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More beef from the Kimberleys, part 2

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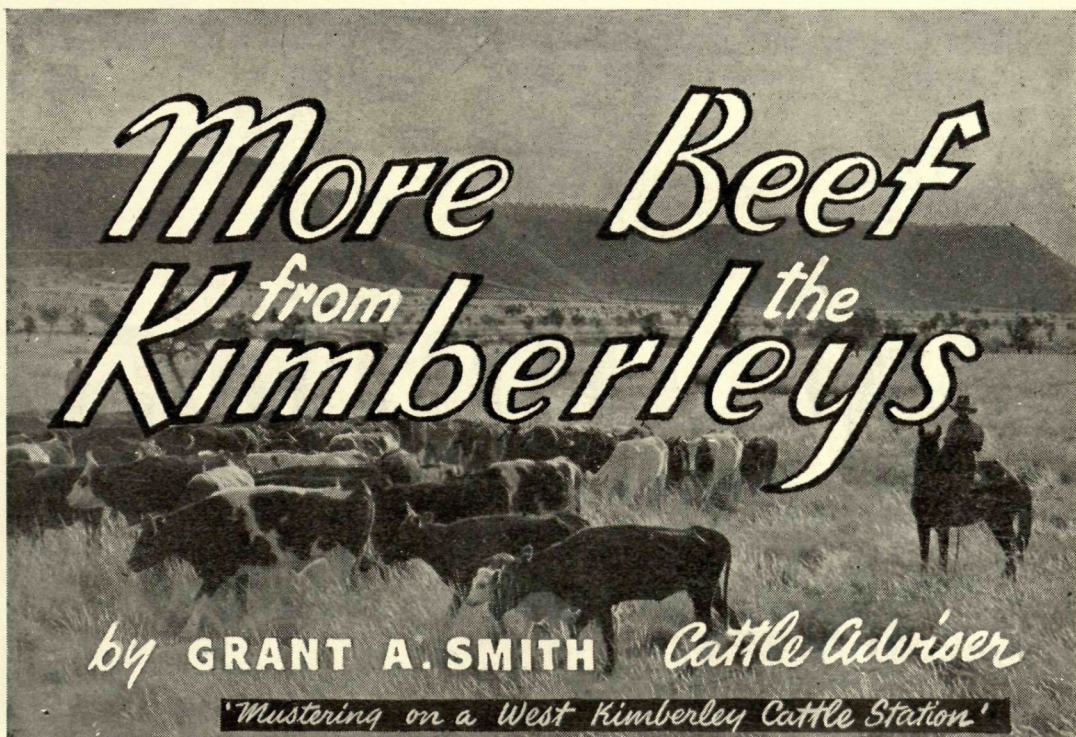
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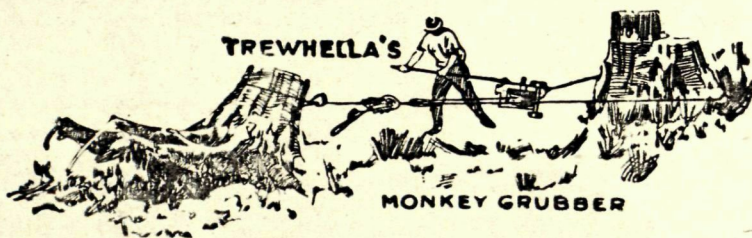


LOW phosphorus content and low protein content of pastures usually go hand in hand and as most dry feed is deficient in both of these important nutritional needs, it is easy to understand why our Kimberley cattle do well in the "wet" when ample green feed is available, but fall away rapidly in condition as the feed dries out. Increasing the protein content is essentially a long-term project, but I feel that the remedying of phosphorus deficiency is an economic possibility, which could be put into effect fairly rapidly.

This is the second and final instalment of this article, the first portion of which appeared in the March-April issue.

