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“Solidarity in a competing world —
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Semen Characteristics and Freezing Capability of Madura's Cattle

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Abstract

Madura cattle are a stable, inbred hybrid of Zebu and Banteng (*Bos javanicus*). They originated on the island of Madura near northeastern Java, where the original cattle population was Banteng, very similar to Bali cattle. Nowadays, Madura cattle frozen semen in Indonesia is produced by two National Artificial Insemination (AI) centres. The information of semen characteristics and the freezing capability of this semen is limited. This research aimed to study the characteristics of Madura fresh semen and its freezing capability from one National AI centre. Five Madura bulls belonging to National Lembang AI centre were used for this research. In total 185 ejaculates were collected in 2015 using artificial vagina and subsequently evaluated macro- and microscopically according to AI centre procedures. Semen were diluted with skim milk egg yolk extender, packed into mini-straws (0.25 ml), equilibrated at 5°C for 4 hours and frozen using an automatic freezing machine. The colour of the ejaculates ranged from milky white to creamy, the mean semen volume ranged from 5.2 ± 1.04 to 6.0 ± 1.39 ml per ejaculation. Progressive motility and sperm concentration were 70.0 to $71.9 \pm 2.94\%$ and 746.6 to $1,305.52 \times 10^6$ sperm, respectively. Post thawing motility varied among bulls. All bulls showed moderate post thawing motility which was only $40.0 \pm 1.76\%$ to $42.9 \pm 3.93\%$. This result was lower than found for other native breed. In conclusion, the presented results indicate that there is variability of sperm concentration among individuals and Madura sperm has a moderate freezing capability.

Keywords: Freezing capability, madura cattle, semen characteristics