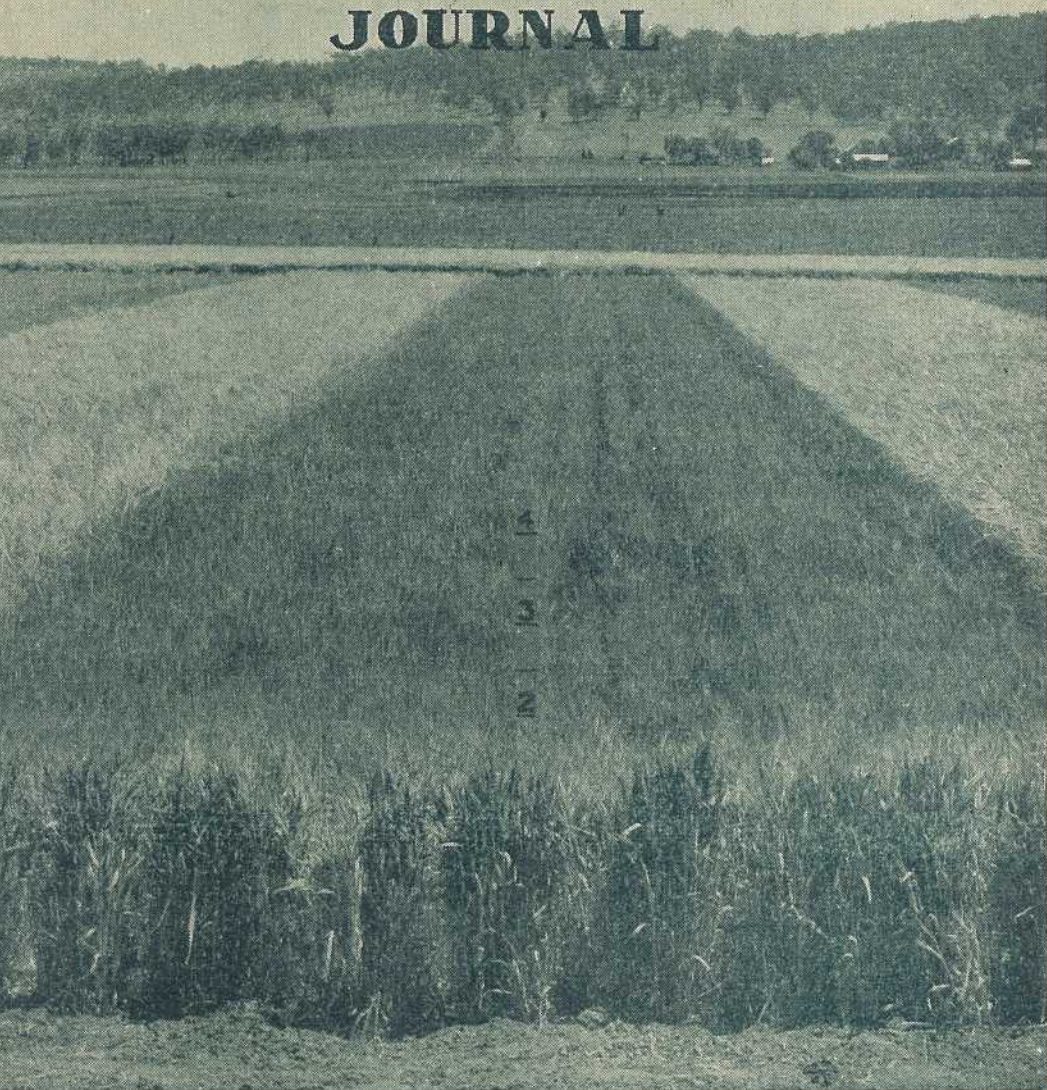


DEPARTMENT OF AGRICULTURE



QUEENSLAND AGRICULTURAL JOURNAL



*Cereal Plots, Hermitage Regional
Experiment Station, Darling Downs.*

LEADING FEATURES

Red Spider Mites

Citrus Virus Diseases

Dairy Competition

Dairying in the North

Beef Production on Crops

QUEENSLAND AGRICULTURAL JOURNAL

Edited by
C. W. WINDERS, B.Sc.Agr.



FEBRUARY, 1953

Issued by Direction of
THE HONOURABLE H. H. COLLINS
MINISTER FOR AGRICULTURE AND STOCK



Contents



	PAGE.
Plant Protection—	
Red Spider Mites and Their Control	63
Citrus Virus Diseases in Queensland	68
Cattle Husbandry—	
Beef Production in Association with Cultivated Crops	76
Dairy Industry—	
Dairy Shed Practices and Dairy Processing in North Queensland	89
Dairy Farm Competition, 1951-52	97
Pure-bred Dairy Cattle Production Recording	105
Astronomical Data for April	123

IMPORTED SEED OATS

Cleaned — Clipped — Graded

ALGERIAN
BELAR

FULGHUM
KURRAJONG
BUDDAH

MULGA
SUNRISE

Also Q'land Rust resisting varieties

BLIGH

VICLAND
(Victoria x Richland)

AGRICULTURAL SEEDS

B.B. Beans
Grasses
Jap. Millet
Mangels

Milletts
Panicums
Pumpkins
Peas

Paspalum
Sorghums
Sudan
Sunflower

POULTRY & STOCK MEALS

Dairy Cow Meal
Stock Meal

Laying Mash
Straight Meals

Growing Mash
Chick Mash

Write or wire (bankers collect) for
quotations of your requirements

STATE PRODUCE AGENCY
PTY. LTD.

226-274 ROMA STREET BRISBANE

PLANT PROTECTION

Red Spider Mites and their Control.

A. R. BRIMBLECOMBE, Entomologist, Science Branch.

RED spiders occur in all countries of the world. They are really mites but the common name of red spider is derived from the red body colour of the adults and the fine webbing associated with their damage. Two species are of economic importance in Queensland. One* (Plate 1) is common in most vegetable and fruit-growing districts of the eastern part of the State, while the other† is known only from the south-eastern portion. A distinguishing feature between them is the more abundant webbing (Plate 2) associated with the less common species; otherwise their appearance, life histories and habits are similar and methods of control are the same.

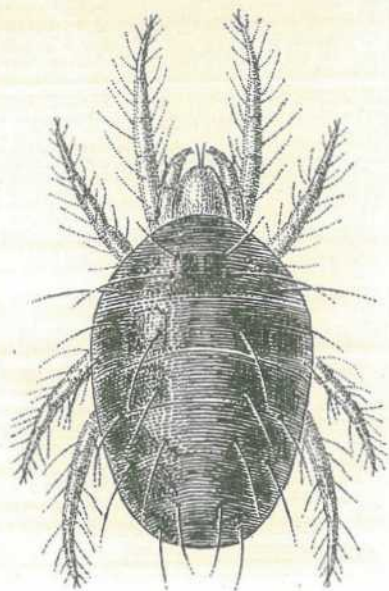


Plate 1.

Red Spider. Magnified 100 times.

Host Plants.

These pests attack a very wide range of economic, ornamental, and weed plants, both native and introduced. The cultivated plants subject to severe damage include beans, cucumbers, strawberries, deciduous

* *Tetranychus urticae* Koch.

† *Eotetranychus telarius* (L.).

fruits, papaws, peas, melons, tomatoes, cotton, grape vines, gooseberries and tobacco. Specific control schedules for red spiders on deciduous fruits, tomatoes, cotton and tobacco are given in Departmental leaflets.

Nature of Damage.

Red spiders possess sharp, slender, lancet-like mouthparts which are used to pierce the surface cells of the host plants and to extract the plant juices. Normally they occur only on the under surface of the leaf, where the dotted whitish feeding punctures of a light infestation show as a pale suffusion. Heavy damage on such plants as beans, cucumbers and gooseberries is evidenced by a general pale mottling on the upper surface of the leaf (Plate 3). Similar damage on strawberries and cotton shows as an abnormal and irregular purple colour on the upper surface, usually adjacent to the main veins (Plate 4). In instances of severe damage the whole under-surface may assume a silvery colour, the leaf edges die, the plants generally look harsh, and growth becomes so retarded that the fruit ripens prematurely. Occasionally plants may even be killed.

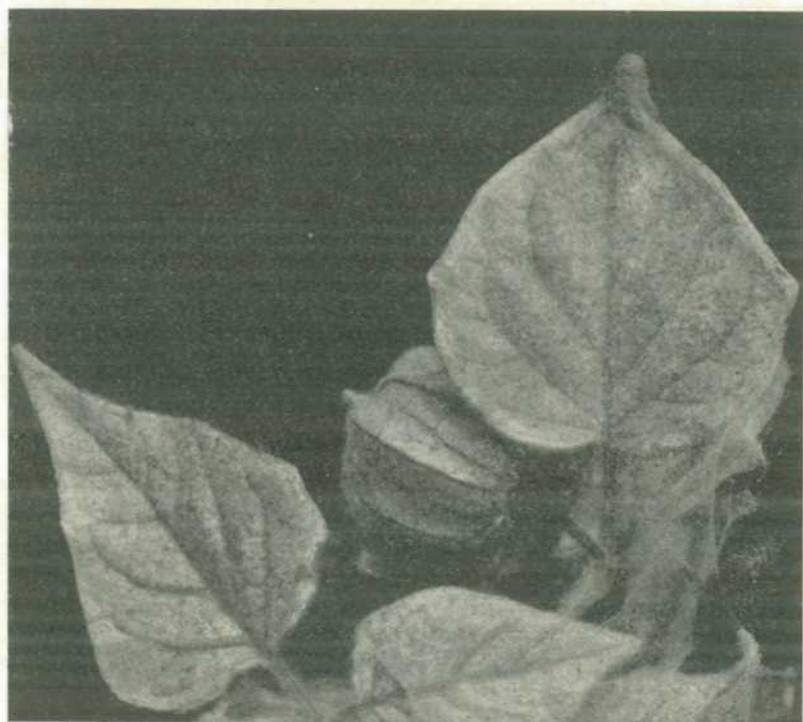


Plate 2.

Red Spider Infestation of a Cape Gooseberry Shoot,
Shown by Webbing and Mottling.

Life History.

The eggs are laid singly and irregularly amongst the webbing on the under surface of the leaf. These are spherical, pale, almost translucent, and barely noticeable to the naked eye. They hatch into 6-legged

larvae which after feeding moult progressively through two 8-legged nymphal stages to adults (Plate 1). The nymphal and adult stages have a similar oval shape without any noticeable division of the body into head, thorax and abdomen.

The larvae are inconspicuous in colour, which in the nymphal stages changes to pale yellow or pale green. The colour of the adults is mostly brick-red, but some individuals may be a dull yellow. This bright red colour against the green background of the host plant makes the mites easily noticeable to the naked eye.

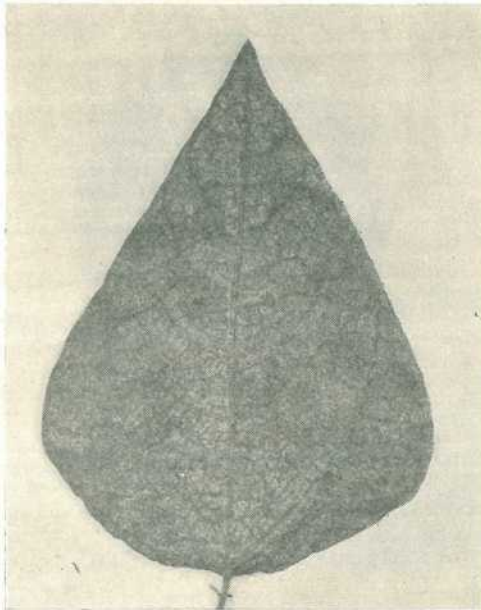


Plate 3.

Red Spider Damage to Bean Leaflet, Shown by Mottling on the Upper Surface.

Each female may lay 50 or more eggs during its life of from one to two weeks. These hatch in a few days, and during the summer the larval and nymphal stages may be completed in 7-10 days, giving an average life cycle of about two weeks. In the colder months the period is much longer, and depending on the severity of winter, 15-20 generations may be passed each year. Since the life cycle is brief, overlapping of generations is constantly occurring, and all stages of the mites are usually present on a leaf at the one time.

Habits.

Red spider mites prefer a concave surface and therefore they and their eggs usually occur against a vein on the under surface of the leaf. In this position they are well protected from wind and rain; the fine webbing adds to the protection. Feeding occurs mainly on the under surface and damage in the early stages may escape notice.

Dispersal of the mites is by wind, birds or transfer of plants, but most of the spread, though it is slow, is by the mites crawling from leaf to leaf and over the ground to other plants.

The red spider mites are nearly always present on most crops. The amount of damage, however, varies from farm to farm and in different districts, but usually the mites are well distributed throughout the one crop on any one farm. Furthermore, damage varies considerably on successive crops and also in successive seasons. Sudden changes in mite numbers may even be apparent from week to week. While this may be due to reproductive periods, actually climatic conditions have a much greater influence on breeding bursts or lulls than have previous populations.

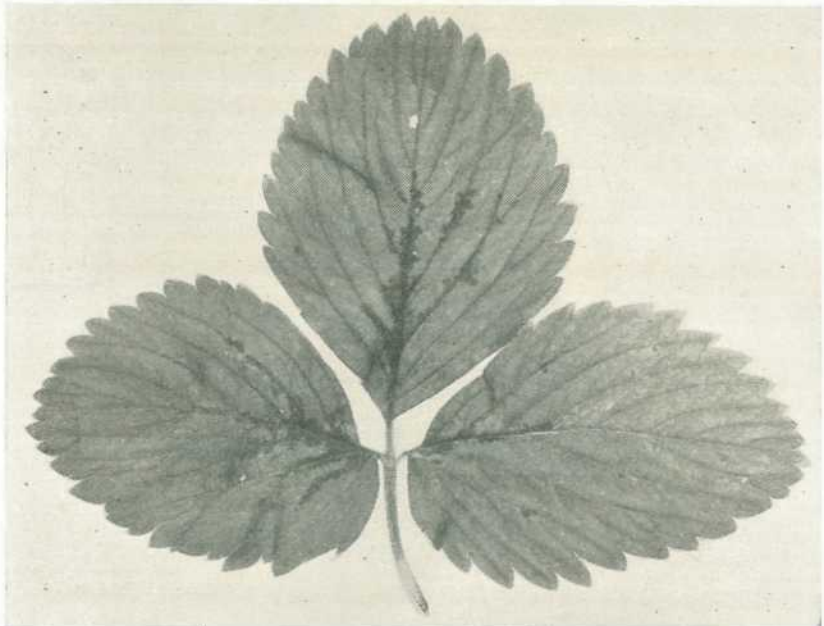


Plate 4.

Red Spider Damage to Strawberry Leaf, Shown by Purple Discolouration Near Veins on the Upper Surface.

Least damage occurs during the winter months, when populations are low and activity is slight; also, at this time the pests are mainly on weeds and other wild hosts. Under Queensland conditions the mites are never completely dormant unless the winter is excessively cold, as may occur in the Stanthorpe district, and then only for short periods, since the warmth of fine winter days is sufficient to promote activity. It is chiefly the mature females which survive the winter, and weed hosts seem to favour survival better than cultivated crops.

With the return of warm spring weather the mites multiply rapidly until the winter food plants wane, and then they move onto early spring crops such as beans and cucumbers. If the dry weather of late winter continues into the spring, severe infestations can be expected and may extend into the summer. During the rainy season of late summer and autumn, damage is normally slight and is confined to periods of dry weather.

Hot, dry days increase egg-laying, but chilly days, dewy nights or wet weather retard it and frequently prevent the development of mite epidemics. For this reason quickly grown irrigated plants normally escape damage until towards the end of the crop, or if watering is eased during harvesting. Non-irrigated crops may suffer severe damage, particularly during periods of low rainfall.

Control.

Red spider mites have several natural enemies, the chief one being a tiny ladybird*. This insect normally assists in checking the pests but is not effective when conditions favour rapid mite breeding.

When chemical control measures become necessary, several well-tried and effective insecticides are available. Because the mites extract the plant juices as food, the chemicals used must kill by contact, and since the pests occur mainly on the under surface of the leaf it is essential for that surface to be treated thoroughly. One application of insecticide does not give a complete control and repeated applications are advisable, the number being determined by regular observations. Failures in mite control are not always due to the chemical; the thoroughness of the applications is important. The choice of the insecticide depends on the crop or the season and no one insecticide is ideal for all conditions.

Suitable readily available dusts and sprays are as follows†.

Dusts.

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> (1) Dusting sulphur. (2) Nicotine sulphate dust. (3) Parathion dust (not exceeding 0.15% active ingredient). | } | Applied at the rate of 10-20 lb. per acre depending on the size of the plants. |
|--|---|--|

Sprays.

Stock.	Dilution.	Per 10 gallons.	Per 3 gallons.
(1) Wettable sulphur	As given on labels	of proprietary	lines.
(2) Lime sulphur	1 part in 80	1 pint	6 fl. oz.
(3) Nicotine sulphate	1 part in 640	2½ fl. oz.	¾ fl. oz.
(4) Parathion or E.605	As given on labels	of proprietary	lines.
(5) HETP	1 part in 800	2 fl. oz.	approx. ½ fl. oz.

Dusts are best applied in fine, cool weather, particularly in the morning when the air is comparatively still. For some crops, such as tomatoes, mixed dusts containing sulphur are regularly used and in these the sulphur content should not be less than 30%. The separate leaflet on insect pest of tomatoes should be consulted. On other plants, such as strawberries, where red spider alone is to be controlled, the sulphur may be diluted with equal parts of hydrated lime. Sulphur dusts applied to the growing points of young cucurbit plants can seriously retard growth, and can cause leaf burn on other plants when used in hot weather.

* *Stethorus vagans* (Blackb.).

† The more promising of the newer miticides are still under test.

Sprays are commonly used for mite control, but in some instances dusts may be more convenient and more effective. On low-growing plants such as strawberries there is a good rebound of dust from the ground onto the lower leaf surface, and on thickly foliaged plants dusts give a fogging effect. However, by using sprays only one type of apparatus is required and stock solutions can be held more conveniently than dusts. Also, most farms now have a readily available water supply.

Warning.

A health risk is involved if parathion or E.605 is inhaled or absorbed through the skin. Care should be taken to avoid inhaling this insecticide or being unduly wet by spray. Splashes of the concentrate should be washed off immediately with soap and water and any clothes which are splashed should be changed immediately and not worn again until they have been washed.

Citrus Virus Diseases in Queensland.

E. L. OXENHAM and O. W. STURGESS, Assistant Pathologists, Science Branch.

THE presence of a complex of virus diseases affecting Queensland citrus has been recognised only in recent years. Growth "declines" in trees of certain varieties, or of particular stock-scion combinations, have been observed over a long period, but in most instances the cause has been obscure. However, investigations carried out in various countries during the last few years have provided information which has established the virus origin of a number of these obscure diseases.

It is hoped that the following information will assist citrus growers in the recognition of trees affected with virus diseases and influence them in the choice of varieties and rootstocks when making new plantings.

STEM PITTING OF GRAPEFRUIT.

Stem pitting of grapefruit is the most serious virus problem affecting the Queensland citrus industry. The disease has been known in Queensland for many years as "grapefruit decline" but until recently the cause was uncertain.

In a survey of the Gayndah-Mundubbera area in 1951, every mature planting of Marsh's Seedless grapefruit inspected was found to contain infected trees. Most plantings had become unproductive by the fifteenth year and some trees were showing advanced symptoms as early as three years of age.

Symptoms.

The most obvious symptoms are observed on trees which have been infected for many years. The name of the disease, stem pitting, is derived from the pit-like depressions or concavities which develop in the surface of the trunk and larger branches (Plate 1, a).

In conjunction with the stem pitting, the tree takes on an irregular or "crazy top" appearance. This malformation is brought about by irregular flushes of weak growth, and the tree may eventually assume a bushy habit. Fruit on infected trees are small and lopsided, have a thick rind and are of little or no commercial value.

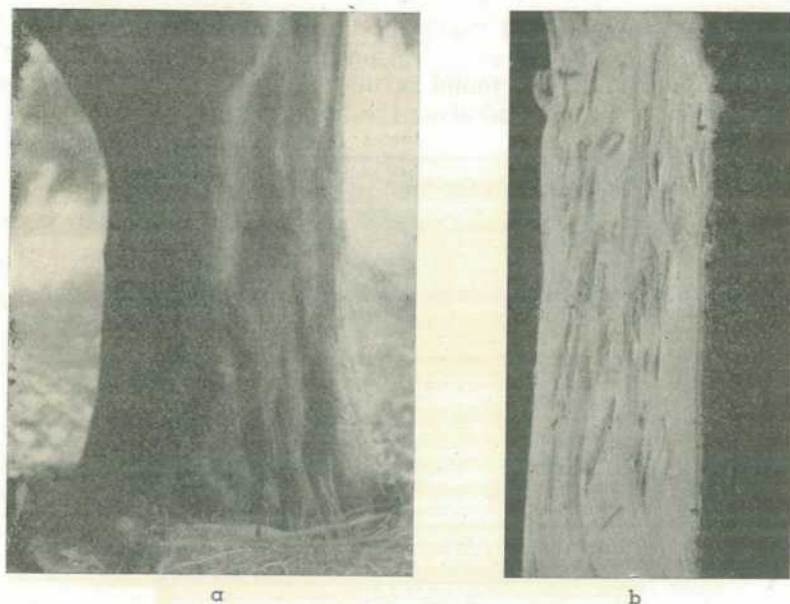


Plate 1.

Stem Pitting of Grapefruit.

(a) A 13-year-old Marsh's Seedless grapefruit on rough lemon stock. Note the dimples or concavities in the trunk. (b) Exposed grapefruit wood revealing the pitted striations due to the stem pitting virus.

Evidence of the disease in young plantings is more difficult to detect. Early symptoms may be found by stripping the bark from small branches to expose the abnormal pitted striations or grooves which follow the grain of the wood (Plate 1, b).

Transmission.

The virus is transmitted by budding or by the black citrus aphid (*Aphis citricidus* (Kirk.)), which is abundant in citrus orchards.

PSOROSIS OR SCALY BARK.

Psorosis was first recorded in Queensland in 1927 and since then has been reported from all the major citrus districts in the State. In 1949 a psorosis survey of a representative number of orchards in the chief citrus areas was made. Washington Navel and Joppa oranges and Beauty of Glen Retreat and Emperor mandarins were found to be the most severely affected. Late Valencia orange seems to be the least affected by the disease and rarely shows advanced symptoms. In some cases, aged trees of various varieties have been seen to crop well despite the presence of acute symptoms of psorosis.

Symptoms.

Symptoms usually appear on infected trees between 10 and 30 years of age, and are of several distinct types.

Scaly Bark.—This is the most severe and also the most easily detected symptom. In advanced cases, large areas of bark may scale off the trunk and limbs of the tree, and sometimes complete girdling results. Badly affected trees are sparsely foliated and show dieback of the twigs and branches.

With less acute cases of "scaly bark," small areas of raised bark may be found, commencing as an odd pustule of lifted bark (Plate 2). An area of scaling is often found in the crutch of affected trees, and chains of pustules may extend along the limbs.



Plate 2.

Psorosis or Scaly Bark. A stage of psorosis on Emperor of Canton mandarin. The affected branch shows raised areas of bark scaling.

Pimpling.—This condition of the bark, found on branches and even twigs, is the most common symptom encountered. The "pimples" consist of small raised pustules, about an eighth of an inch in diameter, on top of which the bark lifts in a tiny lid. A number of these may coalesce to form a small scaly area (Plate 3). Pimpling is usually prominent on trees showing scaly-bark lesions, but is commonly seen before scaling occurs.

Leaf Stippling.—Leaf symptoms of psorosis have been reported elsewhere but have rarely been observed in Queensland. A "stippling" of the young leaves, consisting of a clearing and mottling between the veins, has been described, the clearing sometimes taking the form of an "oak leaf" pattern.

No fruit symptoms which can be attributed to psorosis have been observed in this State.

Transmission.

The use of virus-infected budwood has been accepted as the main method of psorosis transmission.

The presence of psorosis in seedling trees in North Queensland orchards, however, seems to suggest some other means of transmission previously not taken into consideration. If seed transmission may be discounted, it is possible there is an insect vector.

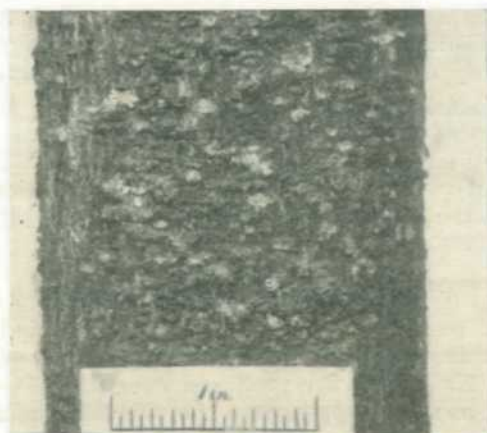


Plate 3.

Psorosis or Scaly Bark. Emperor of Canton mandarin showing how numerous small bark pimples have coalesced to form a scaling area.

BUD UNION DECLINE.

The name "bud union decline" is synonymous with "quick decline" in California, "tristeza" in South America and "incompatibility" in South Africa. This virus is carried in the scion and exerts its effect on susceptible rootstocks. All varieties of citrus budded onto sour orange or Seville rootstocks are liable to decline. Overseas investigations have shown that grapefruit rootstock may also be susceptible to the bud union decline virus, and on the basis of present evidence grapefruit should be avoided as a stock for sweet-orange and mandarin.

There are conflicting reports as to the tolerance of rough lemon, but although this rootstock has been almost universally used in Queensland, so far the presence of bud union decline in trees on this stock has not been recorded.

Sour orange has not been used as a rootstock to any extent in this State and therefore bud union decline as yet does not present any problems.

Symptoms.

Infected trees on susceptible rootstocks, such as sour orange, may show symptoms from the second year of growth. The general appearance of an affected tree is similar to that caused by girdling. The first noticeable symptom is a dull ashen colour in the terminal foliage with a curling of the leaves lengthwise and upwards. In chronic cases the leaves may gradually drop, but in acute cases of collapse they suddenly wilt and dry on the tree.

Transmission.

Like the stem pitting virus of grapefruit, the virus is transmitted by either budding or the black citrus aphid.

SCALY BUTT OF TRIFOLIATA.

The species *Poncirus trifoliata* has proved to be a desirable citrus rootstock, but unfortunately its use has been restricted by the incidence of the scaly butt virus. This virus, which is carried in the scion without

direct ill-effect, expresses its symptoms in the trifoliata rootstock and thereby results in subsequent stunting of the scion. The incidence varies according to the scion variety and the source of the budwood used.

