

THE BEEF INDUSTRY IN QUEENSLAND

[By P. FYNES-CLINTON.]

(Read at a meeting of the Society on 28 June 1962.)

Queensland owes its existence to the wool and beef industries. It was the overflow of land-hungry settlers in New South Wales, and to some extent in Victoria, which set off the invasion of squatters, as they were called, across the line that now defines the area separated from the Mother Colony.

Queensland's suitability for cattle raising was extolled by Alan Cunningham when he first looked upon the Darling Downs in 1827. But it was not until 1840 that squatters took advantage of his discovery.

Patrick Leslie is recognised as the pioneer settler. In 1840 Leslie brought his flocks and herds on to what is known to-day as Canning Downs. Close on his tracks came Arthur Hodgson, John Cox, and others. In the following year David McConnel moved up the Brisbane Valley and occupied Cressbrook. Although Leslie is credited with being the first pioneer, and that seems beyond dispute, he did not remain long. The McConnel family still retains an interest in what remains of the original Cressbrook holding. It was the McConnels and many others, to some of whom I will have time to give passing reference, who really laid the foundation of an industry which, after more than 120 years of ups and downs, is to-day receiving some national recognition for what it has done to safeguard the security of this continent.

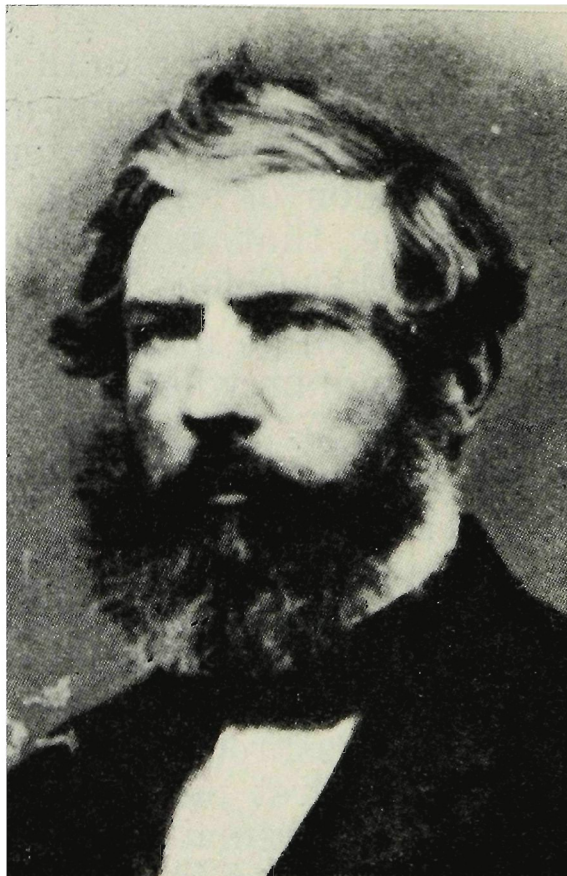
Wave of Land Seekers

The early settlers were followed by a wave of land seekers. Following the Darling Downs settlement the trend was to follow McConnel and then along the Logan and Albert Rivers. Others pushed north and west through the Burnett, the Central Coast and finally over a wide front to the Pioneer River Valley, the Gulf of Carpentaria and the Cape York Peninsula.

The trek, once begun, extended from as far south

as Victoria, through Queensland itself into the Northern Territory and as far as the Kimberleys in the north-west.

One of the first settlers on the Logan was John Collins, who took up and stocked Mundoolun in 1844. His son, Robert Martin Collins, of Tamrookum, in later years played a leading part in developing the export trade.



CHARLES ARCHER

Henry Stuart Russell, who had selected Cecil Plains, on the Downs, in 1841, discovered the Burnett River somewhere about 1843. He was followed there by Thomas Archer, who with his brothers had formed Durundur and Cooyar stations on the Brisbane River in 1841. Thomas Archer, we know, subsequently completed the exploration of the Upper Burnett and the Archers then carried on to the Central region. To-day we usually speak of the Archers of Gracemere, but the Archer family has long had a big stake in this State both as pioneer explorers and progressive graziers. A grandson of Thomas Archer, Mr. Archie Archer, is now land consultant to the State Government. He prepared, after an inspection in 1958, the report on which current development of the Peninsula district is based.

If I have laid some emphasis on the Burnett and Central regions it is because they will, in the very near future, determine the shape of things to come in the future development of the beef industry in Queensland.

Within twenty years sheep and cattle were spread over a very wide area of Queensland.

The Maranoa

Thomas Archer in company with Chauvel was the first to inspect the Maranoa in 1847. Archer made a second visit with Blythe. Archer did not remain, but Blythe settled Blythesdale only to abandon it later because of the hostility of the natives. Allan and William Macpherson were on Mount Abundance, on Muckadilla Creek, in 1848, later dividing the holding into two parts, one carrying sheep and the other cattle. Thomas Hall, from the Hunter River district of New South Wales, occupied Yambougal cattle station in 1847 where Surat now stands. In the following year Blythe established Tingun, but again withdrew because of aboriginal attacks.

