

Survivability of Kedu Rooster Sperm at Different Storage Times and Diluent Supplemented with Vitamin E and Fertilizing Ability on Kampung Chicken

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Abstract	<p>In the present study, the effect and interaction of the addition of vitamin E in diluents during storage were investigated. Semen samples were collected from ten Kedu roosters. Analysis of spermatozoa quality used analysis of variance based on a randomized block factorial design. The first factor was lactate ringer (D-1) and skim milk + 50 mM glucose (D-2), the second factor was a dose of vitamin E (V0-3= 0, 1, 2, 3%) and the third factor was storage time at 4 C (T0-3= 0, 2, 4, 6 hours). The analysis of variance showed that there was an interaction between type of diluents and vitamin E ($P < 0.01$) on sperm viability and abnormalities, with the best combination at D1V2. The type of diluent had a significant effect ($P < 0.05$) on sperm motility. The vitamin E dose had a significant effect on membrane integrity. Storage time had a high effect on sperm motility. There were eight combinations among the type of diluent, vitamin E dose, and storage time, which had a significant effect ($P < 0.01$) on fertility and the fertile periods of kampung hen eggs. The combination of D2V2T0 showed the best fertility and the D(2)V(2)T(0) showed the best fertile periods. In conclusion, the addition of vitamin E 2% in lactate ringer diluents was better for maintaining the quality of spermatozoa. Artificial insemination tests in kampung hens showed fresh semen in a combination diluent of skimmed milk + 50 mM glucose and vitamin E 2% resulting in the highest fertility and fertile period.</p>
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