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AGRICULTURE IN
SOUTH AUSTRALIA—
Yorke Peninsula

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DEPARTMENT OF AGRICULTURE, SOUTH AUSTRALIA

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AGRICULTURE IN SOUTH AUSTRALIA

Yorke Peninsula

The Yorke Peninsula district is the granary of South Australia. The area includes Counties Fergusson and Daly and the western portion of Stanley (Hundreds of Blyth, Boucaut, Everard, Goyder, Hall, Hart and Stow).

Covering an area of about 2.7 million acres, the district includes the whole of the peninsula extending northwards to Port Broughton, thence eastwards, it embraces an area covered by the townships of Redhill, Brinkworth, Blyth, Halbury, Balaklava and Port Wakefield.

The peninsula is 120 miles long and between 20 and 30 miles wide, and somewhat resembles the shape of a leg and foot.

This is essentially a cereal, wool and prime lamb producing district, with some diversification in beef and dairy cattle, pigs and poultry.

Suitable soils and a favourable climate, together with ready access to fertilizer works, sea ports and consumer markets all contribute towards an efficient and highly productive agriculture.

RAINFALL, TOPOGRAPHY AND VEGETATION

Annual rainfall is mainly winter in incidence. It ranges between 12in. and 20in., and the majority of the district receives more than 14in. Rainfall increases towards the south of the peninsula and on the more elevated parts. A restricted area receives 20in.

The country is mainly flat to undulating, and consequently, apart from some hills, stony outcrops and sheet limestone, is largely arable.

The peninsula is, for the most part, less than 400 feet above sea level, but rises gently to a height of 700 feet north and east of Maitland. Further north, the Hummock Range rises steeply to about 1,000ft.

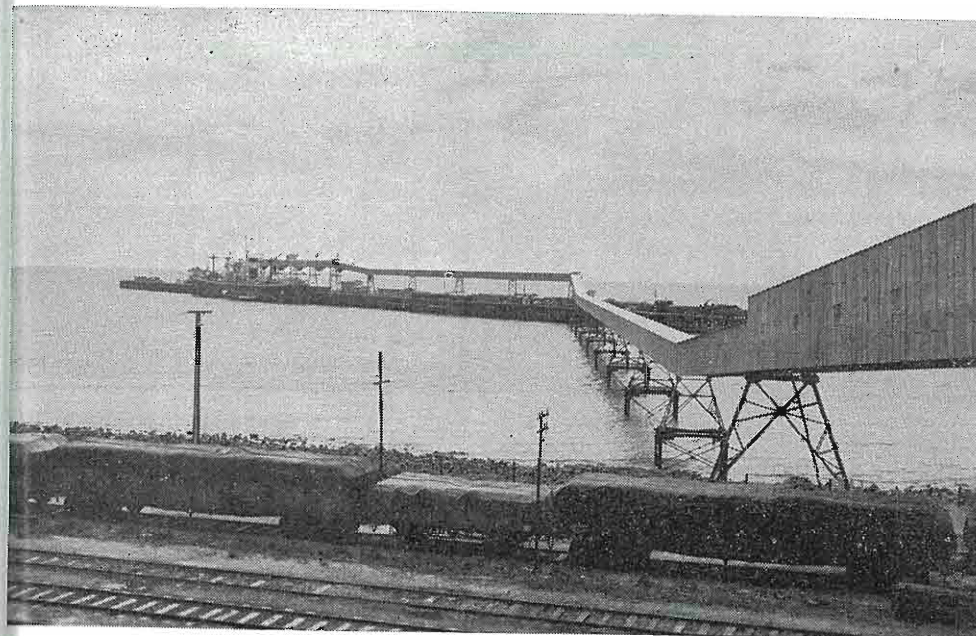
East of the Hummock Range, the topography is flat to slightly undulating, varying between 300ft. and 600ft. above sea level.

A small area running across the "ankle" of the peninsula is almost at sea level and is mainly saline swamp (Map 2).

The natural vegetation consists of various mallee eucalypts, shrubs and grasses. Native pine and broom bush are interspersed in some areas, while tea-tree and other small shrubs are found in association with the mallee on the "foot" of the Peninsula.

Sheoaks are evident on Southern Yorke Peninsula. A small area of red gums is still to be seen east of the Minlaton township and along dry river beds in County Stanley.

By **D. B. Winn**, District Agricultural Adviser, Balaklava.*



A grain conveyor loading a ship at the Wallaroo bulk terminal. Storage space for 2½ million bushels of grain is available here. Additional silos with a capacity of 1 million bushels have been built.

As indicated by the vegetation, mallee soils are predominant; they are highly productive and easy to work, but variations occur frequently throughout, and have a bearing on land use.

Calcareous sands are found on the "foot" of the peninsula and there are small areas of sand over clay as well as the range country.

CROPS (Tables 2-5)

Wheat and barley are the major crops, and during the period 1953-1962, 700,000 acres were sown annually, producing about 18 million bushels of grain. This was approximately ⅓ of the State's wheat and barley production in that period.

Barley acreage was larger than that of wheat, the average being 360,000



Saline lakes and swamps are a feature of the landscape in this district. The larger lakes, including the Bumbunga Lake shown on the left, are harvested for salt.

* At present Officer-in-Charge, Minnipa Research Station.

acres. This yielded some ten million bushels of grain and was about 40 per cent of the State's barley production. County Fergusson is the main barley producing area, contributing about 60 per cent of the district's production.

Barley acreages throughout the period increased slightly each year until 1961, overall, amounting to 36 per cent.

A limited amount of barley is now handled in bulk, and this will no doubt increase. Although barley has been grown solely as a grain crop, there is now some interest in using certain varieties as grazing/grain crops.

Wheat acreage declined during the period to 1959, but since, has risen to slightly above the initial figure. About 330,000 acres were sown annually, yielding eight million bushels of grain, or 25 per cent of the State's wheat harvest.

All wheat is handled in bulk through eight regional silos and terminal silos at Ardrossan and Wallaroo.

Since 1961, wheat acreage has risen, and at present, about 450,000 acres are sown annually. More than half of the wheat is produced in the lower rainfall, sandy and loamy mallee soils of County Daly.

