

REPORT
ON MACKAY
DISTRICT
FERTILISER
USE
1998 SURVEY

Compiled by



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1998 MCPPB NUTRITION SURVEY

SUMMARY

The 1998 nutrition survey has shown that past fertiliser practices within the Mackay sugar industry have dropped closer to BSES recommendations over the last three years - both for the benefit of the industry in terms of production and cost inputs - and in terms of environmental considerations.

The main concern following the 1995 survey was the high applications of nitrogen on plant cane blocks. Similiar surveys were also conducted in other areas of the Queensland sugar industry.

The level of nitrogen has been reduced on plant cane with the greatest reduction in plant cane following green manure.

The survey has also revealed that 65% of growers have modified their fertiliser practices following the extension and demonstration strip trials which have been targeted in this area.

Although levels of nitrogen on plant cane remain higher than current BSES recommendations a downward application of 13% is of credit to local sugar producers.

Of the other major elements applied to sugar cane - the Mackay Sugar district continues to carry out sustainable and economical practices which are able to maintain maximum production.

The only changes which have occurred with the application of these nutrients over the past three years is a reduction in the number of growers who were applying over recommended rates.

It can also be noted that a far greater number of Mackay growers are now accounting for the nutrient contribution of both green manure crops, filter press and the possible contribution from the green cane trash blanket.

The results of the survey indicate that the extension and strip trial work over the past four years has been successful, however there is a need for continued emphasis in this area.

For the greater percentage of the Mackay district growers it is a credit for the sustainable methods used in the application of nutrient and the levels of fertiliser which are used in conjunction with soil tests to achieve required production.

INTRODUCTION

MCPPB staff conducted a nutrition survey in 1994/95 to ascertain existing fertiliser practices within the district. The results of this survey revealed that excessive levels of nitrogen were being applied to plant cane. This report details the results of a follow up survey conducted by MCPPB staff to monitor nutrition practices.

A large extension program was mounted throughout the Mackay sugar district and demonstration strip trials established in plant cane blocks to show that fertiliser applied to plant cane over and above current recommendations is of no benefit to sugar production.

Often excessive nitrogen application will inhibit ccs production. The initial survey also revealed the application was not because of perceived need to apply such amounts of nitrogen , but the ease of cultural practices by top-dressing with the ratoon fertiliser box. 1997/98 saw a follow up survey conducted to monitor the success of the extension program and quantify the changes in fertiliser application.

OBJECTIVES

- quantify the nutrient application to both plant and ratoon cane in the Mackay sugar district
- monitor if any changes have been made to sugar cane nutrition practices
- assess growers understanding of applying excess fertiliser
- use the collated data for the benefit of the Mackay Sugar industry

METHODOLOGY

A total of 89% of Mackay assignments were surveyed following the 1998 harvest. Survey forms were completed by staff while interviewing growers for planting details. Individual grower details remain confidential, however district names were recorded, so that any small areas of concern could be targeted with follow up extension campaigns. All data was entered on laptop by individual field officers using Microsoft access. Data was then combined on access and any errors were filtered with Microsoft excel spreadsheet. Final analysis was conducted on access database.

RESULTS

Are you familiar with current fertiliser recommendations?

| | |
|-----|-----|
| no | 5% |
| yes | 95% |

Do you agree with the recommendations?

| | |
|-----|-----|
| no | 22% |
| yes | 78% |

Have you changed your fertiliser practices since the last survey?

| | |
|-----|-----|
| no | 35% |
| yes | 65% |

Does sugar quality concern you?

| | |
|-----|-----|
| no | 11% |
| yes | 89% |

What percentage of ratoons is trash blanket?

86%

Are you aware of the detrimental effect of excessive fertiliser?

| | |
|--------|-----|
| fully | 36% |
| no | 14% |
| partly | 50% |

Are you aware of some nutrient contribution from GCTB

| | |
|-----|-----|
| no | 26% |
| yes | 73% |

Placement of fertiliser? (1st option)

| | |
|-----------------------------------|-----|
| Beside stool | 32% |
| Broadcast and irrigated | 0% |
| Broadcast and not irrigated | 1% |
| Interspace | 1% |
| On top of stool and irrigated | 21% |
| On top of stool and not irrigated | 29% |
| Stool split | 16% |

Placement of fertiliser? (2nd option)

| | |
|-----------------------------------|-----|
| Beside stool | 26% |
| Broadcast and irrigated | 0% |
| Broadcast and not irrigated | 1% |
| Interspace | 4% |
| On top of stool and irrigated | 7% |
| On top of stool and not irrigated | 9% |
| Stool split | 53% |

Where do you source your information?

| | |
|--------------|-----|
| Agribusiness | 39% |
| CPPB | 13% |
| BSES | 12% |
| Experience | 26% |
| Growers | 4% |
| Other | 5% |

Do you use green manure?

| | |
|-----------|-----|
| Always | 3% |
| Never | 80% |
| Sometimes | 17% |

Do you make use of the nutrient contribution of GCTB?

| | |
|-----|-----|
| no | 91% |
| yes | 9% |

Do you carry out soil sampling?

| | |
|----------------------------|-----|
| At beginning of crop cycle | 57% |
| If problem appears | 8% |
| On an irregular basis | 29% |

| | |
|--------------------------|-----|
| No | 6% |
| Do you plougout/replant? | |
| No | 20% |
| Yes | 80% |
| Why replant? | |
| Economics | 87% |
| Erosion control | 2% |
| Other | 11% |

NUTRIENT APPLIED TO PLANT CANE FOLLOWING GREEN MANURE

| MILL | N | P | K | S |
|--------------|-----|----|-----|----|
| FARLEIGH | 180 | 45 | 113 | 16 |
| MARIAN | 161 | 39 | 83 | 40 |
| PLEYSTOWE | 155 | 38 | 87 | 29 |
| RACECOURSE | 202 | 62 | 103 | 31 |
| | | | | |
| TOTAL | 172 | 46 | 90 | 35 |

