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PARTS I & II.

MANURIAL EXPERIMENTS WITH SUGAR CANE.

PART III.

EXPERIMENTS WITH VARIETIES OF SUGAR-CANE.

BY

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Superintendent Botanical Station.
Agricultural Superintendent of Sugar Cane Experiments.

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1909.

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LETTER OF TRANSMITTAL.

The Honourable SIR DANIEL MORRIS, K.C.M.G.
Imperial Commissioner of Agriculture.

Government Laboratory,
Barbados, November 30th, 1908.

SIR,

We have the honour to forward attached hereto a report upon the Agricultural Experiments for the season ending 1908 carried on at Barbados under the direction of the Imperial Department of Agriculture.

2. The Experiments were carried on at Dodds Botanic Station and at fourteen plantations named in the report, situated in different typical localities of this island. We desire to record our thanks to the Proprietors, Attorneys and Managers of those plantations for their courtesy in allowing the use of land on their plantations and for their co-operation in the experiments.

3. A summary of the more important results of these experiments, sufficient for general readers is given at the beginning of Part II. and Part III. of the report, dealing with the results of the manurial experiments and of the variety trials respectively. For others who may desire to refer to details the full tabulated results are given at the end of the report.

4. This report includes a summary of the results of the manurial experiments carried on continuously for thirteen seasons at Dodds during the years 1892 to 1908.

5. In carrying out this work, besides the members of the staff attached to the Department of Agriculture and named in the body of this report, material and valuable aid has been received from Mr. Radclyffe Hall, B.A., Assistant to the Professor of Chemistry and Mr. E. Gillman, F.C.S., Chief Laboratory Assistant.

6. Finally we have to thank Mr. F. A. Stockdale, B.A., F.L.S., Mycologist on the staff of the Imperial Department of Agriculture, for contributing an interesting account of the hybridization work which he has carried out with seedling canes growing at Dodds Botanic Station.

We have the honour to be,

Sir,

Your most obedient servants,

J. P. D'ALBUQUERQUE,
Island Professor of Chemistry
and Agricultural Science, and
Chemist-in-charge of
Sugar Cane Experiments.

JOHN R. BOVELL,
Superintendent of Agriculture.

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Island Professor of Chemistry
and Agricultural Science, and
Chemist-in-charge of
Sugar Cane Experiments.

JOHN R. BOVELL.
Superintendent of Agriculture.

The Acting Commissioner of Agriculture for the West Indies.
To the Colonial Secretary, Barbados.

Barbados,
December 7, 1908.

SIR,

I have the honour to forward, herewith, a report upon the Agricultural Experiments carried on at Barbados during the season 1906–8.

2. This report deals with (1) the composition of the Barbados rainfall, (2) manurial experiments with sugar-cane during the season under review, (3) the manurial experiments at Dodds for the seasons 1892–1908 and (4) the experiments with seedlings and other varieties of canes, including the important work of Mr. F. A. Stockdale in raising hybrids.

3. The thanks of the Department are due to the Proprietors, Attorneys and Managers who have allowed the use of their land for, and co-operated in, carrying out the experiments.

4. I suggest that this letter be printed with the report and forwarded with it for the information of the Secretary-of-State for the Colonies.

I have the honour to be,
Sir,
Your most obedient servant,

J. P. D'ALBUQUERQUE,
Acting Commissioner of Agriculture
for the West Indies.

The Honourable
The Colonial Secretary,
Barbados.

Report on Agricultural Experiments.

Conducted in Barbados in the season 1906-1908 under the direction of the Imperial Department of Agriculture for the West Indies.

Chemist-in-charge.....Professor J. P. D'ALBUQUERQUE M.A. F.I.C. F.C.S.S. (London and Berlin.)
Assistant Chemist.....LONGFIELD SMITH PH.D. B.SC.
Laboratory Assistant.....C. T. ALLDER
Pupil Assistant.....H. M. CLARKE
Agricultural Superintendent...J. R. BOVELL I.S.O. F.L.S. F.C.S.
Assistant.....J. S. DASH
Junior Assistant.....H. BOURNE

The experiments are described in three parts, viz :—
Part I.—Composition of Barbados rainfall.
Part II.—Manurial and other experiments with Sugar cane.
Part III.—Experiments with cane varieties.

PART I.

COMPOSITION OF BARBADOS RAINFALL.

The rainfall at Dodds was measured in the usual manner and fortnightly samples were analysed at the Government Laboratory. The amount, distribution and composition of the rainfall from December 1906 to May 1908 are given below. The total amount was 59·02 inches and supplied approximately 201·5 pounds of chlorine and 9·635 pounds of nitrogen per acre.

Amount, Distribution and Composition of the Rainfall at Dodds Botanic Station.

	Fall.		Parts per Million of.			
	Days	Inches	Chlorine.	Nitrogen as Ammonia.	Nitrogen as Nitrates	Nitrogen Total.
December 1906	15	4·49	10·0	·040	·471	·511
January 1907	13	1·93	10·0	·054	·162	·216
February "	14	2·97	12·5	·031	·801	·832
March "	7	1·60	13·5	.042	1·430	1·172
April "	9	1·74	14·0	·040	·080	·120
May "	9	1·45	13·0	·038	·396	·434
June "	17	5·20	11·5	·056	·966	1·022
July "	18	5·89	9·0	·025	·247	·272
August "	15	4·94	9·0	·025	1·152	1·177
September "	12	4.41	...	...	...	...
October "	10	7·11	5·0	·008	·658	·666
November "	12	5·72	...	...	...	...
December "	16	2·00	11·0	·016	·658	·674
January 1908	12	2·82	14·0	·021	·270	·291
February "	8	1·49	21·0	·030	·390	·420
March "	9	1·37	28·0	·112	·309	·421
April "	12	2·58	10·0	·063	·637	·700
May "	9	1·31	10·0	·070	·637	·707
	217	59·02				

PART II.

MANURIAL AND OTHER EXPERIMENTS WITH SUGAR CANE AT DODDS BOTANIC STATION ST. PHILIP.

The manurial experiments were carried on at Dodds Botanic Station which is situated in the parish of St. Philip, ten miles from Bridgetown at an elevation of 210 feet above sea level.

The manurial experiments were carried out in Lower Bay Tree field and comprised 26 plots of $\frac{1}{20}$ of an acre each, the lining of the field was 6 feet square, therefore each plot consisted of 60 stools of canes and the experiments covered an acre of approximately $1\frac{1}{4}$ acres.

The chemical analysis of the soil which is what in Barbados is called a black soil is given below, being here reproduced from Dodds report for 1886.

ANALYSIS OF THE SOIL.

Mechanical Analysis,	Per cent.
Stones removed before analysis...	·91
Air-Dried Soil.	
Coarse gravel	·565
Fine Gravel	·091
Coarse sand	17·594
Fine sand	4·190
Clay and Fine soil	65·097
Moisture	12·463
Distribution of the organic matter and combined water.	
Organic matter in coarse gravel	·012
" " " fine gravel	·005
" " " coarse sand	·243
" " " fine sand	·750
" " " clay and fine soil	·864
Combined water in clay and fine soil	9·869
	11·743

CHEMICAL ANALYSIS.

Air-Dried Soil—Stones removed.		
Moisture		12·463
Combined water		9·869
*Organic matter		1·874
Soluble silica		·482
Phosphoric anhydride		·097
Sulphuric anhydride		·005
Carbonic anhydride		·099
Nitric anhydride		trace
Chlorine		·028
Alumina		4·713
Ferrous oxide		·403
Ferric oxide		3·366
Manganese sesquioxide		·495
Calcium oxide (lime)		1·981
Magnesia		·784
Potash		095
Soda		·598
Clay and sand 62·726%	Crystallised silica (quartz sand)	16·448
	Combined silica	28·499
	Alumina	13·969
	Ferric oxide	3·486
	Potash	·046
	Soda	·278
		100·078
*Containing nitrogen		·154

"It is a field of low fertility deficient in the mineral constituents of plant food."

Soon after the canes were cut in 1906, the cane holes were dug and the field planted with Woolly Pyrol. Towards the end of August, the Woolly Pyrol was pulled up and placed in manure holes dug on the south side of the cane holes. On the top of this was placed farmyard manure at the rate of 20 tons per acre, and the whole covered with the soil which had been taken from the manure hole. At the same time the extra farmyard manure at the rate of 20 tons per acre was applied to plot B. 1. The field was then subsoiled in a northerly and southerly direction and planted at the end of November with top plants of the White Transparent cane after they had been soaked in Bordeaux mixture for two hours.

THE WEATHER.

While the rainfall in January 1907 was below the average, that for December 1906 was satisfactory, consequently the cane cuttings that were planted at the close of November and during December on the various estates at which the sugar-cane experiments were carried on, with one exception, grew regularly and a satisfactorily stand was obtained at an early date. The rainfall during the dry season of the year, that is from February to the end of May was, with the exception of that for February, below the average, and the canes made no progress during these months. The rainy season commenced in June, but at no time during the year, with the exception of October, were the rainfall conditions satisfactory, and the year on the whole to that date was dry. From November a drought set in, which lasted until the end of the reaping season. The effect of these conditions of rainfall, cause not only a poor growth, but also tend to induce the attacks of the sugar-cane root disease, *Marasmius sacchari* which was very much in evidence during this reaping season, and which in many instances, seriously affected the yield, especially the ratoon canes in the black soil districts.

The following are the results of the analysis of a sample of farmyard manure applied at this station :—

Moisture	30·86
* Organic matter	28·54
Insoluble siliceous matter	21·55
‡ Phosphoric anhydride	0·35
Potassium oxide	0·65
Undetermined substances	18·05
	100·00
* Containing nitrogen	0·53
‡ Equal to tricalcium phosphate	0·76

Twenty tons of this manure supplied per acre 237 pounds of nitrogen 157 pounds of phosphoric anhydride (equal to 340 pounds of tricalcium phosphate) and 291 pounds of potash.

The experiments were directed, as in former years, with a view to ascertaining the effect of the application of farmyard manure in ordinary quantity and in double the ordinary quantity, of nitrogen, of phosphates and of potash upon the industrial yield of the sugar cane.

The nitrogenous manures employed for the experiments were sulphate of ammonia, nitrate of soda, nitrate of potash, and dried blood.

The phosphoric acid was applied in the form of superphosphate of lime or basic slag.

From a given quantity of phosphate to calculate the equivalent quantity of phosphoric acid it is simply necessary to multiply by ·458.

The chemical manures were applied as follows :—

Phosphates and potash at the end of January 1907. Early application of nitrogen in February 1907. Mid-year application of nitrogen June 1907.

The following table gives their composition.

Composition per cent of the Chemical Manures employed in the Manurial experiments

1906—1908.

	Nitrogen.	Phosphates.			Potash.
		Soluble.	Reverted.	Insoluble.	
Nitrate of Soda	15·72	...	...	...	...
Sulphate of Ammonia (1) ...	20·57	...	...	...	...
Sulphate of Ammonia (2) ...	20·57	...	...	...	...
Dried Blood (1) ...	12 50	...	...	...	...
Dried Blood (2) ...	13·20		...	...	...
Superphosphate	...	39·36	4·45	0·28	...
Basic Slag	...	...	...	34·51	...
Sulphate of Potash ...	...	...	...	...	51·70

In reaping, the procedure was as follows:—

In every case the canes and tops were weighed and the number of canes, sound and rotten, recorded. A sample of 100 pounds was then taken by the method described in our report for 1900 and the canes crushed in the Laboratory three roller mill driven by an $8\frac{1}{2}$ H. P. oil engine. The juice and megass were weighed and the juice analysed, and from these weights and the analytical results were calculated the quantities per acre.

We have calculated the increase of yield by the application of different manures in tons of untopped canes, termed in this report *produce*, and in tons of topped canes, termed in this report *canes*.

Wherever in this report *quantities* of produce, canes or sugar, or of manures applied are mentioned, *per acre* is understood unless stated to the contrary.

The experiments may be divided as follows:—

Farmyard manure only, 20 tons.

Farmyard manure 20 tons extra.

Nitrogen Series
- Minerals only
- Minerals and nitrogen as sulphate of ammonia
- Minerals and nitrogen as nitrate of soda
- Minerals and nitrogen as dried blood

Phosphate Series
- Nitrogen and potash only
- Nitrogen, potash and superphosphate
- Nitrogen, potash and basic slag

Potash Series
- Nitrogen and phosphate only
- Nitrogen, phosphate and potash

The results are given in Tables I—II.

Summary of results.

CONTROL PLOTS.

	Tons Produce	Tons Canes	Saccharose ℔ per acre
Farmyard manure only 20 tons...	33·85	28·96	7,379
Farmyard manure 20 tons extra	35·92	30·42	8,184

NITROGEN SERIES.

Farmyard manure, minerals and			
No nitrogen	34·65	29·15	8,035
40℔ nitrogen as sulphate of ammonia, applied in June...	33·79	28·75	7,834
60 „ „ „ „ „ „ „ „ „ ...	36·45	31·44	8,016
80 „ „ „ „ „ „ „ „ „ ...	34·82	30·52	8,329
40 „ „ „ „ „ „ 15℔ Jan., 25℔ June	39·12	33·60	9,183
60 „ „ „ „ „ „ 15 „ „ 45 „ „	36·89	31·81	8,526
60 „ „ „ nitrate of soda, applied in June ...	35·36	30·85	8,436
40 „ „ „ dried blood, „ 15℔ Jan., 25 „ ..	35·28	30·55	7,771
60 „ „ „ „ „ „ 15 „ „ 45 „ ...	35·31	30·05	7,805
40 „ „ „ „ „ „ in January ...	36·97	30·98	8,933
60 „ „ „ „ „ „ „ „ ...	33·50	29·14	7,499

PHOSPHATE SERIES.

Farmyard manure, potash, nitrogen and	Tons Produce	Tons Canes	Saccharose lb. per acre
No phosphate	36·77	32·00	8,331
40 lb as superphosphate in January	40·81	35·66	10,100
80 ,, ,, ,, ,, ,, ...	36·89	31·81	8,526
120 ,, ,, ,, ,, ,, ...	40·21	34·85	9,681
80 ,, ,, 40 lb in January 40lb. in June ...	33·92	29·81	7,923
120 ,, ,, 60 ,, ,, ,, 60lb. ,, ,, ...	38·72	34·04	8,960
80 ,, basic slag in January	33·08	29·26	7,826
100 ,, ,, ,, ,, ,, ...	35·66	31·97	7,946

POTASH SERIES.

Farmyard manure, nitrogen, phosphate and			
No potash	33·78	29·74	8,387
40 lb. as sulphate in January	37·49	33·13	8,873
60 ,, ,, ,, ,, ,, ...	36·89	31·81	8,526
80 ,, ,, ,, ,, ,, ...	38·44	33·90	9,163
100 ,, ,, ,, ,, ,, ...	35·68	31·62	8,544
60 ,, ,, ,, 30lb. in January 30lb in June	30·41	26·02	7,345
80 ,, ,, ,, 40lb. ,, ,, 40lb ,, ,, ...	33·65	29·19	7,869

It will be seen from the above abstract of the results that the application of artificial manures to this field which had received the ordinary application of 20 tons per acre of farmyard manure resulted, in the great majority of the plots, in an increase in the yield.

Minerals (phosphate and potash) without nitrogen gave an increase of 650lbs. saccharose per acre.

The results of the application of nitrogen were variable but on the whole indicate an increase of yield, whether the nitrogen be applied as sulphate of ammonia or nitrate of soda; the most favourable plot, that which received 40lbs nitrogen as sulphate of ammonia partly in January and partly in June, gave an increase of nearly 1,200lbs saccharose.

In the phosphate series both of the basic slag plots indicate a small diminution on no phosphate but all except one of the superphosphate plots indicate an increase. The increase in the case of the plot that received 40lbs phosphate as superphosphate in January, amounted to 1,800lbs saccharose.

In the potash series all the plots that received their potash entirely in January indicated an increase of saccharose, amounting to 500lbs saccharose in the case of the plot that received 40 lbs potash as sulphate, and to 800lbs saccharose in the case of the plot that received 80lbs potash as sulphate.

The plots that received potash divided between January and June showed a diminution.

The plot that received 60lbs nitrogen as sulphate of ammonia, partly in January and partly in June, 60lbs potash in January and 40lbs phosphate as superphosphate in January gave an increase of nearly 2,700lbs saccharose, showing a profit on manuring of $24.80 per acre.

SUMMARY OF RESULTS OBTAINED ON LOWER BAY TREE AND SUMMERVALE FIELDS FOR THE YEARS 1894—1908

Lower Bay Tree Field.

CONTROL PLOTS.

	Tons Produce	Tons Canes	Saccharose lb. per acre
Farmyard manure only 20 tons	32·80	27·06	7,029
Farmyard manure 20 tons extra	33·58	27·48	7,315

NITROGEN SERIES.

Farmyard manure, minerals and			
No nitrogen	29·86	24·23	6,545
40 lbs. nitrogen as sulphate of ammonia, applied in June	34·27	28·19	7,544
60 ,, ,, ,, ,, ,, ...	40·56	33·84	8,992
80 ,, ,, ,, ,, ,, ...	36·42	30·88	8,090
40 ,, ,, 15lbs. in January 25lbs. in June ...	35·39	30·31	8,153
60 ,, ,, ,, 15lbs. ,, ,, 45lbs. ,, June ...	37·27	31·31	8,258
60 ,, nitrate of soda applied in June	37·03	31·05	8,128
40 ,, dried blood 15lb. in January 25lb in June ...	35·47	29·59	7,968
60 ,, ,, ,, 15lb. in January 45lb. in June ...	36·53	30·81	8,185
40 ,, ,, ,, in January	33·68	28·00	7,619
60 ,, ,, ,, ,, ,, ...	37·78	31·91	8,427

PHOSPHATE SERIES.

Farmyard manure, potash, nitrogen and			
No phosphate	38·44	32·73	8,862
40 lb. „ as superphosphate in January ...	36·86	30·90	8,555
80 „ „ „ „ „ „ ...	37·28	31·31	8,445
120 „ „ „ „ „ „ ...	36·67	30·48	8,383
80 „ „ 40lb. in January 40lb. in June ...	35·79	30·60	8 319
120 „ „ 60 „ „ „ 60 „ „ „ ...	35·68	29·83	8,291
80 „ „ basic slag in January	34·51	29·55	8,250
100 „ „ „ „ „ „	38·01	32·69	8,917

POTASH SERIES.

Farmyard manure, nitrogen, phosphate and			
No potash	31·99	26·98	7,070
40lb „ as sulphate in January	35·13	29·75	7,933
60 „ „ „ „ „ „	37·28	31·30	8,258
80 „ „ „ „ „ „	35·75	30·46	8,006
100 „ „ „ „ „ „	35·18	29·84	7,759
60 „ „ „ „ 30lb January 30lb June	30·96	25·94	6,985
80 „ „ „ „ 40„ „ 40„ „	33·09	27·63	7,513

Summervale Field.

CONTROL PLOTS.	Tons Produce	Canes	Saccharose lb per acre
Farmyard manure only 30 tons...	25·04	19·58	5,413
Farmyard manure 20 tons extra	34·81	28·09	7,703

NITROGEN SERIES.

Farmyard manure, minerals and			
No Nitrogen	30·44	24·32	6,818
40lb. nitrogen as sulphate of ammonia applied in June...	32·34	26·21	7,293
60 „ „ „ „ „ „ „ „ „ ...	31·27	25·44	6,962
80 „ „ „ „ „ „ „ „ „ ...	32·35	25·75	7,066
40 „ „ „ „ „ 15lb. January 25lb. June ...	35·43	28·78	7,963
60 „ „ „ „ „ 15 „ „ 45 „ „ ...	29·30	23·45	6,465
60 „ „ „ nitrate of soda applied in June ...	33·08	26·59	7,201
40 „ „ „ dried blood 15lb. January 25lb. June...	34·02	27·28	7,463
60 „ „ „ „ „ 15 „ „ 45 „ „ ...	35·17	28·51	7,938
40 „ „ „ „ „ applied in January ...	35·12	28·59	7,928
60 „ „ „ „ „ „ „ „ ...	34·09	27·62	7,494

PHOSPHATE SERIES.

Nitrogen, potash and			
No phosphate...	35·30	28·22	7,816
40lb. „ as superphosphate applied in January ...	32·55	26·12	7,084
80 „ „ „ „ „ „ „ ...	29·29	23·45	6,465
120 „ „ „ „ „ „ „ ...	33·61	27·17	7,378
80 „ „ „ 40lb. January 40lb. June ...	33·86	27·02	7,327
120 „ „ „ „ 60 „ „ 60 „ „ ...	35·13	28·37	7,505
80 „ „ „ basic slag applied in January ...	39·14	31·89	8,501
100 „ „ „ „ „ „ „ „	37·81	31·04	8,199

POTASH SERIES.

Nitrogen, phosphate and			
No potash	33·45	27·08	7,158
40lb. „ as sulphate in January	35·00	28·03	7,446
60 „ „ „ „ „ „	29·44	23·45	6,465
80 „ „ „ „ „ „	36·71	29·41	7,836
100 „ „ „ „ „ „	35·33	28·21	7,404
60 „ „ „ „ „ 30lb January 30 lb June ...	36·25	29·68	7,834
80 „ „ „ „ „ 40 „ „ 40 „ „ ...	36·04	29·06	7,716

The manurial experiments have now been carried on for 8 successive seasons in Lower Bay Tree Field and for 7 successive seasons in Summervale Field and during each season the same manure in kind and amount has been applied to each plot. It will be interesting to study the average results with a view to ascertaining the comparative effect of different manures when continually applied, season after season to the same land.

The soil of Lower Bay Tree field is a clay soil but contains a fair proportion of coarse sand ; that of Summervale field is a heavy clay. On the whole both soils contain less of the mineral constituents of plant food and of humus and nitrogen than the average found in Barbados. The proportion of carbonate of lime in the Summervale field soil is not large, and that in Lower Bay Tree field soil is very small. These two fields are therefore very well adapted to quickly show the average effect of the continued application of manures to the sugar cane.

Prior to the planting of the canes each season the land has been tilled in the usual way, a crop of Woolly Pyrol has been grown and turned in and an application of about 20 tons of farmyard manure has been given. It will therefore be seen that the land has been uniformly well and carefully prepared and treated with a view to the growth in a black soil of a crop of canes.

In Lower Bay Tree field minerals applied alone gave a diminished yield, but minerals with the addition of nitrogen gave an increased yield which in the most favourable instance, namely the plot that received 80lb phosphate as superphosphate in January 60lb potash as sulphate in January and 60lbs nitrogen as sulphate of ammonia in June, amounted to nearly 2000lbs saccharose per acre. The experiments in the phosphate series indicate that none of this increase was due to the application of phosphate but that it was partly due to the application of potash. The actual net profit by manuring was $13.60 per ton. If the cost of the phosphate application is deducted from the cost of manuring as having been on the average useless during the period the net profit would be increased to $15.76 per acre.

In this field with one exception the application of phosphate either as superphosphate or basic slag diminished the yield of sugar. The plot that received each season 100lbs of basic slag shows on the average a very small and unremunerative increase. In the earlier seasons the plot showed a considerable increase which has diminished from season to season until this year the plot shows a diminished yield, in contrast to the superphosphate plots, which this year showed an increase.

In the potash series five out of the six plots that received sulphate of potash show an increase of yield which is most favourable in the case of the plot that received 60lbs. of potash as sulphate in January, the increase amounting to 1200lbs. saccharose per acre, and showing a substantial profit by manuring with sulphate of potash when the land also receives a sufficient application of sulphate of ammonia.

In this field the application of an extra 20 tons of farmyard manure per acre led to a very small increase of yield which would not have paid the expense of the application.

In Summervale field the plot that received 80lbs. phosphate as superphosphate, 60lbs. potash as sulphate and 60lbs nitrogen as sulphate of ammonia divided between January and June is evidently abnormal. The cause of this has not been ascertained but this plot in our opinion must be excluded in judging of the results.

The plot unfortunately forms one of each series in the field and renders it difficult in each series to draw the full conclusions from the experiments.

With the exception of one plot all the nitrogen plots show an increased yield by the application of nitrogen ; 40lbs nitrogen as sulphate of ammonia applied partly in January and partly in June gave the best results in the series namely an increase of 1150lbs. saccharose per acre

The favourable results of the plots that received their nitrogen in the organic form of dried blood are interesting. They show that under some conditions the continued application of organic nitrogen in the form of dried blood, tankage, slaughter house refuse, may be nearly as favourable as the result of the application of sulphate of ammonia, but there is nothing in the results to warrant the payment of a "fancy" price for manure in which the nitrogen and phosphate are entirely derived from organic (animal) sources.

In the phosphate series all the superphosphate plots show a diminution by the application of phosphate. Both the basic slag plots show an increase by the application phosphate. This result of the application of basic slag is different from that in Lower Bay Tree Field, when basic slag has not on the average given any increase of yield. It is possibly due not to the application of phosphate as such but to the application of a slightly alkaline material leading to the flocculation of the fine clay particles in the heavy soil and so improving the physical condition. In such soils the

application of half a ton per acre of slaked lime has very beneficial effects and the same increase of yield in the field might result from the substitution of slaked lime for the basic slag.

The application of potash as sulphate led in every case (with the exception of the abnormal plot) to a remunerative increase of yield.

The plot that received 80lb potash as sulphate in January and the plot that received 60lb potash partly in January and partly in June each gave an increase of about 700lb saccharose per acre showing an increase of from $5.49 to $6.65 per acre by the manuring with potash.

The most favourable average result in this field during the seven seasons, was given by the plot that received 80lb phosphate as basic slag, applied in January, 60lb of potash as sulphate of potash applied in January and 60lb nitrogen as sulphate of ammonia applied partly in January and partly in June which gave an increase of about 1,700lb saccharose over the no manure plot.

The average profit by manuring of the plot was $9.60 per acre.

The further application of farmyard manure had a marked effect in the field due probably to the heavy nature of the soil. The increase of yield however did not equal that due to the application of artificial manures.

In the opinion of the compilers of this report the following general conclusion in regard to the yield of sugar from crops of "plant" canes may be drawn from the experiments in these two fields extending over 13 seasons, and under the conditions of rainfall, and climate generally, of soil and agricultural treatment existing at Dodds.

1. The application of nitrogen in the form either of sulphate of ammonia nitrate of soda or dried blood leads to large and profitable increase of yield.

2. Sulphate of ammonia is superior to nitrate of soda.

3. Under some circumstances (a very heavy clay soil?) organic forms of nitrogen like dried blood persistently applied, may equal sulphate of ammonia.

4. The most favourable application of nitrogen is 40lb. to 60lb. equal to about 200 to 300lb. of sulphate of ammonia. In some cases this may best be applied all in June in others it had best be applied partly in January and partly in June.

5. Application of superphosphate appears to diminish the yield of sugar. It is possible that this may be due to a premature ripening of the cane whereby the period of growth is diminished. Or it may be due to a prejudicial effect upon the nitrogenous materials of the farmyard manure carried indirectly through the organism of nitrification and denitrification. The latter effect might be removed by applying the phosphate at a different time.

6. The increase of yield in two recent seasons produced by the application of superphosphate requires further experiment. It may be due to the beginning of exhaustion of phosphate in the no phosphate plot. It may however be accidental or due to causes not connected with the application of phosphate.

7. When basic slag has produced increases of yield it appears proba ble that it may be due rather to the presence of the base, lime, in the slag than to the pesence of phosphate. In which case it might be replaced by an application of slaked lime.

8. The application of potash leads to profitable increase of yield, and 60lb. of potash (contained in 120lb. of sulphate of potash) applied all in January or partly in January and partly in June gives the best results.

TABLE I. DODDS—LOWER BAY TREE. PLANT CANES.

Nitrogen Series.

Farmyard Manure, 20 tons.
Nitrogen.
Phosphate as superphosphate, 80lb in January.
Potash as sulphate, 60 lb. in January.

Number of Plot.		Applied in January.	Applied in June.	Number of Canes per acre.	Weight in Tons per acre. Produce.	Weight in Tons per acre. Cane Tops.	Weight in Tons per acre. Canes.	Per cent by number of rotten Canes.	Per cent. of Juice by Mill.	Normal Juice. Sp. Gr. 30°C./16·6°C.	Normal Juice. Lb. per Gallon. Saccharose.	Normal Juice. Lb. per Gallon. Glucose.	Normal Juice. Lb. per Gallon. Solids not sugar.	Normal Juice. Quotient of purity.	Normal Juice. Glucose Ratio.	Gallons of Juice per acre.	Saccharose lb per acre.	Difference by Manuring in. Produce. Tons per acre.	Difference by Manuring in. Canes. Tons per acre.	Difference by Manuring in. Saccharose. lb. per acre.
A 1	No chemical manure	..	...	17,046	33·85	4·89	28·96	7·08	57·00	1·0893	2·174	·074	·181	89·50	3·40	3,394	7,379	...	...	...
B 1	Farmyard manure, 20 tons extra ...	...	...	19,829	35·92	5·50	30·42	2·51	57·50	1·0920	2·281	·052	·168	91·20	2·29	3,588	8,184	+2.07	+1·46	+ 805
A 2	No nitrogen	...	...	18,315	34·65	5·50	29·15	2·88	58·50	1·0920	2·297	·036	·168	91·84	1·57	3,498	8,035	+ ·80	+ ·19	+ 656
A 3	40lb. nitrogen as sulphate of Ammonia	...	40	18,446	33·79	5·04	28·75	2·35	58·00	1·0938	2·294	·039	·215	90·03	1·70	3,415	7,834	- ·06	+ ·21	+ 455
A 4	60 „ „ „ „ „ „ ...	...	60	17,727	36·46	5·02	31·44	6·18	57·25	1·0879	2·163	·052	·178	90·39	2·40	3,706	8,016	+2·61	+2·48	+ 637
A 6	80 „ „ „ „ „ „ ...	...	80	19,128	34·82	4·30	30·52	4·35	59·50	1·0920	2·236	·063	·202	89·40	2·82	3,725	8,329	+ ·97	+1·56	+ 950
B 3	40 „ „ „ „ „ „ ..	15	25	18,920	39·12	5·52	33·60	6·11	58·75	1·0920	2·268	·057	·176	90·68	2·51	4,049	9,183	+5·27	+4·64	+1,804
A 5	60 „ „ „ „ „ „ ..	15	45	18,810	36·89	5·08	31·81	2·62	58·50	1·0897	2·229	·060	·152	91·32	2·69	3,825	8,526	+3·04	+2·85	+1,147
B 4	60 „ „ „ nitrate of soda ...	...	60	18,562	35·36	4·51	30·85	5·34	59·00	1·0906	2·255	·063	·147	91·48	2·79	3,741	8,436	+1·51	+1·89	+1,057
B 7	40 „ „ „ dried blood ...	15	25	18,582	35·[illegible]8	4·73	30·55	2·47	58·50	1·0879	2·111	·074	·208	88·21	3·51	3,681	7,771	+1·43	+1·59	+ 392
B 5	60 „ „ „ „ „ „ ...	15	45	18,211	35·81	5·26	30·05	4·90	56·84	1·0897	2·223	·039	·179	91·07	1·75	3,511	7,805	+1·46	+1·09	+ 426
B 2	40 „ „ „ „ „ „ ...	40	...	19,796	36·97	5·99	30·98	1·45	59·79	1·0933	2·354	·038	·144	92·83	1·61	3,795	8,933	+3·12	+2·02	+1,554
B 6	60 „ „ „ „ „ „ ...	60	...	18,436	33·50	4·36	29·14	2·90	56·57	1·0911	2·216	·069	·192	89·46	3·11	3,384	7,499	- ·35	+ ·18	+ 120

TABLE II. DODDS—LOWER BAY TREE.

PLANT CANES.

Phosphate Series

Farmyard. manure, 20 tons.
Phosphate
Nitrogen, as sulphate of ammonia, 15lb January, 45lb June.
Potash, as sulphate, 60lb January.

Number of Plot.		Applied in		Number of Canes per acre.	Weight in Tons per Acre.			Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per Acre.	Saccharose lb. per Acre.	Difference by Manuring in		
		January	June		Produce.	Cane Tops.	Canes.			Sp. Gr. 16·6°C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.			Produce Tons per Acre	Canes Tons per Acre	Saccharose Lb. per Acre.
A 1	No Chemical Manure ..	...	...	17,046	33·85	4·89	28.96	7·08	57·00	1·0893	2·174	·074	·181	89·50	3·40	33·94	7,379	...	...	..
B 1	Farmyard manure, 20 tons extra...	...	...	19,829	35·92	5·50	30·42	2·51	57·50	1·0920	2·281	·052	·168	91·20	2·29	35·88	8,184	+2·07	+1·46	+ 805
A 7	No phosphate	...	..	18,844	36·77	4·77	32·00	7·13	59·00	1·0888	2·145	·083	·189	88·75	3·87	38·84	8,331	+2·92	+3·04	+ 952
B 8	40 lb phosphate as superphosphate	40	...	20,084	40·81	5·15	35·66	4·64	59·50	1·0929	2·323	·046	·155	92·04	1·97	43·48	10,100	+6·96	+6·70	+2,721
A 5	80 „ „ „ ..	80	...	18,810	36·89	5·08	31·81	2·62	58·50	1·0897	2·229	·060	·152	91·32	2·69	38·25	8,526	+3·04	+2·85	+1,147
B 9	120 „ „ „ ...	120	...	18,873	40·21	5·36	34·85	5·82	58·50	1·0920	2·315	·033	·153	92·56	1·42	41·82	9,681	+6·36	+5·89	+2,302
A 8	80 „ „ „ ...	40	40	18,383	33·92	4·10	29·81	4·32	57·00	1.0924	2.274	·052	·186	90·53	2·29	34·84	7,923	+ ·07	+ ·85	+ 544
A 9	120 „ „ „ ...	60	60	19,228	38·72	4·68	34·04	3·21	58·59	1·0875	2·181	·039	·162	91·56	1·79	41·08	8,960	+4·87	+5·08	+1,581
A 13 Up	80 „ „ basic slag ...	80	...	18,372	33·08	3·82	29·26	6·39	58·00	1·0906	2·245	·060	·160	91·08	2·67	34·86	7,826	— ·77	+ ·30	+ 447
A 13 Low	100 „ „ „ ...	100	.	18,471	35·66	3·69	31·97	7·66	58·50	1·0857	2·059	·089	·186	88·22	4·32	38·59	7,946	+1.81	+3·01	+ 567

TABLE III. DODDS—LOWER BAY TREE. PLANT CANES.