Although oats are not grown extensively, they are used as a multi-purpose crop for grazing, hay or grain; as such, acreages vary from year to year, according to requirements. For instance, in 1960, 70,000 acres were sown, while in 1961 this was reduced to 30,000 acres. A large proportion of the oats are sown into wheat stubble during the autumn.

Field peas are a minor crop, but during the ten year period, the area sown annually increased to about 4,000 acres. Yields are variable, and fluctuate between 2 and 20 bushels an acre according to the season.

This crop is grown only in selected areas, more especially on the sandy mallee soils in the Bute district (the Hundreds of Redhill, Kilkerran and Hart).

LIVESTOCK (Tables 6 and 7)

Sheep are the main livestock enterprise, and wool accounts for most of the income. However the district is also important for its prime lamb production; there is easy access to the Adelaide markets.

In all, the sheep population amounts to about 1½ million head (9 per cent of the State's sheep population), and these produce 9 per cent of the State's wool. In addition there is an annual turn-off of 300,000 prime lambs, following an increase of 30 per cent in the ten year period.

County Daly is one of the largest prime lamb producing areas in South Australia. There are also some Merino and English breed studs operating in the district.

Other stock include cattle, pigs and poultry. Dairy herds, in the main, supply local township requirements, and beef cattle are both bred and fattened; their numbers fluctuate from year to year.

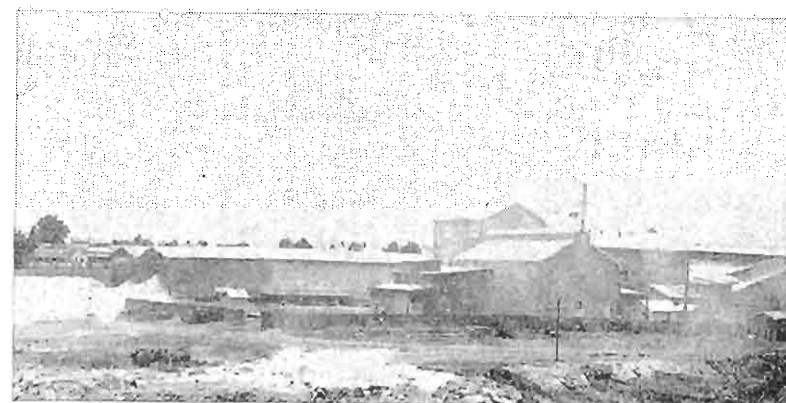
Pigs are grown throughout the district, the majority on smaller properties, particularly in the less reliable cereal areas. Pig numbers are also increasing.

PASTURES

Pastures are of immense importance to production from the district. In the past, cropping and fertilizer practices on the arable land have led to the replacement of the natural grasses with annual medic species (woolly burr, burr and barrel) and annual grasses (barley grass, brome grass, wild oats and Wimmera rye grass).

While these species have all contributed to an improvement in stock carrying capacity, the annual medics, particularly burr and barrel, have been the key to a continual increase in cereal production in the past decade.

Annual medics are well adapted to the alkaline soils, and have been encouraged by regular cropping and superphosphate applications. So that with the alternat



Fertilizer manufacturing plant at Wallaroo. The district's fertilizer requirements are fulfilled by two such plants in this town.

year cropping practices adopted in some areas, the pastures have replenished soil nutrients and improved soil fertility as a whole.

However, over all the arable mallee soils, extended pasture periods in the rotation lead to an invasion of the less productive annual barley and brome grasses. These can, as well, be carriers of cereal root rotting diseases for the following crop.

Regular cropping keeps the pasture medics dominant, and thus controls many of the cereal root rotting diseases, besides providing better quality feed for the stock during the late autumn period—the critical feed period during the year.

Because most of the peninsula soils grow medic species so well, it is only natural that some interest has been taken in harvesting seed. However, this industry has not developed to any extent, and production has not exceeded 150 tons in any year.

WATER RESOURCES

During the period under consideration, reticulated water was supplied to a large portion of the district from the mid-north reservoirs at Beetaloo and Bundaleer.

In earlier years, many growers relied on surface catchment for supplies of

stock water. Underground water is available in areas south of Mount Rat, and where reticulated water is not available, this is still the main source of water.

LAND USE ZONES (Map 1)

For the discussion on land use, the district has been divided into four zones:

- Mallee soil zones
- Calcareous sands
- Sand over clay soils
- Range country.

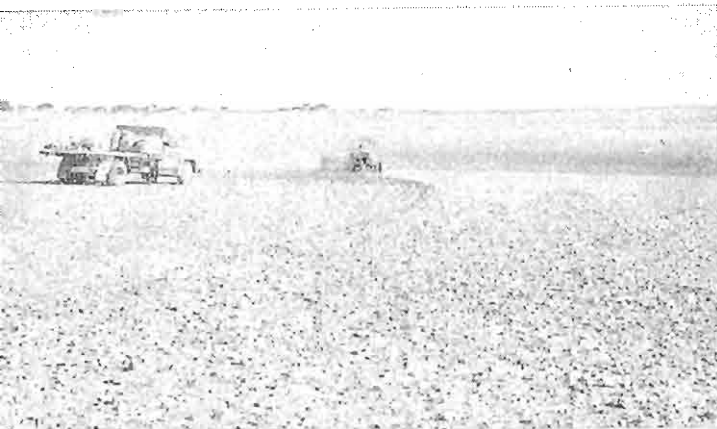
The mallee soil zone is by far the most extensive, and has been further subdivided into four sections. These are:

- Loamy mallee soils with associated red-brown earths
- Grey mallee soils
- Sandy mallee soils
- Shallow red mallee soils.

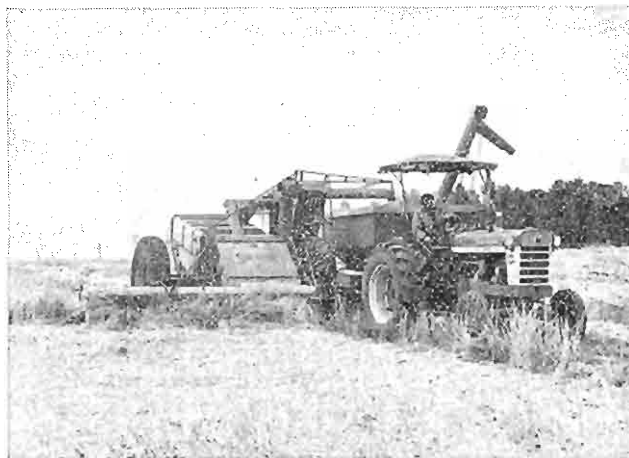
1. THE MALLEE SOILS

A. Loamy Mallee Soils Zone

This is the most extensive soil type within the mallee zone, and agriculturally is highly productive. The area extends from Urania to Bute centrally through the peninsula, along the slopes of the range zone and into the north-west portion of County Stanley.