NUTRIENT APPLIED TO PLANT CANE FOLLOWING A BARE FALLOW

| MILL | N | P | K | S |
|--------------|-----|----|-----|----|
| FARLEIGH | 191 | 44 | 98 | 20 |
| MARIAN | 186 | 48 | 87 | 71 |
| PLEYSTOWE | 192 | 49 | 87 | 22 |
| RACECOURSE | 213 | 60 | 111 | 30 |
| | | | | |
| TOTAL | 193 | 49 | 94 | 41 |

NUTRIENT APPLIED TO PLOUGHOUT/REPLANT

| MILL | N | P | K | S |
|--------------|-----|----|----|----|
| FARLEIGH | 203 | 47 | 97 | 20 |
| MARIAN | 217 | 58 | 95 | 47 |
| PLEYSTOWE | 215 | 55 | 94 | 24 |
| RACECOURSE | 224 | 69 | 99 | 32 |
| | | | | |
| TOTAL | 214 | 56 | 96 | 32 |

NUTRIENT APPLIED TO RATOON CANE

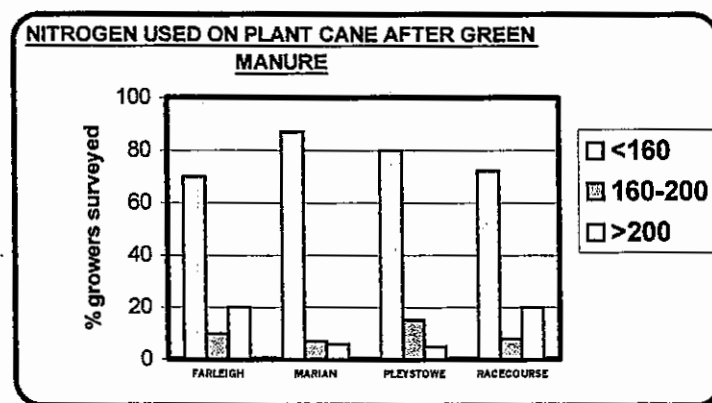
| MILL | N | P | K | S |
|------------|-----|----|-----|----|
| FARLEIGH | 191 | 14 | 102 | 27 |
| MARIAN | 180 | 16 | 96 | 29 |
| PLEYSTOWE | 178 | 13 | 97 | 28 |
| RACECOURSE | 193 | 12 | 103 | 19 |
| TOTAL | 185 | 14 | 99 | 27 |

PERCENTAGE OF GROWER GROUPS USING EACH NUTRIENT REGIME:-

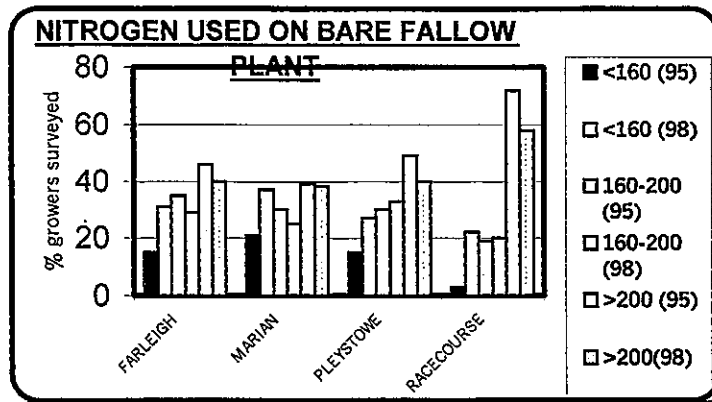
The above results are presented on an average basis. Several growers using nutrients at levels far below or far above the recommended range can easily swing the district average nutrient level. The following data illustrates the number of growers using nutrients within each range and also illustrates any changes in practices which have occurred since the initial survey.

NITROGEN

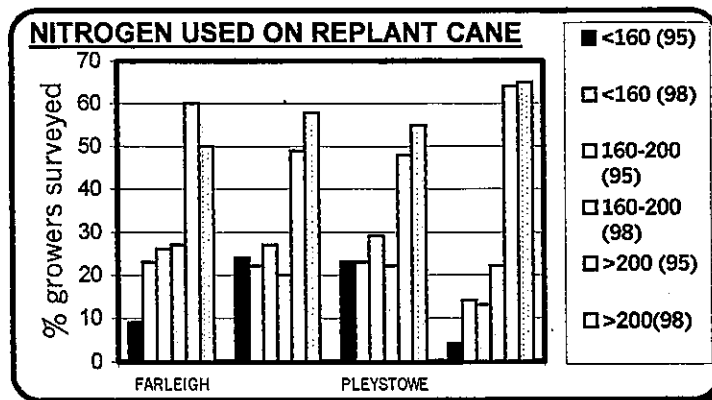
Current recommendations for nitrogen in the Mackay district are 120-150 kg/ha for fallow plant and 160-200 for replant and ratoon.



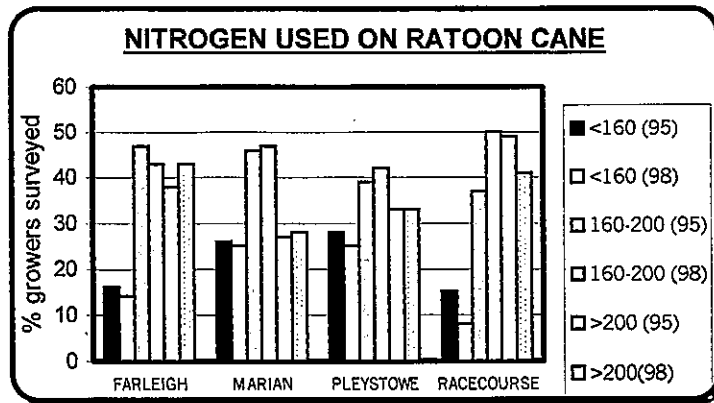
Many of the local growers are continuing to utilise the benefits of green manure crops in their farming system. The majority of growers are using less than 160 kg of nitrogen per hectare from granular fertiliser. In the report written from the 1995 survey plant cane results following green manure were not differentiated from plant cane on bare fallow as the nutritional practices were similar in both.



The most apparent change in nitrogen use following a bare fallow is the decrease in the number of growers using over 200 kg of nitrogen per hectare. There has also been a swing in the lower end users to move to more traditional rates. It was noted in the initial survey that many of the lower rate users were using less conventional products on plant cane. This trend is minimal in the 1998 results as almost all products in use are conventional fertiliser blends.