Potash Series.

Farmyard Manure, 20 tons.
Potash.
Nitrogen, as sulphate of ammonia, 15lb January, 45lb June.
Phosphate, as superphosphate, 80lb in January.

Number of Plot.		Applied in		Number of Canes per acre.	Weight in tons per acre.			Per cent. by number of rotten Canes.	Per cent of Juice by mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.	Difference by Manuring in		
		January	June.		Produce.	Cane Tops.	Canes.			Sp. Gr. $\frac{30°C.}{16°.6C.}$	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio.			Produce Tons per acre.	Canes Tons per acre.	Saccharose lb per acre.
A 1	No chemical manure	..	...	17,046	33·85	4·89	28·96	7·08	57·00	1·0893	2·174	·074	·181	89·50	3·40	3,394	7,379	...	...	...
B 1	Farmyard manure 20 tons extra...	...	...	19,829	35.92	5·50	30·42	2·51	57·50	1·0920	2·281	·052	·168	91·20	2·29	3,588	8,184	+2·07	+1·46	+ 805
B 10	No potash	..	..	17,782	33·78	4 04	29 74	4·30	60·61	1·0911	2·265	·060	·152	91·44	2·65	3,703	8,387	— ·07	+ ·78	+1,008
A 10	40 lb. potash as sulphate ...	40	...	19,421	37·49	4·36	33·13	4·90	59·00	1·0888	2·206	·069	·142	91·27	3.13	4,022	8,873	+3·64	+4·17	+1,494
A 5	60 „ „ „ „	60	...	18,810	36·89	5·08	31·81	2 62	58·50	1·0897	2·229	·060	·152	91·32	2·69	3,825	8,526	+3·04	+2·85	+1,147
A 11	80 „ „ „ „	80	...	18,274	38·44	4·54	33·90	6·80	59·00	1·0902	2·229	·063	161	90·87	2·83	4,111	9,163	+4·59	+4·94	+1,784
A 12	100 „ „ „ „	100	...	18,323	35 68	4·06	31·62	3·88	59·00	1·0902	2·229	·057	·167	90·87	2·56	3,833	8,544	+1·83	+2·66	+1,165
B 12	60 „ „ „ „	30	30	16,264	30·41	4·39	26·02	6·33	60·25	1·0911	2·281	·054	·142	92 09	2.37	3,220	7,345	—3·44	—2·94	— 34
B 11	80 „ „ „ „	40	40	17,472	33·65	4·46	29·19	5·84	57·83	1·0924	2·273	·052	·187	90·49	2.29	3,462	7,869	— ·20	+ ·23	+ 490

TABLE IV. DODDS—LOWER BAY TREE FIELD.

PLANT CANES.

Nitrogen Series.

Farmyard Manure, 20 tons.
Nitrogen.
Phosphate as superphosphate 80lb. in January.
Potash as sulphate, 60lb. in January.

Mean results for the years 1894, 1896, 1898, 1900, 1902, 1904, 1906 and 1908.

Number of Plot.		Applied in		Number of Canes per acre.	Weight in Tons per Acre.			Per cent. by number of rotten Canes.	Per cent of Juice by Mill.	Normal Juice.			Gallons of Juice per acre.	Saccharose lb per acre.	Difference by Manuring.	
		January.	June.		Produce.	Cane Tops	Canes.			Saccharose lb. per gallon.	Quotient of Purity.	Glucose Ratio.			Canes. Tons per acre.	Saccharose. lb per acre.
A 1	No chemical manure	...	...	17,010	32·80	5·75	27·06	8·99	62·18	2·016	89·41	2·88	3,510	7,029	...	...
B 1	Farmyard manure, 20 tons extra ...	...	...	17,457	33·58	6·11	27·48	5·81	61·30	2·064	90·16	2·44	3,550	7,315	+0·42	+ 286
A 2	No Nitrogen...	...	...	16,572	29·86	5·63	24·23	4·10	61·67	2·126	91·41	1·87	3,079	6,545	-2·83	- 484
A 3	40lb. nitrogen as sulphate of Ammonia	...	40	17,899	34·27	6·08	28·19	5·09	62·98	2·119	90·72	1·67	3,588	7,544	+1·13	+ 515
A 4	60 „ „ „ „ „ „ ...	...	60	18,455	40·56	6·71	33·84	8·82	63·42	2·012	88·38	3·07	4,504	8,992	+6·78	+1,963
A 6	80 „ „ „ „ „ „ ...	...	80	18,545	36·42	5·67	30·88	9·84	62·85	2·010	88·94	3·01	4,080	8,090	+3·82	+1,061
B 3	40 „ „ „ „ „ „ ...	15	25	18,074	35·39	5·08	30·31	6·47	61·31	2·052	90·95	2·79	3,966	8,153	+3·25	+1,124
A 5	60 „ „ „ „ „ „ ...	15	45	18,347	37·27	5·97	31·31	8·02	62·36	2·022	87·79	2·95	4,123	8,258	+4·25	+1,229
B 4	60 „ „ nitrate of soda ...	...	60	18,554	37·03	5·99	31·05	6·92	62·22	2·018	89·25	3·03	4,076	8,128	+3·99	+1,099
B 7	40 „ „ „ dried blood ...	15	25	18,250	35·47	5·89	29·59	7·88	62·96	2·040	89·38	2·85	3,903	7,968	+2·53	+ 939
B 5	60 „ „ „ „ „ ...	15	45	18,418	36·53	5·72	30·81	4·80	62·41	2·062	89·77	2·27	4,031	8,185	+3·75	+1,156
B 2	40 „ „ „ „ „ ...	40	...	17,880	33·68	5·67	28·00	4·48	61·69	2·096	90·80	2·69	3,635	7,619	+0·94	+ 590
B 6	60 „ „ „ „ „ ...	60	...	19,101	37·78	6·00	31·91	4·44	62·05	2·057	90·06	2·59	4,152	8,427	+4·85	+1,698

TABLE V. DODDS :—LOWER BAY TREE FIELD. PLANT CANES.

PHOSPHATE SERIES.

Farmyard Manure, 20 tons.
Phosphate
Nitrogen as Sulphate of Ammonia 15lb Jan. 45lb June.
Potash as Sulphate 60lb Jan.

Mean results for the Years 1894, 1896, 1898, 1900, 1902, 1904, 1906, 1908.

Number of Plot.		Applied in		Number of Canes per acre.	Weight in Tons per Acre.			Per cent by Number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.			Gallons of Juice per Acre.	Saccharose lb. per Acre	Difference by Manuring.	
		January.	June.		Produce.	Cane Tops.	Canes.			Saccharose lb. per Acre.	Quotient of Purity.	Glucose Ratio			Canes tons per Acre.	Saccharose lb per Acre
A 1	No. Chemical Manure	...	...	17,010	32·80	5·75	27·06	8·99	62·18	2·016	89·41	2·88	3,510	7,029	...	...
B 1	Farmyard manure, 20 tons extra ...	...	...	17,457	33·58	6·11	27·48	5·81	61·30	2·064	90·16	2·44	3,550	7,315	+ 0·42	+ 286
A 7	No. phosphate	...	...	18,596	38·44	5·71	32·73	7·32	63·18	2·006	89·59	2·90	4,344	8,862	+ 5·67	+ 1,833
B 8	40 lb. phosphate as superphosphate	40	...	18,326	36·86	5·96	30·90	6·93	62·52	2·061	89·85	2·82	4,074	8,555	+ 3·84	+ 1,526
A 5	80 „ „ „ ...	80	...	18,347	37·28	5·97	31·31	8·02	62·36	2·022	87·79	2·95	4,123	8,445	+ 4·25	+ 1,416
B 9	120 „ „ „ ...	120	...	18,323	36·67	6·26	30·48	7·70	62·03	2·064	90·02	2·83	3,978	8,383	+ 3·42	+ 1,354
A 8	80 „ „ „ ...	40	40	17,770	35·79	5·19	30·60	8·08	62·97	2·034	89·35	2·73	4,048	8,319	+ 3·54	+ 1,250
A 9	120 „ „ „ ...	60	60	18,100	35·68	5·83	29·83	9·19	63·03	2·070	90·29	2·93	3,946	8,291	+ 2·77	+ 1,262
A 13 Up	80 „ „ basic slag ...	80	...	17,974	34·51	4·96	29·55	7·36	62·84	2·084	89·27	2·50	3,879	8,250	+ 2·49	+ 1,221
A 13 Low	100 „ „ „ ...	100	...	18,256	38·01	5·30	32·69	10·90	63·86	2·015	88·23	3·03	4,375	8,917	+ 5·63	+ 1,888

PLANT CANES.

TABLE VI. DODDS—LOWER BAY TREE FIELD.

Potash Series.

Farmyard Manure, 20 tons.
Potash.
Nitrogen, as sulphate of ammonia, 15lb January 45lb June.
Phosphate, as superphosphate, 80lb January.

Mean results for the years 1894, 1896, 1898, 1900, 1902, 1904, 1906, and 1908.

Number of Plot.		Applied in		Number of Canes per acre.	Weight in Tons per acre.			Per cent by Number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.			Gallons of Juice per acre.	Saccharose lb per acre.	Difference by Manuring.	
		January.	June.		Produce.	Cane Tops.	Canes			Saccharose lb per Gallon.	Quotient of Purity.	Glucose Ratio.			Canes Tons per acre.	Sacchrose lb per acre.
A 1	No chemical manure	...	...	17,010	32·80	5·75	27·06	8·99	62·18	2·016	8·941	2·88	3,510	7,029	...	...
B 1	Farmyard manure 20 tons extra	...	..	17,457	33·58	6·11	27·48	5·81	61·30	2·064	9·016	2·44	3,550	7,315	+0.42	+ 286
B 10	No potash	..	..	17,417	31·99	5·01	26.98	6·03	62·29	1 973	8·781	3·87	3,541	7,070	—0·08	+ 41
A 10	40 lb potash	40	...	17,730	35·13	5·37	29·75	7·87	62·50	2·041	8·927	3·55	3,882	7,933	+2·69	+ 904
A 5	60 „ „	60	...	18,221	37·28	5 97	31·30	8·02	62·40	2·022	8·777	2·95	4,123	8,258	+4·24	+1229
A 11	80 „ „	80	..	17,657	35·75	5·28	30·46	10·14	62·60	2·019	8·769	3·49	3,975	8,006	+3·40	+ 977
A 12	100„ „	100	...	17,410	35·18	5·34	29·84	9·96	62.30	2·027	8·754	3·67	4,285	7,759	+2 78	+ 730
B 12	60 „ „	30	30	16,540	30·96	5·02	25·94	7·62	62·48	2·059	8·890	2·91	3,395	6,985	—1·12	— 44
B 11	80 „ „	40	40	17,198	33·09	5·46	27·63	6·18	62·79	2·088	8·909	2·71	3,628	7,513	+0 57	+ 484

TABLE VII. DODDS :—SUMMERVALE FIELD.

PLANT CANES.

Nitrogen Series.

Mean results for the Years 1895, 1897, 1899, 1901, 1903, 1905 and 1907.

Farmyard Manure, 30 tons.
Nitrogen.
Phosphate, as superphosphate 80lb January
Potash, as sulphate, 60lb January.

Number of Plot.		Applied in		Number of Canes per Acre	Weight in Tons per Acre.			Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.			Gallons of Juice per Acre.	Saccharose lb per Acre.	Difference by Manuring.	
		January.	June.		Produce.	Cane Tops.	Canes.			Saccharose lb per gallon.	Quotient of Purity.	Glucose Ratio.			Canes Tons per Acre.	Saccharose lb per Acre.
A 1	No Chemical Manure	...	...	16,814	25·04	5·47	19·58	2·76	64·24	2·103	92·24	1·63	2,600	5,413	...	...
B 1	Farmyard manure 20 tons extra ...	...	...	20,299	34·81	6·71	28·09	5·88	64·74	2·072	91·41	2·49	3,757	7,703	+ 8·51	+ 2,290
A 2	No. Nitrogen	...	...	18,090	30·44	6·11	24·32	2·26	64·47	2·120	91·80	1·54	3,234	6,818	+ 4·74	+ 1,405
A 3	40 lb Nitrogen as sulphate of ammonia	...	40	18,159	32·34	6·13	26·21	5·12	63·51	2·133	92·33	1·74	3,425	7,293	+ 6·63	+ 1,880
A 4	60 „ „ „ ...	...	60	18,314	31·27	5·83	25·44	6·40	64·40	2·073	91·14	1·70	3,383	6,962	+ 5·86	+ 1,549
A 6	80 „ „ „ ...	...	80	19,352	32·35	6·59	25·75	5·97	64·55	2·076	90·61	2·06	3,434	7,066	+ 6·17	+ 1,653
B 3	40 „ „ „ ...	15	25	19,723	35·43	6·65	28·78	3·81	65·20	2·067	91·13	1·94	3,880	7,963	+ 9·20	+ 2,550
A 5	60 „ „ „ ...	15	45	18,895	29·30	5·84	23·45	6·67	63·32	2·113	90·63	1·79	3,057	6,465	+ 3·87	+ 1,052
B 4	60 „ „ nitrate of soda ..	...	60	19,039	33·08	6·49	26·59	5·34	64·14	2·058	91·02	1·87	3,538	7,201	+ 7·01	+ 1,788
B 7	40 „ „ dried blood ...	15	25	18,087	34·02	6·74	27·28	5·06	63·66	2·083	90·80	2·03	3,540	7,463	+ 7·70	+ 2,050
B 5	60 „ „ „ ...	15	45	20,050	35·17	6·65	28·51	5·30	64·75	2·087	91·62	2·26	3,808	7,938	+ 8·93	+ 2,525
B 2	40 „ „ „ ...	40	...	19,818	35·12	6·53	28·59	7·49	65·35	2·068	91·14	1·92	3,864	7,928	+ 9·01	+ 2,515
B 6	60 „ „ „ ...	60	...	19,769	34·09	6·47	27·62	5·61	63·53	2·079	91·46	1·70	3,625	7,494	+ 8·04	+ 2,081

TABLE VIII. DODDS :—SUMMERVALE FIELD.

PLANT CANES.

Phosphate Series

Mean results for the Years 1895, 1897, 1899, 1901, 1903, 1905 and 1907.

Farmyard Manure, 30 tons
Phosphate.
Nitrogen, as suphate of ammonia 15lb January, 45lb June.
Potash, as sulphate, 60lb January.

Number of Plot.		Applied in June.	Applied in June.	Number of Canes per Acre.	Weight in Tons per Acre. Produce.	Weight in Tons per Acre. Cane Tops.	Weight in Tons per Acre. Canes.	Per cent by Number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice. Saccharose lb. per Gallon.	Normal Juice. Quotient of Purity.	Normal Juice. Glucose Ratio	Gallons of Juice per Acre	Saccharose lb per Acre	Difference by Manuring. Canes Tons per Acre.	Difference by Manuring. Saccharose lb per Acre
A 1	No. Chemical Manure		...	16,814	25·04	5·47	19·58	2·76	64·24	2·103	92·24	1·63	2,600	5,413	...	...
B 1	Farmyard manure, 20 tons extra	...	...	20,299	34·81	6·71	28·09	5·88	64·74	2·072	91·41	2·49	3,757	7,703	+ 8·51	+ 2,290
A 7	No. Phosphate	...	...	19,670	35·30	7·08	28·22	4·14	64·05	2·120	91·03	1·08	3,725	7,816	+ 8·64	+ 2,403
B 8	40 lb Phosphate as superphosphate ..	40		19,265	32·55	6·43	26·12	4·69	63·06	2·102	91·54	1·83	3,396	7,084	+ 6·54	+ 1,671
A 5	80 ,, ,, ,, ...	80	..	18,895	29·29	5·84	23·45	6·67	63·32	2·114	90·63	1·79	3,057	6,465	+ 3·87	+ 1,052
B 9	120 ,, ,, ,, ...	120	...	19,207	33·61	6·44	27·17	3·91	63·85	2·068	91·59	2·26	3,602	7,378	+ 7·59	+ 1,965
A 8	80 ,, ,, ,, ...	40	40	19,178	33·86	6·83	27·02	3·77	63·46	2·085	91·06	2·17	3,553	7,327	+ 7·44	+ 1,914
A 9	120 ,, ,, ,, ...	60	60	19,644	35·13	6·76	28·37	3·03	63·36	2·038	90·47	2·33	3,712	7,505	+ 8·79	+ 2,092
B 13	80 ,, ,, basic slag ...	80	...	21,057	39·14	7·24	31·89	5·88	63·42	2·044	90·86	2·63	4,170	8,501	+12·31	+ 3,088
A 13	100 ,, ,, ,, ...	100	...	20,483	37·81	6·77	31·04	3·78	63·35	2·044	89·78	2·93	4,073	8,199	+11·46	+ 2,786

PLANT CANES.

TABLE IX. DODDS—SUMMERVALE FIELD.

Potash Series.

Mean results for the years 1895, 1897, 1899, 1901, 1903, 1905, 1907.

Farmyard Manure, 30 tons.
Potash.
Nitrogen, as sulphate of ammonia, 15lb January 45lb June.
Phosphate, as superphosphate, 80lb January.

Number of Plot.		Applied in		Number of Canes per acre.	Weight in Tons per acre.			Per cent by Number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.			Gallons of Juice per acre.	Saccharose lb per acre.	Difference by Manuring.	
		January.	June.		Produce.	Cane Tops.	Canes			Saccharose lb per Gallon.	Quotient of Purity.	Glucose Ratio.			Tons Canes per acre.	Saccharose lb per acre.
A 1	No chemical manure	...	..	16,814	25·04	5·47	19·58	2·76	64·24	2·103	92·24	1·63	2,600	5,413	...	...
B 1	Farmyard manure 20 tons extra .	...	...	20,299	34·81	6·71	28·09	5·88	64·74	2·072	91·41	2·49	3,757	7,703	+ 8·51	+2,290
B 10	No potash		..	19,404	33·45	6·37	27·08	5·80	63·00	2·038	91·26	2·59	3,524	7,158	+ 7·50	+1,745
A 10	40 lb potash	40	...	19,282	35·00	6·97	28·03	3·13	63·60	2·046	90·23	3·89	3,668	7,446	+ 8·45	+2,033
A 5	60 „ „	60	...	18,895	29·44	5·85	23·15	6·67	63·30	2·114	90·36	1·75	3,057	6,465	+ 3·87	+1,052
A 11	80 „ „	80	.	20,228	36·71	7·30	29·41	3·50	63·30	2·062	90·47	2·52	3,828	7,836	+ 9·83	+2,423
A 12	100 „ „	100	...	19,548	35·33	7·12	28·21	3·78	62.80	2·046	89·22	3·23	3,649	7,404	+ 8·63	+1,991
B 12	60 „ „	30	30	20,221	36·25	6·57	29·68	7·11	63·60	2·027	90·73	2·60	3,892	7,834	+10·10	+2,421
B 11	80 „ „	40	40	19,352	36·04	6·98	29·06	4·55	63·10	2·070	90·44	2·66	3,780	7,716	+ 9·48	+2,303

PART III.

EXPERIMENTS WITH SEEDLING AND OTHER VARIETIES OF CANES.

The following is a summary of the principal results obtained with the sugar-cane experiments carried out under the auspices of the Imperial Department of Agriculture for the West Indies.

It contains in some detail and carefully arranged the most important results that have been obtained during the season under review. In this branch of the work the object which is steadily kept in view is to obtain such varieties as will best suit the varying soil and climatic conditions existing in the different districts of the island.

To this end during the last ten years, the period during which the Imperial Department of Agriculture has been in existence, some 33,000 canes have been raised from seed and these 33,000 varieties have been studied in order to select and afterwards propagate varieties that possessed the most desirable agricultural and chemical characters. The means by which this object is attained are briefly as follows :—

The majority of seedlings are raised from seed planted early in the year in boxes and afterwards potted, the better specimens (generally some thousands in number) are planted in May in a field arranged for irrigation, so that during their more tender period they can be protected from drought if necessary. They are kept under careful observation during their growth and when they come to maturity in the March or May of the following year, those varieties whose agricultural qualities are good enough are reaped and analysed.

The whole stool is cut, weighed and crushed, and if the chemical analysis shows that the juice is rich and pure, the stools are irrigated to induce a spring of ratoon canes to provide plants for multiplying the variety the following December. From that time the variety is annually propagated and multiplied in the usual manner, and if the results warrant, it is grown in an increasing number of plots in different districts both as plants and ratoons. Each year these plots are reaped and weighed, samples of the canes are crushed in a small estate mill at the laboratory, and the juice is analysed, and this goes on until the cane is either ultimately rejected, or plants are supplied to the planters with the recommendation to try them on a small estate scale. In this process of agricultural selection, we have, of course, to pay attention to certain main points. In this report we shall shortly give a list of the more important characters of the sugar-cane to which attention should be directed in making a selection, and you are invited to refer to this list; but of them we regard germinating power, tonnage, resistance to disease and drought, richness and purity of juice, as those that should be first attended to.

The seed of the cane plant is produced by a sexual process in which generally two parent plants participate. We may speak of the mother plant or plant that ultimately bears the seed, and the pollen-bearing plant that bears the dust-like pollen that fertilizes the flower of the mother plant. Until a few years ago only one half of the parentage, namely, the mother plant, of the young seedling was known, so that an uncertain element came in in the unknown character of the pollen bearing plant One of us in 1901, drew attention to this and suggested methods of raising seed in which both parents might be selected, but pointed out that unless the difficult operation of taking pollen from one known variety and fertilizing the flower of another known variety were carried out, complete certainty would not be attained. In 1903 this difficult task was accomplished by Mr. L. Lewton Brain, then mycologist of the Imperial Department of Agriculture. Certain very promising varieties were selected for the purpose of thus artificially crossing and ultimately, five seedling varieties of completely known parentage were obtained. Mr. F. A. Stockdale, the present mycologist, has since attacked the problem and has made some very valuable propositions as to the future methods of carrying this work out, in which is incorporated the latest knowledge of plant breeding, and we hope that, working with seedlings thus raised, it may be possible to reach our goal with greater certainty and in much shorter time than we would if we confined our attention to varieties of which the parentage was not completely controlled. These experiments were carried out at two central stations viz., Dodds St. Philip, and Waterford St. Michael, and at thirteen estates in typical parts of the island.

The following table gives a list of these estates their height above sea level and the rainfall at each during the period of growth of the crop.

Variety Experiment Stations 1906–1908.

Name of Estate	Name of Field.	Height above sea level Feet	Rainfall from December 1906, to May 1908 Inches.
Dodds	Cat Hole ... Lower Chapel ... Lower Padmore Mill	210	59·02
Brighton ...	Monkey Pond	271	62·14
Carrington ...	Pig Pond	110	59·86
Clifton	Six Acre Parish Well ...	756	74·51
Clifton Hall ...	Calf Clay Pit Goat	702	58·60
Coverly	Mittie Old Well	254	58·75
Hampton ...	Bean ...	103	50·76
Hannays ...	Path Pond ...	183	51·76
Henley	Golden ... N. W. Swamp Swamp ...	553	69·04
Husbands ...	Cars ...	184	52·88
Lower Estate ...	Simmons Bottom	237	54·48
Pine ...	9 Acre ...	100	42·97
Ridge	Clarke's ...	362	57·92
Sunbury ...	Murray	160	53·91
Waterford ...	No 2 Tennant Sandy ...	186	48·12

SEEDLING CHARACTERS.

The following are the most important field and factory characters, a consideration of which goes to determine the value of any variety of cane :—

FIELD CHARACTERS :—

1. Germinative power.
2. Behaviour under extremes of dryness and moisture.
3. Habit, that is, whether upright or recumbent.
4. Power of resisting the attacks of insects and fungi.
5. Period of growth.
6. Productive power in tons of cane.
7. Tonnage of tops.
8. Ratooning power.

FACTORY CHARACTERS :—

9. Milling quality, that is, whether the canes are tough or brittle.
10. Fuel-producing property, depending upon the percentage of fibre.
11. The relative percentage of expressible juice (determining the "dryness" or "juiciness" of the canes).
12. The richness of the juice.
13. The purity of the juice.

The seedling cane experiments in Barbados as explained above are divided into a number of stages In the first stage the varieties are raised from seed and subjected to a preliminary field selection with the object of eliminating from further cultivation all but those that possess field characters more favourable than the average. In subsequent stages these varieties are replanted and each variety is crushed and the juice analysed.

These stages combine both agricultural and chemical selection, and their object is to eliminate all varieties except those possessing both favourable field characters and juice sufficiently rich and pure, from the point of view of the manufacturer to justify further cultivation. In a later stage, the 'select variety' stage, a few of the best varieties of preceding stages together with the White Transparent variety are cultivated in duplicate plot of 100 stools in each of the typical localities of the island. These experiments are carried out on sugar plantations and in all respects the cultivation is that of the plantation itself.

At this stage therefore, the experiments, so far as the small scale will allow, come under ordinary agricultural conditions, and afford data enabling the planter to determine the varieties that give results in his district sufficiently favourable to justify tentative cultivation on a small estate scale.

During the year under review 219 varieties were raised from seed and planted out making a total of 33,028 varieties of cane raised from seed since 1898. Of this number 6,396 varieties reached a second or third stage and during the year under review a total of 706 varieties were under cultivation and 368 varieties were reaped and analysed.

The tables (X—XXXVII) giving the full result of all these experiments are placed at the end of this report for reference by those who require details of the work.
The following tables will afford a summary of the results for the general reader.

THE SELECTED VARIETIES ARRANGED IN ORDER OF YIELD TO SHOW THE RELATIVE POSITION AND PURITY OF JUICE OF CERTAIN CANES IN DIFFERENT SOILS AND ALSO WHEN GROWN AS PLANTS AND RATOONS.

1908.

Variety.	Yield of Saccharose in Pounds per acre.			*Purity of juice.
	Plants.	Ratoons.	Average.*	
Black soils.				
Sealy seedling ...	7,730	...	...	low
B. 3,412	7,226	...	...	low
B. 208	6,763	4,385	5,574	high
B. 3,747	6,539	...	...	fair
B. 147	6,428	...	...	fair
B. 4,596	6,233	...	...	fair
W. Transparent ...	6,011	4,456	5,234	high
D. 95	5,686	4,210	4,948	high
B. 376	5,667	3,335	4,501	high
Red soils.				
B. 1,521	9,307	...	...	fair
B. 3,405	8,956	7,548	8,252	fair
B. 3,390	8,650	8,241	8,446	fair
B. 1,386	8,610	8,820	8,715	high
B. 1,566	8,260	8,171	8,216	high
B. 3,412	8,213	7,873	8,043	low
B. 376	7,931	8,522	8,227	high
B. 1,753	7,657	...	...	fair
D. 95	7,356	7,615	7,486	high
B. 3,668	6,577	...	...	fair
B. 208	6,541	7,072	6,807	high
W. Transparent ...	5,887	6,483	6,185	high

*Juices are classified as follows :—

Quotient of Purity above 90 high
" " " 90——85 fair
" " " below 85 low

1900-8

Variety.	Yield of Saccharose in pounds per acre.			Purity of Juice.
	Plants.	Ratoons.	Average.	
Black Soils.				
B. 3,696	7,640	...	...	high
B. 1,529 ...	7,203	...	...	high
B. 208	7,121	3,642	5,382	high
B. 147 ...	7,034	...	...	fair
B. 3,635 ...	7,023	...	..	high
B. 1,753	6,709	..	...	fair
W. Transparent ...	6,514	3,575	5,045	high
B. 376	6,489	3,399	4,944	high
Red Soils.				
B. 3,405	9,753	...	...	fair
B. 3,412	9,334	...	...	fair
B. 3,390 ...	9,235	...	...	fair
B. 1,566	8,617	6,688	7,653	high
B. 1,529	6,838	...	...	high
B. 376	6,821	7,027	6,924	high
B. 1,521	6,808	...	...	fair
B. 208	6,691	5,464	6,078	high
D. 95	6,395	6,609	6,502	high
W. Transparent ...	5,644	5,621	5,633	high

SOME CHARACTERS OF SELECTED VARIETIES ARRANGED IN TABULAR FORM

Freedom from Rotten Canes.			Germinative Power.
B. 3,635	0·00	less than average number.	Good.
B. 1,753 ...	1·15		Very Good.
B. 1,566	1·75		Fair.
B. 3,412	2·41		Good.
B. 147	2·43		Good.
B. 3,696	2·94		Fair.
B. 3,405	3·58		Good.
B. 1,529	3·99	greater than average number	Fair.
B. 3,390	4·35		Good.
B. 208	5·02		Good.
B. 376	5·37		Good.
White Transparent	6·62		Good.
D. 95	6·78		Good.

Average number per cent. was 3·57.

THE WEATHER.

While the rainfall in January 1907 was below the average, that for December 1906 was satisfactory; consequently the cane cuttings that were planted at the close of November and during December on the various estates at which the sugar-cane experiments were carried on, with one exception, grew regularly, and a satisfactory stand was obtained at an early date. The rainfall during the dry season of the year, that is from February to the end of May was, with the exception of that for February, below the average, and

the canes made no progress during these months. The rainy season commenced in June, but at no time during the year, with the exception of October, were the rainfall conditions satisfactory, and the year on the whole to that date was dry. From November a drought set in, which lasted until the end of the reaping season. These conditions of rainfall cause not only a poor growth, but also tend to induce the attacks of the sugar cane root disease, *Marasmius Sacchari*, which was very much in evidence during this reaping season, and which in many instances, seriously affected the yield, especially the ratoon canes in the black soil districts.

OBSERVATIONS ON SOME OF THE VARIETIES CULTIVATED, GIVING THEIR MORE GENERAL FIELD CHARACTERS, TOGETHER WITH THE MORE IMPORTANT AGRICULTURAL AND CHEMICAL RESULTS FOR THE CROP.

RESULTS FOR 1908.

Select Seedlings.

The following are some of the results in black soils as plant canes for this year.

BLACK SOILS—PLANTS.

Name or No. of Cane.	Saccharose pounds per acre.	Total Muscovado sugar per crop.	Increase in value per acre compared with W. Transparent.
			$
W. Transparent	6,011	4,809	
B. 4596	6,233	4,986	3·20
B. 147	6,428	5,142	6·30
B. 3747	6,539	5,231	7·64
B. 208	6,763	5,410	10·88
B. 3412	7,226	5,780	17·57
Sealy Seedling ...	7,730	6,184	24·89

In red soils the results are more striking. The average yields per acre for plant canes are as follows :—

RED SOILS—PLANTS.

Name or No. of Cane.	Saccharose pounds per acre.	Total Muscovado sugar per crop.	Increase in value per acre compared with W. Transparent.
			$
W. Transparent	5,887	4,710	
B. 208 ...	6,541	5,133	7·66
B. 3,668 ...	6,577	5,261	9·97
D. 95 ...	7,356	5,885	21·25
B. 1,753 ...	7,657	6,125	25·61
B. 376 ...	7,931	6,344	29·57
B. 3,412 ...	8,213	6,570	33·67
B. 1,566 ...	8,260	6,608	34 35
B. 1,386 ...	8,610	6,888	39·42
B. 3,390 ...	8,650	6,920	40·00
B. 3,405 ...	8,956	7,165	44·44
B. 1,521 ...	9,307	7,446	49·50

If the average for plants and ratoons on the red soils are now considered together the yields per acre per annum are as follows :—

RED SOILS—PLANTS AND 1ST. RATOONS.

Name or No. of Cane.	Saccharose pounds per acre.			Total Muscovado for 2 Crops.	Increase in value per acre compared with W. Transparent.
	1907 Plants.	1908 Ratoons.	Plants and Ratoons Total.		
					$
W. Trans :	5,887	6,483	12,370	9,896	
B. 208 ...	6,541	7,072	13,613	10,890	17·99
D. 95 ...	7,356	7,615	14,971	11,977	37·65
B. 3,412 ..	8,213	7,873	16,086	12,869	53·79
B. 1,566 ...	8,260	8,171	16,431	13,145	58·79
B. 376 ...	7,931	8,522	16,453	13,162	59·11
B 3,405 ...	8,956	7,548	16,504	13,203	59·86
B. 3,390 ...	8,650	8,241	16,891	13,513	65·45
B. 1,386 ...	8,610	8,820	17,430	13,944	73·27

Select Seedlings 1900—1908.

The following are taken from the table giving the results of the select varieties for the 9 years (1900—1908.)

In black soils the following are the results with plant canes :—

BLACK SOILS—PLANTS.

Name or No. of Cane.	Saccharose pounds per acre.	Total Muscovado sugar per crop.	Increase in value per acre compared with W. Transparent.
			$
W. Transparent	6,514	5,211	
B. 1,753 ...	6,709	5,367	2·82
B. 3,635 ...	7,023	5,618	7·37
B. 147 ...	7,034	5,627	7·53
B. 208 ...	7,121	5,697	8·80
B. 1,529 ...	7,203	5,762	9·97
B. 3,696 ...	7,640	6,112	16·31

In red soils the following are the results as plants for the same period :—

RED SOILS—PLANTS.

Name or No. of Cane.	Saccharose pounds per acre.	Total Muscovado sugar per crop.	Increase in value per acre compared with W. Transparent.
			$
W. Transparent	5,644	4,515	
D. 95	6,395	5,116	10·88
B. 208	6,691	5,353	15·17
B. 1,521	6,808	5,446	16·85
B. 376	6,821	5,457	17·05
B. 1,529	6,838	5,470	17·29
B. 1,566	8,617	6,894	43·04
B. 3,390	9,235	7,388	52·00
B. 3,412	9,334	7,467	53·43
B. 3,405	9,753	7,802	59·50

If now we consider the average results for plants and ratoons we find :—

RED SOILS—PLANTS & 1ST RATOONS.

Name or No. of cane.	Saccharose pounds per acre.			Total Muscovado for 2 crops.	Increase in value per acre compared with White Transparent.
	Plants.	Ratoons.	Plants and Ratoons Total.		
					$
W. Transparent	5,644	5,621	11,265	9,012	
B. 208	6,691	5,464	12,155	9,724	12·89
D. 95	6,395	6,609	13,004	10,403	25·20
B. 376	6,821	7,027	13,848	10,778	31·96
B. 1,566	8,617	6,688	15,305	12,244	58·50

Newer Seedlings.

The following results taken from Table XV *et seq* are of especial interest as showing the results so far obtained from the best of the newest varieties, over periods of 4—5 years. It will be observed that for the black soils as plants taking the average White Transparent came out eightieth with 6,538 ℔ saccharose while the 10 best varieties gave over 8,500 ℔ saccharose per acre.