In South Africa where research programmes were conducted in a district possessing climatic and seasonal conditions nearly identical with those of the Kimberleys, it has been shown that phosphorus is a limiting factor in the growth of young stock, the condition of the older animals, and the milk yield of the cows.

It was found that where young calves were given a phosphorus-rich supplement in the form of bonemeal, their rate of weight increase was approximately twice that of the control cows given no supplement. Starting with animals from nine to 18 months old with an average weight of 300 lb., the control animals running on natural pasture with no supplement gained an average of 170 lb. in one year. The other group, running on the same pastures over the same period, but given bonemeal to supply extra phosphorus, made an average gain of 340 lb. in the same period. With this increase in weight, was associated earlier maturity and better quality beef.



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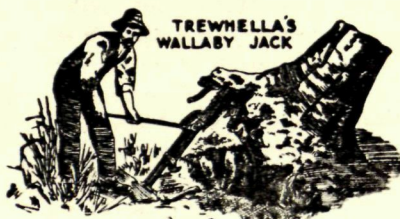
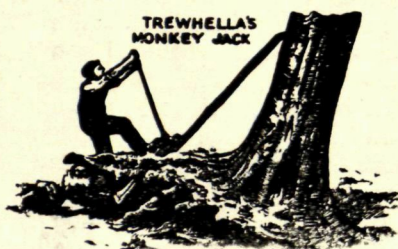
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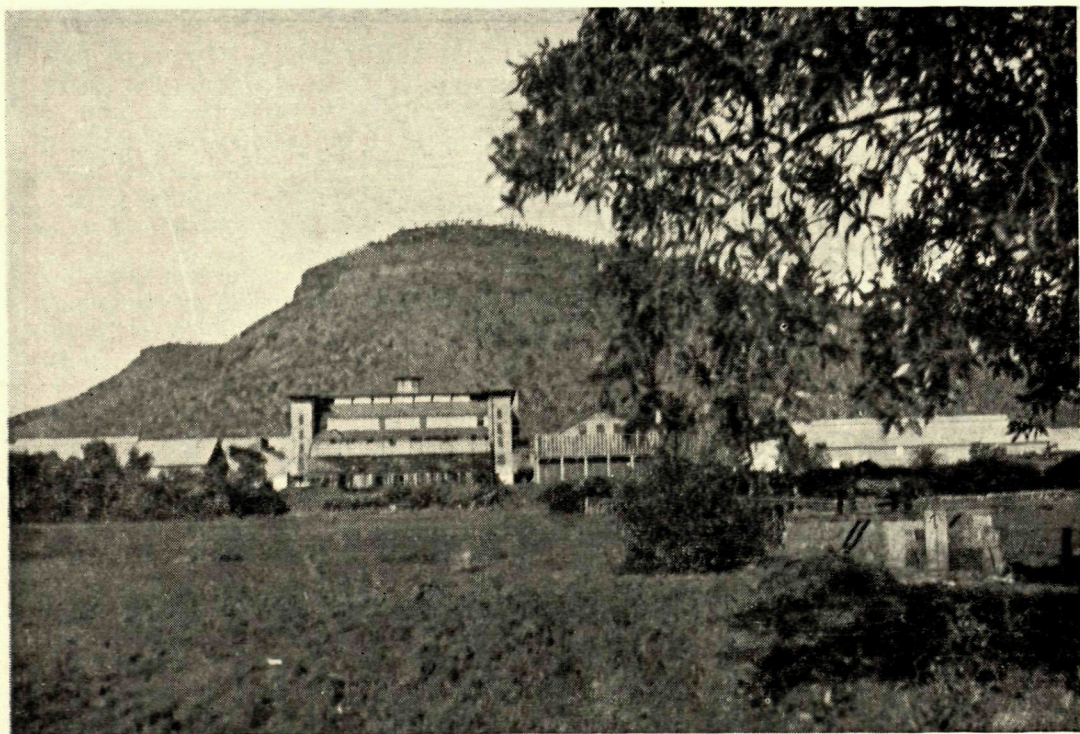
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The Wyndham Meatworks with the West Bastion in the background.
—Photo J. A. Mallett.