As early as 1862 the explorer Landsborough, on his overland trip from Burketown in search of Burke and Wills, found Ridley Williams established with cattle on Coongoola Station, not far from the present site of Cunnamulla. Although sheep had spread in fair numbers to this area, the Coongoola herd would be among the earliest commercial cattle enterprises in the Warrego. In the late 1860's the Lindsay and Howe families were in the Channel Country, that labyrinth of natural channels which will rapidly convert cattle to mud fat condition when the inland rivers run. Some sections of it will starve a bandicoot when they do not.

Push to the North-West

The northward and north-western push accelerated after the Canoona gold rush in 1858. John Graham Macdonald left his property near Geelong, in Victoria, to join his brother at Peak Downs. Macdonald was one of the great pastoral explorers and from his several expeditions from Bowen, covering the Einasleigh, Lynd and Upper Burdekin Rivers, annexed himself a vast cattle kingdom that included Dalrymple, Inkerman, Strathbogie, Glencoe, Kirknie and Leichhardt Downs.

In 1859, the year of separation, George Elphinstone Dalrymple, Ernest Henry, and Phillip Sellheim explored

the Bowen and Burdekin Rivers, following the latter up to Valley of Lagoons. Two years later all three took up holdings. Sellheim with Touissaint took up Strathmore and Sonoma. Henry took Mt. McConnel and Dalrymple Valley of Lagoons.

In 1861 John Mackay, after an arduous trip a year earlier, set off from Armidale with 1,200 cattle, 50 horses and two bullock teams, and eventually established his head station at Green Mount, on the Mackay River (now Pioneer River), in 1862.

Ernest Henry was probably first on the Flinders. After disposing of his property on the Dawson, Henry crossed the main range, sighted the Jardine Valley, and pushed on to establish Hughenden Station on the boundary of which the town of that name was later founded. Bundock and Hays were on Richmond Downs in 1864. Around this time Robert Christison⁽¹⁾ had found his cattle El Dorado at Lammermoor, near the headwaters of Tower Hill Creek. In the same year Kellet and Spry were on Natal Downs, to the south of Charters Towers on the Cape River.

William Landsborough, whose exploration feats have perpetuated his name in Australian history, took up Bowen Downs, on the Thomson River, in 1863 in partnership with Morehead and Young, E. B. Cornish and N. Buchanan. The partnership was registered as the Landsborough River Company. The area of 2,193 square miles was stocked initially with 5,000 head of cattle which were driven 295 miles across country.

A year after the establishment of Bowen Downs the station sent 1,500 head, in charge of Donald McGlashen, who eventually established the first station in the Gulf country at Beame's Brook, about 16 miles from where Burketown now stands.

Invasion of York Peninsula

By 1873 the cattle herds were invading the Cape York Peninsula area, but this phase of the cattle build-

(1) Robert Christison (1837-1915), a young Englishman, who had migrated in 1852, at the age of 15, to Victoria, went to Queensland in 1863, and subsequently acquired Lammermoor which was stocked with Durham cattle, which were later replaced with Herefords. He was one of the first men in North Queensland to adopt water conservation methods, and demonstrated on his own property the value of dams and artesian bores. He lived on Lammermoor until 1910, in which year he sold the station and retired to an estate he had bought at Louth, in Lincolnshire. He lived there until his death on 25 October 1915. His biography, **Christison of Lammermoor**, a magnificent work of its kind, was written by one of his daughters, Mrs. M. M. Bennett.—Ed.

up has been covered very extensively by Mr. Clem Lack and needs no repetition here.

The Annings, father and son, were among the early settlers on the Upper Flinders. Members of the Anning family are still prominent cattle raisers in that area, and along the Cape River.

Joseph Hann and his sons followed the course of the Burdekin Tableland in 1864 and took up Bluff Downs and Maryvale. Hann later sold Bluff Downs to A. W. D. White, but Maryvale is still run by descendants of Hann, the Clarkes. A. W. D. White's son, the late E. E. D. White, conducted Bluff Downs until he disposed of it to the Angliss interests shortly before World War II. E. E. D. White was one of Australia's leading authorities on beef breeding. Subsequently he acquired Woodlands at Greenmount, on the Darling Downs, and established one of the best known Hereford studs in the country. It is still conducted by his son-in-law and daughter, Mr. and Mrs. Bassingthwaite.

Joseph Hann was drowned in the Burdekin in 1864 and his son William ran Maryvale. William Hann, of course, later pioneered cattle breeding in the north and north-west. He, too, is numbered among the great pastoral explorers.