Seeding wheat in the sandy mallee soil zone.



Reaping a "rolled" barley crop near Maitland. The practice of rolling barley prevents wind losses in ripening crops and enables barley to be reaped off the straw at a suitable moisture level, especially for bulk handling.

The zone is interspersed with some red-brown earth, which increases in proportion along the range slopes.

The soils are mainly free working, but the smaller areas of poorly structured red-brown earths are inclined to be sticky to work and crust on the surface. Surface stone and sheet limestone occur in small pockets.

Sheet erosion has occurred in some of the undulating country and on the foothills of the ranges, and a limited amount of contour banking has been carried out to prevent further damage.

In this zone, the annual rainfall ranges from 13in. to 20in. Properties are 600 to 1,000 acres, but larger holdings are found adjacent to the range country. Land values vary from £30-£60 an acre.

The soils are generally well drained and wheat is the main cereal produced. But on the poorer drained soils, barley is sown in preference.

Cropping practices vary considerably, but fallow-wheat-pasture, barley-pasture and fallow-wheat-pasture-barley-pasture rotations are widely used.

These rotations encourage the medic pastures—barrel medic usually dominating on the better drained soils, and burr medic on the poorer drained soils such as those verging into red-brown earths. As a rule, pastures that immediately follow the crop are medic dominant, but if they are allowed to remain for longer than a year, barley grass invasion occurs.

Wimmera rye grass is a valuable annual on these soils, but is not encouraged to any extent where regular cropping is practised.

Barrel medic 173, a recent strain selection, is more productive than existing medics, especially for soils verging into red-brown earths.

Phosphate requirements vary according to the annual rainfall, and where this exceeds 15in., applications averaging 90-112 lb. an acre a year are required. With lower rainfall, an aver-

age annual application of 60-90 lb. an acre is regarded as sufficient.

B. Grey Mallee Soil Zone

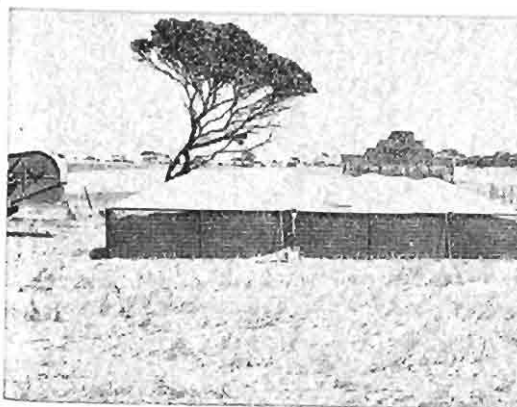
A zone of grey mallee soil extends down the west coast and across the "ankle" of the peninsula, and then on the east coastline in a northerly direction from Port Julia to the head of the gulf. The soils become shallower towards the coastline, particularly on the western side.

These soils are easily managed, as they are free working, well drained and excellent for medic growth. The lighter textured soils have drifted on occasions.

Average annual rainfall varies from 12in. to 17in., and properties are 500 to 1,000 acres, but are larger in the less regular rainfall areas. Land brings £20 to £45 an acre, according to rainfall and depth of soil.

Barley is the main cereal where rainfall exceeds 15in., and is grown largely in a barley-pasture rotation. This encourages annual medic growth, and consequently, soil fertility is increasing.

Increased fertility has resulted in heavy yields, but has led to a lowering of quality in the barley, particularly in seasons of low spring rainfall. As a result, more wheat is being introduced into the area, either replacing or preceding the barley crop.



Where the rainfall is less than 15in., wheat is the main cereal grown. Various rotations of fallow-wheat-pasture-barley - pasture, wheat - pasture - barley-pasture and wheat-barley-pasture are applied.

The area is largely arable and rarely left to pasture for more than a year. With the rise in fertility that has taken place in this zone, fallowing is of doubtful value, as the rubbly subsoils are not able to hold moisture during the summer.

Barrel medic dominates the pasture here, in fact, the grey mallee soils are amongst the best for barrel medic growth in South Australia. Not only has this medic improved fertility, it has also provided a higher safe level of stocking from season to season.

C. The Sandy Mallee Zone

These soils occur immediately south of Moonta, in the north of County Daly and north of Balaklava in County Stanley. In the latter two areas they are interspersed with loamy mallee flats.

The sandy mallee soils are largely arable, but prone to wind erosion. Average rainfall ranges between 13in. and 15in. a year, and property size is variable, but few farms are less than 1,200 acres. Land values range between £20 and £30 an acre.

Paddock storage of grain is a feature at harvest. This is one of the several methods used.

In the Moonta area, wheat and barley grow well and are cropped on a wheat-barley-pasture-pasture or wheat-pasture-barley-pasture rotation.

In the remainder of the zone, wheat is the major cereal grown, especially on the flats and slightly undulating sandy rises. However, barley is more suited to the steeper sandy rises. Rotations adopted in the flats are fallow-wheat-pasture or wheat-pasture-pasture, while on the sandy rises barley-pasture-pasture is used.

Where medics have been successfully established, these soils are being cropped every other year, but care must be taken owing to the risk of wind erosion. Fallowing also increases the erosion risk.

Oats are used more extensively in this zone than elsewhere, the majority being sown into wheat stubbles before the opening rains. Grown this way, oats supply early green feed for prime lamb production.

Until recently, except for woolly burr, medics that grow readily on the deeper, sandy soils, were not available. Then barrel medic 173 and harbinger were introduced, and they were found to adapt themselves to these soils—provided adequate superphosphate was used.

Brome grass is a problem on the sandy soils, particularly during pasture establishment. Potato weed is also prevalent on fallows and in stubble paddocks: it is a summer growing weed and has caused heavy sheep losses.

