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The Australian Rangeland Society

YOUNG BREEDER PERFORMANCE MONITORING

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ABSTRACT

A demonstration site has been developed in conjunction with Warrawagine Station and the Department of Agriculture and Food to investigate the benefits of maintaining individual animal records to improve herd productivity. The use of Radio Frequency Identification Devices (RFID) associated with the introduction of the National Livestock Identification Scheme (NLIS) has allowed cattle records to be stored electronically and accessed easily in subsequent musters.

INTRODUCTION

Warrawagine Station (410,780ha) is an extensive cattle property located approximately 130kms north east of Marble Bar on the western edge of the Great Sandy Desert and is situated in the Shire of East Pilbara in Western Australia. The owners of Warrawagine have shown a keen interest in improving rangeland management and herd productivity and see the potential of using Radio Frequency Identification Devices (RFID) associated with the National Livestock Identification Scheme (NLIS) in assisting them to develop individual animal performance records.

APPROACHES TO DATA COLLECTION AND RECORDING

Livestock numbers and ages are now recorded with weights soon to follow. Approximately 7000 breeders have so far been identified with rumen boluses.

The data is collected on each individual animal under the barcode of the RFID. Cattle and their individual records can be traced from the paddock they were put into, to the place that they were mustered from. This will assist in determining the grazing preference of individual animals and in which areas cattle perform the best. Recording the wet and dry status and body condition of cattle allows the owners to make inferences on which paddocks are/are not suitable breeding grounds for the different age groups. A fencing program could potentially be based on the information recorded regarding preferred grazing and cattle movements in the extensive unfenced areas of the property.

The current infrastructure on Warrawagine has progressed the development of this management system to include the identification of heifers and young breeders. Further use of RFID's should make it possible to efficiently and accurately collect information on large numbers of young breeders. Collecting this information will develop historical records of individual young breeders to help determine the preferred time and age of first calving and its effects on subsequent reproductive performance.

Prior to the implementation of a commercial software program (Stockbook), the owners were using an *Elders* notebook to record cattle numbers. Records were basic and consisted of how many cattle came out of an area and how many were let back. This method only gave a rough idea of how many cattle on the property at the end of the year.

The software program is used by the station to collect and collate individual animal data and easily access it while working with cattle in the yards. The system is set up with a panel reader which reads the RFID device of each animal walking past and is recorded onto the laptop. Experiences so far suggest that only 50% of a person's time is required at the laptop while cattle are being moved through the yards. Abbreviations and the use of shortcut keys means that minimal typing and keyboard skills are required by the operator.

POTENTIAL BENEFITS

Recording cattle weights will enable the owners to identify which areas of the station provide better feed, resulting in higher weight gains. The improvement in turnoff and quality will now be measurable and to a certain degree controllable.

The long term benefits will be a clearer understanding of how many cattle will be culled and how many will be breeders for the following year. From these figures an estimation of the potential calf numbers for the following year can be made. Diseases related to a reduction in the calving rate could be identified by testing the cows that come through without calves. The program has only been going for the past 12 months and will be more useful in the progressive seasons.