



FELINE CONTROL COUNCIL OF QUEENSLAND INC.

BREEDING PRACTICES

INTRODUCTION

FCCQ Inc. is committed to the breeding of healthy, pedigreed cats of all the breeds recognised by the Australian Cat Federation Inc.

Selective breeding to improve the appearance (phenotype) of any given breed towards the ideal described by the breed standard aims to produce cats that are more alike in resultant generations. Along with the good genes come a few that may not be desirable and can lead to abnormalities that affect the health and the welfare of the cats. Selective breeding decreases the genetic diversity and increases the chance of concentrating undesirable, and even harmful, genetic anomalies (defects) and these will begin to appear in the breed.

Advances in DNA genetic testing enable breeders to test for desirable genes such as colours or undesirable genes arising in genetic defects affecting the health of the cat and viability of the breed. Rapid developments in genetic testing are continually adding new DNA tests that are available to breeders. FCCQ Inc. strongly advises breeders to take advantage of DNA (genetic) testing to ensure that they have the healthiest breeding stock possible.

The practice of testing breeding stock where DNA tests for genetic defects are available will increase confidence in the health of any kittens. This benefits both the breeder and the new owner of the cat by reducing the chance of genetic defects arising in the next generation. New cat owners are entitled to receive the healthiest kitten possible, which they can take into their homes and love for many years; they should not have to face the necessity for unfortunate and costly veterinary interventions.

DNA Testing

Breeders should individually research the known genetic defects in their particular breed and research available testing services. It is also recommended that breeders keep up to date with new knowledge of genetic diseases in their breed/s

Informative websites on heritable disease in cats and genetic testing:

- “The Lyons’ Den”, the website of Dr Leslie Lyons, foremost researcher in cat genetics.
www.vetmed.ucdavis.edu/Catgenetics/Index.htm
- Cat Fanciers Association (CFA) paper on Heritable Disease and Abnormalities in Cats by Lorraine Shelton & Hilary Helmrich
Lorraine Shelton is a well-known feline geneticist.
www.catgenes.org/pdf/heritable-diseases.pdf
- Governing Council of the Cat Fancy (GCCF) UK
GCCF Breeding Policy: Guidelines for Healthy Breeding.
www.gccfcats.org/pdf/BreedingPolicy.pdf

The links below offer DNA testing and give details of the procedures to be followed to collect and send samples and the costs involved.

www.vgl.ucdavis.edu/services/cat/
www.animalsdna.com/
<http://asaplab.com.au/dnatesting/index.html>
www.gribblesvets.com.au/index.php/pet-owners-breeders/polycystic-kidney-disease/
<http://www.catdnatest.org/DNA-tests.html>

Breeding Program

A breeding program is where certain cats are selected to be bred with others for predetermined reasons. It is important that breeders should allow no matings unless they have given careful consideration to the possible outcome and any future consequences for the breed.

The purpose of a breeding program is to continue the breed as distinct and recognisable and to improve the quality of the breed as measured against the Breed Standard.

The following guidelines are recommended to breeders:-

- Health must be the overriding consideration in any breeding program.
- The good (positive) and the bad (negative) features of the individual cats should be assessed and weighed against each other before any mating. This includes the risk of passing on genetic faults/anomalies.
- When planning a breeding program, breeders must understand that doubling the good traits in a cat may also result doubling of any defects; the breeding of cats with similar faults should be avoided otherwise there is a possibility of fixing a characteristic which is subsequently very difficult to eliminate.
- Breeders must make themselves aware of the nature of the characteristics they wish to promote or avoid, whether these are due to a dominant gene (which will always be expressed when present, even if only from one parent), or a recessive gene (only expressed when inherited from both parents; the homozygous state)

Recommended reading:

Robinson's *Genetics for Cat Breeders and Veterinarians* 4th Edition. 1999
Carolynn M. Vella; Lorraine M. Shelton, John J. McGonagle & Terry W. Stanglein.
Butterworth Heinemann Oxford

Some well known genetic anomalies with brief description

Included here are some of the better known genetic disorders presently seen in cats.

FCCQ Inc. strongly recommends a breeder use genetic testing, where it is available for known genetic disorders in their breed.

It is possible that, by not doing so, it may count against a breeder in any action taken against them through the small claims tribunal.