The first cattle on the Barcoo were brought to Enniskillen, near Blackall, in 1862.

With the early settlers the emphasis was on sheep as by this time Macarthur had convincingly established the great potential of the Merino. Probably the early arrivals carried only sufficient cattle for their own requirements. It was possibly twenty years before the squatters realised that the Merino and the moist climate of the coast were not compatible.

Cattle Kingdoms

Herds, however, increased in many parts of the State before they had seen the light, so to speak. The original holdings encompassed enormous areas. A thousand square miles was not uncommon. Rawbelle, in the Burnett, for instance comprised such an area and before separation carried a herd of 40,000. In the north and north-west the areas were much larger. James Tyson, the Cattle King, held in the west and north-west a combined area as large and much larger than several European countries.

Until the gold rushes there were far too many



RAWBELLE STATION (REEDY CREEK OUTSTATION) 1893.

BACK ROW: A. Johnson, G. Shaw, C. Harris (drover), A. Cockerill and William Hindmarsh (manager).
FRONT ROW: W. Johnson, E. J. Shaw (in after years President of the Royal National Association), Frank Ward
(afterwards head meat buyer for Gladstone Meat Works), and Colvin Clark.

cattle to serve local requirements and cattlemen had to move their conditioned herds overland to New South Wales and Victoria. The only transport was by hoof or dray. One notable droving feat was performed in the movement of the last mob from Rawbelle to Wodonga, in Victoria. In charge of Mr. Charles Harris, 1,000 head were despatched. Harris delivered 997. The three lost included one killed in a rush, one lost and the other shot for beef.

A Two Years' Trek

Some equally fine achievements were recorded by men who brought their herds with them in their search for runs. The Watson brothers, who selected Gregory Downs, in the Gulf area, in 1878, travelled 1,000 head from Victoria. The journey occupied nearly two years, but they kept on doggedly in search of the "running river" at the opposite end of the Continent. No doubt they were inspired by the reports of Landsborough after his discovery of the Gulf rivers and the Barkly Tableland.

Duncan McIntyre brought sheep and cattle from Victoria in the early sixties to Dalgonally, north of Cloncurry, travelling by way of the Paroo River and Cooper's Creek, and then possibly along the Thomson.

These are but a few. No doubt Mr. Cameron, with his wide experience of the pastoral country extending to the Kimberleys, could fill a book with them.

The early preference for sheep is understandable. In the 1840's a store bullock realised 17/6 in New South Wales. When fattened in Victoria it would sell for £3/10/-. If I may digress for a moment, that price was much more attractive on the then value of money when you consider that in the depression years of the thirties of this century cattlemen had to accept around that price from meatworks. That is the price per head, mind you.

I feel it would be safe to say that by the time the flocks and herds had penetrated to the remotest regions stockowners had finally realised that the natural home of the Merino was across the Great Divide, on the open downs, and in the lighter rainfall zones.

Build Up of Cattle Herds

The build-up of cattle herds in the beginning was a steady process. About 1864, some 20 years after the first cattle run was established, beef cattle numbers had

reached the half million mark. Within fifty years they exceeded five millions. In the first ten years of published statistics—1890 to 1899—Queensland carried its highest ten-year average of 5.8 million head.

The disastrous drought of 1902 decimated this figure to a mere 2,000,000. A rapid recovery to 5,000,000 was recorded by 1910, and since then the beef herds have fluctuated between 4,000,000 and 6,000,000.

In the five successive years 1892 to 1896 the 6 million figure was exceeded for the first time, and has been recorded only twice since—in 1921-22 and in 1957.

Statistically the State's beef herds have been static for something like 60 years, and the reason for that, of course, is recurring droughts.

Drought the Great Hazard

Drought has for ever been the beef industry's greatest hazard. Droughts broke many of the early settlers, forcing them off their holdings, but the majority came back to start again, gambling on the seasons, and waging a hard battle to find outlets for their stock. There have been many such holocausts in the industry's 120 odd years' history. Some of the most calamitous seasons occurred in the 1895-1902 cycle, 1915, 1922-23, 1946, 1951, 1957 to 1961. Until the recurrence of the monsoonal rains in the summer of this year Queensland had experienced only one really normal wet season in five years.

The losses from starvation and thirst are aggravated by the forced sale of breeders which has slowed up the natural increase. This mortality among breeders is grievous in its effect. The loss occasioned by it in our time has been as high as 70 per cent.

Contributing influences against advancement have been the advent of the tick, and in later years, the buffalo fly.

Control of Disease

Another major disability has been the incidence of pleuro-pneumonia in the north-west, and in the south-western Channel Country. This disease reached Queensland by way of New South Wales in 1862 and had penetrated to the far north within two years. However, veterinary science has mitigated the extent of pleuro, as it is commonly called, and is also improving control measures against tuberculosis, which is also prevalent among cattle in tropical and sub-tropical climates.

