Beef in W.A.

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BEEF PRODUCTION IN W.A.—1973

There are four major regions of beef production in Western Australia, each suited to its own type of husbandry. In such a large area, climate plays an important part in limiting production off pasture and this is reflected in the different patterns of production that have emerged from the accumulated experience of working in these areas.

Kimberley. Situated north of latitude 18 deg. S, this is an area of tropical climate. It has summer monsoon rains which are not reliable and range from 1,150 mm annually on the coast to 550 mm and less inland. High summer temperatures and warm winters with wide diurnal fluctuations are typical.

Geologically, the area is composed of granite and ironstone broken by rivers emptying into the sea along the north west coast.

The North-West. Situated from latitude 20 deg. S to 27 deg. S and eastwards to longitude 120 deg. E, this area has total rainfall of 200 to 350 mm annually, depending on the district. The

Locally adapted shorthorn cattle in the Kimberley.
LAND PRICES

Land prices vary widely because of factors such as carrying capacity, accessibility to markets, reliability of seasons and types of agricultural production that can be supported. While prices are still largely determined by value for agricultural purposes, recreational use also influences prices in certain areas, especially those within about 150 km of Perth. Details of the pastoral and homesteading leases of Crown land in the North-West and Kimberley regions, which involve non-residential and residential conditions respectively, may be obtained from the Department of Lands and Surveys, Cathedral Avenue, Perth, 6000.
Details of prices of freehold land may be obtained from the agents in the State:

Westralian Farmers Co-operative Ltd., Wellington Street, Perth, 6000.
Elder Smith Goldsborough Mort Ltd., 111 St George’s Terrace, Perth, 6000.
Western Livestock, Great Eastern Highway, Midland, 6056.
Real Estate Institute of W.A. (Inc.), 1297 Hay Street, West Perth, 6005.
TYPES OF PRODUCTION

From the Kimberley, bullocks are killed at three to six years old with liveweights of about 450 kg. Owing to the age at turnoff, the meat is of manufacturing grade and is mostly exported for processing into small goods and hamburgers.

From the North-West, steers are killed at greatly varying ages and weights. The quality is very dependent on the recent climatic conditions, but on the whole is comparable to that of the Kimberley.

From the South-West, both steers and heifers (about 18 to 20 months old) and baby beef (about 8 to 16 months old) are produced. Since baby beef is killed at 200 to 350 kg liveweight, it has traditionally been produced in those districts where the growing season is long enough to enable the necessary liveweight gain to be made at weaning soon after the pastures dry off in summer. Steers are killed at about 450 kg or more liveweight, after their second winter and spring. The best quality baby beef stock grow at average rates of more than 1 kg per day on pastures and their dams’ milk without supplementary feeding. The steers and heifers suffer a check through the summer and show lower overall growth rates.

Baby beef provide tender young beef for the home market. Most of the steer and heifer beef is also consumed locally and this varies in quality depending on age and fat cover. When grain prices are suitable, they are used for seasonal finishing of weaners through autumn for the higher-priced winter market.

MARKETING AND TRANSPORT

In a State as large as W.A., distance from markets can be an important cost in the beef enterprise. Most cattle in the Kimberleys are processed locally and the carcasses exported from Wyndham, Derby and Broome.

Cattle from the North-West are carried south to Geraldton or Midland for sale and slaughter, or sold locally and transported to W.A. Meat Export Works, Fremantle for slaughter. Usually, a prime mover with a number of trailers behind it is used. Transport is a considerable charge against a beef enterprise in this region.

Manufacturing grade beef from the Kimberleys and North West is almost all exported and thus subject to high freight and handling charges, tariffs and levies. It is subject to wide price fluctuation depending upon world supply and demand and the current balance of payments and internal politics of importing countries.

In the South-West, cattle may be transported to Midland saleyards for live auction sale and slaughter, they may be sold at small local sales for local killing, or they may be sold on the
property to wholesale buyers. In the last case they may be sold on a carcass weight and buyer's grade basis or at a fixed price per head.

Transport is usually by articulated truck or railway.

Commission charged by selling agents at auction sales at Midland saleyards is 4 per cent, and 5 per cent at country sale yards.

Most beef produced in the South West is of table quality and approximately meets the demand for the State’s local consumption. However, an excess is usually available in the December to February period and a shortage in May to August causing very considerable seasonal price fluctuations through the year. Cull dairy and beef breeding animals and dairy steers are of manufacturing grade.

Around half the State's total production is exported and includes surplus production from the agricultural areas. Overall, the local price is thus strongly influenced by world beef trade.

Herefords are one of the major breeds of beef cattle.
BREEDING STOCK

In the northern parts of the State, locally adapted Shorthorn cattle predominate. The particularly difficult environmental conditions in this region necessitate the use of specifically adapted breeds and types of cattle to survive and produce there.