BLACK SOILS—PLANTS.

Name or No. of Cane.	Number of years under experiment.	Number of Expts.	Saccharose pounds per acre.	Increase in value per acre compared with White Transparent.
				$
W. Transparent	5	102	6,538	
B. 147	5	23	7,265	10·53
B. 208	5	65	7,282	10·79
B. 6,346... ...	4	4	8,523	28·74
B. 3,696... ...	5	19	8,621	30·15
B. 6,388... ...	4	4	8,626	30·23
B. 4,934... ...	4	4	8,660	30·73
B. 5,675... ...	4	5	8,782	32·49
B. 6,308... ...	4	4	8,827	33·14
B. 6,450... ...	4	8	8,873	33·81
B. 6,171... ...	4	4	8,893	34·10
B. 3,747... ...	4	7	8,907	34·30
B. 4,578... ...	4	4	9,116	37·32

In red soils the average yield per acre for plant canes for the 5 years 1904—1908 are as follows :—

RED SOILS—PLANTS.

Name or No of cane.	Saccharose pounds per acre.	Total Muscovado sugar per crop.	Increase in value per acre compared with W. Transparent.
			$
W. Transparent	6,069	4,855	
D. 95	6,909	5,527	12·16
B. 1,529	7,204	5,763	16·43
B. 376	7,389	5,911	19·11
B. 1,521	7,442	5,953	19·87
B. 208	7,466	5,973	20·24
B. 1,566	8,823	7,058	39·87
B. 3,390	9,405	7,524	48·30
B. 3,405	9,607	7,685	51·22
B. 3,412	9,854	7,883	54·81

In the red soils as plants and ratoons for the same period we find the following :—

RED SOILS—PLANTS & 1ST RATOONS.

Name or No. of Cane.	Saccharose pounds per acre.			Total Muscovado for 2 crops.	Increase in value per acre compared with White Transparent.
	Plants.	Ratoons.	Plants and Ratoons Total.		
					$
W. Transparent	6,069	6,145	12,214	9,771	
D. 95	6,909	6,982	13,891	11,113	24·27
B. 376	7,389	6,756	14,145	11,316	27·96
B. 1,566	8,823	6,298	15,121	12,097	42·08
B. 3,405... ...	9,607	6,443	16,050	12,840	55·55
B. 3,390... ...	9,405	7,276	16,681	13,345	64·67
B. 3,412... ...	9,854	7 068	16,922	13,538	68·16

In the red soils plants, 1st Ratoons, and 2nd Ratoons, the following mean results for the years 1904-8 are especially deserving of notice :—

RED SOIL, PLANTS, 1ST RATOONS & 2ND RATOONS.

Name or No. of Cane.	Saccharose pounds per acre.				Total Muscovado for 3 crops.	Increase in value per acre compared with White Transparent
	Plants.	1st. Ratoons.	2nd. Ratoons	Plants and Ratoons 3 crops Total.		
						$
W. Transparent	6,069	6,145	5,027	17,241	13,798	
B. 3,405 ...	9,607	6,443	5,939	21,989	17,591	68·75
B. 3,412 ...	9,854	7,068	7,244	24,166	19,333	100·27
B. 3,390 ...	9,405	7,276	8,512	25,193	20,154	115·14

LARGE ESTATE PLOTS—SELECT SEEDLINGS 1908.

A number of estates have been good enough to give us the opportunity of comparing the yields of some of the best known seedling varieties with the White Transparent on plots varying in extent from 1/2 acre to 7 acres.

The average results of some of these varieties taken from table LVII are as follows :—

No. of Estates.	Name or No. of Cane.	Saccharose pounds per acre.	Muscovado sugar pounds per acre.	Increase in value per acre compared with White Transparent.
				$
4	W. Transparent	5,399	4,319	
2	B. 1,719 ...	5,580	4,456	2·48
6	B. 1,753 ..	5,704	4,563	4·42
5	B. 147 ...	5,796	4,637	5·76
7	B. 208 .	6,183	4,946	11·35
4	B. 376	6,570	5,256	16·96

It will been seen that B. 208 and B. 376 gave increases respectively of 627 pounds muscovado worth $11·35 and 937 pounds muscovado worth $16·96 over the White Transparent.

A LIST OF THE SELECTED VARIETIES FOR 1908.

WHITE TRANSPARENT CANE.

	Canes	Saccharose	Comparative order by saccharose yield.
Black soils, plants (mean of 18 plots) ...	24·97	6,011	7
Black soils, 1st ratoons (mean of 4 plots) ...	19·24	4,456	1
Red soils, plants (mean of 5 plots)	22·26	5,887	12
Red soils, 1st ratoons (mean of 6 plots) ...	23·92	6,483	9

Experimental samples of juice—results of 33 samples.

Saccharose lb. per gallon—highest 2·318, lowest 1·921, mean 2·133
Quotient of purity—highest 94·60, lowest 86·32, mean 90·77
Glucose ratio—highest 5·86, lowest 0·98, mean 2·90

Estate samples of juice—results of 24 samples.

Saccharose lb per gallon—highest 2·103, lowest 1·698, mean 1·905
Quotient of purity—highest 91·11, lowest 84·07, mean 87·47
Glucose ratio—highest 5·98, lowest 2·38, mean 4·38

B. 147, CANE.

A delicate, slow growing cane when young and one which does not germinate freely when planted late in the season, from 11 to 12 canes to the clump of a bright yellow colour, with long cylindrical internodes of about 4 to 8 inches long having a slight longtitudinal channel on the side to which the bud is attached; very rarely arrows.

There is a tendency for the sheaths of the dried leaves to remain attached to the lower half of the cane until towards the close of the year, and for this reason the sleeping roots of the nodes begin to start into life; these however dry on being exposed as the leaves fall.

	Canes	Saccharose	Comparative order by saccharose yield.
Black soils, plants (mean of 6 plots)	27·07	6,428	5

Experimental samples of juice—results of 6 samples.

Saccharose lb per gallon—highest 2·074, lowest 1·917, mean 1·994
Quotient of purity—highest 90·32, lowest 86·52, mean 88·67
Glucose ratio—highest 5·37, lowest 3·38, mean 4·43

Estate samples of juice—results of 9 samples

Saccharose lb per gallon—highest 1·967, lowest 1·717, mean 1·813
Quotient of purity—highest 88·72, lowest 83·87 mean 86·14.
Glucose ratio—highest 7·29, lowest 3·78, mean 4·86

B. 208, CANE.

Germinates readily, from 10 to 15 canes per clump internodes from 3 to 5 inches long, somewhat cylindrical; colour greenish yellow; habit upright; average number of arrows; the dry leaves have a tendency to adhere.

	Canes	Saccharose	Comparative order by saccharose yield.
Black soils, plants (mean of 12 plots) ...	24·47	6,763	3
Black soils, ratoons (mean of 2 plots)	15·81	4,385	2
Red soils, plants (mean of 5 plots)	22·34	6,541	11
soils, ratoons (mean of 6 plots)	23·57	7,072	8

Experimental samples of juice—results of 25 samples.

Saccharose lb per gallon—highest 2·466, lowest 2·232, mean 2·366
Quotient of purity—highest 94·93, lowest 87·41, mean 92·08
Glucose ratio—highest 4·02 lowest 0·90, mean 1·85

Estate samples of juice—results of 18 samples.

Saccharose lb per gallon—highest 2·343, lowest 1·821, mean 2·150
Quotient of purity—highest 93·27, lowest 85·39, mean 89·51,
Glucose ratio—highest 6·97, lowest 1·48, mean 2·90

B. 376, CANE.

Of fairly good germinating power; from eight to ten canes to the clump; internodes from 3 to 5 inches long, of medium size, somewhat tumid; colour variable like the White Transparent cane, which it much resembles in habit, in that, while under certain conditions it is somewhat trailing, under others it is upright; average number of arrows; drops its leaves readily.

	Canes	Saccharose	Comparative order by saccharose yield.
Black soils, plants (mean of 6 plots) ...	25·30	5,667	
Black soils, ratoons (mean 4 plots)	14·50	3,335	4
Red soils, plants mean of 4 plots)	28·95	7,931	7
Red soils, ratoons (mean 4 plots)	32·17	8,522	2

Experimental samples of juice—results of 18 samples.

Saccharose lb per gallon—highest 2·307, lowest 2·001, mean 2·139
Quotient of purity—highest 93·59, lowest 87·96, mean 91·03
Glucose ratio—highest 4·20, lowest 1·85, mean 2·99

Estate samples of juice—results of 14 samples.

Saccharose lb per gallon—highest 2·138, lowest 1·639, mean 1·927
Quotient of purity—highest 92·04, lowest 84·92, mean 87·44
Glucose ratio—highest 7·63, lowest 1·73, mean 4·68

B, 1,529 CANE.

Germinating power somewhat under the average; fifteen to twenty-two small canes to the clump; internodes from two to six inches long, variable, some being cylindrical and others tumid; colour red, habit upright; does not arrow freely; leaves somewhat adherent.

	Canes	Saccharose	Comparative order by saccharose yield.
Red soils, plants (mean of 4 plots) ...	18·82	5,672	13

Experimental samples of juice—results of 4 plots.

Saccharose lb per gallon—highest 2·605, lowest 2·404, mean 2·511
Quotient of purity—highest 94·18, lowest 93·06, mean 93·55
Glucose ratio—highest 1·65, lowest 1·11, mean 1·29

Estate sample of juice:—

Saccharose lb per gallon—2·129
Quotient of purity—87·22
Glucose ratio—2·68

B. 1566 CANE.

Germinating power fairly good; seven to twelve large canes to a clump; internodes 2 to 6 inches long, cylindrical or slightly tumid; colour yellow; habit recumbent; flowers freely; dry leaves have a tendency to adhere; eyes large.

	Canes.	Saccharose.	Comparative order by Saccharose yield.
Red soils, plants (mean of 6 plots)	33·02	8,260	5
Red soils, ratoons (mean of 6 plots)	31·52	8,171	4

Experimental samples of juice—results of 12 plots.

Saccharose lb per gallon—highest 2·252, lowest 1·887, mean 2·115.
Quotient of Purity—highest 93·15, lowest 89·34, mean 91·31
Glucose ratio—highest 5·08, lowest 2·07, mean 3·37.

Estate samples of juice—results of 2 samples.

Saccharose lb per gallon—higher 1·997, lower 1·980, mean 1·989
Quotient of purity—higher 91·06, lower 88·39, mean 89·72.
Glucose ratio—higher 3·71, lower 2·88, mean 3·29.

B. 1753, CANE.

Germinating power very good; fifteen to twenty-five canes to a clump; internodes 3 to 6 inches long, cylindrical or very slightly constricted; colour yellow; habit upright; very rarely flowers; leaves fall readily; eyes small.

	Canes	Saccharose	Comparative order by saccharose yield.
Red soils, plants (mean of 6 plots)	33·29	7,657	8

Experimental samples of juice—results of 6 plots.

Saccharose lb per gallon—highest 2·035, lowest 1·892, mean 1·966
Quotient of purity—highest 89·92, lowest 85·34, mean 87·22
Glucose ratio—highest 7·35, lowest 3·39, mean 5·03

Estate samples of juice—results of 11 samples.

Saccharose lb per gallon—highest 1·976, lowest 1·571, mean 1·839
Quotient of purity—highest 89·13, lowest 79·19, mean 85·42
Glucose ratio—highest 9·93, lowest 2·28, mean 5·33

B. 3390 CANE.

Germinating power good ; fifteen to twenty-one canes to a clump ; internodes 2 to 7 inches, clylindical in shape ; colour greenish-yellow ; habit upright ; few flowers ; dry leaves fall readily ; eyes medium size.

	Canes	Saccharose	Comparative order by Saccharose yield.
Red soils plants (mean of 4 plots)	37·04	8,650	3
Red soils ratoons (,, 4 ,,)	33·69	8,241	3

Experimental samples of juice—result of 8 plots

Saccharose lb per gallon—highest 2·252, lowest 1·905, mean 2·007
Quotient of purity—highest 89·97, lowest 84·62, mean 87·36.
Glucose ratio—highest 7 19, lowest 3·24, mean 5·25

Estate Sample of juice :—

Saccharose lb per gallon—1·904
Quotient of Purity—88·23
Glucose ratio—5·46

B. 3405 CANE.

Germinating power good ; sixteen to twenty canes to a clump ; internodes 3 to 6 inches long, slightly tumid ; colour greenish-yellow ; habit upright ; few flowers ; dry leaves fall readily ; eyes prominent and easily broken off.

	Canes	Saccharose	Comparative order by Saccharose yield.
Red soils, plants (mean of 4 plots) ...	40·87	8,956	2
Red soils, ratoons (mean of 4 plots) ...	32·91	7,548	7

Experimental samples of juice—results of 8 plots.

Sacchrose lb per gallon—highest 2·002, lowest 1·724, mean 1·887.
Quotient of purity—highest 39·86, lowest 79 01, mean 84·67.
Glucose ratio—highest 14·51, lowest 3·30, mean 8·54

B. 3,412 CANE.

Germinating power good ; fifteen to twenty canes in a clump ; internodes 3 to 6 inches long cylindrical in shape ; colour greenish-yellow ; habit upright ; few flowers ; dry leaves fall readily ; eyes large.

	Canes	Saccharose	Comparative order by Saccharose yield.
Black soils, plants (mean of 5 plots) ...	33·62	7,226	2
Red soils, plants (mean of 4 plots) ...	36·15	8,213	6
Red soils, ratoons (mean of 4 plots) ...	34·69	7,873	5

Experimental samples of juice—results of 13 plots

Saccharose lb per gallon—highest 2·082, lowest 1·678, mean 1·894.
Quotient of purity—highest 89·65, lowest 77·33, mean 83·70.
Glucose ratio—highest 12·39, lowest 3·45, mean 6·71.

Estate samples of juice—results of 2 samples

Saccharose lb per gallon—higher 1·989, lower 1·678, mean 1·834.
Quotient of purity—higher 87·43, lower 83·11, mean 85·27.
Glucose ratio—higher 6·29, lower 6·20, mean 6·25.

B. 3,635 CANES.

Germinating power good; ten to eighteen larged-sized canes to a clump, some what of B 208 type; internodes 2 to 5 inches long, slightly tumid; colour dark-yellow which changes to a dull-red on exposure to sunlight; habit upright; flowers few; dry leaves somewhat adherent; eyes prominent.

	Canes	Saccharose	Comparative order by saccharose yield.
Black soils, plants (mean of 5 plots) ...	20·66	5,121	

Experimental samples of juice—results of 5 plots

Saccharose lb per gallon—highest 2·355, lowest 2·304, mean—2·324.
Quotient of purity—highest 94·19, lowest 91·41, mean 93·23.
Glucose ratio—highest 2·61, lowest 0·82, mean 1·67.

B. 3,696 CANE.

Germinating power good; fifteen to twenty-one canes to a clump; internodes from 3 to 8 inches long, cylindrical in shape; colour yellow; habit upright; arrows freely; dry leaves fall readily; eyes full.

	Canes	Saccharose	Comparative order by Saccharose yield.
Black soils plants (mean of 8 plots)	23·40	5,695	10
Red soils plants ratoons (mean of 2 plots) ...	24·54	6,431	10

Experimental samples of juice—results of 10 plots.

Saccharose lb per gallon—highest 2·155, lowest 2·044, mean 2·117.
Quotient of purity—highest 93·08, lowest 89·85, mean 90·75.
Glucose ratio—highest 3·89, lowest 2·14, mean 2·84.

D. 95 CANE.

Germinates readily; from twelve to fifteen canes to a clump; internodes from 2 to 6 inches long, somewhat tumid; colour dark-red; habit upright; arrows freely; dry leaves have a tendancy to adhere; eyes large and prominent and liable to be broken off.

	Canes	Saccharose	Comparative order by Saccharose yield.
Black soils, ratoons (mean of 2 plots)	15·34	4,210	3
Red soils, plants (mean of 3 plots	25·54	7,356	9
Red soils, ratoons (mean of 3 plots)	27·77	7,615	6

Experimental samples of juice—results of 8 plots.

Saccharose lb per gallon—highest 2·501, lowest 2·113, mean 2·320.
Quotient of purity—highest 94·31, lowest 88·71, mean 92·86.
Glucose ratio—highest 3·93, lowest 1·19, mean 1·86

HYBRIDIZATION EXPERIMENTS.

In the end of 1907, an enlarged series of experiments for obtaining seedlings of known parentage was laid out by Mr. F. A. Stockdale, B.A., F.L.S., at Summervale plantation and at Dodds. These experiments may be divided as follows:—

1. Artificial hybridization—(*a*) Tonnage experiments
   (*b*) Juice experiments
   (*c*) Disease experiments
   (*d*) Combination—Tonnage and Juice Experiments.
2. Natural hybridization.
3. Self-fertilization.

A detailed description of the manner in which these experiments were laid out will be found in *West Indian Bulletin*, Vol. VIII., pp. 79-90, and the following summary prepared by Mr. Stockdale of the results already obtained may be of interest:—

ARTIFICIAL HYBRIDIZATION.

(*a*) For the tonnage experiments six varieties were chosen, viz., B. 1,753, B. 4,164, B. 4,028, B. 3,390, D. 95 and Queensland Creole. Each of these varieties was planted in four rows, twenty-five holes deep, and arranged according to a definite plan so that any single variety could be crossed with any other. In 1907, owing to considerable irregularity of the time of arrowing of the canes in this series, fifty flowers on only three different arrows were emasculated and hand pollinated. No hybrids, however, were obtained in this series.

(*b*) For the juice experiments six varieties were chosen, viz., B. 3,675, B. 208, B. 3,922, T. 24, B. 3,746 and B 4,164. The first four possess comparatively rich juice,

while the last two have poor juice in point of saccharose. These varieties were planted in a manner similar to those of the tonnage experiments. Fifty flowers on each of ten different arrows, were emasculated during November and December of 1907, and hand-pollination was practised. Two hybrids, viz., H. 83 B. 3,675 (seed-bearing parent × B. 3,746 pollen-bearing parent) and H. 90 (B. 3,746 seed-bearing parent × T. 24 pollen-bearing parent) have been planted out.

(*c*) A similar series of experiments was laid out to enquire into the disease-resisting power of various varieties particularly in respect to root disease, under the sub-head of disease experiments. Four varieties, viz., B 6,048, B. 1,529, B. 3,289 and B. 208, as good disease-resisters, were arranged with B. 3,668 and B. 3,696—canes that frequently suffer somewhat severely from the root disease. Fifty flowers on each of sixteen different arrows were emasculated, and cross pollinated. Ten hybrids of H. 93 (B. 6,048 seed-bearing parent × B. 3, 695 pollen-bearing parent) were obtained and planted out.

(*d*) For the combination, tonnage and juice experiments, twelve varieties, viz., B. 1753, B. 3,289, B. 3,922, B. 6,048, B. 1,529, B. 4,769, B. 4,844, B. 4,164, B. 208, B. 1,566, B. 3,390, B. 3,675, were planted in chess-board fashion. Two crosses were made, but no hybrids were procured.

To summarize:—In the above series of experiments, some 1,520 flowers were emasculated and cross-pollinated—in the majority of cases by hand. Twelve hybride were planted out in May 1908, as the result of this work—two belonging to the juice series and ten to that relating to disease-resistance.

NATURAL HYBRIDIZATION.

It is well known that certain varieties of the sugar-cane produce much fertile pollen while the pistil is normal, while others produce little or none. Varieties possessing little fertile pollen ('female') were planted chess-board fashion at Dodds with canes possessing much fertile pollen ('male'). Arrows from the different canes ('female' and 'male') were bagged at an early stage, before the stigmatic plumes of the seed bearing variety had extended. It is possible that some of the seedlings thus obtained might be the result of self fertilization, as sometimes the 'female' canes produce a few normal pollen grains; but the chances of self-fertilization are reduced to a minimum, and the access of pollen from an unknown source cannot take place. White Transparent and B. 376 produce little fertile pollen, and these were planted chess-board fashion with B. 3,289 and B. 376 respectively. Twenty-eight different efforts were made in this series, and the arrows from the 'male' canes were cut out at dates varying from 5 to 19 days after they had been bagged with the female canes. Twelve hybrids between B. 376 and B. 208 were obtained, and one of White Transparent crossed with B. 3,289.

In 1906, a number of seedling canes were examined microscopically in the Mycological laboratory in respect to the quantity of fertile pollen they produce, with the view of obtaining further varieties to act as 'female' varieties for the above experiments. B. 3,746 was found in that year to possess little or no fertile pollen, and was in 1907 used as the 'female' parent and crossed with B. 3,675, as the 'male' parent. Four hundred seedlings were obtained and planted out, but as self-fertilized seedlings were procured from B. 3,746 during the same season, these canes cannot be classed with those of known parentage. The White Transparent and B. 376 have for several years been found to be infertile to their own pollen, and, therefore, this experience with B. 3,746 as a 'female' cane shows that careful observation should be made of the canes to act as 'female' parents before they are included in this series of experiments. The flowers of the 'female' parents should be examined microscopically every year, and arrows should be bagged separately to see if self-fertilized seedlings can be obtained, for it may be found that whereas a variety may be sterile to its own pollen during one season, it may not be so during the next.

SELF-FERTILIZED SEEDLINGS.

Forty-eight arrows of different canes were bagged for self-fertilization, in order to obtain an idea of the transmission of unit characters to the progeny and in order to gain some knowledge of the value of different Barbados seedlings as the starting point for further work. The following extract from the *West Indian Bulletin*, Vol. VIII, p. 79 will illustrate why this work of self-fertilization is considered of importance:—

"It has repeatedly been pointed out that the breeding ability of the various mother "plants varies considerably. Frequently a variety, which is low down in the list "in respect to saccharose yield per acre, gives seedlings that are of much more value "than a similar race of seedlings produced from a cane that is much higher in the list, or "in other words, a cane of comparatively low value often gives a much greater percentage "of subsequently selected seedlings than a cane which, in itself, is of much higher value. "In the one case, we have what has been described as a strong "projected efficiency", and "in the other a weak "projected efficiency." This variability noticed amongst the off-"spring has led to a considerable confusion, for the plant has been considered as a whole; "when each separate character, if taken alone, may be found to obey definite simple laws. "Single characters must be treated as distinct, and the composition of individual plants "must be considered as much by their progeny as by their ancestry.

In all some 421 self-fertilized seedlings were obtained as the result of this work, and 249 have been planted out :

Reference Number.	Parent.	Number of Seedlings obtained.	Number of Seedlings Planted out.
S. 30	D. 95	2	1
S. 33 S. 34	B. 3,390	12 1 } 13	13
S. 39 S. 40 S. 41	B. 3,675	2 9 8 } 19	12
S. 46	B. 6,048	77	67
S. 48 S. 49 S. 50	B. 3,746	15 1 1 } 17	17
S. 51 S. 53	T. 24	1 2	1 0
S. 54 S. 55	B. 3,696	41 1 } 42	12 0
S. 57	B. 3,389	14	13
S. 62	B 1,753	2	0
S. 63 S. 64	B. 208	90 2 } 92	31
S. 69 S. 70 S. 71	B. 1,566	8 4 80 } 92	44
S. 76 S. 77	B. 4,844	38 11 } 49	38
Total	...	421	249

FUTURE WORK.

The same series of experiments have again been laid out, with but slight alterations. The canes planted for artificial hybridization are the same as were used for the former year, but in the natural hybridization series, it has been decided to replace B. 3,289 by B. 3,922 and to introduce a plot of B. 6,048 planted chess-board fashion with White Transparent.

It may be found, however, in future years necessary to introduce other varieties of canes, because some of those chosen have arrowed but rarely and some even not at all. B.1,753, B. 4,164, B.4,028 B. 1,529 and T. 24 may have to be replaced by other canes that possess characters similar to those for which the above canes have been chosen, and which might be introduced into the experiments without necessitating any change in the general scheme.

EXPLANATION OE TERMS USED IN THIS REPORT.

Per cent. by number of rotten canes, is the number of rotten canes in 100 canes (good and rotten).

Sp. Gr. $\frac{30^\circ C.}{16{\cdot}6^\circ C.}$ is the weight of a given volume of juice at a temperature of 30° Centigrade divided by the weight of an equal volume of water at a temperature of 16·6° Centigrade. A gallon of water at 16·6° C (*i.e.* 62° Fahrenheit) weighs 10lbs; the *Sp. Gr.* $\frac{30^\circ C.}{16{\cdot}6^\circ C.}$ therefore serves to ascertain the volume of the juice from its weight, or *vice versa*.

Per cent. of juice by mill, is the number of pounds of juice expressed from 100lbs of canes.

Quotient of purity, is the number of pounds saccharose (cane sugar) in 100 pounds of the total solids in the cane juice.

Glucose ratio, is the number of pounds of glucose to every 100 pounds of saccharose in the juice.

Saccharose, is the chemical name for pure cane sugar. It is the same as sucrose. Refined cane sugar is almost pure saccharose, containing, when deprived of traces of water, nearly 100 per cent. of saccharose.

The quotient of purity and the glucose ratio of a sample of juice influence greatly the recovery of marketable sugar. With a high quotient of purity and low glucose, a ratio common in the juice of the best varieties of West Indian sugar cane, it is possible on a well-worked muscovado estate, with steam pan and filter press, to recover 80 per cent. of the weight of the saccharose as marketable muscovado sugar. The recovery is less if the purity is lower and the glucose ratio higher, as is the case in immature canes or in mature canes of some varieties or in canes over-matured. According to the Hon. F. Watts, if the glucose ratio reaches 6 per cent. the sugar produced is soft and generally indifferent in quality. Under these circumstances it is difficult, in the muscovado process, to obtain a formation of crystals of sufficient size to enable the sugar to part with its molasses: the result is a sugar of low polariscope test.

TABLE X. RAINFALL AT VARIETY EXPERIMENT STATIONS FROM DECEMBER 1906 TO MAY 1908.

MONTHS.	Dodds.		Brighton.		Coverly.		Hampton.		Hannays.		Husbands.		Lower Estate.		Pine.		Ridge.		Waterford.		Clifton Hall.		Henley.		Sunbury.		Clifton.		Carrington.	
	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
December 1906 ...	15	4·49	15	3·73	11	3·58	8	3·99	8	4·12	12	7·02	11	3·97	7	3·17	7	3·93	14	4·94	...	4·47	12	6·32	9	4·61	20	6·01	9	3·53
January 1907 ...	13	1·93	15	1·55	10	1·90	12	2·00	6	2·17	7	1·09	15	2·48	7	1·21	7	1·55	13	1·65	...	1·58	11	1·54	11	1·99	22	2·98	14	2·40
February " ...	14	2·97	15	2·36	12	3·20	10	2·01	7	1·88	8	2·25	11	2·28	6	1·87	12	2·43	9	1·69	...	3·44	10	3·96	10	2·47	17	3·35	12	2·30
March " ...	7	1·60	8	1·76	5	·92	6	·72	3	·80	6	·37	6	1·11	5	·68	6	·81	6	1·12	...	1·09	7	1·03	6	1·18	9	1·88	8	1·03
April " ...	9	1·74	8	1·21	5	·79	7	·97	3	·47	12	1·35	7	·75	3	·57	6	·87	7	·49	...	1·92	10	1·67	8	·95	11	1·59	8	1·26
May " ...	9	1·45	11	1·99	8	1·94	6	·86	4	·98	7	·98	7	2·35	4	1·83	8	1·93	5	2·02	...	2·08	6	1·64	5	1·01	11	2·68	10	1·27
June " ...	17	5·20	18	5·54	21	6·23	15	4·85	8	4·19	15	5·29	15	5·15	9	3·48	15	6·62	17	4·28	14	4·59	16	6·51	17	4·96	22	5·80	19	5·95
July " ...	18	5·89	20	5·80	16	5·99	17	6·14	9	6·28	16	5·77	16	5·60	10	4·36	15	7·22	20	4·76	13	6·16	18	6·89	17	5·97	23	7·71	19	6·82
August " ...	15	4·94	15	5·25	17	4·94	13	3·73	12	4·93	17	4·29	14	5·61	11	4·43	15	5·33	15	5·25	11	5·65	17	6·18	14	4·34	19	7·64	16	4·66
September " ...	12	4·41	14	6·52	16	6·36	12	5·18	9	4·02	9	3·36	13	5·92	9	5·01	12	5·62	16	5·75	9	4·11	6	6·36	14	4·47	21	5·65	11	5·72
October " ...	10	7·11	19	7·02	21	6·46	16	6·51	15	6·45	14	7·91	13	5·13	11	3·42	15	5·26	15	4·08	15	5·52	18	7·88	18	6·94	22	5·90	18	7·21
November " ...	12	5·72	13	5·45	12	5·47	11	4·78	8	5·45	10	3·83	9	5·25	6	5·13	11	5·60	9	5·02	10	7·05	13	4·92	12	5·81	19	5·59	10	6·53
December " ...	16	2·00	19	3·71	22	2·82	16	2·28	7	1·99	15	3·12	11	2·44	11	3·14	18	2·86	20	2·06	14	3·17	18	3·81	12	1·64	25	5·37	13	2·75
January 1908 ...	12	2·82	17	2·31	11	·83	11	1·26	7	1·14	16	2·25	10	1·84	4	·81	11	1·18	12	1·31	13	2·32	11	2·80	12	2·05	21	2·95	8	1·53
February " ...	8	1·49	14	1·90	11	1·42	12	1·30	5	1·25	6	1·18	9	1·40	3	1·00	7	1·01	9	·93	6	1·01	11	1·47	9	1·13	19	2·07	9	1·59
March " ...	9	1·37	12	1·88	15	1·79	7	1·39	9	1·84	10	1·04	11	1·46	4	1·34	12	1·94	13	1·13	9	1·86	10	1·92	9	1·47	19	2·93	11	2·13
April " ...	12	2·58	15	2·48	11	1·88	9	2·15	5	2·25	7	1·20	6	·90	4	·62	10	2·52	9	·84	12	1·54	10	2·62	10	2·11	18	2·73	8	2·41
May " ...	9	1·31	11	1·68	10	2·23	8	·64	4	1·55	5	·58	4	·84	1	·90	5	1·24	10	·80	5	1·04	7	1·52	10	·81	13	1·68	6	·77
	217	59·02	259	62·14	234	58·75	196	50·76	129	51·76	192	52·88	188	54·48	115	42·97	193	57·92	219	48·12	131	58·60	211	69·04	203	53·91	331	74·51	209	59·86

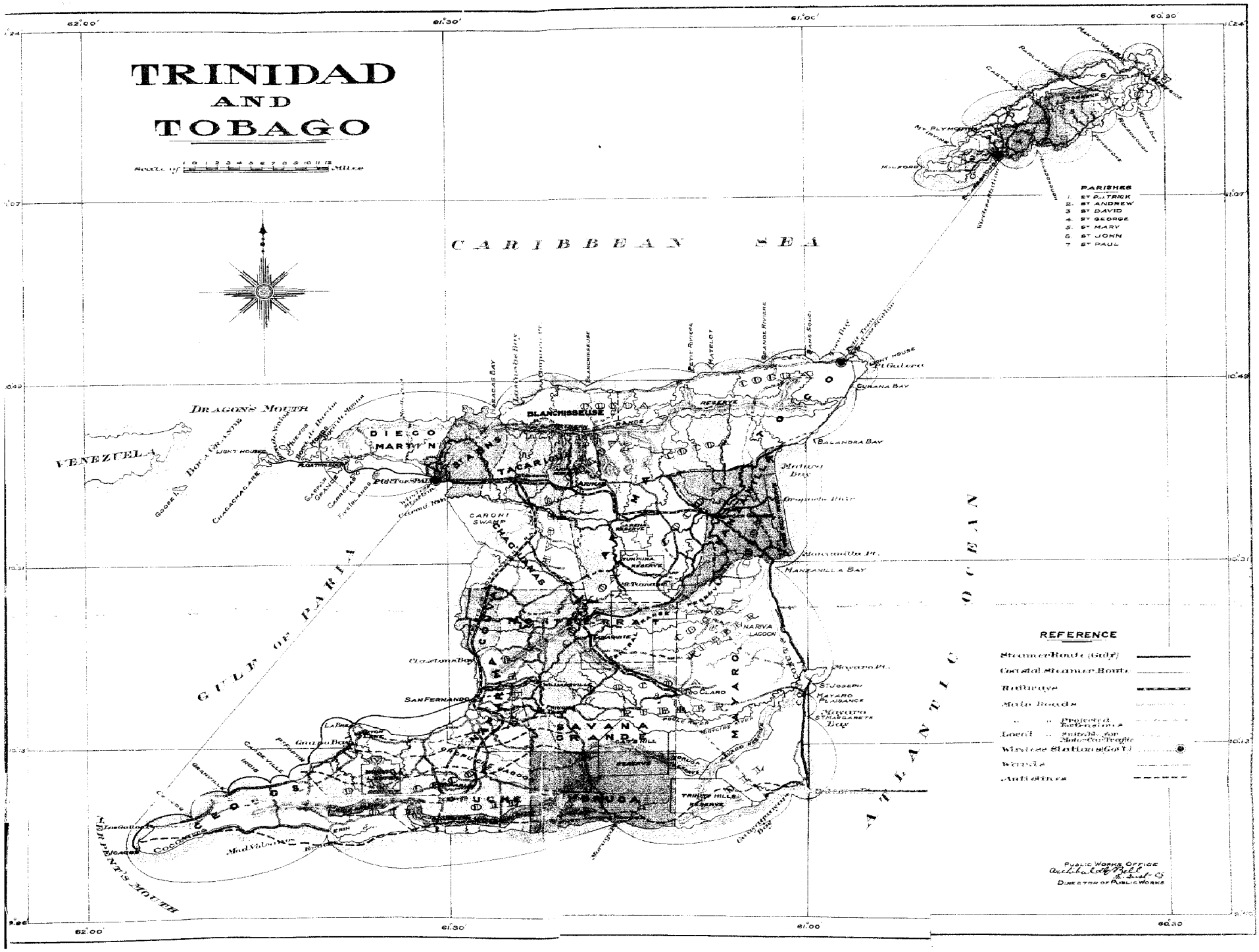
TRINIDAD
AND
TOBAGO
Scale of Miles
CARIBBEAN SEA
GULF OF PARIA
ATLANTIC OCEAN
DRAGON'S MOUTH
VENEZUELA
BOCA GRANDE
GOODE
CHACACHACARE
DIEGO MARTIN
PORT OF SPAIN
BLANCHISSEUSE
TACARIGUA
CARONI SWAMP
CHAGUANAS
MONTSERRAT
SAVANA GRANDE
SAN FERNANDO
GRANDE RIVIERE
MATELOT
CUMANA BAY
BALANDRA BAY
MANZANILLA BAY
NARIVA LAGOON
TRINITY HILLS RESERVE
ST JOSEPH
MAYARO PLAISANCE
MILFORD
NEW PLYMOUTH
PARISHES
1. ST PATRICK
2. ST ANDREW
3. ST DAVID
4. ST GEORGE
5. ST MARY
6. ST JOHN
7. ST PAUL
REFERENCE
Steamer Route (Gov't)
Coastal Steamer Route
Railways
Main Roads
Lorries
Wireless Stations (Gov't)
Wards
Anti-Malaria
PUBLIC WORKS OFFICE
DIRECTOR OF PUBLIC WORKS

TABLE XI. DODDS—CAT HOLE FIELD.