Hypertrophic cardiomyopathy (HCM) and Restrictive Cardiomyopathy (RCM)

Both of these conditions are characterised by thickened heart muscles impairing the ability of the heart to pump sufficient blood. A number of cat breeds have this genetic disorder and it is usually different genes in each breed. In humans HCM over 130 genetic mutations have been identified.

Hypokalemic Polymyopathy

There is a severe decrease in the circulating potassium causing severe muscles weakness with usually a characteristic hanging head as the neck muscle are too weak to hold up the head. This defect is seen in the Burmese breed.

Osteochondrodysplasia

Scottish Fold osteochondrodysplasia is a genetic disease affecting bone growth and formation of articular cartilage throughout the body and is responsible for the characteristic folded ears of the Scottish Fold breed. It is a dominant gene with incomplete penetrance meaning that even straight-eared cats could still be carrying the gene. It results in joint lesions that progress until the cat may be unable to walk and the cat suffers considerable pain which current pain medications are not very successful in treating.

Neonatal Isoerythrolysis (blood type incompatibility)

This affects kittens of blood type A born to queens of blood type B. The maternal anti-A antibodies destroy the red blood cells of the kitten.

Progressive retinal atrophy (PRA)

There is a progressive degeneration in the light receptors in the eyes leading to complete blindness. PRA has been identified in the Abyssinian breed.

Polycystic Kidney Disease (PKD)

This is a dominant gene that causes cysts to be formed in the kidneys which over time dilate destroy normal kidney tissue resulting in early kidney failure and death.

The Feline Advisory Bureau (FAB) in the United Kingdom has a full and extensive list of currently known feline disorders and genetic disease with a description of the symptoms and cause if known. The link below takes you to this excellent resource for breeders.

www.fabcats.org/breeders/index.php

EXPERIMENTAL BREEDING

1. GENERAL

Experimental breeding in the cat is the production of new breeds and varieties by means of outcrossing to other breeds and the development of these breeds and varieties. The ultimate aim must be to produce a cat or cats which are acceptable on Full Register in a recognised breed /variety.

There are three possibilities:

1. The breed already exists; the breeder is attempting to produce a new bloodline.
2. To create a new colour, pattern variety or hair length of an existing breed; the standard for type exists and must be conformed to and the colour or pattern almost certainly exists in another breed, so the description can be incorporated into the standard for the new breed variety.
3. To create a new breed, incorporating one or more colour/pattern varieties.
FCCQ Inc. must be convinced that the animals involved will have a reasonable chance of meeting the objective and that healthy stock will be produced.

1. Producing New Blood Lines

Used for existing breeds to increase genetic diversity for those breeds shown to have low genetic diversity or of having a low population of breeding cats such that there is a risk of a high inbreeding coefficient developing.

A breed needs to have a minimum of 50 to 60 unrelated individual cats as foundation cats or outcrosses in its gene pool to have a sufficiently wide and variable gene pool. There are quite a few breeds that do not meet this number and out-crossing to other breeds or sourcing new foundation individuals would increase the gene pool.

2. NEW COLOURS/PATTERNS

- 2.1 Type is characteristic of the breed, overall.
- 2.2 Coat length/texture is in accordance with the standard.
- 2.3 The required coat pattern/colour has been successfully produced in the majority of cats assessed by FCCQ Inc.

3. NEW BREEDS DEVELOPED WITHIN AUSTRALIA

- 3.1 Experimental programs should be approved and should be carefully supervised by FCCQ Inc. and shall also be reviewed by the Genetics Committee prior to acceptance for registration. The Genetics Committee may recommend additional study prior to acceptance of the breed for registration. It is strongly recommended that, where possible, during development of the breed/variety, every cat kept for breeding in the program be examined by at least two appropriate Senior Judges (other than the nominated mentor) for guidance, and that more than one bloodline be established, either within FCCQ Inc. or in conjunction with breeders in another approved Council. Additionally at least 5 of each generation of kittens must be exhibited at an FCCQ Inc. show and assessed by all judges officiating on the day and individual reports sent to the FCCQ Inc. Genetics Committee.
- 3.2 A cat suffering from a congenital abnormality must not be used for breeding or sold as a breeding cat.

