

PROJECT: BDG-CH 465(P)

LOCATION: 'Palm Range', Berajondo

OFFICER: D. Nicol

OBJECT: To assess the effect of treating weaners with cobalt.

TREATMENT-GROUPS:

Animals were Braford cattle of mixed sex and aged 12-24 months.

Group 1: 4 head. Control.
Group 2: 3 head. Cu as Cu glycinate subcutaneously in brisket.
Group 3: 4 head. Co bullet + grinder.
Group 4: 4 head. Cu + Co administered as above.

Two animals in Group 2 and 2 animals in Group 4 were injected intramuscularly with Vitamin B12 at 5 ml/head.

A second Co bullet was given to Groups 3 and 4 two weeks after the first bullet to ensure each animal in these groups had a bullet; ie. a precaution against regurgitation.

COUNTRY:

Soils were granitic sands.

PASTURE: Green panic and Siratro.

COMMENTS:

All animals were treated with Nilverm at 4 ml/45 kg LW prior to the trial.

The 4 groups were run in one paddock along with other cattle. They were given *ad lib* salt for 6 weeks and this was then discontinued.

The trial lasted from 12/11/76 to 19/2/77. One animal in Group 4 died after being treated. The post-mortem did not reveal the cause of the death.

All cattle were weighed fortnightly when possible, and blood for haematology was taken 6 times during the trial. Faecal samples were taken at the end of the trial.

Weight gains in Co groups were far superior to Cu and Control groups. Weight gain of the Vitamin B12 cattle showed no difference in response from those which received Co only.

As well as weight gain, the Co groups cleaned up in the coat sooner and signs of anaemia disappeared and they appeared to be generally in better health than the untreated groups. The excitability of the untreated groups became obvious compared to the treated groups which settled down and handled better through the yards.

Faecal samples collected at the end of the trial showed no significant internal worm burden.

PROJECT: BDG-CH 465(1)

LOCATION: 'Palm Range', Berajondo

TITLE: Cobalt deficiency in cattle at Berajondo

OFFICER: D. Nicol

OBJECT: To assess the effect of treating weaners with cobalt.

TREATMENT-GROUPS:

Animals were Braford weaners of mixed sexes. Prior to treatment, the weaners were fed hay in yards for 3 weeks.

Group 1: 20 head. Control.
Group 2: 20 head. Co bullet + grinder 23/5/77.
Group 3: 20 head. Co bullet + grinder 28/11/77.

A second Co bullet was applied 14 days after the first to ensure all animals had one.

All animals were injected at 2 weekly intervals with Levamisole hydrochloride (active ingredient 7.5% w/w) at 4 ml/45 kg LW. The first treatment was given on 22/5/77. Faecal egg counts taken immediately prior to injection showed low counts with a differentiation of 50% Haemonchus and 50% Cooperia.

COUNTRY:

Granitic sands. The soil was a siliceous sand with a dark loamy sand surface horizon overlying a pale loamy to clayey sand. pH 6.0 Fe 30 ppm, Cu 0.04 ppm, Mn 6 ppm, Zn 0.5 ppm. Soil Co not measured.

PASTURE: Green panic and Siratro.

COMMENTS

All animals grazed a 15 ha paddock adjoining the one grazed in the preliminary investigation and on the same ridge. The paddock was fertilised with superphosphate at 100 kg/ha.

Pasture bulk was assessed on 10/8/77. The mean oven dry matter kg/ha was 1194 with 15% Siratro content. Co content of herbage was around 0.03 ppm.

After a heavy fall of rain in January a heavy infestation of Haemonchus occurred.

Deaths occurred in all groups; 4 in Group 1, 2 in Group 2 and 2 in Group 3. Only one death could be attributed to Co deficiency, internal parasites or a combination of both. This animal was in Group 3.

PROJECT: BDG-CH 465(2)

LOCATION: "Palm Range", Berajondo

TITLE: Relationship between Co deficiency and internal parasites in cattle.

OFFICER: D. Nicol

OBJECT: To evaluate the effect of Co bullet therapy and anthelmintic on growth, blood parameters and worm faecal egg levels of Braford weaners on a cobalt deficient granitic soil in the Berajondo district.

TREATMENT-GROUPS:

Animals were Braford weaners of mixed sexes.

Group 1: 16 head. Control.

Group 2: 16 head. Worm treatment; Levamisole monthly.

Group 3: 16 head. Co.

Group 4: 16 head. Co + worm treatments.

COUNTRY: Granitic sands.

PASTURE:

Green panic and Siratro.

COMMENTS:

The 64 head grazed 35 ha of improved pasture.

PROJECT: BDG-CH 616

LOCATION: Palm Range, Berajondo

TITLE: Molasses based diets for grazing cattle

OFFICER: D. Nicol

OBJECT: To compare the effect of supplementing a basal ration of molasses (fed ad lib) containing 3% urea (w/w) with cottonseed meal and 2 different soybean-crushed maize supplements to weaners grazing improved tropical pastures in winter spring.

TREATMENT-GROUPS:

Animals were weaner Sahiwal steers and heifers.

Group 1: 12 steers. Extruded maize and extruded soybean.
Group 2: 12 steers. Extruded soybean.
Group 3: 12 steers. Molasses and cottonseed meal.
Group 4: 4 heifers. Extruded maize and extruded soybean.
Group 5: 4 heifers. Extruded soybean.
Group 6: 4 heifers. Molasses and cottonseed meal.

All animals given cobalt bullets. All animals fed fortified molasses ad lib in drums.

PASTURE:

Improved tropical pasture.

SUPPLEMENT DETAILS:

All animals were preconditioned to molasses pretrial. The protein energy mix were fed out daily in separate troughs.

Groups 1, 4 fed 800 g/head/day of an extruded mix of:

40% maize
55% soybeans
5% Na bentonite

Groups 2, 5 fed 300 g/head/day of crushed maize plus 480 g/head/day of an extruded mix of:

95% soybean
5% Na bentonite

Groups 3, 6 fed 800 g/head/day cottonseed meal.

COMMENTS:

Analysis showed no significant effects of treatment, sex or the interaction of treatment by sex.

PROJECT: BIL-CH 524

LOCATION: `Wirranda', via Moura

TITLE: Anthelmintic Response Trial

OFFICERS: P.L. Corlis, W.J. Taylor

PUBLISHED: Circulated Trial Report 79/9

OBJECT: To measure the effect of anthelmintic treatment on the liveweight performance of weaners when grazing improved brigalow pastures.

TREATMENT-GROUPS:

Group 1: 15 head. Murray Grey weaner steers; control.

Group 2: 14 head. Murray Grey weaner steers; anthelmintic treatment.

Group 3: 15 head. Murray Grey x Brahman weaner steers; control.

Group 4: 15 head. Murray Grey x Brahman weaner steers; anthelmintic treatment.

COUNTRY: Brigalow

COMMENTS:

Steers were treated orally with `Camden cattle paste' at the recommended dose rate on 26 July 1978 and thereafter at monthly intervals until 19 December 1978. The final weight was taken on 24 May 1979 to measure compensatory effect.

Breed differences were generally in the direction expected and the Brahman cross gained 37% more than the Murray Grey over the whole period.

Treatment differences were absorbed over the post treatment period.

PROJECT: BIL-CH 631

LOCATION: 'Comley', 55 km south Bauhinia Downs

TITLE: Compudose trial.

OFFICER: G. Mason

TREATMENT-GROUPS:

Animals were Brahman crossbred bullocks 3 years old.

Group 1: 82 head. Control.

Group 2: 82 head. Compudose implant.

PASTURE:

Green panic buffel grass.

COMMENTS:

All animals run as one group at a stocking rate of 1.8 ha/head.

PROJECT: BLE-CH 587

LOCATION: `Marston', Jericho Shire

TITLE: Ralgro trial

OFFICER: R. Cheffins

TREATMENT-GROUPS:

Animals were 26 month Santa Gertrudis steers.

Group 1: 58 head. Control.

Group 2: 59 head. Ralgro January 1981.

COUNTRY: Cleared Brigalow

PASTURE: Buffel grass.

PROJECT: BLE-CH 588

LOCATION: `Swanlea', Aramac Shire

TITLE: Ralgro trial

OFFICER: R. Cheffins

TREATMENT-GROUPS:

Animals were 4 months old Braford Hereford cross calves suckling. Calves were marked and branded on 3 April 1982 and weaned on 12 July 1982.

Group 1: 22 head. Steers. Control.

Group 2: 23 head. Steers. Ralgro April 1982.

Group 3: 19 head. Heifers. No Ralgro.

COUNTRY: Desert country with some gidyea.

PASTURE: Native pasture with some buffel.

PROJECT: BLE-CH 588(A)

LOCATION: 'Darracourt', Barcaldine Shire

TITLE: Ralgro trial

OFFICER: R. Cheffins

TREATMENT-GROUPS:

Group 1: 38 head. Control.

Group 2: 16 head. Early Ralgro; February 1981.

Group 3: 16 head. Late Ralgro; May 1981.

Group 4: 36 head. Ralgro twice; February and May 1981.

COUNTRY: Cleared gidyea.

PASTURE: Buffel grass.

PROJECT: BLE-CH 589

LOCATION: 'Woolthorpe', Aramac Shire

TITLE: Ralgro trial

OFFICER: R. Cheffins

TREATMENT-GROUPS:

Group 1: 27 head. Control.

Group 2: 29 head. Ralgro in March 1981 in the conventional site 6-8 cm away from head.

Group 3: 58 head. Ralgro in March 1981. Annular cartilage site 2-3 cm away from head.

Group 4: 27 head. Control.

Group 5: 29 head. Adult spayed Santa cross cows. Ralgro March 1981.

Groups 1, 2 and 3 were 2 years old Hereford steers.

Groups 4 and 5 were adult Santa cross cows spayed 12 months prior to the start of the trial.

COUNTRY: Mitchell grass downs.

PROJECT: BLE-CH 601

LOCATION: 'Ramonda', Barcaldine Shire

TITLE: Ralgro trial.

OFFICER: R. Cheffins

TREATMENT-GROUPS:

Group 1: 33 head. Control.

Group 2: 32 head. Ralgro June 1981.

Group 3: 58 head. Ralgro October 1981 and March 1982.

Group 4: 57 head. Ralgro June 1981, October 1981 and March.

Groups 1 and 2 consisted of 2-4 months old Hereford steers marked and branded on 18/6/81 and weaned on 19/10/81.

Groups 3 and 4 consisted of 15 months old Hereford steers.

COUNTRY:

Cleared gidyua with some desert.

PASTURE:

Buffel with some native pasture.

PROJECT: BLE-CH 602

LOCATION: 'Yalleroi', Blackall Shire

OFFICER: R. Cheffins

TREATMENT-GROUPS:

Group 1: 26 head. Control.
Group 2: 22 head. Ralgro June 1981.
Group 3: 56 head. Ralgro June and December 1981.
Group 4: 30 head. Control.
Group 5: 26 head. Ralgro June 1981.

Groups 1, 2 and 3 consisted of 20 months old Devon steers.

Groups 4 and 5 consisted of 32 month Devon bullocks.

COUNTRY: Cleared gidyea and some box.

PASTURE: Buffel

COMMENTS:

The final weighing of groups 4 and 5 took place at the Blackall saleyards. Cattle were weighed in groups of 5-8 head.

PROJECT: BNE-CH 465

LOCATION: Peak Crossing, Amberley, Wivenhoe

OFFICER: M. Burns

TITLE: Breed performance trial, Peak Crossing

OBJECT: To compare the productivity of different breeds of cattle from weaning to sale as prime beef cattle on native pastures in south eastern Queensland.

TREATMENT-GROUPS:

All cattle were 10-12 month old weaner steers at the start of the trial.

There were 7 head in each group.

- Group 1: Belmont Red control.
- Group 2: Belmont Red dipped.
- Group 3: Belmont Red drenched.
- Group 4: Belmont Red dipped and drenched.
- Group 5: Belmont Red x Zebu (about 50% indicus) control.
- Group 6: Belmont Red x Zebu (about 50% indicus) dipped.
- Group 7: Belmont Red x Zebu (about 50% indicus) drenched.
- Group 8: Belmont Red x Zebu (about 50% indicus) dipped and drenched.
- Group 9: Hereford (Gatton) control.
- Group 10: Hereford (Gatton) dipped.
- Group 11: Hereford (Gatton) drenched.
- Group 12: Hereford (Gatton) dipped and drenched.
- Group 13: Hereford (Toogoolawah) control.
- Group 14: Hereford (Toogoolawah) dipped.
- Group 15: Hereford (Toogoolawah) drenched.
- Group 16: Hereford (Toogoolawah) dipped and drenched.
- Group 17: Braford control.
- Group 18: Braford dipped.
- Group 19: Braford drenched.
- Group 20: Braford dipped and drenched.

Groups 1-4 grazed at Peak Crossing from 25 October 1976 to 22 May 1978.

Groups 1-4 grazed at Amberley from 22 may 1978 to 8 January 1979.

Groups 1-4 grazed at Wivenhoe from 8 January 1979 to 11 June 1979.

Groups 5-20 grazed at Peak Crossing from 25 October 1976 to 8 January 1979.

Groups 5-20 grazed at Wivenhoe from 8 January 1979 to 11 June 1979.

Groups were run in the same paddocks.

Dipping

Cattle were dipped with 'Promicide'. Dipping was continued throughout the trial.

PROJECT: BNE-CH 465 cont.

Drenching

Cattle were drenched with injectible `Nilverm' or `Ripercol' at the high dose rate. Drenching ceased when cattle left Peak Crossing. Rates used were 5 ml/50 kg unfasted liveweight up to the maximum rate of 27 ml/50 kg.

SEASONAL CONDITIONS:

Rainfall was below average from the start of the trial and the summer of 1977-1978 was extremely dry and semi-drought conditions were in evidence from September 1977 to February 1978. Good relief rains were received at the end of January with subsequent useful followup falls. However, it was not until early April 1978 when surface water was fully replenished that drought conditions could be considered to have terminated. Despite the below average rainfall, and cold winter conditions, pasture quality was apparently above maintenance level but quantity was a limiting factor to high animal performance until September 1977. Both quantity and quality of feed was limiting during the November-February drought period and weight losses were sustained. However, following the late January 1978 and subsequent rains, animals performed exceptionally well with mean daily liveweight gains approaching 1 kg through to the end of the review period.

PROJECT: BNE-CH 523

LOCATION: 'Franklin Vale', Grandchester

OFFICER: M. Burns

OBJECT: To observe the effect of various forms of worm treatment on steers.

TREATMENT-GROUPS:

Group 1: 11 head. Control.
Group 2: 11 head. 3 weekly drench.
Group 3: 12 head. Drenched 3 weeks after effective rain.
Group 4: 12 head. Drenched 3-4 times a year.
Group 5: 7 head. Control.
Group 6: 7 head. Drenched 3 weekly drenching.
Group 7: 7 head. Drenched 3 weeks after effective rain.
Group 8: 6 head. Drenched 3-4 times a year.

Groups 1, 2, 3 and 4 were 10 month weaner Hereford steers.

Groups 5, 6, 7 and 8 were 10 month weaner Braford x Hereford steers.

COUNTRY: Forest

PASTURE: Predominantly black speargrass.

PROJECT: BRG-CH 415

LOCATION: 'Quakit', Theodore

OFFICERS: J.L. Knight and D. Llewelyn

OBJECT: To assess and compare liveweight performance of Hereford and Brahman X Hereford steers fed the following rations as supplements to native pasture during the winter period:

- (a) crushed grain sorghum + urea
- (b) molasses and biophos
- (c) no supplement.

TREATMENT-GROUPS

Group 1: 16 head. 6-12 month steers, Herefords: no supplement.
Group 2: 16 head. 6-12 month steers, Brahman-Hereford cross: no supplement.
Group 3: 16 head. 6-12 month steers, Herefords: Molasses and biophos.
Group 4: 16 head. 6-12 month steers, Brahman - Hereford cross: Molasses and biophos.
Group 5: 16 head. 6-12 month steers, Herefords; grain and urea.
Group 6: 6-12 month steers, Brahman-Hereford cross: grain and urea.

COUNTRY: Forest country.

Soil analyses showed available P to be very low (5 pm) and NACI to be high.

SUPPLEMENTS:

Grain and Urea

Crushed grain sorghum plus urea fed through 3 self feeders for 32 head. Feeders adjusted to an intake of 1.8 kg grain + 28.3 g urea per head per day. An analysis of 3 random samples of the grain sorghum urea mix showed an average crude protein content of 18.2% and P content of 0.31%. Average daily intake over the trial period was 1.64 kg grain and 23.8 g of urea.

Molasses and Biophos

This supplement was fed weekly using open troughs. The mix was 4.51 molasses + 450 g Biophos. Average daily intake was 0.34 kg molasses and 6 g of P as Biophos which consisted of 2/3 monocalcium, 1/3 dicalcium phosphates, with a chemical analysis of 21% P, 15-18% Ca.

Animals were introduced to the grain and molasses rations prior to being turned into the trial paddocks.

PROJECT: BRG-CH 415 cont.

COMMENTS

The Brahman-Hereford cross steers tended to do better than the Herefords on all treatments. Weight increases occurred in supplemented groups and weight losses occurred in unsupplemented groups. Responses were lower to Molasses/Biophos than grain/urea and as both treatments provided similar P levels, the difference was thought to be due to additional energy and NPN.

Supplements were fed 19/7/73 to 1/11/73. Some compensatory gain in the non-supplemented groups occurred from 1/11/73 to 18/4/74 but over the whole trial period supplemented groups were superior to controls in weight gain.

Supplemented groups improved in condition over the winter period. This trend generally followed liveweight performance both in breeder differences and treatment differences. The control groups declined in condition, Herefords more so than the crossbreds. Due to heavy tick loads little improvement in condition of most animals occurred over the summer period except for the Brahman cross control group.

There was no problem with cattle accepting the supplements. The total consumption of the Biophos supplement often occurred within 3-4 days of routine weekly feeding.

Blood and faecal P levels were measured. P levels of pasture grass averaged 0.14%.

PROJECT: BWN-CH 370

LOCATION: 'Woonton Vale', Mt Barnett

TITLE: Wet season phosphate supplement observation'

OFFICER: J. Bond

TREATMENT-GROUPS:

Animals were 2-2 1/2 years old <50% Brahman cross steers.

Group 1: 31 head. Control.
Group 2: 24 head. Molasses + phosphoric acid
Group 3: 23 head. Molasses + MAP

PASTURE:

The pasture consisted of Townsville stylo growing naturally in association with white spear grass and an abundance of summer grasses (mainly button).

SUPPLEMENTATION:

Group 2 was given 5 oz molasses + 1 oz phosphoric acid a day via roller drums. Group 3 was given 5 oz molasses + 1 oz MAP via roller drums. Group 2 and 3 ate 0.22 and 0.26 lb/head/day respectively.

Lickers were filled weekly or when conditions permitted. Due to boggy conditions, lickers were not serviced from end of December 1971 to mid - March 1972. Lick consumption given was for the period actually fed. Acceptance was very irregular after rain and appeared to continue with cattle returning to troughs after using surface water.

SEASONAL CONDITIONS:

Summer rains of 71/72 were well above average but fell only over a relatively short period.

PROJECT: BWN-CH 370 cont.

RESULTS:

There was no improvement in liveweight gain from the phosphoric acid/molasses mix. MAP results were discarded due to a broken fence. The dressing %s favoured P acid supplement. Weights in lb:

Group	1	2	3
Final weight (lb)	1172	1143	1124
Dress cold wt (lb)	598	605	584
Dress %	51.3	52.8	52.0

Weight gains in all groups in 71/72 were only 70% of 70/71; viz 211 vs 304 lb; a reflection of the short but intense wet season in 71/72.

Dressing %s were calculated using the paddock liveweight recorded 10 days prior to slaughtering.

PROJECT: BWN-CH 370(P)

LOCATION: 'Woonton Vale', Mt Barnett

TITLE: Wet season phosphate supplement observation.

OFFICER: J. Bond

TREATMENT-GROUPS:

Animals were 2¹/₂ - 3¹/₂ year old bullocks in forward store condition. No 7s and No 8s.

Group 1: 40 head. Control.

Group 2: 40 head. Molasses + phosphoric acid.

PASTURES:

The control's paddock was 200 ac in area and timbered by 5 year old regrowth. The supplemented group ran in a 1250 ac paddock; 550 ac was recently pulled and the remainder covered by light to moderate regrowth. There was more Townsville stylo in this than the control's paddock.

SEASONAL CONDITIONS:

The 1970-71 season was the wettest for years but dry spells late in November and January caused some wilting of plants, but generally grazing was of good quality and quantity.

SUPPLEMENTATION:

Stock accepted the supplement readily although intake (3.2 g/head/day) was below the 5.0 g desired. Consumption declined markedly after heavy rain with the resultant green pick; cattle returned to lickers later. Regular servicing of lickers was a problem due to boggy conditions. It was impossible to service them between 30 January 1971 and 15 March 1971.

RESULTS:

There was no liveweight response to the supplement but the owner stated this group had a more uniform finish with better bloom on coats than had occurred in previous years.

The tops of the No. 8s were superior to the tails of the No. 7s in gain (328 lb vs 276lb).

CARCASS:

Group	1	2
Liveweight (lb)	1239	1253
Cold dress wt (lb)	660	670
Grade	1	1
Cold dress %	53.3	53.5

PROJECT: BWN-CH 481

LOCATION: 'Birralee', Bowen

TITLE: Entire versus spayed heifer growth rate

OFFICER: J. Bond

OBJECT: To compare liveweight performance of unspayed heifers vs spayed heifers on a commercial property.

TREATMENT-GROUPS:

Animals were 8-12 month 50% to 75% Droughtmaster heifers.

Group 1: 8 head. Control.

Group 2: 14 head. Passage spayed.

PASTURE: Speargrass

RESULTS:

Two died after spaying.

One unspayed heifer lactating at final weighing was not included in the summary.

Unspayed heifers tend to stray more than spayed heifers.

PROJECT: CLE-CH 354

LOCATION: 'Wheatleigh', Charleville

TITLE: Biuret supplementation of weaners

OFFICER: M. Weller

OBJECT: To measure liveweight response in weaners (both steers and heifers) to supplementing native pasture with non-protein nitrogen.

TREATMENT-GROUPS:

Stock used were 5-7 month old Shorthorn cross weaners.

Group 1: 45 head. Steers. Control.
Group 2: 46 head. Steers. Supplemented.
Group 3: 38 head. Heifers. Control.
Group 4: 37 head. Heifers. Supplemented.