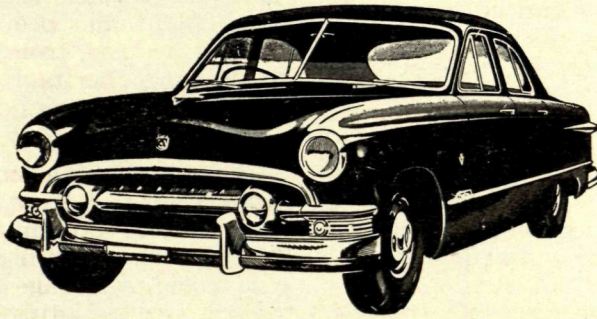
Other experiments conducted in South Africa showed that although cows living on phosphorus-deficient pastures may live and breed to a great age, they do not calve every year. Over a three-year period, about two-thirds of the cows receiving the phosphorus supplement produced a calf each year but none of the control cows on normal pasture had a calf every year.

The experiment suggested that, during the first year, the control cows which were in good condition had sufficient mineral reserves in their bodies to produce a normal calf drop. During the second year the drain on phosphorus through the milk supply to the calves was so great that the majority of the cows were unable to breed and missed a year. During the third year some of the control cows had built up their mineral reserves to the minimum re-

quirements for breeding and bore calves in that year.

In order to give the calf as good a start in life as possible, Nature compels the cow to draw on her bodily reserves of minerals and these are supplied to the calf through the milk. It is this heavy drain on the system which causes a nursing cow to develop "creeps".

Even then, the calf is not always supplied with adequate minerals for although the quality of the milk may not be affected by mineral shortages in the cow's ration, the milk flow will often diminish in quantity to such an extent that it is far below requirements of the calf. Such calves commence life handicapped by malnutrition and, even if they survive the trials of their early years, they are apt to be undeveloped, weak-constituted and later in attaining maturity.



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PHOSPHORUS SUPPLEMENTS

There appear to be only two methods by which station cattle can be supplied with mineral supplements—by making prepared licks available or by supplementing the water supply of the cattle by adding whatever minerals are deficient in the pastures.

To supply tens of thousands of cattle in the Kimberleys with prepared licks would obviously not be a practical proposition. The cost of substances such as bonemeal, bone-flour or meatmeal would be too high even if we disregard the heavy transport costs. There are deposits of phosphatic rock on islands off the Kimberley coast which, if ground and made palatable, could possibly be used in the composition of stock licks but I fear that the costs of mining, sea transport, grinding and treatment with salt and molasses, added to road freight charges from the coast to inland leases, plus the distribution cost to troughs scattered over million-acre runs, would make this method far too expensive.

Research work carried out overseas and by our own Animal Nutrition Officer (Dr. L. C. Snook) in the South-West has shown that the surest and most economical methods of overcoming the phosphorus deficiency in cattle are by supplying the supplement as a routine addition to the water supply or the feed. On dairy farms in the South-West, a saturated solution of phosphate is sprinkled over the feed given in the bails but this method could not be applied under range conditions.

In the U.S.A., extensive research

work is being carried out into the practicability and the economics of supplying range cattle with mineral supplements and it has been proved that the benefits derived from supplying phosphorus supplements to range cattle were so great that it has now become standard practice on many ranches.