Still a large portion of growers are using above recommended rates of nitrogen on replant cane. In the Marian, Pleystowe and Racecourse areas this trend has increased over the past three years. This high rate is thought to be largely due to growers not making use of the nitrogen contribution from filter press. (A total of 90 kilograms of available nitrogen per hectare was used in these calculations for available nitrogen from an average application of filter press) The application of filter press is still a common practice in the ploughout replant situation - yet is presently used as a soil conditioner and not a nutrient source.



The largest portion of growers use nitrogen on ratoon cane is in the order of 160-200 kg/ha. This is witnessed by the average application of nitrogen in the Mackay district of 185 kg/ha.

It must again be emphasised that the 1995 report stated that the only excessive nutrient applied in the Mackay district was "nitrogen on plant cane" which represented only 15% of the district. Yet it become a reported fact through many sources that Mackay cane farmers over fertilised all their land with all nutrients.

An average application of 185 kg N/ha over the Mackay district shows that growers are generally following recommendations. This is sound economics and minimises environmental impacts.

PHOSPHORUS

The majority of growers apply high levels of phosphorus to the fallow or the plant cane crop. This practice has developed from ease of application whereby applying sufficient amounts of phosphorus in the early part of the crop cycle to carry on through the ratooning stage. Phosphorus is a non-mobile element and can be stored in the soil profile for future crop use.

Current BSES recommendations for phosphorus for one crop year are:-

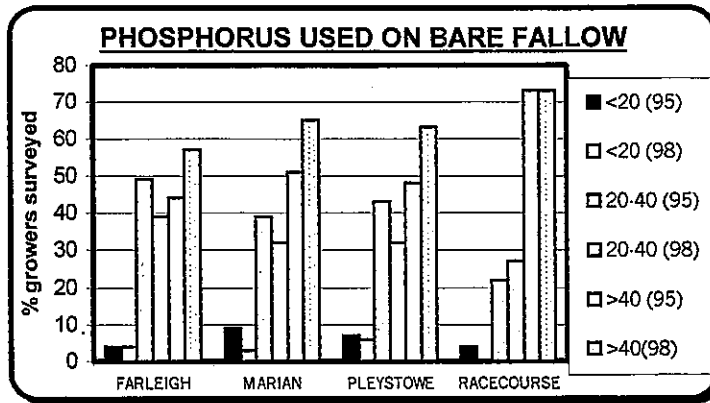
40 kg/ha on deficient soils

25 kg/ha on marginal soils

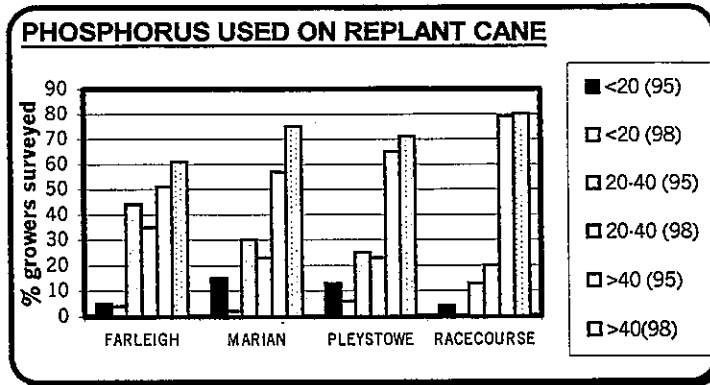
20 kg/ha on adequate soils

(soil status determined from soil analysis)

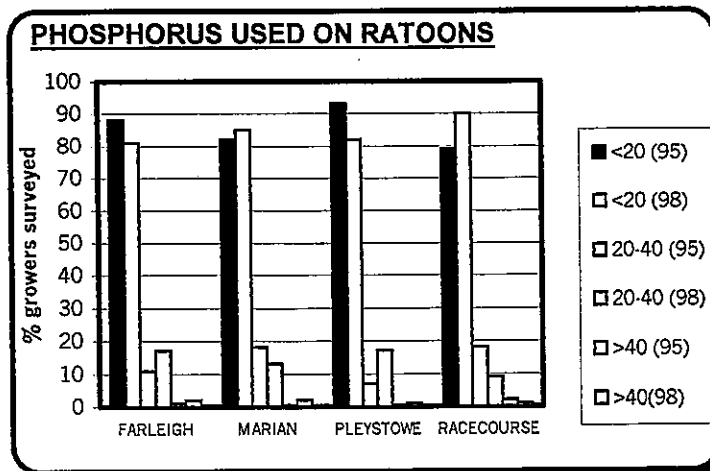
The level of application does not vary on plant, replant or ratoon cane, however this element can be stored in the soil profile for future crops.



Sufficient application of phosphorus at planting is a practice which has increased in all mill areas except Racecourse over the past three years. The application at planting is probably seen more in the Mackay district than other areas with the large use of dunder and urea on ratoons.



Some of the phosphorus contribution applied to replant can be attributed to the application of filter press. A contribution of 30 kg of phosphorus per hectare from filter press was allowed in the calculations for the current crop year. continued reserves of phosphorus from filter press were not carried over in the calculations for future crop years.

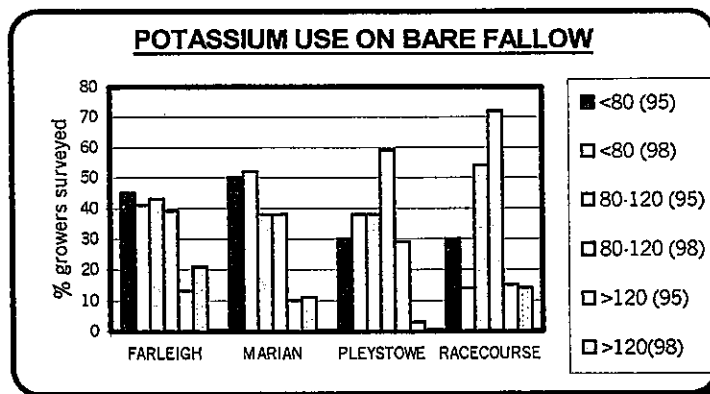


Almost all growers in this district apply little phosphorus at the ratooning stages. Although levels applied at the planting stage are high - this practice is well balanced with the data presented on ratoons.