Supplemented groups and control groups grazed in similar adjacent paddocks.

PASTURE:

Low quality wire grass (*Aristida*).

The country was of red sandy soils, known to be low in P and supported a mulga-box association. No mulga was available for browsing. There was no herbage.

The control groups grazed 3000 acres of which 1000 acres were ringbarked. A total of 140 head grazed (57 yearling heifers as fillers) giving a stocking rate of 43 ac/beast.

SUPPLEMENT:

A mixture of 150 lb feed grade biuret, 3 lb sulphur dustings and 150 lb of molasses (with some water) was distributed in troughs in the treatment paddock at the start of trial, 21 June. The proportions of this mixture were adhered to, except after rain, when molasses was added to the mixture in the troughs to try to bring the cattle back onto the supplement.

PROJECT: CLE-CH 354 cont.

Average daily intake of biuret, calculated on a weekly basis was:

Week No.	Intake biuret/head/day
1	2.5 oz
2	2.5 oz
3	1.6 oz
4	nil (rain)
5	nil
6	nil
7	1.0 oz
8	nil (rain)

Rain during weeks 4 and 8 stopped intake completely as cattle grazed away from water. Following week 8, with the onset of warmer weather and more rain, pastures began to respond and cattle showed no further interest in the supplement.

COMMENTS:

M. Weller reported that from the intake figures a response to biuret could not be expected, considering the initial 28 days required for cattle to adapt to biuret.

He further commented the poorer performance of the biuret group, especially during the second part of the observations, was difficult to explain, and that it was perhaps due to greater walking as they were in a larger paddock.

He pointed out that it was necessary to mix biuret with molasses at 1:1 to achieve required intake and that the manager noticed that 2 or 3 steers which readily took to the supplement in the yards sickened and scoured for 1-2 days.

Calves were weaned progressively during the first 2 weeks of June so that all trial weaners spent at least 1 week in yards on ad lib lucerne hay, before allocation to the trial. A biuret-molasses mixture was offered free choice and there were indications of reasonable intake.

Lice were controlled by one spraying with Dursban.

PROJECT: CLE-CH 505

LOCATION: `Stirling Downs', Tambo

OFFICER: A.W. Plasto, R. Cheffins

OBJECT: (a) To measure the effect of spaying on the liveweight performance of heifers.

(b) To observe liveweight performance on Mitchell grass.

TREATMENT-GROUPS:

Group 1: 15 head. Control.

Group 2: 10 head. Flank spayed.

COMMENTS:

There were no serious side effects to spaying and healing progressed normally.

The two groups were run together. On 31 March 1978, 14 died from thirst. Lucerne hay was given for 7 days to help survivors overcome the accident.

Depression of liveweight performance due to spaying had been compensated by the 52nd day. There was no significant difference in the accumulative gain of the two groups up to 255 days post spaying. After 11 months (332 days) the difference in favour of the non-spayed group was significant for the remainder of the trial.

There was no difference in daily gains between the two groups in any one period save November to February 1978-79 when non-spayed animals gained significantly more.

26 heifers (both groups together) gained 0.36 kg/head/day over 583 days. A positive gain was maintained throughout save from May to July 1978, when it was cold and wet; and in 1979 when it was dry. Top weight gains of 0.89 kg/head/day were recorded over February to May 1979. In the February to May 1978 period, 0.61 was recorded despite the lack of water causing deaths.

PROJECT: CLE-CH 592(A)

LOCATION: `Lambert'

TITLE: The effect of Ralgro on the liveweight gain of steers.

OFFICER: M.R. Clarke

OBJECT: To examine the effect of implants of Ralgro on liveweight performance of steers on 3 properties in south west Queensland.

TREATMENT-GROUPS:

Animals were well conditioned 2 years old Poll Hereford steers.

Group 1: 24 head. Control.

Group 2: 24 head. Ralgro implant.

COUNTRY: Developed gidgee scrub.

COMMENTS:

There waso significant difference between groups.

Reported that it was surprising that implanted animals did not respond significantly and the accuracy of the cattle scales used in this trial was suspect.

All steers used in the trial were finished at the end of the trial and suitable for sale as trade steers.

PROJECT: CLE-CH 592(B)

LOCATION: 'Mt Morris'

TITLE: The effect of Ralgro on the liveweight gain of steers

OFFICER: M.R. Clarke

OBJECT: To examine the effect of implants of Ralgro on liveweight performance of steers on 3 properties in south west Queensland.

TREATMENT-GROUPS:

Animals were store and backward store condition yearling Hereford steers.

Group 1: 24 head. Control.

Group 2: 24 head. Ralgro implant.

COUNTRY: Mixed mulga/frontage country.

COMMENTS:

The steers used in this trial were drought affected but in response to good rain just prior to the trial period they made excellent liveweight gain during the trial. The response to Ralgro was not statistically significant. The fact that these steers were making post-drought compensatory gain may have masked any beneficial effect of the growth promotant.

PROJECT: CLE-CH 592(C)

LOCATION: 'Westquarter'

TITLE: The effect of Ralgro on liveweight gain of steers.

OFFICER: M.R. Clarke

OBJECT: To examine the effect of implants of Ralgro on liveweight performance of steers on three properties in south-west Queensland.

TREATMENT GROUPS:

Animals were Poll Shorthorn steers.

Group 1: 24 head. One year old. Control.
Group 2: 24 head. One year old. Ralgro implant.
Group 3: 24 head. Two year old. Control.
Group 4: 24 head. Two year old. Ralgro implant.
Group 5: 24 head. Three year old. Control.
Group 6: 24 head. Three year old. Ralgro implant.

Groups 1, 2, 3 and 4 were well conditioned, well grown steers.

Groups 5 and 6 were good forward store or fat condition.

COUNTRY: Mitchell grass downs.

COMMENTS:

Groups 1, 2 The response to Ralgro was significant at 5% level.

Groups 3, 4 The response to Ralgro was significant at the 1% level.

Groups 5, 6 These older heavier steers did not gain weight like the steers in groups 1, 2, 3, 4. This may have been due to wet weather during the last week of the trial or to the fact that these steers were fat when they were implanted.

PROJECT: CLT-CH 442

LOCATION: 'Frankfield Station', Clermont

TITLE: Performance of steers on buffel grass

OFFICER: R.C. Cheffins

PUBLISHED: Circulated Trial Report 77/19

OBJECT: To measure the liveweight performance and faecal phosphorus and crude protein levels of steers fattening on buffel grass pastures.

TREATMENT-GROUPS:

Group 1: 13 head. 50% Bos indicus.
Group 2: 20 head. 50% Bos indicus.
Group 3: 49 head. 63% Bos indicus.
Group 4: 18 head. 75% Bos indicus.

COUNTRY: Brigalow-gidgee scrub

PASTURE:

The scrub (800 ac) was cleared and sown to American buffel in 1967/68. It was stocked at 2 ha/head.

COMMENTS:

The mean rainfall for the station was 540 mm. During 1975 813 mm fell and 213 mm to June 1976. Very little rain fell from April to September 1975 and none after February 1976.

Liveweight gains varied little between animals with half or more Brahman content. Gains were lowest for steers with less than half Brahman content, particularly during winter (May to September 1975). All breed types made similar gains after September.

An annual gain of 129 kg was obtained. Liveweight gains of steers on native pasture in other Clermont district trials indicated an annual gain of 130 kg.

Faecal crude protein values were 8.5% (May 1975), 7.5% (September 1975) and 8.5% (June 1976). The faecal P were 0.57%, 0.29% and 0.55% respectively. The fall in P was very marked from May to June.

PROJECT: CLT-CH 442 cont.

CARCASS DETAILS:

Group	Number	Carcass Wt (kg)	Dressing %
1	13	295	50.8
2	19	296	51.3
3	45	302	51.5
4	17	291	50.9

PROJECT: CTS-CH P7

LOCATION: 'Bletchington'

OFFICER: P.C. Davidson

PUBLISHED: Circulated Trial Report 64/11

OBJECT: Observe weight gain performance of drenched and undrenched 12 month old steers.

TREATMENT GROUPS:

Group 1: 33 head. Control

Group 2: 33 head. Given Nevugon on 9/5/63, 25/9/63 and 14/11/63.

COMMENTS:

All animals grazed in same paddock. They were not put into a fresh paddock after drenching.

Worm egg counts of samples taken at start showed majority of steers were not carrying a worm burden of any consequence.

The trial was prematurely terminated.

PROJECT: CTS-CH P9

LOCATION: 'Britannia', Charters Towers

TITLE: Vitamin A supplementation of weaners

OFFICER: P.C. Davidson

OBJECT: To determine the effect of injectible Vitamin A on the growth rate of weaners during the dry season.

TREATMENT GROUPS:

Group 1: 14 head. Older group; no Vitamin A
Group 2: 14 head. Older group; Vitamin A
Group 3: 12 head. Younger group; no Vitamin A
Group 4: 8 head. Younger group; Vitamin A

COMMENTS

Weaning was necessary to relieve stress on poor breeders.

Weaners consisted of a mixture of Herefords, Shorthorns and Brahman cross. Aged 4-9 months. Initially drafted into two groups; younger and older.

Following a short settling down period in the yards, weaners were weighed and each age group (younger and older) was divided into two. One sub-group of each age group was given 1 million IU of injectible Vitamin A initially and then 750,000 IU at 6 week intervals.

Following weaning the ration fed in the yard consisted of lucerne hay, crushed grain sorghum and meat meal.

Good storm rains fell in mid-August and made it possible to stop feeding and turn the weaners onto native pasture at the end of the month as a good green pick was available.

There was no growth response to Vitamin A.

PROJECT: CTS-CH CH6(B)

LOCATION: 'Trafalgar', Charters Towers

TITLE: Superphosphate grazing trial

OFFICER: C.B. Mutch

PUBLISHED: Circulated Trial Report 70/11

OBJECT: To observe the performance of No. 8 Brahman cross steers grazing supered native pasture (10 ac/head) and compared with similar steers grazing native pasture offered a P supplement (22 ac/head) and another group as a control grazing native pasture without a supplement (22 ac/head).

TREATMENT-GROUPS:

- Group 1: 38 head. Control. Steers grazing native pasture.
- Group 2: 19 head. Phosphorus supplemented steers grazing native pasture.
- Group 3: 24 head. Steers grazing supered native pasture.

PASTURE:

Paddock 1: 2,500 ac of open forest country. Country consisted of blackwood scrub, open box and ironbark with rougher areas of quinine and lancewood.

The pasture was bluegrass, forest Mitchell, spear grass (black and white) and wiregrass and the country was noticeably P deficient.

Paddock 2: 1,900 ac as for paddock 1.

Paddock 3: 400 ac of open forest carrying blue grass, forest Mitchell, with box and ironbark dominating.

There were small isolated patches of Townsville stylo and in 1969 the area was sown with 1 lb/ac stylo but germination was so poor the area could only be classed as native pasture.

At the end of 1967, 1968, 1969, 1 cwt/ac of superphosphate was applied. Rainfall following the spread was sufficient to make it available to the pasture.

Soil samples taken in October 1969 had 5-8 ppm P in the unfertilised area and 5-12 ppm in the supered paddock.

COMMENTS:

Faecal analyses for protein and P, and blood P analyses are given in Circulated Trial Report 70/11.

Steers in the control group were seen chewing bones in July 1970. This did not occur in the other groups.

PROJECT: CTS-CH CH6(B) cont.

Steers at the final weighing were conditioned scored and the following were considered suitable for slaughter:

	Control	P Supplement	Supered
% of group	10	60	30

A group of the tops from each paddock (8, 17, 15 from control, P and supered paddocks respectively) were sent to slaughter.

Carcass details were:

Group	1	2	3
Final weight (lb)	989	1 067	1 000
Hot dressed wt (lb)	493	538	504
Dressing %	49.6	50.4	50.4
Condition score	5.3	6.2	5.6
Grade	1.5	1.4	1.5

The use of P supplement enabled 60% of the steers to be turned off 12 months earlier than normal.

SUPPLEMENT

The placement of supplements at watering points was important. There were several natural watering points. In 1970 the supplements were offered at the natural watering points and a marked difference in gain over the controls occurred.

The supplements were:

September 1968 to December 1968: Bonemeal + salt
Phosphoric acid + molasses (drum feeder)

April 1969 to December 1969: Phosphoric acid in water
Phosphoric acid + molasses (drum feeders)

February 1970 to July 1970: Phosphoric acid + molasses (drum feeders).

The phosphoric acid and molasses were offered at the rate of 1 oz of phosphoric acid (5 g P) and 1/3 lb of molasses. After they had settled down, the steers were consuming about 2 gal phosphoric acid a week which was the desired level. At one stage in September 1969 the group of 90 head were eating 5 gal/week of phosphoric acid; this was reduced when noticed.

PROJECT: CTS-CH 325

LOCATION: 'Felspar', Charters Towers (90 miles NW)

TITLE: Biuret Supplementary Feeding Observation

OFFICER: C.B. Mutch

OBJECT: To observe the performance of No. 8 and No. 9 Brahman cross steers grazing native pasture and grazing native pasture plus a supplement of biuret and grain.

TREATMENT-GROUPS:

Group 1: 25 head. No. 8 Brahman cross steers. Control.
Group 2: 25 head. No. 8 Brahman cross steers. Supplemented.
Group 3: 25 head. No. 9 Brahman cross steers. Control.
Group 4: 25 head. No. 9 Brahman cross steers. Supplemented.

PASTURE:

Controls and supplemented stock were run in adjoining paddocks at a stocking rate of 18-20 acres/head. These paddocks contained similar country. About 60%-70% of the supplement paddock was ring barked 2-3 years previously and this provided a slightly greater bulk of feed. Pasture consisted of mature spear grass and bluegrass and contained plenty of bulk.

SUPPLEMENT:

Supplementation commenced on 25 June 1970 with a mixture of 50% Biuret and 50% whole grain sorghum. This provided 3 oz of Biuret and 3 oz of grain sorghum.

Supplementation commenced at the second weighing with 3 oz Biuret and 8 oz of whole grain sorghum per head per day. Experimenting with weldmesh feed hoops was carried out to slow the intake to the desired levels. The intake was the required weekly quantity intended, but it may have been consumed in a shorter period, at times in 3-4 days.

COMMENTS:

At the 29 July 1970 the stock were condition scored. The supplemented group was showing a much more healthy coat than the control group. The unsupplemented cattle had an unthrifty appearance and while their performance had not been poor on the native pastures, it was expected that their weight loss would be even greater.

At the final weighing 22 September 1970 the following comments were made. The consumption of supplement remained steady at 3 oz biuret and 6 oz of uncrushed grain sorghum per head per day. About 5% of the steers had not been getting sufficient supplement and by the bloom on other odd steers, it was considered some were eating more than their share.

The control group was taken in hand at a similar time as the previous weighing about 4 pm and yarded late in the afternoon.

PROJECT: CTS-CH 325 cont.

Comments about the supplemented group were:

The steers were taken in hand off the water around 11 am on the day prior to weighing and looked more hollow than the control group at weighing. The majority of this weight loss was attributed to a difference in fill. At the previous weighing they were yarded later in the afternoon.

In the ring barked country there was a spring green shoot showing age. Although the steers ranged the whole paddock for feed, they may have preferred this pick. There had not been any rain on the country since March/April. The animals consumed their full ration of lick. It was observed about a month ago that the complete group in the supplemented paddock had left the water and were out grazing 1-2 hours before the unsupplemented cattle in neighbouring paddocks.

The average of the condition scores did not indicate the weight loss.

PROJECT: CTS-CH 326(A)

TITLE: Biuret supplementation trial

OFFICER: C.B. Mutch

TREATMENT-GROUPS:

Animals were Brahman cross weaners steers and heifers.

Group 1: 20 head. Control.

Group 2: 30 head. 2lb legume hay per day.

Group 3: 132 head. Supplemented with: Energy 35%
Biuret 50%
Bone flour 5%
Salt 10%

PROJECT: CTS-CH 326(C)

LOCATION: `Myrrlumbing'

TITLE: `Supplementation of Brahman cross heifers

OFFICER: W.J. Taylor

PUBLISHED: Circulated Trial Report 72/1

OBJECT: To assess the performance of Brahman cross heifers grazing native pasture and with access to a grain biuret mixture. Because of the phosphate deficient country mono-ammonium phosphate was included in the mixture and the controls were fed MAP and grain.

TREATMENT-GROUPS

Group 1: 25 head. Control; fed grain + MAP
Group 2: 50 head. Fed grain + MAP + biuret + sulphur

COUNTRY:

Open forest country of iron bark and grey box with Mitchell and spear grasses.

COMMENTS:

Controls were fed 50% grain + 50% MAP. Intake was about 2 oz/head/day.

The supplemented group was fed 50% grain, 14% MAP, 36% biuret (Kedlor 230); 2% of mix was sulphur. Intake was about 3-4 oz/head/day.

The country was normally stocked at 25 ac/head; the rate for the trial was 12 ac/head.

There was good rain in June and early summer rains in October 1971.

The intake of the supplement dropped after the June rain.

After final weighing in October all heifers were run together and supplemented with the grain/biuret mixture. Feed quality dropped due to the hot conditions. Intake of the supplement was 6-7 oz/head/day.

Heifers were run together in the supplemented paddock over the 2 weeks prior to the final weighing. At the final weighing 66% of the grain/biuret group but only 6% of the grain/MAP group had fully cleaned up coats.

Some adjustments in the lick were attempted in the early part of the feeding because 40% grain seemed necessary to get a reasonable intake.

PROJECT: CTS-CH 336(A)

LOCATION: 'Hillgrove', 40 miles north of Charters Towers

TITLE: Biuret supplementation of steers

OFFICER: W. Taylor

OBJECT: To observe the performance of No 0 Devon shorthorn cross steers on minimum biuret supplemented with molasses.

TREATMENT-GROUPS:

Animals were Devon Shorthorn cross weaner steers.

Group 1: Control. Numbers were 25 in 1970, 25 in 1971, 21 in 1972.

Group 2: Supplemented. Numbers were 44 in 1970, 42 in 1971, 40 in 1972.

COUNTRY:

Mainly red basalt with bluegrass species and bloodwood.

SUPPLEMENT:

An intake of 2.5-3 oz of biuret per head per day was aimed at. The supplement was mixed in the paddock in cut-down 44 gal drums in which the lick was fed. Daily intakes were:

21 August 1970 to 18 November 1970, 3 oz biuret + 1oz molasses per head.

14 June 1971 to 27 November 1971, 2.5 oz biuret + 0.5-1 oz molasses + 2% S.

1 June 1972 to 27 September 1972, 2.5 oz biuret + 1 oz MAP + 0.5 oz salt + 0.5-1 oz molasses + 2% S.

All mixtures were altered slightly (molasses content) during the feeding period to achieved the desired intake of biuret. Very little alteration of mixtures was necessary to achieve the desired intakes.

1970: Suitable intakes of the supplement were achieved until the storm rains in October. This gave the control group an advantage and may have accounted for the lack of response to feeding.

1971: This mixture incorporated sulphur as well as biuret and molasses.

Apart from initial upsets in intakes, which were caused by rain, the feeding was at the desired level. This seemed easy to achieve with the mixture used. Following rain, the mixture apparently went sour and raw molasses had to be used to entice the cattle back onto the lick.

At the end of the feeding the control group showed a definite advantage to the fed group. Stocking rates in the control paddock were much higher because of a change in management of the property. These stocking rates enabled the feed to be kept much shorter in the control paddock.

PROJECT: CTS-CH 336(A) cont.

1972: In this year the stocking rates were comparable and filler cattle were used in the fed paddock to even the grazing pressure. There seemed there would be a response, however the control cattle could not be mustered at the suitable times to measure the difference.

Because of pressure of work on 'Hillgrove' the fed group was put out with the control group on 27 September. At this stage it looked as though they had an advantage. Unfortunately, the fed cattle then went back badly. The owner felt this was because the cattle would not feed out in the paddock, and hung on the fence near where they were fed.

However, the control group also lost weight rapidly during November, and caught up to the fed group to some extent.

COMMENTS:

Stocking rates	1970	1971	1972
Control	1:40 ac	1:14 ac	1:15-16 ac
Fed	1:40 ac	1:20 ac	

In each year of the trial, the fed group was confined in a small paddock for the feeding period, and let out into a bullock paddock during the wet season. The control group was run continuously in the bullock paddock. The country in both paddocks was very similar; red, basaltic soil, bluegrass species predominant and covered with narrow leaf ironbark and bloodwood.

PROJECT: CTS-CH 366(A)

LOCATION: 'Hillgrove', Charters Towers

OFFICER: W. Taylor

PUBLISHED: Circulated Trial Report 74/10

OBJECT: To measure the cumulative effect of low level NPN supplements on the growth rate of steers from weaning to turn-off.

TREATMENT-GROUPS:

Animals were Shorthorn/Devon cross weaners.

Group 1: 42 head. Controls
Group 2: 25 head. Supplemented

COUNTRY: Basalt area. In both paddocks the soil was red basaltic and blue grass species predominated. Timber was narrow leaf iron bark and bloodwood.

SUPPLEMENT DETAILS:

The supplement was based on biuret and molasses, with sulphur and phosphorus added in the second and third year. Management difficulties, differential stocking rates and other variables made it impossible to draw any valid conclusions. In fact, the controls did slightly better than the supplemented.

Faecal protein, measured in June, August and September 1971 never fell below 7.5% and in July and August 1972 never below 6.7%.

In each year of the observation, the fed group was confined in a small paddock for the feeding period and let out into a bullock paddock during the wet season. The control group was run continuously in the bullock paddock.

PROJECT: DBY-CH 371

LOCATION: Auburn, Chinchilla

TITLE: Creep feeding trial

OFFICER: E.E. Powell

PUBLISHED: Circulated Trial Report 72/6

OBJECT: (a) To compare the growth rate of creep fed calves with non creep fed calves;
(b) To determine the economics of creep feeding.

TREATMENT-GROUPS:

Animals were male calves with Hereford and Hereford - Brahman cross dams. Sire 3/4 Brahman bulls.

Groups were divided taking into consideration factors such as breed, age of cows and age of and weight of calves to make the groups as even as possible.

Group 1: Control. Non creep.

Group 2: Creep fed.

COUNTRY:

The trial area was improved Brigalow scrub country. Following pulling in 1968 and burning, Green Panic and Rhodes was sown.