The drought problem is gradually being combated by pasture improvement, the extension of watering facilities, general security measures on properties, and the introduction of new breeding strains which by natural environment are expected to develop greater immunity to dry conditions.

The tick pest reached Queensland in 1891 and caused immediate losses in the territory north of the Townsville-Cloncurry line. By 1895 the tick had reached the eastern coast; it was recorded at Rockhampton in 1896; and, in 1900, was firmly established in southern Queensland.

In attempts to halt the tick's advance buffer lines were established around the Gulf and Peninsula in 1894, along the Townsville-Cloncurry line the following year and in Central Queensland in 1896. As these were not fenced lines the tick could not be held behind them. Cleansing areas were established in southern Queensland in 1917, but were subsequently abandoned or reverted to buffer lines.

Control of the Tick

Control of the tick on grazing properties is exercised by dipping or spraying, and by paddock management. The Department of Agriculture and Stock controls stock movements to prevent the tick from spreading into non-infected areas. Nevertheless the tick is permanently established over hundreds of thousands of miles and it breaks into new areas temporarily during seasons of above average rainfall.

One of the objects of the recent introduction of Zebu and Brahman blood into the standard British breeds is to evolve a beast that will have a natural resistance to tick infection. Maybe the trend to lot feeding will have some effect in minimising tick infection. One speaker at the recent Meat Marketing School at Roma said the tick was no problem in the feed lot. It dropped to the ground to complete the life cycle and was trampled in with no chance of survival.

Advent of the Buffalo Fly

The latest pest, the buffalo fly, dates from its arrival at Port Essington, in the Northern Territory, in 1838, but it was not until 1928 that it appeared in north-west Queensland. The fly originated from water buffalo and cattle brought from Timor to Melville Island some

ten years before it was noticed on the mainland. Until 1939 its distribution in Queensland did not extend more than 130 miles east of the border. It moved eastward to Cairns in the wet years of 1939-41, then spread south along the coast, reaching as far as Gympie in 1950. The spraying of southbound cattle under Department of Agriculture and Stock supervision has kept its southern limit around the Wide Bay area.

The buffalo fly's consistent irritation of beef and dairy cattle affects growth rate and milk yield.

The beef industry, as I have indicated, did not find a local market until the gold rushes attracted closer settlement. Even then most of the herds were sold as stores, and any surplus was restricted to the production of tallow and fertiliser by boiling down carcasses after the hides had been removed. It is on record that at one time there were more than 100 boiling down works in Australia.

First Attempt at Exporting

The first attempt at exporting was the shipment of live cattle. Some actually were shipped from Australia, but the Argentine had the advantage of closer proximity to Britain and the continent and the emolument to this country was not encouraging.

Boiling down, however, was wasteful and it was not long before men with inventive minds began to explore the possibilities of preserving meat. Australia was the first country to evolve the canning process as a means of transporting a perishable product over thousands of miles by sea. It was around 1867 that the people of Britain found preserved meat an ideal supplement to the inadequate local supply of meat. In that year Australia's exports of canned meat and meat extract totalled 286,000 lb. By 1880 the figure had soared to 16,000,000 lb.

In this enterprise we soon faced strong competition from the Argentine and North America, but fortunately the North Americans found themselves multiplying faster than their herds and finally the battle for the European market was resolved between Australia and the Argentine.

Refrigeration Pioneered

By 1880 the experiments of several men in Sydney brought the prospect of refrigerated meat within sight. A leading figure in this field was Thomas Sutcliffe Mort,

who became interested in the project in 1866, after several failures by others with an ice-making process. In 1872 Mort headed a syndicate which set up an experimental plant at the rear of the Royal Hotel, in George Street, Sydney. In the following year works were erected at Lithgow and Darling Harbour to handle the trade on a commercial scale. A disastrous fire at the Darling Harbour plant delayed its operation. Mort, who had spent £100,000 on experiments, was bitterly disappointed when a mechanical breakdown upset arrangements for an experimental shipment in 1877. He died in 1878, almost a year before his dream was realised with the first shipment of frozen beef from Australia.

So by 1878 Australia had pioneered the export of beef in its two phases—canning and freezing.

First Processing in Queensland

Meat was first processed in Queensland in 1881, at Queensport on the Brisbane River, then operated by the Queensland Freezing and Food Export Co. Ltd. The plant used consisted of machines which alternated cold air between two cylinders. The first of these machines was brought from England by T. F. Faucet, of Clark and Faucet, a Brisbane engineering firm. The meat from this plant was lightered to waiting ships by the "Iceberg," a vessel built at Kangaroo Point by J. W. Sutton & Co., predecessors of Evans, Anderson and Phelan. The first shipment was taken by the B.I.S.N. steamer "Dorunda," but unfortunately it was not a success.