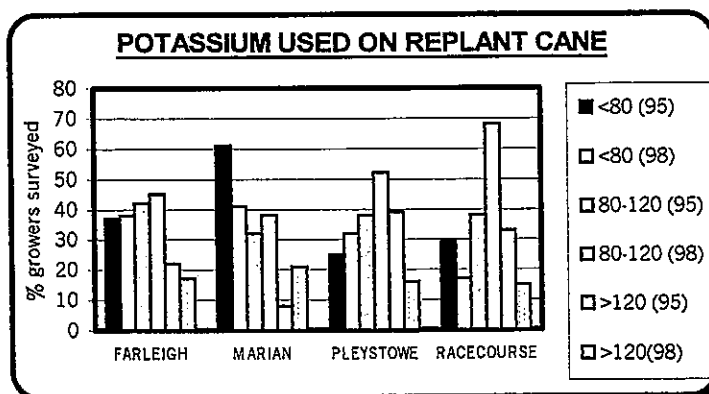
Phosphate movement off farm is a serious threat to the environment, yet the application at planting and the ability to incorporate the nutrient well into the soil during the winter months is a responsible environmental approach.

POTASSIUM

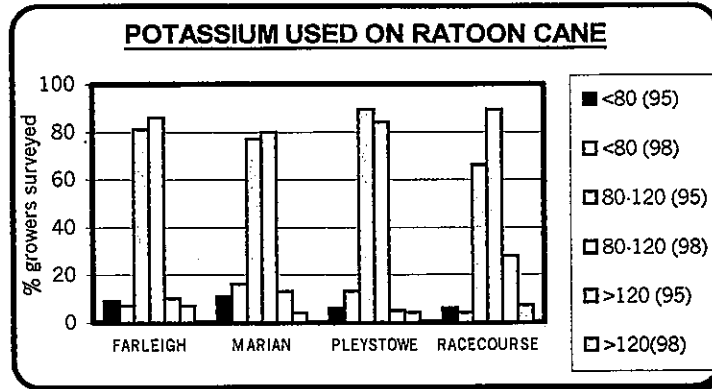
Current recommendations for potassium are 80-100 kg/ha on fallow plant and 100-120 kg/ha on replant and ratoons. These levels are adjusted depending on soil analysis.



The levels of application of potassium after a fallow have remained relatively unchanged over the past three years. Very few growers use high unnecessary levels of potassium on fallow plant.



A large percentage of growers use recommended rates or below on replant cane. The small number of growers using higher than recommended rates has dropped in all except the Marian area.



Again the greatest percentage of growers remain within recommendations on ratoon cane for potassium application.

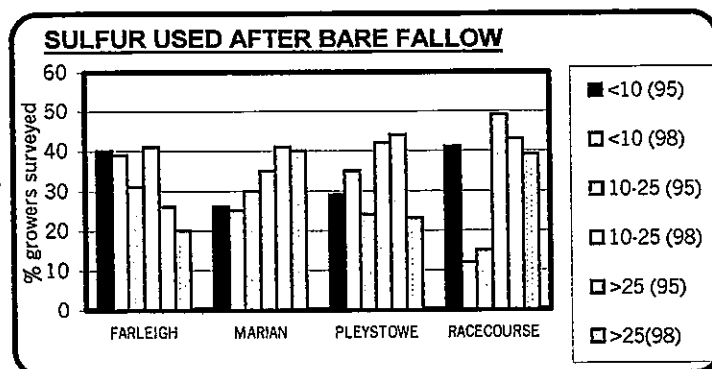
Although the percentage of growers that apply greater than recommendation is very low, this small percentage has dropped even lower over the past three years.

SULFUR

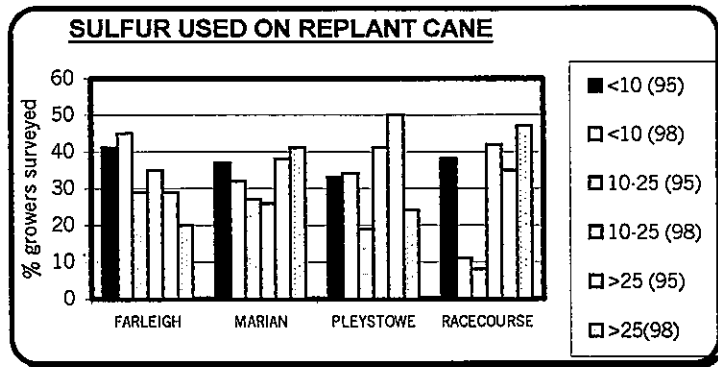
Marian mill area continues to remain the highest uses of sulfur in the Mackay sugar district.

This practice has been brought about as it was in the top end of the Pioneer valley that big responses were shown to sulfur in highly deficient areas by BSES trials.

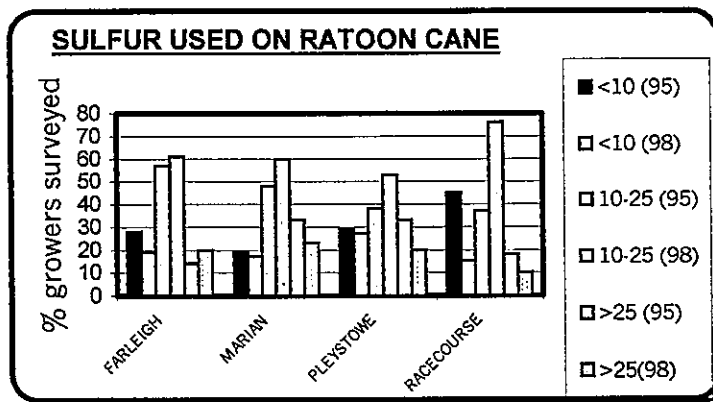
Also some advice from a small sector of the community leans towards sulfur based products.



Sulfur usage following bare fallow remains predominantly within recommendations. The percentage of growers using in excess of 25 kg S/ha has declined over the past three years.



Levels of sulfur applied to replant cane vary dramatically across all four mill areas. Some of the sulfur contribution to all plant cane can be attributed to the levels of phosphate fertilisers applied to maintain much of the crop cycle. Fertilisers such as superphosphate provide adequate levels of sulfur.