Stock numbers have increased in this zone, but lack of ground cover on the sandy rises limits carrying capacity rather than the feed supply.

D. Shallow Red Mallee Soils

On the centre part of the peninsula, running in a southerly direction from Mt. Rat and probing eastwards towards the coastline, there is a zone of red mallee soil. Small areas occur as well on the east coast, extending from Stansbury to Port Giles and further north in the Melton area.

The deeper, less stony parts have been cleared for cereal production, but the non-arable areas of stony reefs and sheet limestone have remained uncleared and are used for grazing. Because land availability for expansion is limited, the reefy sections are gradually being cleared of scrub and stone.

Average annual rainfall of this zone varies between 16in. and 19in. Holdings range from 800 to 1,500 acres, the larger properties having a greater proportion of non-arable land. Land is valued between £15 and £25 an acre, according to the area of arable land available.

These soils are generally more difficult to manage than those previously described, but they can be productive. Being shallow, they tend to be poorly drained and often set hard on the surface.

Barley is the main cereal grown and barley-pasture the common rotation practised. Wheat is normally sown on fallowed land.

Burr medic and woolly burr medic are the main pastures, but barrel medic 173 would be a more productive replacement. Wimmera rye grass is useful on these soils and can add to the stock carrying capacity where extended pasture periods are used.

2. THE CALCAREOUS SAND ZONE

An area of calcareous sands is found on the southern portion of County Fergusson, south-west from Warooka. This zone is relatively undeveloped, and is largely farmed in conjunction with the more productive soils which are adjacent.

Here, the annual rainfall is 17in. to 20in., and properties are of necessity large, varying from 1,500 to 5,000 acres of developed, partially developed and uncleared land.

Because of poor productive capacity in the past, land values have been low. But following recent fertilizer recommendations, prices have firmed, and



Scrub on the calcareous sand zone.

would range between £10 and £15 an acre for developed land.

Underground water supplies are available, but they are limited in some areas.

The soils are variable, and although the deep calcareous sands are most prevalent, there are areas of sheet limestone and reefy outcrops.

For many years, deficiencies of both manganese and copper have been recognized here, adding to the cost of farming. An area of approximately 250,000 acres is involved, and of this, only about 15,000 acres are cropped at present. Large tracts of this land are therefore still available for development; furthermore, the requirements for this development have been worked out in detail.

But an additional problem appeared, and despite the existing knowledge, wide cropping rotations were forced on landholders because of poor cereal yields. For instance, barley crops were yielding only 2 to 4 bags an acre, and the two crops sown with manganese sulphate collapsed before maturity in a condition locally termed "patching out" or "frosting off".

Further investigation revealed a severe manganese deficiency, and on present indications, this can only be prevented by sowing with superphosphate

and manganese, and then applying two manganese sulphate sprays at the correct time during the growing season. These treatments have improved yields by as much as 15 bushels an acre.

While there is scope for increased production by development of uncleared land, the immediate potential in the area possibly lies in more frequent cropping. This zone has an ideal climate and suitable rainfall to produce malting grade barley, and would benefit from alternate year cropping with barley and pasture.

A cropping programme such as this would encourage the application of additional superphosphate, and thus benefit the growth of barrel medic which is suited to the soil type.

There is an indication that wheat could be as profitable as barley on well established medic country with the same fertilizer treatment.

Wimmera rye grass is a valuable annual for this area, and could be used to extend the period under pasture. The perennial pastures, lucerne and phalaris, have some application in increasing livestock production.

3. SAND ON CLAY SOIL ZONE

Two areas of this soil type occur in the district, one is south-east of Port

Lucerne (foreground), a valuable perennial that adds to the value of stubble grazing in the sand over clay soils.



Vincent (Stansbury Scrub) and the other is west of Arthurton. Apart from the calcareous sands, this zone was the last developed on Yorke Peninsula, and some areas of mallee scrub are still standing.

The soils are mixed within the zone, consisting of slightly acid sands over clay, the sands varying in depth, and the transitional soils contain a high degree of surface limestone. Apart from the limestone reefs, these sand on clay soils are arable.

Rainfall varies between 16in. and 18in. annually, and properties between 1,000 and 1,200 acres, with present values varying from £20 to £30 an acre.

Barley is the main cereal crop, and normally, malting grade is produced. The crop is grown in varying rotations, but is usually cropped every second or third year, the intermediate years remaining out to pasture. Very little wheat is grown in this zone.

Fertilizer requirements are high, and an annual average dressing of 112 lb. an acre is recommended, with copper included every 5-7 years.

Pastures on the transitional sands include burr, barrel and snail medics. The sandy soils grow burr medic and subterranean clover if adequately fertilized.

However, pasture establishment on these soils is difficult because of uneven wetting of the surface. Further, they dry out very quickly in the spring, and this often limits growth of shallow rooted pastures.

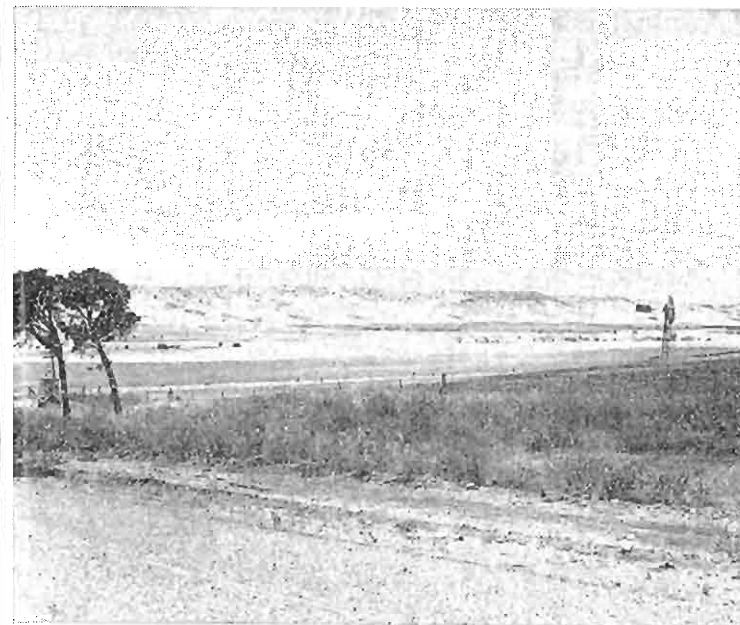
Once it is established, lucerne grows exceptionally well on the sandy soils, and wider use of this plant would raise the stock carrying capacity.