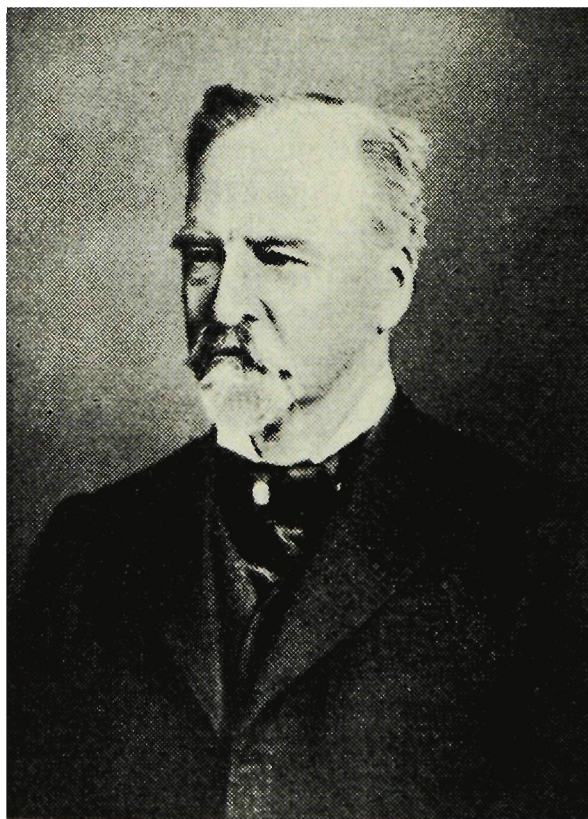
The Queensport works was subsequently taken over by the Graziers Meat Export Co. Ltd. and later passed into the hands of Baynes Bros., a large firm of Brisbane retailers who supplied their fifty city and suburban shops and gradually built up a fair export trade. Operations were curtailed in 1920 when the company began to dispose of its retail establishments, and in 1929 the firm sold the plant to the late Sir William Angliss. The works have since been disbanded, but until recent times the old buildings, wharf and sheds remained as mute testimony of a once-flourishing enterprise.

Fire and tempest in turn robbed two commercial enterprises in provincial centres of the honour of making the first export shipment of refrigerated beef from Queensland.

In 1883 the Lakes Creek works at Rockhampton, then controlled by the Central Queensland Meat Export Company, after fluctuating fortunes dating from 1871, was destroyed by fire after the company had arranged to ship its first order to Britain. Lakes Creek has had a chequered career of enforced closures and new owner-ships, but since its acquisition by the Vestey organisation in 1934 has become probably the largest export abattoir in the State.

Christison's Venture

About the time that Lakes Creek had installed its refrigeration plant, in 1883, a freezing works had been established at Poole Island, near Bowen. This venture was organised and directed by Robert Christison, of Lammermoor, who with other northern graziers was



ROBERT CHRISTISON

who took up Lammermoor Station on Tower Hill Creek, North Queensland, in 1863. His race with a rival claimant to Bowen to register his land is an epic of the northern frontier.

anxious to have an adjacent treatment works. Christison went to London and received assurances of financial support if a proportion of the necessary money was subscribed by the graziers themselves. This was forthcoming. In 1884 the first cargo of frozen beef was loaded for Batavia aboard the steamer **Fiado**, but before the vessel could cast her lines a terrific cyclone left her

stranded on the mainland and the plant was almost destroyed. Nine days after the disaster the beef was still hard frozen, but the promoters had no benefit of insurance in those times and they had to cut their losses. The Poole Island plant was later sold to the British India Steam Navigation Company, which made export shipments until operations were abandoned in 1896.

Nine years later Bergl Australia Ltd. acquired a small plant at Merinda, near Bowen, from a local company. That establishment, now owned and operated by Thomas Borthwick & Sons, has been expanded and draws on a large reservoir of cattle in the immediate district.

It was typical of Christison's stature that he made no complaint, although the Poole Island holocaust cost him a great deal of money. He stoically told his wife that man could not defy the elements and that some day the northern pastoralists would have their local treatment works. The Merinda establishment has proved he was right.

Influence of R. M. Collins

It is, I think, important to interpolate here some remarks on the influence exerted by Robert Martin Collins, to whom I have previously referred. In the financial crash of 1893 Collins was concerned at the possible extent of the crisis. He was a friend of McIlwraith and I believe his letter to the Premier of the day on 24 May 1893 is relevant to the subject of export beef. I am indebted to Harry C. Perry, in his biography of Robert Collins, for these excerpts from that letter:

“The value even of sheep stations depends largely upon the returns to be obtained from fat sheep, and in the case of cattle, the value—both of the stations and of freehold land—depends ultimately on the return to be obtained from fat cattle. Intrinsically fat cattle are worth more now in Australia than ever because we have discovered how to take the meat to all parts of the world in a sound condition, and we have proved that it can be disposed of in the markets of the world at a price which is at present double that of any return to be got here. This makes it certain that stock, stations, and land will all return to their old values as soon as the export trade is

developed adequately. But the existing low values are due to the fact that only about one-half or one-third of our surplus meat is at present exported. We ought to be sending away 250,000 or 300,000 carcasses of beef each year besides an immense quantity of mutton. One million pounds would erect the requisite meatworks and leave sufficient for working capital. If these meatworks are not established then £10,000,000 may be added to the existing capital of the banks, and still their securities will remain unprofitable."