- 3.3 All breeding cats should be identified by microchip and the identifying code of both parents shall be documented in the pedigree.
- 3.4 On completion of the program to the satisfaction of FCCQ Inc., Full Register status may be granted but not necessarily challenge status.
- 3.5 The documentation shall consist of:
- Proposed Standard of Points
 - Breeding Records
 - Pedigrees
 - Registrations on Experimental/Sub-Register Register
 - Progress Reports
 - Reports and recommendations by FCCQ Inc. or its appointed Committee
 - Reports from Judges of Assessment Classes
 - Photographs.

For all Categories:

- (a) Cats assessed display an overall similar appearance, distinguishing them as a distinct breed with specific characteristics.
- (b) The breed has proven its ability to consistently produce itself in terms of type, colour, etc.

4. CONDITIONS AND PROCEDURE

- 4.1 The application to FCCQ Inc. for an Experimental Breeding Program should specifically state the breed or variety that it is hoped to produce and the methods for developing the particular breed or variety.
- 4.2 Breeders wishing to carry out or join an experimental breeding programme must have held their prefix for a minimum of five years and have registered at least five litters on the Full Register. This rule may be waived at the sole discretion of the Management Committee.
- 4.3 Breeders wishing to carry out or join an experimental breeding program should submit an application for approval of the program through the normal process BEFORE carrying out matings.
- 4.4 If the program is accepted, it only covers those people named in the application. In order to transfer cats in the program or their progeny to breeders not named in the original program, application must be made to FCCQ Inc. for dispensation BEFORE making any agreement with those breeders.
- 4.5 The Foundation Registry is for new breeds which are in an early developmental stage and in which record keeping is vital to the history of the breed. The registration of these breeds will provide an accurate, precise chronicle of the breed's progress and development, and may prove or disprove its future acceptance as a viable, healthy breed as well as providing analysis of any genetic problems inherent in a particular breeding program. Use of both hybrid crosses and outcrosses to cats of unknown or unregistered parentage is permitted. There are no limitations or restrictions on the breeding programs for these breeds.
- 4.6 It will be the responsibility of the breeder to submit a detailed and comprehensive provisional standard of points for the new breed/variety for approval by FCCQ Inc.; the provisional standard may be modified during or at the end of the development of the new breed/variety.

- 4.7 It should be noted that a breeding program may include the possibilities of more than one variety being produced. In such a case the proposed program should specify multiple objectives and, with forethought, the appropriate provisional standards can be prepared in advance. Alternatively, the genetic ingredients may include some unknown elements, which may produce a surprise; in this case the breeder should apply to have an additional objective added to the approved program.
- 4.8 Each litter produced must be notified in the usual way and the cats kept for breeding of each generation be inspected by Senior Judges of the relevant breed group for guidance in choosing breeding cats.
- 4.9 Approval of a breeding program does not constitute acceptance of a breed or colour for show purposes; this is a separate process.** There is no explicit or implied guarantee that FCCQ Inc. will accept the breed for championship at any time in the future.
- 4.10 Full registration should only be granted at the fourth (or later) generation and only when FCCQ Inc. and its Committee are convinced that the animals are typical of the proposed breed and are of sound health.
- 4.11 Ideally, there should be sufficient independent bloodlines to ensure the continued production of healthy animals. In addition to healthy stock, the production of more than one bloodline should enable breeders and FCCQ Inc., to arrive at a suitable proposed standard of points by taking note of variations in such features as type/coat colour/pattern/texture/length, eye colour etc. that may arise in various bloodlines.
- 4.12 Rules for exhibiting experimentally bred cats and kittens to SR I level already exist, allowing them to be assessed in special classes by the Judges who must be given the proposed standard of points beforehand. Such written assessments not only guide the breeder and create an interest in the new breed/variety among the Cat Fancy but can also be kept as a record of its progress by FCCQ Inc.
- 4.13 I It is of the utmost importance that the genetic soundness and health of any new breeds/varieties are proven by detailed documentation before recognition is given and that recognition is granted by all Member Bodies at the same time.

5. REGISTRATION FOR EXPERIMENTAL BREEDING

5.1. Registration only

- 5.1.1 Acceptance for Registration Only status implies only that FCCQ Inc. agrees to provide registration facilities for development of the breed in question.

An application to advance from Experimental to Registration Only status must be at least one year since the initial presence of the breed in the Experimental Register.