The rainfall is adequate to mature barley crops sown into lucerne stands, but contamination of grain samples could be a minor problem.

Wimmera rye grass is of some value as an annual, as is perennial veldt grass on the deeper sands.

4. RANGE COUNTRY

This is not an extensive zone. The Hummock Range follows a northerly direction from Kulpara, in the upper end of the district, and the rainfall there



Looking towards the Hummocks Range.

varies from 16in. to 18in. A further range, east of the Hummock Range extends from Whitwarta to Snowtown with an annual rainfall of 13in. to 14in.

The hill country is farmed in conjunction with adjacent arable land, and since this is a cereal district, all the arable land is used for a cropping programme in which normal farm rotations are practised. The remainder of the hills are too steep to be worked.

Recent interest in aerial topdressing with superphosphate and subterranean clover has brought about a marked increase in carrying capacity.

Stock watering poses a problem in that the water has to be lifted from the foothills, and sub-division of paddocks is difficult in most of the area because of poor access.

Isolated patches could be further improved by the use of standing oat crops.

WEEDS, PESTS AND CEREAL DISEASES

Weeds

Weeds affecting production of the district are many and varied and can be divided into three groups.

These are:—

1. Crop weeds
2. Pasture weeds
3. Roadside weeds.

Naturally some weeds are applicable to all groups, but for the purpose of this article, they are confined to the group where they are considered most damaging.

1. Crop Weeds

A large percentage of the cropped area is sprayed with aerial and ground equipment. The main crop weeds distributed over the whole district are saffron thistle, sheep weed and mustard.

Soursob and wild poppy are found mainly in the loamy mallee soils. Wild mignonette is troublesome in crops on Southern Yorke Peninsula and causes contamination of grain samples, particularly barley. Long fruited wild turnip is abundant on the sandy mallee soils. Ward's weed also occurs in odd pockets on this soil type.

The short fruited wild turnip is found mainly on the grey mallee and loamy mallee soils, with fumitory confined to the higher rainfall regions of similar soils.

Dead nettle is also found mainly on these soils but is spreading to all soil types in the district.

Wild oats are more serious on the poorer drained loamy mallee soils. Other crop weeds such as hoary cress, field bind weed and bladder campion are found on small localized patches throughout the district.

2. Pasture Weeds

Of the above weeds, soursob, the turnips, saffron thistle and wild mignonette are important pasture weeds. Soursob on the loamy mallee soils, while of some grazing value, does hinder the development of the more productive pasture species. Three-corner jack is confined largely to the sandy and loamy mallee soils. Pheasant's eye is gaining prominence in the heavier grey mallee and loamy mallee soils and is spreading rapidly. Cape weed and spear thistle are found mainly in the sand over clay soils.

Of the perennial weeds, horehound is the most widespread, occurring over the whole district. Onion weed too, is widespread, but is found to a greater extent on the sandy and loamy mallee soils. Small areas of false caper exist in the sandy mallee soils and Lincoln weed is isolated on the calcareous sands and loamy mallee soils.

Skeleton weed is threatening the district as a pasture and crop feed; already a few outbreaks have been reported. It

will adapt itself to all soil types in the district.

3. Roadside Weeds

Boxthorn, Bathurst burr and wild artichoke are the main roadside weeds, with artichoke confined to the portion of County Stanley under consideration.

Insect Pests and Grubs

White curl grub, cereal curculio, wire worms and cockchafer are the main grubs affecting germinating cereal crops. These grubs are found throughout the district, but damage is serious only after extended pasture periods. Barley grubs can extensively damage ripening barley crops.