Collins' representations met a receptive ear. Eventually Parliament passed "**The Meat and Dairy Produce Encouragement Act**" which imposed a levy on both sheep and cattle. The cattle levy provided two separate funds, one for dairying and the other for beef herds. With the assistance of this fund meatworks were established at Pinkenba, Bowen, Redbank, Cardwell, Broadsound, Gladstone, Brisbane, Charleville, Mackay, Bibbohra (Mareeba), Burketown and Sellheim.

Some of these plants have since disappeared, notably the inland establishments, but the others formed the nucleus of the big works that now process the annual outturn at various points along the coast. So beef has played its part in shaping the destiny of the State. One of the advantages it has left for posterity is the State's long chain of decentralised ports. These do serve other industries admittedly, but ports like Gladstone, Port Alma and Bowen may not have long survived if it had not been for the revenue they won from the beef export trade.

The Export Industry

Australia, and Queensland particularly, is obligated to renew its efforts in developing the export industry. Until the outbreak of World War II, when the discerning British housewife demanded chilled beef, we had faced up to the stern challenge of the Argentine in producing equal, and in many cases better, top quality beef.

The need for expansion has become evident by the Commonwealth desire to assist the State in building the network of roads that will expedite the transport of cattle to railheads and ensure their removal in safe condition to either fattening areas or coastal treatment works.

These roads, some of which are under construction, will tap every available reservoir of stock, and while increasing the outturn will also facilitate the movement of stock to relief areas in time of drought.

The roads which have been given immediate priority are Normanton to Julia Creek, Georgetown-Mt. Surprise-Hann Highway, Burketown-Camooweal and Croydon-Nelia. Other proposed links are Quilpie-Windorah, Bedourie-Boulia and Boulia-Dajarra to serve the Channel Country; Duchess-Mt. Isa and Mt. Isa-Camooweal to provide additional feeders in the north-west.

Acting on Mr. Archie Archer's recommendations of 1958 Governmental authorities have, in the last three years, been providing additional watering facilities in the Peninsula and constructing new roadworks along the Mulligan Highway to provide safer access for the far-northern cattle to Mareeba and Cairns.

Sea Transport Introduced

The Peninsula has long been frustrated by its isolation. A new innovation, the introduction of sea transport from the eastern coast, has already given some relief by delivering cattle to meatworks at Cairns within 22 hours. This method could bring long-felt relief to those distant people who have rarely, if ever, been able to market their stock otherwise than in store condition.

Having established in sequence, if only cursorily, the arrival of the herds, their disposition and establishment, and the retarding influences which have beset the cattle raiser, one must turn to the aspect of future development. When the statistical stagnation is considered—that is, the almost static position of the cattle population for more than half a century—the question of what is being done as a corrective imposes itself on the average mind.

In recent years advances in technical knowledge as the result of constant research and field experiment by both State and Commonwealth instrumentalities have attracted the attention of stock owners in increasing numbers. These discoveries have brought some very promising developments in many parts of the State.

Pasture Improvement

In the first place it has been proved indisputably that pasture improvement will not only mitigate drought but will maintain weight gains over the entire year. Queensland's beef cattle herds have thrived in comparatively dry areas on inferior lands with a light carrying capacity ranging for the most part from three to ten head to the square mile. The lightly carrying country is in the low rainfall zones of the far southwest and west, excluding the Channel Country, the poor forest country to the north of the Great Northern Railway, and the high rainfall zone of the Cape York Peninsula.

The most densely populated area is some 100,000 square miles within the lands drained by the Fitzroy and Burdekin river basins. J. H. Kelly, in "Beef Cattle in Australia," published in 1956, estimated that in this area about one-quarter of Australia's long-term average of nine million head is carried on about 14½ per cent of Queensland's and 3 per cent of Australia's total area. Mr. Kelly, after an exhaustive survey of the Northern Australian cattle industry, concluded that if the southern border of the area he had defined was extended south to a Mungindi-Tweed Heads line the area so enlarged would carry one-third or more of Australia's beef cattle.

Mr. Kelly is an expert on the beef industry. Tests by Government technical officers over a number of years have added weight to his opinion.

