ARTIFICIAL INSEMINATION IN THE DOMESTIC CAT

Introduction:

The purpose of this report is to advise the World Cat Congress of the subcommittee findings on 2013 Annual General Meeting proposal that:

1. The ACF (Inc.) proposes that the WCC appoint a subcommittee to liaise and consult with specialists in the field of feline reproduction currently working with frozen semen artificial insemination in the cat to determine a protocol and guidelines for pedigree cat breeders wishing to utilise AI in their cats and to determine how best to monitor litters resulting from artificial insemination with frozen semen.

The committee comprised

- Mrs Cheryl U’Ren WCC Vice President and International Liaison Officer of Coordinating Cat Council of Australia.
- Mrs. Julian R Schüller at the time representing The Australian Cat Federation Inc. as International Liaison Officer.
- Mr. Steve Crowe, Vice Chairman of The Governing Council of the Cat Fancy U.K.

Consultants from the Veterinary Profession were

- Dr Isobel Johnstone BSc PhD BVSc MACVSc (Feline Medicine) career has included positions as Veterinary Scientist at The University of Queensland she is a former Director of UQ’s Companion Animal Clinic. Her experience includes work on artificial insemination in cats.
- Dr Julia Nichols, BVMS PhD MACVSC (Feline Medicine) CMAVA who graduated in UK and moved to Australia after a brief stint in the USA. She ran a large small animal practice in Adelaide, South Australia for many years and developed special interests in feline medicine and surgery, endocrinology and the treatment of cancer. She has a PhD in pathology and the Australian College Membership in Feline Medicine. Prior to the compiling of this report, Dr Nichols attended the World Cat Congress in Barcelona, at which 600 cat vets from 37 countries participated.

Preamble

As per Morgan Blythe, L Shingleton, B report 2008 artificial insemination (AI) in cats differs from the situation in dogs and other domestic animals in several regards:

* Semen from the male is collected by electro ejaculation, an invasive and painful procedure requiring specialised equipment and which must be conducted under a general anaesthetic.

Alternatively, an artificial vagina (AV) may be used but this requires training of the male with a variable rate of success. (see Annex II)

* Very small volumes of semen are ejaculated and this has to be “extended” and handled under laboratory conditions to allow for numbers of samples to be frozen and stored.
* Female cats are induced ovulators- stimulation of the vagina by the spines on the male penis during mating causes release of the ova (eggs) from the ovary. Artificial stimulation is not always effective in this regard. Hormone injections are usually used to release the eggs, and these may have untoward side effects.

* To improve fertilisation rates it has been suggested that intra-uterine insemination via minimally invasive surgery (MIS) or keyhole surgery (laparoscopy) be employed. This requires general anaesthesia of the queen and is a procedure not without risk to the queen.

* The procedure is not generally available being beyond the scope of most veterinarians in general practice and currently it is only employed in research animals or in endangered species of wild cats.

* The welfare and the best interests of the cats involved in such procedures must be the paramount concern. Currently it is hard to justify this becoming a routine procedure on these grounds alone.

**Proposal**

1. That WCC member bodies not accept the practice of artificial insemination in the breeding of cats unless there are very exceptional circumstances.
2. That WCC Member Bodies have in place a procedure requiring breeders to apply to use AI to breed. The validity of the rationales supporting its use is fully considered before approval is given, similar to the application for an Experimental Breeding Programme.

In the event a circumstance arises wherein a member approves an AI procedure

3. It is proposed that all member bodies adopt a uniform procedure to ensure the traceability of semen used in artificial insemination (AI) procedures.

**Recommendation**

The following points should be considered when adopting a policy for registration of kittens resulting from AI and to monitor its use in the breeding of pedigree cats.

* Identification of sperm donor and recipient by name, breed, microchip number and registration number and by a certified chain of identification with any frozen sample received for the purpose of AI.

* Confirmation that both donor and recipient are healthy and that preferably both have previously been proven fertile by the production of healthy litters.

* Both donor and recipient to be tested free of any genetic condition known to be a problem in the breed and for which a test exists.

* Results of any tests for heritable diseases must be on a certificate from an accredited source and be recorded with the above identification protocols.
* The collection of sperm and the insemination must be conducted by a registered/licensed veterinarian with experience or training in artificial reproduction.

* The veterinarian supplies the information re the certified identification of the donor and recipient and the date of the procedure to the owner/s and registering body when requested.

* The resulting offspring may be registered when this information is received and deemed satisfactory.

* Registration certificates are marked to indicate that the kitten was the result of an AI procedure.

**Conclusion**

Artificial Insemination is not recommended for use in general cat breeding as it is a traumatic and invasive procedure not warranted for common use. *(See Annex I re Royal College of Veterinary Surgeons UK Code of Conduct with respect to Canine surgical artificial insemination)*

If, after all other avenues have been exhausted, an approval is given under very exceptional circumstances for its use; procedures must be in place to ensure the viability of the offspring and the traceability of the semen.

**Foot note:**

Current advice indicates that artificial insemination is used routinely by some veterinary research facilities working with cats but it is felt that this in no way mitigates its general use in the pedigree cat fancy at this time.

**Reference:**

3. Ejaculation training and seminal alkaline phosphatase in domestic cats Valiente, A1; Diaz, JD1; Arauz, S2; Abeyá, M1 and [Gobello, C1](http://www.worldcatcongress.org/wp/lib.html Minutes 2008 Annex 2)

1Laboratory of Reproductive Physiology & 2Central Laboratory, Faculty of Veterinary Medicine, National University of La Plata, 60 y 118, La Plata, Argentina.