animals shall be made on the Embryo Registration Application/Report, Registration Application/Report, or the Limousin Digital Beef online submission (website). If a GED animal is the result of an ET mating, the flush date of the embryo must be provided.
- D. The breeder and/or owner designation for gene edited animals will reflect the rules indicated accordingly for natural dams, ET mating's, A.I. sires or clones.