PASTURES:

There were two paddocks, 242 and 202 acres of the above pasture. At the start of the trials the area was well grassed mainly with Green Panic although there were small patches of Rhodes in each paddock.

Group 2 was allocated the 242 ac paddock (paddock 2). Some extra breeders were also grazed to bring the stocking rate to 5 ac/head.

Group 1 was allocated the 202 ac paddock (paddock 1).

It was not possible to rotate groups between paddocks but there would have been minimal differences between paddocks.

At no time during the trial, except during May when conditions were drying, was there any shortage of good quality feed.

PROJECT: DBY-CH 371 cont.

COMMENTS:

A grain self feeder was used. Feeding cracked grain sorghum began on 4 March 1972. Both cows and calves were allowed access to the feeder at first and this had some success with teaching the calves to feed. Cows were locked off from 1 April 1972, by which time the majority of calves appeared to be eating

Grain consumption for the whole group in early April was 2 lb/head/day; this gradually increased to 5 lb by late May.

Faecal samples were taken to determine which animals were eating grain;

Date	Eating	Not eating
27/4/72	25	13
24/5/72	32	8

See Circulated Trial Report 76/6 for further grain consumption details.

Grain consumption ranged from 2.0 - 3.9 lb/head/day with an average of 2.95 lb based on the 82% which were eating.

Only 34 accounted for final weighing; of these 28 were eating grain.

There was little difference between the 34 calves in each group throughout; the advantage to the creep fed group from weighings on 13 March 1972 to 24 May 1972 was only 11.26 lb/head. If the eaters in the creep fed group are considered the weight advantage over the non-creep calves from 11 January 1972 to 24 May 1972 was 18.42 lb/head. From 13 March 1972 to 24 May 1972 it was 13.0 lb/head.

Dams of creep fed calves had a weight advantage over control dams.

On appearance, the creep fed calves always looked much better during the grain feeding period than the controls but weighings did not bear this out to any extent.

PROJECT: DBY-CH 513

LOCATION: 'Golden Grove', Glenmorgan

TITLE: Rumenvite Green Feed Instant trials

OFFICER: A. Plasto

OBJECT: Evaluation of the product Green Feed Instant.

TREATMENT-GROUPS:

Group 1: 37 head. Control.

Group 2: 37 head. Green Feed Instant (GFI) supplement.

Two groups of Hereford and Hereford x Simmental steers grazed Algerian oats for 136 days.

One group was given free access to GFI for a 108 day period.

Average daily consumption of GFI was 390g/head/day. Recommended intake is 300g.

COMMENTS:

The 1978 oat season was an exceptional one for crop growth and production.

Liveweight gains dropped dramatically in the final stages of the trial indicating that the conventional 100 day grazing period for oats is realistic.

PROJECT: DBY-CH 514

LOCATION: `Ashvale', Irvingdale

TITLE: Rumenvite Green Feed Instant trials

OFFICER: A. Plasto

OBJECT: Evaluation of the product Green Feed Instant.

TREATMENT-GROUPS:

Group 1: 60 head. Control.

Group 2: 60 head. Green Feed Instant supplement.

Two groups of Hereford steers grazed Coobar oats for 137 days.

One group given free access to GFI for a 107 day period.

Average daily consumption was 536 g/head/day.

COMMENTS:

The 1978 oat season was an exceptional one for crop growth and production.

Liveweight gains dropped dramatically in the final stages of the trial indicating that the conventional 100 day grazing period for oats is realistic.

PROJECT: D1

LOCATION: 'Glenrive', Pilton

TITLE: Ralgro trial 'Glenrive', Pilton

OFFICER: A.W. Plasto

OBJECT: To measure the liveweight response in young calves implanted with Ralgro.

TREATMENT-GROUPS:

Calves were all steers about 4 months old and half to three-quarter Brahman cross.

Group 1: 22 head. Control.

Group 2: 22 head. Ralgro implant.

COMMENTS:

The calves experienced a good season during the trial as indicated by their average liveweight gains for both treated and control groups.

26 February 1981.	Initial weighing
14 April 1981.	Weighing
28 May 1981.	Calves weaned in yards (11 days)
8 June 1981.	Calves onto oats
26 June 1981.	Final weighing

The final weighing was to be at weaning but wet weather prevented this.

PROJECT: D10

TITLE: Supplementary feeding of beef weaners

OBJECT: To investigate the supplementation of weaners on native pasture using comparatively large amounts of cottonseed meal.

TREATMENT-GROUPS:

Animals were good quality 6.5 months old Hereford weaners, mixed sexes.

Group 1: 21 head. Control.

Group 2: 20 head. Supplemented group.

COUNTRY:

Ringbarked forest country heavily grassed with black spear. A creek with paspalum and couch ran through the trial paddocks.

COMMENTS:

The supplemented and unsupplemented groups grazed adjoining paddocks until supplementation ended in December 1960 after which they were run together in a third paddock.

Cottonseed meal was fed out in self feeders which were filled weekly. The rate of feeding was 3.5 lb/head/day for the first 64 days and 2.75 lb/head/day for the remaining 137 days.

Fair grazing became available at the end of October but supplementation was continued until 10 December 1960.

Not all members of the original groups were available for the post supplementation weighings.

PROJECT: D11

LOCATION: Eidsvold

TITLE: Supplementation of weaners

OBJECT: To evaluate feeding of a protein concentrate during the winter to early weaned calves running on native pasture. Repetition of an observation carried out on the property in the previous year.

TREATMENT-GROUPS:

Animals were Hereford weaner steers 5-6 months.

Group 1: 20 head. Control.
Group 2: 20 head. Fed supplement.

COMMENTS:

Forty (40) newly weaned 5-6 month Hereford steers were selected on liveweight uniformity and randomly allocated to control and supplement groups of 20 each. From 18 May 1961 to 6 November 1961 the groups were run in adjacent paddocks stocked at 12 ac/head. During this period the supplemented group got cottonseed meal (40% CP) put out weekly in a self-feeder so as to provide 2.5 lb/head/day.

The paddocks were not comparable so the advantage of the supplemented group was probably reduced by this factor to some extent. During the first 2 months of the trial it became apparent that the control group could not be maintained in its allotted paddock. Following weighing on 11 July 1961 the paddocks were swapped which resulted in an improvement of the control group.

After supplementation finished in 6 November 1961, the two groups were run together on native pasture until the final weighing on 2 April 1962.

The liveweight gain of the supplemented group during the supplementation period was 107 lb greater than the controls but this was reduced to a difference of 58 lb by the end of the period on pasture without supplement.

PROJECT: D12

LOCATION: 'Lynore', East Palmerston

TITLE: Phosphate supplementation on tropical pastures.

PUBLISHED: Circulated Trial Report 64/1

OBJECT: To support earlier work on phosphate supplementation in the wet tropics by J. Onley.

TREATMENT-GROUPS:

Animals were No. 2 Brahman crossbred steers.

Group 1: 25 head. Control.

Group 2: 24 head. P supplemented.

COUNTRY: Flat to undulating with red basaltic soils.

PASTURE: Two paddocks were used. One was molasses grass dominant with some guinea and centro; the other was guinea grass dominated with some molasses grass and centro. The two groups were rotated through the two paddocks at regular intervals.

SUPPLEMENT: A rock phosphate + salt mix was fed in troughs. Just under 1 oz/head/day of rock phosphate was consumed. There was no difficulty in getting stock started on the lick.

COMMENTS:

For approximately the first 3 months mainly dry conditions prevailed. With the advent of storm rains in November the performance of cattle increased greatly and good weight gains were recorded up to the last weighing.

Although the supplemented group performed better, the difference was not significant.

Towards the end of the trial, grass samples were taken and analysed for P content. The results indicated the P levels in the grass were adequate.

Sample	P205 content % DM
Guinea	0.52
Guinea	0.75
Guinea and Centro	0.79
Molasses/calapo	0.58
Centro	0.52

PROJECT: D13

LOCATION: 'Franklin Vale', Grandchester

TITLE: Lucerne hay supplementation observation.

OFFICER: M.A. Burns

PUBLISHED: Circulated Trial Report 74/2

OBJECT: To observe the effect on liveweight performance of Hereford steers fed lucerne hay as a supplement to stand-over mature native pasture during the winter months and to observe post-feeding performance during the ensuing production season.

TREATMENT-GROUPS:

Animals were 20-24 months old Hereford steers.

Group 1: 22 head. Control.

Group 2: 21 head. Fed lucerne hay.

COMMENTS:

Best quality lucerne hay (15% CP) was fed from 22/6/73 - 29/6/73.

Middle quality lucerne hay (13.2% CP) was fed from 30/6/73 - 20/7/73.

Grassy hay (11.5% CP) was fed from 24/7/73 - 29/8/73.

The provision of 0.49, 0.62 kg CP per day markedly reduced weight loss over the 68 day supplement period; 5.8 vs 32 kg/head loss. Actually a positive liveweight response would have been expected for this level of supplementation.

During the post-supplementation period of 253 days on native pasture in the spring to late autumn, the unsupplemented steers gained 33.3 kg/head more than the supplemented and more than compensated for the advantage resulting from winter supplementation.

PROJECT: D14

LOCATION: 'Monkton Hills', Raglan

TITLE: Liveweight data observation on high grade Brahman and Charolais x Brahman x British steers.

OFFICER: P. Corlis

PUBLISHED: Circulated Trial Report 74/5

OBJECT: To investigate the liveweight performance of high grade Brahman cross steers with those with a Charolais component.

TREATMENT-GROUP:

Group 1: 26 head. Brahman x Hereford (87.5% Brahman).

Group 2: 21 head. Charolais x Hereford and Angus x Brahman (25% Charolais, 37.5% British, 37.5% Brahman).

COMMENTS: The average rainfall (53 years) was 646 mm; the rainfall for the weighing year was 903 mm.

Weighing began while calves were on their mothers. First weighing was on 29/3/73. The groups were run in separate paddocks. After weaning the two trial groups were run in the same paddock.

Calves were weaned on 4/6/73.

Weights were:

Date	Weight (kg)	
	Group 1	Group 2
29/3/73	180	181
4/6/73 weaned	226	218
20/9/73	248	241
1/4/74	359	340

The Charolais cross group was easier to handle than the other group.

PROJECT: D2

LOCATION: 'Murriula', Richmond

TITLE: Murriula ralgro trial

OFFICER: P.J.M. Thompson

OBJECT: To determine the effect of Ralgro over an extended period of 17 months or 2 growing seasons on Mitchell/Flinders grass pastures.

TREATMENT-GROUPS:

Group 1: 37 head. Control.

Group 2: 15 head. Ralgro implant; 31 January 1980.

Group 3: 12 head. Ralgro implants; 31 January 1980 and 3 months later.

COMMENTS:

On 31 January 1980 a group of Droughtmaster steers were implanted with Ralgro and an equal number were kept as controls. Three months later half of the Ralgro group was implanted again.

The trial began after the first rains of the wet season.

At the completion of the first growing season a large proportion of the trial steers were sold. Those not heavy enough were kept over for another growing season. Data entered is that for animals kept. These steers were weighted again on 21 June 1981 to check for compensatory growth.

It was reported that the results as they stand would indicate that where steers are being kept for two grazing seasons there is no advantage reflected in growth rate by implanting once or twice with Ralgro in the first season.

PROJECT: D3

LOCATION: 'Glen Prairie', St Lawrence

TITLE: Ralgro and Compudose observations

OFFICER: P. Venamore

OBJECT: To measure the effect of Ralgro and Compudose on the growth rate of steers.

TREATMENT-GROUPS:

- Group 1: 50 steers. Control.
- Group 2: 48 steers. Ralgro implanted on 24 February 1982.
- Group 3: 49 steers. Two Ralgro implants; 24 February 1982, 19 November 1981.
- Group 4: 50 steers. Control.
- Group 5: 48 steers. Compudose implanted (200 day).

COMMENTS:

The treatment had a significant effect ($P < .005$) on liveweight at each date and on period and cumulative liveweight gains. These liveweights and liveweights gains were adjusted to an initial liveweight of 372 kg which was the overall mean on 19 November 1982.

The apparent advantage to one implant of Ralgro is a nontreatment effect because Ralgro was not administered until 24 February 1982.

The treatment effects were significant for the two liveweights and for the daily gains for 4 December 1981 to 24 February 1982 and 4 December 1981 to 19 May 1982 but not significant for the period 24 February 1982 to 19 May 1982. Liveweights were adjusted to the 4 December 1981 group liveweight of 387kg.

It was considered that both the response to Ralgro and Compudose were comparable.

Both the two implants with Ralgro and Compudose showed a lower response - second gain period.

The second dose of Ralgro gave an apparent response but this was a diminishing one.

PROJECT: D4

LOCATION: 'Anchor Station'. Duaringa

TITLE: Ralgro observation

OFFICER: P.C. Venamore

OBJECT: To measure the effect of Ralgro on young steers grazing native pasture in Central Queensland.

TREATMENT-GROUPS:

Animals were No 0 Droughtmaster steers.

Group 1: 24 head. Control.

Group 2: 48 head. Ralgro on 12 March 1981, 29 October 1981 and 19 March 1982.

PASTURE DETAILS:

During the trial the steers grazed pasture of about 50% green panic and 50% native species at a stocking rate of 3.0 ha/head.

COMMENTS:

Analysis showed that at each weighing the treated steers were significantly ($P < .005$) heavier than the controls.

It was considered that the response to Ralgro based on one treatment may not indicate the value of sequential treatments. This was because of a diminishing level of response during the periods following the repeated doses.

When the steers were drafted for sale in June 1982, 58% of the treated steers were regarded as saleable, whereas none of the controls were selected.

Managerially, this treatment assisted in allowing the owner to sell steers earlier at a heavier weight. Incidentally, the treated steers (29-33 months of age) averaged 555 kg at sale and were bought for 60 c/kg liveweight.

PROJECT: D5

LOCATION: 'Uralla', Meandarra

TITLE: Ralgro observation

OFFICER: E. Powell

TREATMENT-GROUPS:

There were 3 Chianina x Santa steers about 1 year old and 12 Santa Gertrudis steers rising 2 years per group.

Group 1: 15 head. Control.

Group 2: 15 head. Ralgro.

COMMENTS:

Prior to the trial period the steers had been grazing oats for 2 days and before that severe drought conditions had existed. The steers were grazed on good fattening oats for the duration of the observation. The liveweight gains kg/head/day recorded were:

	Control	Ralgro
Chianina X	1.39	1.74
Santa	1.58	1.52

The conclusion was that Ralgro failed to give any liveweight response to steers grazing oats for an 83 day period in the Meandarra district.

PROJECT: D8

LOCATION: 'Foriston', Meandarra

TITLE: Drenching observation

OFFICER: G.S. Wright

OBJECT: To compare the growth of drenched and undrenched weaners.

TREATMENT-GROUPS:

Group 1: 50 head. Control.

Group 2: 50 head. Injected with Nilverm on 4 July 1977 and 3 August 1977 at half the recommended dose rate.

COMMENTS:

The heifers were weaned on 30 June 1977 and yarded for 9 days and fed ad lib buffel/panic hay.

The heifers were allocated to each group on the basis of initial liveweight. All animals were treated for lice using Tiguvon spot-on. The treated group was given 10cc Nilverm.

At the second weighing on 3 August 1977 the treated group received another 12 cc Nilverm injection. After this muster both groups were put into a lucerne paddock until mid-October when they were mustered into a native pasture paddock. They grazed the native pasture until the final weighing.

PROJECT: D9

LOCATION: 'Mt Eugene', Jambin Project.

TITLE: Effect of spaying by different methods on weight gain of heifers.

OFFICERS: P.J.M. Thompson, Miss H. Williams

PUBLISHED: Circulated Trial Report 80/1

OBJECT: To determine the effects of different spaying techniques on maiden heifers.

TREATMENT-GROUPS:

Animals were 18-20 months old maiden heifers.

- Group 1: <50% Brahman or Africander; Control. Unspayed.
- Group 2: <50% Brahman or Africander; Passage spayed and torn.
- Group 3: <50% Brahman or Africander; Passage spayed and normal.
- Group 4: <50% Brahman or Africander; Flank spayed.
- Group 5: <50% Brahman or Africander; Control. Unspayed.
- Group 6: <50% Brahman or Africander; Passage spayed and torn.
- Group 7: <50% Brahman or Africander; Passage spayed and normal.
- Group 8: <50% Brahman or Africander; Flank spayed.

PASTURE DETAILS:

Predominantly speargrass pastures.

COMMENTS:

These were heifers that had not conceived at their yearling mating and cull heifers that had not been joined.

See Circulated Trial Report 80/1 for further comments on spaying and its effects.

PROJECT: EM-CH P1

LOCATION: 'Meemooloo', Comet

TITLE: 'Growth Rate Observation

OFFICER: P.J. Round

PUBLISHED: Circulated Trial Report 64/7

TREATMENT GROUPS:

- Group 1: 15 month spayed heifers on burnt, seeded brigalow, paddock 1.
- Group 2: 14 month steers on burnt, seeded brigalow, paddock 1.
- Group 3: 11 month steers on burnt, seeded brigalow, paddock 2.
- Group 4: 18-24 month steers on burnt, seeded brigalow, paddock 3.
- Group 5: 9 month steers on burnt, seeded brigalow, paddock 3.
- Group 6: 6-12 month steers on burnt, seeded brigalow, paddock 3.
- Group 7: 15 month spayed heifers on Queensland blue grass downs, paddock 4.
- Group 8: 11 month steers on Queensland blue grass downs, paddock 4.
- Group 9: 9 month weaner steers on Queensland blue grass downs, paddock 4.

COUNTRY: Brigalow scrub and non Mitchell grass downs.

COMMENTS:

Paddock 1 (groups 1,2)

Nine hundred (900) acres pulled in September 1960 and burnt and seeded January 1961 with 1.5 lb Green Panic, 1 lb Rhodes. Establishment of Rhodes fair but Green Panic poor. Stocked May 62. Sucker regrowth heavy following pulling. Burnt after good storm in September 62 and hot dry weather occurred until December 62. Little grass growth during this period but sucker growth was vigorous. Stocking rate was 1 beast/7.5 ac from 8 May 1962 to 7 December 1963.

Paddock 2 (group 3)

Nine hundred (900) acres pulled in September 1960 and burnt and seeded in November 1961 with 1 lb Green Panic, 1 lb Rhodes and 1 lb Jap Millet. Initial establishment of Rhodes was fair but Green Panic was poor. Moderate sucker regrowth was controlled by burning. Stands of Rhodes and Green Panic improved while Jap Millet declined. Paddock was burnt in September 1962 and January 1964. Stocked in April 1962 at 1 beast/8 ac and maintained at this level.

Paddock 3 (groups 4, 5, 6)

One thousand five hundred (1500) acres pulled in September 1961 and burnt and seeded in October 1962 with 1 lb White Panic, 1 lb Green Panic and 1 lb Rhodes. Initial establishment of all components fair to good and stand improved. Sucker regrowth moderate subsequent to seeding. Area stocked at 1 beast/10.5 ac.

Paddock 4 (Groups 7, 8, 9)

An area of 4200 acres comprising 2400 acres open downs and 1800 acres brigalow scrub. Scrub fenced off in August 1963 and not subsequently used in the trial. Stocking rate of whole area was 1 beast/32 ac until August 63 when scrub was fenced off. Subsequent stocking 1 beast/17.5 ac on downs country. The downs country carried Queensland blue, Satin top, Early Spring, Mitchell, Flinders, Shot grass, Black spear, White spear, Yabila and native legumes. Paddock would be better than average for the district.

PROJECT: EM-CH P1 cont.

A notable point of the growth rate pattern was the absence of extreme fluctuations. Daily liveweight losses of 0.5 lb/day or higher were recorded only during one period of 43 days between mid-June and mid-August. Also, periods of very high rates of gain (>2 lb/day) were limited.

PROJECT: EM-CH P1(B)

LOCATION: Central Highlands

TITLE: Performance of cattle grazing rape

OFFICER: C.B. Mutch

PUBLISHED: Circulated Trial Report 66/3

COMMENTS:

Crop consisted of 64 acres of safflower and 31 acres of rape. It provided 52.7 beast days grazing per acre. Crops were grazed when 9 in high.

PROJECT: EM-CH P3(B)

LOCATION: 'Boonal Downs', Capella

TITLE: Safflower grazing observation

OFFICER: B.E. Moore

PUBLISHED: Circulated Trial Report 68/5

OBJECT: Originally to compare the returns from beef production and grain production on a poor safflower crop. The inefficiency of the electric fence system prevented this.

TREATMENT-GROUPS:

Stock were 44 head of 2-3 years old Hereford bullocks in a very forward condition.

COUNTRY: Open undulating downs with some coolabah, bloodwood and stony ridges.

PASTURE/CROP:

The crop was 239 ac of safflower with about 30 ac of native pasture in the same paddock; mainly white spear, star and some blue grass.

The cultivation was sown to sugardrip in February 1967 but this failed although it gave some useful feed to heifers. Safflower was planted 29 June 1967 to 4 July 1967 with Giela at 6.31 lb/ac. The crop germinated well but yields were subsequently affected by dry weather.

COMMENTS:

Grazing commenced when the stalk was 21-30 inches high and flower buds were forming. Grain was harvested from the crop in October-November. The bullocks had been grazing grass and sorghum stubble previously and appeared to be gaining weight on it.

The performance of the bullocks weighed onto and off the crop was 3.42 lb/day. This is obviously a misinterpretation of their real performance.

It was concluded that while failed safflower crops are capable of attaining high daily gain the amount of feed they supply is limited.

Over 1966-67, the highest beast grazing days/acre recorded was 31 in the Clermont district; this included grain and grazing crops.

The results indicate the necessity for a reasonable settling down period before performance can be measured with accuracy.

PROJECT: EM-CH P3(B) cont.

An observation of `Natoma', Capella illustrates the low beast grazing days/acre of safflower. Nineteen head were weighed onto and off crop.

Average Liveweight (lb) 6 October 1966	660.7
Average Liveweight (lb) 3 November 1966	753.4
Average change	92.7
Gain/day (lb)	3.31
Beast grazing days	10.00

Over the period, two safflower crops were grazed. One crop (Horowitz) yielded 8 beast grazing days/acre; the other (Giela) yielded 12 beast grazing days/acre. Extremely dry conditions were being experienced at the time of the weighing.

PROJECT: EM-CH P9

LOCATION: 'St Aubins', Central Highlands

TITLE: Performance of cattle grazing rape

OFFICER: C.B. Mutch

PUBLISHED: Circulated Trial Report 66/3

COMMENTS:

There were 200 acres of Sugardrip and rape at 'St Aubins'.