The great difficulty over the years has been to sustain weights throughout the year. In their unimproved condition Queensland's cattle lands carry a variety of native grasses which lose their nutriment in winter and early spring. As a result, with few exceptions, it has not been possible to top off a beast for marketing until it is five years old. The pasture research and field tests to which I have referred have made the prospect of reducing this fattening period to the age of three, and even two, very real.

Sowing of Legumes

The sowing of legumes, particularly the tropical varieties known as centro and stylo, as a supplementary to the native pastures now extends from the wet tropics to the foothills of the southern border. Practical tests with an imported variety, *glycene javanica*, have proved

successful in certain areas. Some exotic grasses have also been introduced with success. Buffel grass, under very extreme drought conditions in the last five years, has shown an encouraging survival rate in the far south-west. In the north-west, that is the Gulf area, Townsville Lucerne, a long-term immigrant of apparently unknown origin, has shown an encouraging spread. This is a vast breeding reservoir.

There are many research stations throughout the State, each concerned with the particular problems and climate of its district. Brian Pastures, in the Burnett, for instance, carries out practical tests under dry conditions in the south-eastern district. At this station, over a period of ten months—November 1959 to September 1960—yearlings grazed on native grasses alone gained 54 lb. per head. In an adjacent paddock carrying lucerne in one-sixth of the plot for winter grazing the same number of yearlings gained 300 lb. per head in the same period.

The Fitzroy Basin

The Fitzroy Basin, referred to by Mr. J. H. Kelly, contains a belt of 10 to 15 million acres of underdeveloped, but highly fertile, brigalow scrub. Experts have rated brigalow lands as the most promising for scientific development. Agriculturists now believe that brigalow areas can be used effectively for beef fattening in association with grain, provided security measures are followed. Once denuded of scrub the land becomes highly susceptible to erosion. It is considered that cleared land should be quickly sown to pastures and operated on the ley system, an alternate cropping of part of the area, with grain providing the balanced system of rotation.

Perhaps the best example of the shape of things to come in beef fattening is the manner in which a substantial area in the Central Highlands has been converted to cropping in association with beef. In the tract of land extending southwards from Clermont through Emerald to Springsure, including the Peak Downs area previously cultivated for the British Food Corporation, this intensive farming method has come to stay.

Feed Lot the Greatest Stimulant

At the risk of being called a super-optimist I am going to say that the feed lot will, before long, prove the greatest stimulant of all in accelerating and expanding the turn-off of top quality beasts for marketing.

Not many years ago the idea of closer settlement for wool production was scoffed at. The late W. L. Payne, in his report on progressive land settlement, submitted to the Government in 1959, brushed aside the opposition by quoting a specific case. He mentioned a pastoral holding in Central Queensland comprising 229,000 acres and running 50,000 sheep. When the lease expired in 1945 the improvements were valued at £28,470. The land was subdivided into ten grazing selections which were made available to public competition in 1948. Despite labour shortages and shortages of materials, within less than five years the incoming selectors had expended £137,460 on new improvements, including £49,200 on water. The sheep-carrying capacity by the provision of these improvements was increased to 70,000 and made safe at that figure; and 48 persons were permanently resident on the lands.

Cropping in direct association with beef fattening could not be undertaken generally, but there are pockets of arable land where it would be feasible. Indeed, on the Central Highlands, it has been proved that grain, particularly sorghum, gives a better return when marketed through the beast. Arcturus Downs, in the same area, has been lot-feeding for two years or more now, and appears to have proved the economics of the system. Individual graziers in the Gracemere area have had similar success.

Operations at Tingalpa and Fairymead

Lot feeding is also being practised in two other instances which have provided an interesting contrast in method. At Tingalpa, near Brisbane, almost at the gates of Borthwicks' abattoir, the Swift Australia Company has been topping off quality beef in one hundred days on a balanced diet of waste products such as cotton hulls, biscuit pulp, flour dough and fruit cannery waste with a dash of liquid urea to add protein to the meal.

At Fairymead Plantation, adjacent to the Fairymead sugar mill, an extensive Hereford and Droughtmaster stud is conducted in conjunction with a lot feeding project. Here sugar cane and trash—the discarded cane tops—provide the roughage in a balanced diet which includes molasses, maize and lucerne chaff, the maize and lucerne chaff being grown on the property. Sugar cane and molasses are fed *ad. lib.* In 1961 steers were gaining weight at the rate of more than 2 lb. per

day on this diet. Unfortunately I am unable to give any later details of weight gains, my efforts to contact the managing director of the Fairymead Sugar Co. Ltd., Mr. C. A. N. Young, having been unsuccessful.

In 1959 a comprehensive report on the development potential of Queensland by a committee of Government experts stated that the beef industry was capable of relatively slow expansion. The same report, however, said that there is a potential for beef fattening on irrigated pastures in the Mareeba-Dimbulah area, and on special pastures in the wet coastal belt from Ingham to Cairns. The report also mentioned the possibilities of intensive development in the Burdekin region and the brigalow lands of the Fitzroy basin which have already been discussed in this paper.