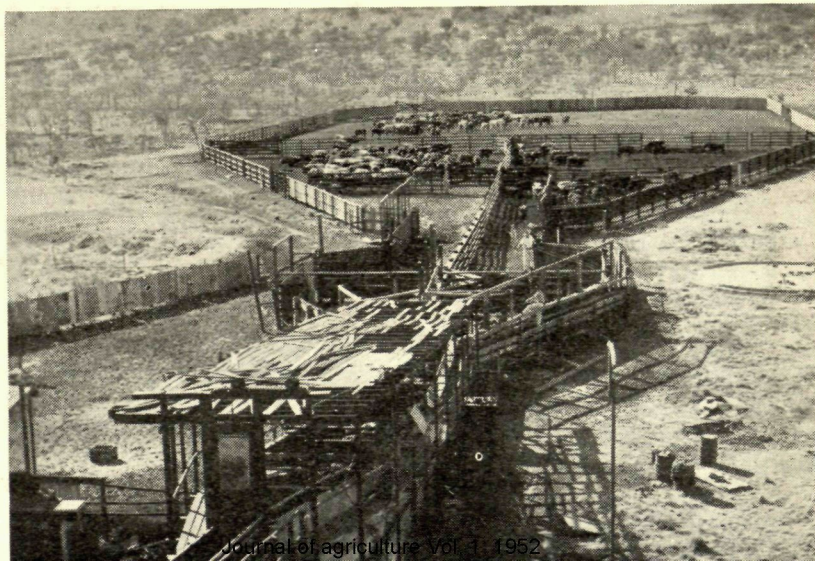
Only last year, a small machine was patented and is now being manufactured commercially in the United States. This machine when fitted to the delivery pipe from the storage tank to the water troughs can be adjusted to automatically deliver any desired quantity of mineral solution to each animal as it drinks.

The North-West Branch of the Department of Agriculture has ordered two of the American machines described above for trial purposes, and arrangements are in hand for demonstration units to commence work during the present season.

Due to its complete solubility and because very strong solutions can be made, monosodium phosphate, which is used in the U.S.A., would undoubtedly be the best phosphatic supplement to use in this country but unfortunately, it is in very short supply here.

The holding yards at Wyndham Meatworks with the race leading up to the killing floor.

—Photo by courtesy of West Australian Newspapers Ltd





Active stockmen with pack mules and droving plant at Fossil Downs Station, West Kimberley.

—Photo W. M. Nunn.

cases has dwindled. In most cases even the opening up of new country has only made it possible to maintain existing numbers.

Under the erroneous impression that big herds mean bigger sales without marked increases in working costs, many lease-holders have endeavoured to stock watering-points to the limit with no regard to the subsequent ruin of the surrounding pastures.

Until supply difficulties can be overcome it may be necessary for us to use a "super-juice" solution through these machines. This is the popular name used in the South-West for the clear liquid drawn off after dissolving 5 lb. of superphosphate in a gallon of water. This is the solution used in the South-West for sprinkling on the feed of dairy cattle.

CONTROLLED BREEDING AND WEANING

Controlled breeding and weaning are the basic principles of successful stock-raising, yet few Kimberley stations have been able to put these principles into effect.

Under present conditions most Kimberley cattlemen are branding 20% to 25% and selling about 10% of their herds every year.

Regardless of the areas of new country which have been opened up by the provision of additional watering-points, the percentage of sales in relation to total herd numbers has not materially increased over the years and in many

Complete boundary fencing and subdivision must be included in any long-range plan for the reorganisation of the Kimberley cattle industry, but only three paddocks on each lease would be required for a start to permit the introduction of a system of management embracing: (a) Controlled breeding at the appropriate season; (b) calf weaning at the right time; (c) systematic speying.

It is my belief that with the adoption of such a system, cattle mortalities could be considerably reduced and sales increased by as much as 100% in some cases. Working conditions would be simplified and would prove no more costly than in the past, and a better class of cattle could be produced. The increase in sales in relation to total herd numbers would contribute no small amount towards the reduction of costs.

In a herd of 10,000 cattle it should not be difficult to paddock off 3,000 breeders. These should preferably be selected animals aged from three to six years. Another paddock should be provided for the bulls and as all stations are under stocked with selected bulls, the best use would have to be made of whatever animals were available.