SELECTED VARIETIES.

Plant Canes.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre		Per cent. by number of rotten Canes.	Per cent. of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
							Lb. per Gallon.						
		Canes.	Cane Tops			Sp Gr $\frac{30°C}{16·6°C}$	Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
W Transparent	25,493	41·87	7·13	4·77	63·02	1·0844	2·038	·069	·192	88·65	3·38	5,450	11,107
B 208	26,945	38·42	6·97	1·07	62·00	1·0906	2·258	·054	·153	91·60	2·39	4,892	11,046
B 1376	23,518	34·84	7·03	1·22	55·32	1·0861	2·138	·052	.156	91·13	2·43	3,975	8,499
B 3694	17,885	31·50	8·06	·96	56·50	1·0751	1·695	·069	·289	82·56	4·07	3,708	6,285
B 3700	29,035	35·65	8·32	·39	54·00	1·0861	2·070	·069	·207	88·24	3·33	3,970	8,218
B 3701	32,693	34·97	7·36	3·09	54·84	1·0875	2·009	·063	·310	84·34	3·14	3,950	7,986
B 3708	26,073	35·98	9·80	1·54	59·00	1·0885	2·041	·060	·174	89·71	2·94	4,389	8,958
B 3731	24,622	30·07	5·44	7·02	57·75	1·0956	2·449	·022	·125	94·34	·90	3,551	8,696
B 3735	24,854	34·48	6·61	1·61	56·00	1·0884	2·171	·060	·174	90·27	2·76	3,974	8,628
B 3750	21,892	37·20	6·22	1·05	58·75	1·0831	2·006	·063	·194	88·64	3·14	4,520	9,067
B 3810	21,427	44·18	6·95	1·34	59·34	1·0765	1·792	·060	·236	85·82	3·35	5,454	9,774
B 3819	17,131	34·82	5·76	3·28	55·00	1·0870	2·106	·052	·212	88·86	2·47	3,946	8,310
B 3838	23,983	36·29	6·87	3·73	57·00	1·0839	1·988	·048	·301	84·74	2·47	4,275	8,285
B 3853	21,428	30·23	5·78	15·94	58·00	1·0729	1·717	·060	·218	86·07	3·49	3,660	6,284
B 3859	32,229	53·20	12·39	·36	60·00	1·0879	2·057	·060	·276	85·96	2·92	6,572	13,519
B 4028	19,395	33·11	3·03	13·25	59·50	1·0684	1·523	·074	·283	81·01	4·86	4,130	6,290
B 4031	28,512	46·35	8·81	8·73	66·75	1·0756	1·539	·078	·448	74·53	5·07	6,443	9,916
B 4452	23,576	34·71	6·84	4·47	64·00	1·0791	1·863	·083	·212	86·33	4·46	4,612	8,592
B 4507	23,751	31·89	7·13	5·76	49·50	1·0933	2·346	·033	·157	92·51	1·41	3,234	7,587
B 4578	24,215	48·53	7·72	2·34	64·25	1·0839	1·996	·104	·187	87·27	5·21	6,444	12,862

TABLE XI.—(*Continued.*) DODDS—CAT HOLE FIELD.

SELECTED VARIETIES.

Plant Canes.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per Acre.	Saccharose lb. per Acre.
		Canes.	Cane Tops.			Sp. Gr. 20°C. 16·6°C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 4596	19,047	32·43	7·91	1·50	63·00	1·0787	1·776	·114	·257	82·72	6·42	4,243	7,536
B. 4769	17,189	30·33	5·50	2·95	62·50	1·0853	2·100	·060	·163	90·40	2·86	3,913	8,217
B. 4844	24,099	43·60	7·78	2·35	64·50	1·0795	1·912	·078	·180	88·11	4·08	5,836	11,158
B. 4929	18,640	30·05	5·76	...	63·25	1·0760	1·750	·089	·238	84·25	5·09	3,956	6,923
B. 4934	19,047	34·79	7·28	2·96	63·46	1·0853	2·119	·052	·152	91·22	2·45	4,557	9,656
B. 5014	23,983	29·81	4·80	·96	57·75	1·0848	2·083	·074	·154	90·13	3·55	3,555	7,405
B. 5062	22,009	30·59	6·48	5·96	57·50	1·0831	1·840	·089	·334	81·31	4·84	3,638	6,694
B. 5102	20,208	11·64	2·02	21·62	58·51	1·0743	1·711	·096	·223	84·28	5·61	1,420	2,430
B. 5135	18,699	33·47	8·56	...	60·75	1·0765	1·772	·125	·191	84·87	7·05	4,231	7,497
B. 5204	22,589	25·35	5·29	4·89	60·00	1·0938	2·336	·054	·158	91·64	2·31	3,115	7,277
B. 5226	23,518	23·31	5·91	...	57·25	1·0875	2·119	·066	·197	88·96	3·11	2,748	5,823
B. 5298	27,816	33·60	6·43	5·15	62·12	1·0844	2·041	·078	·180	88·78	3·82	4,311	8,799
B. 5353	30,313	34·58	6·48	2·43	64·95	1·0866	2·138	·063	·157	90·67	2·95	4,630	9,899
B. 5758	25,551	31·42	5·57	·68	60·00	1·0791	1·866	·104	·188	86·47	5·57	3,913	7,302
B. 6048	26,015	35·39	4·54	1·75	62·50	1·0822	1·759	·078	·403	78·53	4·43	4,577	8,052
B. 6138	26,132	33·83	4·41	2·39	63·83	1·0822	1·986	·114	·140	88·66	5·74	4,469	8,875
B. 6171	27,583	36·40	7·26	·42	61·50	1·0866	2·184	·030	·144	92·62	1·38	4,614	10,077
B. 6183	27,757	35·39	5·31	1·85	61·25	1·0809	1·970	·060	·175	89·34	3·05	4,491	8,847
B. 6230	26,538	30·25	6·61	1·08	61·00	1·0915	2·236	·074	·179	89·84	3·31	3,787	8,468
B. 6259	24,215	30·46	5·91	...	60·75	1·0888	2·012	·096	·309	83·24	4·77	3,807	7,660
B. 8552	29,325	21·10	5·70	...	59·00	1·0969	2·456	·009	·167	93·31	·37	2,543	6,246

TABLE XI.—(*Concluded.*) DODDS—CAT HOLE FIELD.

SELECTED VARIETIES.

Plant Canes.

No. or Name of Seedling.	Number of Canes per acre.	Weight in tons per acre.		Per cent. by number of rotten Canes.	Per cent of Juice by mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C./16°·6C.	Lb. per gallon. Saccharose.	Lb. per gallon. Glucose.	Lb. per gallon. Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 8555	20,731	25·46	4·80	21·54	58·75	1·0817	1·986	·069	·173	89·14	3·48	3,097	6,151
B. 8564	22,751	31·86	3·11	1·23	59·50	1·0897	2·100	·063	·278	86·03	3·00	3,897	8,184
B. 8574	19,221	26·70	3·84	3·78	60·50	1·0888	2·216	·030	·171	91·68	1·35	3,324	7,366
B. 8579	28,222	26·82	6·25	3·95	52·00	1·0848	2·057	·054	·200	89·01	2·63	2,881	5,926
B. 8600	25,609	33·83	9·59	2·22	59·00	1·0902	2·203	·069	·181	89·81	3·13	4,101	9,035
B. 8606	20,100	32·33	4·40	...	60·00	1·0791	1·814	·052	·292	84·06	2·87	4,027	7,305
B. 8607	18,408	28·65	5·16	4·80	59·50	1·0848	2·041	·083	·187	88·32	4·07	3,519	7,182
B. 8609	26,247	37·59	5·83	1·74	63·50	1·0825	1·986	·083	·206	87·30	4·18	4,935	9,801
B. 8651	16,814	34·99	5·92	1·77	62·00	1·0844	2·006	·063	·230	87·26	3·14	4,482	8,991
B. 8660	15,505	35·31	4·36	4·98	62·25	1·0861	20·41	·078	227	87·00	3·82	4,534	9,254

TABLE XII. DODDS—LOWER CHAPEL FIELD, SELECTED VARIETIES.

Plant Canes.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per acre		Per cent by number of rotten Canes.	Per cent. of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose ℔ per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not sugar.	Quotient of purity.	Glucose Ratio.		
W. Transparent	15,679	21·39	3·21	4·93	43·81	1·0844	2·046	·063	·190	89·00	3·08	1,935	3,959
B. 147	17,363	27·48	6·01	1·32	48·25	1·0809	1·950	·096	·159	88·44	4·92	2,748	5,359
B. 208	17,421	21·78	5·50	·33	46·88	1·0951	2·453	·028	·103	94·93	1·14	2,088	5,122
B. 376	19,628	29·35	4·28	2·59	48·06	1·0826	2·064	·066	·132	91·21	3·21	2,918	5,994
B. 1030	20,615	21·46	3·37	·84	40·75	1·0888	2·145	·052	·220	88·75	2·42	1,799	3,859
B. 1355	15,214	21·44	5·44	..	43·50	1·0848	2·119	·069	·123	91·69	3·26	1,926	4,081
B. 1376	15,737	23·36	4·61	2·87	46·75	1·0889	2·046	·069	·172	89·47	3·37	2,256	4,616
B. 1529	23,054	20·79	4·64	1·73	44·50	1·0974	2·449	·034	·162	92·59	1·39	1,889	4,626
B. 1753	23,983	23·75	4·02	·96	40·75	1·0822	1·950	·074	·216	87·05	3·79	2,003	3,906
B. 3289	14,692	22·48	4·38	2·32	47·75	1·0831	2·061	·046	·156	91·08	2·23	2,219	4,573
B. 3635	18,466	23·82	6·53	...	49·25	1·0920	2·355	·043	·103	94·17	1·83	2,408	5,671
B. 3656	20,150	26·93	5·73	1·98	50·25	1·0844	2·112	·054	·133	91·87	2·56	2,795	5,903
B. 3668	18,002	25·02	6·27	2·21	48·25	1·0897	2·229	·057	·155	91·32	2·56	2,481	5,530
B. 3681	17,711	21·36	5·52	4·39	55·50	1·0870	2·177	·048	·145	91·86	2·20	2,443	5,318
B. 3696	22,241	23·69	4·77	4·73	51·25	1·0857	2·155	·046	·133	92·33	2·13	2,506	5,401
B. 3708	21,602	22·81	6·58	...	47·50	1·0857	2·116	·052	·166	90·66	2·46	2,235	4,729
B. 3747	17,421	26·83	6·27	2·91	47·00	1·0884	2·145	·063	·197	89·19	2·94	2,595	5,566
B. 3859	16,956	25·43	4·15	...	44·50	1·0933	2·252	·054	·230	88·80	2·40	2,318	5,220
B. 3871	18,002	24·91	5·81	2·21	48·50	1·0703	1·450	·089	·388	75·25	6·14	2,529	3,667
B. 3922	16,550	26·36	6·30	7·77	49·00	1·0835	2.074	·060	·141	91·16	2·89	2,671	5,540
B. 4769	13,066	18·95	4·80	2·17	57·14	1·0809	1·928	·069	·208	87·44	3·58	2,244	4,326

TABLE XII—(*Concluded.*) LOWER CHAPEL FIELD. SELECTED VARIETIES.

Plant Canes.

No or Name of Seedling	Number of Canes per acre.	Weight in Tons per acre		Per cent by Number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr $\frac{30°C.}{15°C.}$	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio		
B. 6048	19,744	19·65	3·63	1·16	45·75	1·0853	1·986	·083	·254	85·49	4·18	1,855	3,684
Rappoe	15,040	20·43	3·84	4·43	44·25	1·0831	2·087	·043	·127	92·22	2·06	1,869	3,901
Cal. Queen	14,285	17·37	3·63	2·77	43·50	1·0848	2·135	·039	·137	92·38	1·83	1,560	3,331
Jamaica Cane ... ... — .	16,608	23·64	4·15	2·39	41·15	1·0822	2·002	·063	·175	89·38	3·15	2,014	4,032
Bourbon	12,892	21·39	3·89	8·64	46·32	1·0822	1·899	·096	·245	84·78	5·06	2,051	3,895

TABLE XIII. DODDS :—LOWER PADMORE FIELD. PLANT CANES.

No or name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre.		Per cent by Number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 30° C. 16° 6' C.	Lb. per gallon, Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
W. Transparent ...	20,499	27·01	4·04	6·61	57·75	1·0848	2·083	·066	·162	90·13	3·17	3,221	6,709
B. 208 ...	15,389	14·31	4·38	1·49	57·00	1·0956	2·390	·042	·164	92·07	1·76	1,668	3,987
B. 7282 ...	20,615	22·35	2·54	10·36	55·50	1·0969	2·343	·057	·232	89·02	2·43	2,533	5,935
B. 7297 ...	22,473	19·13	1·94	3·97	53·50	1·0839	1·967	·054	·266	86·01	2·75	2,116	4,162
B. 7318 ...	15,737	20·64	2·75	9·37	59·50	1·0889	2·025	·045	·217	88·54	2·22	2,537	5,138
B. 7344 ...	19,395	21·15	3·21	1·77	56·50	1·0870	2·135	·023	·212	90·08	1·07	2,464	5,261
B. 7379 ...	16,956	10·65	2·18	3·63	57·50	1·0822	1·996	·030	·214	89·11	1·51	1,268	2,531
B. 7389 ...	38,326	25·02	3·58	1·35	54·75	1·0813	1·993	·029	·195	89·90	1·45	2,837	5,654
B. 7393 ...	27,467	22·50	4·95	2·07	56·25	1·0866	2·061	·060	·237	87·40	2·91	2,609	5,377
B. 7394 ...	22,531	23·33	3·99	3·48	57·25	1·0835	1·989	·063	·223	87·43	3·17	2,761	5,492
B. 7438 ...	21,602	23·75	4·64	6·30	58·75	1·0804	1·957	·042	·194	89·24	2·14	2,892	5,660
B. 7445 ...	19,163	27·19	6·04	6·25	58·25	1·0813	1·996	·030	·191	90·03	1·51	3,282	6,551
B. 7482 ...	16,318	23·51	4·59	...	62·50	1·0938	2·323	·038	·177	91·56	1·63	3,010	7,022
B. 7489 ...	27,061	24·11	4·41	2·71	60·00	1·0906	2·252	·028	·185	91·36	1·24	2,971	6,691
B. 7496 ...	24,447	20·07	4·51	2·09	55·00	1·0844	2·067	·060	·172	89.91	2·90	2,280	4,713
B. 7503 ...	19,744	15·30	3·21	2·30	58·50	1·0870	2·187	·022	·161	92·28	1·01	1,844	4,033
B. 7509 ...	26,189	20·53	4·33	3·22	53·50	1·0902	2·226	·050	·177	90·75	2·25	2,257	5,024
B. 7510 ...	15,621	17·73	3·32	8·50	56·50	1·0897	2·206	·060	·175	90·37	2·72	2,059	4,542
B. 7514 ...	22,996	13·17	2·28	1·49	59·00	1·0826	2·038	·057	·157	90·50	2·80	1,608	3,277
B. 7518 ...	23,518	27·87	3·27	6·68	58·50	1·0813	1·949	·078	·190	87·91	4·01	3,377	6,582

Plant Canes.

Table XIII.—(*Continued.*) Dodds—Lower Padmore Field.

No. or name of Seedling.	Number of Canes per acre.	Weight in Tons per acre		Per cent by Number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose ℔ per acre.
		Canes	Cane Tops.			Sp. Gr 30°C / 16°6C	Lb per gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio		
B. 7534	20,034	18·85	5·00	2·54	52.50	1·0813	1·947	·078	·192	87·82	4·01	2,050	3,991
B. 7576	25,202	22·61	4·41	3·56	57·75	1·0658	1·601	·078	·133	88·36	4·87	2,744	4,393
B. 7577	18,466	27·32	5·44	2·15	56·75	1·0800	1·989	·063	·130	91·15	3·17	3,216	6,397
B. 7594	18,815	15·89	4·56	2·99	53·00	1·0893	2·106	·096	·227	86·70	4·56	1,732	3,648
B. 7611	13,588	13·35	3·97	1·27	53·79	1·0861	2·116	·031	·199	10·20	1·47	1,481	3,134
B. 7612	20,382	18·41	5·76	2·77	55·00	1·0839	2·049	·028	·210	89·59	1·36	2,092	4,287
B. 7620	18,524	17·34	5·70	13·08	54·00	1·0857	2·101	·046	·187	90·02	2·19	1,932	4,059
B. 7627	24,389	14·60	4·43	1·87	57·50	1·0866	2·113	·014	·231	89·61	·66	1,730	3,655
B. 7661	17,537	15·01	4·54	1·63	55·75	1·0924	2·310	·026	·176	91·96	1·13	1,716	3,964
B. 7663	18,815	20·74	6·56	5·81	58·25	1·0884	2·219	·018	·168	92·27	·81	2,486	5,516
B. 7670	19,222	21·27	6·19	7·76	58·00	1·0822	2·051	·033	·156	91·56	1·61	2,554	5,238
B. 7679	23,170	26·31	4·07	3·15	52·25	1·0826	2·054	·030	·168	91·21	1·46	2,845	5,844
B. 7680	14,982	16·90	3·01	8·83	52·50	1·0751	1·792	·078	·183	87·29	4·35	1,849	3,313
B. 7683	21,660	27·69	4·20	5·81	57·00	1·0844	2·041	·057	·201	88·78	2·79	3,260	6,654
B. 7685	20,499	23·90	3·73	·84	49·75	1·0920	2·346	·001	·154	93·80	·04	2,439	5,722
B. 7686	21,370	21·67	3·84	4·66	53·25	1·0915	2·291	·020	·178	92·04	.87	2,368	5,425
B. 7697	24,912	24·37	2·12	2·06	52·00	1·0884	2·221	·057	·127	92·35	2·57	2,617	5,812
B. 7724	15,853	19·13	1·89	4·88	55·25	1·0893	2·200	·040	·189	90·57	1·82	2,174	4,783
B. 7774	12,137	15·11	3·16	1·88	59·00	1·0804	1·782	·063	·348	81·26	3·54	1,849	3,295
B. 7777	18,757	23·12	3·73	2·71	59·68	1·0813	1·944	·045	·228	87·69	2·31	2,859	5,558

Plant Canes.

Table xiii.—(*Continued.*) Dodds :—Lower Padmore Field.

No. or Name of Seedling.	Number of Canes per acre	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C/16·6°C	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 7779	22,415	20·38	2·54	3·50	55·50	1·0848	2·083	0·30	·198	90·13	1·44	2,335	4,864
B. 7782	25,202	25·66	5·00	3·98	61·25	1·0760	1·695	0·52	·330	81·61	3·07	3,272	5,546
B. 7794	20,847	23·49	2·96	1·91	61·75	1·0813	1·905	0·39	·273	85·93	2·05	3,004	5,723
B. 7834 ... ... —	22,996	26·52	3·97	·50	58·00	1·0773	1·814	0·50	·248	85·89	2·76	3,198	5,801
B. 7845	19,047	19·87	4·80	...	59·50	1·0826	2·002	0·54	·196	88·90	2·70	2,384	4,773
B. 7867	24,970	21·08	5·99	·47	53·25	1·0924	2·330	0·22	·160	92·75	·94	2,301	5,361
B. 7871	15,911	21·23	4·10	8·97	55·00	1·0804	1·889	0·66	·238	86·14	3·49	2,421	4,573
B. 7922	15,214	20·71	2·93	2·60	60·75	1·0822	1·918	0·54	·268	85·65	2·82	2,605	4,996
B. 7944	19,395	17·58	4·04	2·62	56·75	1·0826	1·892	0·57	·303	84·01	3·01	2,064	3,905
B. 7946	17,769	29·32	5·13	5·26	62·00	1·0857	2·067	0·63	·204	88·56	3·05	3,751	7,753
B. 7950	17,885	21·41	5·29	3·75	56·00	1·0817	1·827	1·14	·287	82·00	6·24	2,483	4,536
B. 7957	18,989	22·66	3·99	5·76	60·20	1·0888	2·210	0·46	·161	91·44	2·08	2,806	6,201
B. 8011	18,234	24·96	3·53	·95	57·50	1·0809	1·882	0·60	·263	85·35	3·19	2,975	5,599
B. 8016	18,118	22·48	3·99	6·02	60·25	1·0902	2·258	0·48	·147	92·05	2·13	2,782	6,281
B. 8036	17,554	22·52	2·96	2·96	52·00	1·0879	2·116	0·54	·228	88·43	2·55	2,411	5,102
B. 8038	24,001	22·47	4·45	2·75	50·00	1·0897	2·171	0·60	·210	88·94	2·76	2,309	5,013
B. 8043	20,266	19·08	3·47	1·69	56·50	1·0800	1·886	0·74	·222	86·43	3·93	2,236	4,217
B. 8099	18,640	15·53	4·67	8·55	58·50	1·0813	1·899	1·04	·214	85·66	5·48	1,882	3,574
B. 8114	14,130	15·13	3·76	8·75	56·50	1·0835	2·025	0·74	·176	89·01	3·65	1,766	3,576
B. 8174	16,176	17·25	4·39	4·06	59·00	1·0760	1·798	0·96	·183	86·57	5·34	2,118	3,808

PLANT CANES.

TABLE XIII.—(*Concluded.*) DODDS—LOWER PADMORE FIELD.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per acre		Per cent by number of rotten Canes.	Per cent. of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose ℔ per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 8191	14,924	12·21	3·40	5·86	55·50	1·0848	2·067	·031	·213	89·44	1·50	1,399	2,892
B. 8254	22,531	20·84	5·16	1·52	57·25	1·0888	2·182	·042	·193	90·28	1·92	2,455	5,357
B. 8314	15,679	14·83	4·41	9·09	60·75	1·0857	2·155	·030	·149	92·33	1·39	1,859	4,006
B. 8323	16,376	21·28	3·78	..	60·75	1·0888	2·112	·096	·209	87·39	4·55	2,660	5,618
B. 8327	21,079	23·07	4·20	8·79	55·50	1·0875	2·088	·060	·334	87·66	2·87	2,638	5,508
B. 8334	18,873	22·58	5·73	3·56	57·81	1·0839	2·035	·060	·192	88·98	2·95	2,698	5,490
B. 8340	30,429	21·98	6·64	24·28	56·50	1·0804	1·905	·050	·238	86·87	2·62	2,575	4,907
B. 8347	20,731	25·09	4·90	1·65	53·75	1·0853	1·950	·096	·277	83·94	4·92	2,784	5,429
B. 8382	21,486	27·32	4·33	5·85	55·00	1·0747	1·779	·057	·206	87·12	3·20	3,132	5,572
B. 8387	18,466	20·48	3·08	12·40	54·08	1·0791	1·944	·039	·175	90·08	2·01	2,299	4,469
B. 8403	15,795	14·65	3·55	3·89	54·75	1·0853	2·044	·063	·216	87·99	3·08	1,655	3,383
B. 8413	17,247	10·84	2·54	4·19	49·25	1·0835	1·983	·035	·257	87·17	1·77	1,103	2,187
B. 8477	23,286	29·40	5·44	·99	51·75	1·0879	2·187	·026	·180	91·39	1·19	3,132	6,850
B. 8491	14,145	11·04	2·02	6·88	54·50	1·0879	2·090	·057	·246	87·34	2·73	1,239	2,590
B. 8520	21,892	27·87	5·00	7·60	57·75	1·0857	2·116	·046	·172	90·66	2·17	3,320	7,025
B. 8528	17,479	29·32	3·58	·66	54·25	1·0839	2·035	·054	·198	88·98	2·65	3,287	6,689
B. 8533	23,402	20·14	2·72	5·40	55·47	1·0924	2·291	·032	·189	91·20	1·40	2,291	5,249

TABLE XIV. DODDS—MILL FIELD.

SELECTED VARIETIES.

Plant Canes.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre		Per cent. by number of rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose ℔ per acre.
		Canes.	Cane Tops			Sp Gr 30°C/16·6°C	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
W. Transparent	15,679	21·65	4·61	17·18	61·50	1·0853	2·112	·040	·171	90·92	1·89	2,747	5,802
B. 4257	18,002	31·63	4·23	6·90	63·00	1·0751	1·704	·104	·245	83·00	6·10	4,151	7,073
B. 6265	20,499	17·81	3·97	10·64	59·09	1·0893	2·171	·096	·162	89·38	4·42	2,164	4,698
B. 6274	19,395	18·69	4·46	9·98	58·75	1·0699	1·594	·083	·238	83·24	5·21	2,299	3,665
B. 6278	16,550	12·99	4·33	9·52	58·50	1·0866	2·138	·035	·185	90·67	1·64	1,566	3,348
B. 6280	18,640	17·86	4·77	1·84	62·25	1·0906	2·226	·054	·185	90·30	2·43	2,284	5,084
B. 6281	17,769	18·09	5·47	1·92	63·75	1·0911	2·216	·057	·204	89·46	2·58	2,368	5,247
B. 6286	22,008	21·83	4·15	2·07	57·00	1·0756	1·776	·063	·226	86·00	3·55	2,591	4,602
B. 6292	17,827	21·67	5·68	2·23	63·50	1·0853	2·041	·063	·219	87·86	3·09	2,841	5,798
B. 6308	19,686	31·24	6·48	·29	62·00	1·0848	2·091	·052	·168	90·48	2·49	3,999	8,362
B. 6341	19,453	23·33	4·72	..	62·37	1·0853	2·056	·050	·217	88·51	2·43	3,003	6,174
B. 6344	18,292	17·71	5·03	...	60·82	1·0870	2·166	·036	·168	91·39	1·66	2,219	4,806
B. 6345	23,518	20·22	4·61	...	60·10	1·0920	2·215	·069	·217	88·57	3·11	2,493	5,521
B. 6346	17,363	21·05	4·33	·99	59·69	1·0960	2·446	·029	·133	93·79	1·19	2,568	6,281
B. 6347	20,382	15·94	1·94	11·59	61·00	1·0888	2·171	·037	·209	89·82	1·70	2,000	4,342
B. 6360	23,437	23·86	4·77	6·03	61·50	1·0826	1·892	·096	·264	84·01	5·07	3,036	5,744
B. 6381	22,531	22·16	2·49	20·00	62·50	1·0813	1·925	·078	·214	86·83	4·05	2,870	5,525
B. 6388	21,370	35·85	5·11	·81	66·50	1·0826	1·973	·096	·183	87·62	4·87	4,933	9,733
B. 6434	27,815	26·05	3·78	..	63·50	1·0861	2·036	·096	·214	86·79	4·72	3,412	6,947
B. 6439	19,337	22·06	2·72	7·50	62·75	1·0853	2·041	·063	·219	87·86	3·09	2,857	5,831

TABLE XIV.—(*Concluded.*) DODDS—MILL FIELD.

SELECTED VARIETIES.

Plant Canes.

No. or Name of Seedling.	Number of Canes per acre.	Weight in tons per acre.		Per cent. by number of rotten Canes.	Per cent of Juice by mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes.	Cane Tops.			Sp. Gr. $\frac{30°C.}{16·6°C.}$	Lb. per gallon. Saccharose.	Lb. per gallon. Glucose.	Lb. per gallon. Solids not Sugar	Quotient of Purity.	Glucose Ratio.		
B. 6450	25,326	34·40	7·54	3·82	62·25	1·0829	2·022	·063	·202	88·41	3·12	4,425	8,947
B. 6456	13,879	16·67	2·75	20·86	62·25	1·0773	1·834	·083	·195	86·84	4·53	2,158	3,958
B. 6696	23,809	22·06	5·60	1·68	62·75	1·0839	2·087	·032	·168	91·25	1·53	2,861	5,971
B. 6835	14,227	24·50	5·13	1·61	62·00	1·0915	2·326	·022	·141	93·45	·95	3,116	7,248
B. 7169	...	36·81	3·89	...	61·25	1·0924	2·289	·046	·177	91·12	2·01	4,623	10,582
B. 7245	18,582	32·74	4·41	3·03	60·75	1·0809	1·869	·069	·267	84·76	3·69	4,121	7,702

TABLE XV.

1ST RATOONS.

WATERFORD PLANTATION.—No. 2 TENNANT FIELD.

No. or Name of Seedling.		Number of Canes per acre.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
			Canes.	Cane Tops.			Sp. Gr. 20°C./16·6°C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
W. Transparent	Series i	18,240	16·33	4·05	4·28	54·75	1·0884	2·211	·028	·166	91·93	1·27	1,840	4,068
" "	" ii	17,088	17·83	3·84	1·11	57·00	1·0938	2·291	·063	·194	89·91	2·75	2,081	4,767
	mean...	...	17·08	..	...	...	...	...	...	....	90·92	...	...	4,418
B. 208	Series i	22,656	15·94	4·61	2·68	58·25	1·0911	2·252	·042	·183	90·92	1·87	1,907	4,295
" "	" ii	16,368	15·66	3·41	2·01	58·67	1·0978	2·386	·096	·175	89·80	4·02	1,875	4,474
	mean...	...	15·80	...	...	...	...	..	...	...	90·36	...	..	4,385
B. 376	Series i	17,904	16·12	4·24	2·09	57·00	1·0861	2·127	·042	·177	90·67	1·97	1,894	4,029
" "	" ii	16,560	13·44	3·82	3·63	55·50	1·0888	2·177	·066	·174	90·07	3·03	1,534	3,340
	mean...	...	14·78	...	...	...	...	...	..	..	90·37	...	...	3,685
B. 1753	Series i	21,648	14·92	3·17	3·22	50·00	1·0813	1·907	·089	·221	86·02	4·67	1,545	2,946
" "	" ii	18,048	10·87	2·57	1·57	49·50	1·0822	1·863	·083	·291	83·17	4·46	1,113	2,074
	mean...	...	12·90	...	...	...	...	...	..	...	84·60	...	...	2,510
B. 6048	Series i	22,656	20·38	4·63	1·87	61·25	1·0831	1·831	·043	·389	80·91	2·35	2,581	4,725
" "	" ii	15,696	12·47	4·33	·91	58·25	1·0831	1·860	·096	·307	82·19	5·16	1,502	2,794
	mean...	..	16·43	...	...	...	...	...	..	...	81·55	...	...	3,760
D. 95	Series i	25,008	19·50	5·12	2·44	59·25	1·0929	2·359	·028	·137	93·46	1·19	2,368	5,586
" "	" ii	18,192	11·17	6·24	2·07	58·33	1·0875	2·113	·083	·186	88·71	3·93	1,341	2,834
	mean...	...	15·34	...	...	...	...	...	...	..	91·09	...	..	4,210
W. No. 2	Series i	20,976	16·33	4·31	·23	56·00	1·0875	2·211	·027	·144	92·82	1·22	1,883	4,163
" "	" ii	20,016	17·64	6·26	1·88	55·75	1·0853	2·087	·074	·162	89·84	3·55	2,029	4,235
	mean...	...	16·99	...	...	...	...	...	...	...	91·33	...	...	4,199

TABLE XVI.

SELECTED VARIETIES.

WATERFORD PLANTATION.—SANDY FIELD.

PLANT CANES.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. $\frac{30°C.}{16·6°C.}$	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
W. Transparent	14,592	24·86	4·29	3·80	56·75	1·0857	2·158	·045	·131	92·46	2·09	2,910	6,280
B. 208	16,368	28·03	4·93	2·01	61·25	1·0920	2·339	·023	·139	93·52	·98	3,522	8,238
W No. 2	17,136	24·22	4·61	3·77	56·50	1·0848	2·145	·031	·135	92·82	1·45	2,825	6,060
D. 95	16,608	15·60	4·84	15·19	56·50	1·0848	2·129	·040	·142	92·13	1·88	1,820	3,875
B. 1753	24,864	36·54	2·89	4·07	55·00	1·0791	1·853	·089	·216	85·87	4·80	4,171	7,729
B. 6292	16,224	30·92	3·90	1·17	67·00	1·0888	2·138	·089	·190	88·46	4·16	4,262	9,112
Java 51 ... ... Series i	14,016	33·80	6·64	2·01	64·00	1·0769	1·827	·139	·134	87·00	7·61	4,499	8,220
" " ... ... " ii	12,336	30·86	5·25	6·20	64·00	1·0756	1·727	·104	·234	83·63	6·02	4,113	7,103
mean..	...	32·33	...	...	...	...	...	..	...	85·32	...	...	7,662
Java G. Z. 96 ... ... Series i	23,856	28·29	3·69	2·74	61·22	1·0938	2·333	·050	·165	91·56	2·14	3,546	8,273
" ... ... " ii	24,192	27·97	3·49	2·14	60·25	1·0965	2·401	·046	·173	91·64	1·92	3,442	8,264
mean...	...	28·13	...	...	...	...	...	..	..	91·60	...	...	8,269
B. 11,629	14,544	13·39	1·82	9·28	52·00	1·0769	1·831	·066	·203	87·19	3·60	1,449	2,653
B. 11,660	13,056	21·30	4·67	13·92	64·00	1·0861	2·116	·078	·152	90·20	3·69	2,811	5,948
B. 11,692	14,448	24·22	3·64	...	63·50	1·0763	1·539	·208	·180	79·87	13·52	3,219	4,954
B. 11,724	21,984	20·74	2·89	1·08	59·00	1·0835	2·002	·066	·207	88·00	3·30	2,530	5,065
B. 11,756	7,462	14·44	2·46	45·71	63·00	1·0649	1·286	·114	·389	71·88	8·87	1,914	2,461
B. 11,788	20,592	23·36	2·61	5·09	59·00	1·0813	1·818	·179	·220	82·00	9·85	2,855	5,190
B. 11,820	15,000	17·52	2·01	1·55	64·00	1·0747	1·753	·139	·150	85·85	7·93	2,337	4,097
B. 11,852	12,192	13·29	2·06	1·55	57·25	1·0844	1·853	·125	·321	80·60	6·75	1,571	2,911

Plant Canes.