Scaly butt invariably occurs when lemon is used as the scion, but it appears to be of less consequence in the case of Late Valencia orange and most mandarin varieties. Results vary in the case of Washington Naval orange and grapefruit, scaly butt incidence depending on the source of the budwood, as only certain trees of these varieties carry the virus.

Symptoms.

Affected trees usually show early symptoms between the fourth and eighth year from budding. The symptoms are typified by scaling of the outer bark of the trifoliata stock and retardation of growth of the scion (Plate 4). New scales are produced irregularly beneath the older bark lesions, and as scaling progresses the affected surface cracks, with scaled tissue lifting away from the living bark.



Plate 4.

Scaly Butt of Trifoliata. Union of a 4-year-old stunted Villa Franca lemon on trifoliata stock, showing scaly butt symptoms below the bud union.

Affected trees remain small and stunted, and in severe cases mature trees may only reach four to five feet in height. The stock rarely outgrows the scion, whereas in mature, healthy trees the trifoliata stock may be several times greater in diameter than the scion, and is deeply-ribbed.

Transmission.

The disease is transmitted by propagating with buds taken from virus-affected mother trees. It is interesting to note, however, that not all buds taken from affected trees appear to transmit the virus.

There is no evidence of field spread, and it is also assumed that seedling trifoliata stocks are entirely free from the virus, on the evidence that no seedling tree has been found showing scaling symptoms.

MANDARIN DECLINE.

A slow decline of Ellendale Beauty mandarins on rough lemon stock has been evident in Queensland for some years. Recent investigations indicate a virus infection as being responsible for the decline. The identity of the virus and its relationship to other viruses in the citrus virus complex have not been determined. Other mandarin varieties, such as Beauty of Glen Retreat and Emperor of Canton on rough lemon, are suspected of a similar decline. Symptoms of decline in each of the mandarin varieties bear marked similarities.

The same strains of mandarin budwood when worked on stocks other than rough lemon make normal growth.

Symptoms.

Affected trees take on a rounded, squat appearance as a result of their sparse, short-wooded manner of growth, and suffer considerable twig dieback (Plate 5). A bright yellowing of the leaves, commencing as a yellowing of the veins, is a prominent feature and such leaves show a downward curling of the tip.

Declining trees produce light crops and the fruit is slightly irregular in shape with a coarse rind.

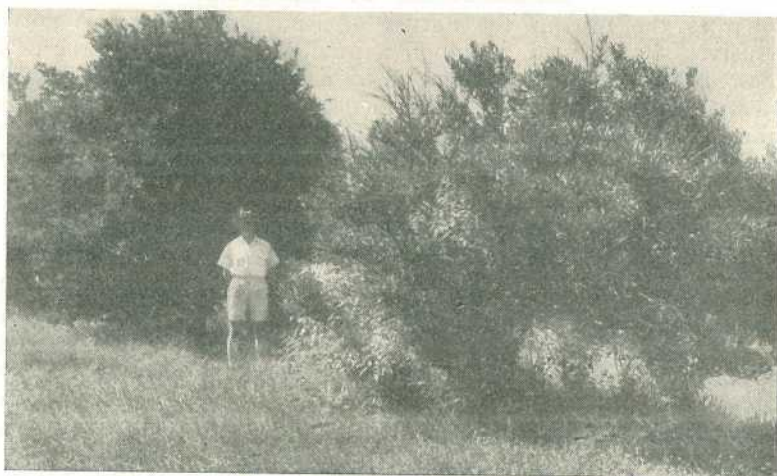
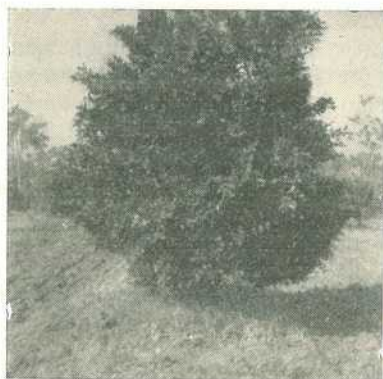


Plate 5.

Mandarin Decline. Effect of the mandarin decline virus in budwood collected from the same source when propagated on different rootstocks. Left, a productive Ellendale Beauty mandarin on sweet orange stock. Right, an unthrifty Ellendale Beauty mandarin on rough lemon stock showing considerable twig dieback.

Transmission.

The mandarin decline virus is transmitted by budding. Therefore, it seems at present inadvisable to propagate mandarin varieties on rough lemon stock until more information is obtained as to the presence of the virus in budwood sources. Other rootstocks such as sweet orange and Emperor mandarin have given satisfactory results when worked with Ellendale Beauty and Beauty of Glen Retreat buds (Plates 5 and 6).



a



b

Plate 6.

Mandarin Decline. Beauty of Glen Retreat mandarins (4-year-old) grown in the same orchard. (a) On sweet orange stock, normal growth. (b) On rough lemon stock, unthrifty growth characteristic of the mandarin decline virus.

SHELLBARK OF LEMONS.

Up to the present the nature of lemon shellbark has not been conclusively determined, although a number of research workers have suggested that the disease is caused by a virus. Fungi are apparently not responsible for the initial incidence of the disease but commonly produce secondary complications. Shellbark is found associated with lemon trees of considerable age, the onset of symptoms varying from 18 to 25 years or more.

Symptoms.

Shellbark is a disease affecting the outer layers of bark on the trunk. Prior to bark shelling, affected trees lack vigour, the foliage becomes chlorotic, and leaf shedding and twig dieback occur. The outer bark of the trunk dies and cracks, with the condition advancing from the bud union upwards until the entire trunk is involved (Plate 7). The inner bark and cambium remain alive and build up new layers to replace the outer destroyed areas. The development of new bark causes the dead bark to shell off in vertical strips. Shellbark is chiefly confined to the trunk, rarely extending along the main branches.

The disease is rarely fatal and has the unusual feature that following a period of bark shelling the tree as a whole may temporarily recover until the next outbreak occurs.

It is inadvisable to treat affected trees as for collar rots. Scraping and painting of shell-barked areas damages the cambium and developing bark, and hinders recovery.

GENERAL RECOMMENDATIONS.

There is no known method of eliminating viruses from a citrus tree after it has become infected, hence their control largely rests on the use of virus-free budwood, or in the case of virus diseases involving certain stock-scion combinations, the selection of suitable tolerant rootstocks is the solution. It is possible also that, when more is known of these



Plate 7.

Shellbark of Lemon. Affected trunks of Villa Franca lemons, on rough lemon (16-year-old).

diseases, use may be made of budwood carrying mild, protective strains of the viruses, or that strains of citrus may be detected which are tolerant to virus infection.

With a view to avoiding citrus virus diseases or reducing their severity, the following recommendations are tentatively made.

(1) *Stem Pitting of Grapefruit.*—Use budwood which is virus-free, or which carries a mild strain of the virus without any ill-effects to the mother tree.

(2) *Psorosis.*—Use virus-free budwood.

(3) *Bud Union Decline.*—Avoid sour orange as a rootstock, and also grapefruit until further information is available.

(4) *Scaly Butt of Trifoliata.*—Do not bud lemon varieties onto trifoliata rootstocks, and use only strains of Washington Navel orange and grapefruit which are free of the virus.

(5) *Mandarin Decline.*—Avoid rough lemon as a rootstock for Ellendale Beauty mandarin, and also treat it with suspicion as a rootstock for other mandarin varieties pending further investigations.

(6) *Shellbark of Lemons.*—Avoid surgical treatment of affected trees and allow them to make temporary natural recovery.



Beef Production in Association with Cultivated Crops.

P. ROUND, Senior Adviser, Cattle Husbandry Branch.

BEEF cattle are able to convert fibrous plant fodders of relatively poor quality into meat. They have been developed to make optimum use of the less nutritious pasture species. In the main, the future development of the beef industry in Queensland depends on more efficient use of natural summer-growing pastures for the growth and fattening of beef cattle.

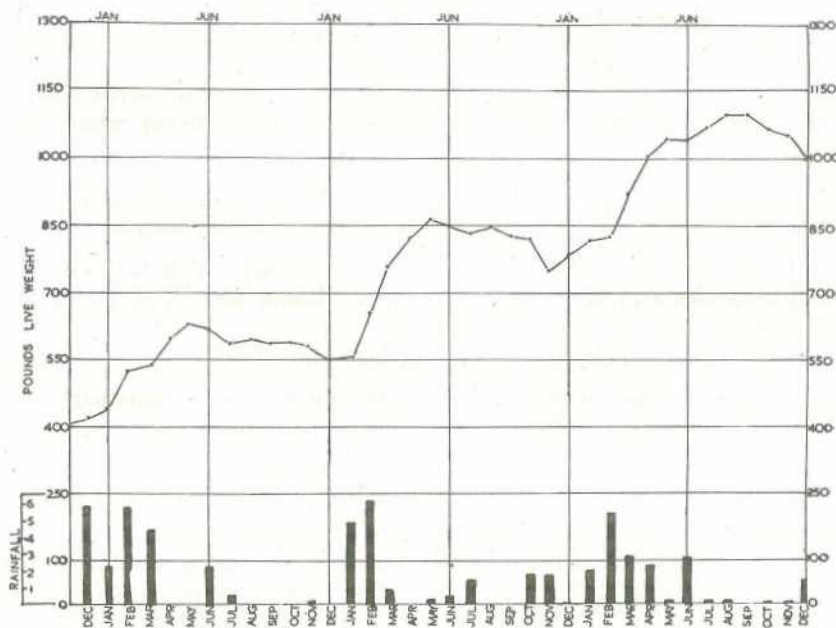


Plate 1.

Graph illustrating the Normal Growth Pattern of Beef Steers on Natural Pasture in Queensland.

Normally in Queensland the beef steer gains weight during the late spring, summer and autumn months but loses weight during winter and early spring (Plate 1). Thus, there is a wastage during winter and early spring of pasture eaten in summer and autumn. It has been said that "a beef steer losing weight is being fed on beef steak," and beef steak is a very expensive type of food for cattle.

Loss of weight and the resultant waste of natural pasture may be avoided by giving the steer access to some supplementary form of fodder during periods when pasture does not provide a maintenance diet. For best economic returns this fodder should be used as a true supplement rather than a substitute for pasture.

Queensland is not alone in having this problem of seasonal loss of weight to overcome. Other major beef-raising countries have a similar problem, but Queensland has been one of the last important cattle areas of the world to realise that, for optimum growth and fattening, beef cattle must be provided with something more than what they can forage from pasture under natural conditions.

CROP GRAZING.

One of the most effective methods of supplementing pastures is by crop grazing. Using this method, high-quality beef can be produced and made available to the market at a time when pasture-fattened cattle are unavailable.

Under present conditions in Queensland, a flush of cattle is available for slaughter during autumn and the early winter months, but at other times of the year fat cattle are frequently unavailable in sufficient numbers to meet local demands. The pattern of supply is shown in Plate 2.

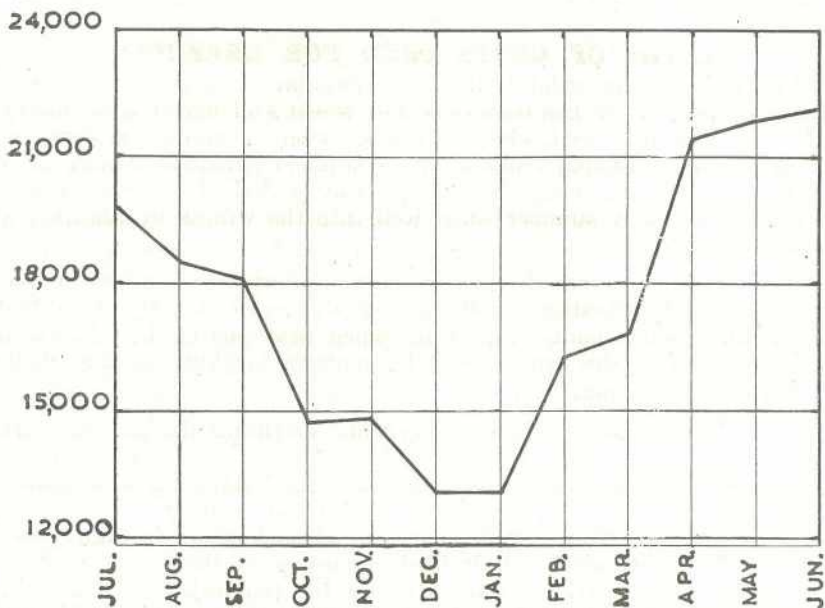


Plate 2.

Average Monthly Slaughtering of Cattle at the Brisbane Abattoir for the 5-Year Period July 1946 to June 1951.

In some areas of the State the best natural grasses have been eaten out by overgrazing and replaced by less palatable and nutritious species: consequently in these areas stock do not thrive so well as previously and the carrying capacity of much country has been considerably reduced.

A rotational programme of pasture and cultivated crops coupled with the use of grazing animals can increase the carrying capacity of land without loss of soil fertility. Farming is rapidly becoming a normal practice on grazing properties in the more reliable rainfall districts of the State, and the cattleman of tomorrow may be as familiar with the tractor as he is with the stock horse.

AREAS WHERE CROP GRAZING MAY BE PROFITABLE.

Until a few years ago, crop grazing for beef production was confined to the Darling Downs and the south-eastern corner of Queensland. Lately, however, there has been a gradual spread west and north from this area and quite recently the practice has spread into Central Queensland, particularly the black-soil areas of the Central Highlands.

There is little doubt that in all areas extending south from a line from Clermont to Mackay and experiencing an average annual rainfall of 25 inches or more, crop grazing will continue to increase in importance. North of this line, the future of agriculture in beef production is not so certain, but at the worst it has possibilities. The development of suitable varieties of sorghum and other crops and the availability of suitable farm machinery could convert this area from a purely grazing one to one in which small areas of agriculture for the production of fodder for fattening and the maintenance of stud breeding herds would be common.

TYPES OF CROPS USED FOR GRAZING.

In southern Queensland, the most popular crop used for winter grazing by beef cattle has been oats, but wheat and barley and canary-seed grass are also used. Sudan grass, sweet sorghums, millets and lucerne are the principal crops used for summer grazing. Sudan grass provides early spring feed, while the grazing period of sorghums can be extended from early summer until well into the winter by planting at proper intervals.

Cereals can be grazed as soon as the plants have sufficient root development to withstand pulling. If the crop is very succulent, stock tend to scour badly, especially when first put on it. Access to roughage, such as dry grass, stubble, mature sorghum or hay, helps to control the scouring.

Caution must be exercised in grazing sorghums during the early stages of growth owing to the possibility of poisoning. However, the crop fattener can generally afford to wait until the sorghums mature, as during the period of active growth of these crops good pasture is usually available. Crop supplementation at such times is unnecessary and indeed uneconomical. A decided advantage of the sweet sorghums is that they stand well for some time in the paddock after maturing without any serious loss of food value. Thus they can be held until the nutritional value of pastures has deteriorated to the point where supplementation becomes of value in maintaining growth and fattening rates of cattle. Under certain seasonal conditions the sorghums will



Plate 3.

Harvesting a Young Sorghum Crop for Hay on the Darling Downs.
Such crops are frequently used for grazing.



Plate 4.

A Paddock of Sorghum Stubble Provided with a Natural Windbreak
Makes Ideal Winter Quarters. Cattle thrive under these conditions.

frequently supply high-quality fodder well into the spring months. The yield per acre of fodder from sorghum crops is, in addition, very considerable.

The stubble of harvested grain sorghum is also used commonly. In the more northerly areas of the Upper Burnett and in Central Queensland the growing season of winter cereals is shorter and the amount of feed available from such crops decreases: under these conditions the importance of sorghums increases.

On the Darling Downs in good seasons, oats may be available for grazing from May to October; during this time, with short rest periods, up to one beast to the acre may be carried. On the other hand, in bad years there may be no more than one or two months of grazing available, and that of indifferent quality.

Lucerne is also used as a grazing crop for beef cattle in southern Queensland, but it has not been as popular for this purpose as in other parts of Australia or overseas and at the moment is not used to any considerable extent. There would appear to be difficulty in maintaining suitable stands of lucerne in some areas where crop grazing has become popular, although row cultivation shows some promise of giving good results in the drier areas. The crop also presents some risk of death from bloat, and in most cases fails to provide sufficient feed for intensive grazing during winter and early spring months, when it is most needed under Queensland conditions.



Plate 5.

Stocked Wheaten Hay on the Darling Downs. This crop was cut 80 days from planting.

SOME ADVANTAGES OF CROP GRAZING.

Where agriculture is practised, grazing cattle offers a convenient means by which crops can be marketed and often utilises growth which cannot be converted into cash by any other means. Where weed growth has become a problem in paddocks used for grain production, a rotation from grain to grazing crop frequently provides an effective and profitable method of weed control.

The adoption of cash-crop farming methods on a non-rotational basis, as is frequently practised in Queensland, may in time lead to deterioration in soil fertility and soil structure. The introduction of grazing cattle into a crop-rotation programme can do much to arrest that deterioration and for this reason cattle should have a place in all farming programmes in Queensland.

In areas where land is very cheap, the utilisation of condition gained by cattle on grass during the flush season for maintenance during the dry season may be profitable, but in areas where land is of high value, continuous growth is essential for best economic returns. Cultivation by conserving moisture and growing crops of high nutritive value makes available good grazing at periods of the year when natural pasture is of low nutritive value, thus extending the period when grazing of high quality is available to the growing and fattening animal. This in turn has the effect of extending the killing season for prime cattle as well as permitting their slaughter at an earlier age. More rapid turnover ensues, thus increasing returns per acre.

TYPES OF CATTLE TO BE GRAZED.

Most people think of crops as being used only for the fattening of forward store bullocks. Whilst this may be the most important use of crops in Queensland at the present time, they have a much wider application, as is indicated below.

Calving Cows.

If cows calve in poor condition on poor pasture, the calf is smaller at birth than would otherwise be the case, and its growth rate during the suckling period is retarded. In severe cases the calf frequently dies, and if the cow survives she is not in a condition to continue a



Plate 6.
Cows on Poor Feed Cannot Rear Good Calves.

normal breeding programme in the following season. It has been shown that birth weight and weaning weight of calves are closely correlated with growth rates later in life. The calf which is undersized at birth or weaning usually grows more slowly after weaning than a calf of normal weight at these times.

An area of cultivation not only does much to ensure the survival of both dam and calf, but makes normal birth weights of calves and rapid growth during the suckling period much more likely. The cow is also well prepared for her next breeding season. It is a mistake to believe that poor-quality country is satisfactory for breeding cows. The nutritional demands of the cow are greatest at calving and during the months of milk production; if she is maintained on a sub-maintenance diet at this period the growth rate of her calf will suffer.

The use of crops for grazing cows and calves is probably only profitable in areas where cattle can be marketed at an early age. In some cases the calves may be sold whilst still on the mother (at 6-9 months old), or they may be carried through on pasture and finished off as chiller-quality steers on crop in the following year.

If an expensive crop is used to grow calves, it is important that a rapid growth rate be maintained until slaughter.

Weaners.

Under natural grazing conditions in Queensland it is normal for beef calves to lose weight at weaning time. Frequently this loss of condition is considerable and growth is retarded for from six to 12 months. Calves weaned onto a suitable grazing crop continue to gain weight and frequently can be marketed as veal at from 10 to 12 months of age. On the other hand, should it be intended to carry them through to the chiller-grade stage, crops can be used to maintain growth until pastures are of sufficiently high quality.

Store Cattle.

Crops are used most commonly in Queensland for fattening steers. The ideal type of steer to fatten is a beast from 18 months to two years of age, but there is frequently some difficulty in obtaining cattle of this age in sufficiently forward condition to place on crop, and more frequently cattle of from 2½ to 3½ years of age are used. Cattle older than 3½ years are seldom satisfactory for crop fattening, as unless they are well bred and have been maintained on better than average pasture they will not, even when in prime condition, produce the type of carcass likely to command a premium price in the saleyard. Generally, the younger the cattle the better the use they will make of the fodder available.

As the nutrients of natural pasture are rapidly lost following the onset of dry weather or winter, it is not uncommon for cattlemen to have a number of unfinished cattle on hand at such times. These cattle have either to be sacrificed on a market over-supplied with unfinished beef or else held until the next season. During this holding period there is a loss of weight which has to be made good in the following season before the fattening process commences again. The amount of beef lost in this way in Queensland is huge and would be greatly in excess of the State's present exportable surplus.



Plate 7.

There is no Check in Growth When Grazing Such as this Oat Crop is Provided for Weaners.



Plate 8.

Rising Ground With Shade and Shelter Makes an Ideal Camp in Wet Weather.

Topping-off unfinished cattle on crops may be quite an economic proposition, for even if the extra weight of beef produced is insufficient to offset the cost of the crop, there is the added return which results from the fact that in winter and spring in Queensland the value of prime steers is nearly always greater than the value of store cattle per 100 lb. Therefore not only the extra weight of beef is to be considered but also the extra price per pound of the whole carcass. Due regard must also be given to the weight loss avoided by not having to hold the cattle on poor pasture until the following season.

Crop fattening by the small mixed farmer is a more difficult and risky undertaking than is crop fattening by the grazier. In order to be reasonably assured of profitable returns, the crop fattener must be in a position to purchase suitable stores at reasonable prices and he must be able to hold the cattle until the crop is ready to be grazed. It is considered that for most efficient operation of a crop-grazing property the cattleman requires five acres of grassland for each acre of crop. If he is in this position, stores can be purchased when they are most readily available and held on the property. If stores must be purchased only when the crop is ready for grazing, there is considerable competition for suitable cattle, which means that prices are high and there is a possibility that cattle will not be available at all. The fattener may quite conceivably be left with a crop and no cattle to graze it. If the crop fails to carry the cattle to prime condition and no grass is available to hold them pending the recovery of the crop, the cattle must then be sacrificed at the best available price.

Culled Dairy Cows and Calves.

Large-framed cows of the dairy breeds or beef cows with good milk production mated to beef bulls of quick-maturing strains, when depastured on crops, are capable of rearing calves of 350-400 lb. dressed



Plate 9.

Beef Cows and Calves on an Oat Crop in the Bongeen Area.

This crop is being used as a supplement to pasture.

weight at 12 months of age. Many dairy cows culled for some defect which renders them unsuitable for dairying can be profitably utilised for this purpose. Where a crop is available it is more profitable to place this type of cow on the crop than to slaughter her when only of tinner quality. In many cases both the cow and calf can be turned off fat when the calf is 9-12 months old. This system of fattening might give a greater return in beef per acre than any other method used in Queensland.

COST OF PRODUCING CROPS FOR GRAZING.

The cost of producing a crop for grazing will vary considerably from district to district and according to the crop and methods and machinery used by the farmer.

The cost per acre of producing a winter fodder crop for the central Darling Downs has been calculated (1952) to be about £5 or £6. Costs for summer crops would possibly be lower than this figure. These costs are given as a guide to those in other districts who may contemplate a crop-grazing programme.

RETURNS FROM CROP-FATTENED STEERS.

Steers of two to three years of age placed on crop in forward condition require, on the average, 100 days' grazing before they are ready for market. The weight gain during this period is in the vicinity of $1\frac{1}{2}$ -2 lb. per day, or a total of 150-200 lb. liveweight gain.

Assuming a 1,000 lb. liveweight steer on a crop showed a daily liveweight gain of 2 lb. for 100 days, the liveweight at slaughter would be 1,200 lb. At this weight, the steer would dress out at approximately 60%, thus yielding 720 lb. dressed weight. If slaughtered at 1,000 lb., it would probably have dressed out at 57%, yielding 570 lb. dressed weight. The end effect of the increase of 200 lb. in liveweight is therefore to increase the dressed weight by 150 lb. An estimated gain of 150 lb. of beef, saleable at 120s. per 100 lb., would return approximately £9 at a stocking rate of one beast per acre.

When stores are purchased at the same rate per 100 lb. as fats, the margin of profit is controlled by the amount of beef added, but fluctuations of values can either narrow or widen this margin.

Over and above this return there is frequently a further period of 50-60 days' grazing of poorer-quality crop which can be used to freshen a second lot of steers destined for early summer fattening on pasture after spring storms, or for other types of cattle. It is difficult to place a value on this period of grazing, as it will depend on the season and the type of cattle available for grazing, but it would be conservative to estimate the total return from a winter cereal crop at £11 per acre in terms of beef. This leaves a profit of approximately £5 15s. per acre over and above the cost of production of the crop.

These figures can, of course, only be taken as a general guide to possible returns. They take no account of the store and fat prices of cattle. As pointed out previously, provided the crop fatterer has grass

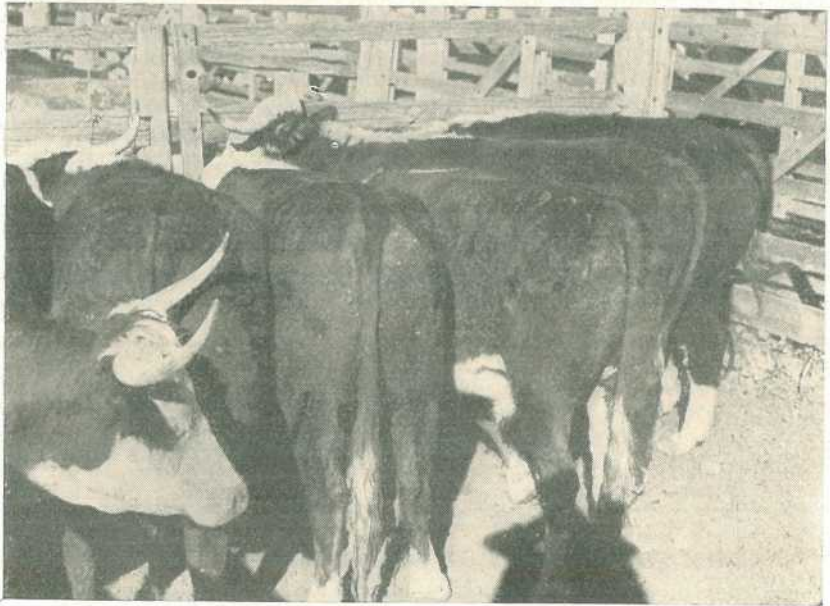


Plate 10.

Two-Year-Old Crop-Fattened Steers Make Ideal Beef.

on which to hold stores, purchase can be made at times when prices are favourable. If the purchase must be made only when the crop is ready to graze, then considerable competition for stores is likely to be experienced and price per 100 lb. will be relatively high. Under the present system of marketing, crop-fattened cattle do not always command the premium for quality which they should, but because they can be placed on the market at the end of the season they do, in fact, usually meet a rather favourable market and may command a few shillings per 100 lb. more than pasture-fattened cattle on the same market.