The allocation of bulls to breeders should be governed by the area of the paddock and the class of country where the breeders were running as well as the distribution of water-points in that paddock. Bulls could be put with the breeders about April and returned to their own enclosure in June or early July. By holding the mating season back to April, the first year should give both breeders and bulls a chance to build up any condition and would result in calving taking place during the green feed season. The cows will be growing stronger after the long spell on dry feed and will be able to produce increased quantities of milk to meet the requirements of the calves.

By September when the country is drying up and the cattle are going back in condition, all the calves can be weaned. After being tailed for a few weeks (the fat cattle mustering is about over by then) those weaners will have quietened down and will have learnt many lessons to make them easier to handle when being worked as grown cattle. After branding, at which time they would be stamped with a year number on the cheek, they could all be settled down in a weaner paddock. Where a bullock paddock was available and large enough, the steer weaners could be turned into it.

The following year, all the yearling heifers could be mustered and released in the breeder paddock or if the mustering was started in the mating season, they could be held temporarily in the bull paddock and moved to the breeder paddock later.

All the heifers will then be about 15 months old and as

another nine months must pass before the bulls are again with the breeders the heifers will be about two years old before they come into contact with the bulls. Their first calves will be born when they are nearly three years old.

By weaning the calves at the start of the annual drought period the breeders will all be dry cows while on dry feed. There will be no drain on their systems through lactation, and mortalities should be greatly reduced. Such cows would be in good strong condition to mate during the next green feed season.

After the first year, the service season could be changed to the month of May. This would allow the calving season to fall well within the months of the best pasture conditions and all calves would be fit to wean before the grass supplies became seriously depleted.

SYSTEMATIC SPEYING

By establishing this system and supplying mineral supplements one could reasonably expect to get an 80% branding in relation to breeders. This represents 2,400 calves from our 3,000 breeders and according to the law of averages there would be about 1,200 steers and a similar number of heifers. Even allowing exceptionally heavy losses from all

Fossil Downs cattle en route to Derby for shipment.
—Photo W. M. Nunn.





The chain system of dressing in operation at the Wyndham Meatworks.
—Photo W. M. Nunn.

indefinitely she must die some day no matter what the conditions are. It is far better to put 800 or 1,000 speyed cows through the meatworks each year than to have them die on the run. The same number of cows will still be available to breed from each year by keeping the ages at from three to six or seven years.

A cow speyed at seven years old cannot, of course, be expected to pile on

quarters, 800 to 1,000 heifers annually would be available for the breeder paddock and consequently an equal number of cull heifers and cows could be speyed each year.

As mentioned earlier, research in South Africa and the U.S.A. has proved that cows on phosphorus-deficient pastures are in most cases irregular breeders although they may live and breed sporadically to a great age. Until such time as the mineral deficiency was remedied, therefore, it would be necessary to adopt a guarded "spey for quality" system—a system based on the calving percentage and the number of yearling heifers available to replace the speyed stock.

After the use of selected bulls for a year or two (at present the "mickies" or scrub bulls sire most of the calves) and when the breeders were graded up by cull speying to a reasonably good standard, a "spey for age" system could be introduced.

If a cow has reared four calves and is then speyed, fattened and sold she has done well enough. If she is kept

beef like a maiden heifer, but she will be quite good enough for a meatworks or a butcher. Whatever the net return received by the cattleman as a result of realising on the "cull for age" cows it must contribute towards reducing the cost of producing the better quality cattle such as bullocks and speyed heifers. Incidentally, speyed cows will usually hold their condition better through the bad spell than will the bullocks, particularly if they are dehorned and paddocked off.

The cost to the industry of the annual mortality in cows alone must be tremendous and, when cull for age speying is introduced and practised annually, production must increase, cost of production must decrease and the killing season at Broome and Wyndham meatworks will have to be extended to cope with the increased number of cattle available for treatment. Admittedly, getting cattle to either of these meatworks late in the year will be a difficult hurdle, but it should not be an unsurmountable one.