



Australian Government

Department of the Environment, Water, Heritage and the Arts

CONDITIONS FOR THE OVERSEAS TRANSFER OF KOALA SEMEN

Effective from June 2008

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OVERSEAS TRANSFER OF
KOALA SEMEN**

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PREAMBLE

This document should be used in conjunction with the *Conditions for the Overseas Transfer of Koalas* guidelines prepared by the Department of the Environment, Water, Heritage and the Arts. The current version of the *Conditions for the Overseas Transfer of Koalas* can be found on the Department's website at:
<http://www.environment.gov.au/biodiversity/trade-use/publications/export-conditions>

While the conditions governing the overseas transfer of live koalas have provided for the successful export, establishment and maintenance of captive koala colonies overseas, the process of transporting animals is both resource-intensive and potentially stressful for the animals concerned. The ability to transport reproductive material, in particular semen, alleviates some of these issues and at the same time facilitates the establishment of self-sustaining, genetically sound colonies.

Techniques for the collection, preparation and storage of koala semen and the artificial insemination of koalas have been used successfully to produce young within Australia and are currently undergoing further development. The export of semen and the use of semen for artificial insemination of captive female koalas in overseas institutions require that a legally enforceable agreement be in place between the Australian exporter, the recipient institution and the Department of the Environment, Water, Heritage and the Arts, as is the case for the transport of live animals. The agreement is referred to as an Ambassador Agreement.

The following conditions have been formulated to ensure that semen exported for artificial insemination purposes maximises the chances of producing young and maintaining genetically viable koala colonies for permanent exhibition. These conditions were initially developed by the Queensland Environmental Protection Agency (EPA) in consultation with scientific experts involved in developing assisted reproductive technologies for the koala and other marsupial species. Further consultations with a number of interested groups including the Australasian Regional Association of Zoological Parks and Aquaria (ARAZPA)¹ were undertaken to produce this final document. The Department of the Environment, Water, Heritage and the Arts would like to thank those who have contributed to this document.

Although the Department of the Environment, Water, Heritage and the Arts reserves the right to amend these conditions without prior notice to an affected person, every reasonable effort will be made to discuss the amendment prior to its implementation. For further information, please contact Wildlife Trade Assessments, Department of the Environment, Water, Heritage and the Arts, GPO Box 787, Canberra ACT 2601, Australia, phone +61 2 6274 2343, fax +61 2 6274 1921, or e-mail wta@environment.gov.au.

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1. REASONS FOR EXPORTING KOALA SEMEN

- 1.1 Semen may be provided to a recipient institution for artificial insemination purposes as a method of:
 - a) facilitating the provision of animals to an overseas facility; or
 - b) facilitating and/or improving genetic diversity in overseas koala populations.

2. SELECTION OF ANIMALS FOR SEMEN COLLECTION

- 2.1 Koalas from which semen is collected must be lawfully held under relevant State or Territory requirements. The collection and use of koala semen must comply with all relevant regulatory provisions.
- 2.2 Semen will be collected from captive sexually mature male koalas (>18 months of age) in good physical condition. Where the age of the animal is not known, the extent of the animal's tooth wear will be used to indicate age (refer *Conditions for the Overseas Transfer of Koalas* – Appendix A, part 1).
- 2.3 Each koala from which semen is collected must be implanted with a microchip/transponder identification system ("pit" tag or "passive integrated transponder" tag). The identification system must record, at a minimum, a unique identification number for the animal. Details of the data recorded on the implant must be supplied to the Department of the Environment, Water, Heritage and the Arts.
- 2.4 DNA samples must be taken from each koala from which semen is collected, and the diagnostic information recorded and retained in a record book or electronic record system, to ensure that the genetics of the donor and any progeny arising from artificial insemination of female koalas at overseas institutions can be determined in the future. Knowledge of the genetics of the donor (male) and recipient (female) animals involved in artificial insemination procedures and, where possible, their reproductive histories, is necessary to limit the likelihood of inbreeding.

3. SEMEN COLLECTION, PRE-EXPORT SPERM TESTING AND DISEASE SCREENING

- 3.1 After determining that a male koala is a suitable candidate for semen collection, a semen sample will be collected using evidence based current best practice techniques.
- 3.2 Samples will be tested to determine sperm quality (i.e. colour, volume, concentration, morphology, percentage motility, direction and rate of movement, DNA content) and check for the presence of disease-causing bacteria of the Family Chlamydiae. The samples should be tested at a laboratory that is professionally recognised as having experience in the required tests.
- 3.3 Techniques and conditions used for the collection and export of semen must be optimal and based on current scientific knowledge.

4. PERMIT AND TRANSPORTATION REQUIREMENTS

- 4.1 As fresh, chilled semen is only viable for about a week, it is essential that the collecting, testing and transportation of semen, and the undertaking of artificial

insemination procedures at the overseas institution, are carefully planned and co-ordinated well in advance of transportation. To avoid unnecessary and detrimental time delays, all permit and transportation requirements must be considered well in advance. These requirements include obtaining:

- a) a Department of the Environment, Water, Heritage and the Arts export permit issued under the *Environment Protection and Biodiversity Conservation Act 1999* prior to the export of koala reproductive material;
- b) a State/Territory fauna movement permit (if required);
- c) an export permit and health certificate (if required) to meet Australian Quarantine and Inspection Service (AQIS) requirements;
- d) an import permit (if required) and any other permits or documentation required under the laws of the importing country.

- 4.2 Semen must be packaged for transport according to International Air Transport Association (IATA) regulations.
- 4.3 As the quality of chilled semen diminishes quickly, the quickest and most direct route, involving the least handling of samples, should be taken for it to reach the recipient institution.
- 4.4 All available identification, veterinary and genetic information must accompany the semen.

5. ABILITY TO UNDERTAKE ARTIFICIAL INSEMINATION PROCEDURES

- 5.1 Due to the high level of acquired skills required to perform the artificial insemination procedure successfully, it is essential that a veterinarian or experienced technician with the necessary training and level of expertise undertake the procedure at the recipient institution. At the behest of the exporter, this person may be:
 - a) a veterinarian or experienced technician provided by the exporter; or
 - b) a veterinarian or experienced technician at the recipient institution whom the exporter determines has the necessary training and experience in the artificial insemination procedure to perform the procedure successfully. In determining the level/degree of training/experience required, the exporting zoo may need to seek advice from another individual or institution with demonstrated success in artificial insemination.
- 5.2 Before an export for the purpose of artificial insemination will be considered, the recipient institution must be able to demonstrate it has the facilities or access to the facilities required for the artificial insemination procedure.
- 5.3 The outcome of artificial insemination procedures will be monitored closely and recorded by the recipient institution, with the Department of the Environment, Water, Heritage and the Arts being advised of success rates.

6. GENERAL ITEMS

- 6.1 The recipient institution must have an approved captive management plan in place for potential progeny resulting from artificial insemination procedures.
- 6.2 Arrangements between the recipient institution and the exporter must be established to ensure close liaison and regular communication on matters related to the transportation of semen, artificial insemination procedure, and the

management and health of existing koalas and any progeny resulting from artificial insemination at the recipient institution.