

Low-voltage electro-ejaculation technique for semen collection from Lanyu Pigs

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Lanyu miniature pig is a native species in Taiwan, and their germplasm conservation and improvement of genetic diversity are very important. The germplasm conservation relies on the storage of semen. However, the success rate of lanyu miniature pig semen collection by hand is very low, and therefore we tried to collect sperm by electrical stimulation. Firstly, the semen was collected with different voltages and the effects of different voltages on its physiological condition, semen quality, and frozen-thawed semen traits were examined. The results showed that the collection success rate was 81.3% when 2-3 V of low-voltage and the maximum current of 500 mA were performed. The survival rate, vitality, linear motility, deformity rate, and acrosomal integrity were 84.3%, 75.7%, 63.7%, 10.3%, and 82.9%, respectively. The low-voltage electrical stimulation of semen collection effectively stimulated the ejaculation of lanyu miniature pigs, and this method caused less stress to the animals during the operation. Thus, the application of low-voltage electrical stimulation to the semen collection of lanyu miniature pigs is a feasible method.