Criteria to be met include:

- At least 10 cats of the breed have been registered in the Experimental Register
- At least five litters of the breed have been registered
- At least three breeders in good standing from at least two different Governing Bodies are on record as owning cats of the breed
- The application is approved by both the Genetics and Management Committees

5.2 Novice cats

- 5.2.1 A novice cat is a cat taken from the domestic population.
- a) of a particular geographic area that a purebred breed is deemed to have originated, e.g. Korat, Norwegian Forest Cat, Turkish Van, Egyptian Mau.
 - b) an Australian domestic cat.
- 5.2.2 Novice cats may be accepted into such breeds to increase genetic diversity for those breeds shown to have low genetic diversity or of having a low population of breeding cats such that there is a risk of a high inbreeding coefficient developing.
- 5.2.3 The procedure for accepting a novice cat into a breeding program is that it must be judged as “excellent and typical of the breed standard” by at least two senior judges of the breed group.
- 5.2.4 The cat must be in good health and have all DNA test/s currently available for that breed: Results of any test/s to be submitted at the time of registration and noted on its registration certificate.
- 5.2.5 Once recognised as a “novice” for a certain breed this cat receives a blank pedigree and a registration number with the word “novice Gen.0” in brackets after it.
- 5.2.6 The novice cat then enters an experimental breeding program as a foundation cat (Gen 0).

5.3 Allowable outcross

- 5.3.1 An allowable outcross is a novice or purebred cat that may be bred to a different purebred to enhance desired characteristics and increase genetic diversity. If a gene pool is limited by low genetic diversity in the breed or a low number of breeding cats in the country then if an outcross is not permitted, it is likely genetic defects will occur more frequently.
- 5.3.2. These may include established breeds as well as newer breeds that are still building up a gene pool. The ACF AGM will recommend which breeds will be permitted outcrosses (other breed(s) and/or domestic cats/novice cats) and what the permitted outcrosses for these breeds should be.
- 5.3.3. Allowable outcrosses are listed in the Standard of Points but further breeds may be added during the year.
- 5.3.4 The progeny of a mating between a full register Breed and a permitted outcross where allowed by the ACF breed standard shall be registered as a full register cat without loss of generation.
- 5.3.5. The progeny of a mating between a full register Breed and a permitted outcross as part of an experimental breeding program shall be registered as Gen 1 with an SR registration number.

6. RULES FOR REGISTRATION

- 6.1 FCCQ Inc. uses a uniform procedure of registration of Full Register and Experimental Register cats. It requires that all litters are registered, and then all kittens individually.
- 6.2 Separate Registers shall be maintained for the purpose of recording all Experimental Stock and Sub-Register stock.
- 6.3 Cats shall be registered by their genotype.

7. APPLICATION FOR REGISTRATION

- 7.1 Application for registration of cats shall be accepted only for breeds fully recognised by the ACF (Inc.)/FCCQ Inc. and Sub-Register or Experimental cats, as approved by FCCQ Inc.
- 7.2 Applications for the registration of a cat shall only be accepted if the breeder and stud owner signs the breeders' declaration in the registration form.
- 7.3 No cat (except those transferred and registered with another approved organization) shall be registered unless the litter in which it was born is recorded and the breeder has registered a Cattery Prefix. Any litter resulting from multiple conceptions shall not be eligible for full registration.
- 7.4 In the case of kittens born of the same parturition but on different dates, the birth of the whole litter shall be taken as the day on which the first kitten was born.
- 7.5 Application for registration of every living kitten of a litter must be submitted on such forms as FCCQ Inc. shall decide and all requested details must be submitted.
- 7.6 The breeder's prefix shall be included as the first word of the cat's name.
- 7.7 Each cat registered shall be issued with a registration certificate giving details of its registration number, ownership, breeder, sex, breed, colour/pattern (written in full, in words), date of birth and parentage. Cats being transferred to owners outside FCCQ Inc.'s jurisdiction shall be provided with a certified pedigree of 4 generations; those cats being sent overseas shall have a certified pedigree of 5 generations.
- 7.8 Transfer of registration for cats bred outside FCCQ Inc. is not automatic. Application for the registration of imported cats, or cats from interstate must be supported by the production of an Export or Certified Certificate and/or such other evidence of identity as FCCQ Inc. may require. (Cats from overseas are required to be identified by a microchip.)
- 7.9 Before transferring a cat to FCCQ Inc. (whether for Full Registration or Sub-Register status), it is advisable to check the level of generation under the ACF (Inc.) system for registration.