There were many enquiries about the taint of beef but with the exception of a steer killed for station meat there were no complaints regarding any smell.

The drought resistance and high quality of rape have shown the advantage of this crop.

PROJECT: EM-CH P10

LOCATION: 'Britley', Central Highlands

TITLE: Performance of cattle grazing rape

OFFICER: C.B. Mutch

PUBLISHED: Circulated Trial Report 66/3

COMMENTS:

Three paddocks of rape were grazed on 'Britley':

- 150 acres, rape 2 ft high, 80.2 beast days grazing per acre.
- 60 acres, rape 18 in high, 59.7 beast days grazing per acre.
- 200 acres, rape 13 in high, 48 beast days grazing per acre.

PROJECT: EM-CH P11

TITLE: Supplementation of sudax regrowth with grain sorghum

PUBLISHED: Circulated Trial Report 69/4

OBJECT: To observe the performance of 2 year old steers being grain supplemented on a ration crop of Sudax grazing sorghum.

COUNTRY: Open downs

COMMENTS:

Cattle were Herefords and Hereford-Shorthorns in very forward store condition at the start of the observation.

The 180 ac of Sudax had been grazed 3 times previously. At the start of the trial it was 12-15 inches high and running to head and fairly sparse. Analysis showed 22.2% protein DW basis and 60% estimated TDN.

Prior to this grazing, the steers had been on oat stubble and pasture.

Grain sorghum was available at all times in self feeders. A faecal examination showed that all animals were eating the grain after the first fortnight. Grain intake reached a maximum of 16 lb/day per head about the fifteenth to the eighteenth day. After this intake reduced gradually.

The grain appeared to put a bloom on the steers. At the start about 50% had drought coats, at the end all but 7 had cleaned up.

PROJECT: EM-CH P13

LOCATION: `St Helens', Taraborah

OFFICER: C.B. Mutch

PUBLISHED: Circulated Trial Report 66/6

OBJECT: Observe the performance of 20 month - 2 year old Herefords grazing a crop of Dolichos and Sugardrip.

COMMENTS:

A crop of 35 acres of Rongai lablab and sugardrip was planted in early March 1966 and had 89 points of rain fall on it after planting.

The lablab grew vigorously to 2 ft 6 in and the sugardrip averaged about 5 ft.

The crop was grazed from 10 May 1966 to 18 July 1966 by which time it was very short.

PROJECT: EMD-CH 366

LOCATION: `Rhodanna', Comet

TITLE: Supplementary grain feeding

OFFICER: A.H. Milles

PUBLISHED: Circulated Trial Report 73/9

TREATMENT-GROUPS:

Animals were Brahman cross weaner steer of 8 months at the start of the trial.

Group 1: Controls. No grain supplement. Molasses/biuret fed from October, 1972.

Group 2: Fed grain sorghum + biuret/urea + salt.

Group 3: Not part of trial. Grazed trial paddock in inter phase period.

PASTURE DETAILS:

From 24 August 1971 to 10 December 1971 there was patchy rain. Substantial rain in December caused prolific growth and so supplementation was suspended. Cattle grazed adjoining paddocks.

From 15 December 1971 to 10 May 1972 the animals grazed the same paddock; no supplement was given.

From 10 May 1972 to 27 December 1972 the animals were run separately and supplemented group was given grain; the control group was given molasses/urea from October. Non-trial cattle were used to adjust stocking rates.

SUPPLEMENT DETAILS: Group 1 was supplemented with molasses/urea from 15 October 1972 to 27 December 1972.

In the 10 May 1972 to 27 December 1972 period, the grain group supplement was initially set at 1.4 kg/head/day grain + 28 g urea/head/day + 7.5% coarse salt. The urea intake gradually increased to 60 g/head/day as the grass matured and hayed off with the first frost.

Salt was included mainly as an additional means of controlling intake. Increased skill in operating the self feeder allowed salt to be cut from 7.5% to 2.5% by the time the steers were finishing.

COMMENTS:

1971 and 1972 were similar in 3 ways: below average annual rainfall, during January and February 25% above average rainfall and very poor autumn rainfall.

In both years a heavy body of feed was produced during the summer months, the bulk of which was well hayed off by mid to later autumn.

The growth rate of the controls during the 1971 spring was exceptional; even so, there was a response to supplementation.

Some compensatory gain by controls occurred during the inter phase communal grazing period. Overall lack of substantial compensation may be due to the high rate of grain during the previous period. In the second supplementation period, grain consumption averaged 2.3 kg/head/day for an extra daily gain of only 0.21 kg; ie a conversion of 1:10.87. This was in marked contrast to the first period when 4.5 kg/head/day produced an extra 1 kg/head/day.

PROJECT: EMD-CH 366 cont.

Fifty points of rain in the control's paddock in October 1972 may have accounted for their improvement from 14 November 1972 to 22 December 1972. During this period there was little difference in gain between controls and the supplemented group. If this period is excluded, the conversion rate of extra gain from grain is about 1:6.

The response from the first supplementation period is exceptional; that from the second period conforms to normal expectations.

PROJECT: EMD-CH 411

LOCATION: Emerald Pastoral College, Emerald

TITLE: Performance of steers on pulled brigalow

OFFICER: W.J. Hall

PUBLISHED: Circulated Trial Report 77/17

OBJECT: To observe the liveweight performance of steers grazing pulled brigalow scrub and relate it to faecal N and P.

TREATMENT-GROUPS:

Animals were Hereford steers, age not given.

Group 1: Grazed trial paddock 27 June 1973 to 17 December 1973.

Group 2: Grazed trial paddock 6 March 1974 to 30 October 1974.

Group 3: Grazed trial paddock 18 April 1975 to 2 October 1975.

RAINFALL:

Mean annual rainfall is 634mm. In 1973, the rainfall was 863 mm. In 1974 it was 1048 mm and in 1975 908 mm. During the trial periods of each year 230 mm, 920 mm and 120 mm fell.

COMMENTS:

Trial area was 305 ha of brigalow scrub which was pulled, burnt and seed in 1971. The mixture planted was 0.23 kg/ha buffel, 0.6 kg/ha green panic and 0.12 kg/ha Rhodes.

During the trial period native pastures still predominated and consisted of Flinders, barley grass, bull Mitchell, native couch, white and bunch spear grass. The paddock was considered to be similar to much of the newly established country in the region.

A new draft of steers grazed the area each year at a stocking rate of 3.6 ha/head.

There did not seem to be any obvious pattern between liveweight change, faecal crude protein and faecal P.

PROJECT: EMD-CH 429(1)

LOCATION; `Consuelo', Rolleston

TITLE: Effect of spaying maiden heifers

OFFICER: W.J. Hall

PUBLISHED: Circulated Trial Report 76/11

TREATMENT-GROUPS:

Animals were 2 years old Shorthorn heifers.

Group 1: 15 head. Control.

Group 2: 15 head. Flank spayed.

COMMENTS:

Too few animals per treatment and subsequent pregnancies placed severe constraints on any conclusions. Unwanted pregnancies terminated the observation which underlines the main function of spaying.

A literature search uncovered 8 experiments where spayed heifers had a lower daily gain than unspayed but none of these differences was significant.

PROJECT: EMD-CH 429(2)

LOCATION; 'Tantallion', Rolleston

TITLE: Effect of spaying maiden heifers

OFFICER: W.J. Hall

PUBLISHED: Circulated Trial Report 76/11

TREATMENT-GROUPS:

Animals were 2 years old Hereford heifers.

Group 1: Control.

Group 2: 9 head. Flank spayed.

Group 3: 18 head. Passage spayed.

COMMENTS:

Too few animals per treatment and subsequent pregnancies placed severe constraints on any conclusions. Unwanted pregnancies terminated the observation which underlines the main function of spaying.

PROJECT: EMD-CH 430

LOCATION: 'Consuelo', Rolleston

OFFICERS: J. Hall, R. Barnett, M. Burns

PUBLISHED: Circulated Trial Report 78/12

OBJECT: To obtain for the performance of various breed crosses in an area where there is little or no empirical information concerning likely differences between genotypes.

TREATMENT-GROUPS:

Group 1: 8 head. Charolais Shorthorn cross bullocks aged 3.5-4 years old.
Group 2: 12 head. Brahman Shorthorn cross bullocks aged 2.5-4 years old.
Group 3: 14 head. Sahiwal Shorthorn cross bullocks aged 2.5-4 years old.
Group 4: 14 head. Shorthorn bullocks 4-5 years old.

CARCASS DETAILS:

Group	Live Wt (kg)	Dressed Wt (kg)	Dressing %
1	626	351	56.05
2	611	333	54.56
3	604	334	55.29
4	570	309	54.22

PROJECT: EMD-CH 464

LOCATION: Emerald Pastoral College, Emerald

TITLE: Breed Comparisons

OFFICER: T. Rudder

OBJECT: To observe the liveweight performance of weaner steers and heifers of various breed mixtures.

TREATMENT-GROUPS:

B = Brahman; H = Hereford; BR = Belmont Red; A = Africander

Group 1:	B4H4 8 month weaner heifers,	No 8 drop; F1.
Group 2:	B6H2 8 month weaner heifers,	No 8 drop; F1.
Group 3:	BR4B2H2 8 month weaner heifers,	No 8 drop; F1.
Group 4:	A4H4 8 month weaner heifers,	No 8 drop; F1.
Group 5:	B4H4 8 month weaner heifers,	No 8 drop; F1.
Group 6:	B6H2 8 month weaner heifers,	No 8 drop; F1.
Group 7:	BR4B2H2 8 month weaner heifers,	No 8 drop; F1.
Group 8:	B4H4 8 month weaner heifers,	No 9 drop.
Group 9:	BR4B2H2 weaner heifers,	No 9 drop.
Group 10:	A4H4 weaner heifers,	No 9 drop.
Group 11:	B4H4 weaner steers,	No 9 drop.
Group 12:	BR4B2H2 weaner steers,	No 9 drop.
Group 13:	A4H4 weaner steers,	No 9 drop.

COMMENTS:

The weights in the data file are age adjusted weights.

Groups 8 to 12 are for males and females; this division is on an approximate basis.

PROJECT: GAY-CH P3(B)

LOCATION: `Binger Plantation', Bundaberg

OFFICER: J.J. Sullivan

PUBLISHED: Circulated Trial Report 65/15

OBJECT: To compare the results of drenching as against non-drenching and the results of drenching with Thibenzole as against injecting with Neguvon.

TREATMENT-GROUPS:

Weaners 4 to 7 months of age of mixed sex.

Group 1: 26 head. Control.
Group 2: 29 head. Neguvon injection.
Group 3: 30 head. Thibenzole drench.

COMMENT:

All weaners were held and fed in a feedlot for the duration of the trial.

The liveweight gain of the Thibenzole group was significantly greater than the other two groups.

At the final weighing, the worm egg counts of the Thibenzole groups was significantly less than the controls. The difference in worms egg counts between the Thibenzole and Neguvon groups was not significant.

PROJECT: GAY-CH P31

LOCATION: Reids Creek

OFFICER: G.T. Marlow

PUBLISHED: Circulated Trial Report 66/8

OBJECT: To examine the performance of bullocks on high protein crops in the summer and autumn.

TREATMENT-GROUPS:

Fifty two bullocks (three years old) in forward store condition grazing cowpeas in a 42 ac paddock.

COMMENTS:

The cowpea crop was planted at the end of October 1965 and stocked on 20 February 1966. They were weighed after eight days of grazing the cowpeas (70%) and speargrass (30%).

Analysis of mixed sample taken on 28 February 1966 gave a Crude Protein of 26.8% DM basis. TDN estimated to be 60%.

CARCASS DETAILS: Stock killed on 16/5/66.

Liveweight	Hot Dressed Wt	Dress %
1240 lb	658 lb	53

PROJECT: GAY-CH P33

LOCATION: `Lynora', Mulgildie

TITLE: Effects of Vitamin A

OFFICER: G.T. Marlow

PUBLISHED: Circulated Trial Report 67/1

OBJECT: To examine the effects of Vetjecta Vitamin A on:

- (a) scouring on oats;
- (b) weigh gains of fattening heifers from previously drought affected country grazing oats.

TREATMENT GROUPS:

Group 1: 16 head. Control

Group 2: 18 head. 750,000 IU Squibb Vetjecta Vitamin A. Heifers, age unknown.

COMMENTS:

Cattle taken from drought affected country to oats to fatten.

One group injected with 750,000 IU Vitamin A.

The Vitamin A group performed better. This was contrary to expectations. It was suggested that at the outset of the trial liver Vitamin A levels were low and the injection boosted this.

PROJECT: GDI-CH 559

LOCATION 'Kindon'

TITLE: Growth rate of bulls on improved pasture.

OFFICER: D. Pollard

OBJECT: (a) To compare the growth rates of Hereford vs Simmental infused bulls (75%H:25%S).

(b) To measure the productivity of a green panic pasture over the summer in terms of cattle growth.

(c) To performance test the bulls.

COUNTRY: Brigalow

COMMENTS:

Bulls were tagged and weighted on 14 November 1979. A second weighing was done on 22 January 1980. By this time seasonal conditions had deteriorated badly and the observations were abandoned.

Pastures were of green panic.

Rainfall for 5 months from 1 December 1979 to 30 April 1980 was 102 mm.

The improved pastures were entirely spent before the end of January. Drought management forced the abandonment of the trial and the removal of the bulls from the pasture area.

PROJECT: GDI-CH 560

LOCATION: `Wyaga', Goondiwindi

TITLE: Ralgro and steer growth trial.

OFFICER: D. Pollard

OBJECT: Comparison of Ralgro treated steers versus controls; and comparison of supplemented steers versus unsupplemented steers; on forage sorghum.

TREATMENT-GROUPS:

Group 1: Control steers; no Ralgro.

Group 2: Ralgro treated steers.

CROP/PASTURE: Forage sorghum.

COMMENTS:

Drought conditions prevailed throughout the observations.

Rainfall over the 5 months 1 December 1979 to 30 April 1980 totalled 71 mm.

The growth rates were very good considering the harsh conditions. However, the steers were in backward condition when purchased, and the response could be partly due to compensatory gain.

PROJECT: GYM-CH 519

LOCATION: Belli Downs, Belli, Gympie

TITLE: Cobalt, copper and anthelmintic trial, 'Belli Downs'

OFFICER: J.L. Knight

OBJECT: (a) To assess liveweight performance of weaners treated with cobalt, copper and anthelmintic.

(b) To observe animal health and ill-thrift.

TREATMENT-GROUPS:

Groups consisted of animals of different sex and varying proportions of *Bos indicus*.

Group 1: 16 head. Control.
Group 2: 15 head. Copper + drench.
Group 3: 15 head. Copper.
Group 4: 16 head. Cobalt + drench.
Group 5: 15 head. Cobalt.

Cobalt was applied as a bullet at the start of the observation. Copper was applied as a glycinate injection every 4 months. Animals were drenched monthly with Nilverm or Ripercol.

PROJECT: ING-CH P11

LOCATION: Murray Upper, North Queensland

TITLE: Animal performance on stylo-hamil grass pastures

OFFICERS: P. Mortiss, H.J. Hibberd, D. Seaton

PUBLISHED: Circulated Trial Report 72/5

TREATMENT-GROUP:

Animals were Brahman cross steers which were turned off when 80% of the group had reached a condition score of 7 (prime fat) and were replaced by a new group.

Group 1: 4 head. Grazing Endeavour stylo 30 September 1969 - 13 March 1970.
Group 2: 4 head. Grazing Schofield stylo 30 September 1969 - 13 March 1970.
Group 3: 6 head. Grazing Endeavour stylo 3 March 1970 - 28 August 1970.
Group 4: 4 head. Grazing Schofield stylo 3 March 1970 - 28 August 1970.
Group 5: 8 head. Grazing Endeavour stylo 30 September 1970 - 30 April 1971.
Group 6: 4 head. Grazing Endeavour stylo 30 September 1970 - 30 April 1971.
Group 7: 6 head. Grazing Endeavour stylo 8 June 1971 - 26 October 1971.
Group 8: 4 head. Grazing Schofield stylo 8 June 1971 - 26 October 1971.

COUNTRY:

Located between Cardwell and Tully and comprised flat coastal forest country of light sandy loam 6 inches deep overlying a heavy yellow-grey subsoil. Timbered with blue gum, bloodwood, light teatree and mahogany and grassed with kangaroo, blady and annuals.

PASTURES:

Each paddock was of 8 acres. The area was cleared and disced several times to give a well prepared seedbed. It was sown on 21 December 1968 with 0.5 lb Hamil and 2 lb stylo per acre. Stylo was not inoculated. Top dressed at sowing with 4 cwt/ac of Zn-super.

Paddocks were grazed intermittently prior to the start of the trial on 30 September 1969.

Paddocks were slashed in September 1970 and top dressed with 3 cwt/ac of Zn-superphosphate.

There was a good germination of both hamil grass and stylo.

Hamil in combination with Endeavour performed poorly and was not grazed until March 1970 after which date it improved markedly in vigour and palatability. The stylo appeared to contribute some N to the soil and hence grass growth. Endeavour showed rapid regrowth after grazing and contributed a greater bulk to the pasture than hamil.

There was a marked visual response by both pastures after slashing and top dressing in September 1970. Extremely vigorous growth of Hamil.

Very wet conditions from February to April 1971 caused flooding and pugging of paddocks, and

rain caused pasture debility. This created a feed shortage and pastures were destocked until a new draft was put out on 8 June 1971.

The Endeavour did not recover. Dry conditions from April 1971 and unusually cold winter conditions prevailed. Growth of Hamil in the Endeavour paddock gradually decreased and by September 1971 it was very short.

PROJECT: ING-CH P11 cont.

The Schofield stylo always showed a reasonable body of feed but the Hamil in this paddock showed very little growth and generally this was only after a top dressing. Blady grass was gradually taking over.

ANIMAL PERFORMANCE:

Steers were turned off when 80% of the group had reached prime fat condition. Dipping for tick and buffalo fly was carried out with weighings.

In the first draft (30 September 1969 to 13 March 1970) those grazing Endeavour had reached slaughter condition 56 days before the Schofield group. The greater bulk of feed in the Endeavour paddock allowed 2 extra animals to be grazed in the second draft.

Following top dressing, the Endeavour was stocked with 6 steers and 2 more were added after 5 weeks. A further 3 steers were added to this paddock but weights were not recorded.

The stocking rate of the Schofield paddock remained unchanged.

PROJECT: ISA-CH 403

LOCATION: 'Cubbaroo', Cloncurry

TITLE: Breed comparison of steer growth

OFFICER: R. Tyler, B.A. Arthur

OBJECT: To compare the growth rate of purebred Shorthorn steers with F1 Brahman x Shorthorn steers in the hot dry environment of north west Queensland.

TREATMENT-GROUPS:

Group 1: 5-8 month old F1 Brahman x Shorthorn steers.

Group 2: 5-8 month old Shorthorn steers.

COUNTRY:

Red loamy frontage country interspersed with pebbly gidyaa ridges. Main vegetation is eucalypt and gidyaa trees with Mitchell and Flinders grasses. The 4860 ha paddock was watered by one bore.

RAINFALL:

From August 1973 to September 1974 the total rainfall was 1497 mm. This included the cyclonic flood rains of January (986 mm) and February (205 mm). Only 29 mm of rain fell after March 1974. The mean annual rainfall for Cloncurry is 474 mm.

COMMENTS:

Over the 371 days the Brahman cross steers gained 133 kg and the Shorthorn 108 kg. Virtually all of this advantage accrued between August 1973 and May 1974 (113 kg vs 89 kg).

During 1974 the property became severely tick infested and animals carried large tick burdens for much of the year; no doubt contributing to the poorer performance of the Shorthorns.

On all occasions the faecal crude protein for the Shorthorns was higher, suggesting the Shorthorns used dietary N less efficiently. The peak faecal P level for the Shorthorns was also higher.

PROJECT: ISA-CH 433

LOCATION: 'Cubbaroo', Cloncurry

TITLE: Evaluation of Africander bulls in the dry tropics

OFFICERS: P.C. Smith, P.J. Round, P. Mulhearn, R. Tyler

OBJECT: To evaluate and compare:

- (a) Reproductive efficiency of Africander and Brahman bulls.
- (b) Growth rate of male progeny.
- (c) Fertility and mothering ability of female progeny.

TREATMENT-GROUPS:

Animals were the progeny of Brahman and Africander sires over Brahman cross and Shorthorn dams.

Group 11: 28 head. Male. Brahman sire. Brahman cross and Shorthorn dams.
Group 12: 23 head. Male. Africander sire. Brahman cross and Shorthorn dams.
Group 13: 26 head. Female. Brahman sire. Brahman cross and Shorthorn dams.
Group 14: 18 head. Female. Africander sire. Brahman cross and Shorthorn dams.
Group 21: 22 head. Male. Brahman sire. Brahman cross and Shorthorn dams.
Group 22: 30 head. Male. Africander sire. Brahman cross and Shorthorn dams.
Group 23: 29 head. Female. Brahman sire. Brahman cross and Shorthorn dams.
Group 24: 26 head. Female. Africander sire. Brahman cross and Shorthorn dams.
Group 31: Male. Brahman sire. Brahman cross and Shorthorn dams.
Group 32: Male. Africander sire. Brahman cross and Shorthorn dams.
Group 33: Female. Brahman sire. Brahman cross and Shorthorn dams.
Group 34: Female. Africander sire. Brahman cross and Shorthorn dams.

Groups 11, 12, 13 and 14 were weaned 6 October 1976.

Groups 21, 22, 23 and 24 were weaned 4 October 1977.

Groups 31, 32, 33 and 34 were weaned 20 October 1978 and 14 November 1978.

COUNTRY: Mitchell grass/Flinders grass downs.

COMMENTS:

The trial began by dividing 142 50% to 75% Brahman cross cows into 2 groups and 40 Shorthorn cows into 2 groups. Initially the following matings were made:

- 70 Brahman cross cows x Africander
- 21 Shorthorn cows x Africander
- 72 Brahman cross cows x Brahman
- 19 Shorthorn cows x Brahman

Halfway through the first mating, 26 Brahman cross cows were added to the Africander group and 30 Brahman cross cows and 3 Shorthorn cows were added to the Brahman group.

PROJECT: ISA-CH 433 cont.

The 1976 calves were weaned on 6 October 1976 into a Mitchell/Flinders grass paddock that was heavily tick infested in 1975/76 but levels had been reduced to acceptable numbers by the cold winter and strategic dipping.

