

Captive breeding programme for Mesopotamian fallow deer: A subspecies surrogacy approach

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Abstract

Mesopotamian fallow deer (*Dama dama mesopotamica*) are an endangered subspecies relative of the common European fallow deer (*D.d. dama*), with possibly <200 individuals existing remaining. Assisted reproductive technologies that have been recently developed and applied to farmed fallow deer, such as artificial insemination (AI), multiple ovulation-embryo transfer (MOET) and *in vitro* embryo production (IVP), offer considerable potential to increase rates of population increase of Mesopotamian fallow managed *ex situ*. We have initiated a subspecies surrogacy programme at Invermay. A base herd of six females Mesopotamians (as of January 1998) will serve as embryo/ova donors, and a larger herd of hybrid animals will serve as maternal surrogates. Over the next five years, a combination of MOET and IVP will be used to allow transfer of Mesopotamian embryos to the recipient does. Existing stocks of frozen semen from unrelated males will be used at strategic times in the programme to reduce the possibility of inbreeding depression. We aim to establish a viable population of 25 individuals (1:3 ratio males:females) within five years. This may provide a useful surrogacy model for other endangered cervid species.