High Quality Grain Production

Queensland's ability to produce high quality grain is indisputable. On the Darling Downs and already developed brigalow lands the protein content of our wheat is the highest in Australia. The growing of summer grains, notably maize and sorghum, has expanded at a rate scarcely conceived possible a few years ago. And these summer grains are giving very high yields on country which a generation ago was considered to have no agricultural potential whatever—country actually converted to closer settlement from exclusive running of cattle. The Burnett, while still a major beef producer and the centre of keen line breeding for beef, is an expanding grain bowl. The Central Highlands area, which has set a new lead in production of feed grains, grows those crops on land where the arable soil depth is no more than three or four feet in contrast to the Darling Downs where the rich loam is upwards of forty feet deep.

In the light of those facts and the events which are justifying them, one may be forgiven for a little optimism on the future of lot feeding. It has a strong precedent. Lot feeding on the farm has been in operation in the United States for more years than many of us have lived.

Marketing Problems

The encouraging aspect of this departure in stock feeding is that it has caught the attention of both the producer and the processor. In these days when the processor markets every part of the beast but the

bellow a mutual approach to marketing problems by the two main branches of the industry may prove beneficial.

These marketing problems do exist. The Royal National Association of Queensland, which gives incalculable help in the promotion of beef by its State-wide field competitions for pasture improvement, both dry and irrigated, is seriously concerned at the pronounced drift in local consumption.

So great is the R.N.A.'s concern that it has arranged a Symposium on the eve of this year's Brisbane Royal Show in an endeavour to arrest this drift. The Association expects about two thousand to attend this Symposium and the views of producers, processors, retailers and the most discerning customer—the housewife—will be invited. In the last six years home consumption of beef and veal has dropped alarmingly from 117 lb. to 87 lb. per head. If consumption can be restored to 117 lb. it would mean an annual increase of 300 million pounds of beef and veal. Perhaps the solution will be reached if those concerned with beef promotion understand the consumer's needs.

Mr. Hope, chairman of the Queensland Meat Industry Board, was reported in last week's issue of "**Country Life**" as saying that beef consumption will increase when prices fall, but is the price fall in sight? The producer, for his part, claims that current prices on the hoof and in the saleyard are too low. So far as the consumer is concerned quality beef and imaginative selling is the answer.

Chicken a Formidable Competitor

The beef industry's most formidable competitor at present is the broiler chicken. Mr. Young, who directs the beef enterprise at Fairymead, is associated with a company which operates one of the largest poultry abattoirs in Australia, within sight of the two large beef abattoirs at Cannon Hill. The Swift Australia Company, a large beef exporter, also has a poultry abattoir in the Maryborough district. Ironically enough pulverised feathers from this abattoir form an alternate ingredient in the waste products the company feeds to cattle at its Tingalpa feed lot.

There is room in this expansion programme for both the big man and the small man. We know that in the widely remote regions such as the Channel Country,

some parts of the Gulf and the Peninsula the task is beyond the small landholder. But they are great reservoirs and when beef production becomes divided into the two functions of breeding and fattening, as I think it will, the man who desires to work his own selection will get his chance on the smaller blocks where fattening will be almost exclusive.

The beef roads to which I have referred will, in the ultimate, require an expenditure of something like £15,000,000 at Government level. Landholders are already playing their part. If you read last week's issue of "Country Life" you will have noticed the remarks of Mr. R. J. Kleberg, of King Ranch, Texas, the American partner in the new ownership of Brunette Downs. To the author, A. T. Eliot, he said that expenditure in the company's present programme of water development was justified. There are some 105 bores now on the 4,700 square mile property, but at least one hundred more are proposed. It was suggested that half a million pounds had been spent and, while not admitting it, Mr. Kleberg asserted he had been criticised as having spent too much. He personally considered he had not spent enough.

Maybe his example will inspire both Governments and graziers to greater effort, as Robert Collins did more than half a century before in his representations to McIlwraith. If that example is followed some of us should see, in the time left to us, the beef industry asserting itself to its true potential and to its rightful place as one of the top rank earners in the economy.

This excellent paper, which was illustrated by a coloured map of Queensland depicting the sheep and cattle-raising areas of the State, was warmly applauded and evoked an interesting discussion.

Messrs. J. W. Collinson, Clem Lack, K. T. Cameron, Arthur Laurie, Max Malone, and T. McCarthy congratulated the speaker on the thorough manner in which he had covered a subject of very great economic importance to the State.

The President referred to the very interesting and valuable experiments in the crossing of Brahman and Santa Gertrudis breeds with English stock which were being carried on by Mr. Tom Cook at Greenmount, on the Pioneer River, the station which had originally