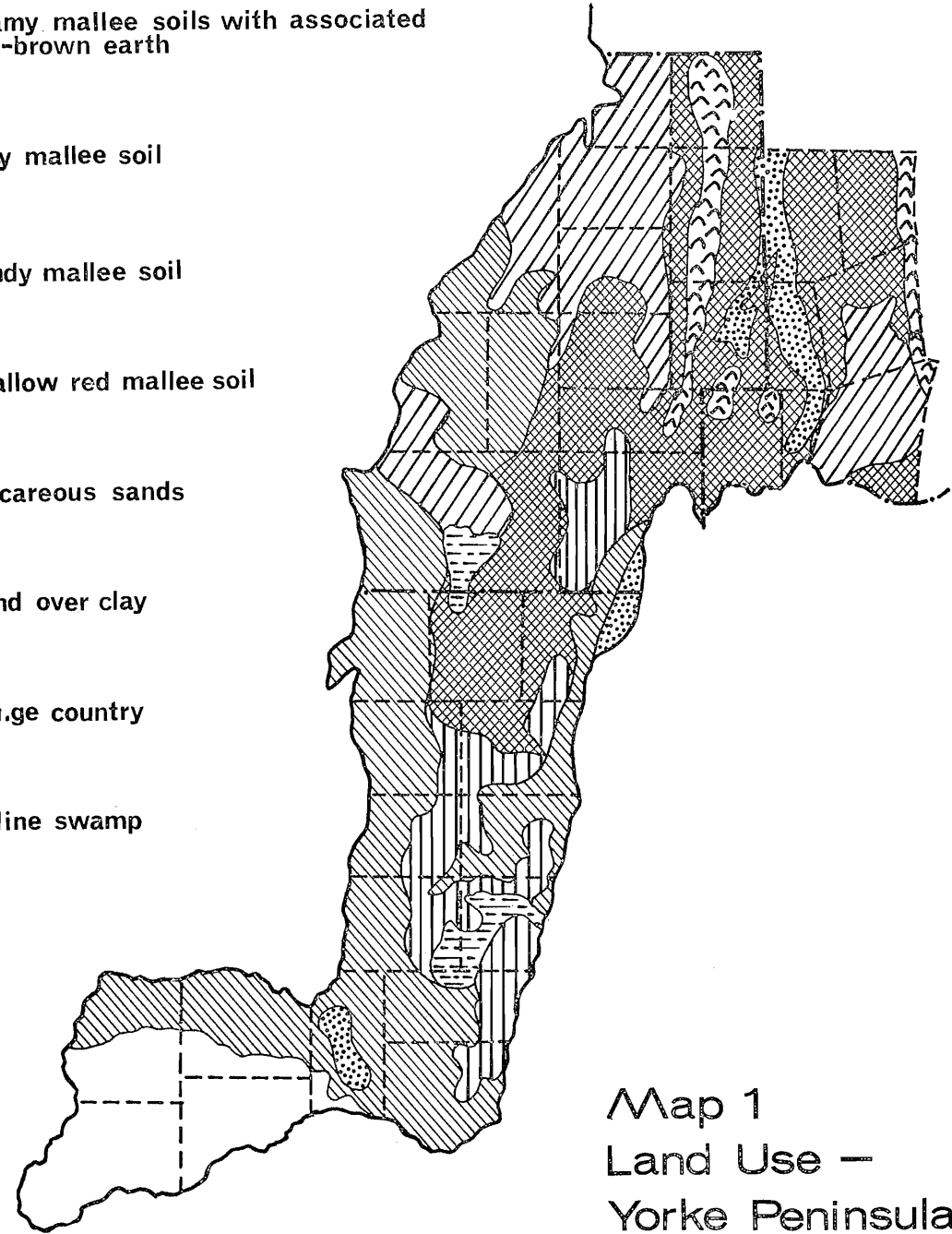
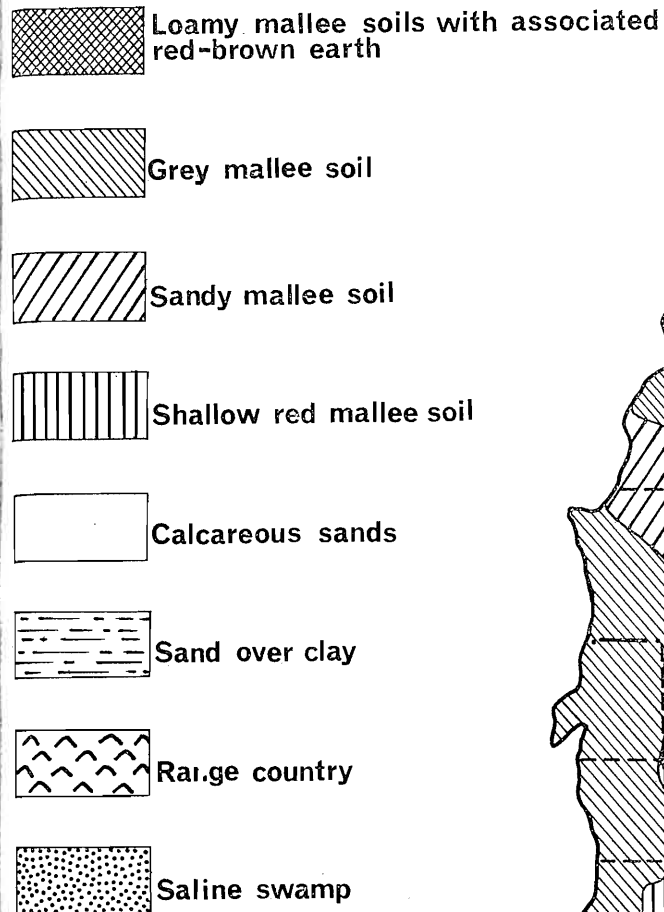
Red-legged earth mite damages pastures, but is more commonly found on sandy soil types. Lucerne flea is more apparent on the heavier soil types, and pasture cockchafer is confined mainly to the calcareous sands of southern Yorke Peninsula, where it is more damaging during extended pasture periods.

Cereal Diseases

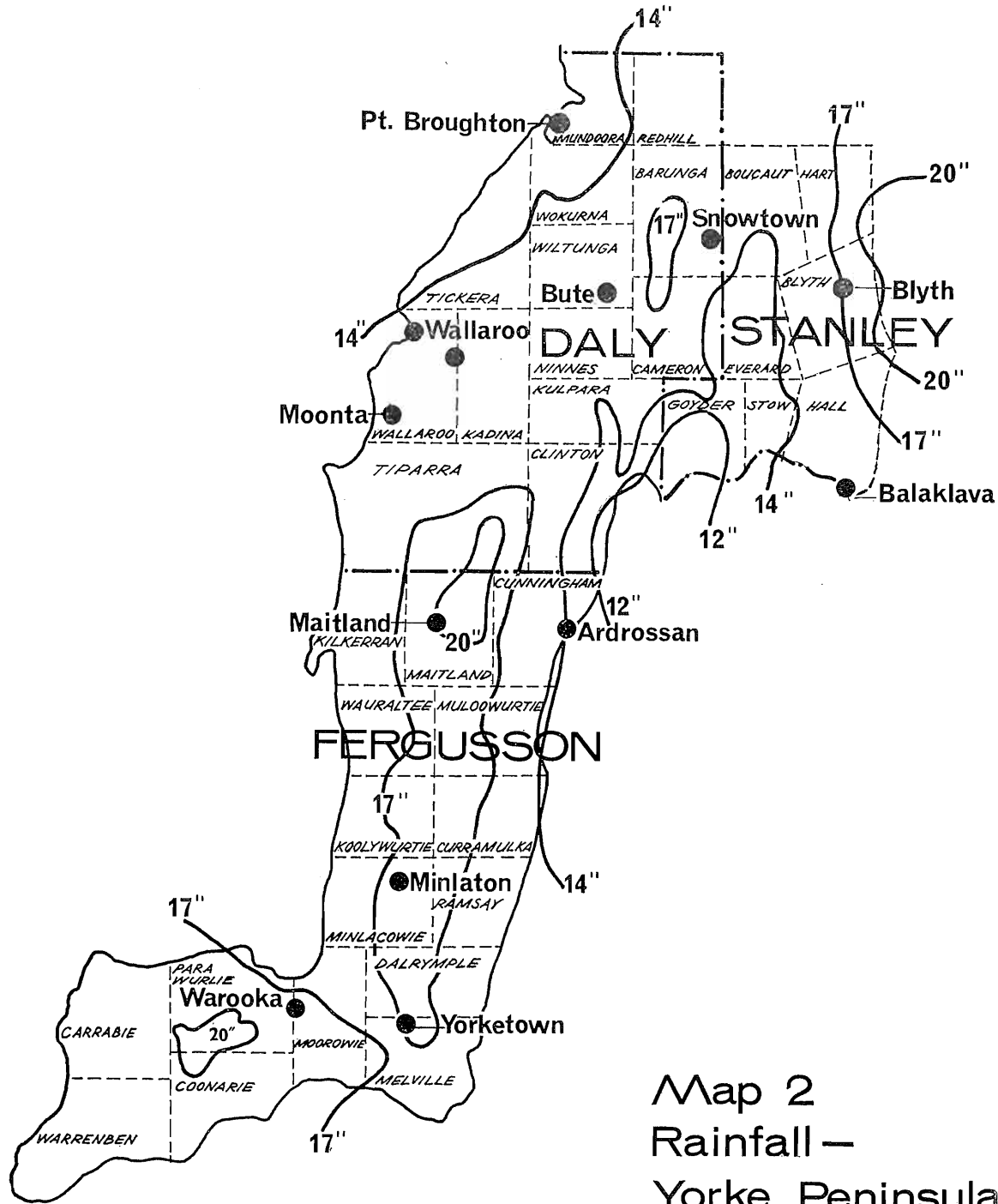
Damage from the more serious cereal diseases is determined largely by seasonal conditions. In the wetter seasons, and on the lighter soil types, wheat and oats are affected with cereal eelworm, and yields are sometimes reduced considerably.

