



PASTORAL MEMO

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Southern Rangelands

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EDITOR: Kaz Price

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PO Box 522

CARNARVON WA 6701

Phone: (08) 9956 3333

Fax: (08) 9941 8334

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EDITORIAL

Kaz Price, Carnarvon District Office

Being that diversification is my role at Carnarvon, I have diversified my job a little to take on editing the *Pastoral Memo* for this quarter. It has been great to have such a diverse array of articles come in (that's the last of the puns). We all become so insular within the roles we have, that events like Liaison Meetings and opportunities to edit the Memo are really valuable as they allow us to see the 'bigger picture' of what is happening within AGWEST and out there in the industry. For those of you who are only just coming to grips with the acronym AgWA, from now on the agency's policy will be that AGWEST will be used. Check out 'Commonly used acronyms' for more.

Lod Hurst's thought provoking article 'Prospects and needs for future viability of the pastoral industry' is a must read. Lod held the assembly at the Kalgoorlie Liaison Meeting in October absolutely rapt with this presentation on the changing face of pastoralism and the challenges for both pastoralists and government to ensure a vibrant and viable future.

Maybe you might be interested in running a Flerd, and NO this is not some dodgy pitch to have you invest in shoats or geep in the run-up to the end of the financial year. Dean Anderson's article from the States is fascinating and explains the advantages of and methods for creating mixed-species herds.

Robert Rouda has contributed a couple of articles. He explains his new GMS project 'Integrated management technology systems' – a Brave New World for the Rangelands.

I would be interested to have feedback on whether or not David Williamson would still be considered Australia's finest living playwright if Robert's 'Cold beer, WARMS and PMS' was given an opening night extravaganza???

My contributions for this March Memo are a process for applying for Diversification Permits through the Pastoral Lands Board and an article heralding the approach of a major Industry Development Forum for Carnarvon. This Forum is an exciting venture aimed at the development of commercial supply chain partnering arrangements for the new and emerging Rangeland meat and fibre industries. More information will be coming to you about this event in the very near future.

The next *Pastoral Memo* will be published by the Kalgoorlie Office and is due to hit the mail boxes in June 1999. Contributions and queries to the Kalgoorlie Office on (08) 9021 0888.

On behalf of all the staff here at the Carnarvon Office have a great Easter weekend, and don't forget to take the *Pastoral Memo* with you...even if it's only over to the shed!

Cheers, Kaz.

STOP PRESS-----STOP PRESS-----STOP PRESS-----STOP PRESS

DEVELOPING COMMERCIAL PARTNERSHIPS FOR SHEEP, GOAT AND CATTLE PRODUCTS

A commercially focused forum to develop new partnerships for production and marketing of Rangeland goat, sheep and cattle products will be held in Carnarvon, 19-20 May 1999.

This forum will:

- bring together producers, buyers and customers of Rangeland products;
- present models of successful supply chain partnering arrangements; and
- present an opportunity for businesses to seek out and identify commercial partnering arrangements.

For further information contact: Kaz Price, Carnarvon District Office (08) 9956 3333.

WOULD MANAGING A FLERD BENEFIT YOUR BOTTOM LINE?

Dean M. Anderson, Research Scientist, United States Department of Agriculture

Reducing predation losses, cutting conventional fencing costs, eliminating unproductive search time to locate animals and promoting uniform utilisation of the vegetation resource face all resource managers who practise mixed-species stocking. These four management challenges can be turned into management opportunities when coupled with the ability to modify small ruminant behaviour so they remain close to cattle under free-ranging conditions. Sheep and goat flocks normally forage separate from cattle herds. However, if small ruminants, preferably young animals, are socialised with cattle the adults will form one or more flerds, i.e. small ruminants that consistently remain close to cattle under free-ranging conditions.

A flerd is an animal group in which small ruminants bond to and consistently remain with cattle. It appears only the small ruminants form bonds, while cattle simply learn to accept the near presence of the smaller animals. Bonding of sheep and goats to cattle can be accomplished by a period (30 to 60 days) of uninterrupted pen confinement of the small ruminants with tolerant cattle or by combining a shorter period (7 to 14 days) of pen confinement with confinement in a paddock using repetitive and frequent regrouping of animals until the small ruminants consistently remain with cattle. Transition from flocks and herds to flerds should be approached gradually to ensure adequate time has elapsed for the development and subsequent maturity of strong bonds, i.e. small ruminants that remain close to cattle. For example, if bonding is to be done using both the pen and paddock be sure the area has only a single source of drinking water, is small and free of dense brush so there is an 'open' line of sight among all animals at all times. By

adding a bell to one or more gentle cattle the sound may also help focus the small ruminants attention to the cattle. However, once bonded, a flerd can be successfully managed in large brush infested paddocks yet maintaining bells and a single drinking water source is recommended to encourage animals to remain as a cohesive unit or flerd.