8. FULL REGISTER

- 8.1 The Full Register is for the purpose of recording the pedigrees of Fully Registered cats. To be classed as Full Register, cats must have at least four provable generations of immediate ancestry of the same Breed/Type; that is pedigrees of cats which extend back for at least four generations of Fully Registered cats.
- 8.2 All pedigrees issued must bear the breed, colour and pattern (as applicable) written out in full (and generation number if applicable) for each cat entered on the pedigree. Once on Full Register, a cat is no longer subject to checks and examinations of Sub-Register status but in some cases, test matings may be required by FCCQ Inc. before Full Registration is permitted.
- 8.3 Full Registration implies not only that a cat conforms to the Standard of Points to some degree (even if of very poor type), but that it will transmit to its progeny the definitive type, coat length and texture in any of the colour or pattern varieties recognised for the breed and will not transmit alien or undesirable characteristics.
- 8.4 If a new colour or pattern is admitted to Full Register, then by default all colours or patterns consequent from matings with existing varieties should also be admissible, but they may be

limited for a period to Sub-Register status with a Provisional Standard if FCCQ Inc. so decides.

- 8.5 In those breeds where a new variety of colour/pattern/coat texture/length of hair is regarded as undesirable or a serious fault, the potential carrier will not be accepted on Full Register until that potential has been eliminated by DNA testing where available to the satisfaction of FCCQ Inc.
- 8.6 FCCQ Inc. will not register progeny from a cat which is registered as “not for breeding” or as “pet only” unless prior written permission is received from the cat’s breeder.

9. SUB-REGISTER

- 9.1 Foundation Cat(s) are the felines used to start a new breed or improve an existing breed (designated Gen 0).
- 9.2 Progeny resembling the intended breed or variety (prototypes) produced from mating Foundation to Foundation or back crossing to the basic breed type will be known as first generation (Gen 1) of the intended breed/variety.
- 9.3 If, in the opinion of FCCQ Inc. or a Committee appointed by FCCQ Inc., the generation 1 progeny exhibit enough of the qualities required by the Standard for the Breed and are genetically capable of development, they will be placed on the Sub-Register as first generation of the new breed/variety and known as SR 1.
- 9.4 Although Sub-Register cats may be mated with cats on Full Register, the offspring will be only one generation more than the Sub-Register parent, e.g. the mating of an SR 1 cat to a fully registered cat would produce SR 2 progeny.

See tables below for progression of Experimental Breeding Generations.
- 9.5 All colour variants of the same breed in one litter will be registered with the same generation number.
- 9.6 Registrations in the Sub-Register will be grouped according to the breed aimed at, i.e. Longhair, Shorthair etc. The generation number (denoted by SR 1, SR 2 etc.) will be included with the registration number and all pedigrees issued must include the SR number as well as the breed/variety name written in full for each cat stated on the pedigree.
- 9.7 Offspring of SR3 generation cats will be eligible for Full Register, if, in the opinion of FCCQ Inc. or its appointed Committee, they are typical of the breed and of sound health. Breeders should apply in writing to have the new breed/variety accepted for Full Register.
- 9.8 It is required by FCCQ Inc. that breeders agree to continue breeding to at least the fourth generation.
- 9.9 All kittens/cats not required by the breeder for their experimental programme must be desexed, (the breeder to be responsible for this) unless such kittens/cats are to be used in another approved experimental program.
- 9.10 The FCCQ Inc. registrar will not transfer entire sub-register cats to an interstate or overseas breeder unless FCCQ Inc has sighted an experimental breeding program from the purchasers own governing body.