GUIDE TO FEED REQUIREMENTS.

An attempt is made in this section to set out the approximate food consumption of beef cattle for maintenance and specified weight gains. The data given should be used as a guide only, as owing to the limited number of analyses and feeding trials carried out, variations may occur.

For convenience in estimating food requirements, Kellner's Starch Equivalent Tables are used. Here all food values are related to starch—that is, the starch content of the foods. If it takes 100 lb. of Sudan grass to produce as much liveweight gain as 12 lb. of starch, then Sudan grass is given a starch equivalent value of 12. Similarly, if it takes 100 lb. of a cereal crop to produce as much liveweight gain as 14 lb. of starch, then the cereal crop is given a starch equivalent of 14, and so with all other fodders.

Tables 1 and 2 show the English rationing standards for beef cattle and the food values of some roughages commonly used in Queensland. It is proposed, using these tables, to indicate how fodder crops may be fed to meet the food requirements of two types of steers.

TABLE 1.
ENGLISH RATIONING STANDARDS FOR BEEF CATTLE.

(1) *Appetite and Maintenance Requirements at Different Liveweights :*

Liveweight of Animal.	Appetite (Dry Matter per Day).	Maintenance Requirements.	
		Starch Equivalent (S.E.) or Food Units per Day.	Digestible Protein per Day.
Lb.	Lb.	Lb.	Lb.
500	14.0	3.6	0.36
600	16.0	4.1	0.41
700	17.5	4.6	0.46
800	19.0	5.1	0.51
900	20.5	5.5	0.55
1,000	22.0	6.0	0.60
1,100	23.0	6.5	0.65
1,200	24.5	6.9	0.69
1,300	26.0	7.3	0.73
1,400	27.0	7.7	0.77
1,500	28.5	8.1	0.81
1,600	30.0	8.5	0.85

(2) *Food Requirements in Excess of Maintenance per Lb. of Liveweight Increase :*

Age and Condition of Animal.	Starch Equivalent.	Digestible Protein.
	Lb.	Lb.
Under 2 years—		
Stores	2.0	..
Fresh condition	2.25	0.15
Over 2 years—		
Stores	2.5	0.15
Fresh condition	2.75	0.15
Half-fat	3.0	0.10
Fat	4.0	0.05

TABLE 2.
FODDER VALUES OF COMMONLY USED ROUGHAGES.

	Dry Matter.	Starch Equivalent or Food Units per 100 Lb.	Digestible Protein per 100 Lb.
	%	Lb.	Lb.
Lucerne	20	12	3.0
Cereal Crops	15	14	1.5
Sudan Grass	20	12	1.5
Millet	20	14	1.3
Sweet Sorghum	20	12	1.0

1. Feeding Stores under 2 Years and Weighing about 700 lb.

From Table 1 it is seen that the requirements of a 700 lb. animal are 4.6 lb. starch equivalent (S.E.) for maintenance and 2.0 lb. S.E. for

production of 1 lb. liveweight increase—a total of 6.6 lb. S.E. The amounts of various fodders necessary to meet these requirements are as follows:—

Green lucerne—Table 2 shows that 100 lb. green lucerne contains 12 lb. S.E. Therefore, 55 lb. of green lucerne (yielding 6.6 lb. S.E.) is necessary to maintain an animal and to produce 1 lb. liveweight increase per day.

Cereal crops—Table 2 shows the starch equivalent of cereal crops to be 14. Therefore, 47 lb. of cereal crops are required to yield the 6.6 lb. S.E. necessary for maintenance and 1 lb. liveweight gain.

Sudan grass—As the starch equivalent of Sudan grass is 12, a daily ration of 55 lb. will yield the starch equivalent required for a 1 lb. liveweight increase.

Millet—The starch equivalent of millet is 14, so as with the cereal crops, 47 lb. are necessary for maintenance and 1 lb. liveweight gain.

Sweet sorghum—This feed is similar to green lucerne in starch equivalent value; consequently 55 lb. are necessary for maintenance and 1 lb. liveweight gain.



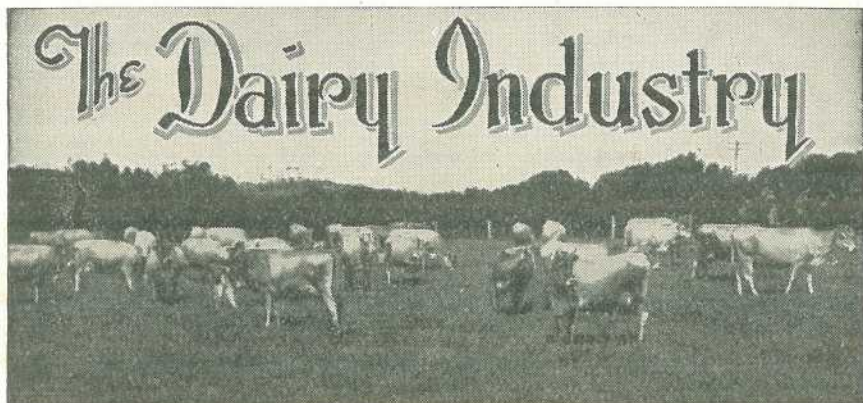
Plate 11.

These Young Bulls are Getting a Good Start in Life on an Oat Crop.

2. Feeding Stores over 2 Years and Weighing about 900 lb.

The requirements of a 900 lb. animal, as shown in Table 1, are 5.5 lb. S.E. for maintenance and 2.5 lb. S.E. for the production of 1 lb. liveweight gain, a total of 8.0 lb. S.E. This amount is supplied by the following weights of various feeds:—

	Per Day.		
Green lucerne (S.E. value 12)	67 lb.
Cereal crops (S.E. value 14)	57 lb.
Sudan grass (S.E. value 12)	67 lb.
Millet (S.E. value 14)	57 lb.
Sweet sorghum (S.E. value 12)	67 lb.



Dairy Shed Practices and Dairy Processing in North Queensland.

D. S. ROBERTSON, Senior Adviser in Dairying.

THE dairying industry in North Queensland is conducted principally on the Atherton Tableland, with smaller settlements of dairy-farmers in the East Palmerston, Julatten and Daintree districts. There are also isolated dairy farms scattered along the coastal sugar lands from Tully north to Cairns, but these are of minor importance when compared with the aggregation of farms in the other areas.

The map in Plate 1 gives a general picture of the dairying districts in the North. Factories are located at the following centres:—

Malanda.—The Atherton Tableland Co-operative Butter Association, which has the largest factory in the North, handles milk and manufactures butter. It has almost 500 suppliers of milk and cream, of whom about one-third supply milk and the others cream.

Millaa Millaa.—The Millaa Millaa Central Tableland Butter Association, which manufactures butter, has about 150 suppliers.

Ravenshoe.—The Evelyn Tableland Dairymen's Co-operative Butter Association, which manufactures butter, draws cream from about 70 farms.

Innisfail.—The Millaa Millaa Central Tableland Co-operative Butter Association operates a branch factory which pasteurises milk for Innisfail and nearby towns. The milk is obtained from East Palmerston and farms at Millaa Millaa.

Townsville.—The Atherton Tableland Co-operative Butter Association has a milk depot from which milk is distributed to the city of Townsville and as far west at Mt. Isa. Ice cream is also manufactured. All milk is forwarded from the head factory at Malanda.

Cairns.—The Polar Star Ice Cream Company manufactures ice cream at its factory and also pasteurises milk for the city of Cairns. About 40 producers supply milk to the factory. Some half of the

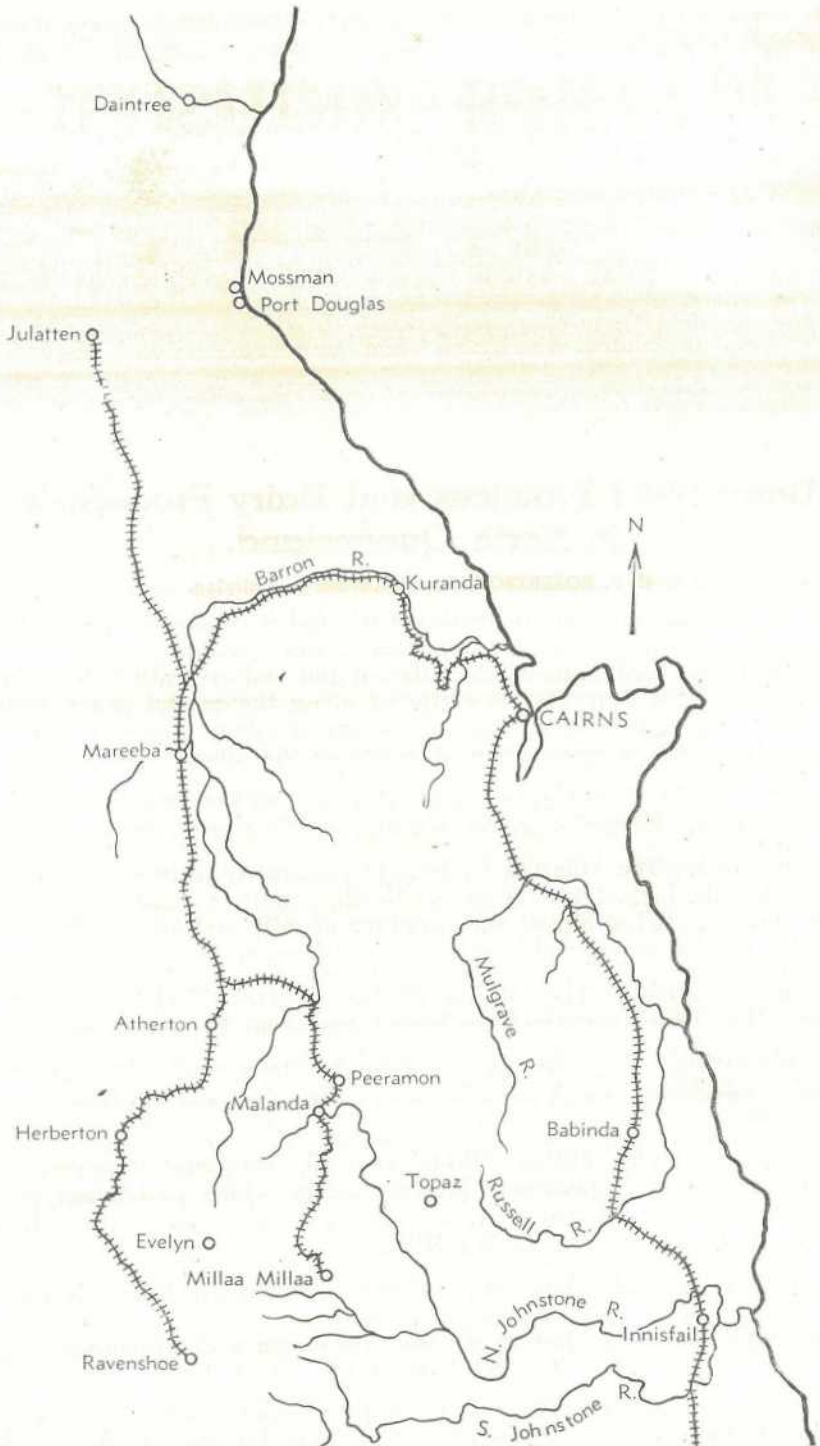


Plate 1.
Sketch Map Embracing the Main Northern Dairying Districts.

requirements are received from these direct suppliers and the remainder is received by road milk tanker from the Malanda factory. The Albion Ice Works acts as distributing agent for the supply of warm milk to Cairns. This milk is drawn from the Atherton Tableland.

Daintree.—The Daintree Co-operative Butter Association manufactures butter for the local trade. It has only 15 suppliers.

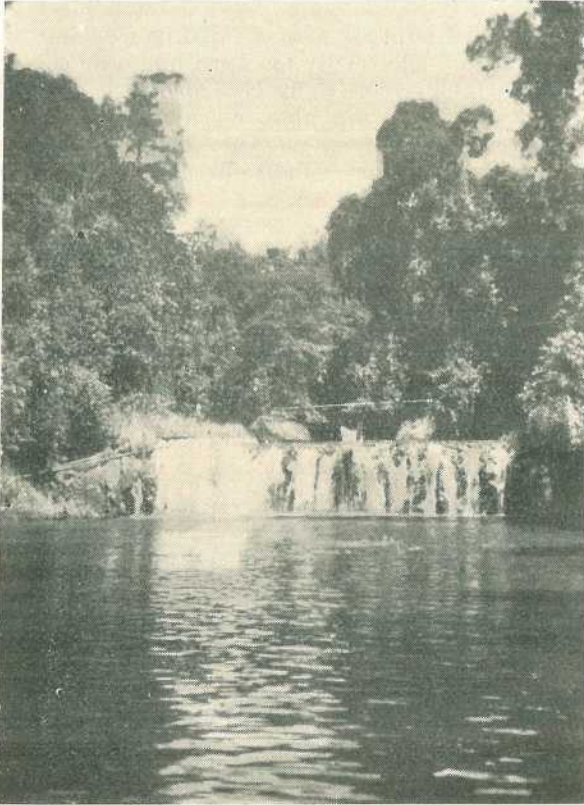


Plate 2.

Malanda Falls, on the Johnstone River.

GENERAL LAYOUT OF DAIRY BUILDINGS.

As the northern districts are in a monsoonal rain area, the layout of dairy buildings differs somewhat from those adopted in the drier districts of the State. In order to combat the heavy rain, a large yard is generally concreted and roofed, and this is used as a drying yard for the cows coming from the pastures to the bails for milking. In addition, the cows are provided with a race in front of the bails so that they may be directed from the building along a set route. This race is concreted and that portion in front of the bail doors is walled and roofed so that rain does not enter through the bail door when it is opened. The large holding yard which forms part of the shed may make the interior of the building gloomy in wet weather, so home electric lighting plants are often installed in the sheds to compensate for the

absence of sunlight. Farmers are adopting the system of concrete races and paths in the vicinity of the shed, as used in the southern States, to minimise the mud problem.

Practically every shed on the Tableland is supplied with an abundance of water, which is used for hosing out the bails and also in tubular water coolers for milk-cooling. Steam sterilizers or set-in coppers provide the hot water for cleaning utensils.

Nearly every shed is fitted with a milking machine, the three-unit plant being most used. Electricity has been laid onto some farms. This power comes from the Barron Falls Hydro-electric Supply Station at Kuranda, and where it is available, all machinery, including water pumps, is powered by electricity. On those farms where milk is separated, skim-milk pumps are usually fitted at the dairy shed to pump the skim-milk direct to the piggery.

DAIRY SHED METHODS.

Many of the producers supply milk for the liquid milk market. They are very conscious of the necessity for strict cleanliness and correct milking methods if the milk is to be of the desired standard, and consequently the following methods are commonly followed:—

- (1) Washing the cow's udder with a cold chlorine rinse and then drying.
- (2) Stimulating milk let-down by washing the udder just before the cow is milked.
- (3) Using the strip cup and discarding the first few squirts of fore-milk.
- (4) Machine-stripping of cows.
- (5) Dipping the teat-cups in a chlorine solution between cows to aid in preventing the spread of mastitis from cow to cow.



Plate 3.

A Well Kept Atherton Tableland Dairy Farm.

Although the above routine may appear complex and time-consuming to those who have never adopted it, farmers in the North who practice it speak highly of the results. Over the past three years an intensive drive with gratifying results has been made by local officers of the Division of Dairying to promote the use of these proven methods.

Milk delivered to the factory is water-cooled on the farm, as there is usually a plentiful supply of running water on every farm. This cooling retards bacterial growth in the milk. All milk is, of course, strained through cotton-wool filter pads on the farm before despatch to the factory. Cream is often stored in water-cooling troughs on the farm while awaiting delivery, and in some cases these troughs have continuously running water. Some farmers are erecting charcoal coolers for holding cream on the farm, while tower coolers for cooling milk are growing in popularity. Dairy refrigerators have been installed on some farms, but owing to the abundance of water and the cool nights, the demand for these on the Atherton Tableland is not so great as in the hotter parts of the State.

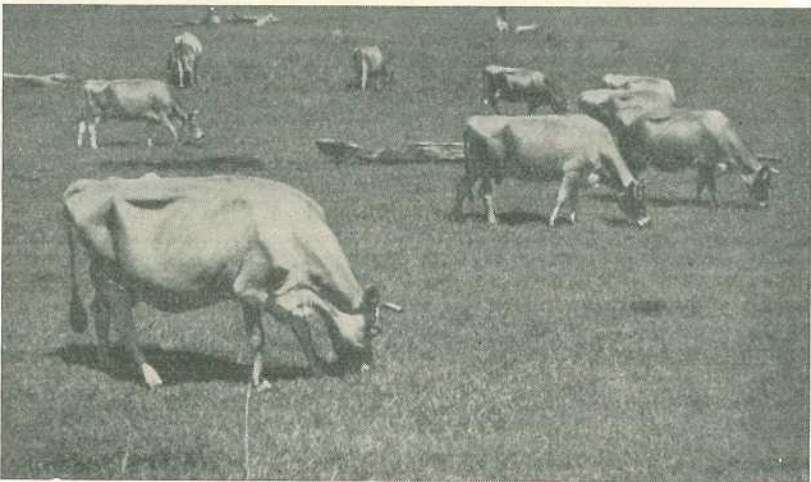


Plate 4.

Stud Jersey Cows on the Atherton Tableland.

TRANSPORT.

The transport of dairy produce from the farm to the factory can be difficult in a high-rainfall area, but the difficulties may be almost insuperable if the roads are poorly surfaced. Fortunately, transport of milk and cream on the Tableland presents no insurmountable difficulties, as nearly all farms are on all-weather roads. Even minor side-roads are gravelled so that they will stand up to the heavy rain. The nature of the roads enables regular deliveries of milk and cream to be made in all seasons. Factories arrange a roster system of deliveries, and trucks arrive at the factory according to a time-table which ensures that factory treatment is not delayed. Milk is collected every day, and the milk deliveries are timed to reach the factories as early as possible. Cream is collected three days a week only. Most carriers use two trucks on the run; this enables one truck to be used to pick up milk as early as possible and the second to go out later for the cream.

LABORATORY CONTROL.

The Malanda factory has equipped a laboratory where control is exercised over the raw and treated produce. This laboratory is under the guidance of officers of the Division of Dairying, and farmers' samples of milk are examined as well as the milk and cream at the factory. Assistance is also given to suppliers of other factories by examining and reporting on samples sent in by them. The laboratory has proved of value in controlling the quality of dairy produce and the efficiency of processing.



Plate 5.

Members of a Tableland School Calf Club Parade Their Charges.

MARKETS.

The main markets for milk produced in North Queensland are to be found on the coast. By mutual agreement, areas for the supply of pasteurised milk are as follows:—

- (1) The Polar Star Ice Cream Company, of Cairns, supplies Cairns and the immediate neighbourhood.
- (2) The Millaa Millaa Central Tableland Co-operative Dairy Association branch milk factory at Innisfail supplies milk to the area extending along the coast from Gordonvale to Ingham.
- (3) The Atherton Tableland Butter Association branch milk factory at Townsville distributes milk as far west as Mt. Isa.

The Malanda factory distributes milk in Atherton and Mareeba.

The butter factories on the Tableland market the butter produced through the North Queensland Co-operative Marketing Federation. This body is responsible for the storage and distribution of the butter, and all factories market under the trade mark "Sunbeam." The refrigerated space necessary for storing the butter is supplied by the Malanda factory, where large rooms are available to the Federation. The local trade takes the bulk of the butter produced in the North, but in the flush season, generally from January to May, some butter is packed for export. This

is railed from the Malanda cold stores to Cairns, where it is loaded direct onto overseas ships. Commonwealth officers grade the butter before consignment at Malanda. Butter is also packed for transport to centres in the Gulf and to towns in the far west. This is transported by rail. The factory at Daintree does not market through the Federation but supplies direct to the town of Mossman, any surplus being sold in Cairns.

ADVISORY SERVICES.

The North is well served in respect of official farm advisory services. The Department of Agriculture and Stock also operates a Regional Experiment Station at Kairi, on the Tableland, which incorporates an experimental dairy in which modern dairying methods are demonstrated. Under the Commonwealth Dairy Industry Efficiency Scheme, demonstration farms are being conducted by the owners under the guidance of Departmental officers in respect of various demonstration projects.

Junior Farmer Clubs, which are strong on the Tableland, are the means of imparting to the young farmer the latest information pertaining to the industry in which he is engaged. Members of these clubs are granted regular trips to southern districts for the purpose of comparing methods.

School Project Clubs are a valuable medium of imparting information on dairying to the school child and fostering in him an interest in his future work.

FACTORY TREATMENT.

The North Queensland factories are well equipped with efficient machinery for the handling and treatment of dairy produce. This is reflected in the excellent results obtained in factory surveys of milk quality, and also in the standard of bacteriological and chemical results



Plate 6.

The Millaa Millaa Central Tableland Butter Association's
Milk Factory at Innisfail.

in the Queensland Butter Improvement Service. Automatic butter-cutting, packing and patting machinery is a feature of the larger factories, while bottling and can-washing machines are used.

The Atherton Tableland Co-operative Butter Association, Malanda, handles about 1,000,000 gallons of milk yearly for the market milk trade. The output of butter for the past three years was—

					Lb.
1951-52	..	..	..	..	1,815,604
1950-51	..	..	..	..	2,389,032
1949-50	..	..	..	..	2,328,094

The Millaa Millaa Central Tableland Co-op. Dairy Association pasteurises about 250,000 gallons of milk yearly at its Innisfail factory and its production of butter at its Millaa Millaa factory in recent years was—

					Lb.
1951-52	..	..	..	..	902,220
1950-51	..	..	..	..	915,510
1949-50	..	..	..	..	901,220

The production of butter at the Evelyn Tableland Co-operative Dairy Association factory at Ravenshoe and the Daintree Co-operative Dairy Association factory at Daintree was—

	1951-52.	1950-51.	1949-50.
	Lb.	Lb.	Lb.
Ravenshoe	.. 419,601	538,194	497,438
Daintree	.. 80,548	81,689	83,602

FUTURE POSSIBLE DEVELOPMENTS IN THE INDUSTRY.

The greatest scope for future development lies in the maximum use of milk and its products. The present market for milk grew up out of the needs arising from the wartime concentration of troops on the Tableland. This market was extended to the civilian population, and has not nearly reached its maximum. However, for economic handling, the trend in the future may be in the direction of milk products, such as cheese and dried milk. Large numbers of Europeans live on the Coastal Plain and in the area adjacent to Mareeba and Dimbulah, and it is there that a market exists for various types of cheese. At present, all cheese consumed in the North is made in southern Queensland, and the new market, adjacent to the dairying areas of the North, will no doubt eventually be supplied from this area. Such new markets will provide a welcome stimulus to the industry, and will assist in the better farming of what now may be classed as marginal lands. It is an accepted economic fact that healthy markets stimulate and encourage better farming methods and better utilization of the land.

Therefore, any expansion of the industry in this part of the State may well lie in the direction of cheese and milk products.

Dairy Farm Competition, 1951-52.

R. A. PAUL, Director of Field Services, Division of Dairying.

AS a result of experience gained in the previous two Dairy Farm Competitions, a number of alterations were made in the conditions and conduct of the competition under review.

Firstly, the periods of judging were reversed, so that the first judging was carried out between September 1 and November 30, 1951, and the second judging between February 1 and April 30, 1952. The reason for the change was to allow of a quick follow-up with the holding of field days, which was not practicable under the previous system, as results could not be finalised before the onset of the wet months. Secondly, the number of zones was decreased from 16 in previous competitions to 11. Lastly, a division was made into six main sections, in each of which first and second prizes were awarded in addition to first, second and third prizes in the "Whole Farm" competition.

The alterations made had the desired effect of widening farmer interest, and a total of 194 entries was received, compared with 104 in the previous competition. Unfortunately, severe drought conditions prevailed throughout the State during almost the complete period of the competition; 20 farmers withdrew between the closing date of entries and the first judging, and a further 21 before the second judging, leaving a total of 153 farmers competing.

Due to the large number of entries received in Zone 9 it was decided to divide it and include a further zone, shown as Zone 9A. The six main sections on which the farms were judged are shown below; these were further divided into 49 sub-sections for the assistance of officers carrying out the judging.

Section.	Points.
A. Efficiency of Land Usage	1,000
B. Farm Buildings	460
C. Dairy Buildings	380
D. Herd Management	950
E. Farm Economy	600
F. Animal Feeding	610
Total	4,000

Prizes awarded in each zone were:—"Whole Farm" Competition: First, £50 and Trophy; Second, £30 and Pennant; Third, £20 and Certificate. Sectional Prizes: First, £15 and Pennant; Second, £5 and Certificate.

The competition was financed from the Commonwealth Dairy Industry Efficiency Grant and conducted and judged by officers of the Divisions of Animal Industry and Dairying.

Prize-winners in the 1951 Competition were handicapped 80 points for first, 40 for second and 20 for third in the "whole farm" competition. No handicaps applied in the sections.

LIST OF PRIZE-WINNERS.

"WHOLE FARM" COMPETITION.

Zone.	Entrant.	Handicap.	Net Points.
1	1. S. A. Cramb, Upper Caboolture .. .. .	..	2,518
	2. W. Hamilton, Armstrong Creek, <i>via</i> Dayboro' .. .. .	..	2,484
	3. T. J. Bennetts, Moggill .. .. .	..	2,474
2	1. R. J. Barton, Veresdale .. .. .	..	2,903
	2. H. L. Stark, Kalbar	80	2,824
	3. P. N. and S. P. Rackley, Harrisville .. .. .	..	2,807
3	1. V. E. Millewski, Minden .. .. .	..	3,053
	2. A. J. Egan, Toogoolawah	20	2,820
	3. J. P. Schlecht, Lark Hill	40	2,658
4	1. N. R. Potter, Wellcamp .. .. .	..	2,765
	2. A. E. Pechey, Pechey	40	2,693
	3. C. H. B. Huey, Sabine	40	2,518
5	1. I. B. Skerman, Kaimkillenbun	80	2,724
	2. J. A. Smith, Chinchilla .. .. .	..	2,603
	3. A. T. Curd, Jandowae .. .. .	..	2,501
6	1. P. Kerlin, Killarney .. .. .	..	3,039
	2. R. J. Browne, Yangan	80	2,865
	3. M. C. Lester, Glengallan .. .. .	..	2,834
7	1. A. W. Webster, Maleny .. .. .	..	3,005
	2. J. J. Ahern, Conondale .. .. .	..	2,923
	3. W. Allen and Sons, Chatsworth	20	2,862
8	1. W. and E. Adlem, Kingaroy .. .. .	..	2,726
	2. F. H. Sippel, Redgate	40	2,576
	3. T. J. Champney, Crawford	80	2,546
9	1. J. C. C. McCall, Tiaro .. .. .	..	2,609
	2. Carswell and Co., Gootchie .. .. .	..	2,496
	3. W. Pitt, Childers .. .. .	..	2,381
9A	1. W. H. Doss, Degilbo .. .. .	..	2,801
	2. R. R. Radel, Coalstoun Lakes .. .. .	..	2,719
	3. P. E. Paulsen, Mundubbera .. .. .	..	2,609
10	1. G. E. Muller, Mackay	80	2,794
	2. H. J. Kraatz and Son, Etna Creek .. .. .	..	2,633
	3. F. J. Bowman, Littlemore .. .. .	..	2,571
11	1. R. S. Griffiths, Moregatta	80	2,848
	2. H. Sigley, Jaggan	40	2,708
	3. D. N. Beattie, Chilverton .. .. .	..	2,586

SECTIONAL DETAILS.