Table xvii. Waterford Plantation :—Sandy Field

No. or Name of Seedling.	Number of Canes per acre	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose ℔ per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C 16·6°C	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
River from St. Lucia	9,264	6·32	1·39	61·01	59·25	1·0787	1·754	·104	·289	81·70	5·93	778	1,364
River No. 1 from St. Andrews	20,160	23·35	3·32	4·55	57·00	1·0738	1·688	·125	·206	83·61	7·41	2,777	4,688
„ No. 2 „ „	8,976	13·80	2·40	22·08	61·00	1·0716	1·737	·096	·128	88·58	5·53	1,760	3,057
„ No. 3 „ „	15,648	18·47	2·89	3·26	57·50	1·0751	1·797	·089	·167	87·53	4·95	2,213	3,977
Bourbon Seedling from Heywoods	13,008	24·47	3·38	...	64·00	1·0751	1·753	·125	·175	85·39	7·13	3,263	5,720
B. 8721	24,478	35·33	9·61	2·35	59·50	1·0800	1·882	·114	·186	86·25	6·06	4,359	8,204
B. 8882	20,880	21·09	3·13	4·13	58·00	1·0817	1·933	·083	·212	86·76	4.29	2,534	4,898
B. 9054	22,400	20·71	2·86	1·41	56·50	1·0791	1·921	·057	·180	89·02	2·97	2,429	4,666
B. 9129	36,384	26·68	6·39	·39	55·75	1·0853	2·067	·083	·173	88·98	4·02	3,069	6,344
B. 9181	25,390	34·17	7·10	5·09	58·25	1·0699	1·678	·078	·159	87·62	4·65	4,168	6,994
B. 9200	23,966	29·61	6·43	2·92	57·50	1·0707	1·763	·052	·123	90·97	2·95	3,563	6,282
B. 9213	13,680	14·66	2·44	3·06	58·25	1·0813	1·917	·083	·217	86·47	4·33	1,769	3,391
B. 9215	17,952	22·82	3·64	7·42	60·25	1·0778	1·889	·063	·171	88·98	3·34	2,858	5,399
B. 9258 ... ... —	17,232	27·14	3·30	21·27	58·00	1·0765	1·759	·114	·215	84·24	6·48	3,277	5,764
B. 9299	16,355	21·35	3·56	10·92	58·00	1·0778	1·857	·089	·177	87·47	4·79	2,574	4,780
B. 9332	9,360	15·71	2·96	28·31	53·50	1·0773	1·788	·104	·220	84·66	5·82	1,747	3,124
B. 9541 „	21,840	23·87	3·32	5·40	59·25	1·0902	2·242	·060	·151	91·40	2·68	2,906	6,515
B. 9619	20,760	16·61	1·34	14·35	52·75	1·0866	2·161	·046	·151	91·65	2·13	1,805	3,901
B. 9881	33,072	37·69	3·11	5·87	57·75	1·0947	2·365	·054	·153	91·95	2·28	4,454	10,534
B. 10082	22,464	24·99	2·68	1·47	56·50	1·0902	2·255	·036	·162	91·93	1·60	2,901	6,542

PLANT CANES.

TABLE XVII.—(*Continued.*) WATERFORD PLANTATION—SANDY FIELD.

No or Name of Seedling.	Number of Canes per acre.	Weight in Tons per acre		Per cent by number of rotten Canes.	Per cent. of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose ℔ per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 10100	10,735	14·15	1·17	9·89	59·50	1·0743	1·707	·104	·219	84·09	6·09	1,756	2,997
B. 10107	17,760	24·53	3·53	2·63	54·75	1·0884	1·947	·096	·362	80·96	4·93	2,765	5,383
B. 10368	25,104	26·94	3·90	3·33	58·50	1·0848	1·993	·139	·179	86·24	6·97	3,254	6,485
B. 10541	17,952	32·66	5·64	·27	58·75	1·0915	2·177	·083	·229	87·47	3·81	3,938	8,573
B. 10459	21,168	26·25	2·57	4·13	53·00	1·0804	1·857	·074	·262	84·68	3·98	2,884	5,356
B. 10631	17,129	23·61	3·65	1·74	59·25	1·0835	2·048	·089	·138	90·02	4·35	2,893	5,925
B. 10650	17,424	32·68	4·24	3·46	61·75	1·0875	2·145	·063	·174	90·05	2·94	4,156	8,915
B. 10659	16,272	20·25	2·25	3·14	54·90	1·0769	1·837	·060	·203	87·48	3·27	2,312	4,247
B. 10665	13,166	25·57	5·74	1·54	58·00	1·0857	2·116	·043	·175	90·66	2·03	3,061	6,477
B. 10816	11,315	27·45	4·04	14·72	59·00	1·0721	1·685	·096	·192	85·40	5·70	3,385	5,704
B. 10857	12,192	34·87	2·68	4·15	55·00	1·0793	1·873	·060	·237	86·31	3·20	3,980	7,455
B. 10894	18,768	28·61	4·24	2·01	57·75	1·0822	1·925	·078	·237	85·94	4·05	3,420	6,584
B. 10990	14,580	21·90	2·21	13·36	56·00	1·0729	1·727	·078	·190	86·57	4·52	2,560	4,421
B. 11118	19,968	24·97	2·36	...	53·25	1·0857	2·106	·035	·193	90·23	1·66	2,743	5,777
B. 11144	10,800	12·67	1·61	10·45	54·25	1·0888	2·200	·036	·181	91·02	1·64	1,749	3,848
B. 11187	10,280	11·24	1·51	21·88	54·50	1·0778	1·839	·083	·201	86·62	4·51	1,273	2,341
B. 11285	11,760	9.85	1·93	12·50	50·28	1·0835	2·056	·038	·181	90·37	1·85	1,025	2,107
B. 11360	12,600	21·54	3·21	9·09	60·00	1·0800	1·944	·078	·160	89·09	4.01	2,680	5,210
B. 11385	15,429	23·18	3·44	·66	59.75	1·0844	1·912	·179	·208	83·17	9·36	2,862	5,472
B. 11620	22,560	17·14	1·50	12·96	48·70	1·0703	1·429	·089	·409	74·16	6·23	1,747	2,496

Plant Canes.

Table xvii.—*Continued* Waterford Plantation :—Sandy Field.

No. or name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 30° C. 16° 6 C.	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 11813 ...	22,627	28·64	2·30	14·72	60·50	1·0848	1·989	·060	·262	86·07	3·02	3,579	7,119
B. 11818 ...	28,320	20·35	3·21	9·23	48·67	1·0866	2·093	·054	·211	88·76	2·58	2,042	4,274
B. 12064 ...	16,800	24·32	2·68	2·78	61·50	1·0765	1·801	·156	·181	86·25	8·66	3,112	5,605
B. 12204 ...	21,264	23·19	3·32	1·77	53·00	1·0897	2·074	·139	·228	84·97	6·70	2,526	5,239
B. 12241 ...	32,204	26.88	4·44	7·17	54·25	1·0782	1·882	·060	·193	88·15	3·19	3,030	5,702
B. 12296 ...	14,976	15·43	1·29	16·13	52·27	1·0822	1·620	·104	·516	72·32	6·42	1,669	2,704
B. 12376 ...	20,496	24·97	4·39	2·29	54·50	1·0884	2·168	·054	·183	90·15	2·49	2,800	6,070
B. 12482 ...	19,296	23·17	3·64	6·95	59·50	1·0853	2·100	·066	·157	90·40	3·14	2,845	5,975
B. 12554 ...	24,480	32·79	4·50	·97	59·04	1·0809	1·782	·114	·309	80·82	6·40	4,011	7,148
B. 12583 ...	8,639	9·46	1·56	23·64	54·65	1·0689	1·516	·156	·220	80·13	10·29	1,083	1,642
B. 12614 ...	16,368	20·74	2·46	7·09	61·00	1·0831	2·064	·078	·121	91·21	3·78	2,617	5,401
B. 12619 ...	18,513	36·81	6·70	4·26	57·83	1·0703	1·607	·114	·206	83·39	7·09	4,456	7,161
B. 12652 ...	11,088	18·17	2·14	...	54·75	1·0897	1·944	·139	·358	79·64	7·15	2,045	3,975
B. 12756 ...	14,112	21·51	2·19	5·77	51·53	1·0835	1·889	·114	·272	83·03	6·03	2,292	4,330
B. 12768 ...	11,520	12·27	1·93	15·79	56·19	1·0800	1·824	·114	·244	83·59	6·26	1,430	2,608
B. 12771 ...	20,382	22·20	2·92	2·13	56·50	1·0804	1·869	·089	·235	85·23	4·76	2,601	4,861
B. 12777 ...	16,704	26·37	3·60	1·69	58·75	1·0870	2·117	·078	·175	89·32	3·68	3,191	6,755
B. 12789 ...	20,880	24·27	4·02	1·69	56·06	1·0969	2·305	·074	·253	87·58	3·21	2,778	6,403
B. 12791 ...	18,308	32·02	4·22	3·61	61·50	1·0879	2·203	·063	·127	92·06	2·86	4,055	8,933
B. 12794 ...	14,880	25·38	4·50	4·62	61·25	1·0839	2·019	·096	·172	88·28	4·75	3,214	6,489

Plant Canes.

Table xvii.—(*Concluded.*) Waterford Plantation:—Sandy Field.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre		Per cent. by number of rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes.	Cane Tops			Sp Gr $\frac{30°C}{16·6°C}$	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 12867	21,600	15·94	4·18	...	54·00	1·0888	2·187	·048	·182	90·49	2·19	1,771	3,873
B. 13417	16,934	21·98	2·70	6·07	58·00	1·0778	1·860	·104	·159	87·61	5·59	2,649	4,927
B. 13646	17,184	21·34	2·23	1·92	58·50	1·0804	1·929	·096	·168	87·96	4·97	2,589	4,994
B. 13667	23,376	23·04	3·49	1·42	58·25	1·0888	2·229	·063	·125	92·22	2·83	2,761	6,154
B. 13725	20,880	23·79	3·21	7·94	56·75	1·0835	2·043	·074	·158	89·80	3·57	2,791	5,702
B. 13750	10,080	10·45	1·45	18·84	57·50	1·0760	1·795	·114	·168	86·42	6·36	1,250	2,244
B. 13774	24,528	24·24	2·91	11·13	57·25	1·0782	1·823	·125	·187	85·39	6·86	2,883	5,256
B. 13864	17,208	16·98	1·90	14·64	57·50	1·0791	1·876	·089	·193	86·93	4·74	2,026	3,801
B. 13920	21,393	29·01	5·69	6·30	58·50	1·0800	1·918	·114	·150	87·90	5·94	3,520	6,751
B. 14034	19,542	26·16	2·94	3·06	56·50	1·0826	2·019	·057	·176	89·65	2·82	3,060	6,178
B. 14114	15,429	25·89	1·84	13·29	66·00	1·0813	1·931	·089	·197	87·09	4·61	3,541	6,838
B. 14141	14,400	23·15	2·57	..	60·00	1·0787	1·756	·179	·212	81·79	10·19	2,883	5,063
B. 14352	14,709	24·10	1·84	26·29	60·50	1·0809	1·834	·179	·192	83·17	9·77	3,023	5,544
B. 14458	24,210	19·77	2·81	5·29	57·00	1·0791	1·929	·078	·151	89·39	4·04	2,339	4,512
B. 14479	21,680	19·10	2·07	11·15	61·00	1·0861	2·119	·057	·170	90·32	2·69	2,404	5,094
B. 14761	19,920	34·43	3·75	..	58·75	1·0902	2·244	·048	·161	91·48	2·14	4,155	9,324
B. 14775	13,988	24·14	1·47	...	53·50	1·0813	1·879	·139	·199	84·76	7·39	2,677	5,030
B 15047	17,160	23·25	4·39	1·38	59·25	1·0773	1·759	·156	·197	83·29	8·86	2,864	5,038
B. 15051	19,520	28·85	5·18	3·56	62·00	1·0791	1·905	096	·157	88·28	5·04	3,714	7,075
B. 15398	18,389	22·06	4·20	4·32	57·00	1·0870	2·193	·042	·135	92·53	1·91	2,591	5,682
B. 15483	19,680	29·77	3·53	...	56·25	1·0760	1·792	·114	·171	86·28	6·36	3,488	6,250
B. 15496	14,194	24·03	2·30	...	64·50	1·0809	1·941	·083	·181	88·03	4·27	3,212	6,234

TABLE XVIII — WATERFORD PLANTATION

PEAR TREE FIELD.

No. of Seedling.	Lb. Canes per hole.	Tons Canes per acre.	Saccharose lb. per gallon.	No. of Seedling.	Lb. Canes per hole.	Tons Canes per acre.	Saccharose lb. per gallon.
20625 ...	15	9·64	1·542	20720 ...	42	27·00	1·750
20626 ..	52	33·42	1·779	20721 ...	37	23·78	2·096
20627 ...	43	27·64	1·989	20727 ...	48	30·85	1·989
20628 ...	62	39·85	1·860	20734 ...	38	24·42	2·012
20629 ...	38	24·42	1·004	20735 ...	47	30·21	2·294
20631 ...	39	25·07	1·452	20738 ...	34	21·85	2·054
20632 ...	25	16·08	1·962	20739 ...	20	12·85	1·918
20634 ...	37	23·78	1·599	20740 ...	22	14·14	2·300
20635 ...	32	20·57	1·652	20743 ...	39	25·07	1·837
20636 ...	22	14·14	1·393	20748 ...	32	20·57	1·588
20637 ...	40	25·71	1·646	20749 ...	25	16·08	1·711
20638 ...	41	26·35	1·941	20750 ...	33	21·21	1·740
20639 ...	84	54·00	1·455	20751 ...	50	32·14	1·908
20641 ...	16	10·28	1·633	20754 ...	38	24·42	1·400
20642 ...	27	17·35	1·588	20756 ...	50	32·14	2·035
20643 ...	60	38·57	2·019	20754 ...	26	16·71	1·928
20644 ...	22	14·14	1·714	20759 ..	34	21·85	1·814
20645 ...	22	14·14	1·597	20761 ...	40	25·71	1·526
20646 ...	56	36·00	2·145	20762 ..	59	37·92	1·934
20651 ...	37	23·78	1·623	20765 ...	38	24·42	1·706
20655 ...	16	10·28	1·591	20766 ...	16	10·28	1·008
20657 ..	30	19·28	1·792	20767 ...	44	28·28	1·729
20658 ...	71	45·64	1·972	20768 ...	33	21·21	2·236
20659 ...	21	13·50	1·714	20769 ...	30	19·28	1·993
20660 ...	33	21·21	1·873	20770 ...	60	38·57	2·051
20661 ...	30	19·28	1·571	a. 20772 ...	55	35·35	1·976
20664 ...	22	14·14	1·695	20772 ...	54	34·72	1·098
20666 ...	20	12·85	1·869	20773 ..	46	29·57	1·928
20668 ..	22	14·14	2·151	20776 ...	25	16·08	1·713
20669 ...	28	18·00	1·844	20779 ...	60	38·57	1·626
20670 ...	37	23·78	1·779	20784 ...	40	25·71	1·821
20674 ...	36	23·14	1·659	20785 ...	43	27·64	1·850
20675 ...	26	16·71	2·252	20786 ...	42	27·00	1·599
20681 ..	43	27·64	1·575	20789 ..	34	21·85	1·685
20685 ...	32	20·57	2·038	20793 ..	35	22·50	1·635
20690 ...	24	15·42	1·850	20794 ...	30	19·28	1·746
20692 ...	31	19·92	1·798	20796 ...	43	27·54	1·798
20694 ...	31	19·92	1·892	20798 ...	50	32·14	1·330
20695 ...	41	26·35	1·707	20799 ...	57	36·64	1·358
20697 ...	29	18·64	1·986	20801 ...	38	24·42	1·861
20703 ..	26	16·71	1·827	20802 ...	25	16·08	1·439
20704 ...	22	14·14	1·680	20807 ...	101	64·94	1·516
20705 ..	19	12·21	1·941	20810 ...	25	16·08	1·539
20706 ...	30	19·28	2·022	20815 ...	35	22·50	1·832
20707 ...	27	17·35	1·879	20816 ...	27	17·35	1·750
20710 ...	40	25·71	1·947	20817 ...	28	18·00	2·019
20711 ...	34	21·85	1·879	20819 ..	88	56·57	1·793
20712 ...	17	10·92	1·821	20826 ...	29	18·64	2·138
20713 ..	53	34·05	2·158	20828 ..	50	32·14	1·202
20714 ...	22	14·14	1·963	20831 ...	43	27·64	1·925
20715 ...	19	12·21	1·298	20833 ...	28	18·00	2·122
20716 ...	26	16·71	2·048	20836 ...	20	12·85	1·879
20717 ...	36	23·14	1·970	20839 ...	35	22·50	1·954
20718 ...	48	30·85	1·955	20840 ..	31	19·92	2·083
20719 ...	22	14·14	2·106	20842 ...	42	27·00	2·138

SELECTED VARIETIES.

PLANT CANES.

TABLE XIX. BRIGHTON PLANTATION :—MONKEY POND FIELD.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per acre		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes	Cane Tops.			Sp. Gr 30°C / 16°6C	Lb per gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio.		
White Transparent	12,785	28·49	3·87	13·39	59·25	1·0848	2·125	·069	·117	91·95	3·25	3,487	7,410
B. 376	10,889	26·23	3·51	15·09	60·00	1·0831	2·044	·083	·136	90·32	4·06	3,255	6,653
B. 1030	17,100	23·19	2·66	1.39	56·00	1·0875	2·138	·045	·199	89·76	2·11	2,674	5,717
B. 1355	18,511	28·03	6·66	·86	61·50	1·0870	2·159	·104	·107	91·09	4·81	3,553	7,671
B. 1376	15,850	22·61	4·72	4·38	58·75	1·0897	2·262	·045	·134	92·67	1·98	2,731	6,178
B. 1528	18,794	22·65	4·29	1·69	60·50	1·0920	2·281	·060	160	91·20	2·63	2,811	6,412
B. 1529	17,261	13·14	4·10	...	57.75	1·1010	2·553	·029	·159	93·14	1·14	1,544	3,942
B. 1566	11,897	16·20	3·96	4·22	55·00	1·0879	2·181	·050	·162	91·14	2·29	1,835	4,002
B. 1753	23,391	25·87	4·18	..	55·00	1·0875	2·119	·078	·185	88·96	3·68	2,931	6,211
B. 3289	11,978	19·53	4·95	7·19	58·50	1·0795	1·947	·052	171	89·72	2·67	2,371	4,616
B. 3390	20,044	24·52	5·37	3·87	58·00	1·0831	1·915	·083	·265	84·62	4·33	2,941	5,632
B. 3412	19,963	27·32	4·14	4·62	60·00	1·0870	1·952	·083	·335	82·36	4·25	3,379	6,596
B. 3696	18,229	23·69	3·87	2·59	51·00	1·0879	2·151	·046	·196	89·88	2·14	2,488	5,352
B. 6048	17,423	22·68	4·05	9·43	50·25	1·0853	1·963	·066	·294	84·50	3·36	2,353	4,619

SELECTED VARIETIES.

TABLE XX — CARRINGTON PLANTATION :—PIG POND FIELD.

Plant Canes.

No. or Name of Seedling.		Number of Canes per acre.	Weight in tons per acre. Canes.	Weight in tons per acre. Cane Tops.	Per cent. by number of rotten Canes.	Per cent of Juice by mill.	Normal Juice. Sp. Gr. 30°C./16·6°C.	Normal Juice. Lb. per gallon. Saccharose.	Normal Juice. Lb. per gallon. Glucose.	Normal Juice. Lb. per gallon. Solids not Sugar.	Normal Juice. Quotient of Purity.	Normal Juice. Glucose Ratio.	Gallons of Juice per acre.	Saccharose lb per acre.
White Transparent	Series i	15,778	28·46	3·18	10·19	56·12	1·0829	2·007	·069	·211	87·76	3·44	3,300	6,623
" "	" ii	14,617	24·24	3·61	3·82	55·50	1·0866	2·164	·054	·140	91·77	2·49	2,774	6,003
	mean	..	26·35	..	...	...	...	..	.		89·77	...	...	6,313
B. 147	Series i	15,052	26·34	4·73	2·51	58·50	1·0844	2·038	·078	·183	88·65	3·83	3,183	6,487
" "	" ii	15,246	24·33	5·44	·63	57·50	1·0831	2·044	·069	·150	90·32	3·38	2,893	5,913
	mean	...	25·34	...	...	...	...	..		...	89·49	. .	..	6,200
B. 208	Series i	16,553	25·63	4·73	4·47	58·25	1·0951	2·385	·043	·156	92·30	1·80	3,053	7,281
" "	" ii	14,230	25·43	4·62	3·29	57·25	1·0974	2·446	·022	·177	92·48	·90	2,972	7,269
	mean	...	25·53	...	...	...	..	..	.	...	92·39	...	...	7,275
B. 376	Series i	13,697	23·82	2·70	9·59	53·75	1·0875	2·119	·089	·174	88·96	4·20	2,639	5,592
" "	" ii	14,084	23·57	2·99	2·35	54·50	1·0870	2·168	·040	·162	91·48	1·85	2,648	5,741
	mean	...	23·70	...	..	...	...	...	...	...	90·22	..	...	5,667
B. 1566	Series i	12,245	28·61	3·26	4·89	56·50	1·0813	1·955	·074	·188	88·18	3·79	3,348	6,545
" "	" ii	11,616	21·00	4·47	...	53·00	1·0915	2·333	·022	·134	93·73	·94	2,284	5,329
	mean	...	24·81	...	...	...	..	...	...	...	90·96	..	...	5,937
B. 1753	Series i	23,764	30·40	3·07	·61	53·00	1·0835	1·933	·089	·253	84·97	4·60	3,331	6,439
" "	" ii	24,297	30·34	3·01	1·95	50·75	...	...		Juice lost		...	...	...
	mean	...	30·37	...	..	...	...	..		...	...	...	...	
B. 3289	Series i	12,342	24·27	2·99	2·67	54·50	1·0804	1·926	·069	·198	87·83	3·58	2,629	5,063
" "	" ii	12,342	23·03	2·52	3·77	55·15	1·0848	2·125	·043	·143	91·95	2·02	2,623	5,574
	mean	...	23·15	...	...	...	...	...	...	...	89·89	...	...	5,319

SELECTED VARIETIES.

TABLE XX—(*Concluded.*) CARRINGTON PLANTATION:—PIG POND FIELD.

Plant Canes.

No or Name of Seedling		Number of Canes per acre.	Weight in Tons per acre		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
			Canes.	Cane Tops.			Sp. Gr. 30°C./15°6 C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio		
B. 3412	Series i	21,538	35·35	4·56	1·11	56·00	1·0879	2·082	·089	·222	87·00	4·27	4,076	8,486
" "	" ii	22,458	32·11	4·13	·43	55·00	1·0879	2·025	·104	·264	84·62	5·14	3,636	7,363
	mean...	...	33.73	...	...	...		...	...	...	85·81	..	...	7,925
B. 3696	Series i	17,037	23·77	3·69	·57	58·00	1·0861	2.112	·046	·188	90·03	2·18	2,843	6,004
" "	" ii	17,085	21·69	3·46	·84	58·25	1·0875	2·155	·054	·173	90·47	2·51	2,603	5,609
	mean...	...	22·73	...	...	...	..	...	...	...	90·25	...	...	5,807
B. 3747	Series i	16,553	26·43	5·21	·87	57 83	1·0884	2·172	·057	·176	90·31	2·62	3,145	6,831
" "	" ii	17,085	27·92	5·38	·84	57·50	1·0893	2·187	·043	.199	90·03	1 97	3,301	7,219
	mean...	...	27·18	...	...	..	...	...	...	...	90·17	...	...	7,025
B. 6292	Series i	13,988	22·45	4·45	...	61·50	1 0879	2·155	·063	·175	90·06	2·92	2,843	6,127
" "	" ii	13,213	23·98	4·28	1·44	59·75	1·0826	1·976	·096	·180	87·74	4·86	2,965	5,859
	mean	...	23·22	...	...	...	..	...	...	...	88·90	..	...	5,993
Sealy Seedling	Series i	19,650	32 52	3·46	·98	54·50	1·0857	1·928	·074	·332	82·61	3·84	3,657	7,051
" "	" ii	19,796	33·94	5·12	·49	58·00	1·0879	2·074	·078	·241	86·67	3·76	4,054	8,408
	mean...	...	33·23	...	...	...	...	...	...	...	84·64	...	...	7,730

Selected Varieties.

Table xxi. Clifton Plantation;—Six acre Parish Field.

1st Ratoons

No. or Name of Seedling		Number of Canes per acre.	Weight in Tons per Acre: Canes.	Weight in Tons per Acre: Cane Tops	Per cent. by number of rotten Canes.	Per cent of Juice by Mill.	Normal Juice: Sp Gr 30°C 16·6°C	Normal Juice: lb. per Gallon: Saccharose.	Normal Juice: lb. per Gallon: Glucose.	Normal Juice: lb. per Gallon: Solids not Sugar.	Normal Juice: Quotient of Purity.	Normal Juice: Glucose Ratio.	Gallons of Juice per acre.	Saccharose lb per acre.
White Transparent	Series i	13,995	18·77	3·47	29·12	55·50	1·0906	2·255	·066	·144	91·48	2·93	2,140	4,825
" "	" ii	20,092	25·82	3·53	6·49	60·31	1·0888	2·219	·066	·132	91·81	2·97	3,204	7,110
	mean	...	22·30	..	...	...	...	...	...	...	91·65	...	...	5,978
B. 208	Series i	17,653	22·11	4·54	12·89	57·50	1·0956	2·401	·057	·138	92·49	2·37	2,600	6,243
"	" ii	20,324	23·72	3·97	10·26	59·00	1·0956	2·414	·052	·130	92·99	2·15	2,861	6,906
	mean	...	22·92	...	...	...	...	...	...	...	92·74	...	...	6,575
B. 1030	Series i	18,060	15·60	2·93	...	50·52	1·0879	2·148	·060	·185	89·76	2·79	1,623	3,486
"	" ii	10,001	6·80	1·01	...	53·16	1·0853	2·064	·069	·190	88·85	3·34	746	1,540
	mean	...	11·20	...	..	...	...	...	...	...	89·31	...	...	2,513
B. 1566	Series i	17,421	29·14	5·31	·99	60·71	1·0861	2·104	·083	·159	89·68	3·94	3,648	7,675
"	" ii	17,072	28·97	3·30	..	58·25	1·0809	1·993	·089	·123	90·39	4·47	3,497	6,970
	mean	...	29·06	...	...	...	...	...	...	...	90·04	...	...	7,323
B. 1753	Series i	25,550	25·46	3·99	1·57	54·75	1·0853	2·031	·096	·196	87·43	4·73	2,877	5,843
"	" ii	24,564	24·26	3·27	..	52·96	1·0844	2·041	·078	·180	88·78	3·82	2,655	5,419
	mean	...	24·86	...	...	...	...	...	...	...	88·11	...	...	5,631
B. 3209	Series i	17,711	20·77	3·73	8·96	57·50	1·0911	2·300	·048	·129	92·85	2·09	2,451	5,637
"	" ii	18,989	20·66	3·78	9·17	59·00	1·0870	2·219	·043	·108	93·63	1·94	2,512	5,574
	mean	...	20·72	...	...	...	...	...	...	...	93·24	...	...	5,605
B. 3390	Series i	26,189	31·08	5·06	8·70	58·00	1·0861	2·035	·066	·245	86·74	3·24	3,718	7,566
"	" ii	25,086	26·31	5·26	9·62	55·05	1·0853	2·090	·083	·150	89·97	3·97	2,990	6,249
	mean	...	28·70	...	...	...	...	...	...	...	88·36	...	...	6,908

SELECTED VARIETIES.

TABLE XXI.—*Concluded.* CLIFTON PLANTATION:—SIX ACRE PARISH FIELD.

1st Ratoons.

No. or Name of Seedling.		Number of Canes per acre.	Weight in tons per acre.		Per cent. by number of rotten Canes.	Per cent of Juice by mill	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
			Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C.	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 3405	Series i	26,306	31·32	5·63	1·95	56·50	1·0835	1·972	·125	·178	86·68	6·34	3,658	7,214
" "	" ii	26,306	29·97	5·91	·44	56·00	1·0817	2·002	·066	·160	89·86	3·30	3,475	6,957
	mean	...	30·65	..	...	...	...	..	..		88·27	..	...	7,086
B. 3412	Series i	28,454	35·69	4·98	2·97	58·50	1·0800	1·824	·156	·202	83·59	8·55	4,331	7,900
" "	" ii	27,932	30·98	5·86	1·43	57·50	1·0817	1·976	·096	·156	88·69	4·86	3,689	7,289
	mean	...	33·34	...	...	...	...	..		...	86·14	..	..	7,595
B. 3696	Series i	21,776	25·38	4·79	8·76	60·00	1·0861	2·135	·083	·128	91·01	3·89	3,141	6,706
" "	" ii	19,777	23·70	4·12	8·10	58·50	1·0848	2·151	·054	·106	93·08	2·51	2,862	6,156
	mean	...	24·54	...	...	...	..		..	...	92·05	...	...	6,431
B. 3708	Series i	21,950	27·01	6·82	4·55	59·50	1·0844	2·100	·048	·151	91·34	2·29	3,320	6,972
" "	" ii	20,905	19·70	5·08	9·32	58·50	1·0861	2·158	·031	·157	91·99	1·44	2,377	5,130
	mean	...	23·36	...	..	...	...	...	..	..	91·67	..	...	6,051
B. 4596	Series i	20,847	27·25	5·31	9·80	61·00	1·0813	1·808	·179	·230	81·55	9·90	3,443	6,225
" "	" ii	21,950	23·31	5·83	3·57	61·00	1·0817	1·967	·114	·147	88·29	5.80	2,945	5,793
	mean	...	25·28	..	...	...	..	...	...	...	84·92	..	...	6,008

TABLE XXII.

CLIFTON PLANTATION.—WELL FIELD.

SELECTED VARIETIES.

PLANT CANES.

No. or Name of Seedling.		Number of Canes per acre.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
			Canes.	Cane Tops.			Sp. Gr. $\frac{30°C.}{16·6°C.}$	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
White Transparent	Series i	17,421	16·05	6·48	·33	56·00	1·0870	2·242	·022	·106	94·60	·98	1,852	4,152
" "	" ii	16,898	21·34	4·82	3·32	57·50	1·0866	2·211	·031	·116	93·77	1·40	2,529	5,592
	mean	...	18·70	...	...	...	..	..	...	...	94·19	...	...	4,872
B. 208	Series i	18,292	17·47	7·34	5·69	55·50	1·0965	2·436	·045	·139	92·98	1·85	1,981	4,826
" "	" ii	12,137	14·18	4·56	41·62	60·00	1·0893	2·232	·063	·134	91·89	2·82	1,750	3,905
	mean	...	15·83	...	...	...	...	...	...	...	92·44	...	...	4,366
B. 1030	Series i	22,271	14·72	5.00	...	52·50	1·0857	2·145	·027	·162	91·90	1·26	1,594	3,419
" "	" ii	19,221	18·54	4·48	...	51·50	1·0870	2·138	·057	·175	90·21	2·67	1,967	4,205
	mean	...	16·63	...	...	...	...	...	...	...	91·06	...	...	3,812
B. 1566	Series i	13,467	23·75	5·62	...	56·00	1.0857	2·169	·050	·115	92·93	2·31	2,744	5,952
" "	" ii	13,588	23·59	5·21	1·68	56·75	1·0866	2·174	·045	·139	92·20	2·07	2,760	6,000
	mean	...	23·67	...	...	...	...	...	..	...	92·57	..	...	5,976
B. 1753	Series i	24,041	23 49	4·61	·72	54·75	1·0817	1·962	·083	·183	88·06	4·23	2,663	5,225
" "	" ii	19,744	19·96	3·53	...	53·00	1·0831	1·983	·089	·191	87·63	4·49	2,188	4,339
	mean	...	21·73	...	..	...	...	...	...	..	87·85	...	...	4,782
B. 3390	Series i	24,273	31·16	6·35	1·41	56·00	1·0804	1·905	·125	·163	86·87	6·56	3,618	6,892
" "	" ii	23,228	27 69	7·15	2·68	55·50	1·0835	1·944	·114	·217	85·45	5·86	3,177	6,176
	mean	...	29·43	..	..	..	...	..	...	..	86·16	...	..	6,534
B. 3405	Series i	25,338	32·7	7·03	1·24	58·50	1·0813	1·963	·096	·158	88·54	4·89	3,971	7,795
" "	" ii	24,388	27·95	8·05	...	57·50	1·0822	1·928	·156	·156	86·07	8·09	3,327	6,414
	mean	...	30·36	...	...	...	...	...	...	.	87·31	..	...	7,105

TABLE XXII.—*Concluded.*

SELECTED VARIETIES.

CLIFTON PLANTATION :—WELL FIELD. PLANT CANES.

No or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 30° C. / 16° 6 C.	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 3412 ... ... Series i	22,949	28·06	7·57	·98	57·50	1·0853	2·038	·114	·171	87·73	5·59	3,331	6,789
" " ... ... " ii	26,461	29·51	7·59	·93	59·00	1·0826	2·019	·074	·159	89·65	3·67	3,603	7,274
mean	...	28·79	...	...	...	...	...	...	...	88·69	...	...	7,032
B. 3696 ... ... Series ii	19,550	21·91	8·21	9·01	60·50	1·0835	2·122	·033	·120	93·27	1·56	2,740	5,814
B. 4596 ... ... Series i	16,884	19·98	5·92	2·32	57·00	1·0778	1·852	·114	·157	87·24	6·16	2,367	4,384
" " ... ... " ii	16,375	17·46	6·65	...	60·00	1·0817	2·041	·060	·127	91·61	2·94	2,169	4,427
mean	...	18·72	...	...	...	...	...	...	...	89·43	...	...	4,406

Selected Varieties.

Table xxiii. Clifton Hall Plantation :—Calf Field

Plant Canes.