The 1977 calves were weaned on 4 October 1977 and put into the paddock the No 6s were in.

The No 6s and No 7s were run in this same paddock until 10 April 1978 when the No 6 females were put into their mating paddock and the No 6 males were put into a paddock handy for sale. The No 7s remained in the paddock until 9 August 1978 when they were sent off to agistment.

PROJECT: ISA-CH 487

LOCATION: 'Rocklands', Camooweal

TITLE: Steer breed comparison trial

OFFICER: R. Tyler, P. Smith, R. Dodt

OBJECT: To measure the growth rate on F1 Africander X Shorthorn, F1 Sahiwal X Shorthorn and Shorthorn steers.

TREATMENT-GROUPS:

Animals were 4-6 months old weaner steers.

Group 1: 70 head. F1 Africander X Shorthorn.

Group 2: 70 head. F1 Sahiwal X Shorthorn.

Group 3: 70 head. Shorthorn.

COUNTRY: Treeless, gently undulating plains country. Mitchell grass (*Astrebla pectinata*) was the predominant species.

COMMENTS:

During the dry season (July to mid-December) the Africander cross and Sahiwal cross steers grew at the same rate, but during the wet season (mid-December to April) the Africander crosses grew faster. Both genotypes out performed the Shorthorn throughout. The Shorthorn just maintained weight during the dry season.

At weaning the *Bos indicus* infused steers were heavier than the Shorthorns; as they had common dams this is considered an heterotic effect.

PROJECT: KRY-CH 567

LOCATION: `Ivanhoe', Goomeri

OFFICERS: W.J. Edwards

TITLE: Ralgro growth observation

OBJECT: To investigate whether Ralgro has any significant benefit for cattle grazing native pasture in the South Burnett region.

TREATMENT-GROUPS:

Group 1: 13 head. 4 year old Santa x British steers; No Ralgro: Paddock 1.
Group 2: 16 head. 3 year old Santa x British steers; No Ralgro: Paddock 1.
Group 3: 1 head. 2 year old Santa x British steers; No Ralgro: Paddock 1.
Group 4: 11 head. 2 year old Santa x British steers; No Ralgro: Paddock 2.
Group 5: 12 head. 4 year old Santa x British steers; Ralgro: Paddock 1.
Group 6: 16 head. 3 year old Santa x British steers; Ralgro: Paddock 1.
Group 7: 1 head. 2 year old Santa x British steers; Ralgro: Paddock 1.
Group 8: 12 head. 2 year old Santa x British steers; Ralgro: Paddock 2.
Group 9: 5 head. 4 year old Charolais x Brahman x British steers; No Ralgro: Paddock 1.
Group 10: 13 head. 3 year old Charolais x Brahman x British steers; No Ralgro: Paddock 1.
Group 11: 9 head. 2 year old Charolais x Brahman x British steers; No Ralgro: Paddock 1.
Group 12: 18 head. 2 year old Charolais x Brahman x British steers; No Ralgro: Paddock 2.
Group 13: 4 head. 4 year old Charolais x Brahman x British steers; Ralgro: Paddock 2.
Group 14: 12 head. 3 year old Charolais x Brahman x British steers; Ralgro: Paddock 1.
Group 15: 8 head. 2 year old Charolais x Brahman x British steers; Ralgro: Paddock 1.
Group 16: 18 head. 2 year old Charolais x Brahman x British steers; Ralgro: Paddock 2.

Groups 5, 6, 7 and 13, 14,15 were implanted on 7 March 1980.

Groups 8 and 16 were implanted on 8 March 1980.

Groups in Paddock 1 were finally weighed on 3 June 1980.

Groups in Paddock 2 were finally weighed on 29 April 1981.

PROJECT: MBA-CH 548(P)

LOCATION: Julatten area

TITLE: Cobalt supplementation

OFFICER: A.E. Holmes

OBJECT: A preliminary investigation into bullocks not fattening. Wasting disease.

TREATMENT-GROUPS:

Bullocks (breed not given) of 2-4 years were selected from a mob of about 120.

Group 1: 4 head. 21 August 1978 - 22 October 1978 control (no treatments).
Group 2: 3 head. 21 August 1978 - 22 October 1978 drench + Cu + Co.
Group 3: 3 head. 21 August 1978 - 22 October 1978 Co.
Group 4: 3 head. 21 August 1978 - 22 October 1978 Cu.
Group 5: 3 head. 21 August 1978 - 22 October 1978 Drench.

At the 22 October 1978 weighing the following animals were given a Cobalt bullet:

2 animals from the Cu only treatment.
1 animal from the drench only treatment.
1 animal from the control.

Cu was given as a copper glycinate injection. Co was given as a Co bullet plus grinder. The drench was Levamisole at recommended dose rates.

COUNTRY:

The property is situated on a sandy scrub soil, much of which has been cleared for many years. Despite soil phosphate levels of 6-10 ppm, the property supports good hamil grass pastures though there is little legume present.

COMMENTS:

Over many years a small number of bullocks would not fatten. These animals waste and finally die, but if shifted to a neighbouring property they quickly recover.

The 16 animals selected by the owner were considered by him to have the wasting disease though animals were at varying stages of being affected. None of these animals were emaciated or even very poor though a number were in backward store condition.

Results for the period 21 August 1978 to 22 October 1978 showed a substantial advantage to all animals given cobalt, some advantage to worming and no benefit in copper supplementation.

Results for the period 22 October 1978 to 11 December 1978 showed that all animals receiving cobalt bullets both on 21 August 1978 and 22 October 1978 performed substantially better than unsupplemented animals.

PROJECT: MBA-CH 586

LOCATION: `Wrotham Park'

TITLE: Growth rate of cattle implanted with Ralgro on cleared, fertilised, Townsville stylo in lower Cape York Peninsula.

OFFICERS: A.J. Boorman, P.B. Hodge

OBJECT: To study the effect of Ralgro administered at two times on the growth rates of bullocks grazing cleared fertilised Townsville stylo pastures.

TREATMENT-GROUPS:

Animals were number 7 and 8 Brahman cross bullocks.

Group 1: Control.
Group 2: Implanted 6 January 1981.
Group 3: Implanted 30 April 1981.
Group 4: Implanted 6 January 1981 and 30 April 1981.

COUNTRY: Sandy surface duplex.

PASTURE: Fertilised Townsville stylo.

COMMENT:

Mustered morning of 5 January 1981. Weighted 6 January 1981. Would not have been full of water.

Mustered 29 April 1981 and weighed 30 April 1981. Would have been full of water.

Mustered 28 July 1981 and weighed 30 July 1981. No access to water after leaving paddock.

Weight gains from 6 January 1981 to 30 April 1981 were unrealistic due to different water contents of animals.

The first and last weighings would give a reasonably accurate indication of the effect of the treatments.

Economics of using Ralgro on basis of these results was considered questionable.

PROJECT: MBA-CH 606

LOCATION: `Wrotham Park'

TITLE: Ralgro Growth

OFFICER: A. Boorman

TREATMENT-GROUPS:

Group 1: 39 Brahman x No 8 steers. Control.
Group 2: 31 Brahman x No 9 steers. Control.
Group 3: 41 Brahman x No 8 steers. 200 day Compudose (8 December 1981).
Group 4: 31 Brahman x No 9 steers. 200 day Compudose (8 December 1981).
Group 5: 20 Brahman x No 8 steers. Ralgro - 2 doses (8 December 1981 - 11 March 1982).
Group 6: 15 Brahman x No 9 steers. Ralgro - 2 doses (8 December 1981 - 11 March 1982).
Group 7: 20 Brahman x No 8 steers. Ralgro - 2 doses (8 December 1981 - 11 March 1982).
Group 8: 16 Brahman x No 9 steers. Ralgro - 2 doses (8 December 1981 - 11 March 1982).

COMMENTS:

Fertilised Townsville stylo was grazed.

PROJECT: MIL-CH P13(A)

LOCATION: `Nylmah', Wandoan

TITLE: Oat production observation

OFFICER: R.T. Strachan

PUBLISHED: Circulated Trial Report 68/2

OBJECT: (a) To compare early and late variety oats grown for fodder in the area;
(b) To record any differences in animal production between these varieties.

TREATMENT-GROUPS:

Group 1: 30 head. Hereford steers grazing Camellia.

Group 2: 30 head. Hereford steers grazing Bentland.

COUNTRY: Cleared Brigalow

COMMENTS:

Crops sown 21 March and 22 March 1967 and were ready for grazing on 26 May 1967. Both areas had been sown to a summer fodder crop for the previous 3 years. Sowing rate was 25 lb/ac.

The stocking rate of both areas was adjusted throughout the observation by the co-operator to ensure the maximum production from both crops was achieved without detriment to the grazing animals. See Circulated Trial Report 68/2 for details.

The steers were considered very suitable and were in good store condition at the start.

The season was favourable for winter crop production in the early part of the year, while the absence of rain after June was detrimental to both the varieties. Crop production was very poor during the spring.

The below average gains of both groups in June is considered to be the result of unseasonal rainfall pattern when 305 points fell over 11 wet days. This period of reduced daily gain did affect the overall performance of both varieties.

PROJECT: MIL-CH P13(A) cont.

Crop Samples:

	26 May 1967	6 Jul 1967	2 Aug 1967	1 Sept 1967
CAMELLIA				
Green wt yields ton/ac	2.4	3.5	-	1
Moisture %	81.9	85.1	78.5	72.7
Dry matter/ac (lb)	973	1168	-	611
Protein % (grab sample)	22.9	21.1	26.9	23.1
BENTLAND				
Green wt/ac (tonnes)	4.15	2.9	-	1.5
Moisture %	85.2	85.8	80.3	69.9
Dry matter (lb/ac)	1375	923	-	-
Protein % (grab sample)	27.8	17.2	26.0	23.3

PROJECT: MIL-CH P13(B)

LOCATION: 'Nylmah', Wandoan

TITLE: Autumn crop grazing observation

OFFICER: R.T. Strachan

PUBLISHED: Circulated Trial Report 68/4

OBJECT: To demonstrate the liveweight performance of cattle grazing native pasture, standover sugardrip sweet sorghum and Dolichos lablab in the autumn and record the subsequent liveweight behaviour on oats.

TREATMENT-GROUPS:

Animals were Hereford steers/bullocks.

- Group 1: 25 head. Fodder sorghum group
- Group 2: 23 head. Dolichos lablab group
- Group 3: 24 head. Native pasture group

COUNTRY: Formerly heavy brigalow scrub country. The project was sited in 3 adjoining paddocks. Two cultivated paddocks had been subjected to grazing crops during the previous 3 years. Soil type was a grey clay loam.

SEASONAL CONDITIONS:

During late January and February, heat wave conditions caused some stress to the crops.

CROPS:

Sugardrip. Sown on 24 December 1966 into a well prepared seedbed at 7 lb/ac. Early growth was satisfactory but heatwaves in late January and February caused a stunting of the crop and at the commencement of grazing it looked severely moisture stressed.

When grazing commenced on 7 April 1967, green matter yield was 4.3 ton/ac.

Lablab. Sown on 12 December 1966 into well prepared seedbed at 12 lb/ac. It did not suffer as much as the sugardrip from the heatwave.

When grazing commenced on 7 April 1967, green matter yield was 4.3 ton/ac. Volunteer sorghum alum appeared in the crop and its production was estimated at 3 ton/ac of green matter.

Native Pasture. Native species on the former scrub country had been grazed by the breeding herd prior to the start of the project. Analysis of samples taken at start of grazing:

	% Moisture	Protein % DM basis	Est TDN % DM basis
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Sorghum	76.5	10.6	60
Lablab	85.2	21.8	60

PROJECT: MIL-CH P13(B) cont.

The stock were removed from all paddocks on 26 May 1967. Estimated that 4 tons green matter per acre remained in the sorghum paddock, mainly trampled to the ground. In the lablab paddock, an estimated 1 ton/ac of green matter remained.

LIVEWEIGHT:

Cattle remained on treatments from 6 April 1967 to 25 May 1967. As the liveweight recorded to 26 May 1967 would be unrealistic owing to the effect of 'fill' which could be expected to vary between treatments, the steers were weighed after 7 days on oats and the average to 2 June 1967 taken to represent the daily gains on the various treatments.

Samples of the oat crop showed 82% moisture and 25.3% protein DM basis.

All steers were considered finished on 2 August 1967.

No significant difference was obtained in liveweight gains over the 3 treatments. The prior grazing of the native pasture may have removed standover feed and a fresh green pick appeared after rain; also the 15 ac/head stocking rate was light for the district.

Animals were weighed monthly. See Circulated Trial Report 68/4 for further comments.

PROJECT: MIL-CH P15

LOCATION: Giligulgul

TITLE: Grain supplement oats grazing trial

OFFICERS: R.T. Strachan, A.J. Boorman

PUBLISHED: Circulated Trial Report 70/4

OBJECT: (a) To observe the liveweight gains of steers grazing oats with free access to a grain supplement at various times;

(b) To determine the average daily intake of the supplement and estimate its efficiency in terms of additional carcass gain.

TREATMENT-GROUPS:

Animals were Hereford and Angus steers 18-20 months old in store to forward store condition.

Group 1: 30 head. Grain supplement for total period 24 June 1968 to 2 October 1968.

Group 2: 30 head. Control. No supplement.

Group 3: 30 head. Grain supplement for final 50 days. 14 August 1968 to 2 October 1968.

Group 4: 30 head. Grain supplement for first 50 days. 24 June 1968 to 14 August 1968.

COUNTRY: Brigalow - belah with some vine scrub.

CROP - DETAILS:

A paddock of 152 acres which had been cropped for the 4 previous years was sown to Algerian oats and divided into 4 paddocks for the trial.

The steers were rotated through the paddocks 3 times so that all groups grazed each paddock for approximately 25 days. The overall stocking rate was 1 acre/head for 100 days. Additional steers were used to maintain the stocking rate.

The crop was an excellent one and except for a short period from 50-70th day it was in a condition required to promote normal growth.

Crop samples from each paddock were taken for protein analysis at the start of the trial and at each sub-period when an estimate of the dry matter yield was recorded. See Circulated Trial Report 70/4.

PROJECT: MIL-CH P15 cont.

SUPPLEMENT:

Coarsely cracked grain sorghum + 3% urea to prevent excessive intake was fed in troughs and self-feeders.

Average grain consumption per head per day for various periods for each group was estimated. See Circulated Trial Report 70/4. For the 100 days the intakes were:

Group 1: 7.25 lb/day 84% eating.

Group 3: 3.53 lb/day 94% eating.

Group 4: 3.79 lb/day 80% eating.

The animals eating were determined by faecal examination.

The average daily consumption (acceptors only) was 7.27 lb.

The groups grazing paddocks 1 and 3 performed better than groups grazing paddocks 2 and 4.

It was suggested that the grain was used a substitute for crop; 7 lb grain for 25-30 lb crop per day.

PROJECT: MKY-CH 533(1)

LOCATION: 'Charlies Farm', Kalarka (30 km north of St Lawrence).

TITLE: Effect of drenching on liveweight performance in the wet coast - Mackay

OFFICERS: R. Beasley, R. Nieper

PUBLISHED: Circulated Trial Report 80/4

OBJECT: To measure weight response in growing cattle to anthelmintic treatments at various times.

TREATMENT-GROUPS:

Animals were 12-14 months old 1/2 - 7/8 Brahman steers and heifers.

Group 1: 11 head. Control.
Group 2: 20 head. Heifer control.
Group 3: 17 head. Steers; Levamisole.
Group 4: 21 head. Heifers; Levamisole.
Group 5: 15 head. Steers; Levamisole + Mansonil.
Group 6: 25 head. Heifers; Levamisole + Mansonil.

PASTURE-DETAILS:

Improved coastal country. Grasses grazed were *Kazungula setaria* and *Paspalum plicatulum* (cv Rodd's Bay). Legumes, where present, were largely Siratro.

RAINFALL:

Rainfall data was for the closest recording station which was at Carmila, about 35 km north. Although rainfall was considerably lower, these records gave some indication of seasonal conditions.

COMMENTS:

Steers and heifers grew at the same rate during the treatment period (9 December 1977 - 17 May 1978) but during the compensation period (17 May 1978 - 30 March 1979), females grew faster than males. This resulted in females having a higher gain than males over the whole period. As the females were separated from the males and mated after the completion of treatments, this may be a paddock and pregnancy effect.

The treatment had no effect during the wet period from December 1977 to February 1979. However, during the period from February 1978 to May 1978 the Levamisole had a small positive effect but the use of Levamisole + Mansonil resulted in a considerably higher gain.

PROJECT: MKY-CH 533(2)

LOCATION: 'Kunapippa Springs', Bloomsbury

TITLE: Effect of drenching on liveweight performance in the wet coast - Mackay

OFFICERS: R. Beasley, R. Nieper

PUBLISHED: Circulated Trial Report 80/4

OBJECT: To measure weight response in growing cattle to anthelmintic treatments at various times.

TREATMENT-GROUPS:

Animals were 12-14 months old 1/2 - 7/8 Brahman steers and heifers.

- Group 1: Control.
- Group 2: Heifer control.
- Group 3: Steers; Levamisole.
- Group 4: Heifers; Levamisole.
- Group 5: Steers; Levamisole + Mansonil.
- Group 6: Heifers; Levamisole + Mansonil.

PASTURE-DETAILS:

Improved coastal country. Grasses grazed were *Kazungula setaria* and *Paspalum plicatulum* (cv Rodd's Bay). Legumes, where present, were largely Siratro.

RAINFALL:

Rainfall recorded was for Bloomsbury (20km south).

COMMENTS:

No follow up weighing to the treatment period was possible, thus compensatory gain was not measured.

The treatment period was 5 December 1977 to 21 June 1978. The effect of treatment was not significant.

The heavier animals at the start of the observation gained more rapidly than the lighter animals.

PROJECT: MKY-CH 533(3)

LOCATION: 'Tedlands', Koumala (35km south of Sarina)

TITLE: Effect of drenching on liveweight performance in the wet coast - Mackay

OFFICERS: R. Beasley, R. Nieper

PUBLISHED: Circulated Trial Report 80/4

OBJECT: To measure weight response in growing cattle to anthelmintic treatments at various times.

TREATMENT-GROUPS:

Animals were 12-14 months old 1/2 - 7/8 Brahman steers and heifers.

Group 1: 16 head. Control.
Group 2: 29 head. Heifer control.
Group 3: 14 head. Steers; Levamisole.
Group 4: 35 head. Heifers; Levamisole.
Group 5: 14 head. Steers; Levamisole + Mansonil.
Group 6: 34 head. Heifers; Levamisole + Mansonil.

PASTURE-DETAILS:

Improved coastal country. Grasses grazed were Kazungula setaria and *Paspalum plicatulum* (cv Rodd's Bay). Legumes, where present, were largely Siratro.

RAINFALL:

Rainfall recorded was for Koumala (5km away).

COMMENTS:

No difference in growth rates between heifers and steers. Treatment effects were significant. Levamisole gave a greater response than Levamisole + Mansonil.

The steers responded to treatment to a greater extent than the heifers. This is exactly reverse to the situation on 'Charlies Farm'. There was no explanation for these sex by treatment interactions.

Steers only were available for the post treatment weighing to assess compensatory gain.

PROJECT: MKY-CH 533(4)

LOCATION: 'Tedlands', Koumala (35km south of Sarina)

TITLE: Effect of drenching on liveweight performance in the wet coast - Mackay

OFFICERS: R. Beasley, R. Nieper

PUBLISHED: Circulated Trial Report 80/4

OBJECT: To measure weight response in growing cattle to anthelmintic treatments at various times.

TREATMENT-GROUPS:

- Group 1: 13 head. Control.
- Group 2: 15 head. Regular Levamisole.
- Group 3: 13 head. Seasonal Levamisole (after 1st heavy rain).
- Group 4: 13 head. Three Levamisole.
- Group 5: 13 head. Three Levamisole + Mansonil.
- Group 6: 14 head. Three Mansonil.

PASTURE-DETAILS:

Improved coastal country. Grasses grazed were *Kazungula setaria* and *Paspalum plicatulum* (cv Rodd's Bay). Legumes, where present, were largely Siratro.

COMMENTS:

Response to regular Levamisole was recorded during 22 August 1978 to 21 November 1978 and resulted in a response on a cumulative basis on 21 November 1978. However, this was eroded by 14 December 1978. No other treatment response was recorded.

Breed was determined by phenotypic appearance and divided into low-Brahman (about 50% Brahman); moderate Brahman (about 5/8 Brahman) and high Brahman (3/4 - 7/8 Brahman). Breed effect was relatively consistent during the trial with moderate Brahman component out performing the other two categories. While differences were demonstrated, it should be remembered that categories were based on phenotypic assessment and this may or may not reflect actual genotypic breed difference. Because the numbers of animals in the categories were small, the data entered into the data file was not separated on a breed basis.

PROJECT: MKY-CH 566(1)

TITLE: Ralgro observations

OFFICER: R. Beasley

LOCATION: 'Tedlands', Koumala (70 km south of Mackay).

OBJECT: To measure the effect of Ralgro on growth and fattening of beef cattle relative to untreated cattle.

TREATMENT-GROUPS:

Animals were 2 - 2½ years old 50% to 87% Brahman bullocks.

Group 1: 38 head. Control.

Group 2: 39 head. Ralgro treated.

COMMENTS:

Animals grazed improve pasture consisting of Setaria, Siratro, etc.

These bullocks were divided into 2 groups by weight at final weighing. The heaviest group went onto forage sorghum or sale in July or August.

The other group was returned to pasture to be weighed later to check for compensatory gain. Results of these subsequent weighings were unavailable.

PROJECT: MKY-CH 566(2)

TITLE: Ralgro observations

OFFICER: R. Beasley

LOCATION: `Denman Brothers', Habana (15 km north of Mackay).

OBJECT: To measure the effect of Ralgro on growth and fattening of beef cattle relative to untreated cattle.

TREATMENT-GROUPS:

Animals were 1-8 months old, 50% to 75% Brahman calves, mixed sex.

Group 1: 37 head. Control.

Group 2: 37 head. Ralgro treated.

COMMENTS:

Animals grazed a Setaria pasture.

There was a wide range of ages and initial weights amongst these calves. The younger calves grew faster and steers grew faster than heifers.

PROJECT: MLS-CH 322

LOCATION: 'Ashley Downs', Wandoan

TITLE: Urea supplementation of forage sorghum

OFFICER: A.J. Boorman

OBJECT: To compare the performance of two groups steers grazing a sugardrip forage sorghum crop when one group received a urea supplement from roller drums.