Table 1 has been compiled to give an overall picture of the average efficiency of the competitors in each section of the competition. The average score of all the competitors in any zone is given, together with that of the competitor gaining the highest score in that section. A study of the table shows very clearly that many of the farmers are highly efficient in particular sections, but it also indicates that the majority of the entrants have ample scope to improve before they can hope to compete with the more efficient, as represented by the highest score.

TABLE 1.

HIGHEST PERCENTAGE SCORE IN EACH SECTION AND THE AVERAGE PERCENTAGE SCORE OF ALL COMPETITORS.

Zone.	—	Sec. A.	Sec. B.	Sec. C.	Sec. D.	Sec. E.	Sec. F.
1	Highest Score ..	77.0	82.7	91.3	68.8	60.8	48.9
	Average Score ..	69.4	72.6	83.5	52.1	34.1	41.8
2	Highest Score ..	80.5	90.4	97.5	66.9	69.0	80.4
	Average Score ..	75.1	83.5	88.9	61.6	40.0	74.6
3	Highest Score ..	88.5	92.7	87.9	69.9	58.5	83.1
	Average Score ..	68.9	78.6	82.6	53.3	28.8	65.5
4	Highest Score ..	75.5	82.5	79.2	75.1	51.0	77.0
	Average Score ..	47.9	70.4	73.5	62.2	35.4	61.5
5	Highest Score ..	60.5	90.4	90.5	71.3	54.6	79.7
	Average Score ..	51.7	82.9	86.5	65.2	40.1	69.5
6	Highest Score ..	83.8	90.0	96.1	84.7	57.8	84.5
	Average Score ..	63.6	72.8	85.5	68.8	37.8	69.8
7	Highest Score ..	61.5	92.4	98.4	77.2	95.8	83.8
	Average Score ..	43.1	75.9	81.7	59.7	57.1	72.5
8	Highest Score ..	78.3	84.0	86.3	70.0	58.8	75.6
	Average Score ..	59.6	69.1	70.8	52.0	29.5	55.6
9	Highest Score ..	78.0	86.0	92.9	68.3	62.7	70.2
	Average Score ..	57.4	75.3	78.0	47.0	20.6	57.0
9A	Highest Score ..	82.5	84.8	80.3	70.0	43.3	64.8
	Average Score ..	66.3	62.7	64.4	45.6	20.1	52.0
10	Highest Score ..	83.7	92.3	92.1	70.8	40.0	75.7
	Average Score ..	69.8	82.5	84.5	56.5	23.8	61.6
11	Highest Score ..	71.5	85.4	88.0	72.7	73.5	80.8
	Average Score ..	63.8	68.1	82.2	60.5	49.9	68.6
All Zones	Average Score ..	61.5	74.0	78.7	54.9	33.1	61.7

Section A. Efficiency of Land Usage.

This section includes the provision of pastures and crops; conservation and storage of hay, silage and grains; and the maintenance and conservation of soil fertility. The average score for all competitors was 61.5% of the maximum points for the section. A number of competitors scored very well in this section, notably V. E. Millewski (Minden), who was the winner of the section in Zone 3. Mr. Millewski's farm consists of 100 acres of what was originally brigalow scrub land, with 46 acres under cultivation. The crops grown include oats, wheat, mangolds, white panicum, sorghum, maize, Poona pea, and lucerne. Soil fertility is maintained by the use of animal manure, whilst rotational grazing is carried out with the aid of two electric fences. A spray irrigation plant is available when required. A good hayshed is provided and ample lucerne and cereal hay is conserved for the stock. Further reserves are provided in the form of grain in a vermin-proof shed and tank.

Mr. P. Kerlin (Killarney), who won this section in Zone 6, also scored heavily. Improved pastures of Rhodes grass and kikuyu have been laid down, whilst cultivations include Japanese millet, oats and canary grass, with wheat and barley for grain. An underground concrete silo is on the property, whilst a hayshed contains lucerne hay, and grain is stored in a vermin-proof shed. Lime is used on the pasture land, and slight erosion troubles are being countered by the establishment of grassed waterways, ploughing-in of leguminous crops and stubble mulching.

The judges' remarks in general indicate that further attention is required in relation to fodder conservation particularly and also to soil conservation and maintenance of fertility.

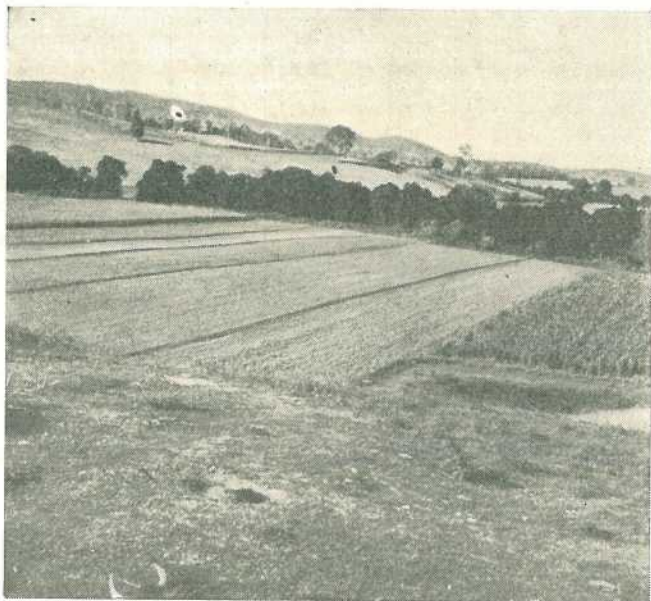


Plate 1.

Cultivation Paddocks on the Property of Mr. W. Hamilton, Dayboro.
This farm won Section A (efficiency of farm usage) in Zone 1.

Section E. Farm Buildings.

This section includes farm layout, farm buildings and farm machinery. The average points scored in the section were 74.0% of the maximum, indicating a satisfactory standard of efficiency in relation to the provision and care of buildings and machinery, but further attention could be paid to subdivision and provision of adequate watering points.

Section C. Dairy Buildings.

This section includes dairy buildings, layout, equipment and milking methods. Here again, with an average points score of 78.7%, the standard is satisfactory. The judges' reports indicate that dairy buildings and equipment are in very good condition and well cared for, but that in some instances improved layout of the yards and buildings would result in a speeding up of milking operations.

Competitors who scored very creditably in this section are I. McDougall (Veresdale), winner in Zone 2, and W. Allen and Sons (Chatsworth), winners in Zone 7. These premises are described in some detail in the article on the Dairy Building and Equipment Competition published in the *Queensland Agricultural Journal* for December, 1951, and January, 1952.

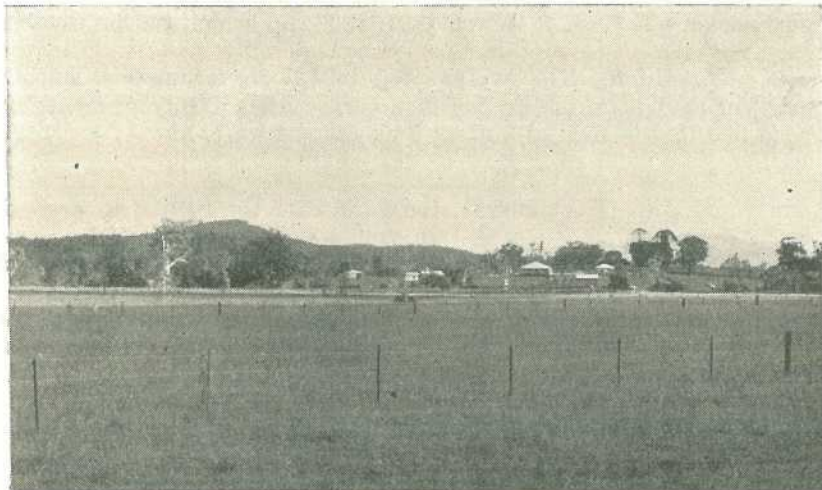


Plate 2.

Well Subdivided Pasture and Cultivation Paddocks on the Property of
Mr. G. A. Hinze, Oxenford.

Section D. Herd Management.

This section includes breeding and management of the herd sire, control of service, seasonal calving practices, herd records, disease control measures and average production per cow.

The average points score in this section was 54.9% of the maximum points, a situation that cannot be considered satisfactory. Too few farmers used bulls of known production backing, and the figures show that of the 254 bulls in use, although 216 (85%) were from purebred parents, 68 of these (31%) had no record of production backing in the near male or female line. It does appear that those farmers supplying the wholemilk market are more at fault in this regard, the majority being content to get the cows in calf and to buy in replacements rather than breed their own. This is a short-sighted policy in relation to increased production from the farm, particularly in view of the fact that trials carried out by the Division of Animal Industry show that healthy, quick-growing calves can be raised very economically on as little as 25 gallons of wholemilk.

Adequate control of service does not appear to be exercised, as only 56% of the entrants made an attempt to calve the cows down in the optimum months. Statistics compiled from records obtained from the Grade Herd Improvement Scheme show that on a State basis an increase in production of 17% is to be expected by calving down in the months July to September compared with the other months of the year.

Some slight variations in these months apply to the various districts, but in general, calving from June to October will give an appreciable increase of approximately 15% over the other months of the year.

Due to drought conditions prevailing for almost the whole of the period February 1, 1951, to January 31, 1952, for which the production figures were taken, cow productions are considerably lower than in the previous competition. The average fell to 127 lb. commercial butter, compared with 173 lb. in the previous competition. Only one entrant exceeded 300 lb. commercial butter; 8 exceeded 250 lb. and 11 exceeded 200 lb.

Mr. A. M. Lee (Goomburra), the winner of the section in Zone 6, had an average production of 331 lb. commercial butter from 18 cows. Mr. Lee's herd is composed mainly of Jersey grade cows, with only a few registered. The sire in use has very good production backing and is strictly controlled. All cattle are branded and a dry period of eight weeks aimed at, whilst cows close to calving are "steamed up" on good cultivation feed prior to freshening.

Section E. Farm Economy.

This section includes production of commercial butter per acre, labour cost per pound of commercial butter, and method of farm bookkeeping.

The average points score was 33.1% of the maximum points. This is not a satisfactory position, although the low average has been affected very considerably by the severe drought, which while lowering production per acre raised the labour cost and so in both instances decreased the points scored.

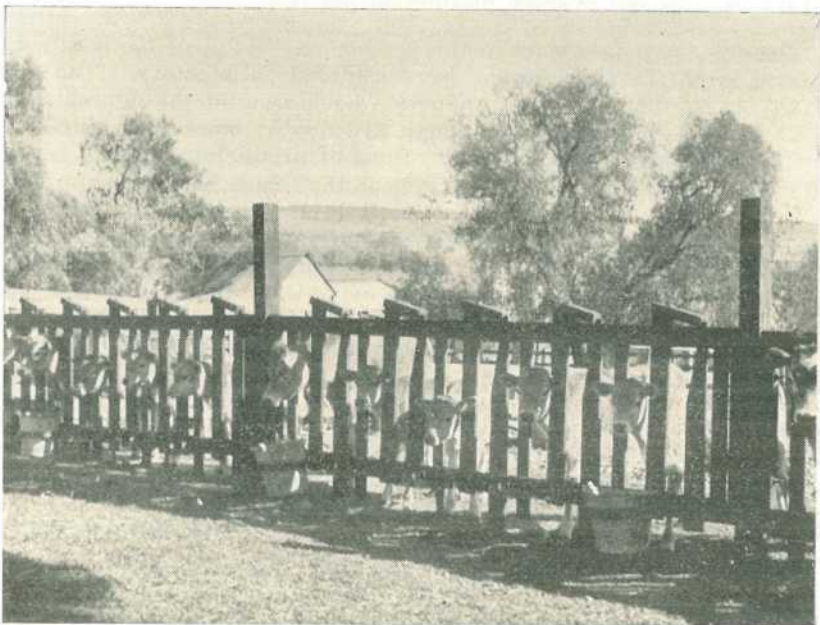


Plate 3.

A Convenient Type of Fixed Calf-Feeding Bails on the Property of Messrs. W. J. and A. L. Semgreen, Coolabunia West.

The average production per acre for all competitors was 15 lb. commercial butter, compared with 23 lb. in the previous competition. Eleven entrants had a production over 50 lb., 3 over 75 lb. and 1 over 100 lb. The Estate A. A. Alcorn (Maleny), winner of the section in Zone 7, had a production of 134 lb. per acre, whilst A. W. Webster (Maleny), winner of the second prize in the section in the same zone, had a production of 99 lb. per acre, and P. Ruddle, also of Maleny, a production of 92 lb. per acre. These results have been achieved by sound management practices, including renovation and fertilizing of pastures, subdivision and use of electric fences, provision of shade, shelter and a plentiful water supply, and extensive use of animal manure.

Section F. Animal Feeding.

This section includes management of young stock, pig-raising, and condition of stock generally. The average points score in the section was 58.8% of the maximum points.

In Zone 1 none of the competitors kept pigs and this is reflected in the low scores shown in Table 1 for this zone.

Better facilities are required for the raising of young stock in that more and better paddocks are required to raise healthier calves and heifers as herd replacements.

TABLE 2.
FARM ECONOMY DETAILS—AVERAGE AND HIGHEST FIGURES.

Zone.	—	Acres.	Cows.	Acres per Cow.	Production. (Lb. Commercial Butter).	
					Per Acre.	Per Cow.
1	Average	288	55	5.2	26	139
	S. A. Cramb	114	29	3.9	46 (56)	182
2	Average	340	51	6.6	29	189
	N. J. Barton	200	65	3.1	64	197 (287)
3	Average	324	57	5.4	20	112
	V. E. Millewski ..	100	30	3.3	65	215
4	Average	343	38	9.0	23	208
	N. R. Potter	300	37	8.1	36 (37)	294
5	Average	835	68	12.2	13	161
	I. B. Skerman	776	60	12.9	17 (21)	221 (227)
6	Average	194	28	7.0	30	207
	P. Kerlin	150	27	5.5	49 (60)	271 (331)
7	Average	251	67	4.0	42	156
	A. W. Webster	148	72	2.0	99 (134)	204 (236)
8	Average	385	52	7.4	17	126
	W. Adlem	310	48	6.4	46	295
9	Average	1,167	57	20.2	4	82
	J. C. C. McCall ..	59	22	2.7	41 (88)	111 (155)
9A	Average	706	70	10.0	8	84
	W. H. Doss	500	54	9.2	16 (21)	144 (163)
10	Average	497	57	8.6	11	94
	G. E. Muller	120	34	3.5	40	142 (177)
11	Average	269	59	4.5	39	179
	R. S. Griffiths ..	210	56	3.7	70	261
Average all Zones ..		481	57	8.4	15	127

In general, satisfactory pig accommodation is provided and breeding stock are of good quality, but judging from the number of pigs sold from the farms, and the number of calves raised, better utilisation could be made of the available skim-milk to raise more pigs, more calves or both. Skim-milk is a very valuable foodstuff high in protein, and full use should be made of it in animal feeding as a supplement to other feeds rather than as the main food, as is too often the case.

Table 2 has been compiled to show in each zone the average number of acres used for dairying, the average number of cows, and the average production per acre and per cow compared with the figures of the winner of the first prize in the "whole farm" competition. The figures in brackets are the highest obtained in the zone. The number of cows has been obtained by adding the cows milking and dry each month and dividing by 12.

The table shows that there are very significant differences in average carrying capacity and production between zones, as can be seen by comparing Zones 7 and 9.

GENERAL.

It is very pleasing to be able to report the increased interest shown in the competition and to learn that such competitions are playing their part in increasing efficiency in dairy-farm management. As a direct result of the competitions and the Field Days held in conjunction with them, officers of the Department have been approached by farmers for advice regarding pasture establishment and management, selection of suitable sires, varieties of winter and summer crops, cooling facilities for dairy produce, layout of buildings, yards, etc., and many other aspects of management.

HAVE YOUR SEEDS TESTED FREE

The Department of Agriculture and Stock examines FREE OF CHARGE samples representing seed purchased by farmers for their own sowing.

The sample submitted should be representative of the bulk and a covering letter should be sent advising despatch of the sample.

MARK YOUR SAMPLE

Sample of _____ seed
 Drawn from _____ bags
 Representing a total of _____
 Purchased from _____
 Name and Address of Sender _____
 Date.....

SIZE OF SAMPLE

Barley - 8 oz.	Oats - 8 oz.
Beans - 8 oz.	Peas - 8 oz.
Grasses 2 oz.	Sorghum 4 oz.
Lucerne 4 oz.	Sudan - 4 oz.
Milletts 4 oz.	Wheat - 8 oz.
Vegetable Seeds - ½ oz.	

SEND YOUR SAMPLE TO—STANDARDS OFFICER,
 DEPARTMENT OF AGRICULTURE AND STOCK, BRISBANE.

Pure-Bred Dairy Cattle Production Recording— Details for 1951-52.

S. E. PEGG, Chief Adviser, Herd Recording Section.

RECORDS OF COWS COMPLETING LACTATION RECORDS DURING THE YEAR ENDED
30TH JUNE, 1952.

EXPLANATION OF TABLE.

Owners are listed alphabetically within each breed and cows grouped according to name of sire.
Cows milked three times a day during some period of their lactations are indicated by an asterisk (*).

In brackets after the owner's name are shown the breed and the number of cows whose production records are given.
The butterfat production required for entry to the Advanced Register varies according to the age, and is as follows:

Junior 2-year-old (under 2½ years at calving)	230 lb. butterfat
Senior 2-year-old (between 2½ and 3 years at calving)	250 lb. butterfat
Junior 3-year-old (between 3 and 3½ years at calving)	270 lb. butterfat
Senior 3-year-old (between 3½ and 4 years at calving)	290 lb. butterfat
Junior 4-year-old (between 4 and 4½ years at calving)	310 lb. butterfat
Senior 4-year-old (between 4½ and 5 years at calving)	330 lb. butterfat
Mature (5 years and over at calving)	350 lb. butterfat

Cow.	Sire.	Age.	Days Re- corded.	Production.		
				Milk.	Test.	Butter- fat.
				Lb.	%	Lb.

AUSTRALIAN ILLAWARRA SHORTHORN.

BRADFORD, A., Yangan, *via* Warwick (A.I.S., 3).

Kanangra Sadie	Ashstead Royal Major	M	210	5,409	3.9	212
Kanangra Duchess	Bileena Venture	J.4	240	3,987	4.2	166
Kanangra Melba 2nd	Bileena Venture	S.4	273	6,313	4.3	273

CROOKEY, J., Allora (A.I.S., 5).

Arolla Lucy 3rd	Arolla Jupiter	J.2	240	4,290	4.4	187
Arolla Ruth 5th	Bingleigh Vision's Sultan	J.2	273	6,035	4.0	243
Arolla Pet 3rd	Bingleigh Vision's Sultan	S.2	273	9,249	4.4	405
Arolla Beauty 16th	Bingleigh Premier	J.3	273	5,452	4.0	269
Arolla Pet 4th	Blacklands Limerick	J.3	273	6,823	4.1	279

DAVIS, W. D., Chinchilla (A.I.S., 18).

Wamba Gem 4th	Bingleigh Rosette's Victory	J.2	180	3,150	4.0	126
Faversham Daisy 5th	Croydon Marchese	M	273	7,378	3.3	243
Wamba Thelma	Fairvale Noble	J.2	273	5,941	3.6	212
Wamba Dahlia 3rd	Fairvale Noble	J.2	273	5,882	3.6	209
Wamba Mafalda	Fairvale Noble	J.2	240	5,301	3.9	206
Wamba My Gift 3rd	Fairvale Noble	J.2	273	5,255	3.6	181
Wamba Grace 2nd	Fairvale Noble	J.2	273	5,167	3.5	181
Wamba Gem 3rd	Fairvale Noble	J.2	210	3,186	3.8	122
Wamba My Gift 2nd	Fairvale Noble	S.2	273	7,152	3.5	253
Wamba Pride 2nd	Fairvale Noble	S.2	240	5,163	3.7	191
Wamba Ruby	Fairvale Noble	S.2	273	4,727	3.9	186
Fairvale Doris 13th	Fairvale Reward	M	273	7,928	4.2	335
Blacklands Envy 58th	Parkview Arbitrator	J.2	240	4,500	3.4	154
Blacklands Foremost 7th	Parkview Arbitrator	J.2	150	2,700	3.5	95
Bunyaview Mafalda 8th	Trevor Hill Reflection	M	273	6,351	4.0	257
Bunyaview Rosette 6th	Valera Jean's Pride	J.2	273	7,509	3.7	280
Bunyaview Thelma 17th	Valera Jean's Pride	J.3	273	7,890	4.1	321
Bunyaview Mafalda 9th	Valera Jean's Pride	S.3	240	3,918	3.7	145

DAY, V. S., Veresdale, *via* Beaudesert (A.I.S., 5).

Applegarth Miss Rosina	Applegarth Rosemount	M	273	7,063	3.7	284
Ellismore Rosina	Bingleigh Jean's Monarch	J.2	273	6,185	4.0	250
Bingleigh Rosette 5th	Bingleigh Jean's Sultan	M	273	8,029	4.6	371
Ellismore Fairy Queen 2nd	Cedar Valley Prospector	J.2	273	5,060	3.7	185
Millstream Beryl 16th	Sunnyview Bruce	M	273	9,970	3.6	354

ENGLISH, J. K., Malanda (A.I.S., 7).

Eachamvale Rosie 20th	Blacklands Sperry	J.2	273	6,886	4.6	318
Eachamvale Dainty	Blacklands Sperry	S.3	273	6,905	4.0	277
Eachamvale Rosette	Blacklands Sperry	S.3	273	6,400	4.1	261
Eachamvale Rosy 25th	Cedargrove Commodore 2nd	M	273	8,924	4.1	365
Eachamvale Crimson	Eachamvale Standard	M	273	7,113	3.9	277
Eachamvale Lovely	Meadowvale He'll Do	M	240	6,396	4.3	274
Eachamvale Wattle	Meadowvale He'll Do	M	210	6,924	4.0	274

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Recorded.	Production.		
				Milk.	Test.	Butter-fat.
				Lb.	%	Lb.
EVANS, E. G., Maleny (A.I.S., 5).						
Lauraven Mermaid	Arley Statesman 32nd	J.2	273	5,538	4.2	231
Lauraven Buttercup 3rd	Arley Statesman 32nd	J.2	273	5,273	4.4	231
Lauraven Dawn 2nd	Arley Statesman 32nd	J.2	273	6,251	3.5	217
Lauraven Dawn	Arley Statesman 32nd	S.2	273	6,544	3.5	231
Cedargrove Lily 9th	Rosenthal Scout	S.3	273	6,447	3.8	244
EVANS, J. F., Malanda (A.I.S., 6).						
Evansvale Champion	Evansvale Silvermine	J.2	150	5,061	4.0	204
Evansvale Velvet	Penrhos Bounty	J.3	180	4,914	4.8	235
Beechwood Mignonette 60th	Rosemount Cherry's Prince	M	273	7,634	4.3	329
Evansvale Bonny 6th	Sunnyview Principal	J.2	240	5,469	3.7	203
Evansvale Floss 6th	Sunnyview Spearvale	J.2	273	6,013	3.8	229
Evansvale Joan	Sunnyview Spearvale	J.3	273	6,301	4.7	296
EZZY, A. F., Mt. Emlyn, <i>via</i> Millmerran (A.I.S., 8).						
Jamberoo Winnie 2nd	Brooklyn Terrace Banker	M	240	6,123	4.0	247
Jamberoo Dignity 5th	Murray Bridge Florrie's Prince	M	273	9,956	4.1	407
Nullabowry Winnie 3rd	Jamberoo Banner	J.2	273	5,124	3.4	194
Nullabowry Dignity	Jamberoo Banner	S.2	273	7,268	3.5	287
Nullabowry Rose 3rd	Jamberoo Banner	J.3	273	7,185	4.3	306
Nullabowry Princess 4th	Jamberoo Banner	S.3	180	3,846	3.6	153
Nullabowry Rose 2nd	Jamberoo Banner	J.4	273	6,425	3.9	248
Nullabowry Winnie 2nd	Jamberoo Banner	M	273	6,403	4.0	254
FAIRYMEAD SUGAR CO. LTD., Bundaberg (A.I.S., 4).						
Alfa Vale Betsy 2nd	Alfa Vale Paisley	M	273	7,490	3.9	291
Tantitha Star	Beauna Vista Blamey 2nd	M	273	5,545	3.7	204
Tantitha Clover	Greyleigh Fortune	J.2	273	7,182	3.1	226
Tantitha Princess 2nd	Sunny View Sun Valley	S.2	273	7,025	3.0	212
FLESSER, W., Boyland, <i>via</i> Beaudesert (A.I.S., 6).						
Roshill Queenie 21st	Dnalwon King Lear	J.2	273	5,270	3.6	188
Roshill Calm 18th	Dnalwon King Lear	J.2	180	3,588	3.2	116
Roshill Melba 6th	Dnalwon King Lear	J.3	273	5,270	3.6	188
Roshill Almond 14th	Dnalwon King Lear	J.3	273	5,588	3.3	185
Roshill Redberry 16th	Dnalwon Felix	J.2	273	6,415	3.8	246
Roshill Felix Queenie	Dnalwon Felix	S.2	273	6,173	3.6	223
FOGG, J. H., Toogoolawah (A.I.S., 16).						
Aynesley Florrie 7th	Aynesley Ethel's Victory	S.2	90	1,058	3.7	39
Ventnor Jewel 2nd	Berry Carson	S.2	180	3,807	3.6	139
Ventnor Heather 3rd	Berry Carson	S.2	240	3,294	4.1	136
Ventnor Mab 41st	Berry Carson	J.3	273	6,581	4.2	276
Ventnor Marie 28th	Berry Carson	J.3	273	6,595	3.9	260
Ventnor Cherry	Berry Carson	S.3	273	4,130	3.6	150
Ventnor Shamrock 4th	Berry Carson	M	273	5,188	4.0	207
Aynesley Jane 16th	Haroldae Dandy	S.3	90	1,377	4.2	58
Morden Dahlia 8th	Fairvale Red Prince	S.2	273	4,442	3.8	168
Cedar Valley Rosette	Kyabram Masterpiece	J.4	273	9,145	3.9	357
Cedar Valley Rosette	Kyabram Masterpiece	J.4	305	9,695	3.9	376
Cedar Valley Rosette	Kyabram Masterpiece	J.4	330	10,221	3.9	396
Aelkor Rosette	Ventnor Carson 11th	S.2	150	2,601	4.0	105
Aelkor Helen	Ventnor Eros 3rd	J.2	273	5,710	3.9	226
Ventnor Eros's Judy	Ventnor Eros 3rd	S.2	273	4,439	4.1	181
Fernbank Ventnor's Licorice	Ventnor Romeo 4th	S.2	273	5,833	3.9	230
Aelkor Licorice	Ventnor Romeo 4th	S.2	273	4,577	3.5	158
Wilga Plains Ruby 18th	Wilga Plains Guardsman	S.4	273	4,548	3.6	163
FOWLER, T. W., Pittsworth (A.I.S., 5).						
Kenstan Vision 2nd	Alfa Vale Mindful	J.2	273	5,171	4.2	220
Kenstan Sunbeam	Alfa Vale Mindful	J.2	273	7,143	4.0	287
Kenstan Norma 2nd	Alfa Vale Mindful	S.2	273	7,592	4.6	352
Kenstan Model	Alfa Vale Mindful	S.2	273	7,887	4.4	317
Kenstan Kitty	Fairvale Janitor	S.2	273	7,896	4.2	331
HARCH, E., Laidley (A.I.S., 3).						
Newhaven Blossom 2nd	Blacklands Enthusiast	S.3	273	6,291	3.9	247
Newhaven Jean	Blacklands Enthusiast	S.3	273	6,202	4.0	246
Trevlac Spotted Rose	Valera Handsome's Perfection	J.2	273	4,294	4.3	184
HARVEY, C. and B. E. C., Nobby (A.I.S., 4).						
Mt. Camp Fuschia 12th	Rosenthal Douglas	S.2	240	5,679	4.0	227
Mt. Camp Scarlet 4th	Rosenthal Douglas	S.3	240	6,075	4.0	245
Yevrah Iris	Trevor Hill Skipper	J.2	273	5,825	3.8	224
Yevrah Ann	White Park Prince Royal	J.2	273	4,407	4.7	208