Take-all (haydie) is also serious throughout the district, but is normally more apparent on the lighter mallee soils where pasture becomes infested with the host plants, barley grass and brome grass, to a much greater extent than on the heavier soils. Rhizoctonia is of lesser importance.

Rust affects wheat crops in wet springs. Helminthosporium is evident in barley crops in the sandy soils of the wetter districts. Many other diseases do occur, but are not considered to be of economic importance except in isolated areas.



Map 1
Land Use —
Yorke Peninsula



Map 2
Rainfall -
Yorke Peninsula

Extracted from Climatological Survey—Region 9, S.A. Bureau of Meteorology

Table 1—HOLDINGS

	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62
COUNTY FERGIUSSON										
Number	1,033	1,046	888	940	910	885	889	891	903	899
Acres	1,109,072	1,115,352	1,070,721	1,098,397	1,144,119	1,142,932	1,141,965	1,141,318	1,141,775	1,116,886
Average, Acres	1,080	1,062	1,210	1,168	1,257	1,291	1,283	1,282	1,282	1,269
COUNTY DALY										
Number	1,034	1,027	1,135	1,049	1,022	1,016	1,014	1,003	992	981
Acres	941,461	946,323	1,058,377	1,028,524	1,021,865	1,016,975	1,018,696	1,024,709	1,017,773	1,020,773
Average, Acres	914	916	934	980	1,001	997	1,009	1,024	1,028	1,042
COUNTY STANLEY* (PART)										
Number	586	583	580	549	533	529	523	515	513	508
Acres	407,500	400,400	484,284	435,200	478,200	487,000	482,100	480,800	482,600	488,649
Average, Acres	700	690	780	790	900	920	920	930	940	960

Table 2—WHEAT

	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62
COUNTY FERGIUSSON										
Acres	72,046	69,042	68,693	69,760	58,300	50,491	47,138	53,949	61,127	76,445
Yield, Bushels	2,287,069	1,993,811	1,989,928	1,664,343	1,783,347	1,060,158	1,391,538	567,195	1,651,215	1,514,739
Yield, Bushels/Acre	31-74	28-88	28-97	23-86	30-59	21-00	29-52	10-51	27-01	19-81
COUNTY DALY										
Acres	183,754	175,418	203,110	188,907	167,603	158,680	163,004	179,677	202,221	209,389
Yield, Bushels	5,768,434	4,517,735	5,035,417	4,292,428	5,163,787	2,765,781	4,645,035	1,728,297	5,686,581	4,790,811
Yield, Bushels/Acre	31-39	25-75	24-79	22-67	30-81	17-43	28-50	9-62	28-12	22-88
COUNTY STANLEY* (PART)										
Acres	79,827	78,917	85,496	80,166	74,656	70,535	69,911	76,222	88,070	90,444
Yield, Bushels	2,644,730	2,117,023	2,159,974	1,755,435	2,180,471	1,276,965	1,899,915	766,338	2,639,082	2,141,148
Yield, Bushels/Acre	33-1	26-8	25-3	21-9	29-2	18-1	27-2	10-05	30-0	23-7

Table 3—BARLEY

	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62
COUNTY FERGIUSSON										
Acres	191,201	210,669	202,673	205,330	223,956	224,618	235,174	239,251	258,053	233,830
Yield, Bushels	6,640,347	6,583,340	4,850,481	5,966,703	8,431,152	5,130,846	7,750,012	2,670,946	7,985,108	3,936,949
Yield, Bushels/Acre	34-73	31-25	23-93	29-06	37-65	22-84	32-95	11-16	30-94	16-84
COUNTY DALY										
Acres	96,725	109,412	109,662	107,468	131,579	132,340	142,150	131,189	144,234	120,640
Yield, Bushels	3,329,409	3,385,776	2,350,088	3,118,805	4,951,108	2,124,718	4,894,757	1,064,396	5,113,079	2,450,419
Yield, Bushels/Acre	34-42	31-23	21-43	29-02	37-63	16-05	34-43	8-11	35-45	20-31
COUNTY STANLEY (PART)										
Acres	22,774	29,602	26,739	26,545	35,465	35,274	37,566	33,204	39,060	30,411
Yield, Bushels	824,309	809,579	524,059	644,936	1,196,705	436,888	1,141,937	232,204	1,294,490	551,768
Yield, Bushels/Acre	36-20	27-35	19-60	24-30	33-74	12-40	30-40	6-99	33-14	18-14

*Estimated.