The main breeds of beef cattle found in the south of the State are Angus, Hereford (Polled and Horned), Beef Shorthorn and Polled Shorthorn. There are also Red Polls, Santa Gertrudis, Brahman and Devons and crossbreds of the above breeds. Charolais, Simmental, South Devon, Lincoln Red and other exotic breeds are also being developed, using artificial insemination.

Culls from dairy herds and dairy/beef breed crosses have played an important part in beef production, especially baby beef. Most dairy cows are Friesian or Friesian cross animals.

Owing to risks of importing exotic diseases there is a total ban in importation of cattle to Australia from countries other than New Zealand. Semen may be imported from the U.K., New Zealand or Canada after a quarantine period.
HUSBANDRY TECHNIQUES

These are determined by economics and climate. The relative costs of grazing land or other feeds dictates that most production be derived from grazing. Climatic influences determine the periods of pasture growth and thus the seasonal fluctuations in quality and quantity of available feed. Over most of the State, rainfall rather than temperature limits the period of pasture growth.

In the Kimberleys, rainfall occurs in summer but the period over which it takes place can vary between years from November to May to a shorter period of January to February. Carrying capacity of the native pastures and shrubs is generally very low (a few breeders per square kilometre) but considerably higher in limited areas associated with the river systems. Natural water supplies limit the utilisation of grazing and foraging areas, unless supplemented by bores, in the dry season. Costs of fencing materials and other equipment are very high in this region, necessitating very careful planning and assessment prior to
investment in such capital improvements. Control of stock density and movement is thus a difficult matter, but essential to long-term preservation of satisfactory ecological conditions for livestock production. The major management techniques applied have for many years been the annual muster for branding, castration, and sale or transfer of stock, and the fencing of limited areas of better land for finishing stock. However, the relatively free movement of stock in the wet season and the difficult nature of much of the country renders control of livestock a considerable problem. More sophisticated production
techniques such as irrigation and lot-feeding are very high in cost and only economic at very high beef prices.

Husbandry techniques are similar in the North-West and Goldfields to those in the Kimberleys. The types of forages grazed and the seasonal climatic conditions differ according to regional soil type and latitude, tending towards a winter rainfall pattern in the southern regions. These areas are, collectively, the pastoral areas.

The agricultural areas include the South-West and wheat belt, and consist of those regions where pasture improvement and appropriate fertiliser programmes have been applied. All are winter-rainfall areas but annual precipitation, length of growing season and soil types vary widely, resulting in widely variable carrying capacity and agricultural practices. Cropping predominates in the lower rainfall (inland) parts of these regions. Beef production is most concentrated in the areas of over 650 mm annual rainfall. The agricultural areas are heavily dependent upon fertiliser and trace element use owing to inherent deficiencies in phosphate and minor elements such as copper, cobalt, zinc and molybdenum. Improved pasture species comprise annual and perennial legumes and grasses. Carrying capacities range from about 0.6 to 2.5 ha per breeding cow, depending upon rainfall.

Controlled mating and grazing are usually practised, and fodder conservation as hay in various forms is common. Single-suckling is the method employed and many prime baby beef calves are slaughtered at weaning at about 8 to 10 months age and 135 to 165 kg carcass weight. Others are carried through to slaughter as prime steer and heifer beef at 18 to 20 months age and 200 to 250 kg carcass weight. These systems use grazed pasture as the major or sole feed supply. When grain and beef prices are appropriate, topping-off of store weaners over autumn for slaughter at about 14 to 16 months age as prime baby beef at around 150 to 180 kg carcass weight in winter is practised quite widely, improving continuity of supply of prime beef to the local market.

The local dairy industry is small relative to the beef industry of the agricultural areas. The practice of hand-rearing of surplus dairy calves for beef production is thus confined largely to the areas of higher rainfall where dairying is practised.

Improved pastures supply very high quality feed in the growing season, which ranges from about 5 months duration in the lower rainfall parts of the agricultural areas to 9 months in the highest rainfall parts of the South-West corner of the State. The dried-off summer pastures maintain reasonable quality which is quite adequate to support dry stock but not lactation or body weight gain at fattening rates.

In general, the relative prices of land, labour, grain and beef have tended to disfavour the development of fully intensive beef production systems.
Natural water supplies in the agricultural areas, because of their limited seasonal flows, also have to be supplemented by windmills and bores and dams (earth tanks).

DISEASES

Western Australia is free of the major epizootic scourges affecting cattle. Tuberculosis is not a major problem, as government testing has revealed. Parasites, both internal and external, are widespread in the higher rainfall districts and deficiencies of phosphate and protein are frequent in the more extensively managed properties of the Kimberley North-West and other marginal areas. Trace element deficiencies of copper, cobalt and sometimes of selenium are encountered in the coastal soils, and in some of the inland areas. Tick fever is rather less of a problem in the Kimberley region now that droving to coastal districts has virtually ceased and road trains are used.