As the data showed the phosphorus application between plant cane and ratoon cane became balanced over the whole crop cycle, the same can also be said for the sulfur balance. As the data indicates on ratoon cane the greatest percentage of growers are applying between 10 and 25 kg S/ha. However many of the Mackay soils do have adequate reserves of sulfur.

ACKNOWLEDGMENTS:-

Thanks to all Mackay district sugar cane growers for their time and efforts in assisting with this survey.

APPENDIX 1**AVERAGE NUTRIENTS APPLIED ON DISTRICT BASIS**

Average nutrients applied to plant cane following green manure

| DISTRICT | NITROGEN | PHOSPHORUS | POTASSIUM | SULFUR |
|--------------|----------|------------|-----------|--------|
| Alexandra | 107 | 37 | 43 | 4 |
| Bakers Creek | 216 | 59 | 120 | 25 |
| Balnagowan | 164 | 32 | 76 | 28 |
| Benholme | 115 | 41 | 44 | 93 |
| Conningsby | 260 | 54 | 148 | 42 |
| Deveraux Ck | 164 | 40 | 132 | 65 |
| Dews Flat | 148 | 2 | 120 | 12 |
| Dows Ck | 149 | 40 | 56 | 4 |
| Doyles Rd | 167 | 31 | 82 | 16 |
| Dumbleton | 110 | 27 | 82 | 27 |
| Dunwold | 124 | 32 | 58 | 15 |
| Finch Hatton | 127 | 20 | 23 | 172 |
| Farleigh | 145 | 38 | 137 | 24 |
| Glenella | 212 | 62 | 169 | 6 |
| Homebush | 188 | 48 | 92 | 30 |
| Kungurri | 178 | 23 | 95 | 12 |
| Kuttabul | 200 | 43 | 62 | 11 |
| Marwood | 233 | 68 | 90 | 20 |
| Mia Mia | 140 | 49 | 116 | 33 |
| Mirani | 169 | 51 | 74 | 11 |
| Mirani West | 210 | 54 | 94 | 24 |
| Mt Martin | 148 | 43 | 73 | 34 |
| Mulei | 149 | 26 | 71 | 17 |
| Munburra | 175 | 68 | 95 | 26 |
| Narpi | 183 | 47 | 67 | 130 |
| Nindaroo | 225 | 55 | 88 | 6 |
| Oakenden | 223 | 64 | 120 | 134 |
| Otterburn | 195 | 36 | 149 | 35 |
| Rosella | 225 | 76 | 152 | 25 |
| Royston Pk | 213 | 47 | 67 | 5 |
| Sandiford | 231 | 61 | 106 | 11 |
| Sandy Creek | 181 | 80 | 124 | 28 |
| Seaforth | 138 | 16 | 54 | 16 |
| Septimus | 192 | 17 | 143 | 211 |
| Sunnyside | 153 | 65 | 90 | 34 |
| Te Kowai | 215 | 43 | 62 | 11 |
| Walkerston | 159 | 44 | 107 | 17 |
| Watts Rd | 174 | 39 | 56 | 34 |
| Yakapan | 213 | 47 | 67 | 5 |

Average nutrients applied to plant cane following a bare fallow

| DISTRICT | NITROGEN | PHOSPHORUS | POTASSIUM | SULFUR |
|-----------------|----------|------------|-----------|--------|
| Mirani West | 168 | 50 | 116 | 69 |
| Mt Jukes | 175 | 41 | 85 | 38 |
| Mt Martin | 162 | 45 | 81 | 183 |
| Mt Vince | 187 | 63 | 78 | 43 |
| Mt. Ossa | 208 | 66 | 90 | 11 |
| Mt. Pelion | 168 | 44 | 69 | 12 |
| Mt.Charlton | 137 | 48 | 64 | 6 |
| Mt.Ossa | 213 | 46 | 130 | 6 |
| Mt.Pelion | 182 | 29 | 55 | 10 |
| Mulei | 179 | 38 | 64 | 11 |
| Munburra | 203 | 76 | 113 | 25 |
| N/Eton | 184 | 60 | 77 | 20 |
| Narpi | 195 | 53 | 85 | 44 |
| Nebia | 189 | 35 | 78 | 17 |
| Netherdale | 142 | 44 | 79 | 42 |
| Newbury | 159 | 43 | 97 | 17 |
| Nindaroo | 221 | 52 | 81 | 6 |
| Nth.Mackay | 199 | 46 | 75 | 12 |
| Oakenden | 193 | 44 | 96 | 52 |
| OI72 | 162 | 43 | 100 | 17 |
| Otterburn | 224 | 53 | 94 | 18 |
| Owens Ck | 151 | 33 | 136 | 13 |
| Paget | 191 | 51 | 90 | 14 |
| Palmyra | 205 | 75 | 62 | 15 |
| Pindi | 213 | 38 | 86 | 18 |
| Pinnacle | 195 | 43 | 71 | 33 |
| Pleystowe | 186 | 29 | 113 | 30 |
| Redfern | 246 | 40 | 205 | 63 |
| Reliance Ck | 133 | 25 | 65 | 2 |
| Richmond | 201 | 43 | 96 | 32 |
| Rosella | 237 | 49 | 126 | 36 |
| Royston Pk | 205 | 46 | 83 | 11 |
| S/Grove | 194 | 56 | 68 | 16 |
| Sandiford | 244 | 80 | 132 | 24 |
| Sandy Creek | 223 | 67 | 144 | 35 |
| Seaforth | 167 | 43 | 84 | 27 |
| Sennini Rd | 198 | 63 | 84 | 24 |
| Septimus | 187 | 62 | 91 | 39 |
| Shoal Pt. | 220 | 38 | 279 | 55 |
| Silent Grove | 189 | 47 | 77 | 9 |
| Sugar Shed Rd. | 191 | 42 | 55 | 6 |
| Sunnyside | 204 | 49 | 100 | 26 |
| Tannalo | 173 | 36 | 57 | 73 |
| Tekowai | 214 | 36 | 118 | 23 |
| Uruba | 102 | 20 | 23 | 143 |
| Victoria Plains | 208 | 51 | 97 | 11 |
| Wagoora | 178 | 41 | 98 | 44 |
| Walkeston | 199 | 28 | 32 | 6 |
| Watts Rd | 177 | 39 | 56 | 31 |
| Wewak | 183 | 36 | 72 | 4 |
| Wilson Pd | 200 | 22 | 84 | 13 |
| Wollingford | 204 | 45 | 67 | 5 |
| Wundaru | 188 | 42 | 79 | 6 |
| Yakapari | 177 | 41 | 75 | 10 |
| Yalboroo | 146 | 35 | 65 | 22 |