Table 4—OATS

	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62
COUNTY FERGUSSON										
Acres	8,798	6,209	8,536	9,084	8,991	8,712	12,883	11,598	14,580	6,383
Yield, Bushels	227,146	130,557	180,735	201,933	266,691	127,621	400,485	71,274	353,203	97,753
Yield, Bushels/Acre	25-82	21-03	21-17	22-23	29-66	14-65	31-09	6-15	24-23	15-31
COUNTY DALY										
Acres	24,261	16,038	21,494	32,988	35,061	25,298	35,699	36,021	43,837	17,958
Yield, Bushels	630,194	309,977	394,476	709,881	1,081,982	219,359	1,039,836	121,345	1,272,441	344,085
Yield, Bushels/Acre	25-98	19-33	18-35	21-52	30-86	8-67	29-13	3-37	29-03	19-16
COUNTY STANLEY (PART)										
Acres	5,151	4,325	7,361	9,564	12,122	7,364	11,667	10,311	12,511	5,210
Yield, Bushels	124,828	74,073	113,720	182,625	321,793	46,274	315,962	23,245	351,735	72,782
Yield, Bushels/Acre	24-2	17-1	15-4	19-1	26-5	6-3	27-08	2-25	28-1	14-0

Table 5—FIELD PEAS

	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62
COUNTY FERGUSSON										
Acres	1,473	1,071	1,823	1,356	997	1,256	942	1,199	980	758
Yield, Bushels	26,427	13,800	23,071	21,303	19,256	10,499	17,236	2,956	15,242	5,037
Yield, Bushels/Acre	17-94	12-89	12-66	15-7	19-31	8-4	18-3	2-5	15-6	6-6
COUNTY DALY										
Acres	1,440	1,188	1,477	1,731	2,244	1,923	2,015	2,176	2,415	3,067
Yield, Bushels	31,863	16,537	16,368	23,590	45,465	9,637	32,431	2,776	35,697	28,407
Yield, Bushels/Acre	22-1	13-92	11-08	13-63	20-26	5-01	16-09	1-28	15-20	9-26
COUNTY STANLEY (PART)										
Acres	424	574	747	815	788	1,283	1,056	662	1,029	839
Yield, Bushels	8,956	7,416	7,492	15,700	17,099	8,555	13,179	1,967	11,122	8,934
Yield, Bushels/Acre	21-12	12-92	10-03	19-3	21-70	6-67	12-48	2-97	10-81	10-65

Table 6—SHEEP AND WOOL

	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62
COUNTY FERGUSSON										
Sheep Number	493,304	486,474	524,091	560,130	598,403	617,390	637,386	470,645	574,160	637,191
Sheep and Lambs Shorn	529,576	528,138	515,091	594,188	596,155	658,891	648,682	657,003	554,824	680,038
Wool, lb.	5,881,450	5,357,238	5,654,456	6,852,983	6,872,954	6,641,283	6,940,717	7,155,453	5,915,861	7,711,656
Wool/Head, lb.	11-11	10-14	10-98	11-53	11-53	10-08	10-70	10-89	10-66	11-34
COUNTY DALY										
Sheep Number	460,831	426,950	479,722	508,239	574,355	520,035	554,462	428,371	542,696	606,961
Sheep and Lambs Shorn	483,983	472,679	480,619	523,365	555,496	609,761	546,828	575,422	498,162	632,164
Wool, lb.	5,495,373	4,770,504	5,202,452	6,195,596	6,267,407	6,133,385	5,910,419	6,333,332	5,411,291	7,149,755
Wool/Head, lb.	11-35	10-09	10-82	11-84	11-28	10-06	10-81	11-01	10-86	11-31
COUNTY STANLEY (PART)										
Sheep Number	174,455	160,584	197,817	183,342	213,133	196,766	203,148	163,351	199,895	221,758
Sheep and Lambs Shorn	191,269	179,411	210,312	206,786	210,510	234,016	214,106	219,562	193,944	231,376
Wool, lb.	2,251,344	1,902,462	2,282,080	2,461,026	2,381,455	2,327,081	2,407,809	2,426,925	2,152,175	2,692,296
Wool/Head, lb.	11-77	10-60	10-85	11-90	11-32	9-94	11-25	11-05	11-00	11-63

Table 7—CATTLE AND PIGS

	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62
COUNTY FERGUSSON										
Cattle—Dairy	6,446	6,841	6,676	6,795	6,830	6,713	6,348	6,003	5,842	6,265
Beef	946	910	1,236	1,646	2,150	1,920	2,327	1,723	3,746	6,344
Total	7,392	7,751	7,912	8,441	8,980	8,633	8,675	7,726	9,588	12,609
Pigs	1,922	1,916	2,848	2,180	2,730	3,084	2,943	3,507	6,047	7,142
COUNTY DALY										
Cattle—Dairy	6,276	6,020	6,551	6,468	6,574	6,472	5,839	5,414	5,300	5,883
Beef	659	704	1,441	1,933	3,183	1,406	2,742	1,222	3,142	6,120
Total	6,935	6,724	7,992	8,401	9,757	7,878	8,581	6,636	8,442	12,003
Pigs	4,895	4,578	7,080	6,266	7,866	9,442	8,764	9,688	11,826	15,850
COUNTY STANLEY (PART)										
Cattle—Dairy	2,294	2,321	2,253	2,315	2,235	2,126	2,890	2,598	2,572	2,820
Beef	1,617	1,530	1,725	1,753	2,090	1,435	1,130	344	2,916	3,221
Total	3,911	3,851	3,978	4,148	4,325	3,561	4,020	2,942	5,488	6,041
Pigs	2,065	2,185	3,144	2,332	3,227	4,035	4,046	4,615	5,863	7,119

Table 8—RAINFALL (INCHES)

	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
COUNTY FERGUSSON										
April-November	16-03	13-62	12-87	17-58	17-70	10-83	14-89	6-87	15-00	10-92
Year	17-73	16-19	15-42	20-70	19-47	12-09	16-48	9-73	18-26	11-93
COUNTY DALY										
April-November	16-73	10-16	10-62	14-02	16-68	7-93	11-74	5-03	14-21	12-15
Year	18-94	12-97	13-20	17-61	18-65	8-85	13-60	8-41	17-33	13-54
COUNTY STANLEY										
April-November	21-84	15-83	13-10	17-58	23-12	11-24	16-13	7-48	19-62	16-08
Year	24-21	18-35	16-33	22-03	25-11	12-77	18-32	11-26	23-20	17-98