No. or Name of Seedling.	Number of Canes per acre	Weight in Tons per Acre. Canes.	Weight in Tons per Acre. Cane Tops.	Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice. Sp. Gr. 30°C 16·6°C	Normal Juice. Lb. per gallon. Saccharose.	Normal Juice. Lb. per gallon. Glucose.	Normal Juice. Lb. per gallon. Solids not Sugar.	Normal Juice. Quotient of Purity.	Normal Juice. Glucose Ratio.	Gallons of Juice per acre.	Saccharose lb per acre.
White Transparent ... ... Series ii	13,066	24·16	4·93	25·00	61·62	1·0844	2·125	·045	·129	92·43	2·12	3,076	6,537
B. 208 ... ... Series ii	17,653	32·72	6·66	2·87	60·25	1·0933	2·333	·054	·149	91·99	2·31	4,039	9,423
B. 376 ... ... Series i	19,744	38·73	8·66	11·69	59·79	1·0879	2·142	066	·185	89·51	3·08	4,768	10,213
" " ... ... " ii	19,279	31·96	6·30	7·00	63·50	1·0826	2·028	083	·141	90·05	4·09	4,200	8,517
mean.	...	35·35	...	...	...	...	...	...	...	89·78	...	...	9,365
B. 1386 ... . Series i	19,221	31·68	6·38	18·87	58·87	1·0857	2·009	·069	·256	86·08	3·43	3,848	7,731
" " ... ... " ii	20,092	34·09	7·91	10·59	61·50	1·0879	2·198	·057	·138	91·85	2·59	4,317	9,489
mean.	...	32·89	...	...	...	...	...	...	...	88·97	...	...	8,610
B. 1521 ... ... Series i	18,408	33·10	7·47	13·39	61·00	1·0870	2·093	·069	·208	88·31	3·30	4,162	8,711
" " ... ... " ii	17,189	35·78	7·73	4·82	61·75	1·0879	2·177	·074	·142	90·99	3·39	4,549	9,903
mean.	...	34·44	..	...	...	...	...	...	...	89·65	...	...	9,307
B. 1529 ... ... Series i	24,606	21·88	3·60	10·32	59·47	1·0987	2·495	·031	·155	93·06	1·24	2,652	6,617
" " ... ... " ii	15,429	23·33	5·07	24·39	62·25	1·0947	2·404	·028	·140	93 47	1·16	2,972	7,145
mean.	...	22·61	...	...	...	...	..	...	...	93 27	...	...	6,881
B. 1566 ... ... Series i	18,640	51·28	9·83	3·02	60·00	1·0791	1·941	·089	·128	89·94	4·59	6,387	12,397
" " ... ... " ii	17,572	45·54	9·16	4·91	60·75	1·0773	1·887	·096	·129	89·34	5·08	5,753	10,856
mean.	...	48·41	...	...	...	...	...	...	...	89·64	...	...	11,627
B. 1753 ... ... Series i	33,005	55·18	6·67	1·64	57·50	1·0831	2·035	·069	·159	89·92	3·39	6,561	13,352
" " ... ... " ii	26,851	42·08	5·10	1·98	56·00	1 0835	1·986	·096	·193	87·29	4·84	4,871	9,674
mean.	...	48·63	...	...	...	...	...	...	...	88·61	...	..	11,513

SELECTED VARIETIES.

PLANT CANES.

TABLE XXIII.—*Concluded.* CLIFTON HALL PLANTATION :—CALF FIELD.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per acre		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes	Cane Tops.			Sp. Gr $\frac{30°C}{16°6C}$	Lb per gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio.		
B. 3289	17,854	34·57	6·47	7·12	61·46	1·0848	2·085	·038	·188	90·22	1·82	4,388	9,149
B. 3390 ... ... Series i	26,886	47·52	6·20	6·46	60·46	1·0831	1·931	·139	·193	85·33	7·19	5,942	11,474
" " ... ... " ii	19,744	41·79	8·01	6·85	58·00	1·0831	2·006	·083	·174	88·64	4·13	5,015	10,056
mean		44·66	...	...	...	...	...	...	...	86·99	...	...	10,765
B. 3405 ... ... Series i	28,518	54·43	9·45	4·54	59·50	1·0817	1·779	·208	·241	79·85	11·69	6,708	11,934
" " ... ... " ii	26,532	48·33	8·05	8·33	56·00	1·0800	1·724	·250	·208	79·01	14·51	5,614	9,679
mean		51·38	...	...	...	..	...	...	...	79·43	.	...	10,807
B. 3412 ... ... Series i	26,247	49·96	9·26	4·24	60·10	1·0800	1·753	·179	·250	80·34	10·21	6,227	10,916
" " .. .. " ii	19,395	37·07	6·09	3·47	61·00	1·0795	1·678	·208	·284	77·33	12·39	4,692	7,873
mean		43·52	...	...	...	...	...	...	...	78·84	...	...	9,395
D. 95	23,852	38·50	10·92	13·17	63·50	1·0844	2·148	·034	·117	93·43	1·58	5,049	10,846

SELECTED VARIETIES.

TABLE XXIV.

CLIFTON HALL PLANTATION—CLAY PIT FIELD.

1ST RATOONS.

No. or Name of Seedling.		Number of Canes per acre.	Weight in Tons per acre		Per cent by number of rotten Canes.	Per cent. of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
			Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
White Transparent	Series i	20,034	29·94	6·17	2·25	61·36	1·0875	2·187	·054	·141	91·81	2·47	3,784	8,276
" "	" ii	21,137	29·99	6·61	3·19	59·09	1·0879	2·197	·046	·150	91·81	2·09	3,649	8,017
	mean	...	29·96	...	...	...	...	...	..	..	91·81	...	...	8,147
B. 208	Series i	22,996	29·73	8·29	1·49	65·00	1·0951	2·411	·035	·138	93·30	1·45	3,954	9,533
" "	" ii	18,524	24·11	5·60	12·60	62·50	1·0947	2·390	·052	·130	92·93	2·18	3,084	7,371
	mean	...	26·92	...	...	...	...	...	...	...	93·12	...	...	8,452
B. 376	Series i	21,660	36·92	6·84	2·10	62·50	1·0822	2·074	·054	·112	92·59	2·60	4,776	9,905
" "	" ii	21,892	36·32	7·65	6·91	59·50	1·0853	2·119	·069	·135	91·22	3·25	4,460	9,451
	mean	...	36·62	...	...	...	...	...	...	..	91·91	...	...	9,678
B. 1386	Series i	22,473	33·65	6·56	2·27	59·50	1·0915	2·300	·052	·137	92·41	2·26	4,109	9,451
" "	" ii	19,860	30·41	6·35	3·93	58·00	1·0897	2·258	·040	·143	92·50	1·77	3,626	8,188
	mean	...	32·03	...	...	...	..	..	...	...	92·46	..	...	8,820
B. 1521	Series i	16,143	21·44	5·78	1·77	60·50	1·0933	2·346	·043	·147	92·51	1·83	2,658	6,236
" "	" ii	14,924	12·44	3·94	1·16	58·50	1·0915	2·291	·069	·129	92·04	3·01	1,494	3,423
	mean	...	16·94	...	...	...	...	...	...	...	92·28	..	...	4,830
B. 1529	Series i	23,402	17·06	5·00	·98	61·01	1·0983	2·362	·027	·280	88·49	1·14	2,123	5,015
" "	" ii	18,815	10·32	4·25	...	56·12	1·0983	2·539	·024	·106	95·13	·94	1,181	2,999
	mean	...	13·70	...		...	...	...		...	91·81	...	...	4,007
B. 1566	Series i	21,079	37·77	7·65	2·15	58·00	1·0897	2·252	·057	·132	92·26	2·53	4,504	10,143
" "	" ii	18,815	35·52	7·73	3·29	57·00	1·0870	2·203	066	·101	92·95	2·99	4,172	9,191
	mean	...	36·65	...	...	...	.	...	...	...	92·61	...	...	9,667

SELECTED VARIETIES.

TABLE XXIV.—*Concluded.* CLIFTON HALL PLANTATION:—CLAY PIT FIELD.

1st Ratoons.

No. or Name of Seedling.		Number of Canes per acre.	Weight in tons per acre.		Per cent. by number of rotten Canes.	Per cent of Juice by mill	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
			Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C.	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 1753	Series i	21,312	19·70	4·30	1·08	56·19	1·0844	1·999	·089	·211	86·95	4·45	2,287	4,572
" "	" ii	17,944	13·35	3·40	...	54·50	1·0857	2·077	·062	·194	88·59	3·03	1,501	3,118
	mean	...	16·53	..	...	...	...	..	...		87·97	.	...	3,845
B. 3289	..	8,613	8·21	2·72	3·26	57·00	1·0902	2·284	·027	·142	93·11	1·18	961	2,195
B. 3390	Series i	34,610	47·44	10·89	·83	57·73	1·0875	2·116	·104	·162	88·83	4·91	5,641	11,935
" "	" ii	26,073	29·94	7·13	1·10	57·50	1·0857	2·031	·125	·178	87·02	6·15	3,552	7,214
	mean	...	38·69	...	...	...	...	..	...	...	87·93	...	..	9,575
B. 3405	Series i	28,571	35·93	8·81	·61	58·00	1·0809	1·860	·156	·189	84·35	8·39	4,319	8,033
" "	" ii	30,196	34·43	7·98	1·33	60·00	1·0826	1·869	·208	·175	82·99	11·13	4,274	7,988
	mean	...	35·18	...	...	...	...	.	..	...	83·67	...	...	8,011
B. 3412	Series i	29,151	35·23	8·17	..	57·50	1·0817	1·869	·156	·203	83·88	8·34	4,195	7,840
" "	" ii	30,719	36·84	7·47	1·12	58·59	1·0826	1·895	·156	201	84·15	8·23	4,466	8,463
	mean	...	36·04	..	...	...	...	...	...	...	84·02	..	...	8,152
B. 95 "	...	30,254	41·71	10·68	4·58	59·38	1·0911	2·336	·031	·110	94·31	1·33	5,085	11,878

TABLE XXV.

SELECTED VARIETIES.

CLIFTON HALL PLANTATION:—GOAT FIELD.

2ND RATOONS.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per acre		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes	Cane Tops.			Sp. Gr. $\frac{30°C}{16°6C}$	Lb per gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio		
White Transparent ...	21,021	22·22	5·94	3·47	60·00	1·0884	2·185	·063	·157	90·85	2·88	2,743	5,993
B. 3390 ...	32,868	36·06	8·14	7·36	56·75	1·0800	1·887	·114	·181	86·48	6·04	4,244	8,008
B. 3405 ...	33,565	31·99	7·57	1·87	57·00	1·0804	1·886	·114	·193	86·00	6·04	3,781	7,131
B. 3412 ...	38,561	40·44	8·87	1·82	59·00	1·0853	1,988	·125	·210	85·58	6·29	4,924	9,789

TABLE XXVI. COVERLY PLANTATION :—MITTIE FIELD.

SELECTED VARIETIES.

1st Ratoons

No. or Name of Seedling		Number of Canes per acre.	Weight in Tons per Acre		Per cent. by number of rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
								Lb. per Gallon.						
			Canes.	Cane Tops			Sp Gr $\frac{30°C}{16·6°C}$	Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
White Transparent	Series i	19,166	22·91	5·56	·55	52·00	1·0839	2·009	·096	·182	87·84	4·78	2,462	4,946
" "	" ii	18,216	19·89	4·55	1·43	50·50	1·0826	1·944	·114	·194	86·32	5·86	2,079	4,042
	mean	...	21·40	..	...	..	...	...	...	...	87·08	...	...	4,494
B. 376	Series i	18,902	13·60	4·81	...	45·50	1·0870	2·158	·060	·152	91·05	2·78	1,276	2,754
"	" ii	18,480	14·83	5·23	...	46·50	1·0893	2·268	·052	·109	93·37	2·29	1,418	3,216
	mean	...	14·22	...	...	...	...	...	...		92·21	...	...	2,985
B. 1030	Series i	20,116	13·62	4·57	..	46·50	10·839	2·015	·069	·203	88·11	3·42	1,309	2,638
"	" ii	17,740	10·23	4·78	..	45·50	1·0831	1·989	·074	·200	87·89	3·72	963	1,915
	mean	...	11·93	...	...	...	...	...	...	...	88·00	...	...	2,277
B. 1529	Series i	15,989	8·38	5·35	..	47·00	1·0924	2·315	·054	·143	92·15	2·33	808	1,871
"	" ii	17,804	9·17	5·26	...	48·00	1·0924	2·300	·060	·152	91·56	2·61	902	2,075
	mean	...	8·78	...	...	...	...	...	...		91·86	...	...	1,973
B 1753	Series i	27,244	16·45	5·14	...	45·25	1·0800	1·863	·104	·215	85·38	5·58	1,544	2,876
"	" ii	25,977	15·25	4·01	...	44·50	1·0826	1·955	·114	·183	86·81	5·83	1,404	2,745
	mean		15·85	...	...	...	...	...	...	...	86·10	...	...	2,811
B. 3635	Series i	20,750	15·04	6·84	...	49·50	1·0915	2·292	·057	·140	92·09	2·49	1,528	3,502
"	" ii	14,361	9·36	4·03	...	45·00	1·0866	2·116	·060	·182	89·74	2·84	868	1,837
	mean		12·20	...	...	...	...	...	...	...	90·92	...	...	2,670
B. 3696	Series i	19,123	16·68	4·56	...	51·00	1·0835	2·054	·074	·147	90·29	3·61	1,759	3,613
"	" ii	14,163	11·69	3·24	...	51·50	1·0813	1·994	·083	·140	89·94	4·16	1,247	2,487
	mean	...	14·19		...	...	...	...	...	...	90·12	...	...	3,050
B. 5102	Series i	19,747	9·10	6·86	...	51·05	1·0813	1·983	·074	·160	89·45	3.73	962	1,908
"	" ii	18,824	10·39	6.72	...	48·00	1·0809	1·965	·066	·174	89·12	3·36	1,033	2,030
	mean	...	9·75	...	.	...	...	...	...	..	89·29	...	...	1,969

SELECTED VARIETIES.

TABLE XXVII. COVERLEY PLANTATION :—OLD WELL FIELD.

PLANT CANES.

No. or Name of Seedling.		Number of Canes per acre	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose ℔ per acre.
								Lb. per gallon.						
			Canes.	Cane Tops.			Sp. Gr. 30°C 16·6°C	Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
W. Transparent	Series i	13,228	26·14	5·94	3·81	55·50	1·0804	1·944	·096	·153	88·65	4·94	3,008	5,848
" "	" ii	15,123	29·84	5·08	2·34	53·50	1·0822	1·986	·083	·171	88·66	4·18	3,306	6,566
	mean.	...	27·99	...	...	...	...	...	...		88·66	...	...	6,207
B. 376	Series i	16,172	25·80	5·29	1·72	49·50	1·0831	2·027	·078	·158	89·57	3·85	2,641	5,355
" "	" ii	13,873	23·03	4·07	1·43	49·00	1·0835	2·001	·057	·217	87·96	2·85	2,333	4,668
	mean.	...	24·42	...	...	...	...	...	...	...	88·77	...	...	5,012
B. 1030	Series i	17,906	25·10	4·72	1·33	48·50	1·0822	1·986	·078	·176	88·66	3·93	2,520	5,005
" "	" ii	14,115	27·72	4·34	2·24	52·11	1·0817	1·868	·096	·264	83·85	5·14	2,992	5,589
	mean.	...	26·41	..	...	...		...	...	...	86·26	...	...	5,297
B. 1529	Series i	20,850	25·53	5·91	1·15	55·00	1·0929	2·313	·074	·137	91·64	3·20	2,878	6,657
" "	" ii	21,294	26·37	5·11	...	53·03	1·0956	2·326	·089	·181	89·60	3·83	2,858	6,648
	mean.	...	25·95	...	...	...	...	...	...	...	90·62	...	...	6,653
B. 1566	Series i	11,332	26·05	3·64	3·77	48·50	1·0861	2·091	·069	·186	89·13	3·30	2,606	5,449
" "	" ii	11,816	23·50	2·74	10·12	48·00	1·0800	1·844	·096	·242	84·51	5·21	2,339	4,313
	mean.	...	24·78	...	...	...	...	...	...	...	86·82	...	...	4,881
B. 1753	Series i	20,648	29·86	5·65	1·35	46·50	1·0773	1·792	·083	·237	84·85	4·63	2,888	5,175
" "	" ii	22,705	33·46	5·55	·71	46·75	1·0773	1·717	·104	·291	81·30	6·06	3,253	5,585
	mean.	...	31·66	...	...	...	...	...	...	...	83·08	...	.	5,380
B. 3412	Series i	22,665	34·34	5·82	·71	49·50	1·0831	1·824	·063	·376	80·60	3·46	3,517	6,415
" "	" ii	21,979	39·01	5·04	...	53·25	1·0791	1·686	·139	·333	78·13	8·24	4,313	7,272
	mean.	...	36·68	..	...	...	...	...	...	...	79·37	...	...	6,844

SELECTED VARIETIES.

TABLE XXVII.—*Concluded.*

COVERLY PLANTATION :—OLD WELL FIELD. PLANT CANES.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 30° C. 16° 6 C.	Lb. per gallon, Saccharose.	Lb. per gallon, Glucose.	Lb. per gallon, Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 3635 ... ... Series i	12,905	16·29	5·96	...	49·00	1·0929	2·307	·046	·171	91·41	1·99	1,636	3,774
" " ... ... " ii	15,204	25·28	7·65	...	55·00	1·0915	2·304	·060	·125	92·57	2·61	2,853	6,573
mean	...	20·79	...	...	...	...	...	...	...	91·99	...	...	5,174
B. 3696 ... ... Series i	16,615	20·63	4·12	...	51·50	1·0844	2·067	·069	·163	89·91	3·34	2,195	4,537
" " ... ... " ii	18,108	27·05	4·57	...	56·00	1·0835	2·044	·078	·153	89·85	3·82	3,133	6,404
mean	...	23·84	...	...	...	...	...	...	...	89·88	...	...	5,471
B. 5102 ... ... Series i	20,084	21·10	6·32	1·77	54·50	1·0791	1·912	·083	·163	88·61	4·34	2,387	4,564
" " ... ... " ii	21,011	24·16	6·90	1·35	56·00	1·0804	1,963	·083	·147	89·51	4·22	2,805	5,506
mean	...	22·63	...	...	...	...	...	...	...	89·06	...	...	5,035
B. 6292 ... ... Series i	13,994	21·61	2·59	1·98	52·50	1·0769	1,801	·096	·203	85·76	5·33	2,359	4,249
" " ... ... " ii	15,769	31·57	5·33	1·01	57·50	1·0826	1,970	·114	·168	87·48	5·79	3,757	7,401
mean	...	26·59	...	...	...	...	...	...	...	86·62	...	...	5,825

SELECTED VARIETIES.

TABLE XXVIII. HAMPTON PLANTATION:—BEAN FIELD.

Plant Canes.

No or Name of Seedling.	Number of Canes per acre.	Weight in Tons per acre		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C. / 15·6 C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio		
W. Transparent	15,633	23·12	3·59	2·12	56·00	1·0861	2·106	·063	·177	89·77	2·99	2,671	5,625
B. 208	18,828	25·89	4·73	·77	55·75	1·0920	2·292	·040	·169	91·64	1·75	2,961	6,787
B. 1030	20,812	21·00	4·23	1·60	51·00	1·0835	1·952	·069	·254	85·80	3·53	2,214	4,322
B. 1753	20,038	18·56	3·03	·72	53·50	1·0822	1·917	·104	·219	85·58	5·42	2,055	3,940
B. 3289	12,768	19·67	2·50	3·04	56·25	1·0800	1·929	·045	·208	88·41	2·33	2,295	4,427
B. 3696	20,724	25·31	3·62	1·88	60·00	1·0861	2·113	·046	·187	90·07	2·18	3,132	6,618
B. 3708	15,973	17·18	4·72	1·49	54·50	1·0870	2·171	·048	·151	91·60	2·21	1,929	4,188
B. 4769	11,616	17·68	3·32	2·91	56·00	1·0835	2·049	·048	·178	90·06	2·34	2,047	4,194
B. 4844	17,424	23·49	4·12	1·92	57·32	1·0826	1·968	·104	·180	87·38	5·28	2,786	5,483

SELECTED VARIETIES.

TABLE XXIX. HANNAYS PLANTATION.—PATH POND FIELD. PLANT CANES.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 20°C. / 16·6°C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
White Transparent	14,326	25·32	3·78	9·48	55·25	1·0300	1·921	·083	·178	88·04	4·32	2,902	5,575
B. 208	14,229	25·48	5·21	16·00	58·84	1·0915	2·281	·040	·168	91·64	1·75	3,076	7,015
B. 1753	22,264	32·06	3·65	·86	53·00	1·0800	1·869	·104	·209	85·66	5·56	3,525	6,588
B. 2652	12,197	15·08	1·94	29·01	58·00	1·0769	1·767	·114	·219	84·14	6·45	1,820	3,216
B. 2938	17,618	24·52	4·15	5·70	54·75	1·0813	2·030	·045	·142	91·56	2·21	2,782	5,647
B. 3289	13,116	26·04	3·98	4·58	58·00	1·0826	2·044	·039	·169	90·77	1·91	3,125	6,388
B. 3747	17,811	35·28	6·35	2·90	60·50	1·0844	2·009	·096	·194	87·39	4·78	4,410	8,860
B. 6450	18,924	36·30	6·68	5·10	58·33	1·0791	1·873	·114	·171	86·79	6·09	4,395	8,232
D. 95	20,715	27·42	5·51	2·73	57·50	1·0920	2·318	·034	·149	92·68	1·47	3,234	7,496
Hannays No. 2	12,245	23·64	2·87	5·60	57·00	1·0844	1·976	·114	·209	85·95	5·77	2,783	5,499
Burke	13,600	26·19	3·61	14·33	59·50	1·0747	1·648	·096	·298	80·71	5·83	3,248	5,353

TABLE XXX.

HENLEY PLANTATION—GOLDEN FIELD.

SELECTED VARIETIES.

2ND RATOONS.

No. or Name of Seedling.		Number of Canes per acre.	Weight in Tons per acre		Per cent by number of rotten Canes.	Per cent. of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
			Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
White Transparent	Series i	16,898	15·22	4·28	5·83	53·00	1·0800	2·009	·060	·113	92·07	2·99	1,673	3,361
" "	" ii	18,466	19·96	4·36	2·75	50·75	1·0813	2·041	·054	·122	92·06	2·65	2,099	4,284
	mean	...	17·59	...	...	...	...	...	...	..	92·07	...	...	3,823
B. 208	Series i	17,350	11·14	3·05	14·73	53·00	1·0884	2·203	·054	·148	91·60	2·45	1,215	2,677
" "	" ii	16,390	11·06	2·40	9·21	53·25	1·0893	2·271	·048	·110	93·50	2·11	1,212	2,753
	mean	...	11·10	...	...	...	...	...	...	...	92·55	...	...	2,715
B. 95	Series i	27,757	23·25	6·82	1·65	52·08	1·0861	2·171	·054	·121	92·54	2·49	2,498	5,423
" "	" ii	28,164	22·99	5·37	·82	50·50	1·0870	2·226	·042	·102	93·92	1·89	2,393	5,327
	mean	...	23·12	...	...	...	...	...	...	...	93·23	...	...	5,375
B. 376	Series i	12,601	15·48	4·36	9·21	47·50	1·0751	1·837	·078	·138	89·48	4·25	1,532	2,814
" "	" ii	19,453	19·44	4·54	2·05	51·25	1·0804	2·054	·037	·102	93·66	1·80	2,066	4,244
	mean	...	17·46	...	...	...	...	..	...	...	91·57	...	...	3,529
B. 1566	Series i	15,447	15·35	4·93	2·92	48·50	1·0765	1·902	·078	·108	91·09	4·10	1,549	2,946
" "	" ii	14,576	19·70	5·34	1·18	49·75	1·0787	1·944	·066	·137	90·54	3·40	2,035	3,956
	mean	...	17·53	...	...	...	...	...	...	...	90·82	...	...	3,451
B. 5157	...	21,486	16·85	4·15	7·04	50·25	1·0769	1·769	·104	·227	84·24	5·88	1,761	3,115
B. 3731	..	20,325	12·36	3·16	3·58	53·75	1·0861	2·219	·026	·101	94·59	1·17	1,371	3,042

Selected Varieties.

Table xxxi. Henley Plantation :—N. W. Swamp Field.

1st Ratoons.

No. or Name of Seedling.	Number of Canes per acre	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C / 16·6°C	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
W. Transparent ... ... Series i	16,550	19·18	2·85	1·72	57·00	1·0897	2·271	·057	·113	93·04	2·51	2,248	5,105
" " ... ... " ii	16,492	19·83	3·84	1·05	59·00	1·0920	2·318	·074	·109	92·68	3·19	2,400	5,563
mean.	..	19·51	...	...	...	...	...	...	...	92·86	...	...	5,334
B. 208 ... ... Series i	18,699	20·09	4·15	1·53	60·50	1·0951	2·414	·045	·125	93·42	1·86	2,486	6,001
" " ... ... " ii	20,615	21·65	5·57	·56	59·00	1·0974	2·446	·063	·136	92·48	2·58	2,607	6,377
mean.	...	20·87	...	...	...	...	...	...	...	92·95	...	...	6,189
D. 95 ... ... Series i	22,880	19·31	7·00	1·25	56·00	1·0888	2·252	·043	·122	93·17	1·91	2,225	5,011
" " ... ... " ii	18,466	22·30	6·87	6·87	54·52	1·0947	2·394	·043	·135	93·08	1·80	2,487	5,954
mean.	...	20·81	..	...	...	.	...	...	...	93·13	...	...	5,483
B. 376 ... ... Series i	19,279	26·13	4·80	3·49	58·00	1·0884	2·245	·057	·103	93·34	2·54	3,119	7,002
" " ... ... " ii	22,415	29·29	5·06	1·28	58·00	1·0897	2·213	·089	·139	90·66	4·02	3,493	7,730
mean.	...	27·71	...	...	...	...	...	...	...	92·00	...	...	7,366
B. 1529 ... ... Series i	18,524	9·54	3·32	·31	55·50	1·1006	2·566	·027	·136	94·03	1·05	1,078	2,766
" " ... ... " ii	20,615	13·35	3·50	...	57·00	1·1028	2·605	·026	·159	93·37	1·00	1,546	4,027
mean.	...	11·45	...	...	...	...	...	...	...	93·70	...	...	3,397
B. 1566 ... ... Series i	18,060	28·65	5·65	1·58	58·50	1·0879	2·229	·048	·116	93·15	2·15	3,450	7,690
" " ... ... " ii	17,015	29·04	4·61	2·00	58·00	1·0853	2·117	·069	·137	91·13	3·26	3,476	7,359
mean.	...	28·85	...	...	...	...	...	...	...	92·14	..	.	7,525
B. 3668 ... . Series i	17,828	16·85	4·93	2·23	55·50	1·0933	2·268	·114	·154	89·43	5·03	1,916	4,345
" " ... ... " ii	19,279	18·67	5·96	3·77	55·00	1·0924	2·281	·069	·162	90·80	3·02	2,105	4,802
mean.	...	17·76	..	...	...	...	...	...	...	90·12	...	...	4,574

SELECTED VARIETIES.

TABLE XXXI.—*Concluded.* HENLEY PLANTATION:—N. W. SWAMP FIELD.

1st Ratoons.

No. or Name of Seedling.	Number of Canes per acre.	Weight in tons per acre.		Per cent. by number of rotten Canes.	Per cent. of Juice by mill	Normal Juice.						Gallons of Juice per acre.	Saccharose ℔ per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C.	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio.		
B. 3675 ... ... Series i	25,377	22·29	5·13	2·45	57·50	1·0965	2·414	·046	·160	92·14	1·91	2,619	6,322
" " ... ... " ii	25,725	20·69	4·85	·89	54·50	1·0956	2·401	·063	·132	92·49	2·62	2,305	5,534
mean	...	21·49	...	...	...	...	...	...	...	92·32	...	...	5,928
B. 3731	22,996	23·02	4·72	6·60	60·25	1·1001	2·535	·045	·137	93·30	1·77	2,824	7,159
B. 4086	23,344	14·31	5·13	...	53·00	1·0938	2·323	·060	·165	91·17	2·58	1,553	3,608
B. 5062	16,782	17·89	4·10	2·37	58·25	1·0870	1·972	·156	·242	83·20	7·91	2,147	4,234
B. 1753	25,202	22·29	4·02	1·58	53·50	1·0839	1·970	·083	·234	86·14	4·21	2,465	4,856
B. 5157	21,892	25·62	4·36	...	57·50	1·0831	1·895	·156	·212	83·74	8·24	3,046	5,772

TABLE XXXII.

HENLEY PLANTATION—SWAMP FIELD, SELECTED VARIETIES. PLANT CANES.

No. or Name of Seedling.		Number of Canes per acre.	Weight in Tons per acre		Per cent by number of rotten Canes.	Per cent. of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
			Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
White Transparent	Series i	15,447	23·85	6·09	4·66	57·50	1·0897	2·187	·078	·176	89·59	3·57	2,819	6,165
" "	" ii	16,840	25·92	5·57	1·02	60·00	1·0866	2·179	·054	·125	92·41	2·48	3,207	6,988
	mean	...	24·89	...	...	...	...	...	..	..	91·00	...	...	6,577
B. 208	Series i	18,176	23·33	4·98	...	61·50	1·0978	2·466	·057	·134	92·81	2·31	2,928	9,221
" "	" ii	18,002	23·98	6·80	·64	61·25	1·0974	2·445	·050	·150	92·44	2·05	2,998	7,330
	mean	...	23·66	...	...	...	...	..	...	...	92·63	...	...	8,276
B. 376	Series i	13,705	19·50	5·24	·42	61·00	1·0906	2·307	·046	·112	93·59	1·99	2,442	5,634
" "	" ii	16,144	25·59	3·55	1·77	62·50	1·0884	2·236	·048	·121	92·97	2·15	3,291	7,359
	mean	...	22·55	...	...	...	...	...	...	...	93·28	...	...	6,497
D. 95	Series i	19,744	19·83	6·74	2·29	59·00	1·0987	2·501	·048	·132	93·29	1·92	2,386	5,967
" "	" ii	19,279	18·28	6·95	4·87	57·25	1·0969	2·459	·030	·143	93·43	1·22	2,137	5,255
	mean	...	19·06	...	...	...	...	...	...	...	93·36	...	...	5,611
B. 1529	Series i	19,860	14·65	6·22	...	58·00	1·1019	2·605	·029	·132	94·18	1·11	1,727	4,499
" "	" ii	23,925	15·42	5·50	·48	55·50	1·1001	2·540	·042	·135	93·49	1·65	1,743	4,427
	mean	...	15·04	...	...	...	...	...	...	...	93·84	..	...	4,463
B. 1566	Series i	12,833	25·97	4·67	·89	61·00	1·0875	2·174	·063	·145	91·27	2·90	3,264	7,096
" "	" ii	13,937	28·00	6·17	...	59·00	1·0866	2·132	·089	·137	90·42	4·17	3,405	7,259
	mean	...	26·99	...	...	...	...	...	...	...	90·85	...	...	7,178
B. 1753	Series i	21,021	26·26	3·50	1·36	57·50	1·0831	1·939	·114	·210	85·68	5·88	3,123	6,055
" "	" ii	27,409	32·79	4·67	1·25	56·75	1·0813	1·892	·139	·186	85·35	7·35	3,855	7,294
	mean	...	29·53	...	...	...	...	...	...	...	85·52	...	...	6,675

SELECTED VARIETIES.

TABLE XXXII.—*Concluded.* HENLEY PLANTATION:—SWAMP FIELD.

Plant Canes.

No or Name of Seedling.	Number of Canes per acre.	Weight in Tons per acre		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C. / 15·6 C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio		
B. 3668 ... . Series i	15,969	22·55	6·27	2·82	59·25	1·0938	2·299	·066	·183	90·23	2·87	2,737	6,292
" " ... ... " ii	18,408	26·24	7·78	4·80	58·00	1·0915	2·197	·104	·188	88·72	4·73	3,123	6,861
mean	...	24·40	...	...	...	...	...	...	..	89·25	...	...	6,577
B. 3675 ... ... Series i	21,602	18·59	5·86	...	60·00	1·0929	2·304	·057	·163	91·28	2·47	2,286	5,267
" " ... ... " ii	22,357	28·46	4·80	1·78	59 50	1·0844	2·035	·114	·150	88·52	5·60	3,498	7,118
mean	...	23·53	...	...	...	...	...	...	...	89 90	..	...	6,193
B. 3731	19,047	20·17	3·81	1·20	63·75	1·0987	2·495	·039	·147	93·06	1·56	2,621	6,539
B 4086	19,918	15·50	5·76	·58	59·00	1·0929	2·341	·040	·131	93·19	1·71	1,875	4,389
B. 5062	16,898	29·86	4·61	·68	61·50	1·0817	1·805	·208	·215	81·01	11·52	3,803	6,864
B. 5157	17,189	21·39	5·13	·34	60·00	1·0866	2·108	·074	·176	89·40	3·51	2,645	5,576

SELECTED VARIETIES.

TABLE XXXIII. HUSBANDS PLANTATION:—CARS FIELD.

Plant Canes.

No. or Name of Seedling		Number of Canes per acre.	Weight in Tons per Acre		Per cent. by number of rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice, per acre.	Saccharose lb per acre.
			Canes.	Cane Tops			Sp Gr 30°C / 16·6°C	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
White Transparent ...	Series i	15,563	20·19	2·96	5·30	57·00	1·0884	2·226	·066	·113	92·56	2·97	2,369	5,273
" "	" ii	15,853	20·97	3·21	4·88	64·75	1·0893	2·232	·050	·147	91·89	2·24	2,792	6,232
	mean	...	20·58	..	...	...	...	...		...	92·23	...	...	5,753
B. 147	Series i	18,047	25·76	4·98	4·43	61·50	1·0844	2·074	·104	·121	90·21	5·01	3,272	6,786
"	" ii	18,259	27·33	4·82	4·39	63·50	1·0822	1·938	·104	·198	86·52	5·37	3,593	6,963
	mean	...	26·55	...	...	...	...	...	...		88·37	...	...	6,875
B. 208	Series i	20,266	23·75	4·90	·57	58·59	1·0983	2·333	·057	·279	87·41	2·44	2,838	6,621
"	" ii	16,027	18·22	3·76	·72	62·00	1·0951	2·378	·043	163	92·03	1·81	2,311	5,496
	mean	...	20·99	...	..	...	...	...	...	...	89·72	...	...	6,059
B. 1030	Series i	23,048	21·68	3·17	3·91	55·00	1·0866	2·116	·089	·153	89·74	4·21	2,459	5,203
"	" ii	20,208	21·39	3·32	1·13	55·00	1·0879	2·142	·050	·201	89·51	2·33	2,422	5,188
	mean	...	21·54	...	..	...	...	...	...		89·62	...	...	5,196
B. 1355	Series i	18,787	19·36	4·64	2·89	58·25	1·0911	2·265	·052	·160	91·44	2·30	2,315	5,243
"	" ii	17,889	15·67	3·89	1·84	59·50	1·0915	2·268	·034	·187	91·12	1.50	1,914	4,341
	mean		17·52	...	...	...	...	...	...	...	91·28	...	...	4,792
B. 1529	Series i	25,051	21·82	4·63	4·13	57·25	1·0978	2·459	·043	·155	92·55	1·75	2,548	6,266
"	" ii	21,775	15·67	3·46	5·66	57·07	1·0983	2·459	·050	·160	92·13	2·03	1,824	4,485
	mean	...	18·75	...	..	...	...	...	...	...	92·34	...	...	5,376

SELECTED VARIETIES.