Average nutrients applied to plant cane following a bare fallow

| DISTRICT | NITROGEN | PHOSPHORUS | POTASSIUM | SULFUR |
|------------------|----------|------------|-----------|--------|
| Alexandra | 160 | 46 | 79 | 49 |
| Alladale | 185 | 51 | 98 | 13 |
| Alligator Creek | 164 | 89 | 120 | 13 |
| Andergrove | 215 | 43 | 62 | 11 |
| Bakers Creek | 231 | 68 | 115 | 32 |
| Balmunda | 118 | 35 | 84 | 30 |
| Balnagowan | 192 | 44 | 76 | 32 |
| Barry Lane | 209 | 46 | 120 | 31 |
| Beaconsfield | 155 | 38 | 97 | 16 |
| Beatrice Ck | 186 | 41 | 88 | 37 |
| Belberra | 197 | 77 | 116 | 13 |
| Benholme | 157 | 50 | 73 | 75 |
| Blacks Beach | 225 | 49 | 115 | 49 |
| Boldon | 242 | 76 | 99 | 48 |
| Brightly | 222 | 45 | 87 | 25 |
| Broardsound Rd | 217 | 43 | 120 | 29 |
| Bucasia | 242 | 51 | 120 | 33 |
| Butherra | 178 | 52 | 86 | 26 |
| Calen | 194 | 43 | 115 | 11 |
| Camerons Pkt | 182 | 45 | 120 | 14 |
| Cedars | 207 | 62 | 109 | 10 |
| Chelona | 249 | 53 | 92 | 11 |
| City Gates | 192 | 51 | 105 | 15 |
| Conningsby | 198 | 34 | 119 | 16 |
| Dawlish | 192 | 51 | 110 | 16 |
| Deveraux Ck | 202 | 45 | 119 | 167 |
| Dews Flat | 190 | 34 | 105 | 7 |
| Dows Ck | 200 | 40 | 89 | 19 |
| Doyles Rd | 198 | 41 | 89 | 17 |
| Dumbleton | 189 | 41 | 93 | 21 |
| Dundula | 212 | 34 | 120 | 40 |
| Dunrock | 222 | 54 | 116 | 17 |
| Dunwold | 154 | 81 | 85 | 206 |
| Eimeo Rd | 173 | 52 | 75 | 15 |
| Erakala | 221 | 51 | 106 | 29 |
| Eton | 214 | 43 | 95 | 16 |
| F/Hatton | 187 | 39 | 85 | 57 |
| Farleigh | 206 | 48 | 93 | 20 |
| Foulden | 184 | 38 | 82 | 23 |
| Gargett | 226 | 58 | 58 | 8 |
| Geeberga | 187 | 39 | 206 | 16 |
| Geeburga | 230 | 70 | 99 | 44 |
| Glenella | 202 | 40 | 134 | 20 |
| Greenmount | 221 | 51 | 120 | 17 |
| Habana | 193 | 44 | 100 | 28 |
| Hampden | 196 | 31 | 84 | 474 |
| Homebush | 203 | 58 | 95 | 30 |
| Kolijo | 196 | 41 | 68 | 13 |
| Kungurri | 174 | 43 | 92 | 9 |
| Kuttabul | 193 | 53 | 99 | 142 |
| Langdon | 205 | 54 | 72 | 10 |
| Mandarana | 195 | 43 | 98 | 7 |
| Mapalo | 151 | 19 | 96 | 10 |
| Marian | 194 | 39 | 101 | 51 |
| Marwood | 216 | 60 | 109 | 26 |
| Mcewans Beach Rd | 229 | 67 | 105 | 14 |
| Mcgregor Ck | 212 | 60 | 99 | 12 |
| Mia Mia | 137 | 45 | 105 | 31 |
| Mirani | 178 | 56 | 68 | 32 |

