

**2014: Five articles**

**1. Standard Operating Procedures for Staff Working in Disasters 2014: A WSPA handbook**

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The handbook was published to help staff working in disasters to make decisions and ensure they also do the best possible job. Often, the individuals who provide the much-needed aid during animal disaster situations need to put themselves in harm's way and expose themselves to significant risks. In order to reduce these risks to levels that are as low as reasonably practical, clear standard operation procedures need to be drawn and provided as a working handbook to such staff. This handbook covers contents on necessary attributes of disaster management cycle.

**2. Bovine *in-vitro* embryo production and its contribution towards improved food security in**

**Kenya- Accepted- African Journal of Food, Agriculture, Nutrition and Development**

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**ABSTRACT**

The Boran breed is mainly kept by pastoralist communities as a source of both milk and beef, and by commercial beef ranches mainly for beef production. Although this breed Boran may seemingly be low valued, it can be raised to higher reproductive potential using current reproductive technologies such as *in-vitro* embryo production and embryo transfer. In this author's literature search there was lack of locally optimized procedures for boosting the reproductive potential of the Boran cow using such technologies. This paper discusses simplified methods used for *in-vitro* embryo production and embryo transfer that have been tested and optimized for the Kenyan Boran cows as described in text. This article provides the reader with technical procedures, the outcomes and the challenges experienced during use of the technologies. The results of the reported *in vitro* embryo production obtained an oocyte maturation rate of over 90%, over 70% cleavage rate and an embryo output of 30-50% blastocyst rate. Embryo transfer had a conception rate of 45-50%. All the 17 calves born out of this work have since attained puberty without any abnormalities. This research was the first to produce a "test tube" calf in Kenya and built the capacity of 57 staff on these technical procedures within East Africa. Utilization of the *in vitro* embryo production technology in Kenya can be used to do value addition to indigenous cows and improve household incomes and food security. This avenue can be used to raise household revenues and attract many more farmers to engage in farming leading to improved national economic and food security. Kenya can utilize reproductive technologies in the dairy sector due to the massive potential benefits to revolutionize the sector for enhanced food security by increasing cattle productivity. The paper highlights practical ways of applying the technologies discussed therein to help raise the economy of the Kenyan livestock farmers and boost their food security.