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Re- corded.	Production.		
				Milk.	Test.	Butter- fat.
				Lb.	%	Lb.
HEADING, C. A., Maleny (A.I.S., 7).						
Wilga Plains Poppy 8th ..	Blacklands Fairy Lad ..	J.2	273	3,794	3.8	145
Wilga Plains Necklace 3rd ..	Headlands Red Jacket ..	M	273	6,639	4.5	299
Wilga Plains Bangle ..	Headlands Red Jacket ..	M	273	5,832	4.1	251
Wilga Plains Fussy 10th ..	Highfields Champ ..	J.2	240	6,117	3.9	242
Wilga Plains Ruby 21st ..	Highfields Rocket ..	S.3	273	5,340	3.8	190
Wilga Plains Ruby 14th ..	Wilga Plains Peter ..	M	273	7,240	3.5	256
Wilga Plains Daisy Bell 3rd ..	Wilga Plains Peter ..	M	273	5,914	4.3	254
HENRY, K., Greenmount (A.I.S., 9).						
Tara Cleo 4th ..	Alfa Vale Plumber ..	M	240	6,765	4.0	271
Tara Hilda 4th ..	Alfa Vale Plumber ..	J.2	273	6,219	3.8	239
Tara Hilda 5th ..	Bileena Bonnie's Prince ..	J.2	273	5,652	3.9	220
Tara Daphne 6th ..	Fairfield Maxwell ..	J.2	240	4,269	4.0	172
Tara Isis 10th ..	Fairfield Maxwell ..	S.2	273	6,791	4.7	317
Tara Hilda 6th ..	Fairfield Maxwell ..	S.2	273	6,677	4.0	270
Tara Elfin 8th ..	Fairfield Maxwell ..	S.2	273	5,396	4.4	237
Tara Elfin 9th ..	Tara Favo ..	S.2	120	2,763	3.9	107
Tara Cleo 3rd ..	Tara Magnets' Gift ..	M	240	7,200	4.5	327
HENSCHELL, W., Yarranlea (A.I.S., 18).						
Fairvale Laurel 2nd ..	Bingleigh Jean's Monarch ..	M	273	16,095	4.0	645
Yarranvale Judy 3rd ..	Blacklands' Roosevelt ..	J.2	150	2,676	4.2	112
Yarranvale Minerva 4th ..	Fairvale Cheerio ..	S.3	273	7,007	4.4	306
Yarranvale Jellioce's Minerva 6th ..	Fairvale Jellioce ..	J.2	273	6,104	3.7	253
Yarranvale Ethel 2nd ..	Fairvale Jellioce ..	J.2	273	4,509	4.8	210
Yarranvale Gem ..	Fairvale Jeweller ..	J.2	273	8,138	4.2	344
Yarranvale Pretty Maid ..	Fairvale Jeweller ..	J.2	210	3,465	4.5	157
Trevor Hill Noella ..	Fairvale Jeweller ..	S.2	273	8,191	4.2	157
Trevor Hill Rosemary ..	Fairvale Jeweller ..	S.2	240	6,063	4.6	281
Yarranvale Handsome ..	Fairvale Jeweller ..	J.4	240	8,046	4.2	339
Yarranvale Minerva 3rd ..	Fairvale Jeweller ..	J.4	210	7,473	4.4	330
Fairvale Jean 15th ..	Fairvale Red Prince ..	M	240	6,213	4.5	281
Fairvale Minerva 5th ..	Fairvale Reward ..	M	210	6,504	4.0	257
Fairvale Dulcie 5th ..	Fairvale Reward ..	M	210	5,085	4.0	205
Yarranvale Model 6th ..	Fairvale Viceroi ..	S.4	150	3,309	4.0	132
Yarranvale Picture ..	Sunny View National ..	M	273	9,185	4.2	386
Yarranvale Jean ..	Trevor Hill Bosca ..	M	210	6,402	4.3	278
Yarranvale Flower ..	Yarranvale Prospector ..	M	240	9,396	4.2	394
JACKSON, E. W., Nobby (A.I.S., 5).						
Ennismore Fussy 2nd ..	Ardelia Ossie ..	M	273	5,732	4.8	278
Ennismore Ruby 2nd ..	Arolla Limerick ..	J.2	273	6,322	4.0	253
Ennismore Princess 2nd ..	Arolla Limerick ..	J.2	273	6,284	3.7	231
Ennismore Bud 5th ..	Arolla Limerick ..	J.2	273	4,832	4.0	195
Ennismore Fussy 4th ..	Arolla Limerick ..	M	273	5,166	3.9	203
KNIGHT, R. J., Biddeston, (A.I.S., 8).						
Barkworth Kitty ..	Roxmoor Lincoln ..	J.2	273	7,326	3.9	284
Barkworth Lyle ..	Roxmoor Lincoln ..	J.2	273	6,088	4.3	261
Barkworth Dahlia ..	Roxmoor Lincoln ..	J.2	273	6,408	3.9	251
Barkworth Betsy ..	Roxmoor Lincoln ..	J.2	273	3,905	6.3	244
Barkworth Amy ..	Roxmoor Lincoln ..	J.2	273	6,052	3.9	236
Barkworth Honey ..	Roxmoor Lincoln ..	J.2	273	5,599	4.1	227
Barkworth Evie ..	Roxmoor Lincoln ..	J.2	273	3,820	4.3	165
Barkworth Wendy 2nd ..	Roxmoor Lincoln ..	S.2	273	6,686	3.9	261
LESTER, M. C., Warwick (A.I.S., 12).						
St. Andrews Violet ..	Bingleigh Premier ..	M	273	10,125	4.4	442
St. Andrews Gentle 15th ..	Fairvale Ensign ..	J.2	273	6,573	3.9	257
Mountain Home Envy 3rd ..	Fairvale Ensign ..	M	240	11,814	4.2	493
St. Andrews Envy 2nd ..	St. Andrews Victory 13th ..	J.2	273	6,230	3.9	245
St. Andrews Violet 7th ..	Tabbagong Victory ..	J.2	273	6,628	4.9	323
St. Andrews Gentle 10th ..	Tabbagong Victory ..	S.2	273	6,054	4.2	258
St. Andrews Gentle 7th ..	Tabbagong Victory ..	S.2	180	4,158	4.9	205
St. Andrews Honeycombe 3rd ..	Tabbagong Victory ..	J.3	273	10,695	4.1	442
St. Andrews Gem 28th ..	Tabbagong Victory ..	J.3	210	6,519	4.0	260
St. Andrews Gentle 9th ..	Tabbagong Victory ..	J.3	240	9,282	4.1	383
St. Andrews Envy ..	Tabbagong Victory ..	S.3	273	11,768	3.9	460
St. Andrews Olive ..	Tabbagong Victory ..	S.4	273	10,679	4.1	441
LOHSE, A., Degilbo (A.I.S., 4).						
Sunnyview National Lady 3rd ..	Newstead Ambassador ..	J.4	273	6,709	4.3	292
Alascan Plush ..	Sunnyview Ruby's Elect ..	J.3	273	5,756	4.1	238
Alascan Bess 3rd ..	Sunnyview Toy ..	S.2	273	8,248	4.3	352
Alascan Bess 2nd ..	Sunnyview Toy ..	S.2	273	6,672	4.5	300

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Recorded.	Production.		
				Milk.	Test.	Butter-fat.
				Lb.	%	Lb.
McLENNAN, T., Willowvale, <i>via</i> Warwick (A.I.S., 7).						
Murcott Nancy 7th	Fairthorn Rainbow's Prince .. .	J.2	273	5,029	4.0	199
Murcott Charm 6th	Fairthorn Rainbow's Prince .. .	J.2	273	5,047	3.8	192
Murcott Clara 13th	Fairthorn Rainbow's Prince .. .	J.2	273	3,726	3-7	139
Murcott Clara 11th	Murcott Royal	J.2	273	5,504	4-1	226
Murcott Petunia 5th	Murcott Royal	J.2	273	5,299	3-8	202
Murcott Nancy 6th	Murcott Royal	J.3	210	4,305	4.0	173
Murcott Clara 3rd	Rozana Red Radiance	M	273	8,104	4.0	199
MITCHELL AND MULCAHY, Warwick (A.I.S., 11).						
Fairlie Cherry 21st	Corunna Potentate	M	273	7,250	4.3	313
Rosenthal Fuchsia 30th	Rosenthal Enterprise	J.2	273	8,159	3-8	312
Rosenthal Choice 25th	Rosenthal Enterprise	J.2	273	5,996	4-1	247
Rosenthal Princess	Rosenthal Enterprise	S.2	273	6,463	3-9	250
Rosenthal Lilac 23rd	Rosenthal Gay Knight	J.4	273	7,032	3-8	266
Rosenthal Choice 29th	Waragai Trafalgar	J.2	273	7,618	3-9	298
Rosenthal Choice 29th	Waragai Trafalgar	J.2	305	8,226	4.0	325
Rosenthal Lilac 31st	Waragai Trafalgar	J.2	273	7,024	3-6	250
Rosenthal Fuchsia 21st	Waragai Trafalgar	J.3	273	5,401	3-9	213
Rosenthal Lilac 26th	Waragai Trafalgar	J.3	273	8,350	3-8	317
Rosenthal Choice 26th	Waragai Trafalgar	J.3	273	6,153	3-6	223
Rosenthal Lilac 27th	Waragai Trafalgar	J.3	273	5,287	4.0	213
NEALE, D. J., Pittsworth (A.I.S., 1).						
Alfa Vale Florrie 13th	Penrhos Pansy's Pride	J.2	273	4,660	4.3	198
O'SULLIVAN, CON, Greenmount (A.I.S., 9).						
Swanlea Diana 14th	Alfa Vale Loyal	M	273	14,366	3.8	549
Navillus Charm 17th	Greyleigh Eros	M	273	11,655	3.0	422
Navillus Charm 18th	Greyleigh Eros	M	273	9,951	3.5	352
Meadowstream Gem 2nd	Greyleigh Quality	J.3	273	6,946	4.0	278
Brundah Tulip 2nd	Navillus Radiant	J.2	273	7,047	3-8	267
Brundah Briar 2nd	Navillus Radiant	S.2	273	7,563	3-8	288
Brundah Sally 2nd	Navillus Radiant	S.2	273	6,934	3.5	244
Brundah Fairy 2nd	Navillus Radiant	M	273	7,565	4.3	330
Brundah Dulcy 2nd	Navillus Radiant	M	273	7,266	3.5	256
POWER, M. F., Kapaldo (A.I.S., 1).						
Wattleview Countess 22nd	Fairholm Gilpin	J.2	120	1,488	3.6	54
Q.A.H.S. and COLLEGE, Lawes (A.I.S., 11).						
College Raceme 6th	Alfa Vale Pride 3rd	M	273	7,976	3.9	309
College Dizzy 2nd	Alfa Vale Pride 3rd	S.4	273	6,800	4.4	297
College Pursue's Rascal	Alfa Vale Pursue	J.3	273	7,500	4.1	307
College Pursue's Thorn	Alfa Vale Pursue	S.2	273	6,737	4-1	276
Ennismore Ruth 3rd	Arolla Limerick	J.4	273	9,553	3-4	321
Bingleigh Laurel	Blacklands Arbitrator	S.2	273	7,694	3-9	302
Bingleigh Pretty Maid	Blacklands Jean's Victory	J.2	273	9,551	4.1	397
Bingleigh Dahlia	Blacklands Jean's Victory	S.2	273	8,302	4.0	336
Bingleigh Miss Ettie 5th	Blacklands Jean's Victory	J.3	273	8,257	3-7	309
Bingleigh Miss Ettie 5th	Blacklands Jean's Victory	J.3	305	8,693	3-8	330
Bingleigh Myrtle 3rd	Blacklands Jean's Victory	M	273	10,172	4.3	432
Bingleigh Myrtle 3rd	Blacklands Jean's Victory	M	305	10,619	4.3	452
College Presidents Ivy	Ennismore President	J.2	273	8,224	3.4	282
RUHLE, K. A., Motley, <i>via</i> Oakey (A.I.S., 4).						
Motley Valley Pet	Fairvale Patriot	J.3	210	4,425	5.8	258
Yarranvale Dolly	Fairvale Viceroy	S.4	150	3,456	4.9	169
Invercauld Dainty 2nd	Glenvale Park Prince 2nd	J.2	210	3,210	4.7	151
Blacklands Queen 30th	Parkview Arbitrator	J.2	120	2,535	3.9	99
SANDERSON, W., Mulgeldie (A.I.S., 9).						
Logie Bank Dainty 42nd	Montlea Curly	J.2	273	5,644	3.8	216
Logie Bank Ruby 18th	Parkview Talisman	J.2	273	6,305	4.1	259
Sunlit Farm Gem 2nd	Sunlit Farm King Billy	J.2	273	5,710	3.8	217
Sunlit Farm Roseline 11th	Sunlit Farm King Billy	S.2	273	6,618	4.0	267
Sunlit Farm Alice 5th	Sunlit Farm Madam's Victory	J.2	273	6,570	4.0	263
Sunlit Farm Victory's Ida	Sunlit Farm Madam's Victory	J.2	273	6,941	4.0	240
Sunlit Farm Ivy 3rd	Sunlit Farm Madam's Victory	J.2	273	6,139	3.8	233
Sunlit Farm Flower 12th	Sunlit Farm Madam's Victory	J.2	273	4,997	4.1	203
Sunlit Farm Poppy 7th	Sunlit Farm Madam's Victory	S.2	273	7,832	3.7	295

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Recorded.	Production.		
				Milk.	Test.	Butter-fat.
				Lb.	%	Lb.
SCOTT, W. and A. G., Blackbutt (A.I.S., 8).						
Walena Gwen 2nd ..	Arley Chieftan ..	S.2	180	1,996	4.3	87
Walena Tiny Girlie 2nd ..	Arley Chieftan ..	S.2	60	1,113	4.5	50
Cedar Grove Ellen 49th ..	Cedar Grove Count ..	S.2	273	4,021	4.2	170
Wilga Plains Ruby 10th ..	Highfield Guardsman ..	M	273	6,634	3.7	247
Aurora Fortuna ..	Parkview Challenge ..	J.2	210	4,302	3.7	158
Aurora Joan 2nd ..	Parkview Challenge ..	S.3	30	903	3.8	34
Aurora Luana 2nd ..	Parkview Challenge ..	S.4	273	4,546	4.2	191
Aynesley Rosy 11th ..	Valera Daphne's Pride ..	S.2	273	7,372	3.9	291
Aynesley Rosy 11th ..	Valera Daphne's Pride ..	S.2	305	7,934	3.9	312
SKERMAN, I. B., Kaimkillenbun (A.I.S., 18).						
Laguna Venus 5th ..	Alfa Vale Brigadier ..	M	273	9,419	3.9	369
Faversham Gem 3rd ..	Chelmer Redman ..	M	240	7,449	4.2	316
Faversham Gem 11th ..	Girraween Gideon ..	S.3	273	7,431	4.2	312
Fairvale Iris ..	Fairvale Reward ..	M	273	8,984	4.0	363
Moola Sweet Briar 3rd ..	Navillus Plumdale ..	J.4	240	7,692	4.5	343
Moola Rose ..	Navillus Vera 3rd's Re Nell ..	M	273	8,010	4.3	341
Ripley Park Flower 10th ..	Mountain Camp Joker ..	J.2	273	6,057	3.8	232
Ripley Park Thelma 3rd ..	Mountain Camp Joker ..	J.2	273	4,764	3.8	183
Ripley Park Shannon 5th ..	Mountain Camp Joker ..	J.2	273	4,680	4.0	190
Ripley Park Thelma 4th ..	Mountain Camp Joker ..	S.2	273	5,588	3.9	218
Ripley Park Dainty 3rd ..	Mountain Camp Joker ..	S.2	273	4,980	3.7	184
Ripley Park Iris 3rd ..	Mountain Camp Joker ..	S.2	240	3,882	3.9	153
Ripley Park Melba 3rd ..	Mountain Camp Joker ..	J.3	240	6,525	5.0	256
Ripley Park Thelma 2nd ..	Mountain Camp Joker ..	J.3	273	6,501	3.9	255
Ripley Park Melba 4th ..	Mountain Camp Joker ..	S.3	273	5,802	3.9	224
Ripley Park Rosebud 7th ..	Mountain Camp Joker ..	S.3	273	5,792	3.4	199
Ripley Park Thistle 7th ..	Trevor Hill Reflection ..	S.3	273	7,456	4.1	305
Ripley Park Doris ..	Trevor Hill Reflection ..	J.4	240	8,568	3.7	318
SPERLING, G., Kooralgin, via Yarraman (A.I.S., 9).						
Kooravale Fairy ..	Alfa Vale Princely ..	J.2	273	5,756	4.3	249
Blacklands Melba 23rd ..	Blacklands Gloucester ..	S.4	273	7,407	3.9	292
St. Andrews Gem 35th ..	Fairvale Ensign ..	J.2	273	6,788	3.9	263
Highfields Perfect 42nd ..	Highfields Starlight ..	M	273	7,725	3.8	294
Highfields Connie 7th ..	Laguna Emblem 8th ..	M	240	6,101	3.4	206
Penrhos Nancy 14th ..	Penrhos Archie ..	M	273	7,422	3.9	287
Penrhos Shielia 21st ..	Rosenthal Lochinvar ..	J.3	273	6,614	4.0	262
Penrhos Evelyn 18th ..	Rosenthal Macarthur ..	J.4	240	5,565	3.3	184
St. Andrews Gem 4th ..	Tabbagong Victory ..	J.2	273	3,993	4.1	162
SULLIVAN, D., Pittsworth (A.I.S., 13).						
Bantry Choice 5th ..	Bantry Commodore ..	J.4	240	4,083	4.4	179
Bantry Bonnie 2nd ..	Bantry Commodore ..	S.4	240	4,704	4.1	193
Bantry Rosebud 2nd ..	Bantry Nancy's Prince ..	J.2	273	5,554	4.7	260
Bantry Model 5th ..	Bantry Nancy's Prince ..	J.2	210	4,836	4.4	215
Bantry Rose 6th ..	Bantry Nancy's Prince ..	J.2	210	2,958	4.4	129
Bantry Bonnie 5th ..	Bantry Nancy's Prince ..	S.2	273	5,788	3.8	220
Bantry Nancy ..	Bantry Nancy's Prince ..	S.2	273	4,692	4.3	200
Bantry Nellie 2nd ..	Rosenthal Surplus 2nd ..	M	273	6,374	3.8	243
Bantry Model 6th ..	Valera Justice ..	J.2	273	6,120	4.5	275
Bantry Lila 3rd ..	Valera Justice ..	J.2	273	5,173	4.9	255
Bantry Bonnie 6th ..	Valera Justice ..	J.2	273	5,772	4.0	225
Bantry Bonnie 7th ..	Valera Justice ..	J.2	120	1,500	4.3	64
Bantry Bonny 8th ..	Valera Justice ..	S.2	150	2,403	4.5	108
SULLIVAN BROS., Pittsworth (A.I.S., 15).						
Valera Una 12th ..	Alfa Vale Pride 2nd ..	J.2	273	8,114	4.1	333
Valera Jean 2nd ..	Alfa Vale Pride 2nd ..	J.2	273	8,221	3.9	322
Valera Jean 2nd ..	Alfa Vale Pride 2nd ..	J.2	305	8,665	3.9	341
Valera Dahlia 2nd ..	Alfa Vale Pride 2nd ..	J.2	273	7,422	4.3	319
Valera Roseleaf 32nd ..	Alfa Vale Pride 2nd ..	J.2	273	6,738	4.5	302
Valera Roseleaf 35th ..	Alfa Vale Pride 2nd ..	J.2	273	6,663	4.5	301
Valera Judy 3rd ..	Alfa Vale Pride 2nd ..	J.2	273	6,627	4.4	294
Valera Bonnie 18th ..	Alfa Vale Pride 2nd ..	J.2	273	6,433	4.0	257
Valera Dahlia 3rd ..	Valera Monarch ..	J.2	273	6,791	4.3	293
Valera Roseleaf 37th ..	Valera Monarch ..	J.2	273	5,636	4.1	229
Valera Handsome 9th ..	Valera Monarch ..	J.2	240	4,575	4.2	193
Valera Thelma ..	Valera Renown ..	J.2	273	6,269	3.6	228
Valera Bonny 19th ..	Valera Roseleaf's Reflection ..	J.2	273	6,136	4.1	254
Valera Sally 10th ..	Valera Roseleaf's Reflection ..	J.2	273	6,043	4.2	254
Valera Lila 29th ..	Valera Roseleaf's Reflection ..	J.2	273	4,858	4.9	237
Valera Pendant 8th ..	Valera Roseleaf's Reflection ..	S.2	273	7,784	3.6	284
WEBSTER, A. H., Helidon (A.I.S., 3).						
Millievale Olive 3rd ..	Millievale Hector ..	S.2	240	5,889	4.3	254
Trevor Hill Moya ..	Fairvale Jeweller ..	J.2	240	5,832	4.1	242
Millievale Aster 2nd ..	Fairvale Supreme ..	J.2	240	5,460	4.6	251

