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The last 50 years of pastoralism – what impact drought strategies?

The last 50 years: As of the 30th June 2016, there was 25 million head of cattle and 70.9 million sheep in Australia (ABS) ie around 34 million adult equivalents. The data for 2019 is not yet available but all indications are that there will be a further retraction after this current widespread drought. It seems each ensuing drought takes a toll and while stock numbers is the statistic which attracts most attention, it is deterioration of the rangelands which should cause most concern. The cumulative effects of each drought episode is analogous to a boxer's attempts to survive as more blows are landed. In our lifetime, the national numbers have tumbled from 33 million head of cattle and 180 million sheep in the seventies (around 55 million adult equivalents) to current levels. The question which needs to be asked is "*Could we ever sustain these stock numbers again in Australia?*"

Evolution of a pastoral industry: An historical examination of the grazing industries provides insight into how we have arrived at this point. From its meagre beginnings of a bull, bull calf and 4 cows in 1788, the Australian beef herd evolved slowly over the next 50 years and was restricted to the major regions of settlement in NSW, Victoria, Western Australia and South Australia. However with the cessation of transportation of convicts in the mid eighteenth hundreds and expeditions by the early explorers such as Sturt, Mitchell, Stuart, Leichardt, Forest and Kennedy, pastoralism exploded in the next 40 years and by 1890, most of the grazing lands in Australia had been opened up.

grazing industry as success was not dependant on processing plants, refrigeration, inland roads or domestic markets. The national flock peaked at 180 million head in 1970 but declining global demand, rising costs of labour, deteriorating land condition and increasing predation have seen a marked decline in both the size of today's sheep population (70.9 million) and the regions now suited to sustainable sheep production.

By 1862, both New South Wales and Victoria were grazing about 6 million sheep each, with Queensland only a little behind. Between 1860 and 1894 the whole sheep population had risen from 20 million to 100 million, and the cattle from 4 million to more than 12 million. The great drought from 1895 to 1902 reduced the sheep population by half and much of the western districts of NSW were virtually destocked (1). In 1901 with the federation of the states and the emergence of a new nation, sheep numbers again accelerated as wool production was much more amenable to the development of a thriving

Meanwhile the metamorphosis that occurred in the beef industry has been as equally interesting. As refrigeration and shipping improved, export markets were developed and stock routes sprung up through the north creating corridors through which the beef industry could effectively operate. Beef production gradually replaced wool in the northern regions less suited to sheep and the national herd grew slowly to around 16 million head by 1960. Vast breeder operations were established in the dry tropical zones and these supplied store steers into the fattening regions of the channel country which were located closer to processing facilities on the eastern seaboard. Great Britain was the main importer until its entry into the European Common Market in the mid nineteen fifties. This necessitated the development of new

markets into the United States and Japan which created demand and stimulated a rapid expansion in cattle numbers between 1960 and the infamous 1974 beef slump when the national herd had reached its peak of 33 million head. Beef roads were developed and the stock routes gradually disappeared. The eradication of both TB and Brucellosis along with the change in genotype, meant that northern Australia cattle were highly suited to the live export trade in south east Asia. Advances in pump technology, poly pipe, supplementation, a botulism vaccine, road trains and weaning improved the ability to manage droughts and reduce stock losses but at what cost? Major stock losses from drought could be averted and available pastures reserves could be accessed while existing stubble could be grazed to ground level. Government policies on fodder and freight rebates were designed with every good intention to keep stock alive and ensure business survival at the expense of long term sustainability as each widespread drought could now progressively remove more perennial pastures. Massive stock losses (25,000 head) as occurred in the 1958 drought on Brunette Downs (2) could now be avoided.

What has changed since the sixties? The factors leading to this apparent loss of carrying capacity in the rangelands are multi-factorial but include:-

1. An increase in the capital value of the land in comparison to the value of the stock means less funds directed at working capital and more into financing an asset that is losing productivity.
2. Development and the continued utilisation of new country reduces the reserves available in years of widespread drought when feed is scarce.
3. Supplementation, efficient transportation of fodder and development of underground water supplies has enabled stock to be retained on pastures far beyond their capacity to regenerate.
4. Stock are able to be transferred further afield – placing more grazing pressure on pastures in other regions previously not under threat.
5. Major stock losses avoided but reduced opportunity for subsequent pasture regeneration.
6. Borehole pumps replace wells and water tables lowered in irrigation regions causing streams to stop flowing sooner with overall loss of irrigation capacity .

A change in focus is needed: The development of lot feeding and live exports now ensures that markets exist for store steers which would have been retained previously in widespread drought. This should have improved our ability to manipulate stocking rates, manage drought periods and stabilise the nation's carrying capacity. Notwithstanding, there are examples of pastoral businesses successfully operating in arguably the most variable rainfall regions in Australia where drought is common place. (P.Holmes pers comm). The focus needs to turn from management of livestock to management of pastures. When the health of the pastures is centre stage in management and drought planning, then sustainability of rangeland enterprises can be achieved. Its not the ability to predict the seasons that is paramount but the necessity to adjust stocking rates according to pasture availability, develop long term carrying capacities, implement suitable spelling practices and make early decisions based on well established critical trigger points before livestock become unsaleable. The golden rule for sustainable pastures as advocated by Bill Burrows is still relevant “Ensure you come out of a drought with stubble on the ground.”

Key Words: drought strategies sustainability stock losses national carrying capacity stubble

References: (1) Australian Agriculture The Complete reference on Rural Industry, Vol Two 1989/1990 Published by NFF. (2) <https://trove.nla.gov.au/newspaper/article/51193762>



Dry times in western Qld – Stock are doing well but where is the stubble?



After 25 years of rest, country can regenerate in the Goldfields of WA.