TREATMENT-GROUPS:

Store steers were purchased. They were weighed as soon as they got to the yards.

- Group 1: 21 head. Grazing crop.
- Group 2: 8 head. Grazing crop + grain.
- Group 3: 20 head. Grazing crop + urea.
- Group 4: 9 head. Grazing crop + urea + grain.

Grain was fed from 23 April 1970 to 18 June 1970.

The crop was grazed and urea provided from 26 February 1970 to 18 June 1970.

COUNTRY: Undulating Brigalow-belah. Soil mainly a heavy grey clay loam.

CROP DETAILS:

A 68 acre paddock planted with sugar drip over 64 acres of the total area was sub-divided into two equal areas of crop in each paddock. The extra 4 acres were under native pasture in a gully which split the paddock approximately in half.

At the commencement of the trial (26 February 1970) the crop was about 20% in flower.

Crop samples were taken on the day the cattle were weighed. Two quadrats (1 yard square) were taken in each paddock. Two separate collections were made from each quadrat; the first was 'feed' and this was considered to be all the standing crop; and the second was 'residue' and this was the cleanings off the ground after the 'feed' had been removed i.e. trampled crop. At the last two samplings all the material in both paddocks was considered residue because only trampled material on the ground was available to the cattle.

PROJECT: MLS-CH 322 cont.

The following table shows the supplemented cattle had more dry matter available throughout the trial than the unsupplemented.

Date	Control paddock				Supplemented paddock			
	Feed		Residue		Feed		Residue	
	D.M. lb/ac	Protein %	D.M. lb/ac	Protein %	D.M. lb/ac	Protein	D.M. lb/ac	Protein %
25.2.70	2031	14.1	1185	11.7	2295	13.5	1185	11.7
1.4.70	612	11.2	1729	11.4	608	10.0	1837	9.0
22.4.70	189	8.5	1909	9.3	451	8.2	2131	8.2
22.5.70			1057	6.5			1107	7.0
18.6.70			454	8.0			682	10.0

Poor rainfall resulted in a lack of crop growth.

Month	Rainfall (pts)	No. falls
December 1969	331	5
January 1970	240	6
February	85	3
March	107	5
April	70	1
May	29	2
to June 18	13	1

The crop did not go to head possibly because of moisture stress.

SUPPLEMENT DETAILS

One group was supplemented with urea in roller drums.

Urea intake was maintained at 2 oz/head/day throughout the trial.

On the 23 April 1970 a grain feeding phase was initiated in an endeavour to keep the trial cattle on the urea - no urea regimes until they went onto oats. Unfortunately the oats never eventuated and the trial was abandoned on the 18 June by which stage the crop residue available to the cattle was all but irretrievable.

The grain was fed from 44 gal drum type self feeders and commenced at the rate of 2 lb/head/day. On 23 May 1970 the grain ration was increased to 3 lb/head/day. At the final weighing all cattle were back-raked to determine grain acceptance. None of the urea supplemented cattle and eight of the control cattle only were eating grain. Therefore effective grain intake for the cattle actually eating grain was

6.67 lb/head/day for urea supplemented steers and 7.5 lb/head/day for non-urea supplemented steers respectively during the first 30 days grain was fed and 109 lb and 11.25 lb respectively for the final 27 days of the trial.

PROJECT: MLS-CH 365

LOCATION: Meandarra

TITLE: Creep feeding trial

OFFICER: E.E. Powell

PUBLISHED: Circulated Trial Report 72/7

OBJECT: (a) To compare the growth rate of creep fed calves with calves fed no creep;

(b) To determine the economics of creep feeding.

TREATMENT-GROUPS:

Shorthorn calves aged up to 6 months.

Group 1: 47 head. Control. No creep.

Group 2: 39 head. Creep fed group.

COUNTRY: Belah

PASTURE:

An abundance of native grasses in the trial paddocks. Paddock area was 1,500 ac. An even stocking rate was maintained by the inclusion of dry stock. Sheep were run also.

RAINFALL: Rainfall figures recorded are for a neighbouring property.

COMMENTS:

Cows calved until May 1972. Only calves born by 26 January 1972, the start of creep feeding were included in the weighing data.

The initial acceptance of creep, milled grain millet, was poor but all calves were eating from March 1972 until weaning on 3 July 1972.

Wild pigs consumed a lot of grain. Daily consumption figures for calves were:

	All calves	Calves eating
26/1/72 - 22/3/72	1.7 lb	2.5 lb
22/3/72 - 15/5/72	3.9 lb	4.8 lb

15/5/72 - 3/7/72

7.5 lb

? lb

PROJECT: MOR-CH 349

LOCATION: 'Elanda Plains', Cootharaba

TITLE: Investigation of wasting syndrome in wallum country

OFFICERS: K.F. Dowsett, S. Atkinson

OBJECT: To determine whether supplementation with Cu, Se, S alleviated the wallum wasting syndrome.

TREATMENT-GROUPS:

Animals were Shorthorn breeding cows of unknown age.

Group 1: 18 head. Control.
Group 2: 20 head. Cu injected.
Group 3: 20 head. Cu oral.
Group 4: 20 head. Cu oral + S in lick.
Group 5: 19 head. Cu inject + S in lick.
Group 6: 20 head. Cu oral + Se inject.
Group 7: 20 head. Cu inject + Se inject.

PASTURE DETAILS:

Three paddocks, each about 100 acres and developed similarly, were grazed. *Setaria*, *Paspalum plicatulum* and mat grass comprised the grass portion of the pasture and white clover (*T. ripens*) and lotonis the legume portion.

The stocking rate was held at 46 breeders/paddock; that is 40 treated animals and 6 controls. Paddock rotation occurred every 2 weeks. There were 20 animals in each of 5 treated groups and 18 in control groups.

Much of the property was waterlogged or submerged in the 1970-71 summer. This had deleterious effects on stock and pastures.

The winter of 1971 was comparatively dry but good white clover growth occurred well into the 1971 summer, due to light but persistent rainfall during August-September 1971.

The spring and early summer of 1971 was a good season with heavy storm rains in the Christmas/New Year period. Growth of *setaria* and *paspalum* was adequate for most of the spring-summer period; however, reversion of much of the pasture to mat grass was evident.

The clover persisted well in to the New Year and quite good stands of lotonis were available during the summer.

SUPPLEMENTS:

During the 1971 winter all animals got a molasses/urea/phosphoric lick in roller drum lickers. The sulphur group received the S in this lick.

At the end of the winter the lickers were left out but without urea it was thought this might reduce intake.

Acceptance of the lick during the summer of 1971-72 was low and there was some doubt about the amount of S taken by the S groups.

PROJECT: MOR-CH 349 cont.

COMMENTS:

After the initial Cu treatment, blood Cu levels remained above deficiency status level. At no stage was blood P a critical factor. There was a general improvement in the anaemic condition that was present at the start of the trial. At no stage were recommended liver Cu levels reached.

It was concluded that the 200 lb difference in weight from July 1971 to July 1972 plus a 75% increase in pregnancy % were a marked improvement in production and reproduction; but whether these differences could be attributed to the various treatments or to the decreased stocking rates is debatable.

PROJECT: MOR-CH 584

LOCATION: 'Mt Brisbane', Esk

TITLE: Ralgro observation, Mt Brisbane, Esk.

OFFICER: M.A. Burns

PUBLISHED: Circulated Trial Report 83/1

OBJECT: To observe the effect of Ralgro on the growth of steers and their carcass weights.

TREATMENT-GROUPS:

Animals were 2 years old Droughtmaster steers.

Group 1: 24 head. Control.

Group 2: 24 head. Ralgro. One implant 29/1/81.

Group 3: 24 head. Ralgro. One implant 21/10/80.

Group 4: 24 head. Ralgro. Five implants. One at 21/10/80 and the remainder at about 100 day intervals.

COUNTRY:

Predominantly rolling and low hilly terrain. Dominant soils are hard setting solodics and soloths with small areas of river and stream alluvia. Vegetation is predominantly eucalypt open forest of narrowleaf and silverleaf ironbark while the alluvia carries blue gum and gum-topped box open forest.

Black speargrass and forest blue are the co-dominant pasture species with some blue and green couch along river and creek frontages.

Average carrying capacity is 1 adult equivalent per 2.4 ha.

SEASONAL-CONDITIONS:

About 70% of the annual rainfall of 950 mm falls in five months November-March. July-September is usually dry. Frosts occur in the June-August period.

Annual rainfall during the trial was slightly below average. The period from late 1980 to 1981 was marked by relatively dry conditions in the lead-up to the trial; a normal wet season and a relatively dry winter-spring. Rainfall in the second wet season was about normal.

COMMENTS:

Growth rates of untreated animals followed the normal seasonal pattern of weight gain during the wet season (November-May) followed by maintenance or weight loss during the dry season (June-October).

PROJECT: MOR-CH 584 cont.

Ralgro significantly ($P < 0.05$) increased liveweight and growth rates during the first wet season up to 199 days after treatment but there was no advantage of multiple over single treatments during this period. Multiple implants of Ralgro significantly ($P < 0.05$) improved growth performance during the dry season but single Ralgro treatment gave no advantage over no treatment in this

period. In the second wet season, November-February, Ralgro treatments had no effect on growth rate but the advantage in liveweight obtained from single and multiple Ralgro during the first wet season was maintained.

However, this advantage was not reflected in carcass weights when the animals were slaughtered at the end of the second wet season (26 and 27.5.82) 90 and 91 days after the final weighing.

Two possible explanations for the absence of a statistical difference could be that untreated animals compensated during the 90 day preslaughter period or more likely that there were insufficient carcass weights to provide a significant difference as some animals from each group had lost their identification tags between final weighing and slaughter and therefore were excluded from carcass data analysis.

Effect of Ralgro on carcass weight (kg):

1.	Control	314	
2.	One Ralgro January/1981	321	
3.	One Ralgro October/1980	317	
4.	Five Ralgro	325	

PROJECT: MOR-CH 593

LOCATION: 'Avonel', Toogoolawah

TITLE: Ralgro evaluation.

OFFICER: D. Pollard

OBJECT: To measure the effects of Ralgro on the growth rate of steers grazing irrigated High-N-Ryegrass.

TREATMENT-GROUPS:

Group 1: 38 head. Hereford yearling steers. Control.
Group 2: 40 head. Hereford yearling steers. Ralgro.
Group 3: 21 head. Hereford 2 year old steers. Control.
Group 4: 24 head. Hereford 2 year old steers. Ralgro.
Group 5: 9 head. Hereford x Droughtmaster 2 year old. Control.
Group 6: 8 head. Hereford x Droughtmaster 2 year old. Ralgro.

PASTURE DETAILS:

All animals grazed irrigated high-N-Ryegrass top dressed with nitrogen.

COMMENTS:

The observations were completed on 7/10/81 when the owner chose to sell the trial cattle due to problems with irrigating the ryegrass. The cattle were not ideally finished.

The data showed advantages to Ralgro of 13.0% for yearlings and 20.6% and 18.5% for the 2 year old pure British breed and crossbred steers respectively.

PROJECT: MTO-CH 25

LOCATION: 'Oakey Creek', Rawbelle via Monto

TITLE: Weaner performance on saved buffel grass top dressed annually with 50 lb nitrogen

OFFICER: G. Marlowe

TREATMENT-GROUPS:

Animals were weaners. No sex and breed were given.

Group 1: Stocking rate of 0.8 acres/head.

Group 2: Stocking rate of 1.0 acres/head.

Group 3: Stocking rate of 1.2 acres/head.

There was no non-nitrogen control.

PROJECT: OAK-CH P9

LOCATION: `Fairylands', Jandowae

TITLE: Urea molasses phosphate trial

OFFICER: M.C. Weller

PUBLISHED: Circulated Trial Report 69/3

OBJECT: To ascertain the value of urea-molasses-phosphate lick feeders for overwintering store cattle on poor grass country.

TREATMENT-GROUPS:

Group 1: Control. Dairy beef crossbred heifers and steers.

Group 2: Supplemented. Dairy beef crossbred heifers and steers.

COUNTRY: Control's paddock: Forest blue grass country growing Blue gum, Appletree and Box. 100 ac of 200 ac had been rung.

Supplement paddock: The paddock comprised 500 ac green timbered country mainly box, with bull-oak and sandalwood; 800 ac thickly timbered cypress pine.

The country was P deficient and watered naturally.

COMMENTS:

It was not possible to rotate through paddocks. Heifers were originally included but were discarded due to pregnancy.

Weighing continued until break of the season in September when controls began to gain weight.

Licks were placed near water. Acceptance was nil until all block licks were removed.

See Circulated Trial Report 69/3 for details of supplementation.

As the urea concentration increased, intake of the mix declined and it was impossible to achieve urea intake on the thin mix. At the end of July a thick mix (more molasses) was used in an attempt to increase urea intake, to overcome scouring and to overcome rejection when P acid was added.

By the end of July there was a serious shortage of dry matter especially near water which was all at one end of the paddock; and so the lickers were shifted.

By 28 August 1968 treated cattle were impacted from eating cypress pine needles and so were shifted from the trial paddock to a spelled grass paddock.

A serious lice problem developed in the treated group over the last 8 weeks. No lice were evident on the controls at any stage.

PROJECT: OAK-CH

P9

cont.

Both paddocks had been lightly stocked the preceding summer and had seasonable bulk at the start of the trial. The treatment paddock carried taller but sparser growth.

From appearance the trial cattle had begun to lose weight on the taller sparser grass before the trial began.

Rainfall during the trial had little effect on available feed.

Treated cattle performed as well as controls although controls were on better country.

The weight loss of the treated group in the spelled paddock in the last month was probably due to heavy lice infestation.

All stock were drenched with Ripercol on 3 April 1968.

PROJECT: RKN-CH P12(A)

LOCATION: 'Medway', Bogantungan

TITLE: Drought feeding of calves

OFFICER: C.B. Mutch

TREATMENT-GROUPS:

Single group only.

SUPPLEMENT DETAILS:

Calves removed from cows early because of drought and put into 900 acre paddock containing some standing dry roughage and fed a daily ration of 1.5 lb hay (varied from wheaten to poor quality lucerne hay) and 1.5 lb milled grain sorghum. The animals were fed every second day. Good quality lucerne hay was fed when available.

COMMENTS:

The 30 selected for weighing were from the tail of the mob and were injected with Vitamin ADE.

The calves came through the drought well and losses were low. Deaths were mainly due to dingoes. Had they been left on their mothers losses would have been high.

PROJECT: RKN-CH P12(B)

LOCATION: 'Medway', Bogantungan

TITLE: Drenching and Vitamin Supplementation of drought fed calves

OFFICER: C.B. Mutch

PUBLISHED: Circulated Trial Report 65/2

OBJECT: (a) To observe the effects of Neguvon and Vitamin A, D & E injections given to calves being wholly fed under drought conditions.

(b) To observe the comparative effects of Vitamin A, D & E given as a intramuscular injection as against vitamin ADE given orally.

TREATMENT-GROUPS:

Mixed Hereford weaners aged about 6 months.

- Group 1: 15 head. Control. No vitamins or Neguvon.
- Group 2: 13 head. 4 cc injectible Neguvon.
- Group 3: 15 head. Injectible Vit A, D & E.
- Group 4: 15 head. Injectible Neguvon + injectible Vit A, D & E.
- Group 5: 15 head. Vit ADE soluble powder.

COMMENTS:

The 75 calves in the 5 groups were part of 320 of average age 6 months being wholly fed in a 2 acre paddock every second day. These 320 calves looked well at the end of the trial.

The ration fed was 1.5 lb milled grain sorghum + 1.5 lb of wheat hay per day or good quality lucerne hay per day fed every second day. Troughs were used.

There was no apparent response to worm treatment or vitamin treatment in this trial. Of greater interest is the overall performance of the 320 in this group compared with the 638 of RKN-CH P12(A). In the latter there was less troughing, the trial was bigger and dingoes caused deaths.

PROJECT: RKN-CH P13

LOCATION: `Fairview', Mt Larcom

TITLE: Crop Fattening Trial

OFFICER: W.C. Stubbs

PUBLISHED: Circulated Trial Report 64/14

SEASONAL CONDITIONS:

Some 304 points of rain were recorded over August 22 and 23.

COMMENTS:

An area of 15 acres was grazed. This oat crop was adjacent to an area of Cape barley. Rust was apparent in the oats but did not appear to affect acceptance.

The oat crop had made good growth and it was estimated that 14 bullocks in forward store condition could be finished off the area.

PROJECT: RKN-CH P14

LOCATION: 'Melmoth', Dingo

TITLE: Drought feeding of calves

OFFICER: W. Stubbs

PUBLISHED: Circulated Trial Report 65/3

OBJECT: To obtain some information on the drought feeding of early weaned calves.

TREATMENT-GROUPS:

Group 1: 19 head. Brahman cross calves.

Group 2: 16 head. Hereford calves.

Group 3: 17 head. Calves injected with vitamin ADE on 14/7/64.

Group 4: 18 head. Calves not injected with vitamins ADE.

Groups 3, 4 incorporate Groups 1, 2.

Refer to Circulated Trial Report 65/3.

COMMENTS:

About 150, 4-6 months calves were early weaned and hand fed in yards from the middle on June 1964 to save their mothers.

On 14 July 1964, 38 of the youngest were selected and half were given 5 cc Pfizer injectible Vitamin ADE. Some were Herefords and 13 were Brahman crossbreds.

From 14 July 1974 to 4 August 1964, a daily ration of 1.5 lb grassy lucerne hay and 1.5 lb crushed grain sorghum was fed daily. From 4 August 1964 to 25 August 1964, a daily ration of 1.2 lb grain sorghum and 1.7 lb lucerne hay was fed every two days.

There was no benefit from the vitamins.

The crossbreds did better than the Herefords.

PROJECT: RKN P35

LOCATION: 'Lowville', Marlborough

OFFICER: T.G. Graham, B.G. Mayer

OBJECT: To compare the different methods of establishing Townsville stylo in black spear grass pasture using grazing animals to assess the effectiveness of each method.

COUNTRY:

Spear grass country. Slightly acid soil (pH 6.3), very low in N and grossly P deficient (10 ppm P₂O₅ and poor in K).

TREATMENT-GROUPS:

Animals were Brahman cross weaners, 10-12 months old.

First draft: 16 November 1964 to 16 August 1966.

Group 1: 22 head. Grazed area 1.

Group 2: 22 head. Grazed area 2.

Group 3: 22 head. Grazed area 3.

Group 4: 22 head. Grazed area 4.

Second draft: 25 October 1966 to 16 August 1968.

Group 5: 22 head. Grazed area 1.

Group 6: 22 head. Grazed area 2.

Group 7: 22 head. Grazed area 3.

Group 8: 22 head. Grazed area 4.

Area 1: Two native pasture paddocks, each of 88 acres with a natural stand of black spear grass in which the majority of the timber had been rung some years previously.

Area 2: Two paddocks, each of 44 acres. Townsville stylo was sown on contour cultivated strips in otherwise undisturbed native pasture. The area was worked once with a chisel plough. Contour strips were 8 ft wide and 1 chain apart, centre to centre. Only a quarter of the country in these paddocks was cultivated and sown.

Area 3: Two paddocks, each of 44 acres. Townsville stylo was sown over the whole area following a complete cultivation with the chisel plough.

Area 4: Two paddocks, each of 44 acres. Townsville stylo sown following complete cultivation as for Area 3 and Mo 6 superphosphate applied at a rate of 2 cwt/ac at planting followed by 1 cwt/ac of superphosphate annually.

Areas 1, 2, 3 and 4 are recorded in the data file as paddocks 1, 2, 3 and 4, that is the 2 paddocks (replications) of each treatment and the stock grazing them are bulked into one for recording.

PROJECT: RKN P35 cont.

COMMENTS:

The pasture was sown in January-February 1964; 3 lb/acre straight after cultivation.

The area was bulk grazed by station cattle prior to the start of the trial while fences and waters were erected.

From 16 November 1964 to 22 April 1965, 14 head ran in each paddock; that is 28 animals on each area treatment. This was reduced to 11 animals per paddock after 22 April 1965.

1965 was a drought year. Stock were removed from the trial paddocks onto poor range pasture during 26 August 1965 to 23 December 1965.

In 1965 there was little liveweight difference between the groups.

In 1966 there was a major and significant response to superphosphate.

In 1967 there was a highly significant response to superphosphate.

In 1968 the gains by the superphosphate group were maintained but there was no strong differences between the groups for the year.

Livestock on the supered stylo pasture stood out. Steers on this pasture mainly made up the stock considered marketable.

The superphosphate application was the outstanding treatment but this effect did not show up in all years. During the 1964/65 drought year there was little apparent effect on a per head basis, while in the exceptionally wet summer 1967/68 there was no outstanding difference due to super either on a per head or a per acre basis.

The higher forage availability in the native pasture and strip treated paddocks could have been due to less disturbance by recent cultivation or to better utilisation of the feed available on the supered paddocks.

During 1965, all animals were only just receiving sufficient feed to maintain slow growth. This was exhausted by August when they were removed. In 1968 there was sufficient pasture growth in all treatments for all steers to select an adequate diet.

The better performance of steers on native pasture in 1965 would be due to their having twice the area/beast to graze.

In seasons with lesser extremes of rainfall, stock on the supered treatment performed much better than all others but at the extremes in this trial they suffered from a feed shortage in the drought although not as much as the non-supered stylo treatments. In the wet season of 1967/68, the advantages were masked by excessive selectivity available at the set stocking rates on native pasture. In 1967/68 the stocking rates of all treatments could have been substantially increased particularly in the supered paddocks.

PROJECT: RKN P35(1)

LOCATION: 'Lowville', Marlborough

OFFICER: T.G. Graham, B.G. Mayer

OBJECT: To compare and contrast animal performance on a number of low cost production pastures.

TREATMENT-GROUPS:

Animals were high grade Santa Gertrudis yearling heifers and steers.

- Group 1: 6 head. Steers grazing native pasture.
- Group 2: 11 head. Steers grazing supered Townsville stylo.
- Group 3: 11 head. Steers grazing stylo + perennial legumes (Siratro, fine stem stylo) + super.
- Group 4: 11 head. Steers grazing Townsville stylo + buffel + super.
- Group 5: 11 head. Steers grazing native pasture and supplemented with a molasses/urea/phosphoric acid lick.
- Group 6: 6 head. Heifers grazing native pasture.
- Group 7: 11 head. Heifers grazing supered Townsville stylo.
- Group 8: 11 head. Heifers grazing Townsville stylo + perennial legumes (Siratro, fine stem stylo) + super.
- Group 9: 11 head. Heifers grazing Townsville stylo + buffel + super.
- Group 10: 11 head. Heifers grazing native pasture and supplemented with a molasses/urea/phosphoric acid lick.