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Recorded.	Production.		
				Milk. Lb.	Test. %	Butter-fat. Lb.
WOODFORD, A. P., Kapaldo (A.I.S., 2)						
Croydon Flower 5th	Alfa Vale Lombard	J.2	273	8,517	3.7	244
Applegarth Prim 4th	Greyleigh Crowner	M	273	7,402	3.8	284
YOULES, R. J. E., Kilroy (A.I.S., 8)						
Bingleigh Molly 16th	Blacklands Emblem	M	210	5,757	3.9	224
Glen Idol Jenny 15th	Blacklands True Blue	J.4	273	6,579	3.7	246
Winyalea Molly	Chelmer Red Prince	J.2	273	6,113	4.4	266
Berley Miniature	Chelmer Red Prince	J.2	240	3,549	4.4	157
Winyalea Rosalie	Happy Hill Lauretta's Pride	J.2	210	3,270	4.3	142
Winyalea Lauretta	Happy Hill Lauretta's Pride	S.2	273	6,628	4.5	228
Greenlea Midge 2nd	Mahreen Robin 2nd	M	273	6,345	3.6	330
Kapleton Maiden	Rhodesview Royal Lad	M	273	9,021	3.9	372
AYRSHIRE.						
DUDGEON, C. E. R., Maleny (Ayrshire, 3).						
Jenola Daphne	Auchen Eden Buster	S.2	273	5,205	3.9	291
Denhigh Gentle 64th	Denhigh Opportune	J.2	120	2,379	3.6	85
Auchen Eden Butterfly 2nd	Oatlands Duke	J.2	273	5,240	3.9	292
MANN, N. J., Broxburn, via Pittworth (Ayrshire, 9).						
Leafmore Honor Royal	Burwood Royal Master 2nd	J.2	273	7,583	3.8	287
Crescent Farm Joysey 2nd	Crescent Farm Bell Boy	J.2	273	7,517	3.7	289
Crescent Farm Isabel 4th	Crescent Farm Bell Boy	J.2	273	6,822	3.6	261
Crescent Farm Lady Isabel	Crescent Farm Bell Boy	S.2	273	6,897	3.6	249
Crescent Farm Helms	Horsley Ayr Lad	J.2	273	6,723	4.1	277
Leafmore Lydia	Leafmore Paul	J.2	273	6,616	3.7	244
Leafmore Hoaker 2nd	Myola Jaunt 2nd	J.2	273	6,791	4.1	282
Crescent Farm Peacefulness	Myola Orphan Boy	M	273	8,851	3.7	329
Crescent Farm June 2nd	Myola Orphan Boy	M	240	6,192	3.7	231
MATHIE, E. and SONS, Maleny (Ayrshire, 7).						
Ainslie Audrey	Ainslie Belliance	J.2	240	5,667	4.4	251
Ainslie Rita	Ainslie Belliance	S.2	273	6,905	3.9	273
Ainslie Peggy	Ainslie Belliance	S.2	273	5,682	4.6	269
Ainslie Ladybelle	Ainslie Belliance	J.4	273	7,081	4.2	236
Ainslie Alison	Crescent Farm Joy Boy	J.2	273	6,159	4.1	253
Ainslie Lovely	Crescent Farm Joy Boy	S.4	240	8,598	4.2	363
Ainslie Rena	Crescent Farm Milkboy	J.2	273	7,229	4.1	293
NOBLE, H. R., Wanora, via Ipswich (Ayrshire, 7).						
Auchen Eden Modark	Auchen Eden Terryie	J.2	273	5,670	4.0	226
Crescent Farm Miss Tulip	Crescent Farm Bell Boy	S.2	273	7,156	3.6	270
Crescent Farm Bonnie's Pride	Crescent Farm Bell Boy	S.2	180	3,867	3.8	146
Auchen Eden Blue Bell	Fairhill Buddy	S.2	273	5,426	4.2	231
Auchen Eden Lady Lindy	Oatlands Duke	S.2	273	7,091	3.6	251
Auchen Eden Briar	Oatlands Duke	J.3	273	5,981	4.0	241
Auchen Eden Honeysuckle	Oatlands Duke	S.3	240	5,742	3.8	220
NORGAARD, L. and N., Nara, via Oakay (Ayrshire, 4).						
Holm Park Melba 6th	Beltana Judy's Joss	J.2	273	3,725	4.5	167
Holm Park Miriam	Beltana Judy's Joss	S.2	273	5,765	4.1	238
Holm Park Jaunty	Myola Jaunty's Prince	J.2	273	7,332	4.8	354
Holm Park Jollity 2nd	Myola Jellioe 2nd	S.3	273	8,695	3.5	283
RUHLE, J. P., Motley, Oakay (Ayrshire, 12).						
Leafmore Bernadette	Burwood Royal Master 2nd	J.2	273	5,138	4.6	237
Leafmore Gail	Burwood Royal Master 2nd	J.2	273	5,355	4.3	230
Leafmore Harriet 2nd	Leafmore Grisha	M	210	5,514	3.6	198
Leafmore Beryl's Pride	Leafmore Paul	J.2	273	3,385	4.1	140
Leafmore Bonnie Nell	Myola Bessemer	M	273	6,580	3.9	260
Leafmore Tidy Talmadge	Myola Bessemer	M	210	6,162	4.1	252
Leafmore Honor 2nd	Myola Bessemer	M	273	4,881	4.7	231
Leafmore Lynn	Myola Juggler	J.2	273	6,922	3.6	292
Leafmore Miss Dove	Myola Juggler	M	273	5,748	4.8	274
Leafmore Silver	Myola Perfection	J.2	273	5,078	4.1	208
Leafmore Mist	Myola Perfection	J.2	273	5,134	3.7	188
Leafmore Lady Gay	Myola Perfection	S.2	273	6,307	3.9	246
ST. CHRISTOPHER'S LODGE, Brookfield (Ayrshire, 4).						
Iona Jolly 4th	Glen Muir Peter	J.3	273	7,188	4.0	284
Iona Joy 2nd	Glen Muir Peter	J.3	273	6,465	4.1	267
Iona Garnet	Leafmore Victory	J.2	273	4,759	4.2	201
St. Christopher's Topsy	Myola Jaunty's Prince	M	273	5,649	4.4	251

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Recorded.	Production.		
				Milk. Lb.	Test. %	Butter-fat. Lb.
SCOTT, J. N., Camp Mountain (Ayrshire, 8).						
Auchen Eden Thistle-down	Auchen Eden Archibald	S.3	273	7,977	4.5	361
Auchen Eden Thalia	Auchen Eden Rajah	M	273	8,760	4.9	430
Auchen Eden Buddy's Joy	Fairhill Buddy	S.2	273	6,840	5.4	371
Auchen Eden Marcia	Oatlands Duke	J.2	273	6,831	5.0	340
Auchen Eden Trixie 2nd	Oatlands Duke	S.2	273	10,680	4.8	511
Auchen Eden Trixie 2nd	Oatlands Duke	S.2	305	11,516	4.8	554
Auchen Eden Trixie 2nd	Oatlands Duke	S.2	365	12,986	4.9	635
Auchen Eden Margie	Oatlands Duke	S.2	273	8,780	4.7	412
Auchen Eden Margie	Oatlands Duke	S.2	305	9,503	4.7	448
Auchen Eden Margie	Oatlands Duke	S.2	365	10,921	4.7	517
Auchen Eden Butter-scotch	Oatlands Duke	J.2	273	7,461	4.4	325
Auchen Eden Trude	St. Christopher's Marquis	J.4	273	7,199	4.7	348
STIMPSONS LTD., Loganlea (Ayrshire, 3).						
Eleresley Cynthia 2nd	Auchen Eden Miracle	M	180	5,328	4.3	229
Eleresley Bright Eyes	Oatlands (Q.) Dan	J.2	273	5,927	4.5	270
Eleresley Flirt 5th	Oatlands (Q.) Dan	S.4	273	8,144	4.6	374
FRIESIANS.						
GORDON, Dr. D., Oxley (Friesian, 7).						
Glendalough Maida 10th	Anama Wodan Jan	J.3	273	6,916	4.3	298
Glendalough Corndale 15th	Anama Wodan Jan	S.3	273	5,473	4.1	227
Burnbrae Myra Colantha	Burnbrae Moira's Pietje	J.3	273	7,988	3.9	313
Glendalough Cissy	Burnbrae Victory Vaalveeman	S.2	273	8,333	3.6	304
Brigalow Dutchmaid 16th	St. Athans Bell Piebe 2nd	J.2	273	5,578	3.5	198
Brigalow Belle	St. Athans Bell Piebe 2nd	S.2	273	7,839	3.5	277
Burnbrae Adeline Colantha	Wattlebank Colantha Auklod	S.3	273	9,069	3.7	339
NAUMANN, C. H., Yarraman (Friesian, 9).						
Rockview Fanny	Anama Transvaal Stamp	J.3	273	6,913	3.3	230
Rockview Beauty	Burnbrae Pontiac Piebe	M	273	8,101	3.2	256
Brigalow Dutchmaid 8th	Invale Friesland Chief	M	273	8,187	3.5	289
Yarrabine Molly's Robe	Rockview Clinker	J.2	273	7,015	3.6	251
Yarrabine Gypsy Princess	Rockview Clinker	J.2	273	7,107	3.4	244
Yarrabine Oak Beauty	St. Athans Oak Eagle	J.2	273	6,086	3.4	204
Yarrabine Bonny Angel	St. Athans Oak Eagle	J.2	273	5,312	3.3	175
St. Athans Vic Olive 2nd	Victoria Eagle	M	273	11,312	3.0	337
St. Athans Vic Darling	Victoria Eagle	M	273	9,725	3.2	311
GUERNSEY.						
BROOKS AND SONS, Bauple (Guernsey, 10).						
Linwood Chance	Laureldale Baron	M	273	4,887	3.8	184
Adaville Freezia	Laureldale Lifeboub	J.2	273	3,458	4.6	159
Adaville Gloria	Laureldale Lifeboub	J.2	273	3,073	5.0	153
Adaville Fuchsia	Laureldale Roseboy	M	210	3,438	4.2	144
Adaville Fussy	Laureldale Pluto	M	273	4,082	4.7	191
Adaville Gwenda	Laureldale Pluto	M	210	3,246	4.2	137
Linwood Finch	Linwood Peter	M	273	4,293	4.4	190
Linwood Gloss	Warrawang Winter	M	273	4,499	4.2	187
Linwood Shammy	Warrawang Winter	M	210	4,020	4.1	164
Adaville Gem	Willowbrae Victory	M	240	4,176	3.6	151
COOKE, J. M., Maleny (Guernsey, 1).						
Adaville Coral	Willowbrae Victory	J.3	240	4,671	4.7	220
COOKE, W. A. K., Maleny (Guernsey, 6).						
Laureldale Ethel 4th	Bangalow Vale Guardsman	J.2	273	5,290	4.6	241
Laureldale Vida 4th	Bangalow Vale Guardsman	S.2	273	4,443	4.5	201
Laureldale Duchess 3rd	Bangalow Vale Guardsman	J.3	273	5,395	4.6	249
Laureldale Jill	Laureldale President	M	273	6,763	4.1	277
Laureldale Liddy	Minnimurra Topsy's Sequel 2nd	M	273	8,267	4.7	388
Laureldale Pamela	Minnimurra Topsy's Sequel 2nd	M	273	6,919	4.6	315
CRANNEY, A. J., Maleny (Guernsey, 5).						
Fernhill Fairy Duchess	Wollongbar Remus	J.2	273	4,762	5.6	268
Fernhill Babe	Wollongbar Remus	J.2	273	4,860	5.1	250
Fernhill Mariette	Wollongbar Remus	J.2	273	3,550	6.0	214
Fernhill Glitter	Wollongbar Remus	J.2	273	3,365	6.1	206
Fernhill Jennifer	Wollongbar Remus	J.3	273	6,695	4.9	331
DOSS, W. H., Degilbo (Guernsey, 4).						
San Jonda Fairy	Fairfield Winner	J.2	273	4,370	4.7	207
Oakwood Honour 2nd	Fairfield Winner	J.4	273	5,315	4.8	256
San Jonda Beatrix	Laureldale Pride	J.2	273	3,487	5.2	183
San Jonda Brighteyes	Laureldale Pride	S.2	273	6,320	5.1	320

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Recorded.	Production.		
				Milk. Lb.	Test. %	Butter-fat. Lb.
FOXTON, E. G., Maleny (Guernsey, 15).						
Toba Sarah	Koojan Ace's Marshall	J.4	273	5,873	4.5	262
Toba Sue	Koojan Spellbound	J.2	273	4,075	5.5	223
Toba Herlone	Linwood Hurricane	J.2	273	5,125	4.7	243
Toba Olwyn	Linwood Hurricane	J.2	273	4,486	4.6	205
Toba Generous	Linwood Hurricane	S.2	273	5,788	4.3	247
Toba Secret	Linwood Hurricane	S.3	273	5,344	4.9	261
Toba Olga	Linwood Hurricane	J.4	273	6,314	4.6	293
Toba Beauty	Linwood Hurricane	S.4	273	6,507	4.5	292
Willow Brae Poppy	Linwood Peace Boy	M	273	8,666	4.6	396
Willow Brae Poppy	Linwood Peace Boy	M	305	9,273	4.6	424
Willow Brae Poppy	Linwood Peace Boy	M	365	10,309	4.6	474
Toba Favourite	Toba Batten	J.2	273	6,332	4.1	261
Toba Socks	Toba Ding Dong	J.2	273	4,677	4.7	220
Toba Polly	Toba Ding Dong	S.2	273	4,764	4.7	225
Toba Marie	Warrawong Winter	S.4	273	7,838	4.2	327
Linwood Delight	Warrawong Winter	M	273	6,886	4.9	300
Linwood Gay Lady	Warrawong Winter	M	273	7,660	4.2	324
MURDOCK AND WRIGLEY, Preston, via Toowoomba (Guernsey, 6).						
Evermore Queen Ann	Evermore Trump	M	273	4,679	5.0	233
Evermore Merl	Yarraview Commander	M	240	5,547	5.1	286
Evermore Maytime	Yarraview Commander	M	240	5,274	4.9	257
Evermore Tess	Yarraview Commander	M	240	4,440	5.6	249
Evermore Josie 3rd	Yarraview Commander	M	210	3,774	4.8	182
Preston May	Yarraview Imperial	S.3	273	5,126	4.3	218
RUGE, A. AND SONS, Woowoonga, via Biggenden (Guernsey, 14).						
Willowbrae Tossels	Laureldale Don	J.3	273	6,507	5.1	332
Willowbrae Tribby	Laureldale Don	S.3	273	7,831	5.0	391
Laureldale Vera 2nd	Laureldale Prospect	J.3	273	6,324	4.7	298
Willowbrae Daffodil	Linwood Pharos	J.4	273	9,421	4.7	439
Springvale Jennifer	Moongi Gay Sport	J.4	273	7,961	4.4	353
Springvale Popsy	Moongi Lloyd George	J.3	273	6,118	4.6	281
Springvale Verla	Moongi Lloyd George	S.3	273	8,286	4.9	407
Springvale Jessie	Moongi Lloyd George	J.4	273	9,068	4.1	368
Woowoonga Jubilee	Springvale Lancelot	J.2	273	7,565	4.5	339
Woowoonga Flossie	Springvale Lancelot	J.2	273	8,582	4.8	281
Woowoonga Clementine	Springvale Lancelot	J.2	273	5,547	4.7	263
Springvale Cordelia	Springvale Lancer	J.2	273	4,365	4.7	203
Springvale Elva	Springvale Governor	J.2	273	5,717	4.9	279
Springvale Lucienne	Springvale Governor	J.2	273	5,105	4.8	247
SENTINELLA, E. C., Graceville (Guernsey, 4).						
Darinth Park Betty	Fernhill Searchlight	J.4	273	8,008	4.1	327
Tattenbar Nerida	Linwood Peer	M	273	7,335	4.7	341
Tattenbar Ollie	Linwood Peer	M	273	8,187	4.7	388
Tattenbar Neta	Linwood Peer	M	273	6,685	4.6	309
STRACHAN, A. W., Oxley (Guernsey, 2).						
Oxley Pearl	Moongi Veronica's Tony	S.2	240	2,706	4.8	131
Avalon Style	Moongi Veronica's Tony	S.4	273	3,970	5.0	200
JERSEY.						
AHERN, J., Conondale, via Maleny (Jersey, 8).						
Connemara Creole Betty	Belgonia Flashlight	S.2	273	5,104	5.6	284
Connemara Rosemary	Belgonia Flashlight	S.3	273	4,729	5.8	273
Connemara Princess Eileen	Devon Park Madiera's Victorious	J.2	273	4,473	5.9	263
Connemara Dainty Bridesmaid	Devon Park Madiera's Victorious	J.2	273	3,489	6.1	212
Navua Designing Fillpail	Navua Designing Ruler	S.3	240	3,420	5.0	171
Lermont Bud 4th	Trinity Graceful Duke	J.2	273	4,045	6.0	242
Brooklodge Erna	Trinity Mighty Prince	J.2	273	3,230	5.4	173
Brooklodge Sweet	Trinity Mighty Prince	M	240	6,426	4.9	314
ANDERSON, R. A., Yandina (Jersey, 2).						
Bonnie Brae White Daisy	Bonnie Bray Darby	M	240	3,048	4.5	137
Bonnie Brae Brown Maid	Bonnie Bray Monty	S.2	240	3,354	4.7	156
BAILEY, W., Greycliff, via Biloela (Jersey, 5).						
Romsey Flying Duchess	Oxford Flying Fox	J.3	240	4,224	4.5	192
Romsey Ginger Maid	Oxford Flying Fox	S.4	240	5,271	3.8	203
Ashendon Cowslip	Treacarne Jersey Boy	J.2	180	3,168	4.5	146
Ashendon Silver	Treacarne Jersey Boy	J.2	180	2,661	4.6	123
Valhalla Clover Leaf 4th	Valhalla Desmond	S.4	240	4,410	4.9	217

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Re-corded.	Production.		
				Milk.	Test.	Butter-fat.
				Lb.	%	Lb.
BARLOW, C. W. and E. M., Boodua, via Oakey (Jersey, 1).						
Erceldene Ecstasy	Erceldene Really Royal .. .	J.2	240	3,360	5.5	186
BECKINGHAM, C., Everton Park, Brisbane (Jersey, 7).						
Goldland Daffodil	Calton Lotmyle	M	273	5,741	5.0	287
Lockerbie Bella	Gunawah Neptune	J.2	273	3,368	5.3	178
Danilo Beauty	Navua Designing Count 2nd .. .	J.2	273	3,459	5.4	186
Cosme Harmony	Oxford Buttercup's Victory .. .	J.2	273	4,229	5.5	231
Cosme Buttercup's Glory .. .	Oxford Buttercup's Victory .. .	J.2	273	4,187	5.3	223
Lockerbie Some Maiden	Trecarne Some Duke	S.3	240	3,819	5.3	204
Trecarne Jersey Miss 4th .. .	Trecarne Some Duke	M	273	6,545	5.2	339
BORCHERT, Mrs. I. L. M., Kingaroy (Jersey, 25).						
Woodbine Dainty	Avon View Lord Pictine	M	240	4,884	4.8	237
Willow Bank Arabule's Pet .. .	Brampton Doffodil's Peer	S.2	273	5,529	5.6	309
Willow Bank Arabule's Pet .. .	Brampton Daffodil's Peer	S.2	305	6,046	5.7	347
Willow Bank Repeat	Brampton Daffodil's Peer	S.2	273	5,113	5.6	287
Willow Bank Audrey	Brampton Daffodil's Peer	S.2	273	4,002	5.5	219
Willow Bank Collett	Brampton Daffodil's Peer	S.3	273	4,821	5.4	262
Willow Bank Cute Poppy	Inverlaw Observer	J.2	273	6,317	4.9	309
Willow Bank Golden Queen .. .	Inverlaw Observer	J.2	273	5,972	4.8	287
Willow Bank Powder	Inverlaw Observer	J.2	273	6,090	4.7	285
Willow Bank Powder	Inverlaw Observer	J.2	305	6,515	4.8	313
Willow Bank Attraction's Girl ..	Inverlaw Observer	J.2	273	5,417	5.1	276
Willow Bank Point	Inverlaw Observer	J.2	273	5,662	4.8	270
Willow Bank Pansy	Inverlaw Observer	J.2	273	4,704	5.3	251
Willow Bank Little Pet	Inverlaw Observer	J.2	273	4,827	5.3	258
Willow Bank Joyful Marion .. .	Inverlaw Observer	J.2	273	3,404	5.1	177
Willow Bank Dairy Queen	Inverlaw Observer	J.2	210	3,274	5.1	167
Willow Bank Golden Bud	Inverlaw Observer	S.2	273	6,250	5.7	353
Willow Bank Gold Speck	Inverlaw Observer	S.2	273	4,470	5.7	256
Willow Bank Golden Drop	Inverlaw Observer	S.2	240	4,193	5.2	219
Willow Bank Princess Mary .. .	Inverlaw Observer	S.2	273	5,232	4.6	245
Willow Bank Golden Wings .. .	Inverlaw Observer	S.3	273	8,057	4.8	386
Willow Bank Promise	Inverlaw Observer	S.3	273	4,873	5.2	255
Trecarne Tottie's Queen	Trecarne Golden Lad 2nd .. .	S.3	240	4,185	4.6	194
Trecarne Golden Ettlyn 2nd .. .	Trecarne Peer 2nd	M	273	6,822	4.6	314
Trecarne Chiming 3rd	Trecarne Some Lad 3rd	S.2	273	9,169	5.4	499
Trecarne Chiming 3rd	Trecarne Some Lad 3rd	S.2	305	9,783	5.5	537
Trinity Golden Aim	Trinity Crowning Effort .. .	J.4	273	4,217	5.2	218
Trinity National Lass	Trinity National Victory .. .	J.3	273	5,680	4.9	278
BROWNE, R. J., Yangan, via Warwick (Jersey, 19.)						
Minidong Maid	Balwyn Fancy's Baron	M	273	6,353	6.1	385
Minidong Maid	Balwyn Fancy's Baron	M	305	6,707	6.1	407
Glenrandie Winsome Lady .. .	Gem Rodney	S.3	273	4,232	6.3	265
Glenrandie Diana	Gem Rodney	S.3	273	3,993	5.3	212
Hill 60 Likeness 2nd	Kelvinside Dream Boy	J.2	273	4,676	5.4	253
Hill 60 Likeness 2nd	Kelvinside Dream Boy	J.2	305	5,012	5.4	273
Hill 60 Esteem	Kelvinside Dream Boy	J.2	273	4,996	4.6	229
Hill 60 Likeness	Kelvinside Dream Boy	J.3	273	7,974	4.7	379
Hill 60 Likeness	Kelvinside Dream Boy	J.3	305	8,366	4.8	400
Hill 60 Golden Thread	Kelvinside Dream Boy	S.4	273	8,009	4.0	319
Nairfale Coquette	Kelvinside Handsome Boy .. .	M	240	7,371	5.6	410
Nairfale Chenille	Kelvinside Handsome Boy .. .	M	273	6,441	4.8	308
Nairfale Sapphire	Kelvinside Handsome Boy .. .	M	273	5,982	4.6	278
Nairvale Neat Neta	Nairfale Count's Paymaster .. .	M	273	6,800	5.0	314
Nairfale Lena	Nairfale Golden Reality	M	273	7,245	4.9	356
Nairfale Lena	Nairfale Golden Reality	M	305	7,449	5.0	369
Nairfale Idol's Delight	Nairfale Golden Recorder .. .	M	273	7,265	5.8	412
Nairfale Idol's Delight	Nairfale Golden Recorder .. .	M	305	7,816	5.7	448
Nairfale Likeness	Nairfale Golden Recorder .. .	M	273	7,485	4.6	343
Nairfale Gentle	Nairfale Golden Recorder .. .	M	273	6,048	5.1	311
Nairfale Noble's Rosemary .. .	Nairfale Prides' Noble	M	305	8,197	5.0	409
Nairfale Noble's Rosemary .. .	Nairfale Prides' Noble	M	273	7,629	5.0	380
Valley Farm Nola	Navua Ethne's Royalist	M	273	9,712	4.7	456
Valley Farm Nola	Navua Ethne's Royalist	M	305	10,050	4.7	476
Glenrandie Cream Maid	Trinity Gleaming Effort .. .	S.2	273	4,970	5.3	264
Glenrandie Daffodil 2nd	Trinity Gleaming Effort .. .	J.3	273	7,225	4.8	346
BYGRAVE, P. J. L., Aspley, Brisbane (Jersey, 2).						
Navua Egretta 3rd	Elm Hill Volkenia Nobly Born ..	M	273	4,967	7.1	354
Craigian Cecelia's Queen .. .	Navua Designing Count 2nd .. .	J.2	240	3,369	5.2	176

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Re- corded.	Production.		
				Milk. Lb.	Test. %	Butter- fat. Lb.
CARPENTER, J. W., Helidon (Jersey, 9).						
Mayfair Charm 2nd	Mayfair Winston	S.2	273	4,450	4.7	211
Mayfair Bell	Trearne Golden King 2nd	M	273	5,145	6.3	323
Mayfair Maybell	Trearne Golden Lad 3rd	J.2	273	4,028	5.2	210
Mayfair Golden Lass	Trearne Golden Lad 3rd	S.2	273	4,188	4.9	204
Mayfair Heatherbell 3rd	Trearne Golden Lad 3rd	S.2	180	2,877	4.1	118
Mayfair Ettlyn	Trearne Golden Lad 3rd	J.3	273	4,736	5.4	255
Mayfair Lady Gay 3rd	Trinity Crowning Admiral	J.3	273	5,308	5.7	301
Mayfair Lady Gay 4th	Woodview Some Commander	S.2	273	4,137	6.0	250
Mayfair Twinkle 2nd	Woodview Some Commander	S.2	273	4,415	5.5	245
COCHRANE, H., Kin Kin (Jersey, 6).						
Austral Park Blue Royal	Austral Park Blue Lad	J.3	273	3,081	5.5	170
Fauvic Florin	Austral Park Distinction	S.4	240	2,910	5.4	158
Fauvic Heroine	Baerami Douglas	J.4	273	3,683	5.6	205
Fauvic Respond	Fauvic Cornet	J.3	273	3,960	5.6	222
Fauvic Lace	Fauvic Cornet	S.3	273	3,229	5.6	182
Fauvic Promise	Fauvic Trial Link	J.4	273	4,633	5.7	263
COLVIN, J., Beechmont (Jersey, 16).						
Eumirvel Star Delight	Avon Real Star (Imp)	S.2	273	5,230	5.3	278
Eumirvel Star Perfection	Avon Real Star (Imp)	J.3	273	6,532	4.9	322
Eumirvel Star Maiden	Avon Real Star (Imp)	S.3	240	7,290	4.9	358
Eumirvel Star Jewel	Avon Real Star (Imp)	J.4	273	6,566	5.0	331
Eumirvel Neta	Eumirvel Beechmont Peer	M	210	7,761	5.2	405
Eumirvel Mariette	Eumirvel Beechmont Peer	M	273	5,664	5.5	313
Eumirvel Beechmont Peersess	Eumirvel Beechmont Peer	M	273	5,486	5.9	326
Eumirvel Nerida	Hunstrete's Galores Emperor 2nd	M	273	5,503	4.5	250
Eumirvel Goldie	Reflection's Golden Aim (Imp)	J.2	273	5,102	5.7	290
Eumirvel Maybelle	Reflection's Golden Aim (Imp)	J.2	273	4,907	5.7	282
Eumirvel Golden Nan	Reflection's Golden Aim (Imp)	J.2	273	4,855	5.4	264
Eumirvel Golden Lass	Reflection's Golden Aim (Imp)	J.2	273	4,742	5.4	256
Eumirvel Golden Duchess	Reflection's Golden Aim (Imp)	J.2	273	4,217	5.4	230
Eumirvel Cute Maid	Reflection's Golden Aim (Imp)	J.2	273	3,204	5.8	186
Eumirvel Larkspur	Reflection's Golden Aim (Imp)	J.2	273	3,728	5.3	188
Eumirvel Neradeen	Reflection's Golden Aim (Imp)	J.2	180	2,202	4.1	91
CONOCHIE, W. S., Sherwood (Jersey, 20).						
Brookland Princess Olga	Brookland Merry Monarch	J.2	273	3,910	5.4	213
Brookland Princess Joybelle	Brookland Merry Monarch	S.2	273	4,675	4.8	223
Brookland Fleurette	Brookland Merry Monarch	J.3	273	3,638	6.0	220
Brookland Olga	Brookland Merry Monarch	J.3	273	2,529	5.7	144
Brookland Golden Jubilee	Brookland Regal Sovereign	J.2	273	3,362	5.9	200
Brookland Golden Anna	Brookland Regal Sovereign	J.2	180	2,649	4.5	120
Brookland Noble Buttercup	Brookland Regal Sovereign	J.2	150	1,308	5.4	70
Brookland Regal Prunette	Brookland Regalia	S.2	273	5,612	6.6	369
Brookland Regal Drop	Brookland Regalia	J.3	273	6,176	5.5	341
Brookland Prunette	Brookland Regalia	S.3	273	3,037	5.8	177
Brookland Regal Oakleaf	Brookland Regalia	J.4	273	4,363	5.1	221
Brookland Regal Prunella	Brookland Regalia	S.4	273	4,482	5.6	252
Brookland Regal Fleur	Brookland Regalia	S.4	210	3,459	5.7	198
Brookland Regal Laurel Leaf	Brookland Regalia	M	273	5,236	5.5	286
Brookland Regal Monica	Brookland Regalia	M	273	4,977	5.0	249
Brookland Angel Cake	Bulby Maria's Keepsake	M	273	6,651	5.5	368
Grasmere Lynn's Jubilee	Grasmere Lady Lynn's Jubilee	S.2	273	3,306	5.7	187
Hill Park Fairy Queen	Midlands Fairy Jester	J.3	273	4,388	6.7	294
Brookland Jovial Petunia	Windsor Merry Charles	J.2	273	4,718	6.2	292
Brookland Jovial Lorraine	Windsor Merry Charles	J.2	210	2,163	5.8	125
CORNHILL, E. D. J., Dundas (Jersey, 8).						
Rosedene Lady Olive 2nd	Lawn View Teddy	J.2	273	5,993	4.4	264
Rosedene Beauty's Leaf	Lawn View Teddy	J.2	273	4,116	4.7	194
Rosedene Pretty Lass	Lawn View Teddy	J.2	273	3,759	4.6	193
Rosedene Sally	Lawn View Teddy	S.2	273	5,010	4.4	218
Rosedene Marite	Lawn View Teddy	S.2	273	4,805	4.3	208
Rosedene Jessie	Lawn View Teddy	S.2	273	4,732	4.4	208
Rosedene Lily	Lawn View Teddy	J.3	273	6,084	4.8	294
Rosedene Golden Silver	Lawn View Teddy	J.3	273	4,729	4.6	218
COX, F. J., Kingaroy (Jersey, 10).						
Rosel Gertrude	Belmont Royal Peer	J.2	273	5,141	4.7	244
Rosel Eunice	Belmont Royal Peer	J.2	273	4,323	5.0	215
Rosel Jennifer	Belmont Royal Peer	J.2	273	3,300	5.6	188
Rosel Clare	Belmont Royal Peer	J.2	273	4,150	4.1	169
Rosel Rhonda	Belmont Royal Peer	J.2	273	3,311	4.5	149
Rosel Blanche	Belmont Royal Peer	S.2	273	3,096	4.3	133
Rosel Bonnie	Belmont Royal Peer	J.3	273	4,594	4.9	224
Rosel Blue Spee	Rosel Royal Peer	J.2	210	2,331	4.7	104
Rosel Ginger Girl	Rosel Solid Gold	M	273	6,994	5.7	401
Rosel Elma	Rosel Solid Gold	M	273	5,235	6.2	322