TABLE XXXIII.—(*Concluded.*) HUSBANDS PLANTATION.—CARS FIELD. PLANT CANES.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C. 16·6°C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 1753 ... ... Series i	24,331	25·04	3·86	2·56	54·00	1·0953	2·062	·063	·198	88·76	3·06	2,791	5,755
" " ... ... " ii	24,760	21·88	3·17	...	56·00	1·0870	2·041	·096	·233	86·12	4·70	2,525	5,154
mean	...	23·46	...	...	...	...	...	...	...	87·44	...	...	5,455
B. 3289 ... ... Series i	13,064	22·42	3·24	14·29	60·60	1·0831	2·038	·063	·162	90·06	3·09	2,782	5,670
" " ... ... " ii	9,818	15·98	2·51	24·39	58·50	1·0844	2·028	·063	·208	88·21	3·11	1,931	3,916
mean	...	19·20	...	...	...	...	...	...	...	89·14	...	...	4,793
B. 3675 ... ... Series i	23,614	22·32	4·18	4·44	56·75	1·0965	2·398	·045	·177	91·53	1·88	2,588	6,206
" " ... ... " ii	26,132	23·42	5·40	1·82	51·75	1·0969	2·414	·052	·166	91·72	2·17	2,475	5,975
mean	...	22·87	...	...	...	...	...	...	...	91·63	...	...	6,091

SELECTED VARIETIES.

TABLE XXXIV.

LOWER ESTATE PLANTATION :—SIMMONS BOTTOM FIELD. PLANT CANES.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 30° C. 16° 6 C.	lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
W. Transparent	13,954	24·09	3·92	7·24	57·04	1·0870	2·067	·096	·207	87.22	4·64	2,832	5,854
B. 1753	19,762	26·75	2·61	2·97	55·75	1·0793	1·847	·104	219	85·12	5·63	3,096	5,718
B. 3013	14,761	26·68	3·62	5·43	59·00	1·0804	1·931	·074	·188	88·05	3·84	3,264	6,303
B. 3289	10,204	19·34	2·86	2·32	60·53	1·0813	2·004	·050	·163	90·39	2·50	2,425	4,859
B. 3381	15,850	20·65	4·01	2·48	56·50	1·0938	2·344	·030	·174	91·99	1·28	2,389	5,600
B. 6450	10,284	31·18	5·42	2·30	61·00	1·0866	2·106	·066	·186	89·31	3·13	3,921	8,258

TABLE XXXV.

SELECTED VARIETIES.

PINE PLANTATION :—9 ACRE FIELD.

PLANT CANES.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per acre		Per cent by number of Rotten Cane.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes	Cane Tops.			Sp. Gr. 30°C/16·6C	Lb per gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio		
White Transparent ...	16,177	22·36	4·93	·24	41·75	1·0[illegible]17	2·033	·024	·171	91·25	1·18	1,933	3,930
B. 1529 ...	19,560	17·75	4·54	...	43·50	1·0[illegible]24	2·320	·028	·164	92·36	1·21	1,583	3,673
B. 1753 ...	20,084	20·60	3·47	·40	40·50	1·0767	1·886	·060	·201	87·84	3·18	1,735	3,272
B. 1809 ...	15,728	26·69	7·13	2·26	49·75	1·0826	2·041	·063	·148	90·63	3·09	2,748	5,609
B. 3289 ...	12,421	21·66	5·37	1·60	47·00	1·0826	2·064	·037	·151	91·65	1·78	2,106	4,347
B. 3635 ...	14,881	18·29	7·40	...	45·25	1·0911	2·323	·019	·135	93·79	·82	1,699	3,947
B. 3656 ...	17,946	21·32	5·82	1·33	46·25	1·0861	2·106	·054	·186	89·77	2·56	2,033	4,282
B. 5758 ...	18,148	22·58	6·21	...	45·00	1·0822	2·028	·052	·160	90·54	2·56	2,103	4,265
B. 3731 ...	17,543	20·13	4·21	4·40	47·50	1·0906	2·307	·026	·132	93·59	1·13	1,964	4,531
B. 4028 ...	14,075	29·14	4·99	1·41	51·75	1·0707	1·652	·089	197	85·24	5·37	3,156	5,214

Selected Varieties.

Table xxxvi. Ridge Plantation :—Clarke's Field.

Plant Canes.

No. or Name of Seedling.	Number of Canes per acre	Weight in Tons per Acre.		Per cent by number of Rotten Canes	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C/16·6°C	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
W. Transparent ...	13,552	18·02	4·01	2·44	56·00	1·0848	2·164	·039	·108	93·64	1·80	2,084	4,509
B. 1030 ...	13,068	15·67	3·11	4·26	53·50	1·0844	2·072	·043	·184	90·13	2·07	1,731	3,587
B. 1355 ...	12,316	12·73	4·75	...	59·00	1·0822	2·090	·020	·130	93·30	·96	1,554	3,248
B. 1376 ...	14,181	18·37	3·07	4·56	58·50	1·0839	2·106	·054	·127	92·09	2·56	2,220	4,675
B. 1528 ...	17,956	19·99	3·01	5·60	58·50	1·0822	2·040	·066	·134	91·07	3·24	2,420	4,937
B. 1529 ...	17,908	20·09	4·54	...	59·18	1·0997	2·534	·017	·154	93·68	·67	2,421	6,135
B. 1753 ...	22,748	28·78	3·28	2·69	56·50	1·0844	2·015	·096	·188	87·65	4·76	3,359	6,768
B. 3289 ...	10,890	14·33	2·53	8·90	57·00	1·0795	1·976	·057	·137	91·06	2·88	1,694	3,347
B. 3635 ...	15,198	19·62	6·16	...	60·00	1·0911	2·333	·026	·118	94·19	1·11	2,417	5,639
B. 3656 ...	19,021	20·05	3·37	5·75	60·00	1·0826	1·921	·139	·192	85·30	7·24	2,489	4,781
B. 3696 ...	16,801	21·39	3·39	5·08	61·00	1·0844	2·090	·078	·131	90·91	3·73	2,695	5,633
B. 3819 ...	19,307	23·05	3·12	3·49	57·07	1·0831	2·002	·060	·201	88·47	2·99	2,720	5,446
B. 4028 ...	14,020	18·21	1·92	22·65	61·50	1·0707	1·630	·139	·169	84·11	8·53	2,344	3,820
B. 4596 ...	18,799	25·83	6·31	2·77	60·50	1·0809	1·869	·139	·197	84·76	7·44	3,238	6,052
B. 5062 ...	15,391	18·49	4·32	·63	60·25	1·0831	1·873	·156	·234	82·77	8·33	2,305	4,317
B. 5758 ...	19,166	19·51	4·79	1·49	60·00	1·0822	1·980	·114	·146	88·39	5·76	2,423	4,798
B. 6048 ...	17,285	18·40	3·92	1·96	60·00	1·0826	1·824	·179	·249	80·99	9·81	2,284	4,166

TABLE XXXVII. SUNBURY PLANTATION:—MURRAY FIELD.

Plant Canes.

No. or Name of Seedling.	Number of Canes per acre.	Weight in Tons per Acre		Per cent by number of rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose ℔ per acre.
							Lb. per Gallon.						
		Canes.	Cane Tops			Sp Gr. $\frac{30^\circ C}{16{\cdot}6^\circ C}$	Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
White Transparent	13,107	21·57	3·78	13·33	52·00	1·0866	2·113	·066	·179	89·61	3·12	2,312	4,885
B. 147	15,446	31·16	6·41	1·29	57·00	1·0800	1·917	·078	·187	87·86	4·07	3,684	7,062
B. 208	17,221	20·78	4·79	..	57·25	1·0924	2·268	·043	·201	90·29	1·90	2,439	5,532
B. 1030	17,100	22·72	3·40	..	52·04	1·0875	2·075	·060	·247	87·11	2·89	2,436	5,055
B. 1753	19,318	24·45	3·20	...	53·00	1·0835	1·931	·125	·219	84·88	6·47	2,679	5,173
B. 3224	18,068	21·84	3·51	4·07	58·00	1·0809	1·947	·069	·189	88·29	3·54	2,625	5,111
B. 3289	12,583	22·63	2·93	5·46	51·00	1·0809	1·981	·052	·172	89·84	2·63	2,392	4,739
B. 3509	23,795	27·34	5·40	1·01	56·25	1·0906	2·258	·031	176	91·60	1·37	3,160	7,135
B. 3731	16,455	15·65	3·18	4·00	56·75	1·0920	2·313	·019	·169	92·48	·82	1,821	4,212
B. 4596	17,180	25·55	4·52	·47	61·50	1·0809	1·970	·083	·152	89·34	4·21	3,256	6,414
B. 5062	16,051	25·08	5·13	...	57·00	1·0861	2·059	·083	·204	87·77	4·03	2,948	6,070

TABLE XXXVIII.

MEAN RESULTS OBTAINED ON FIFTEEN ESTATES—TWELVE BLACK AND THREE RED WITH THE FOLLOWING ELEVEN VARIETIES OF SUGAR CANE.

Plants.

No. or Name of Seedling.	Number of Plots.	Weight in Tons per acre		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes	Cane Tops.			30°C Sp. Gr. 16·6C	Lb per gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio		
B. 3390	5	34·54	6·62	4·25	57·59	1·0 26	1·940	·109	·202	86·18	5·61	4,138	8,046
B. 3412	9	34·75	6·02	1·83	56·82	1·0836	1 895	·117	·266	83·08	6·36	4,086	7,665
B. 1566	11	28·50	5·34	3·04	55·82	1·0845	2·080	·068	·155	90·25	3·33	3,340	6,836
B. 208	17	23·84	5·27	5·02	58·20	1·0 42	2·355	·044	·161	91·98	1·87	2,851	6,699
D. 95	5	23·93	6·99	7·65	58·75	1·0914	2·311	·037	·137	92·99	1·61	2,925	6,688
B. 376	10	26·76	4·66	5·37	56·25	1·0856	2·113	·066	·154	90·56	3·13	3,114	6,573
B. 1753	19	29·00	4·00	1·15	52·58	1·0822	1·941	·092	·209	86·50	4·78	3,184	6,191
White Transparent	23	24·39	4·52	6·62	56·31	1·0851	2·108	·060	·155	90·73	2·81	2,809	5,984
B. 3696	9	23·21	4·41	2 94	56·40	1·0855	2·112	·055	·160	90·75	2·62	2,704	5,708
B. 1529	12	19·70	4·78	3·99	55·21	1·0975	2·455	·041	·153	92·66	1·70	2,220	5,427
B. 4596	4	22·21	5·85	1·39	59·75	1·0803	1·933	·099	158	88·24	5·19	2,825	5,319

TABLE XXXIX. MEAN RESULTS OBTAINED ON TWO BLACK AND THREE RED SOIL ESTATES WITH THE FOLLOWING FIVE VARIETIES OF SUGAR CANE.

1st Ratoons.

No or Name of Seedling.	Number of Plots.	Weight in Tons per acre		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C / 15°6 C.	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio		
B. 208	8	21·63	5·02	5·50	60·05	1·0953	2·389	·055	·144	92·30	1·81	2,672	6,400
D. 95	5	22·80	7·18	2·44	57·50	1·0910	2·291	·046	·138	92·55	2·03	2,701	6,253
B. 376	8	23·33	5·31	2·44	55·31	1·0871	2·173	·061	·138	91·62	2·81	2,746	5,928
W. Trans.	10	22·05	4·45	5·12	56·65	1·0865	2·190	·066	·153	90·86	3·08	2,585	5,672
B. 3696	4	19·36	4·18	4·22	55·25	1·0839	2·084	·074	·130	91·08	3·54	2,252	4,741

Mean Results Obtained on Twelve Black Soil Estates with the Following Ten Varieties of Sugar Cane.

Table XL.

Plants.

No. or Name of Seedling.	Number of Plots.	Weight in tons per acre.		Per cent. by number of rotten Canes.	Per cent of Juice by mill	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
		Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C.	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio.		
Scaly Seedling	2	33·23	4·29	·74	56·25	1·0868	2·001	·076	·287	84·64	3·80	3,856	7,730
B. 3412	5	33·62	4·74	1·37	54·75	1·0852	1·914	·096	·306	82·54	5·07	3,784	7,226
B. 208	12	24·47	4·94	2·62	57·57	1·0939	2·342	·040	·170	91·30	1·70	2,898	6,763
B. 3747	3	27·06	5·62	1·54	54·11	1·0887	2·168	·054	·191	85·84	2·51	3,014	6,539
B. 147	6	27·07	5·32	2·43	57·71	1·0825	1·994	·088	·166	88·67	4·43	3,229	6,428
B. 4596	2	25·69	5·42	1·62	61·00	1·0809	1·920	·111	·175	87·05	5·83	3,247	6,233
White Transparent	18	24·97	4·22	6·55	55·69	1·0846	2·086	·063	·162	90·22	3·01	2,841	6,011
B. 1376	4	24·80	4·86	3·26	54·83	1·0859	2·138	·055	·147	91·34	2·59	2,796	5,992
B. 6292	4	24·90	4·16	1·11	57·81	1·0825	1·976	·092	·182	87·76	4·73	2,981	5,909
B. 3696	8	23·40	3·94	1·96	55·88	1·0857	2·111	·058	·166	90·43	2·75	2,699	5,695

TABLE XLI.

MEAN RESULTS OBTAINED ON TWO BLACK SOIL ESTATES WITH THE FOLLOWING FOUR VARIETIES OF SUGAR CANE.

1ST. RATOONS.

No. or Name of Seedling.	Number of Plots.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
		Canes.	Cane Tops.			Sp. Gr. 30° C. / 16° 6 C.	Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
W. Transparent	4	19·24	4·50	1·84	53·56	1·0872	2·114	·075	·184	89.00	3·67	2,116	4,456
B. 208	2	15·81	4·01	2·35	58·46	1·0945	2·319	·069	·179	90·36	2·95	1,891	4,385
D. 95	2	15·34	5·68	2·26	58·79	1·0902	2·236	·056	·162	91·09	2·56	1,855	4,210
B. 376	4	14·50	4·53	1·43	51·13	1·0878	2·183	·055	·153	91·32	2·52	1,531	3,335

TABLE XLII.

MEAN RESULTS OBTAINED ON THREE RED SOIL ESTATES WITH THE FOLLOWING FOURTEEN VARIETIES OF SUGAR CANE.

PLANTS

No or Name of Seedling.	Number of Plots.	Weight in Tons per acre		Per cent by number of rotten Canes.	Per cent. of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb per acre.
							Lb. per Gallon.						
		Canes.	Cane Tops.			Sp. Gr. 30°C./16·6°C	Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 1521	2	34·44	7·60	9·11	61·38	1·0875	2·135	·072	·175	89·65	3·35	4,356	9,307
B. 3405	4	40·87	8·15	3·53	57·88	1·0813	1·849	·178	·191	83·37	9·80	4,905	8,956
B. 3390	4	37·04	6·93	4·35	57·49	1·0825	1·947	·115	·187	86·57	5·94	4,438	8,650
B. 1386	2	32·89	7·15	14·73	60·19	1·0868	2·104	·063	·197	88·97	3·01	4,083	8,610
B. 1566	6	33·02	6·78	1·75	58·92	1·0838	2·080	·072	·132	91·02	3·52	4,052	8,260
B. 3412	4	36·15	7·63	2·41	59·40	1·0819	1·872	·144	·216	83·76	7·97	4,463	8,213
B. 376	4	28·95	5·94	5·22	61·70	1·0874	2·178	·061	·140	91·53	2·83	3,675	7,931
B. 1753	6	33·29	4·68	1·16	55·92	1·0826	1·966	·098	·187	87·32	5·03	3,877	7,657
D. 95	3	25·54	8·20	6·78	59·92	1·0933	2·369	·037	·131	93·38	1·57	3,191	7,356
B. 3668	2	24·40	7·03	3·81	58·63	1·0927	2·248	·085	·186	89·25	3·80	2,930	6,577
B. 208	5	22·34	6·07	10·16	59·70	1·0949	2·382	·054	·141	92·42	2·27	2,739	6,541
W. Trans :	5	22·26	5·58	6·87	58·52	1·0869	2·189	·046	·130	92·56	2·11	2,697	5,887
B. 1529	4	18·82	5·10	8·80	58·81	1·0989	2·511	·033	·141	93·55	1·29	2,274	5,672
B. 4596	2	18·72	6·29	1·16	58·50	1·0798	1·947	·087	·142	89·43	4·55	2,403	4,406

TABLE XLIII. MEAN RESULTS OBTAINED ON THREE RED SOIL ESTATES WITH THE FOLLOWING ELEVEN VARIETIES OF SUGAR CANE.

1st Ratoons.

No. or Name of Seedling.	Number of Plots.	Weight in Tons per Acre.		Per cent by number of Rotten Canes.	Per cent of Juice by Mill.	Normal Juice.						Gallons of Juice per acre.	Saccharose lb. per acre.
							Lb. per Gallon.						
		Canes.	Cane Tops.			Sp. Gr. 30°C. 16·6°C.	Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.		
B. 1386	2	32·03	6·46	3·10	58·75	1·0906	2·279	·046	·140	92·46	2·02	3,868	8,820
B. 376	4	32·17	6·09	3·45	59·50	1·0864	2·163	·067	·122	91·95	3·10	3,962	8,522
B. 3390	4	33·69	7·09	5·06	57·07	1·0862	2·068	·095	·184	88·14	4·57	3,975	8,241
B. 1566	6	31·52	5·71	1·67	58·41	1·0862	2·150	·069	·128	91·59	3·22	3,791	8,171
B. 3412	4	34·69	6·62	1·38	58·02	1·0915	1·891	·141	·191	85·08	7·50	4,170	7,873
D. 95	3	27·77	8·18	2·56	56·63	1·0915	2·327	·039	·122	93·52	1·68	3,266	7,615
B. 3405	4	32·91	7·08	1·08	57·63	1·0822	1·926	·139	·176	85·97	7·29	3,932	7,548
B. 208	6	23·57	5·35	6·56	60·58	1·0956	2·413	·051	·133	92·95	1·43	2,932	7,072
W. Transparent	6	23·92	4·41	7·30	58·71	1·0861	2·241	·061	·132	92·11	2·69	2,898	6,483
B. 3696	2	24·54	4·46	8·43	59·25	1·0855	2·143	·069	·117	92·05	3·20	3,002	6,431
B. 3708	2	23·36	5·95	6·94	59·00	1.0853	2·129	·040	·154	91·67	1·87	2,849	6,051

MEAN RESULTS BLACK AND RED SOIL ESTATES FOR SEASONS { 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908 }

TABLE XLIV — PLANT CANES.

Number or Name of Seedling.		Number of Plots.	Tons Canes per Acre.	Per cent by Number of Rotten Canes.	Normal Juice. Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.	Saccharose lb per Acre.	Muscovado Yield.
B. 3696	1904	1	40·43	...	1·863	·058	·138	90·48	3·11	9,926	...
	1905	1	36·46	1·07	2·078	·048	·203	89.03	2·31	9,731	..
	1906	4	29·08	2·15	2·125	·074	·180	89·27	3·57	8,839	...
	1907	7	32·33	2·59	2·025	·076	·134	90·55	3·83	8,424	...
	1908	9	23·24	2·94	2·112	·055	·160	90·75	2·62	5,708	...
	mean	..	29·48	2·39	2·074	·065	·157	90·32	3·19	7,516	2·68
B. 1529	1904	5	32·54	0·34	2·320	·064	·144	93·11	1·15	9,137	...
	1905	6	25·01	2·59	2·410	·039	·157	92·54	1·66	7,402	...
	1906	10	27·32	1·10	2·474	·042	·169	92·13	1·71	8,021	...
	1907	14	24·07	3·36	2·433	·039	·144	93·01	1·60	7,025	...
	1908	12	19·70	3·99	2·455	·041	·153	92·66	1·70	5,427	..
	mean	...	24·67	2·64	2·433	·043	·154	92·68	1·60	7,103	2·54
B. 208	1900	11	22·55	3·70	2·134	·051	·159	90·81	2·67	5,443	...
	1901	13	30·22	7·39	2·231	·076	·187	89·40	3·47	8,420	...
	1902	12	26·22	5·80	2·312	·065	·146	91·61	2·84	7,595	...
	1903	10	20·33	1·42	2·151	·046	·168	90·90	2·19	5,052	..
	1904	13	28·08	5·97	2·165	·038	·180	90·81	1·78	7,680	...
	1905	22	23·81	5·25	2·278	·040	·188	91·30	1·83	6,744	...
	1906	15	26·13	3·96	2·334	·054	·161	91·53	2·35	7,365	...
	1907	20	27·71	8·38	2·315	·051	·134	92·66	2·21	7,780	...
	1908	17	23·84	5·02	2·355	·044	·161	91·98	1·87	6,699	..
	mean	...	25·56	5·43	2·267	·051	·166	91·34	2·31	7,085	2·53
B. 1753	1902	1	31·45	1·04	2·038	·079	·146	90·06	3·88	7,620	..
	1903	1	24·03	2·68	1·993	·060	·210	88·07	3·01	5,371	..
	1904	1	57·91	...	1·879	·050	·206	88·01	2·66	13,112	...
	1905	1	42·41	...	2·057	·060	·170	89·04	2·92	9,921	..
	1906	1	25·84	2·15	1·917	·144	·244	84·26	5·95	5,135	...
	1907	19	34·28	2·43	1·925	·095	·192	87·00	4·98	7,643	...
	1908	19	29·00	1·15	1·941	·092	·299	86·50	4·78	6,191	...
	mean	...	31·55	1·53	1·936	·092	·204	86·72	4·80	6,936	2·48
B. 376	1902	5	26·22	11·04	2·157	·074	·103	92·42	3·44	6,957	...
	1903	9	21·48	5·36	1·915	·059	·170	89·69	3·15	5,067	...
	1904	13	29·69	6·30	1·900	·073	·267	88·64	3·98	7,035	...
	1905	13	23·88	5.63	2·060	·057	·156	90·55	2·88	6,123	...
	1906	10	30·03	4·51	2·090	·056	·189	89·47	2·69	7,603	...
	1907	10	28·09	10·16	2·055	·057	·135	91·55	2·89	6,843	..
	1908	10	26·76	5·37	2·113	·066	·154	90·56	3·13	6,573	...
	mean	...	26·71	7·06	2·059	·058	·141	90·42	2·87	6,590	2·36
W. Trans.	1901	9	27·81	10·27	2·050	·090	·153	89·04	4·44	7,320	..
	1902	23	24·41	10·27	2·124	·082	·138	90·60	3·88	6,550	...
	1903	20	20·52	4·93	1·966	·059	·170	89·52	3·05	5,023	...
	1904	27	28·75	4·42	1·930	·063	·177	88·96	3·15	7,010	...
	1905	28	22·23	2·58	2·082	·053	·169	90·35	2·58	5,799	...
	1906	21	27·76	5·68	2·063	·072	·189	88·23	3·51	6,779	..
	1907	28	25·93	6·73	2·146	·060	·150	91·05	2·86	6,685	...
	1908	23	24·39	6·62	2·108	·060	·155	90·73	2·81	5,984	...
	mean	...	25·19	6·03	2·059	·061	·164	89·92	3·16	6,342	2·27

MEAN RESULTS BLACK AND RED SOIL ESTATES FOR SEASONS. { 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1808 }

TABLE XLV. 1ST RATOONS.

Number or Name of Seedling.	Number of Plots.	Tons Canes per Acre.	Per cent. by number of rotten Canes.	Normal Juice. Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.	Saccharose lb per acre.	Muscovado Yield.
B. 376 1901-8	31	19·18	2·77	2·089	·050	·140	91·48	2·40	4,786	1·71
D. 95 1903-8	27	18·02	1·81	2·148	·040	·155	91·54	1·96	4,651	1·66
B. 208 1901-8	54	16·28	4·50	2·267	·046	·154	92·06	1·98	4,520	1·61
W. Trans. 1902-8	55	17·30	4·83	2·090	·056	·151	90·46	2·74	3,804	1·36

MEAN RESULTS BLACK SOIL ESTATES FOR SEASONS 1901 1902 1903 1904 1905 1906 1907 1908

TABLE XLVI. PLANT CANES.

Number or Name of Seedling.		Number of Plots.	Tons Canes per acre.	Per cent by number of Rotten Canes.	Normal Juice. Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.	Saccharose lb per acre.	Muscovado Yield.
B. 3696	1904	1	40·43	...	1·863	·058	·138	90·48	3·11	9,926	...
	1905	1	36·46	1·07	2·078	·048	·208	89·03	2·31	9,731	...
	1906	4	29·08	2·15	2·125	·074	·180	89·27	3·57	8,839	..
	1907	5	33·25	1·91	2·092	·067	·133	91·24	3·23	8,916	...
	1908	8	23·40	1·96	2·111	·058	·166	90·43	2·75	5,695	...
	mean	19	29·82	1·84	2·094	·063	·161	90·33	3·05	7,640	2·73
B. 1529	1904	4	32·64	·43	2·333	·071	·149	93·35	1·04	9,341	...
	1905	4	25·21	2·63	2·480	·039	·182	91·80	1·58	7,613	...
	1906	8	27·43	1·17	2·458	·047	·174	91·74	1·94	7,968	...
	1907	10	24·43	1·35	2·400	·044	·153	92·41	1·83	7,090	...
	1908	8	20·15	1·58	2·427	·046	·159	92·21	1·90	5,304	...
	mean	34	25·20	1·41	2·422	·047	·163	92·15	1·76	7,203	2·58
B. 208	1900	7	20·28	2·76	2·233	·045	·183	90·74	2·01	4,988	...
	1901	9	31·43	9·16	2·200	·081	·203	88·49	3·76	8,741	.
	1902	8	28·21	8·53	2·325	·068	·153	91·30	2·97	8,323	...
	1903	8	20·38	1·73	2·163	·047	·170	90·81	2·22	5,329	...
	1904	9	25·99	4·02	2·165	·038	·185	90·64	1·78	7,083	...
	1905	18	22·84	3·95	2·331	·036	·195	91·50	1·59	6,575	...
	1906	13	25·95	3·91	2·346	·058	·155	91·65	1·51	7,287	...
	1907	14	29·73	5·84	2·315	·055	·062	92·49	2·39	8,365	...
	1908	12	24·47	2·62	2·342	·040	·170	91·80	1·70	6,763	...
	mean	98	25·57	4·65	2·283	·050	·161	91·21	2·25	7,121	2·54
B. 147	1900	9	25·76	4·74	1·910	·082	·185	87·74	4·29	6,067	...
	1901	15	32·98	5·73	1·884	·113	·204	85·56	6·04	8,160	...
	1902	16	31·23	4·67	2·004	·105	·188	87·25	5·26	8,239	...
	1903	18	22·53	2·28	1·871	·063	·210	86·98	3·44	5,269	...
	1904	4	28·56	1·03	1·783	·077	·186	87·00	4·99	6,659	...
	1905	5	30·71	0·85	1·951	·067	·207	87·67	3·44	7,803	...
	1906	4	30·77	2·10	1·980	·080	·246	85·90	4·03	7,649	...
	1907	4	31·78	3·82	2·036	·074	·161	89·61	3·67	7,793	...
	1908	6	27·07	2·43	1·994	·088	·166	88·67	4·43	6,428	...
	mean	81	28·54	3·60	1·927	·087	·185	87·10	4·54	7,084	2·51
B. 3635	1904	1	40·74	1·64	1·959	·051	·178	89·53	2·60	9,891	...
	1905	1	23·04	...	2·129	·043	·233	88·52	2·02	6,187	...
	1906	4	30·43	0·85	2·279	·051	·167	91·32	2·21	8,354	.
	1907	5	26·52	0·87	2·257	·048	·133	92·52	2·16	7,455	...
	1908	5	20·66	...	2·324	·039	·130	93·23	1·67	5,121	...
	mean	...	26·34	0·58	2·257	·046	·150	92·01	2·03	7,023	2·51
B. 1753	1902	1	31·45	1·04	2·038	·079	·146	90·06	3·88	7,620	...
	1903	1	24·03	2·68	1·993	·060	·210	88·07	3·01	5,371	...
	1904	1	57·91	...	1·879	·050	·206	88·01	2·66	13,112	...
	1905	1	42·41	...	2·057	·060	·170	89·94	2·92	9,921	...
	1906	1	25·84	2·15	1·917	·114	·244	84·26	5·95	5,135	...
	1907	14	32·57	2·06	1·916	·099	·200	86·47	5·23	7,274	...
	1908	13	27·02	1·15	1·930	·090	·220	86·11	4·67	5,515	...
	mean	32	30·90	1·55	1·931	·091	·208	86·58	4·76	6,709	2·40

MEAN RESULTS BLACK SOIL ESTATES FOR SEASONS. 1901 1902 1903 1904 1905 1906 1907 1908

TABLE XLVI *Concluded.* PLANT CANES.

Number or Name of Seedling.		Number of Plots.	Tons Canes per Acre.	Per cent by number of Rotten Canes.	Normal Juice. Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.	Saccharose lb. per acre.	Muscovado Yield.
W. Trans.	1901	6	31·27	8·61	2·074	·087	·150	89·29	4·23	8,430	...
	1902	17	26·24	12·45	2·107	·087	·150	89·89	4·17	7,201	...
	1903	18	21·10	5·23	1·969	·059	·171	89·49	3·05	5,172	...
	1904	22	28·85	4·73	1·949	·059	·180	89·06	2·94	7,068	...
	1905	23	22·83	2·35	2·123	·049	·175	90·45	2·33	5,864	...
	1906	18	27·64	4·55	2·091	·073	·176	89·24	3·54	6,876	...
	1907	22	26·55	6·23	2·139	·064	·155	90·67	3·07	6,871	...
	1908	18	24·97	6·55	2·086	·063	·162	90·22	3·01	6,011	...
	mean	...	25·70	5·92	2·066	·065	·168	89·86	3·14	6,514	2·33
B. 376	1902	3	31·17	10·49	2·139	·076	·119	91·64	3·56	8,350	...
	1903	7	21·86	6·66	1·938	·056	·175	89·66	2·95	5,145	..
	1904	9	27·33	7·08	1·976	·062	·160	89·82	3·17	6,627	...
	1905	9	22·78	3·71	2·165	·045	·169	90·97	2·08	6,103	...
	1906	8	29·42	4·89	2·098	·059	·190	89·35	2·83	7,387	...
	1907	6	28·99	8·70	2·011	·068	·137	90·73	3·44	7,123	...
	1908	6	25·30	5·46	2·069	·069	·163	89·92	3·34	5,667	...
	mean	...	26·23	6·68	2·052	·060	·146	90·18	2·95	6,489	2·32

TABLE XLVII. MEAN RESULTS BLACK SOIL ESTATES FOR SEASONS 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908

1st Ratoons.

No. or Name of Seedling.	Number of Plots.	Tons Canes per acre.	Per cent. by number of Rotten Canes.	Normal Juice. Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio	Saccharose lb. per acre.	Muscovado Yield.
D. 95 1903–8	12	14·59	2·12	2·162	·043	·152	91·60	2·09	3,815	1·37
B. 208 1901–8	28	13·21	0·88	2·292	·041	·150	92·17	1·81	3,642	1·30
W. Trans 1901–8	35	14·46	2·26	2·118	·051	·158	90·89	2·50	3,575	1·28
B 376 1903–8	18	13·95	1·44	2·146	·045	·141	91·73	2·13	3,399	1.22

Mean Results Red Soil Estates for Seasons.

1900
1901
1902
1903
1904
1905
1906
1907
1908

Table xlviii. Plant Canes.

