

RESEARCH ARTICLE

# Effect of sperm selection by percoll and swim up techniques on the sex ratio of rabbit offspring

A.M.A. HUSSEIN

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**ABSTRACT.....** This study was conducted to evaluate rabbit the semen characterization before freezing and after thawing. Also, to determine the sex ratio of rabbit offspring's after artificial insemination (AI) using semen selected by Percoll or swim up method. Semen was collected from New Zealand white rabbit bucks (n=9) and 45 rabbit does in three groups (15 in each) were inseminated with frozen semen (control, G1), semen selected by 67.5 per cent Percoll (G2) or swim up (G3) methods, respectively. Semen was processed in tris-buffer extender at a rate of 1:4. Results showed that percentage of progressive motility, livability and intact acrosome spermatozoa decreased ( $P<0.05$ ) post-dilution, post-equilibration and post-thawing. Using semen selected by Percoll in does AI resulted in more females (65.8 %) and less males (34.2 %). Using semen selected by swim up method in AI produced more males (75 %) and less females (25 %). Control does produced sex ratio of 51.2 per cent males and 48.8 per cent females. In conclusion, present results showed that, regardless sperm characteristics in post-thawed rabbit semen and fertility results, semen selected by Percoll density at 67.5 per cent and 10 min centrifugation or swim-up can be used for determining the sex ratio of rabbits. This may control the desire to male or female production prior to conception.

Author for Corresponding -

A.M.A. HUSSEIN

Department of Biotechnology,  
Animal Production Research  
Institute, DOKKI (GIZA) EGYPT  
Email: ahmed\_dsusakha@yahoo.com

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