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Recorded.	Production.		
				Milk.	Test.	Butter-fat.
				Lb.	%	Lb.
COX, R. V. D., Maleny (Jersey, 27).						
Glengarriffe Caesar's Lentil 4th	Glengarriffe Cunning Caesar ..	M	305	8,833	5.2	462
Glengarriffe Caesar's Lentil 4th	Glengarriffe Cunning Caesar ..	M	273	8,099	5.3	426
Glengarriffe Caesar's Gypsy 3rd	Glengarriffe Cunning Caesar ..	M	240	6,405	6.1	332
Glengarriffe Caesar's Fleurette 4th	Glengarriffe Cunning Caesar ..	M	273	6,095	5.9	361
Glengarriffe Caesar's Comfrey 3rd	Glengarriffe Cunning Caesar ..	M	273	6,098	5.2	349
Glengarriffe Caesar's Faith 2nd	Glengarriffe Cunning Caesar ..	M	273	6,135	5.6	342
Glengarriffe Fluster's Rozel 7th	Glengarriffe Cunning Filibuster	J.3	240	5,928	5.4	320
Glengarriffe Fluster's Rozel 7th	Glengarriffe Cunning Filibuster	S.4	273	6,727	5.3	356
Glengarriffe Fluster's Cavell ..	Glengarriffe Cunning Filibuster	S.4	273	5,882	6.0	352
Glengarriffe Fluster's Fraitly 3rd	Glengarriffe Cunning Filibuster	S.4	273	5,591	5.8	323
Glengarriffe Fluster's Foxglove 2nd	Glengarriffe Cunning Filibuster	M	273	7,143	6.3	448
Glengarriffe Fluster's Jessie 2nd	Glengarriffe Cunning Filibuster	M	273	6,600	5.6	369
Glengarriffe Fluster's Lubra 2nd	Glengarriffe Cunning Filibuster	M	273	6,217	5.9	367
Glengarriffe Fluster's Fraitly ..	Glengarriffe Cunning Filibuster	M	240	3,606	6.6	236
Glengarriffe Foreman's Cavell ..	Glengarriffe Cunning Foreman ..	M	273	5,745	5.9	337
Glengarriffe Foreman's Foxglove	Glengarriffe Cunning Foreman ..	M	273	6,647	4.9	325
Glengarriffe Collingwood's Cavell	Glengarriffe Dreamer's Collingwood	J.2	273	4,219	6.2	260
Glengarriffe Dreamer's Rosary 2nd	Selsey Dreamer	J.2	273	4,246	5.5	234
Glengarriffe Dreamer's Colleen ..	Selsey Dreamer	J.3	273	5,037	5.4	274
Glengarriffe Dreamer's Coullise	Selsey Dreamer	S.3	273	6,947	5.7	396
Glengarriffe Dreamer's Coullise	Selsey Dreamer	S.3	305	7,416	5.7	361
Glengarriffe Dreamer's Hawthorn	Selsey Dreamer	S.3	240	6,282	5.7	357
Glengarriffe Dreamer's Carnation	Selsey Dreamer	S.3	273	5,828	6.0	349
Glengarriffe Dreamer's Eremata ..	Selsey Dreamer	S.3	273	5,235	5.7	356
Glengarriffe Dreamer's Gypsy 3rd	Selsey Dreamer	J.4	273	6,230	5.5	232
Glengarriffe Dreamer's Cargel ..	Selsey Dreamer	J.4	210	4,215	5.5	232
Glengarriffe Dreamer's Hawthorn	Selsey Dreamer	S.4	273	5,358	5.1	275
Glengarriffe Cunning Lentil 2nd	Selsey Dreamer	M	273	6,827	5.0	344
Glengarriffe Cunning Faith ..	Navua Cunning Lad (Imp.) ..	M	273	6,081	5.3	321
	Navua Cunning Lad (Imp.) ..	M	273	5,736	5.1	294
CRAMB, S. A., Caboolture (Jersey, 8).						
Fauvic Ballerina	Austral Park Distinction ..	J.2	273	5,355	5.4	291
Fauvic Dazzle	Austral Park Distinction ..	J.2	273	4,476	4.5	199
Fauvic Daydawn	Fauvic Cornet	S.3	273	6,719	4.6	306
Fauvic Daydawn	Fauvic Cornet	S.3	305	7,309	4.6	338
Amaroo Grand Princess	Glengarriffe Caesar's Deemster	J.2	273	5,002	5.4	271
Amaroo Grand Princess	Glengarriffe Caesar's Deemster	J.2	305	5,404	5.5	297
Caergwile Tulip	Inverlaw Bandmaster	J.3	273	6,141	5.0	308
Caergwile Tulip	Inverlaw Bandmaster	J.2	305	6,458	5.0	324
Ashdon Silver	Oxford Buttercup's Victory ..	J.2	273	5,688	4.8	272
Glenolive Holly	Trearne Golden Ruler	S.2	273	5,072	5.5	278
Glenolive Sweet Chimes	Trearne Golden Ruler	S.3	273	5,574	4.8	268
FARM HOME FOR BOYS, Westbrook (Jersey, 14).						
Westbrook Starbright 15th ..	Mornmoot Clementine's Valour	J.2	273	4,538	5.2	238
Westbrook Sultane 14th	Mornmoot Clementine's Valour	S.2	273	6,070	4.2	253
Westbrook Tulip 156th	Mornmoot Clementine's Valour	J.3	273	5,661	4.0	228
Westbrook Starbright 16th ..	Westbrook Comet 26th	J.3	273	5,734	4.5	259
Westbrook Tulip 155th	Westbrook Comet 26th	J.3	273	5,316	4.7	248
Westbrook Bells 20th	Westbrook Comet 26th	S.3	273	5,002	5.2	293
Westbrook Sylvia 25th	Westbrook Silvermine's Valour	S.3	273	6,316	4.6	288
Westbrook Pearl 6th	Wyalla Golden Lad	J.2	273	5,663	5.2	294
Westbrook Silvermine 5th	Wyalla Golden Lad	J.2	273	5,841	4.7	274
Westbrook Tulip 157th	Wyalla Golden Lad	J.2	273	4,774	5.4	255
Westbrook Tulip 160th	Wyalla Golden Lad	J.2	273	4,403	5.2	230
Westbrook Wyandotte 13th ..	Wyalla Golden Lad	J.2	273	5,016	4.5	224
Westbrook Silvermine 6th	Wyalla Golden Lad	J.2	273	5,149	4.1	210
Westbrook Bells 21st	Wyalla Golden Lad	J.3	273	4,695	5.4	254
GRANGER BROS., Lockyer (Jersey, 18).						
Oxford Regal Carolyn	Brookland Regalia	M	273	6,338	5.0	319
Trearne Ryebread 2nd	Jerseylea Golden Duke	M	273	5,102	5.5	280
Oxford Victoria	Oxford Maid's Victor	M	273	5,716	5.2	297
Trearne Jersey Queen 13th ..	Regal Design (Imp.)	J.2	273	6,567	5.0	331
Granwyn Seafoam	Trearne Dairyboy 2nd	J.2	273	5,583	4.7	263
Brampton Gifts Goldil	Trearne Golden Lad 2nd	J.2	273	6,475	4.4	288
Trearne Golden Dairy Girl 5th	Trearne Golden Lad 2nd	J.2	273	4,901	4.9	241
Trearne Dairy Maid 11th	Trearne Golden Lad 2nd	J.3	273	6,647	4.8	321
Trearne Dairy Queen 5th	Trearne Golden Lad 2nd	J.3	273	5,743	5.5	318
Trearne Ryebread 5th	Trearne Golden Lad 2nd	S.3	273	6,116	5.1	310
Trearne Golden Jersey Lass ..	Trearne Golden Lad 2nd	J.4	273	7,101	4.7	337
Trearne Daffodil's Jewel 2nd	Trearne Ruler 2nd	M	273	4,614	6.1	282
Glenrea Ballad Girl	Trearne Some Duke	J.2	273	4,396	6.3	279
Glenrea Some Attraction	Trearne Some Duke	S.3	273	5,804	5.8	339
Trearne Jersey Queen 5th	Trearne Some Duke	M	273	6,506	5.6	368
Trearne Dairy Queen 3rd	Trearne Some Duke	M	273	7,431	4.6	340
Trearne Jersey Lass 6th	Trearne Some Duke	M	273	7,317	4.4	322
Trearne Doreen 7th	Trearne Some Duke	M	273	6,294	4.7	295

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Recorded.	Production.		
				Milk.	Test.	Butter-fat.
				Lb.	%	Lb.
GRASMERE JERSEY STUD, Neurum, via Kilcoy (Jersey, 9).						
Grasmere Doves Lily	Grasmere Elaine's Victory ..	J.3	240	2,532	7.1	180
Grasmere Lynn's Sultane	Grasmere Lady Lynn's Victory ..	S.3	210	3,357	5.1	171
Grasmere Lynn's Colleen	Grasmere Lady Lynn's Victory ..	S.3	90	1,230	7.0	87
Ashden Bright Face	Oxford Buttercup Victory	S.3	240	3,078	5.3	162
Grasmere Victory Charm	Oxford Brown Victory	M	240	5,262	5.3	281
Glenside Jovial Lass	Oxford Dudley	J.4	150	1,440	5.9	86
Treacarne Daffodil 3rd	Treacarne Ruler 2nd	M	240	4,404	4.5	199
Trinity Crowning Princess 2nd ..	Trinity Crowning Effort	M	273	3,326	5.7	190
Glenview Gaythorne	Trinity Royal Prince	M	150	1,908	6.1	117
GREGORY, P. H. F., Rosevale, via Rosewood (Jersey, 2).						
Windsor Royal Patricia	Brookland Lord Roseberry	J.2	273	5,114	5.5	257
Windsor Royal Rose	Brookland Merry Monarch	J.3	273	5,698	5.5	316
HARLEY, G., Kingaroy (Jersey, 9).						
Romsey Dainty Spot	Oxford Pixie's Victor	M	273	6,483	5.2	335
Hopewell Poppy	Trinity Cute Premier	J.2	273	4,475	5.5	245
Hopewell Desley 2nd	Trinity Daffodil's Design	J.4	273	5,315	4.5	241
Hopewell Sunflower	Trinity Daffodil's Design	M	273	5,843	5.1	296
Hopewell National Lass	Trinity National Duke 2nd	J.2	273	4,735	5.5	261
Hopewell National Larkspur	Trinity National Duke 2nd	J.2	273	4,577	5.5	252
Hopewell National Victorious	Trinity National Duke 2nd	J.2	273	4,134	5.8	240
Hopewell National Maid	Trinity National Duke 2nd	J.2	90	783	4.7	37
Hopewell National Lily	Trinity National Duke 2nd	S.2	273	6,789	5.2	352
HUEY, C., Sabine, via Oakey (Jersey, 6).						
Ashview Lady 5th	Ashview Double Duke	S.2	273	4,842	5.4	260
Ashview Joyful	Parrabel Oxford Thorn	J.2	273	4,092	5.3	217
Ashview Bracken	Parrabel Oxford Thorn	J.2	273	4,120	4.9	204
Ashview Ladyette 3rd	Treacarne Some Tot's Duke 2nd ..	J.2	273	3,751	6.1	229
Ashview Tot 2nd	Treacarne Some Tot's Duke 2nd ..	J.2	273	3,671	5.4	197
Ashview Mossrose	Treacarne Some Tot's Duke 2nd ..	S.2	273	2,963	5.1	152
JOHNSON, H. G., Beaudesert (Jersey, 5).						
Windsor Regal Countess	Brookland Lord Roseberry	J.2	273	6,096	5.3	325
Windsor Regal Melba	Brookland Lord Roseberry	J.2	273	5,692	5.1	291
Windsor Royal Ann	Brookland Lord Roseberry	S.2	273	5,476	5.4	297
Windsor Royal Ruth	Brookland Merry Monarch	S.4	273	8,393	5.4	452
Windsor Princess Florence	Bobs of Wingate	M	273	6,882	5.2	350
KIRBY, W. S., Tinana (Jersey, 9).						
Broadview Royal Budget	Trinity Beauty's Hero	J.4	273	4,294	5.7	246
Broadview Red Fern	Trinity Irondele's Effort	J.2	273	4,562	5.5	253
Broadview Crowning Brunette	Trinity Irondele's Effort	J.2	273	4,355	4.1	180
Broadview Mary Ann	Trinity Irondele's Effort	J.2	273	3,635	4.5	163
Broadview Effort's Beauty 2nd	Trinity Irondele's Effort	S.2	273	4,629	4.8	221
Broadview Betsy 2nd	Trinity Irondele's Effort	J.3	273	4,377	5.7	250
Broadview Effort's Dream	Trinity Irondele's Effort	J.3	273	4,103	5.2	215
Broadview Beth	Trinity Irondele's Effort	S.3	273	4,361	5.6	245
Broadview Lu Lu	Trinity Irondele's Effort	S.3	273	4,285	4.9	210
KERLIN, P., KILLARNEY (Jersey, 19).						
Glenrandie Verabelle	Bellgarth Stylish	M	273	8,798	5.7	499
Glenrandie Golden Girl	Bellgarth Stylish	M	273	6,062	5.6	341
Glenrandie Fashion Lady	Bellgarth Stylish	M	273	5,066	5.7	290
Glenrandie Stylish Lily	Bellgarth Stylish 2nd	J.2	273	5,598	4.6	269
Glenrandie Viola	Bellgarth Victory 6th	S.2	273	5,336	6.2	329
Glenrandie Evenbelle 2nd	Gem Rodney	S.3	273	4,411	5.8	256
Glenrandie Joan	Gem Rodney	J.4	273	6,122	6.1	374
Glenrandie Joan	Gem Rodney	J.4	305	6,599	6.1	403
Glenrandie Fair Lassie 2nd	Gem Rodney	J.4	273	4,845	6.7	318
Glenrandie Lucilla	Gem Rodney	J.4	180	4,242	5.5	235
Golden View Lady Lass	Treacarne Playboy	J.2	273	6,802	4.3	289
Treacarne Bright Dairymaid	Treacarne Golden Lad 2nd	J.2	60	720	7.9	57
Glenrandie Gleam Girl	Trinity Gleaming Effort	J.2	273	6,551	5.7	375
Glenrandie Daisy Bell 2nd	Trinity Gleaming Effort	J.2	273	5,892	5.6	328
Glenrandie Milk Maid 2nd	Trinity Gleaming Effort	J.2	273	5,149	5.2	270
Glenrandie Gleam Girl	Trinity Gleaming Effort	S.2	273	7,280	5.9	426
Glenrandie Gleaming Maid	Trinity Gleaming Effort	S.2	273	6,630	5.4	361
Glenrandie Goldenette 2nd	Trinity Gleaming Effort	J.3	273	8,739	5.7	382
Glenrandie Charm 2nd	Trinity Gleaming Effort	J.3	240	4,995	6.6	332
Glenrandie Spotted Lady	Oxford Noble Peer	M	210	4,200	5.5	229
LEITCH, E. M., Kenmore (Jersey, 1).						
Gem May's Maggie	Gem May's Keepsake	J.2	273	5,298	5.3	279

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Re- corded.	Production.		
				Milk. Lb.	Test. %	Butter- fat. Lb.
LOUTTIT, D. J., Mulgeldie (Jersey, 6).						
Lindvale Choice	Glenview Lochiel	J.3	120	2,130	5-0	107
Upwell Fay Fawn	Glenview Some Sultan	J.4	273	6,966	5-1	356
Upwell Gay Guest	Glenview Some Sultan	M	273	6,925	5-2	361
Boree Effort's Perfect	Trinity Daffodil's Effort	J.2	273	6,800	5-0	334
Boree Effort's Perfect	Trinity Daffodil's Effort	J.2	305	7,396	4-9	364
Boree Effort's Roslyn	Trinity Daffodil's Effort	J.2	273	6,740	4-4	295
LOVELL, J. F. and H. A., Samford (Jersey, 5).						
Glenbrook Lady Lynn	Glenbrook Governor	M	273	6,931	4-7	329
Golden View Xmas Lily	Kardena Beauty's Volunteer	M	273	5,927	5-8	345
Glenbrook Rose Nella 2nd	Lermont Golden Victory	M	273	6,060	5-3	322
Glenbrook Sunshine 2nd	Lermont Golden Victory	M	273	5,284	5-7	302
Tarana Lady Nelleen	Oxford Bruno	J.2	273	4,231	5-5	233
Tarana Lady Au-Lynne	Oxford Bruno	J.4	273	5,158	6-2	320
MCCARTHY, J. S., Greenmount (Jersey, 14).						
Glen Erin Lady Hopeful	Ashfield Prometheus	J.2	273	7,030	5-0	354
Glen Erin Lady Hopeful	Ashfield Prometheus	J.2	305	7,537	5-1	382
Glen Erin Silver Spray	Ashfield Prometheus	J.2	273	6,001	5-6	335
Glen Erin Tulip 2nd	Ashfield Prometheus	J.2	273	7,014	4-6	326
Glen Erin Princess 2nd	Ashfield Prometheus	S.3	273	9,110	4-9	446
Kathleigh Bonnie Pride	Ellerdale Ruler's Sultan	J.2	273	6,538	5-3	347
Ellerdale Waftern Berenice	Ellerdale Waftern Gamboge	S.3	240	6,657	6-1	403
Ellerdale Waftern Berenice	Ellerdale Waftern Gamboge	S.4	273	7,829	5-1	387
Trinity Crowning Rose	Trinity Crowning Effort	J.3	180	4,335	4-9	214
Glen Erin Bright Girl	Trinity Cute Monarch	J.2	273	6,188	5-2	321
Glen Erin Bright Girl	Trinity Cute Monarch	J.2	305	6,620	5-3	351
Glen Erin Model 2nd	Trinity Cute Monarch	J.2	180	4,557	5-0	228
Glen Erin Daffodil 2nd	Trinity Margaret's Effort	J.2	273	6,887	4-9	334
Glen Erin Effort's Viola	Trinity Margaret's Effort	J.2	273	5,225	4-7	243
Glen Erin Kathleen	Westbrook Valour 29th	J.2	273	5,473	5-3	292
Glen Erin Velvet	Westbrook Valour 29th	S.2	273	5,575	5-3	297
MARSDEN, L., Canaga, via Chinchilla (Jersey, 9).						
Fernflat Fairy	Ashview Eva's Victor 3rd	J.2	273	3,104	6-7	208
Woodview Birdie	Ashview Peer	S.4	273	4,398	5-1	223
Woodview Heatherbell 2nd	Brookland Royal Regalia	J.2	273	5,432	5-1	276
Woodview Lovebird	Brookland Royal Regalia	J.2	240	4,401	5-0	221
Treacarne Bright Tottie 2nd	Regal Design (Imp.)	J.2	240	3,330	5-3	178
Treacarne Alleenette 7th	Treacarne Golden Lad	J.2	273	3,897	5-5	215
Treacarne Golden Jewel	Treacarne Golden Lad 2nd	J.3	273	4,085	4-9	202
Ashview Rosemond 2nd	Treacarne Some Tot's Duke 2nd	S.3	273	5,594	6-1	343
Fernflat Royal Lady	Woodview Bachelor	J.2	273	4,021	5-5	221
MATTHEWS, E. A., Yarraman (Jersey, 7).						
Oakvale Lady	Glenview Exchange	M	273	7,447	4-9	365
Yarradale Rejoice	Grasmere William	J.2	273	3,907	5-4	209
Yarradale Felicity	Grasmere William	J.2	273	2,976	6-1	183
Yarradale Rosebud 2nd	Grasmere William	J.2	210	1,665	6-0	100
Sunnyside Elsa 3rd	Sunnyside Banjo	M	273	5,927	5-4	321
Yarradale Rosina	Smythesdale Bruce	S.3	210	3,393	4-9	167
Yarradale Gold Dust	Smythesdale Bruce	S.3	210	3,459	4-3	150
MAY, M. Miss, Hermitage, via Warwick (Jersey, 3).						
Englebourne Remus' Gem	Englebourne Gem's Remus	J.3	273	5,623	5-3	300
Englebourne Daffodil	Englebourne Gem's Remus	J.2	273	4,873	5-9	287
Englebourne Trixie	Grasmere Daisy's Victory	J.3	150	3,315	5-4	179
NEWTON, E. C., Caboolture (Jersey, 6).						
Malvern Royal Reima	Grasmere Gambia's Royal	J.2	273	4,705	5-5	260
Malvern Royal Calm	Grasmere Gambia's Royal	S.2	273	5,139	4-5	233
Malvern Freda	Grasmere Gambia's Royal	J.3	273	3,859	5-5	212
Merrivale Cuning Peeres	Tecoma Cuning Lad	J.2	273	3,486	5-1	177
Boree Tulip's Maid	Trinity Daffodil's Effort	S.2	273	4,945	4-3	213
Boree Peeres Pride	Trinity Daffodil's Effort	J.3	273	4,308	3-9	170
NOCK, T., Degilbo (Jersey, 8).						
Broad View Coral 2nd	Trinity Beauty's Hero	M	273	6,970	5-1	355
Trinity Woodbine 2nd	Trinity Crowning Effort	J.2	273	4,157	5-2	215
Trinity Darling Brunette	Trinity Crowning Effort	S.4	273	7,288	4-9	364
Trinity Sweet Hazel	Trinity Crowning Effort	S.4	273	6,962	4-8	334
Boree Effort's Mischief	Trinity Daffodil's Effort	S.4	273	8,540	4-2	362
Boree Effort's Cornflower	Trinity Daffodil's Effort	M	273	7,523	4-7	356
Ellescar Graceful Darling	Trinity Graceful Lad	J.3	273	5,629	5-0	280
Trinity Cute Royalty 2nd	Trinity Prince Royal	S.2	273	4,343	5-4	236

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Recorded.	Production.		
				Milk.	Test.	Butter-fat.
				Lb.	%	Lb.
PORTER,* F., Conondale, via Maleny (Jersey, 21).						
Westwood Coronation	Belgonia Flashlight	J.2	273	4,960	5.8	290
Westwood Favorite	Belgonia Flashlight	J.2	273	4,278	6.1	260
Westwood Snowstar	Belgonia Flashlight	S.2	273	5,171	5.0	256
Westwood Fairy Floss	Devon Park Madiera's Victorious	J.2	273	4,413	6.6	291
Westwood Hawthorn	Devon Park Madiera's Victorious	J.2	273	4,983	5.5	276
Westwood Clover Leaf	Devon Park Madiera's Victorious	J.2	273	4,845	5.5	267
Westwood Gold Time	Devon Park Madiera's Victorious	J.2	273	4,406	5.2	231
Westwood Lorena	Devon Park Madiera's Victorious	J.2	273	2,794	5.6	157
Westwood Emerald Isle	Devon Park Madiera's Victorious	J.2	273	2,672	5.4	145
Westwood Golden Lotus	Devon Park Madiera's Victorious	S.2	273	5,266	5.2	275
Westwood Mirabel	Devon Park Madiera's Victorious	S.3	273	6,216	5.8	363
Westwood Golden Molen	Devon Park Madiera's Victorious	M	273	7,599	5.1	418
Ferncrest Pilot's May	Glenview Sky Pilot	S.2	150	1,467	4.6	60
Westwood Gayness	Westwood Silver Standard	J.2	210	2,448	6.2	151
Westwood Sunglaze	Westwood Silver Standard	J.3	273	6,653	5.9	390
Westwood Carmel	Westwood Silver Standard	J.2	273	4,816	5.8	281
Westwood Dahlia	Westwood Snowman	J.2	210	2,238	4.7	105
Westwood Regal Court	Westwood Vice Regal	J.2	273	3,513	5.6	195
Westwood Heloise	Westwood Vice Regal	J.2	273	3,045	5.8	177
Westwood Regal Gem	Westwood Vice Regal	J.2	273	2,690	5.8	151
Westwood Florist	Westwood Vice Regal	J.2	273	3,067	4.9	150
Q.A.H.S. and COLLEGE, Lawes (Jersey, 8).						
College Victory's Floss	Grasmere Twinkles Victory	J.2	273	5,403	5.3	288
College Victory's Mistletoe	Grasmere Twinkles Victory	J.2	273	5,716	4.9	258
College Victory's Holly	Grasmere Twinkles Victory	S.2	273	5,314	5.2	274
Glenside Rhonda	Oxford Dudley	S.4	273	8,782	4.7	412
Glenside Ivy 2nd	Oxford Dudley	S.4	273	6,658	5.5	363
College Victory's Ivy	Oxford Fawn's Victor	J.2	273	5,402	5.8	315
College Victor's Tulip	Oxford Fawn's Victor	J.2	180	2,031	4.4	90
College Victor's Florette	Oxford Fawn's Victor	S.2	273	6,643	4.9	325
RALPH, G. H., Ravensbourne (Jersey, 2).						
Ashview Fairy	Ashview Eva's Victor	S.2	90	1,386	5.5	76
Ashview Freiful	Parrabel Oxford Thorn	J.2	240	2,355	6.1	143
SEMGREEN, A. L., Coolabunia, via Kingaroy (Jersey, 10).						
Tecoma Blue Fern	Austral Park Double Blue	J.2	273	5,227	5.4	285
Tecoma Blue Jay	Austral Park Double Blue	J.2	273	3,101	5.9	182
Tecoma Myrtle	Austral Park Double Blue	S.4	150	3,240	5.5	178
Tecoma Blue Columbine	Austral Park Double Blue	M	273	6,361	5.1	326
Austral Park New Princess	Austral Park Ntee Lad	M	273	6,675	4.2	280
Tecoma Prissie	Glenview Royal Chief	M	273	4,502	6.8	307
Tecoma Flora	Glenview Royal Chief	M	210	3,402	5.0	170
Tecoma Florian Lass	Tecoma Florian	J.2	273	3,095	5.2	162
Tecoma Ginger Pet	Trinity Golden Royal	J.2	273	4,017	5.5	220
Tecoma Golden Locket	Trinity Golden Royal	M	273	5,112	4.9	253
SIGLEY, H., Jaggan, via Malanda (Jersey, 14).						
Riviera Hopeful Duchess	Astor Crowning Star	J.2	273	3,994	5.2	207
Inverlaw Melva	Inverlaw Councillor	M	273	6,143	4.8	297
Myrtledale Fairy Queen	Inverlaw Royal Banner	J.2	273	4,489	6.2	279
Myrtledale Sally	Inverlaw Royal Banner	J.2	273	3,219	6.1	195
Myrtledale Seaweed	Inverlaw Royal Banner	J.2	273	4,308	5.3	221
Myrtledale Posey	Inverlaw Royal Banner	J.2	240	3,204	4.9	158
Myrtledale Icicle	Myrtledale Dandy	S.3	273	5,621	5.1	285
Riviera Miss Melody	Navua Designing Star	M	273	5,792	5.2	300
Myrtledale Dora	Oxford Remus Count	M	273	4,814	6.6	318
Palm Ridges Bounce	Palm Ridges Combination	J.2	273	3,726	6.3	234
Myrtledale Helen	Palm Ridges Golden Victory	J.2	273	4,059	5.1	207
Myrtledale Dream	Palm Ridges Golden Victory	J.4	273	4,017	6.8	274
Myrtledale Model	Palm Ridges Golden Victory	M	273	7,115	5.4	385
Trinity Crowning Beauty	Trinity Crowning Effort	M	273	6,678	5.1	339
SPRESSER, W. and SONS, Rosewood (Jersey, 7).						
Carnation Hazel	Carnation Toy	S.2	273	4,117	5.3	218
Carnation Kit	Carnation Toy	J.2	60	489	4.9	24
Carnation Frances	Inverlaw Syrian Victor	J.2	273	3,638	4.8	174
Carnation Barbara	Oxford Fawn's Victor	S.4	273	4,938	5.1	253
Carnation Joy	Rosslyn Royal Trigger	M	273	4,703	5.1	236
Carnation Hope's Hazel	Treacarne Victor 2nd	M	273	4,918	5.0	246
Carnation Blue Daisy	Trinity General Effort	J.2	273	3,476	5.2	181

Pure-bred Dairy Cattle Production Recording.