Average nutrients applied to ploughout/replant cane

| DISTRICT | NITROGEN | PHOSPHORUS | POTASSIUM | SULFUR |
|------------------|----------|------------|-----------|--------|
| Alexandra | 160 | 46 | 79 | 49 |
| Alladale | 241 | 62 | 56 | 9 |
| Alligator Creek | 164 | 89 | 120 | 13 |
| Andergrove | 215 | 43 | 62 | 11 |
| Bakers Creek | 250 | 70 | 101 | 31 |
| Balmunda | 115 | 35 | 120 | 12 |
| Balnagowan | 198 | 52 | 84 | 36 |
| Barry Lane | 209 | 46 | 120 | 31 |
| Beaconsfield | 153 | 39 | 120 | 16 |
| Beatrice Ck | 127 | 36 | 91 | 56 |
| Belberra | 218 | 65 | 92 | 15 |
| Benholme | 223 | 68 | 88 | 44 |
| Boldon | 248 | 70 | 101 | 45 |
| Brightly | 289 | 66 | 88 | 26 |
| Broardsound Rd | 217 | 43 | 120 | 29 |
| Bucasia | 273 | 58 | 96 | 41 |
| Butherra | 178 | 52 | 86 | 26 |
| Calen | 183 | 40 | 107 | 10 |
| Camerons Pkt | 182 | 45 | 120 | 14 |
| Cedars | 215 | 43 | 62 | 11 |
| Chelona | 197 | 129 | 92 | 17 |
| City Gates | 276 | 79 | 22 | 5 |
| Conningsby | 217 | 44 | 104 | 12 |
| Deveraux Ck | 244 | 59 | 102 | 40 |
| Dews Flat | 189 | 34 | 95 | 6 |
| Dows Ck | 253 | 72 | 85 | 17 |
| Doyles Rd | 228 | 52 | 91 | 18 |
| Dumbleton | 265 | 66 | 100 | 11 |
| Dundula | 212 | 34 | 120 | 40 |
| Dunrock | 137 | 115 | 108 | 21 |
| Dunwold | 153 | 38 | 160 | 29 |
| Eimeo Rd | 198 | 58 | 87 | 19 |
| Erakala | 256 | 69 | 122 | 30 |
| Eton | 230 | 48 | 85 | 12 |
| Finch Hatton | 174 | 43 | 90 | 74 |
| Farleigh | 251 | 62 | 117 | 22 |
| Foulden | 237 | 54 | 22 | 13 |
| Gargett | 220 | 60 | 80 | 16 |
| Geeburga | 319 | 99 | 121 | 44 |
| Glenella | 220 | 48 | 76 | 20 |
| Greenmount | 221 | 51 | 120 | 17 |
| Habana | 210 | 46 | 111 | 21 |
| Hampden | 185 | 38 | 86 | 23 |
| Homebush | 224 | 77 | 97 | 33 |
| Kolljo | 203 | 43 | 83 | 8 |
| Kungurri | 198 | 51 | 98 | 9 |
| Kuttabui | 262 | 68 | 100 | 207 |
| Langdon | 239 | 67 | 81 | 11 |
| Mandarana | 199 | 43 | 87 | 6 |
| Mapalo | 151 | 19 | 96 | 10 |
| Marian | 244 | 59 | 60 | 46 |
| Marwood | 249 | 78 | 76 | 23 |
| Mcewans Beach Rd | 249 | 51 | 120 | 17 |
| Mia Mia | 175 | 60 | 121 | 103 |
| Mirani | 212 | 75 | 75 | 44 |
| Mirani West | 201 | 61 | 94 | 66 |
| Mt Jukes | 207 | 45 | 51 | 7 |
| Mt Martin | 185 | 56 | 135 | 53 |
| Mt Vince | 204 | 59 | 87 | 58 |
| Mt. Ossa | 209 | 59 | 95 | 11 |

| Average nutrients applied to ploughout/replant cane | | | | |
|---|----------|------------|-----------|--------|
| DISTRICT | NITROGEN | PHOSPHORUS | POTASSIUM | SULFUR |
| Mt. Pelion | 170 | 45 | 86 | 16 |
| Mt. Charlton | 148 | 47 | 66 | 6 |
| Mt. Ossa | 213 | 46 | 130 | 6 |
| Mt. Pelion | 182 | 29 | 55 | 10 |
| Mulei | 295 | 70 | 84 | 10 |
| Munburra | 224 | 74 | 114 | 25 |
| Nth Eton | 186 | 67 | 78 | 22 |
| Narpi | 182 | 42 | 76 | 40 |
| Nebia | 200 | 37 | 97 | 4 |
| Netherdale | 143 | 32 | 75 | 61 |
| Newbury | 200 | 43 | 86 | 14 |
| Nindaroo | 221 | 52 | 81 | 6 |
| Nth. Mackay | 208 | 52 | 77 | 10 |
| Oakenden | 206 | 54 | 96 | 53 |
| OI 72 | 255 | 37 | 130 | 4 |
| Otterburn | 284 | 66 | 80 | 14 |
| Owens Ck | 150 | 33 | 116 | 11 |
| Paget | 177 | 65 | 56 | 14 |
| Palmyra | 205 | 35 | 91 | 15 |
| Pindi | 223 | 43 | 99 | 16 |
| Pinnacle | 209 | 62 | 92 | 19 |
| Pleystowe | 194 | 31 | 114 | 27 |
| Redfern | 239 | 63 | 85 | 26 |
| Reliance Ck | 133 | 25 | 65 | 2 |
| Richmond | 260 | 42 | 118 | 51 |
| Rosella | 265 | 55 | 106 | 37 |
| Royston Pk | 256 | 66 | 95 | 13 |
| Silent Grove | 194 | 56 | 68 | 16 |
| Sandford | 246 | 88 | 130 | 32 |
| Sandy Creek | 262 | 87 | 102 | 40 |
| Seaforth | 166 | 45 | 90 | 30 |
| Sennini Rd | 198 | 63 | 84 | 24 |
| Septimus | 179 | 90 | 105 | 79 |
| Shoal Pt. | 304 | 66 | 181 | 43 |
| Sugar Shed Rd. | 226 | 56 | 95 | 13 |
| Sunnyside | 169 | 49 | 91 | 26 |
| Tannalo | 181 | 42 | 113 | 181 |
| Tekowai | 211 | 33 | 83 | 19 |
| Uruba | 102 | 20 | 23 | 143 |
| Victoria Plains | 254 | 68 | 118 | 15 |
| Wagoora | 194 | 42 | 96 | 58 |
| Walkeston | 214 | 30 | 112 | 11 |
| Watts Rd | 266 | 69 | 78 | 31 |
| Wewak | 182 | 34 | 79 | 5 |
| Wilson Pd | 200 | 22 | 84 | 13 |
| Wollingford | 218 | 45 | 67 | 5 |
| Wundaru | 186 | 37 | 72 | 5 |
| Yakapari | 177 | 41 | 75 | 10 |
| Yalboroo | 155 | 40 | 65 | 23 |