This trial continued on in the same paddocks as for the previous one, with certain modifications.

The above groups (1-10) were recorded in the data file as grazing paddocks 1 to 10 respectively.

Paddocks 1, 5, 6 and 10. These paddocks were obtained by subdividing the 2 native pasture paddocks of Area 1 (see RKN P35) to give 4 paddocks each of 44 acres.

Paddocks 2 and 7. These were the 2 supered Townsville stylo paddocks of Area 4.

Paddocks 3 and 8. These were the 2 contour cultivated paddocks of Area 2.

Paddocks 4 and 6. These were the completely cultivated, non-supered paddocks of Area 3.

COMMENTS:

The areas had to be cleared of logs and standing timber to allow the planting of the pastures. Gayndah buffel was sown in Paddocks 4 and 9 over a period of 5 days starting on 22 October 1969.

Townsville stylo had spread over the contoured cultivated paddocks (3 and 8) and these were planted by the contour method with Siratro and fine stem stylo; the legumes were planted alternatively in each strip.

PROJECT: RKN P35(1) cont.

Stock were removed from the paddocks of the initial trial in September 1968, and clearing then began but by the time this was completed, the dry conditions did not permit cultivating and seeding. During 1969, the 440 acres were used as grazing by station cattle until October when useful rains fell.

Refer to:

- DPI Technical Communication P. 1/69 Project Rkn-PO35 BR 1969.
- DPI Technical Communication P. 1/68 Project Rkn-P35 BR 1968.
- DPI Technical Communication P. 1/66 Project Rkn-P35 BR 1964-66.
- DPI Technical Communication P. 1/73 Project Rkn-P35 BR 1963.

All paddocks except the controls (1 and 6) were topdressed with 1 cwt/acre super on 22 January 1969.

In the observation beginning on 1 December 1970, a nitrogen phosphorus supplement in molasses via drum lickers was provided. This supplement was gradually increased until animals were receiving ½ lb molasses + 2 oz urea + 1 oz phosphoric acid daily.

By the time the new groups were ready to commence grazing, the pastures had recovered from the knocking about they received during timber clearing and were making good growth following nearly 5 inches of rain in November.

Station cattle were removed in October 1969 and the cultural operations necessary to establish the new pastures began.

In the grazing 8 December 1972 to 6 June 1973 the Gayndah buffel had not spread very much; it was considered to contribute 3.45% and 0.86% of the paddocks in estimation on 24 May 1973. It was thought that by selective grazing, the contribution of the buffel was possibly higher. The same applied to the Sirato. The fine stem stylo had virtually disappeared. Supplementation was not carried out.

PROJECT: RKN-ED P36

LOCATION: 'Cleveden', Raglan

TITLE: Fattening steers on safflower

OFFICER: W.C. Stubbs

PUBLISHED: Circulated Trial Report 65/1

TREATMENT-GROUPS:

Group 1: 19 head. Steers introduced on 27/8/64

Group 2: 19 head. Steers introduced on 11/9/64

COMMENTS:

Horowitz safflower was planted on 44 acres next to 17 acres of grass. Germination was variable both in time and percentage; this was probably due to a dry start of the season and also poor seed.

Rain in July caused excellent growth.

Nineteen (19) head were introduced on 27 August 1964 but could not handle it so another 19 head were introduced on 11 September 1964. A tendency to concentrate at one end would have meant the remaining crop would have seeded and died.

Rain was adequate for the grazing life of the crop and stock always looked well. The area of grass available may have helped. The higher rate of gain by the second 19 may have been due to their lower condition.

PROJECT: RKN-CH 558

LOCATION: 'Nether Haven', Rockhampton

TITLE: Effect of copper, cobalt, and nilverm on performance of steers.

OFFICER: P. Venamore

PUBLISHED: Circulated Trial Report 81/1

OBJECT: To investigate the liveweight response in steers from copper, cobalt and anthelmintic treatment.

TREATMENT-GROUPS:

Animals were Brahman cross steers 2-4 years old.

Group 1: 13 head. Control.

Group 2: 14 head. Nilverm - drenched in August 1979 and January 1980.

Group 3: 15 head. Copper injected in August 1979 and January 1980 and Co bullet plus grinder in August 1979.

Group 4: 15 head. Cu + Co. Cu injection August 1979 and January 1980, Nilverm drench August 1979 and January 1980, and cobalt bullet plus grinder in August 1979.

Group 5: 14 head. Cu + Co. Cu injected August 1979 and January 1980. Co bullet plus grinder inserted in August 1979.

Group 6: 12 head. Cu + Co + Nilverm. Cu injected August 1979 and January 1980. Nilverm drench August 1979 and January 1980. Co bullet plus grinder inserted in August 1979.

COUNTRY: Coastal country north of Rockhampton. Soils are hard setting loams subject to flooding.

COMMENTS:

Nilverm injectible was given at 25 ml/head. Cu as 5 ml Coprin Multidose was injected subcutaneously. Permaco Co bullets and grinders were injected with a home made gun.

There was no significant difference in the performance between the various groups.

There was a marked visual difference between animals at the end of the study. Animals receiving Cu had more 'bloom'.

PROJECT: RMA-CH P7

LOCATION: `Verona', Morven

TITLE: Drought feeding observation

OFFICER: H.G. Corbett

PUBLISHED: Circulated Trial Report 64/18

OBJECT: Observe the effect of drenching and Vitamin A on drought fed weaners.

TREATMENT GROUP:

- Group 1: Injectable Neguvon + Vitamin A
- Group 2: Thibenzole drench + injectible Vitamin A
- Group 3: Injectable Neguvon + injectible Vitamins A, D & E

Combined averages for groups 1, 2 and 3 are entered in the data file.

COMMENTS:

Seventy-one (71) calves weaned 1/6/64 and fed 5 lb lucerne hay each per day in yards until 13/7/64; then put into a small paddock which contained some rough grass and fed 2 lb lucerne hay per day each morning and mulga was cut three times a week. Towards the last part of the period (13/7/64 - 3/10/64) the calves survived solely on lucerne hay and mulga.

There was a wide incidence of blight which only cleared up after rain in September (455 points).

There was a wide variation in individual liveweight performance, change varying from -60 lb to +60 lb; however all but three of the animals present at the final weighing (8/10/64) had gained weight.

The 71 weaners were divided into three groups and treated with Vitamins A and A, D & E, and Neguvon and Thibenzole. The difference between treatments was insignificant.

PROJECT: RMA-CH 331

LOCATION: 'Marchison Park', Glenmorgan

OFFICER: R. Strachan

PUBLISHED: Circulated Trial Report 71/2

OBJECT: To determine the effect of a moderate infestation of cattle lice on liveweight performance of beef cattle.

TREATMENT-GROUPS:

Animals were Hereford cows and calves.

Group 10: 28 head. Control cows.
Group 11: 28 head. Control calves.
Group 20: 24 head. Cows treated with Fenthion (1 application).
Group 21: 24 head. Calves treated with Fenthion (1 application).
Group 30: 20 head. Cows treated with Fenthion (2 applications).
Group 31: 20 head. Calves treated with Dioxathion (2 applications).
Group 40: 28 head. Cows treated with Dioxathion (2 sprayed applications).
Group 41: 28 head. Calves treated with Dioxathion (2 sprayed applications).

COUNTRY: Country carrying box, sandalwood with some bendee and native pasture.

COMMENTS:

Fenthion 'Tiguvon' pour on was applied.

Groups were treated on 9 July 1970. A second application was given on 23 July 1970.

Following treatment all groups grazed the same paddock.

The lice population varied from nil to moderate. Medicants appeared to increase the growth rate of sucking calves lightly to moderately infested with long nose sucking louse.

PROJECT: RMA-CH 368

LOCATION: Wallumbilla

TITLE: Creep feeding trial

OFFICER: E.E. Powell

PUBLISHED: Circulated Trial Report 72/7

OBJECT: (a) To compare the growth rates of creep fed calves with non creep fed calves;
(b) To determine the economics of creep feeding.

TREATMENT-GROUPS:

Animals were Herefords.

Group 1: 30 head. Control
Group 2: 30 head. Creep fed.

COUNTRY: Brigalow - box. Native pasture.

COMMENTS: See Circulated Trial Report 72/7.

PROJECT: RMD-CH 361

LOCATION: 'Fog Creek', 120 miles north of Richmond

TITLE: Phosphorus supplementation of growing cattle in sandy forest country of North Queensland.

OFFICER: P.C. Smith

OBJECT: To determine liveweight responses in growing steers and heifers when supplemented with phosphorus. To determine conception rates of heifers with and without supplement.

TREATMENT-GROUPS:

Animals were Brahman infused weaners.

Group 1:	17 head. No. 2 females.	Control
Group 2:	21 head. No. 2 females.	Supplemented.
Group 3:	18 head. No. 3 females.	Control.
Group 4:	18 head. No. 3 females.	Supplemented.
Group 5:	12 head. No. 3 males.	Control.
Group 6:	13 head. No. 3 males.	Supplemented.

Group 2 was supplemented from 19 May 1972 to 31 October 1972 and from 23/23/73 to 15 December 1973.

Groups 4 and 6 were supplemented from 28 February 1973 to 15 December 1973.

COUNTRY: Poor sandy country timbered mainly with wattle with some titree and bloodwood flats.

SEASONAL CONDITIONS:

1973 was an above average rainfall year; 900 mm compared with 500-600 mm average. This rainfall provided a green shoot over most of the year.

SUPPLEMENT DETAILS:

19 May 1972 to 31 October 1972: Animals were fed MAP in a dry form and intake controlled with molasses. Initially 2 gal molasses was mixed with 112 lb MAP. Intake of lick was generally satisfactory with consumption to 31 October 1972 being 0.94 oz. The level of molasses fed rose to a ratio 1:2 w/w when Kedlow was included when the mix being accepted consisted of 1,200 lb Kedlow 50 lb MAP 2 lb sulphur 5 gal molasses.

A supplement of 2 oz biuret/head/day was fed to both groups from 8 August 1972 to 31 October 1972 when some scattered storms were received.

PROJECT: RMD-CH 361 cont.

During the period 28 February 1972 to 2 December 1973, the average lick consumption over the period to 2 December 1973 was 19.34 g MAP, 8.32 g salt, 15.37 g molasses per head per day. The lick consumption overall was below the desired level. The intake of 3.5-4 g P was considered significant for the class of cattle being fed.

COMMENTS:

Samples were taken from the control group at intervals to determine faecal protein, P and ash. Results for 1973 were:

Date	Faecal Protein %	Faecal P %	Ash %
19-5-73	15.6	0.27	20.2
10-7-73	8.3	0.17	17.1
5-9-73	6.7	0.13	18.1
1-10-73	9.5	0.23	14.1

The trial paddocks were alternated for the first time on 2 December 1973.

The weight taken on the 21 August 1973 could be biased in favour of the supplemented group as a number of these heifers had young calves at foot on 2 December 1972.

PROJECT: RMD-CH 517

LOCATION: Toorak Research Station, Julia Creek

TITLE: Toorak Research Station breed comparison trial.

OFFICERS: P.J.M. Thompson, M. Tolman, L. Ferguson

OBJECT: To determine the growth rates of 6 genotypes of steers on Flinders/Mitchell grass pastures.

COUNTRY: Flinders/Mitchell grass downs at Julia Creek

TREATMENT-GROUPS:

Group 1: 24 head. 18-24 month old Santa Gertrudis steers.
Group 2: 21 head. 18-24 month old 50% Brahman steers.
Group 3: 17 head. 18-24 month old 38% Sahiwal steers.
Group 4: 21 head. 18-24 month old 75% Brahman steers.
Group 5: 20 head. 30-36 month old Shorthorn steers.
Group 6: 18 head. 18-24 month old 38% Africander steers.
Group 7: 17 head. 18-24 month old Hereford steers.

The 6 genotypes are the groups 1-4, 6-7; that is excluding the Shorthorns which were a year old.

PROJECT: RMD-CH 517(1)

LOCATION: Toorak Research Station, Julia Creek

TITLE: Toorak Research Station breed comparison trial.

OFFICERS: P.J.M. Thompson, M. Tolman, L. Ferguson

OBJECT: To determine the effects of Ralgro on 6 genotypes of steers on Flinders/Mitchell grass pastures.

COUNTRY: Flinders/Mitchell grass downs at Julia Creek

TREATMENT-GROUPS:

Group 1:	24 head. 18-24 month old Santa steers.	No Ralgro.
Group 2:	21 head. 18-24 month old 50% Brahman steers.	No Ralgro.
Group 3:	17 head. 18-24 month old 38% Sahiwal steers.	No Ralgro.
Group 4:	21 head. 18-24 month old 75% Brahman steers.	No Ralgro.
Group 5:	20 head. 30-36 month old Shorthorn steers.	No Ralgro.
Group 6:	18 head. 18-24 month old 38% Africander steers.	No Ralgro.
Group 7:	17 head. 18-24 month old Hereford steers.	No Ralgro.
Group 8:	20 head. 18-24 month old Santa steers.	Ralgro.
Group 9:	19 head. 18-24 month old 50% Brahman steers.	Ralgro.
Group 10:	17 head. 18-24 month old 38% Sahiwal steers.	Ralgro
Group 11:	21 head. 18-24 month old 75% Brahman steers.	Ralgro
Group 12:	19 head. 30-36 month old Shorthorn steers.	Ralgro
Group 13:	19 head. 18-24 month old 38% Africander steers.	Ralgro
Group 14:	20 head. 18-24 month old Hereford steers.	Ralgro

SEASONAL CONDITIONS:

At the end of May 1981 and early June 1981 substantial out of season rain fell. The resultant pick was sufficient to keep all steers gaining weight right into October.

COMMENTS:

The most notable result was the performance of the Herefords. From 8 August 1980 to 12 November 1980 they did the best of all the breeds because they lost least weight. However, they were significantly lighter than the other breeds. Then, at the break of the season, 12 November 1980 to 19 February 1981, all the heavier cattle jumped ahead leaving the Herefords behind. The Herefords were slower to start gaining however, once their condition improved, they were able to match the other breeds for average daily gain when good feed was available, 19 December 1981 to 20 July 1981.

The extended growing season enabled the British breeds of both ages to significantly outperform their *Bos indicus* cross bred contemporaries from 20 July 1981 to 15 October 1981. Ralgro had a significant economic effect in some breeds; there was a 6-8.5% response in the British breeds, Santa Gertrudis and Africander crosses. However, on these results it would not pay to implant half or high *Bos indicus* component steers.

PROJECT: RMD-CH 517(1) cont.

From December 1979 to May 1980, 44 yearling steers of 6 different genotypes arrived at Toorak Research Station from 5 different locations. There was already a similar sized herd of Shorthorn steers on the station which had been purchased a year earlier.

Details of the groups:

Shorthorns from 'Byalong', Richmond. Forest country.

Santas from 'Solway', Richmond. Forest.

50% Brahman x Hereford from 'Hazelwood', Richmond. Forest/downs.

38% Sahiwal 62% Shorthorn from 'Rocklands', Camooweal. Downs.

38% Africander 62% Shorthorn from 'Rocklands', Camooweal. Downs country.

75% Brahman 25% British from 'Auckland Downs', Julia Creek. Downs country.

Herefords from 'Burleigh Station', Richmond. Forest/downs.

After arriving at Toorak Research Station, a stabilising period of one growing season was allowed before the trial period.

It was elected to begin the trial in August 1980 as it was considered the cattle had stopped gaining weight.

Originally the steers were to be split into 2 groups; half to run at Toorak on ticky country. This was not done. Instead all genotypes were split into 2 and half were implanted with Ralgro.

PROJECT: TBA-CH 345

LOCATION: 'Hodgsonvale'

OFFICER: A.W. Plasto

OBJECT: Observe the performance of bullocks grazing sorghum stubble and provided with molasses NPN supplements.

TREATMENT-GROUPS:

Group 1: 23 head. Molasses + urea.
Group 2: 23 head. Biuret + molasses.

COMMENTS:

Forty six 3 year old Hereford bullocks were weighed and divided into 2 groups. One group received urea/molasses and the other biuret/molasses. Each group grazed a paddock of 18 acres of grain sorghum stubble and about 30 acres of grass. The sorghum stubble was of the same variety. There was virtually no grain either on the stubble or on the ground after harvesting.

Prior to the trial both groups were receiving urea/molasses in roller drums. For some unaccountable reason the urea group in the trial refused to take the mixture when drafted in their trial paddock. After one week with no acceptance the mixture was altered to 50:50 molasses and water (no urea) and slowly the urea was added until 2oz intake per head per day was achieved after 4 days. Consequently for the first 7 days of the trial the urea group was without urea and for the next 4 days they were building up to an intake of 2 oz per head per day.

The biuret group immediately accepted the molasses biuret mixture. The initial mix was 21 lb molasses and 25 kg biuret (a weeks supply). This was consumed in 3 days. In subsequent mixes the molasses was gradually dropped to 10 lb molasses to 25 lb biuret. In all cases water was added to the molasses to give a 2 gal mixture.

The trial was terminated after 4 weeks as the co-operator decided to sell the cattle.

PROJECT: TBA-CH-384

LOCATION; 'Berwich', Jondaryan

OFFICER: A.W. Plasto

PUBLISHED: Circulated Trial Report 73/3

OBJECT: To investigate the liveweight performance of steers grazing sorghum stubble and receiving either (1) ad lib grain sorghum + biuret + sulphur or (2) urea + molasses.

TREATMENT-GROUPS:

Steers were 3 years old Herefords and 2 years old Santa Cross. The Herefords were in forward store condition and the Santa Cross in good store condition.

Group 1: 30 head. Fed urea/molasses via drum roller. Control group.

Group 2: 30 head. Fed cracked grain sorghum etc. from self feeder.

PASTURE - CROP DETAIL:

The control's paddock consisted of 150 ac sorghum stubble and 200 ac of native pasture.

The Group 2 paddock consisted of 60 ac sorghum stubble and 100 ac of native pasture.

Filler cattle were used to bring stocking rates of both paddocks to 2 ac/beast. Sorghum variety was Yates 212.

At the commencement of the trial there was little flag left, but the lower part of the stems of the sorghum plants were green and moist. Although frosts occurred the stubble was not severely affected. Initially the stubble was available at a rate of 3,000 lb per acre of dry matter.

Cattle grazed the stubble at night and visited feeders for about 30 minutes en route to water around 6.00-7.00 am. Little grazing occurred during the day.

SUPPLEMENTS DETAILS:

The grain was only 8% protein so 2.5% biuret was added to make a protein equivalent of 13.4%. Also, S was added at a rate of 2% of the biuret, and for the first 3 weeks NaHCO₃ was included at 1.5% of the concentrate.

The biuret supplement of 7 oz/head/day was later considered to be excessive.

Lucerne hay was offered from the first 2 days after which ad lib grain feeding started successfully. One animal became ill during the trial. Feeders were located away from water to limit intake.

COMMENTS:

The liveweight gains of both groups were better than expected. Presence of limited green shoot rather than molasses/urea (intake was only one-third of desired level) was considered responsible for an average gain of 1.1 lb/head/day in the control group.

PROJECT: TBA-CH-384

The liveweight gain of the grain supplemented group was comparable to a feedlot. Steers were probably getting 79% of total feed intake from the self feeder. Average intake was 2.2% of average body weight, ie. 0.6% less than expected in a feedlot.

The trial was concluded when the majority of grain supplemented steers were marketable. Stubble availability in both paddocks had decreased markedly by then.

Five of the best Herefords were slaughtered. Mean carcass weight was 633 lb and dressing percentage was 54%.

PROJECT: TBA-CH 406

LOCATION: Crows Nest

TITLE: Salt supplementation trial

OFFICER: A.W. Plasto

OBJECT: To investigate the liveweight performance and change in saliva sodium levels of steers receiving salt supplementation while grazing native pasture.

TREATMENT-GROUPS:

Animals were 14 months old Hereford steers.

Group 1: 20 head. No supplement

Group 2: 20 head. Salt lick

COMMENTS:

Continual rain in January 1974. Rain soaks produced and controls ate dirt from these soaks; dirt contained 7.3 meq/100 g Na. The white encrustations on the face of the dirt areas being eaten had Na levels > 25 000 meq/100 g.

Faecal Na levels determined in March and April indicated adequate Na intake from the dirt. This was further verified by saliva Na data.

From mid-April Na intake by supplemented group was nil. Before then it was 7 g/head/day.

Both groups had normal saliva levels at the start of the trial. Six weeks later the controls had dropped below normal while the supplemented group maintained levels. In this period the supplemented group gained 7 kg/head more than the controls.

PROJECT: TBA-CH 565

LOCATION: Pittsworth

OFFICER: K. Howard

TREATMENT GROUPS:

Group 1: 10 head. Hereford steers
Group 2: 8 head. Quarter Simmental steers
Group 3: 9 head. Half Simmental steers
Group 4: 9 head. Three-quarter Simmental steers
Group 5: 9 head. Half Africander
Group 6: 20 head. Charolais cross

FEED:

Cattle were on oats until 6 December 1982 when they went onto forage sorghum with access to native pasture. The sorghum cut out steadily until cattle were grazing practically 100% grass around 25 January.

COMMENTS:

All cattle made good gains over the final 117 days and looked attractive on hoof and hook. Charolais cross not sent to slaughter.

CARCASS DETAILS					
	1	2	3	4	5
Weight less 3%	268	268	296	313	280
Dress %	49.4	50.0	48.0	50.2	51.8

A high plane of cultivation was maintained throughout the length of the trial so it was considered a good guide to the performance of all groups under above average nutritional conditions.

The three lighter groups all had adequate finish, especially the Africander.

The Africander cross, while having the lightest liveweights, had heavier carcasses than the Herefords and quarter Simmental.

On liveweight, the Africanders were 2.2 kg lighter than the Herefords, gained 22.4 kg less but their carcass average was 11.9 kg better than the Herefords.

Weight gain difference between groups over the full trial period was consistent. The carcass percentage, even though taken on relatively full live weight seemed, it was thought, to be 2-3% less than what would be expected.