- 9.11 Sub-Register cats from another registry may be used providing proper records and certified registrations of the cats are obtained and approval is given by FCCQ for their use in the breeding program.
- 9.12 Any breach of the regulations may result in the cancellation of the approval for Experimental Breeding and de-registration of all experimental animals involved. FCCQ Inc. may also proceed to take disciplinary action under its general Rules and Regulations.
- 9.13 Sub-register cats of ALL BREEDS may compete in challenge classes with Full Register cats and may be awarded the challenge certificate; Titles awarded to such cats must show the "SR" before the title. i.e. "SR" champion, "SR" grand champion.
- 9.14 Generation Progression for Experimental Breeding:

Generation 0 matings:
Gen 0 x Gen 0 = Gen 1
Gen 0 x Gen 1 = Gen 1
Gen 0 x Gen 2 = Gen 1
Gen 0 x Gen 3 = Gen 1
Gen 0 x Full Reg = Gen 1

Generation 1 matings:	Generation 2 matings:	Generation 3 matings:
Gen 1 x Gen 1 = Gen 2	Gen 2 x Gen 1 = Gen 2	Gen 3 x Gen 1 = Gen 2
Gen 1 x Gen 2 = Gen 2	Gen 2 x Gen 2 = Gen 3	Gen 3 x Gen 2 = Gen 3
Gen 1 x Gen 3 = Gen 2	Gen 2 x Gen 3 = Gen 3	Gen 3 x Gen 3 = Full Register (Gen 4)
Gen 1 x Full Reg = Gen 2	Gen 2 x Full Reg = Gen 3	Gen 3 x Full Reg = Full Register (Gen 4)

APPLICATION FORM

Notes — Please read BEFORE completing application form

Please send two copies of all documents (photos, laser copies or computer-printed pictures are acceptable provided the quality is good). These will be distributed to the FCCQ Inc. Management Committee and the FCCQ Inc. Appointed Committee. Applications with supporting documentation may be submitted in hard copy by post or by email.

The following documents must be included:

- Breeding program application.
- Certified Pedigrees if possible of any cats intended to be used as the foundation cats in the breeding program.
- Photographs of the foundation cats to be used in the program.
- In the case of a totally new breed, or a breed new to FCCQ Inc., include As much supporting information as possible (articles, photographs, genetic information, addresses of web links, draft standard etc) should be included.
- Any other information that would be helpful.

If all the relevant information and documents have been included, usually an answer can be expected in approximately two months after submitting the application.

If you have any questions, or would like to discuss your program before formally submitting it, please feel free to contact:

Hon. Registrar, Ros Bird — phone: (07) 3200 0446; email: registrar@fccqinc.org.au

Note: this document has been set up using tables, for easy completion on a computer. You will find that the table cells expand to fit however much writing you wish to put in them. Please use as much space as you need.

Contact details:

Your name:	
Your address:	
Phone number (day):	
Phone number (AH):	
Email:	

Your breeding history:

Prefix(es):	
Year(s) prefixes granted:	
Main breeds (past and present):	
Approx no of litters registered with FCCQ Inc.	

Have you been involved in an experimental program before?	
If so with which organisation? Please give documentary proof.	

If yes, please give details below:

Proposed breeding program

Goal of the program

(Describe below briefly what are you aiming to achieve)

List the pedigree names and breeds of the cats involved in the initial mating(s) (if you are seeking approval before having identified specific cats to use please explain what breed(s) will be involved and what characteristics you will be looking for in the foundation cats for your program).

In general terms how do you intend to progress through the next 3/4 generations?

Are there other ways the stated goal could be achieved, if so, please explain why you have chosen this particular route? (for example, importing new bloodlines).

If your program aims to produce a trait or colour that already exists in the breed or an intermateable breed, please state the rationale behind this particular application.

If your program aims to recreate a program which has not been carried out in Australia previously, but has been carried out overseas, please give details of the overseas program and explain the rationale behind any differences in your approach.

<p>Are there other breeders working with you on this program? Give details.</p>	
<p>Are you aware of other breeders in Australia who have experimental programs with the same goal? If so, who?</p>	
<p>Do you have a mentor for this program? If not, would you like the FCCQ Inc. to suggest one?</p>	
<p>If you have a mentor what is their name and experience?</p>	

Further comments

DECLARATION

I/We agree to abide by the rules and regulations of the Feline Control Council of Queensland Inc. and declare that we will agree to continue breeding to at least the fourth generation and all kittens from this experimental breeding program, not required by me/us will be altered (i.e. neutered or spayed), unless they are sold/leased/given to another breeder with a similar approved, experimental program.

SIGNATURE OF OWNER(S)

SIGNATURE OF WITNESS