Average nutrients applied to ratoon cane

| DISTRICT | NITROGEN | PHOSPHORUS | POTASSIUM | SULFUR |
|------------------|----------|------------|-----------|--------|
| Alexandra | 175 | 11 | 118 | 15 |
| Alligator Creek | 166 | 2 | 98 | 20 |
| Andergrove | 218 | 17 | 104 | 25 |
| Bakers Creek | 201 | 10 | 103 | 27 |
| Balmunda | 201 | 11 | 100 | 23 |
| Balnagowan | 184 | 16 | 93 | 49 |
| Barry Lane | 173 | 15 | 103 | 15 |
| Beaconsfield | 190 | 18 | 118 | 15 |
| Beatrice Ck | 190 | 10 | 101 | 25 |
| Belberra | 191 | 9 | 111 | 14 |
| Benholme | 167 | 14 | 91 | 16 |
| Blacks Beach | 156 | 15 | 82 | 19 |
| Boldon | 191 | 16 | 106 | 26 |
| Brightly | 184 | 13 | 102 | 36 |
| Boardsound Rd | 188 | 19 | 120 | 17 |
| Bucasia | 194 | 2 | 115 | 19 |
| Butherra | 211 | 23 | 106 | 58 |
| Calen | 180 | 15 | 105 | 45 |
| Camerons Pkt | 132 | 11 | 91 | 108 |
| Cedars | 179 | 24 | 93 | 13 |
| Chelona | 191 | 16 | 92 | 26 |
| City Gates | 202 | 15 | 101 | 24 |
| Conningsby | 193 | 7 | 94 | 19 |
| Dawlish | 189 | 2 | 120 | 12 |
| Deveraux Ck | 186 | 16 | 102 | 46 |
| Dews Flat | 205 | 10 | 97 | 18 |
| Dows Ck | 167 | 12 | 90 | 18 |
| Doyles Rd | 196 | 19 | 112 | 12 |
| Dumbleton | 180 | 16 | 106 | 18 |
| Dundula | 190 | 2 | 112 | 23 |
| Dunrock | 180 | 16 | 95 | 26 |
| Dunwold | 143 | 13 | 105 | 74 |
| Eimeo Rd | 180 | 9 | 106 | 16 |
| Erakala | 191 | 15 | 92 | 22 |
| Eton | 183 | 16 | 106 | 17 |
| Finch Hatton | 177 | 12 | 98 | 27 |
| Farleigh | 196 | 12 | 108 | 21 |
| Foulden | 181 | 9 | 110 | 24 |
| Gargett | 198 | 20 | 100 | 20 |
| Geeburga | 207 | 24 | 90 | 24 |
| Glenella | 191 | 14 | 108 | 12 |
| Greenmount | 136 | 14 | 120 | 15 |
| Habana | 193 | 18 | 104 | 27 |
| Hampden | 167 | 13 | 102 | 19 |
| Homebush | 182 | 10 | 98 | 17 |
| Kolijo | 216 | 14 | 107 | 22 |
| Kungurri | 200 | 8 | 99 | 27 |
| Kuttabul | 174 | 20 | 92 | 38 |
| Langdon | 150 | 12 | 78 | 25 |
| Mandarana | 173 | 15 | 85 | 14 |
| Mapalo | 218 | 10 | 95 | 17 |
| Marian | 195 | 16 | 110 | 22 |
| Marwood | 196 | 17 | 96 | 21 |
| Mcewans Beach Rd | 195 | 10 | 103 | 15 |
| Mcgregor Ck | 209 | 15 | 92 | 23 |
| Mia Mia | 155 | 16 | 91 | 32 |
| Mirani | 195 | 16 | 93 | 19 |
| Mirani West | 185 | 11 | 109 | 21 |
| Mt Jukes | 181 | 16 | 98 | 48 |
| Mt Martin | 174 | 16 | 88 | 16 |

Average nutrients applied to ratoon cane

| DISTRICT | NITROGEN | PHOSPHORUS | POTASSIUM | SULFUR |
|-----------------|----------|------------|-----------|--------|
| Mt Vince | 164 | 10 | 108 | 69 |
| Mt. Ossa | 212 | 19 | 116 | 22 |
| Mt. Pelion | 192 | 15 | 102 | 19 |
| Mt.Chariton | 181 | 18 | 102 | 40 |
| Mt.Ossa | 219 | 15 | 112 | 16 |
| Mt.Pelion | 193 | 10 | 102 | 20 |
| Mulei | 180 | 13 | 100 | 21 |
| Munburra | 190 | 17 | 109 | 17 |
| N/Eton | 179 | 11 | 82 | 14 |
| Narpi | 192 | 22 | 108 | 34 |
| Nebia | 207 | 21 | 97 | 9 |
| Nebo | 177 | 12 | 77 | 74 |
| Netherdale | 143 | 14 | 89 | 57 |
| Newbury | 185 | 2 | 114 | 20 |
| Nindaroo | 217 | 19 | 98 | 9 |
| Nth.Mackay | 193 | 5 | 106 | 23 |
| Oakenden | 200 | 15 | 98 | 33 |
| OI 72 | 190 | 25 | 112 | 2 |
| Otterburn | 192 | 15 | 93 | 18 |
| Owens Ck | 163 | 31 | 79 | 16 |
| Paget | 145 | 13 | 78 | 24 |
| Palmyra | 197 | 2 | 112 | 16 |
| Pindi | 187 | 15 | 104 | 27 |
| Pinnacle | 175 | 21 | 98 | 30 |
| Pleystowe | 214 | 16 | 94 | 21 |
| Redfern | 247 | 17 | 108 | 27 |
| Reliance Ck | 177 | 12 | 77 | 19 |
| Richmond | 184 | 10 | 109 | 16 |
| Rosella | 201 | 10 | 116 | 14 |
| Royston Pk | 191 | 17 | 104 | 30 |
| Sandiford | 208 | 13 | 108 | 13 |
| Sandy Creek | 200 | 11 | 113 | 16 |
| Seaforth | 165 | 15 | 94 | 35 |
| Sennini Rd | 190 | 2 | 112 | 23 |
| Septimus | 158 | 16 | 98 | 78 |
| Shoal Pt. | 227 | 2 | 120 | 12 |
| Silent Grove | 196 | 31 | 102 | 3 |
| Sugar Shed Rd. | 190 | 11 | 86 | 16 |
| Sunnyside | 199 | 14 | 105 | 15 |
| Tannalo | 191 | 16 | 110 | 43 |
| Te Kowai | 199 | 4 | 104 | 18 |
| Uruba | 143 | 9 | 120 | 12 |
| Victoria Plains | 200 | 19 | 101 | 9 |
| Wagoora | 196 | 17 | 100 | 32 |
| Walkerston | 222 | 16 | 105 | 25 |
| Watts Rd | 181 | 22 | 117 | 12 |
| Wewak | 199 | 16 | 103 | 49 |
| Wilson Pd | 181 | 33 | 110 | 18 |
| Wollingford | 221 | 16 | 105 | 5 |
| Wundaru | 191 | 13 | 99 | 15 |
| Yakapari | 202 | 15 | 97 | 16 |
| Yalboroo | 182 | 28 | 97 | 5 |