PROJECT: TDE-CH P1

LOCATION: `Silverton' Theodore

TITLE: Pasture and crop grazing observation

OFFICER: P.J. Round

PUBLISHED: Circulated Trial Report 66/2

OBJECT: To observe the performance of cattle grazing a sequence of pasture and crop on improved brigalow land with a view to finishing them as fats.

TREATMENT-GROUP:

Animals were 15-17 months old Angus steers.

COUNTRY: Brigalow country with native grasses.

COMMENTS:

Paddock 1: 220 acres of native grass on pulled brigalow country. Grazed by 112 steers, 108 heifers and 1700 sheep from 16 February 1965 to 20 March 1965.

Paddock 2: 150 acres failing grain sorghum and 250 acres of native pasture on Brigalow country. Grazed by 112 steers and 1200 sheep from 20 March 1965 to 28 May 1965.

Paddock 3: 100 acres sorghum stubble and 150 acres native blue grass. The sorghum crop had partially failed and only selected areas were harvested, leaving a considerable amount of grain with the stubble. The pasture had not been grazed during the growing period of the sorghum. Grazed from 28 May 1965 to 7 July 1965.

Paddock 4: 150 grazing oats grazed by 112 steers from 7 July 1965 until 17 August 1965.

PROJECT: TDE-ED C25

LOCATION: 'Kitty Mara', Theodore

TITLE: Dry land oat grazing demonstration

OFFICER: P.J. Round

PUBLISHED: Circulated Trial Report 66/10

OBJECT: To gain more information on oats in the area and to gain some measure of the differences in animal production between early and mid season oat varieties.

TREATMENT-GROUPS:

Group 1: Steers on Camellia oats
Group 2: Heifers on Camellia oats
Group 3: Steers on Benton oats
Group 4: Heifers on Benton oats

COMMENTS:

12-18 months heifers and steers, mainly Hereford but a few Brahman crossbreds also.

On 6 April 1966, 27 acres of Camellia and 17 acres of Benton oats were sown.

Grazing started on 14 June 1966 with heifers and steers which had been grazing sugardrip.

Animals were allotted to each group on size and proportionally the same number of steers and heifers grazed each crop. Stocking varied:

	14/6-29/6	29/6-29/7	29/7-24/8
Camellia	35	50	35
Benton	21	26	13

Average stocking rate for the period was 1.6 beasts/acre for Camellia and 1.2 beasts/acre for Benton. By 24 August Benton was virtually grazed to the ground while there was still good grazing available on the Camellia.

Analyses of samples taken at start of grazing and green weight yields at start of grazing were:

	% moisture	% C.P.	% est. D.P.	est. TDN	Green matter (lb/ac)
Camellia	75.6	13.3	10	55	1 500
Benton	76.8	24.4	19.5	65	2 000

PROJECT: TH-CH P5

LOCATION: Markville Hills, Theodore

TITLE: Oat grazing demonstration

OFFICER: M.K. Rynne

PUBLISHED: Circulated Trial Report 68/6

OBJECT: Observation to check repeatability of results of TDE-ED C25.

TREATMENT-GROUPS:

Brahman-Hereford crossbreds mainly, with a few Hereford were the stock used. Age varied from 12 to 20 months.

- Group 1: Mixed ages and sex grazing Denton oats.
- Group 2: Steers of mixed ages grazing Camellia oats.
- Group 3: Mixed ages and sexes grazing Algerian oats.

COMMENTS:

Stock initially introduced on 14 June 1967 but rain caused them to be removed on two occasions. Finally reintroduced on 14 July 1967 and weighed 10 days later. Stock were mainly Brahman-Hereford crossbreds with a few Herefords. Only steers grazed Camellia but steers and heifers grazed on Benton and Algerian. The average age of the Camellia group was slightly higher than the other two groups.

The crops were planted after rain in the first week of March 1967. The three varieties were ready for grazing on 14 June 1967. Algerian and Camellia were about 10 in high and the Benton 15 in high.

The 27 ac of Benton carried 25 head from commencement of stocking until 14 August 1967 when the number was increased to 50. The 20 ac of Camellia was set stocked with 36 head.

The 40 ac of Algerian carried 45 head from 14 June 1967 to 14 August 1967 and then 65 head until final weighing.

All paddocks carried a good body of feed throughout the grazing period. At final weighing there was an excess of quality feed in the Algerian paddock, Camellia had a similar bulk but much coarser feed while the Benton was eaten out.

PROJECT: TK-CH P2

LOCATION: 'Laudham Park', Townsville

TITLE: Monosodium Orthophosphate Lick Feeding Trial

PUBLISHED: Circulated Trial Report 64/2

OBJECT: (a) To determine whether monosodium orthophosphate would stand up to wet season conditions;

(b) To determine whether cattle would accept this material as a lick without salt as an appetiser or regulator.

TREATMENT-GROUPS:

Animals were 2 years old Brahman cross steers.

Group 1: 20 head. Control

Group 2: 20 head. Supplemented

COMMENTS:

Monosodium orthophosphate was fed ad lib. The supplemented group and the control group were run in adjoining paddocks. The cattle were alternated between paddocks after each weighing.

The average consumption was 0.7 oz/head/day which supplied about 5 g of P. Consumption pattern was:

0.85 oz during first 53 days

1.04 oz during next 42 days

0.8 oz during next 56 days

0.55 oz during next 76 days

Blood P levels of both groups were high at the start of the trial and remained high until the onset of storm rains. Blood levels in the control group started to fall about 6 weeks before the supplemented group when there was a rapid decline in both groups until the end of the wet season. The supplemented group had higher blood P levels than the controls at the start of the trial and maintained this advantage throughout. Apart from the continued rise for 6 weeks at the end of the dry season by the supplemented group, the pattern for both groups was much the same.

See Circulated Trial Report 64/2 for blood P and Mg levels at the five dates.

Monosodium orthophosphate was adversely affected by heavy rains when placed in open troughs and is not readily taken by cattle.

PROJECT: TLE-CH P4

LOCATION: `Salisbury Plains', Bowen

TITLE: Superphosphate demonstration on Townsville lucerne, Salisbury

OFFICER: L. Winks

PUBLISHED: Circulated Trial Report 70/1

OBJECT: To determine the response, in terms of animals liveweight, to applications of superphosphate to Townsville stylo based pasture and to study the economics of the venture.

TREATMENT-GROUPS:

Animals were Brahman cross steers, 2.5-3.5 years old.

Group 1: 109 head. Unsupered paddock for period 4 January 1968 to 14 July 1968.

Group 2: 120 head. Supered paddock for period 4 January 1968 to 14 July 1968.

Group 3: 140 head. Unsupered paddock for period 13 August 1968 to 3 February 1969.

Group 4: 133 head. Supered paddock for period 13 August 1968 to 3 February 1969.

COUNTRY:

Stunted ti-tree and oak with some iron bark ridges. Soils predominantly solodic with a sandy surface overlying a heavy clay.

PASTURE:

Townsville stylo had become established over the years. Estimated stocking rate of 12 acres/head. Fertilised and unfertilised paddocks were of similar country.

A 420 ac paddock was fertilised with 1 cwt super/ac in November 1967. Another 1 cwt/ac was applied in November 1968.

The 1968 wet season was ideal and dry matter production was high; both Townsville stylo and native grasses produced a heavy bulk; the supered areas seemed to carry more feed than the unsupered. Protein and P analyses were on a % dry matter basis:

Sample	Protein	P
Fertilised	18.1	0.24
Unfertilised	14.7	0.19

As the season advanced the stylo hayed off and was heavily grazed. By July 1968 the fertilised area still carried a good body of stylo but there was very little in the unfertilised paddock.

PROJECT: TLE-CH P4 cont.

By January 1969 pasture showed signs of heavy grazing. A heavy germination of stylo followed the January rains but the following dry conditions caused a high mortality. Dry matter production in both paddocks was low and in January to March quantity rather than quality of pasture limited animal growth.

When steers were sold in March 1969 the supered area was virtually bare while the unsupered area still had some dry grass from the previous year.

Final liveweights of the second draft were not able to be got. Weight gains from January to slaughter were not high.

CARCASS DETAILS

Group	1	2	3	4
Final liveweight (lb)	1263	1248	877	873
Cold dressed Wt (b)	665	647	498	489
Dressing %	52.7	54.0	-	-
Final weighing date	14/7/68	14/7/68	3/2/69	3/2/69
Kill date	18/7/68	18/7/68	28/3/69	28/3/69

PROJECT: TLE-CH P5

LOCATION: 'Glencoe', Bowen

TITLE: Superphosphate demonstration on Townsville stylo

OFFICER: L. Winks

PUBLISHED: Circulated Trial Report 69/8

OBJECT: To assess the responses obtained under commercial conditions to superphosphating Townsville stylo and to study the economics of the venture.

TREATMENT-GROUPS:

The steers ranged from weaners to 2 years and were a mixture of Brahman cross, Shorthorn and Herefords.

The steers were drafted into two groups on basis of liveweight of 40 each. One group grazed the fertilised pasture, the other the unfertilised.

- Group 1: 40 head. Mixed British breed on unsupered pasture.
- Group 2: 40 head. Brahman cross on unsupered pasture.
- Group 3: 40 head. Mixed British breeds on supered pasture.
- Group 4: 40 head. Brahman cross on supered pastured.

COUNTRY:

The country was open forest of ti-tree, oak and iron bark. Solodic soils with a light surface soil overlying a heavy clay subsoil.

PASTURE:

Townsville stylo was introduced into black speargrass, Kangaroo and White speargrass pasture by judicious grazing management.

Three hundred and forty seven (347) acres were cleared and fenced in 1967. In November 1967, 167 ac given 1 cwt/ac super; supering repeated again in November 1968. 180 ac left unsupered.

Pasture growth was very rapid following February and March rains in 1968 and at start of trial both paddocks carried a heavy body of feed. On a visual basis, yields on fertilised paddock were greater than the unfertilised paddock. Both pastures were heavily grass dominant, and while the stylo plant numbers were high, absolute yields were not great.

PROJECT: TLE-CH P5 cont.

Analysis of samples of stylo taken in April on a dry matter basis were:

	Protein	Phosphorus
Unfertilised	16.5%	0.10%
Fertilised	16.3	0.11

As the season advanced, the pastures dried off and the stylo was heavily grazed. When the wet season broke in January 1969 both areas had a good body of dry native pasture. Germination of stylo was high but growth of both grass and legume was severely limited by moisture stress.

In 1969 autumn, the unfertilised area received several light falls of rain not received by the fertilised area. The rain caused a greening up of the unfertilised area, but the fertilised remained quite dry. A general fall of 35 points in July 1969 caused a green shoot throughout but when the trial terminated the pasture had dried off again and was showing signs of high pressure grazing. Both areas carried some dry feed with slightly more on the fertilised area.

During the autumn-winter of 1968, gains on the fertilised area were far greater than on the unfertilised area. At this stage there was a greater bulk of feed on the supered area and the greater opportunity for selection by the animals would have contributed to the greater gains.

In the dry spring and early summer period, animals of the fertilised area suffered greater weight loss than the unfertilised paddock animals. This would be largely a function of the uneven distribution of the rainfall that was received. This tended to favour the unsupered area throughout the whole trial period.

A similar situation existed during the autumn-winter of 1969 when the unfertilised area was favoured by light falls of rain which did not reach the fertilised area.

Despite the setbacks, overall gains on the supered area were greater than the unsupered.

Throughout the whole period, the Brahman cross outperformed the British breeds.

CARCASS DETAILS

Group	Breed	Final LW (lb)	Hot dressed wt (lb)	Hot dressed %
Supered	Brahman X	911	465	51.0
	British	839	412	49.1
Unsupered	Brahman X	888	443	49.9
	British	852	416	48.8

PROJECT: TLE-CH 605(A)

LOCATION: 'Mungalla', Ingham

TITLE: Mungalla Ralgro Compudose Evaluation

OFFICER: P.J. Round

OBJECT: To measure the effect of subcutaneous ear implantation of Ralgro (Zeranol) and Compudose (Estradiol).

TREATMENT-GROUPS:

Animals were 5 years old, 4 years old and 3 years old Droughtmaster bullocks.

- Group 1: 38 head. Control - no implant.
- Group 2: 38 head. Single implant of Ralgro.
- Group 3: 38 head. Two implants of Ralgro at 90 day intervals.
- Group 4: 38 head. Single implant of 200 day release Estradiol (Compudose 200).
- Group 5: 38 head. Single implant of 400 day release Estradiol (Compudose 400).

Treatments were inserted into the rear of the near ear, about $\frac{1}{3}$ of the ear length from the skull.

PASTURE

All cattle were grazed together and the project group was part of a larger mob grazing one paddock. Pasture was a mixture of Pangola grass, Para grass and Couch grass. The area had been fertilised with 37 kg phosphorus per hectare, as 3.5 bags of triple super.

The paddock was previously used for a Ralgro evaluation project in 1980.

COMMENTS

During the first 90 days of the project, the two Ralgro treatments and the Compudose 400 treatment produced a liveweight response.

The only period of liveweight gain was during the first 90 days. From this time until the final weighing there was little response in the way cattle performed.

Although 1982 progressed into a drought year, rainfall and pasture conditions until July indicated a better growth rate could be expected. Winter conditions were very cold with quite heavy frosts during June and July. This would have retarded pasture growth during those months.

PROJECT: TLE-CH 605(B)

LOCATION: 'Havilah', Collinsville

TITLE: Ralgro-Compudose trial

OFFICER: J. Bond

TREATMENT-GROUPS:

Animals were 3/8 - 5/8 No. 8 Brahman cross steers.

Group 1: 100 head. Control.

Group 2: 100 head. Compudose 200, 10 December 1981.

Group 3: 50 head. Ralgro, 10 December 1981.

Group 4: 50 head. Ralgro, 10 December 1981 and 23 April 1982.

COUNTRY: Cleared Brigalow and open woodland cabbage gum.

PASTURE: Buffel and native blue grass with some black spear.

CARCASS: Hot Carcass Weights:

Group	Date	No.	Weight (kg)	Dressing %
1	8/7/82	95	261	50.54
2	8/7/82	93	278	51.14
3	8/7/82	50	270	51.4
4	8/7/82	46	276	51.4

PROJECT: TLE-CH 605(C)

LOCATION: `Havilah', Collinsville

TITLE: Ralgro trial

OFFICER: J. Bond

TREATMENT-GROUPS:

Animals were 2-3 years old Brahman cross steers.

Group 1: 40 head. Control.

Group 2: 46 head. Ralgro 28 March 1980.

COUNTRY: Cleared Brigalow and open woodland cabbage gum.

PASTURE: Queensland buffel and native Blue grass. Grazed at 2.4 ha/head.

Poor feed. Pasture suffered moisture stress for most of the period.

CARCASS: Cold Carcass Weights:

Group	Date	No.	Weight (kg)	Dressing %
1	25/5/80	40	249	48.37
2	25/5/80	46	250	48.47

PROJECT: TLE-CH 605(D)

LOCATION: 'Eton Vale', Bowen

TITLE: Ralgro trial

TREATMENT-GROUPS:

Animals were 3 years old Droughtmaster Brahman Steers.

Group 1: 60 head. Control.

Group 2: 60 head. Compudose 200 10 December 1981.

Group 3: 50 head. Ralgro 10 December 1981.

Group 4: 50 head. Ralgro 10 December 1981 and 23 April 1982.

COUNTRY: Cleared brigalow and open woodland cabbage gums.

PASTURE: Buffel and native bluegrass with some black spear. A good pasture season.

CARCASS: Cold carcass weights:

Group	No.	Date	Weight (kg)
1	58	5/5/82	294
2	55	5/5/82	302

PROJECT: TLE-CH 605(E)

LOCATION: 'Salisbury Plains', Bowen

TITLE: Ralgro Trial

PUBLISHED: Aust. Vet. J.

TREATMENT-GROUPS:

Animals were 4 years old Brangus type steers.

Group 1: 36 head. 4 years. Control.

Group 2: 36 head. 4 years. Ralgro 18 February 1980.

Group 3: 8 head. 3 years. Control.

Group 4: 8 head. 3 years. Ralgro 18 February 1980.

COUNTRY: Open grassland; coastal.

PASTURE: Bothriochloa + Townsville stylo + some buffel. A good pasture season.

CARCASS: Cold carcass weights:

Group	No.	Date	Weight (kg)
1	36	22/5/80	300
2	36	22/5/80	308
3	8	22/5/80	284
4	8	22/5/80	299

PROJECT: TLE-CH 605(F)

LOCATION: 'Eton Vale', Bowen

TITLE: Ralgro Trial

OFFICER: J. Bond

TREATMENT-GROUPS:

Animals were 4 years old Santa cross Brahman steers.

Group 1: 28 head. Ralgro 12 December 1981.

Group 2: 26 head. Control.

Group 3: 26 head. Ralgro 11 February 1981.

Group 4: 28 head. Control.

COUNTRY: Open and cleared timber. Ironbark and bloodwood.

PASTURE: Speargrass and Bothriochloa

PROJECT: TLE-CH 605(G)

LOCATION: 'Corabelle', Corfield

TITLE: Ralgro trial

TREATMENT-GROUPS:

Animals were Droughtmaster steers.

- Group 1: 3.5-4.5 years old. Control.
- Group 2: 3.5-4.5 years old. Ralgro implant.
- Group 3: 1.5-2.5 years old. Control.
- Group 4: 1.5-2.5 years old. Ralgro implant.

PROJECT: TLE-CH 605(H)

LOCATION: `Kangarong`

TITLE: Ralgro trial

OFFICER: P. Smith

TREATMENT-GROUPS:

Group 1: 20 head. No. 9 steers. Control.
Group 2: 21 head. No. 9 steers. Ralgro implant.
Group 3: 25 head. No. 0 steers. Control.
Group 4: 25 head. No. 0 steers. Ralgro implant.

PROJECT: TLE-CH 605(I)

LOCATION: `Dotswood'

TITLE: Ralgro Trial

OFFICER: P. Smith

TREATMENT-GROUPS:

Animals were steers.

Group 1: 79 head. Control.

Group 2: 80 head. Ralgro implant.

PROJECT: TLE-CH 605(J)

LOCATION: `Niall'

TITLE: Ralgro trial

OFFICER: P. Smith

TREATMENT-GROUPS:

Group 1: 36 head. No. 7 steers. Control.
Group 2: 39 head. No. 7 steers. Ralgro implant.
Group 3: 32 head. No. 8 steers. Control.
Group 4: 31 head. No. 8 steers. Ralgro implant.

PROJECT: WRK-CH P3

LOCATION: 'Vermont', Warwick

TITLE: Response to Vitamin A

PUBLISHED: Circulated Trial Report 65/7

OBJECT: Observe weigh changes of heifers given vitamin A and a control group.

TREATMENT-GROUPS

Group 1: 28 head. Control

Group 2: 28 head. Injected with 500 000 IU Vitamin A (Squibb) on 21/5/65.
Retreated with 750 000 IU on 15/7/65.

COMMENTS:

On 21 May 1965, 28 non-pregnant 15 month Hereford heifers paired and one of each pair selected and injected with vitamin A. All heifers were then depastured on open forest country with no supplementary feed.

There was no apparent difference in the condition or appearance of the animals within groups or between groups.

PROJECT: WRK-CH P4

LOCATION: Sandy Creek, Warwick

OFFICER: D. Pollard

OBJECT: To observe the weight gain of steers grazing Sudax.

TREATMENT-GROUPS:

Group 1: Two year old Hereford and Hereford cross steers.

COMMENTS:

Paddock 1. This 24 acre paddock was planted with Sudax on 20/12/65.

Paddock 2. This 22 acre paddock was planted with Sudax on 23/12/65. Eight acres of the paddock was along a creek and grew good couch and paspalum.

Sixty-seven steers were put into paddock 1 when the crop was 4.5 feet high and not yet in the boot stage. At this stocking rate it got away from the cattle.

Fifty-seven of the steers were removed from paddock 1 and put into paddock 2 on 3/3/66 when the crop was 8 feet high and in seed.

PROJECT: WRK-CH 444

LOCATION: 'Mt Malakoff', Stanthorpe

TITLE: Winter supplementation of grazing cattle with NPN or protein.

OFFICER: D. Llewellyn

OBJECT: To evaluate protein versus NPN supplements fed to 2 year old 1st calf heifers grazing native pasture; in terms of:

- (a) Liveweight changes from June to September.
- (b) Subsequent interconception intervals.
- (c) Observe the extent of liveweight compensation over the following summer period.

TREATMENT-GROUPS:

Animals were 2 year old Hereford heifers approaching their third trimester of pregnancy.

Group 1: NPN supplemented. 'Lickermix'.
Group 2: Meatmeal + molasses supplemented.

COUNTRY:

Traprock country. Area concerned was shallow, stony land of quite hilly terrain. Trees were narrow and silverleaf ironbark association with tumble-down gum, yellow and white box, and spotted gum.

RAINFALL:

Average annual rainfall of 660 mm with about 35% falling during April-September.

PASTURE:

Native grasses include *Aristida* (white speargrass), *Eragrostis* (lovegrass) and *Bothriochloa decipiens* (pitted bluegrass).

SUPPLEMENTS:

Group 1: Supplemented with Lickermix, a commercial NPN product.
Group 2: Offered meatmeal-molasses mixture; 15 kg of meatmeal and 22 kg of molasses being fed every 3 days in troughs.

COMMENTS:

Heifers set stocked at 5.4 ha/head in 243 ha paddocks. In addition, 280 and 350, 2-tooth wethers grazed with Group 1 and Group 2 respectively.

PROJECT: WRK-CH 444 cont.

Supplementation began on 30 June with 5 bales of medium quality hay per group offered as an enticement for all animals to visit feeding troughs. Supplementation ended on 9 September and

both groups subsequently grazed in the same paddock which had better quality native pasture than their individual treatment paddocks. Calving began in September.

Intake of urea-molasses (Lickermix) ranged from 0.07 - 0.46 kg/day with 92% eating. Only 18% of the meatmeal group was eating and intake ranged from 0.29 - 2.67 kg/day.

Urea-molasses had no significant effect on liveweight loss.

Meatmeal-molasses affected liveweight change significantly in 10 June - 15 August period but not in the 15 August - 9 September period. Meatmeal eaters were free of dystocia and post natal calf death; noneaters were not. No compensatory gain was exhibited by noneaters.

The poor acceptance of the meatmeal was suggested to be due to the short supplementation period and lack of time for animals to become accustomed to it.

A trend towards a reduction in available dry matter and evidence of a green shoot from 15 August to 9 September may have contributed to the lack of any response at this stage.