Number or Name of Seedling.		Number of Plots.	Tons Canes per acre.	Per cent. by number of rotten Canes.	Normal Juice. Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.	Saccharose lb per acre.	Muscovado Yield.
B. 3405	1904	1	32·25	1·47	1·722	·083	·190	86·32	4·82	7,551	...
	1905	1	37·38	0·91	2·078	·048	·185	89·91	2·31	9,664	...
	1906	1	47·89	4·76	1·818	·078	·373	80·12	4·29	11,070	..
	1907	4	44·52	5·14	1·960	·093	·161	88·47	4·77	10,792	...
	1908	4	40·87	3·53	1·849	·178	·191	83·37	9·80	8,956	...
	mean		41·74	3·80	1·896	·118	·196	85·79	6·34	9,753	3·49
B. 3412	1904	1	40·30	1·69	1·683	·078	·212	85·30	4·63	9,108	...
	1905	1	37·23	3·38	2·069	·050	·192	89·53	2·41	9,343	...
	1906	1	48·75	8·93	2·093	·074	·238	87·03	3·54	13,108	...
	1907	4	42·08	8·77	1·915	·099	·154	88·39	5·14	9,589	...
	1908	4	36·15	2·41	1·872	·144	·216	83.76	7·97	8,213	...
	mean		39·93	5·34	1·910	·106	·192	86·41	5·73	9,334	3·33
B. 3390	1904	1	43·03	8·09	1·729	·081	·176	87·05	4·69	9,740	...
	1905	1	41·92	1·18	1·879	·056	·200	88·01	2·98	9,647	...
	1906	1	37·60	6·37	2·067	·066	·225	87·66	3·19	9,452	...
	1907	4	40·16	5·32	2·008	·074	·158	89·63	3·74	9,536	...
	1908	4	37·04	4·35	1·947	·115	·187	86·57	5·94	8,650	...
	mean		39·22	4·94	1·954	·087	·180	87·96	4·51	9,235	3·30
B. 1566	1904	1	39·33	2·60	1·798	·074	·205	86·57	4·12	8,353	...
	1905	2	37·15	0·44	1·923	·065	·142	90·29	3·35	9,298	...
	1906	2	38·02	3·68	2·081	·035	·219	89·14	1·68	9,811	...
	1907	6	32·69	6·58	2·189	·031	·109	93·96	1·45	8,394	...
	1908	6	33·02	1·75	2·080	·072	·132	91·02	3·52	8,260	...
	mean		34·35	3·58	2·083	·053	·139	91·49	2·59	8,617	3·00
B. 1529	1904	1	32·15	...	2·268	·037	·124	93·37	1·63	8,321	...
	1905	2	24·60	2·50	2·272	·039	·106	94·00	1·72	6,981	...
	1906	2	26 86	·81	2·540	·020	·151	93·70	0·79	8,232	...
	1907	4	23·17	8·39	2·517	·026	·120	94·53	1·03	6,864	...
	1908	4	18·82	8·80	2·511	·033	·141	93·55	1·29	5,672	...
	mean		23·31	5·79	2·462	·031	·130	93·93	1·23	6,838	2·44
B. 1521	1905	1	29·04	2·98	2·025	·052	·222	88·08	2·57	7,531	...
	1906	2	16 87	2·23	1·880	·038	·382	81·78	2·00	4,006	...
	1907	2	28·99	14·23	2·208	·090	·162	89·80	4·06	7,998	...
	1908	2	31·44	9·11	2·135	·072	·175	89·65	3·35	9,307	...
	mean		25·86	7·50	2·056	·063	·247	86 81	3·01	6,808	2·44
B. 208	1900	4	26·52	4·89	1·961	·078	·117	90·96	3·98	6,239	...
	1901	4	27·49	3·37	2·302	·065	·150	91·45	2·81	7,698	...
	1902	4	22·22	0·34	2·284	·059	·133	92·22	2·59	6,139	...
	1903	2	19·96	0·19	2·104	·044	·158	91·26	2·09	5,443	...
	1904	2	32·89	10·37	2·163	·038	·170	91·18	1·75	9,023	...
	1905	4	28·19	11·06	2·038	·059	158	90·34	2·95	7,503	...
	1906	2	27·31	4·29	2·258	·029	·203	90·71	1·26	7,876	...
	1907	6	23·00	14·29	2·314	·042	·137	93·05	1·80	6,410	...
	1908	5	22·34	10·16	2·382	·054	·141	92·42	2·27	6,541	...
	mean		25·45	7·74	2·219	·053	·148	91·77	2·41	6,691	2·40
B. 376	1902	2	18 78	6·87	2·180	·071	·079	93·58	3·26	4,842	...
	1903	2	20·13	0·78	1·833	·071	·150	89·76	3·86	4,792	...
	1904	4	35·01	4·55	1·726	·098	·183	85·94	5·80	7,954	...
	1905	4	26·34	9·92	1·824	·083	·126	89·61	4·65	6,168	...
	1906	2	34·50	8·73	2·058	·044	186	89·96	2·15	8,464	...
	1907	4	26·74	12·35	2·122	·040	·133	92·29	2·07	6,428	...
	1908	4	28·95	5·22	2·178	·061	·140	91 53	2·83	7,931	...
	mean		27·77	7·32	1·981	·058	·143	90·19	3·63	6,821	2 44

MEAN RESULTS RED SOIL ESTATES FOR SEASONS 1900 1901 1902 1903 1904 1905 1906 1907 1908

TABLE XLVIII. — *Concluded.* PLANT CANES.

Number or Name of Seedling.		Number of Plots.	Tons Canes per acre.	Per cent by number of Rotten Canes.	Normal Juice. Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.	Saccharose lb per acre.	Muscovado Yield.
D. 95	1903	2	17·31	5·99	1·841	·076	·154	88·91	4·12	4,035	...
	1904	4	27·73	2·05	1·852	·077	·135	89·64	4·21	6,522	..
	1905	4	25·21	9·50	1·867	·072	·140	89·72	3·89	6,078	...
	1906	4	27·91	3·15	2·307	·028	·160	92·47	1·22	8,063	...
	1907	3	23·76	8·46	2·373	·017	·127	94·30	0·75	6,266	...
	1908	3	25·54	6·78	2·369	·037	·131	93·38	1·57	7,356	...
	mean	...	25·00	6·11	2·072	·054	·140	91·26	2·80	6,395	2·29
W. Trans.	1901	3	20·90	13·59	2·004	·094	·159	88·59	4·85	5,102	...
	1902	6	19·23	4·09	2·169	·068	·109	92·42	3·17	4,921	...
	1903	2	15·31	2·28	1·938	·058	·163	89·75	3·00	3,687	...
	1904	5	28·31	3·06	1·840	·074	·163	88·55	4·07	6,753	...
	1905	5	23·35	3·66	1·897	·070	·160	89·90	3·76	5,542	...
	1906	3	25·87	12·46	1·899	·064	·265	85·20	3·37	6,199	...
	1907	6	23·67	8·54	2·171	·045	·132	92·41	2·11	6,006	...
	1908	5	22·26	6·87	2·189	·046	·130	92·56	2·11	5,887	...
	mean	...	22·80	6·47	2·035	·063	·140	90·41	3·20	5,644	2·02

MEAN RESULTS RED SOIL ESTATES FOR SEASONS. 1901 1902 1903 1904 1905 1906 1907 1808

TABLE XLIX. 1ST RATOONS.

Number or Name of Seedling.	Number of Plots.	Tons Canes per Acre.	Per cent. by number of rotten Canes.	Normal Juice. Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.	Saccharose lb per acre.	Muscovado Yield.
B. 376 1904-8	12	28·02	5·06	2·028	·055	·137	91·28	2·66	7,027	2·50
B. 1566 1905-8	21	27·24	1·30	2·053	·060	·142	91·01	2·87	6,688	2·40
D. 95 1903-8	13	25·44	2·26	2·112	·043	·131	91·77	2·09	6,609	2·36
W. Trans. 1902-8	21	22·21	5·89	2·043	·064	·148	90·58	3·08	5,621	2·01
B. 208 1901-8	26	19·57	8 38	2·239	·052	·143	91·54	2·15	5,464	1·95

BLACK SOILS—PLANTS.

MEAN RESULTS OF CANES UNDER EXPERIMENT FOR THE YEARS :—

1904, 1905, 1906, 1907 AND 1908.

TABLE L.

	Name of Cane.	No. of Experiments.	No. of Years.	Tons per Acre.	Saccharose lb per Gallon.	Glucose lb per Gallon.	Quotient of Purity.	Glucose Ratio.	Saccharose lb per Acre
1	B. 4578	4	4	36·05	1·932	·096	86·16	4·94	9,116
2	B. 3747	7	4	34·65	2·176	·060	90·31	2·77	8,907
3	B. 6171	4	4	33·70	2·078	·046	90·82	2·23	8,893
4	B. 6450	8	4	35·74	2·008	·080	88·39	4·06	8,873
5	B. 6308	4	4	34·80	2·075	·064	90·42	3·11	8,827
6	B. 3675	5	4	33·82	2·179	·059	89·37	2·70	8,782
7	B. 4934	4	4	31·79	2·173	·042	92·16	1·91	8,660
8	B. 6388	4	4	31·55	2·137	·067	89·26	3·18	8,626
9	B. 3696	19	5	33·53	2·054	·061	95·16	3·24	8,621
10	B. 6346 ...	4	4	30·35	2·320	·036	92·01	1·55	8,523
11	B. 5353	5	5	31·67	2·010	·071	88·58	3·49	8,498
12	B. 3871	4	4	42·88	1·496	·182	78·73	12·59	8,433
13	B. 3859	6	5	35·96	1·975	·091	85·50	5·07	8,415
14	B. 3922	4	4	31·56	2·132	·057	90·78	2·69	8,303
15	B. 7169	4	4	31·22	2·274	·055	91.79	2·44	8,276
16	B. 1753	31	5	37·21	1·938	·083	86·98	4·28	8,200
17	B. 4631	4	4	36·13	1·711	·104	80·54	6·04	8,188
18	B. 6341	4	4	31·72	2·064	·056	88·79	2·73	8,169
19	B. 3750	5	5	32·46	1·973	·068	88·64	3·42	8,113
20	B. 3700 ... —	5	5	33·03	2·019	·059	89·42	2·95	8,086
21	B. 6230	4	4	30·57	2·181	·057	88·96	3·84	8,065
22	B. 3819	7	5	33·83	1·994	·073	88·44	3·80	8,041
23	B. 4452	4	4	33·66	1·806	·098	85·16	5·47	7,952
24	B. 3838	5	5	33·97	1·902	·095	85·58	5·09	7,920
	B. 3853	5	5	33·12	1·894	·065	89·01	3·49	7,920
25	B. 6259	4	4	33·55	1·932	·117	82·15	6·14	7,909
26	B. 3708	8	5	32·86	1·986	·065	89·14	3·21	7,907
27	B. 1809	5	5	31·80	2·054	·082	89·53	3·96	7,864
28	B. 6183	4	4	33·04	1·936	·057	88·70	2·94	7,836
29	B. 3668	4	4	31·35	2·146	·063	88·25	2·93	7,828
30	B. 3735	5	5	29·80	2·158	·062	89·69	2·98	7,768
31	B. 6835 ...	4	4	27·78	2·338	·029	93·02	1·23	7,767
32	B. 6138	4	4	34·53	1·848	·101	86·32	5·48	7,740
33	B. 6280 ...	4	4	27·32	2·300	·060	90·71	2·65	7,738
34	B. 5136	4	4	32·30	1·884	·109	85·99	5·85	7,732
35	B. 6360	5	4	32·43	1·943	·103	85·36	5·33	7,731
36	B. 1355	13	5	29·40	2·124	·048	91·52	2·25	7,715
37	B. 4844 ...	6	5	33·45	1·799	·122	84·20	7·27	7,697
38	B. 3289	23	5	30·62	2·039	·051	89·98	2·39	7,647
39	B. 6048	13	5	31·42	1·900	·100	84·47	5·48	7,608
40	B. 1030	22	5	32·32	2·028	·056	88·20	2·79	7,605
41	B. 3810	5	5	33·07	1·687	·101	83·70	6·27	7,561
42	B. 1376	11	5	29·67	2·097	·056	90·78	2·71	7,535
43	B. 4028	9	5	36·45	1·634	·095	81·43	5·93	7,529
44	B. 4929	4	4	32·61	1·845	·098	85·44	5·35	7,521
45	B. 5204	5	5	27·33	2·178	·057	90·00	2·66	7,479
46	B. 4596 — ...	9	5	32·97	1·803	·108	85·22	6·18	7,478
47	B. 1529	34	5	25·97	2·420	·040	92·25	1·66	7,464
48	B. 3635	16	5	28·28	2·190	·046	91·02	2·13	7,402

BLACK SOILS—PLANTS.

MEAN RESULTS OF CANES UNDER EXPERIMENT FOR THE YEARS :—

1904, 1905, 1906, 1907 AND 1908.

TABLE L.—*Concluded.*

	Name of Cane.	No. of Experiments.	No. of Years.	Tons per acre.	Saccharose lb. per gallon.	Glucose lb. per gallon.	Quotient of Purity.	Glucose Ratio.	Saccharose lb. per acre.
49	B. 6281	4	4	27·34	2·273	·044	90·40	1·95	7,390
50	B. 3013	5	5	30·14	1·925	·076	88·18	4·01	7,375
51	B. 5298	5	5	28·18	2·178	·061	89·89	2·89	7,362
52	B. 6381	4	4	29.01	2·044	·072	88·37	3·59	7,335
53	B. 208	65	5	26·18	2·302	·045	91·54	1·97	7,282
54	B. 4257	3	3	32·88	1·760	·116	83·22	6·66	7,278
55	B. 147	23	5	29·78	1·949	·078	87·77	4·01	7,265
56	B. 3701	5	5	32·98	1·848	·099	83·82	5·48	7,239
57	B. 1528	7	5	28·39	2·090	·063	90·31	3·01	7,226
58	B. 4769	7	5	29·06	1·932	·093	69·29	4·97	7,152
59	B. 5014	5	4	28·57	2·114	·068	89.83	3·23	7,136
60	B. 3509	5	5	28·59	2·218	·041	91·28	1·86	7,094
61	B. 6344	4	4	27·43	2·096	·044	90·96	2·12	7,087
62	B. 4507	5	5	29·59	2·154	·053	90·24	2·46	7,079
63	B. 7245	4	4	29·87	1·970	·068	87·16	3·47	7,040
64	B. 5062	10	5	30·18	1·936	·084	86·08	4·39	7,036
65	B. 3731	9	5	25·42	2·252	·042	91·92	1·97	6,996
66	B. 3656 ...	10	5	29·39	1·952	·077	86·79	4·04	6,963
67	B. 5226	5	5	26·68	2·168	·054	89·42	2·49	6,866
68	B. 6434 ...	4	4	27·37	2·022	·065	87·76	3·23	6,845
69	B. 6274	4	4	30·43	1·849	·075	86·64	4·09	6,814
70	B. 3694	4	4	31·93	1·711	·108	83·07	6·43	6,803
71	B. 6696	4	4	27·34	2·074	·042	90·58	2·03	6,771
72	B. 6292	9	4	26·28	2·078	·075	88·38	3·63	6,766
73	B. 5758	9	5	27·11	2·055	·070	90·02	3·46	6,751
74	W. No. 2. ...	10	5	26·89	2·060	·067	89·99	3·31	6,731
75	B. 3381 .. .	8	5	25·74	2·302	·042	91·23	1·84	6,666
76	B. 6439	4	4	26·00	2·057	·078	87·53	3·80	6,643
77	B. 3224	5	5	26·19	2·048	·060	90·27	2·85	6,618
78	B. 376	37	5	26·84	2·060	·062	90·10	3·05	6,578
79	B. 6345	4	4	24·71	2·221	·069	88·91	3·13	6,547
80	W. Transparent ...	102	5	26·17	2·078	·061	89·94	2·99	6,538

RED SOILS—PLANTS.

Mean Results of Canes under Experiment for the years 1904, 1905, 1906, 1907, 1908.

Table LI.

	Name of Cane.	Number of Expts.	Number of Years.	Tons per Acre.	Saccharose lb. per Gallon	Glucose lb. per Gallon.	Quotient of Purity.	Glucose Ratio.	Saccharose lb. per acre.
1	B. 3412	11	5	40·90	1·927	·089	86·80	4·74	9,854
2	B. 3405	11	5	40·59	1·885	·096	85·64	5·19	9,607
3	B. 3390	11	5	39·95	1·926	·078	87·78	4·11	9,405
4	B. 1566	17	5	36·04	2·014	·055	90·19	2·82	8,823
5	B. 208	21	5	26·75	2·229	·044	91·35	2·12	7,466
6	B. 1521	9	5	28·17	2·116	·063	87·67	3·16	7,442
7	B. 376	18	5	29·91	1·982	·065	89·87	3·50	7,389
8	B. 3731	3	3	24·44	2·390	·034	92·91	1·75	7,275
9	B. 1529	13	5	25·12	2·422	·031	93·83	1·29	7,204
10	D. 95	12	5	26·12	2·159	·045	92·04	2·23	6,909
11	W. Transparent ...	24	5	25·09	1·997	·060	89·72	3·09	6,069

RED SOILS—PLANTS.

MEAN RESULTS OF CANES UNDER EXPERIMENT FOR THE YEARS 1907 & 1908.

TABLE LII.

	Name of Cane.	Number of Expts.	Number of Years.	Tons per Acre.	Saccharose lb. ℔ Gallon.	Glucose lb. per Gallon.	Quotient of Purity.	Glucose Ratio.	Saccharose lb. per Acre.
1	B. 1753	11	2	36·19	1·959	·091	87·90	4·66	8,166
2	B. 1386	4	2	31·93	2·117	·066	89·99	3·12	8,127
3	B. 3289	2	2	32·08	1·989	·040	87·34	2·00	7,876
4	B. 3696	2	2	25·98	1·989	·066	91·04	3·44	6,504
5	B. 3668	4	2	23·38	2·268	·073	90·16	3·24	6,251
6	White Transparent...	11	2	22·97	2·180	·046	92·49	2·11	5·946

RED SOILS, 1st RATOONS.

MEAN RESULTS OF CANES UNDER EXPERIMENT FOR THE YEARS 1905, 1906, 1907, 1908.

TABLE LIII.

	Name of Cane.	Number of Expts.	Number of Years.	Tons per Acre.	Saccharose lb. ℔ Gallon.	Glucose lb. per Gallon.	Quotient of Purity.	Glucose Ratio.	Saccharose lt. per Acre
1	B. 3390	7	4	32·77	1·931	·076	87·29	3·94	7,276
2	B. 3412	7	4	31·34	1·858	·102	84·33	5·45	7,068
3	D. 95	9	4	26·61	2·185	·037	92·36	1·71	6,982
4	B. 376	10	4	27·03	2·053	·049	91·60	2·40	6,756
5	B. 3405	7	4	29·63	1·809	·106	83·48	5·91	6,443
6	B. 1566	11	4	25·92	2·010	·058	90·61	2·89	6,298
7	W. Transparent ...	14	4	24·16	2·076	·064	90·77	3·08	6,145

RED SOILS—2ND RATOONS

MEAN RESULTS OF CANES UNDER EXPERIMENT FOR THE YEARS :—

1907 AND 1908.

TABLE LIV.

	Name of Cane.	No. of Experiments.	No. of Years.	Tons per Acre.	Saccharose lb per Gallon.	Glucose lb per Gallon.	Quotient of Purity.	Glucose Ratio	Saccharose lb per Acre
1	B. 3390	2	2	37·25	1·953	·092	89·51	4·73	8,512
2	B. 3412	2	2	30·29	1·955	·113	87·30	5·75	7,244
3	B. 3405	2	2	26·42	1·889	·109	86·60	5·77	5,939
4	W. Trans :	4	2	20·13	2·104	·049	92·38	2 34	5,027

NEWER SEEDLINGS.—BLACK SOILS-PLANTS.

MEAN RESULTS OF CANES UNDER EXPERIMENT FOR THE YEARS 1907 & 1908.

TABLE LV.

	Name of Cane.	Number of Expts.	Number of Years	Tons per acre.	Saccharose lb per gallon.	Glucose lb per Gallon.	Quotient of Purity.	Glucose Ratio.	Saccharose lb per Acre.
1	B. 7946	2	2	32·78	2·200	·058	90·17	2·75	8,881
2	Java G. Z. 96	4	2	27·61	2·284	·061	91·08	2·69	7,670
3	B. 8609	2	2	28·60	2·163	·060	90·20	2·86	7,558
4	Java 51	5	2	33·40	1·761	·137	84·59	7·76	7,497
5	B. 7482	2	2	24·22	2·398	·033	92·77	1·36	7,149
6	B. 8520	2	2	29·29	1·996	·083	87·87	4·26	7,107
7	B. 8651	2	2	27·92	2·095	·051	89·03	2·47	7,096
8	B. 8600	2	2	26·81	2·301	·053	90·67	2·32	7,037
9	B. 8660	2	2	28·04	2·046	·084	87·88	4·08	6,991
10	B. 7518	2	2	28·58	2·021	·062	89·96	3·10	6,904
11	B. 8334	2	2	27·68	2·119	·043	91·69	2·07	6,841
12	B. 7782	2	2	29·22	1·770	·086	83·99	4·76	6,790
13	B. 7489	2	2	25·34	2·304	·028	92·33	1·20	6,680
14	B. 7777	2	2	25·79	2·147	·040	91·03	1·90	6,550
15	B. 7834	2	2	27·64	1·917	·058	87·55	3·02	6,488
16	B. 7794	2	2	23·36	2·108	·043	88·30	2·02	6,479
17	B. 7577	2	2	26·73	2·088	·047	92·19	2·30	6,471
18	White Transparent ...	2	2	25·77	2·112	·064	90·45	3·07	6,441

ANALYSIS OF ESTATE SAMPLES OF JUICE.

TABLE LVI.

Number or Name of Seedling.		Number of Samples.	Normal Juice.					
			Sp. Gr. $\frac{30^{\circ}C.}{16^{\circ}C.}$	Lb. per Gallon. Saccharose.	Glucose.	Solids not Sugar	Quotient of Purity.	Glucose Ratio.
Burke		1	1·0729	1·682	·096	·217	84·31	5·71
Cal. Queen		1	1·0751	1·847	·060	·146	89·97	3·25
Collynns Cane		1	1·0791	1·784	·114	·260	82·67	6·39
Hannays No. 1 ...	Higher	...	1·0773	1·720	·179	·213	81·44	10·41
	Lower ...	...	1·0760	1·693	·179	·205	81·51	10·51
	mean ...	2	1·0767	1·707	·179	·209	81·48	10·46
Hannays No. 2 ...	Higher...	..	1·0734	1·597	...	...	79·57	...
	Lower ...	...	1·0734	1·594	...	...	79·42	...
	mean ...	2	1·0734	1·596	...	...	79·49	...
Mont Blanc		1	1·0747	1·788	·078	·176	87·56	4·36
Rappoe	Higher...	2	1·0782	1·889	·045	·201	88·48	2·38
	Lower ...	...	1·0721	1·659	·069	·245	84·09	4·16
	mean ...	2	1·0752	1·774	·057	·223	86·29	3·27
Sealy Seedling ...	Higher...	...	1·0915	2·245	·057	·187	90·20	2·54
	Lower ...	...	1·0787	1·758	·156	·233	81·88	8·87
	mean ...	2	1·0851	2·002	·107	·210	86·04	5·72
White Transparent ...	Highest...	...	1·0875	2·103	·089	·190	88·29	4·23
	Lowest ...	...	1·0721	1·698	·069	·206	86·06	4·06
	mean ...	24	1·0839	1·905	·076	·205	87·47	4·38
B. 109		1	1·0773	1·763	·083	·266	83·48	4·71
B. 147	Highest...	...	1·0813	1·967	·083	·167	88·72	4·22
	Lowest ...	...	1·0725	1·717	·078	·189	86·54	4·54
	mean ...	9	1·0795	1·813	·091	·210	86·14	4·86
B. 208	Highest...	...	1·0924	2·343	·057	·112	93·27	2·43
	Lowest ...	...	1·0778	1·821	·114	·188	85·77	6·26
	mean ...	18	1·0882	2·150	·061	·189	89·51	2·90
B. 376	Highest...	...	1·0853	2·138	·037	·148	92·04	1·73
	Lowest ...	...	1·0699	1·639	·125	·151	85·59	7·63
	mean ...	14	1·0808	1·927	·096	·180	87·44	4·68

ANALYSIS OF ESTATE SAMPLES OF JUICE.

TABLE LVI—*Concluded.*

Number or Name of Seedling.		Number of Samples	Sp. Gr. 30°C./16·6°C	Normal Juice. Lb. per gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.
B. 1329		1	1·0902	2·296	·023	·134	93·60	1·00
B. 1462		1	1·0804	1·925	·069	·199	87·78	3·58
B. 1529		1	1·0897	2.129	·057	·255	87·22	2·68
B. 1566	Higher	...	1·0804	1·997	·074	·122	91·06	3·71
	Lower	...	1·0822	1·980	·057	·203	88·39	2·88
	mean	2	1·0813	1·989	·066	·163	89·73	3·30
B. 1719		1	1·0813	1·912	·074	·231	86·24	3·87
B. 1753	Highest	...	1·0813	1·976	·045	·196	89·13	2·28
	Lowest	...	1·0725	1·571	·156	·257	79·19	9·93
	mean	11	1·0788	1·839	·096	·216	85·42	5·33
B. 3289		1	1·0835	2·066	·048	·161	90·81	2·32
B. 3381		1	1·0813	1·636	·156	·425	73·79	9·54
B. 3390		1	1·0791	1·904	·104	·150	88·23	5·46
B. 3412	Higher	...	1·0835	1·989	·125	·161	87·43	6·29
	Lower	...	1·0738	1·678	·104	·237	83·11	6·20
	mean	2	1·0787	1·834	·115	·199	85·27	6·25
W. No. 2	Highest	...	1·0920	2·317	·050	·134	92·64	2·16
	Lowest	...	1·0716	1·626	·139	·196	82·92	8·55
	mean	4	1·0783	1·848	·107	·182	86·07	6·16

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RESULTS OF THE LARGE VARIETY EXPERIMENTS PLOTS. 1908.

TABLE LVII.

Date.	Name of Estate.	Name of Field.	No. or Name of Cane.	Size of Plot.	Gallons of Juice from Plot (Imp. Gallons.)	Normal Juice. Sp. Gr. 30°C./16·6°C.	Pounds per Gallon. Saccharose	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.	Gallons of Juice per Acre (Imp. Gallons.)	Saccharose lb per Acre
March 20	Society	Never Failing ...	B. 376	·5 Acre	2,166	1·0861	2·093	·054	·199	89·22	2·58	4,332	9,067
„ 27	„	Pasture	„	·5 „	1,479	1·0817	1·892	·104	·232	84·92	5·50	2,958	5,596
April 11	„	„	„	·918 „	2,624	1·0835	1·986	·114	·175	87·30	5·74	2,858	5,682
„ 25	Claybury ...	Road & Bootman ...	„	3·75 „	14,610	1·0699	1·639	·125	·151	85·59	7·63	3,896	6,386
March 30	Upton	Hog Hole	„	5· „	14,344	1·0848	2·002	.096	·213	86·63	4·80	2,869	5,726
April 13	„	Low Tamarind ...	„	4·5 „	18,154	1·0795	1·865	·096	·209	85·95	5·15	4,034	7,523
„ 13	Balls	...	„	·783 „	2,340	1·0809	1·873	·114	·218	84·94	6·09	2,989	5,598
„ 16	„	...	„	·707 „	2,400	1·0857	2·057	·074	·203	88·13	3·60	3,395	6,984
			Mean	...	...	...	...	...	...	...	...	...	6,570
Feb. 13	Upton	Harper	B. 208	1 „	2,896	1·0866	2·158	·048	·152	91·52	2·22	2,896	6,250
March 4	„	Bottom	„	3·5 „	9,650	1·0835	2·019	·050	·206	88·75	2·48	2,757	5,566
„ 2	Hannays ...	North Path Pond ...	„	1·465 „	5,975	1·0879	2·171	·039	·183	90·72	1·79	4,078	8,853
„ 2	„	„	„	1·465 „	3,983	1·0884	2·179	·038	·188	90·60	1·75	2,719	5,925
„ 6	Pine	Head Acre	„	1·008 „	2,799	1·0897	2·249	·036	·156	92·13	1·60	2,777	6,234
„ 10	Balls	... ...	„	·704 „	1,560	1·0933	2·229	·057	·250	87·89	2·56	2,216	4,935
April 13	„	... ...	„	·764 „	1,520	1·0942	2·294	·034	·232	89·61	1·48	1,990	4,565
„ 15	„	Middle Tenant ...	„	·707 „	1,640	1·0915	2·171	·096	·222	87·22	4·42	2,320	5,037
March 18	Husbands ..	Four Acre	„	1·03 „	2,666	1·0915	2·236	...	...	89·84	...	2,588	5,787
„ 19	Claybury ...	Road & Bootman ...	„	3·75 „	17,993	1·0778	1·821	·114	·188	85·77	6·26	4,798	8,737
„ 25	Society	..	„	·5 „	1,499	1·0929	2·312	·039	·173	91·60	1·69	2,998	6,931
„ 27	„	Pasture	„	·918 „	2,478	1·0857	1·993	·139	·202	85·39	6·97	2,699	5,379
			Mean	...	...	...	...	...	...	...	...	...	6,183

TABLE LVII—*Continued.*

RESULTS OF THE LARGE VARIETY EXPERIMENT PLOTS, 1908.

Date.	Name of Estate.	Name of Field.	Number or Name of Cane.	Size of Plot.	Gallons of Juice from Plot (Imp. Gallons.)	Normal Juice. Sp. G. 30° C. / 16·6° C.	Pounds per Gallon. Saccharose.	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.	Gallons of Juice per acre (Impl. Gals.)	Saccharose lb. per acre.
Feby. 18	Upton	Harper	B 147	1 acre	3,077	1·0725	1·717	·078	·189	86·54	4·54	3,077	5,754
March 20	„	Four Pond ...	„	6 „	19,500	1·0778	1·824	·069	·230	85·92	3·78	3,250	5,928
„ 7	Pine	Head Acre ..	„	·992 „	3,149	1·0760	1·785	·078	·214	85·94	4·37	3,174	5,666
„ 11	Balls	Court House ..	„	·734 „	1,640	1·0813	1·900	·083	·234	85·70	4·37	2,234	4,245
„ 12	„	Middle Negro Yard	„	·575 „	2,000	1·0813	1·921	·078	·218	86·65	4·06	3,478	6,681
April 14	„	...	„	·704 „	1,960	1·0813	1·923	·096	·198	86·74	4·99	2,784	5,354
„ 18	„	...	„	·694 „	2,200	1·0813	1·967	·083	·167	88·72	4·22	3,170	6,235
March 27	Society	Pasture	„	·918 „	3,644	1·0835	1·908	·139	·228	83·87	7·29	3,969	7,573
„ 19	Husbands	Four acre... ...	„	·103 „	2,607	1·0804	1·868	·114	·211	85·18	6·10	2,581	4,728
			Mean.										5,796
March 2	Hannays	North Path Pond...	B 1753	1·003 „	3,375	1·0813	1·938	·089	·190	87·42	4·59	3,365	6,521
„ 16	Coverly	Millfield	„	·62 „	2,671	1·0725	1·571	·156	·257	79·19	9·93	4,309	6,769
„ 18	Husbands	Four acre	„	1·03 „	2,999	1·0809	1·918	074	·213	86·98	3·86	2,912	5,585
„ 24	Pine	Head acre	„	·998 „	2,799	1·0793	1·891	·060	·219	87·14	3·17	2,805	5,304
April 11	Haggatts	Born Slack ...	„	7 acrs	15,900	1·0795	1·801	·125	·244	83·00	6·94	2,271	4,090
May 6	Brighton	Monkey Pond ...	„	·331 „	1,100	1·0773	1·793	·114	·205	84·90	6·36	3,323	5,958
			Mean.										5,704
March 18	Coverly	Millfield	B 1719	·248 „	875	1·0817	1·776	·125	·327	79·71	7·04	3,528	5,266
April 2	Upton	Low Crawford ...	„	·203 „	624	1·0813	1·912	·074	·231	86·24	3·87	3,072	5,874
			Mean.										5,570

TABLE LVII.—*Concluded.* RESULTS OF THE LARGE VARIETY EXPERIMENT PLOTS. 1908.

Date.	Name of Estate.	Name of Field.	No. or Name of Cane.	Size of Plot.	Gallons of Juice from Plot (Imp. Gallons.)	Normal Juice. Sp. Gr. 30°C. 16·6°C.	Pounds per Gallon. Saccharose	Glucose.	Solids not Sugar.	Quotient of Purity.	Glucose Ratio.	Gallons of Juice per Acre (Imp. Gallons.)	Saccharose lb. per Acre.
Feby. 13	Upton ...	Harper	White Transparent ...	·5 Acre.	1,475	1·0778	1·879	·074	·170	88·51	3·94	2,950	5,543
March 5	"	Quarry	" " " ...	4· Acres	10,680	1·0795	1·868	·069	·233	86·08	3·69	2,670	4,988
" 18	"	Brook Bottom ...	" " " ...	5· "	14,332	1·0787	1·865	·060	·222	86·86	3·22	2,866	5,345
April 2	"	Low Crawford ...	" " " ...	4· "	11,096	1·0831	2·020	·050	·193	89·26	2·48	2,774	5,603
" 10	"	St. Thomas ...	" " " ...	5· "	15,635	1·0791	1·891	·074	·193	87·63	3·91	3,127	5,913
March 10	Balls	...	" " " ...	·719 "	2,040	1·0839	1·950	·078	·259	85·26	4·00	2,837	5,532
" 12	"	Middle Negro Yard...	" " " ...	1·153 "	2,960	1·0817	1·928	·089	·211	86·53	4·63	2,567	4,949
April 15	"	...	" " " ...	·856 "	2,440	1·0835	1·972	·104	·199	86·68	5·27	2,850	5,620
" 15	"	...	" " " ...	·719 "	2,040	1·0866	2·009	·089	·260	85·20	4·43	2,837	5,700
" 18	"	...	" " " ...	·198 "	700	1·0839	2·049	·078	·160	89·59	3·81	3,535	7,243
March 11	Pine	Head Acre	" " " ...	·248 "	400	1·0787	1·805	·104	·238	84·07	5·76	1,613	2,911
" 17	Husbands ..	Four Acre	" " " ...	1·03 "	2,666	1·0875	2·103	·089	·190	88·29	4·23	2,588	5,443
			Mean		...	...	...	...	..	...	...	...	5,399
May 6	Brighton ...	Monkey Pond ...	B. 3390	·069 "	350	1·0791	1·904	·104	·150	88·23	5·46	5,072	9,657
" 6	"	" ...	B. 3412	·079 "	283	1·0835	1·989	·125	·161	87·43	6·29	3,582	7,125
" 6	"	" ...	B. 3289	·316 "	983	1·0835	2·066	·048	·161	90·81	2·32	3,111	6,427
March 6	Pine	Head Acre ...	Rappoe	1·016 "	3,061	1·0782	1·889	·045	·201	88·48	2·38	3,013	5,692
" 11	"	" ...	Burke	·992 "	3,324	1·0729	1·682	·096	·217	84·31	5·71	3,351	5,636
April 24	Society	Pasture	Mixed Plants	·918 "	2,541	1·0844	2·007	·096	·196	87·29	4·78	2,768	5,555
March 7	Pine	Head Acre	B. 109	·992 "	2,711	1·0773	1·763	·083	·266	83·48	4·71	2,733	4,818
" 24	Pine	Head Acre	B. 1529	.992 "	2,429	1·0897	2·129	·057	·255	87·22	2·68	2,449	5,214
" 16	Coverly	Millfield	Collynns...	1·0 "	2,484	1·0791	1·784	·114	·260	82·67	6·39	2,484	4,431
May 6	Brighton ...	Monkey Pond ...	B. 1566	·083 "	183	1·0804	1·997	·074	·122	91·06	3·71	2,205	4,403
March 18	Coverly	Millfield	B. 3381	·579 "	1,388	1·0813	1·636	·156	·425	73·79	9·54	2,397	3,921
April 2	Upton	Low Crawford ...	B. 1462	·226 "	438	1·0804	1·925	·069	·199	87·78	3·58	1,938	3,731