



In vitro and in vivo fertility of ram semen cryopreserved in different extenders

S.S. Valente, R.M. Pereira*, M.C. Baptista, C.C. Marques, M.I. Vasques, M.V.C. Silva Pereira, A.E.M. Horta, J.P. Barbas

Unidade de Recursos Genéticos, Reprodução e Melhoramento Animal, Quinta da Fonte Boa, 2005-048 Vale de Santarém, Portugal

ARTICLE INFO

Article history:

Received 1 August 2008

Received in revised form 17 April 2009

Accepted 27 April 2009

Available online 3 May 2009

Keywords:

IVF

Cervical insemination

Ram

Frozen semen

Homologous and heterologous fertilization

ABSTRACT

Seminal traits of frozen-thawed (FT) ram semen and in vitro and field fertility in native Portuguese breeds were evaluated in 4 experiments. In exp. 1 and 2 the cryopreservation capacity of 2 extenders, E1 (15% egg yolk-EY) and E2 (4.5% EY and trehalose) was compared through morphological evaluation and in vitro fertilizability of FT ram semen. Exp. 3 aimed to determine the usefulness of in vitro homologous/heterologous fertilization tests as tools for predicting ram fertility. Exp. 4 was conducted to verify if the identified differences between the 2 extenders could be confirmed by field fertility. E1 showed a better cryoprotective action expressed by higher in vitro and field fertility results. In conclusion, EY is difficult to be replaced in ram semen extenders. Heterologous fertilization seems to be a useful tool for predicting fertility of FT ram semen.

© 2009 Elsevier B.V. All rights reserved.

Supported by POCI/CVT/57148/2004.

* Corresponding author. Tel.: +351 243767380; fax: +351 243767307.

E-mail address: rosalnp@gmail.com (R.M. Pereira).

0378-4320/\$ – see front matter © 2009 Elsevier B.V. All rights reserved.
doi:10.1016/j.anireprosci.2009.04.007