Cow.	Sire.	Age.	Days Recorded.	Production.		
				Milk.	Test.	Butter-fat.
				Lb.	%	Lb.
THEUERKAUF, H., Dundas (Jersey, 5).						
Lawn View Queenie	Carnation Brown Lad	J.2	273	5,450	4-5	243
Lawn View Princess	Carnation Brown Lad	J.2	273	4,574	4-8	221
Lawn View Dell	Carnation Brown Lad	J.2	273	4,039	5-1	207
Lawn View Fay	Carnation Brown Lad	S.2	273	5,373	5-1	273
Oxford Val	Oxford Royal Ace	J.2	273	5,282	4-3	225
WACKERLING, M. R., Ravensbourne (Jersey, 6).						
Minidong Doreen	Balwyn Ettrey	J.2	273	3,110	5-8	181
Minidong Beauty	Balwyn Love's Peer 3rd	J.2	273	4,155	6-4	267
Minidong Dorothy	Minidong Golden Noble	S.2	273	3,797	6-2	236
Minidong Golden Lily	Minidong Noble Lad	J.2	273	4,294	5-7	243
Janefield's Clementine 9th	Westbrook Valour	J.2	273	3,810	5-8	222
Janefields Loretta 8th	Westbrook Valour	S.2	240	3,066	5-1	157
WADLEY, D., Indooroopilly (Jersey, 8).						
Nindethana Lindy Lou	Oxford Remus Victory	J.2	273	5,450	5-6	308
Nindethana Priscilla	Oxford Remus Victory	J.2	273	4,676	5-7	267
Nindethana Victory Ida	Oxford Remus Victory	J.2	273	5,135	4-8	247
Nindethana Victorious Lady	Oxford Remus Victory	J.2	273	4,253	5-5	236
Trinity Crowning Gift	Trinity Crowning Victory	J.2	273	4,680	6-1	289
Trinity Prim Lass	Trinity Crowning Effort	M	273	6,269	4-5	284
Trinity Cute Lady 2nd	Trinity Cute Effort	M	273	6,013	5-0	349
Rangelands Effort's Lady	Trinity Lady's Effort	J.2	273	5,258	5-3	278
WAITE, H. M., Palmwoods (Jersey, 17).						
Brooklodge Queenie 5th	Conemara Craftsman	J.2	240	3,516	5-0	178
Brooklodge Sweet Nell	Oxford Baritone	M	273	4,726	4-6	222
Brooklodge Sepia	Oxford Jolly Peer	M	273	5,363	5-3	282
Brooklodge Cherry Ripe 2nd	Treacarne Some Victor 4th	J.2	273	6,010	4-4	305
Brooklodge Jessica 3rd	Treacarne Some Victor 4th	J.2	273	4,083	5-4	222
Brooklodge Melodioms 2nd	Treacarne Some Victor 4th	J.2	273	4,799	6-0	288
Brooklodge Brilliant	Treacarne Some Victor 4th	M	240	5,562	5-8	326
Brooklodge Dione	Treacarne Some Victor 4th	M	273	5,337	5-6	298
Brooklodge Cleome	Treacarne Some Victor 4th	M	273	4,941	5-1	251
Brooklodge Maiden 3rd	Trinity Mighty Prince	J.2	273	4,994	5-0	251
Brooklodge Olga 2nd	Trinity Mighty Prince	J.2	273	4,346	5-8	250
Brooklodge Choice Lady 2nd	Trinity Mighty Prince	J.2	273	4,267	5-5	235
Brooklodge Saylee 2nd	Trinity Mighty Prince	J.2	273	4,106	5-4	220
Brooklodge Sepia 2nd	Trinity Mighty Prince	J.2	273	4,314	5-0	215
Brooklodge Muriel 2nd	Trinity Mighty Prince	S.2	240	4,311	5-0	214
Brooklodge Golden Leaf	Trinity Mighty Prince	M	273	5,049	5-2	261
Brooklodge Fay's Butterfly	Trinity Mighty Prince	M	273	4,824	5-2	250
WHITE, W. A. and D., Malanda (Jersey, 6).						
Coraldale Rosebud	Coraldale Noble Hero	J.2	273	3,490	5-5	190
Coraldale Duchess	Peeramon Aviator	J.2	273	4,001	5-2	207
Coraldale Ivy	Peeramon Aviator	J.3	273	3,965	5-7	227
Coraldale Pearl	Peeramon Britain	J.2	273	3,939	5-5	216
Coraldale Sunbeam	Peeramon Britain	J.2	273	3,703	5-7	211
Peeramon Buttercup	Trinity Popcorn 2nd's Pioneer..	M	240	4,509	5-3	240
WILTON, J., Killarney (Jersey, 3).						
Romsey Syria	Oxford Flying Fox	J.2	273	4,061	5-8	235
Romsey Lady Fox	Oxford Flying Fox	J.3	273	6,616	6-1	401
Romsey Brown Lady	Oxford Flying Fox	S.3	273	4,899	6-0	293

TUBERCULOSIS-FREE CATTLE HERDS.
(AS AT 31st JANUARY, 1953.)

Breed.	Owner's Name and Address of Stud.
Aberdeen Angus ..	The Scottish Australian Company Ltd., Texas Station, Texas F. H. Hutton, "Bingegang," Dingo
A.I.S.	F. B. Sullivan, "Fermanagh," Pittsworth D. Sullivan, "Bantry" Stud, Rossvale, <i>via</i> Pittsworth W. Henschell, "Yarranvale," Yarranlea Con. O'Sullivan, "Navillus Stud," Greenmount H. V. Littleton, "Wongalea Stud," Hillview, Crow's Nest J. Phillips and Sons, "Sunny View," Benair, <i>via</i> Kingaroy Sullivan Bros. "Valera" Stud, Pittsworth Reushle Bros., "Reubydale" Stud, Ravensbourne H. F. Marquardt, "Chelmer" Stud, Wondai W. G. Marquardt, "Springlands," Wondai A. C. and C. R. Marquardt, "Cedar Valley," Wondai A. H. Sokoll, "Sunny Crest" Stud, Wondai W. and A. G. Scott, "Welena," A.I.S. Stud, Blackbutt G. Sperling, "Kooravale" Stud, Kooralgin, <i>via</i> Cooyar C. J. Schloss, "Shady Glen," Rocky Creek, Yarraman W. H. Thompson, "Alfa Vale," Nanango
Ayrshire	L. Holmes, "Benbecula," Yarranlea J. N. Scott, "Auchen Eden," Camp Mountain "St. Christopher's and Iona" Studs, Brookfield road, Brisbane E. Mathie and Son, "Ainslie" Ayrshire Stud, Maleny
Friesian	C. H. Naumann, "Yarrabine Stud," Yarraman
Guernsey	C. D. Holmes, "Springview," Yarraman A. B. Fletcher, Cossart Vale, Boonah W. H. Doss, Degilbo, <i>via</i> Biggenden
Jersey	Queensland Agricultural High School and College, Lawes J. S. McCarthy, "Glen Erin Jersey Stud," Greenmount J. F. Lau, "Rosallen Jersey Stud," Goombungee G. Harley, Hopewell, Kingaroy Toowoomba Mental Hospital, Willowburn Farm Home for Boys, Westbrook F. J. Cox and Sons, "Rosel" Stud, Crawford, Kingaroy Line R. J. Browne, Hill 60, Yangan P. J. L. Bygrave, "The Craigan Farm," Aspley R. J. Crawford, "Inverlaw Jersey Stud," Inverlaw, Kingaroy P. H. F. Gregory, "Carlton," Rosevale, <i>via</i> Rosewood E. A. Matthews, "Yarradale," Yarraman A. L. Semgreen, "Tecoma," Coolabunia G. & V. Beattie, "Beauvern," Antigua, Maryborough L. E. Meier, "Ardath" Stud, Boonah A. M. and L. J. Noone, "Winbirra," Stud, Mt. Esk Pocket. Esk W. S. Conochie and Sons, "Brookland" Stud, Sherwood road, Sherwood Estate of J. A. Scott, "Kiaora," Manumbar road, Nanango F. W. Verrall, "Cobleburn," Walloon
Polled Hereford ..	W. Maller, "Boreview," Pickanjinnee

Brucellosis Testing of Swine.

The Department of Agriculture and Stock is operating a scheme whereby pig herds are tested at intervals for the occurrence of swine brucellosis (contagious abortion).

A herd listed by the Department as "brucellosis tested" is one in which all such animals as may be determined by the Director of the Department's Division of Animal Industry have been subjected to two successive tests for brucellosis, at intervals determined by him, without any positive reactors being found.

In order for a herd to be retained on the list of Tested Herds, a semi-annual or annual re-test of the herd, as determined by the Director, is required. If at a re-test any animal gives a positive reaction to the test the herd is removed from the list; it is not listed again until subsequent tests, as determined by the Director, have been carried out.

Full particulars of the Brucellosis Testing of Swine and application forms may be obtained from the Under Secretary, Department of Agriculture and Stock, William Street, Brisbane.

TESTED HERDS.

(AS AT 31st JANUARY, 1953.)

Breed.	Owner's Name and Address. of Stud.
Berkshire	J. J. Bailey, "Lucydale" Stud, East Greenmount
	S. Cochrane, "Stanroy" Stud, Felton
	Garrawin Stud Farm Pty. Ltd., 657 Sandgate road, Clayfield
	G. Handley, "Handleigh" Stud, Murphy's Creek
	J. L. Handley, "Meadow Vale" Stud, Lockyer
	R. G. Koplick, "Melan Terez" Stud, Rochedale
	O'Brien and Hickey, "Kildurham" Stud, Jandowae East
	E. Pukallus, "Plainby" Stud, Crow's Nest
	G. C. Traves, "Wynwood" Stud, Oakey
	E. Tumbridge, "Bidwell" Stud, Oakey
	Westbrook Farm Home for Boys, Westbrook
	H. W. Wyatte, Rocky Creek, Yarraman
	H.M. State Farm, "Palen Creek," Palen Creek
	A. R. Ludwig and Sons, "Cryna" Stud, Beaudesert
	H. H. Sellars, "Tabooba" Stud, Beaudesert
	F. Thomas, M.S. 373, Beaudesert
	D. T. Law, Trouts road, Aspley
	C. F. W. and B. A. Schellback, "Redvilla" Stud, Kingaroy
	R. H. Crawley, "Rockthorpe" Stud, via Pittsworth
	F. R. J. Cook, "Alstonville," Woolvi, via Gympie
	D. E. and E. C. Apelt, "Thelmur," Oakey
	Mrs. I. M. James, "Kenmore" Stud, Cambooya
	H. L. Stark, "Florida," Kalbar
	J. H. N. Stoodley, "Sto dville," Ormiston
	H.M. State Farm, Numinbah
	V. G. M. and A. G. Brown, "Bardell," Goovigen
	R. E. Paulsen, "Hillcrest" Stud, Binjour Plateau, M.S. 670, Gayndah
M. G. and R. H. Atkins, "Diamond Valley" Stud, Mooloolah	
Large White	H. J. Franke and Sons, "Delvue" Stud, Cawdor
	Garrawin Stud Farm Pty. Ltd., 657 Sandgate road, Clayfield
	F. L. Hayward, "Curyo," Jandowae
	J. A. Heading, "Highfields," Murgon
	K. B. Jones, "Cefn" Stud, Pilton
	R. G. Koplick, "Melan Terez" Stud, Rochedale
	R. Postle, "Yarralla" Stud, Pittsworth
	E. J. Bell, "Dorne" Stud, Chinchilla
	L. C. Lobegeiger, "Bremer Valley" Stud, Moorang, via Rosewood
	J. H. G. Blakeney, "Talgai" Stud, Clifton
	H. R. Gibson, "Thistleton" Stud, Maleny
H.M. State Farm, Numinbah	
K. A. Hancock, "Laurestonvale" Stud, Murgon	

TESTED HERDS—continued.

Breed.	Owner's Name and Address of Stud.
Large White	O. H. Horton, Manneum, Kingaroy V. P. McGoldrick, "Fairymeadow" Stud, Cooroy N. Woltmann and Sons, Wooroolin R. S. Powell, Kybong, <i>via</i> Gympie E. B. Horne, "Kalringal," Wooroolin S. T. Fowler, "Kenstan" Stud, Pittsworth J. A. and J. McNicol, "Camden," Canning Vale, Warwick H. L. Larsen, "Oakway," Kingaroy C. Allison, "Colrene" Stud, Lake and Reserve roads, Slacks Creek E. G. Evans, Box 22, Maleny
Tamworth	S. Kanowski, "Miecho" Stud, Pinelands N. R. Potter, "Actonvale" Stud, Wellcamp D. F. L. Skerman, "Waverley" Stud, Kaimkillenbun A. C. Fletcher, "Myola" Stud, Jimbour Salvation Army Home for Boys, Riverview F. Thomas, M.S. 373, Beaudesert A. J. Surman, Noble road, Goodna P. V. McKewin, "Wattleglen" Stud, Goombungee Department of Agriculture and Stock, Regional Experiment Station, Kairi P. V. Campbell, Lawn Hill, Lamington E. C. Phillips, "Sunny View," M.S. 90, Kingaroy T. A. Stephen, "Withcott," Helidon W. F. Kajewski, "Glenroy" Stud, Glencoe A. A. Herbst, Bahr Scrub, <i>via</i> Beenleigh R. G. Koplick, "Melan Terez" Stud, Rochdale H.M. State Farm, Numinbah
Wessex Saddleback ..	W. S. Douglas, "Greylight" Stud, Goombungee D. Kay and P. Hunting, "Kazan" Stud, Goodna E. Sirrett, "Iona Vale" Stud, Kuraby C. R. Smith, "Belton Park" Stud, Nara H. H. Sellars, "Tabooba" Stud, Beaudesert H. Thomas, "Eurara" Stud, Beaudesert D. T. Law, Trouts road, Aspley G. J. Wilson, "Glenbella" Stud, Silverleigh G. J. Cooper, "Cedar Glen," Yarraman J. B. Dunlop, Acacia road, Kuraby A. Curd, Box 35, Jandowae C. Allison, "Colrene" Stud, Lake and Reserve roads, Slacks Creek

PESTS AND DISEASES HANDBOOK.

The second edition of Volume III of the "Queensland Agricultural and Pastoral Handbook" is now available from the Department of Agriculture and Stock.

The description and control of pests and diseases which affect most of the farm and orchard crops grown in Queensland are set out. There is also a chapter on insecticides and fungicides and one on pests of stored products.

The book runs to 560 pages and contains more than 300 illustrations. It is available to primary producers in Queensland for ten shillings, post free, and to others for £1, post free in the British Commonwealth.

ASTRONOMICAL DATA FOR QUEENSLAND.

APRIL

Supplied by W. J. Newell, Hon. Secretary of the Astronomical Society of Queensland.
TIMES OF SUNRISE AND SUNSET.

At Brisbane.			MINUTES LATER THAN BRISBANE AT OTHER PLACES.					
Day.	Rise.	Set.	Place.	Rise.	Set.	Place.	Rise.	Set.
	a.m.	p.m.						
1	5.57	5.47	Cairns	20	38	Longreach	31	39
6	6.00	5.41	Charleville	26	28	Quilpie	36	34
11	6.02	5.36	Cloncurry	44	56	Rockhampton	6	14
16	6.05	5.30	Cunnamulla	29	29	Roma	16	18
21	6.08	5.26	Dirranbandi	20	18	Townsville	18	33
26	6.10	5.21	Emerald	15	23	Winton	35	45
30	6.12	5.18	Hughenden	29	41	Warwick	5	3

TIMES OF MOONRISE AND MOONSET.

At Brisbane.			MINUTES LATER THAN BRISBANE (SOUTHERN DISTRICTS).											
Day.	Rise.	Set.	Charleville 27 ;		Cunnamulla 29 ;		Dirranbandi 19 ;		Quilpie 35 ;		Roma 17 ;		Warwick 4.	
	p.m.	a.m.												
1	6.26	7.12												
2	7.02	8.08												
3	7.44	9.06												
4	8.32	10.05												
5	9.26	11.04												
	p.m.													
6	10.26	12.01												
7	11.31	12.52												
8	..	1.38												
	a.m.													
9	12.37	2.21												
10	1.44	2.59												
11	2.50	3.36												
12	3.57	4.13												
13	5.03	4.50												
14	6.11	5.30												
15	7.20	6.15												
16	8.28	7.03												
17	9.33	7.57												
18	10.34	8.54												
19	11.27	9.53												
	p.m.													
20	12.14	10.51	1	44	15	61	41	45	26	37	14			
21	12.54	11.48	3	52	7	66	35	50	21	43	8			
22	1.29	..	5	55	3	68	32	51	18	45	4			
	a.m.		7	51	5	65	35	49	20	42	6			
23	2.00	12.43	9	46	14	62	40	47	25	38	14			
24	2.29	1.35	11	35	26	54	47	39	33	29	22			
25	2.57	2.27	13	23	38	46	56	30	41	20	33			
26	3.25	3.19	15	12	48	38	62	23	48	11	40			
27	3.55	4.11	17	5	55	35	67	19	52	5	45			
28	4.27	5.05	19	5	52	35	65	19	50	5	44			
29	5.02	6.01	21	11	46	38	61	23	47	10	38			
30	5.42	6.59	23	20	41	43	58	28	44	17	35			
			25	28	32	50	53	34	38	24	28			
			27	38	23	56	45	41	30	32	20			
			29	47	12	63	38	47	24	39	12			
			30	51	8	65	36	49	21	42	8			

Phases of the Moon.—Last Quarter, April 7, 2.58 p.m.; New Moon, April 14, 6.09 a.m.; First Quarter, April 21, 10.40 a.m.; Full Moon, April 29, 2.20 p.m.

On April 15 the sun will rise and set approximately 12 degrees north of true east and true west respectively, and on the 12th and 25th the moon will rise and set very close to true east and true west respectively.

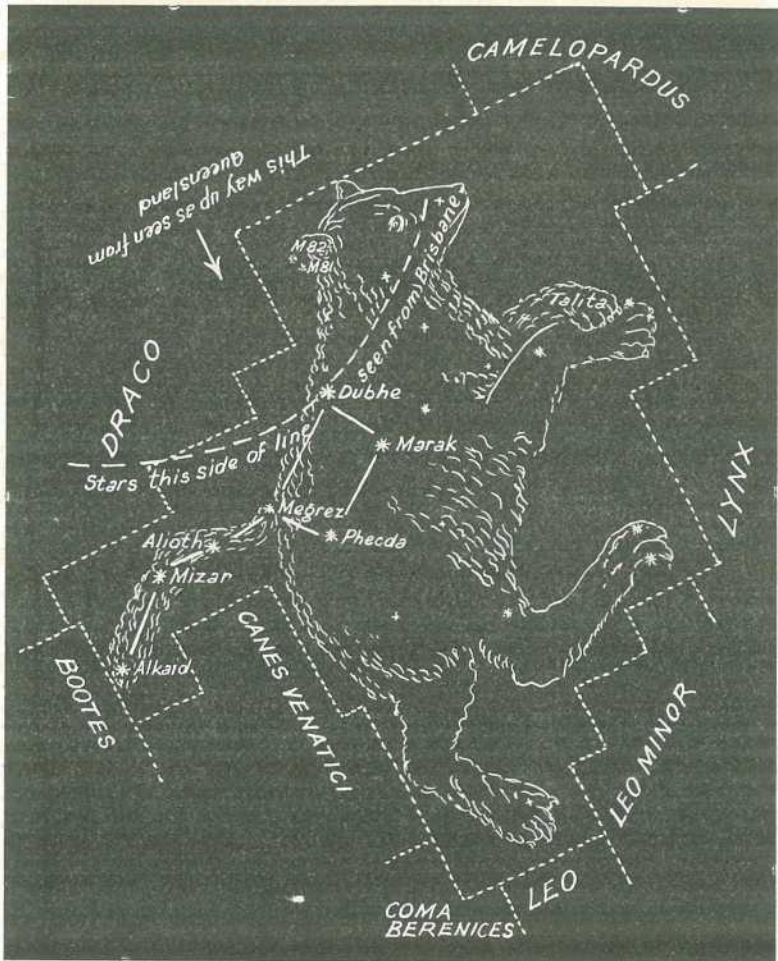
Mercury.—Remains in the constellation of Pisces all the month. On the 1st will rise 1½ hours before the sun and will reach greatest angle west of the sun on the 15th, when it will rise 2 hours before sunrise. About the 28th it will pass Venus, and at the end of the month it will rise 1 hour 44 minutes before the sun. The moon will be near on the 12th.

Venus.—Will be an evening object at the beginning of the month, setting ½ hour after sunset. On the 13th it will be in line with the sun, after which it will pass into the morning sky, and by the end of the month, in the constellation of Pisces, will rise 1 hour 47 minutes before sunrise.

Mars.—In the constellation of Aries and Taurus, is now too close in line with the sun for observation.

Jupiter.—May be seen with difficulty at the beginning of the month in the constellation of Aries, when it will set 2 hours 6 minutes after the sun. At the end of the month, in the constellation of Taurus and close to Mars, it will set only 1 hour after sunset. On the 16th the moon will be near Jupiter and Mars.

Saturn.—At the beginning of April will rise soon after sunset, but by the end of the month it will be well up in the eastern sky at nightfall. It is placed in the constellation of Virgo.



THE CONSTELLATIONS.

URSA MAJOR (THE GREAT BEAR).

This group is well known to inhabitants of the northern hemisphere, almost everyone there being able to recognise this constellation. Besides the Larger or Great Bear, it is also known by "The Big Dipper," "The Plough," "Butcher's Cleaver" and "Charles' Wain" (wagon). North of latitude 40 degrees north it always remains above the horizon and Dubhe (Alpha) and Merak (Beta) often referred to as "The Pointers," are excellent guides to identifying Polaris or The North Pole Star, which is contained in the constellation of Ursa Minor. Because of the large area covered, it can be seen quite plainly low on the northern horizon from as far south as Brisbane, the most advantageous time to observe it being about 10 p.m. at the beginning of May and about 8 p.m. at the beginning of June. None of the stars of this group are larger than second magnitude. The star at the end of the handle of the Dipper is called Alkaid (Eta), or sometimes Benetnasch. The next star to Alkaid is Mizar (Zeta), and close to Mizar is a 4th magnitude star called Alcor. Mizar is interesting historically as it was the first star discovered and mentioned as a double star. It was also the first double to be satisfactorily photographed. Its brighter component was the first star discovered with a spectroscope to be a double. The third star in the handle is Alioth (Epsilon). Where the handle joins the bowl is Megrez (Delta) and below it is Phecda (Gamma). Of the Pointers, Dubhe is closer to the Pole. Ursa Major includes besides the bright stars of the Dipper many others of lesser brilliance. It contains many doubles and nebulae, including the well-known spiral galaxy M81 and the almost edge-on spiral M82. The dotted line on the diagram shows the horizon as seen from Brisbane at most favourable observation.

LYNX.

This is an inconspicuous group situated between Auriga and Ursa Major and north of Cancer and Gemini.