Western Australia has entered a phase of test and slaughter in the Brucellosis eradication campaign. The overall prevalence of this disease is low and it is not believed to occur at all in the Kimberley.

Leptospirosis and vibriosis occur in some beef herds. Cancerous eyes in white-faced cattle and contagious ophthalmitis ("Pink-eye") also occur quite frequently but so far have not had serious effect on production. Many toxic plants occur in indigenous bush, but their distribution and nature are fairly well established, and they are usually eradicated at the time of clearing.

On the whole, the main problems of cattle are related to nutrition, minerals and trace elements, and their interactions with parasites.

OTHER ENTERPRISES ON THE PROPERTY

Few properties in W.A. run a beef herd as a sole enterprise, except in the Kimberley and the North-West.

Whole milk production is largely centred in the south-west coastal areas, and the high rainfall areas of the south-west have, until recently, concentrated upon butterfat production.

Most properties of the South-West region have for many years relied mainly on sheep for meat or wool production, or on cereal growing. Pig production is practised as a by-product of butterfat farming and cereal growing, or as a specialist enterprise near the metropolitan area.

In 1970 and 1971, depressed wool and cereal prices and improved cattle prices led many farmers in the South-West to increase their beef numbers at the expense of wool production. In addition, many cereal producers in the wheat belt, restricted by wheat quotas, moved into beef production. Consequently
beef production in the south-west of Western Australia increased considerably in the early 1970s.

Wool, and sheep meat prices and cereals then improved in price, and beef prices became very depressed in the mid-1970s.

Over the 1965/75 decade a noticeable increase in the number of multi-enterprise farms occurred compared to the traditional single or double enterprise policies of the preceding period. World market prices play a very large part in determining W.A. prices for all its major agricultural products, and these are difficult to predict for any length of time ahead. Farmers have thus tended to diversify their production as some insurance against wide income variability.

However, in the Kimberleys climatic, economic and environmental factors have almost precluded diversification except in the irrigated areas associated with the Ord River dam, and in the North West, South West and wheat belt, commercial beef
production is a much younger industry in which the necessary bank of technological expertise has not yet been developed.

Beef production thus predominates in the Kimberley, but is a relatively minor enterprise compared to cropping, wool production and sheep meat production in the other areas. However, the beef cattle population of the agricultural areas is greater than that of the pastoral areas, and annual tonnage and its quality are very much higher.

SERVICES

Services allied to agriculture are expanding within the State, though the distances involved and the extensive nature of most agricultural enterprises and thus low population densities create difficulties. Farm advisory clubs, the Western Australian Department of Agriculture and various press sources provide good quantities of information, and both pure and applied research are carried out at the W.A. Department of Agriculture, CSIRO, and the University of Western Australia. The major stock firms are represented in most country centres. Private veterinary surgeons are located in various towns of the South-West region, and the W.A. Department of Agriculture maintains veterinary and agricultural investigatory and advisory teams in all the major centres of the State.

Road communications are good in the South-West and wheat belt, and medical and primary education services are available in many country towns, but tertiary education facilities are only located in major regional centres.
COST STRUCTURE OF A BEEF FARM

This checklist of inputs will help you to construct your own budgets. Prices of most inputs are listed in the Farm Budget Guide (Bulletin 3959), which is revised annually and available at any office of the Western Australian Department of Agriculture.

Capital costs
Land and fixed improvements (farm roads, fences, water supplies, handling yards, fodder storage) (allow $200 to $350 per breeder)
Plant and machinery—truck (?), tractor, trailer (?), firebreak implement, fodder conservation equipment (?), A.I. equipment (?), weighing scales (?), fertiliser spreader (?), specialised feeding equipment (?)
Livestock—breeders, bulls, yearlings, replacement breeders

Other costs
Household
Education
Life assurance/superannuation
Income tax
Death duties

Production costs
Fertiliser
Fodder conservation—twine
Stock requisites—vet calls, A.I. (?), vaccines and other vet. supplies, ear tags, castration aids.
Bull replacements
Sprays (?) for insects, weeds
Wages
Fuel, oil, electricity, gas
Repairs—machinery, buildings, fences
Contract services (?), haymaking, stock cartage, fertiliser cartage, and/or spreading, plant hire
Rates, water rates (?)
Insurance—livestock, crop and fodder, plant, buildings
Selling costs—commission (?), killing charges (?), yarding fees (?), levies
Administration—licences, telephone, subscriptions, accounting, legal, bank charges, management consultant
Interest—bank, stockfirm

Those items unqualified by a question mark are basic essentials but those qualified are either not always required or represent options.