Even though the cost of pen confinement exceeds that of grazing/browsing, if combined with lambing in a dry lot, winter feeding, or a feedlot program, an opportunity exists to encourage interspecies socialisation. Though it is desirable to start with recently weaned sheep and/or goats and have all small ruminants bond to cattle this may not be possible. Furthermore, the closeness of association of the small ruminants to the cattle not only varies among genera, species and breed but also within and among classes of livestock. Wethers appear to bond closer than ewes to cattle. This offers an innovative management opportunity by selecting and bonding one or more wethers, a 'catalyst group' can be formed around the cattle. If some small ruminants never establish close strong bonds, flocking of well bonded individuals to those less bonded will serve to bridge the 'bonding gap' and ensure the entire group remain together. Flerds may be managed with one or more species of small ruminants (sheep and or goats); however, hair goats (Angora) tend to form stronger and more consistent bonds to cattle compared to meat type (Spanish) goats.

The keen eye of a proactive manager is crucial, especially for selecting species that flock and observing and removing cattle that may be physically abusive toward the small ruminants at any stage during the development or management of flerds. Removal of

cattle from a flerd is not disruptive because small ruminants bond to cattle not specific animals. However, lambs born to bonded ewes are not automatically bonded and they too require a period of socialisation with cattle in the absence of their lactating dams to themselves become bonded. To date our research team has managed Polypay and Polypay Rambouillet crossbred lambs, ewes (lactating and non-lactating), wethers, and Angora and Spanish kids and adults (castrated male and non-lactating nanny goats).

Flerds provide several management benefits. Cattle appear to intimidate marauding coyotes and barking dogs thus protecting the small ruminants as a result of their close association with cattle. The author is unaware of Australian research describing the use of flerds and thus it is not known if dingos too might be intimidated by cattle if sheep and/or goats were bonded to cows in areas where mixed-stocking is practised and dingos exist. Furthermore, it is unknown if there is a critical ratio of cattle to small ruminants for optimum protection from predators. However, over the past 12 years of flerd research by our team we have not found predation protection to be compromised by either number of sub flerds the livestock divide into or whether cattle in the flerd are heifers or mature cows.

The flerd will remain confined to an area even if fencing is only adequate to restrain cattle provided cattle are absent in adjoining pastures, since as pointed out earlier, the bond is species not individual specific. However, all behaviours can be compromised given the 'right' conditions; therefore, property boundaries should be fenced appropriately. Because of their stature, cattle are normally recognised first on a landscape, especially if infested with brush; therefore, with flerds all animals are usually located simultaneously thus reducing search time. Cattle appear to dictate the flerd's foraging location resulting in more uniform utilisation across the landscape than if flocks and herds forage independently.

Details on producing bonded sheep and goats and managing flerds can be obtained by sending inquiries to the following address:

Dr Dean M. Anderson
 USDA-ARS-Jornada Experimental Range
 PO Box 30003, MSC 3JER, NMSU
 Las Cruces, NM 88003-8003

Telephone, voice: 505-646-5190
 Fax: 505-646-5889
 Internet: deanders@nmsu.edu

ELECTRIC FENCE BATTERIES

Kevin Shackleton

Once you've learnt to put up a nice clean electric fence, the main ongoing problem you will have is keeping batteries up to the energisers.

There are several problems involved with lead-acid batteries:

- The batteries have a limited number of charge-discharge cycles.
- The number of charge-discharge cycles decreases rapidly with depth of dis-

charge – typically 1000 discharging to 90 per cent capacity down to 300 at 50 per cent.

- The life decreases rapidly with temperature – for example ten years at 25°C down to three years at 40°C and two years at 45°C.

On top of which there are batteries designed for automotive use, which are cheap but are not the most reliable for fencing, and batteries which are designed for fencing, but which