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Miscellaneous Information—No. 6.

As many planters are trying since the deplorable drop in the price of sugar to grow food for their animals instead of buying imported oats, oilmeal, corn &c, a practice commendable when the profit derived from an acre of sugar canes was sufficient to pay for the produce of many acres of corn, but just the reverse now, when sugar hardly pays the cost of production; the following extract from a lecture given on "Our stock foods and how to use them" by Professor E. M. Shelton, M.Sc., Instructor in Agriculture, Queensland, may not be without interest giving as it does the per cent composition of many of the plants and grains used for food here, and the right way to feed animals.

JOHN R. BOVELL
Superintendent.

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Queensland Annual Report of the Department of Agriculture for the year 1892-93.

Our stock foods, and how to use them—Farmers universally recognise the truth that foods differ greatly in appearance, and in their effects upon the animals that consume them. All farmers understand that the grains which are fed most profitably to fattening animals are not the best for working stock, or for young and growing beasts. Most farmers—all who have studied carefully and watched their operations attentively—have learned that different foods have very different effects upon the products of feeding. Certain foods are known to effect powerfully the flow of milk or the growth of wool, while others tend to accumulate fat in the tissues of animals, and it is now boldly asserted that the stock-feeder, by the use of proper foods alone, may produce in his feeding animals, lean flesh or fat, butter fat or cheese in the milk of his cows, and in his fowls, eggs or flesh as he desires. Again, most people understand, from personal experiences, if not from their observations of the lower animals, that foods containing an undue proportion of any one element are injurious to the consumer. An excess of fats or of sugar or starch or albumen in food, provokes at first disgust and if persisted in results in serious derangements of health. It should be remembered that in feeding grains we first take these substances away from the straw, husks or chaff, with which they are naturally connected, and which, under natural conditions, would be consumed with them. In the use of by-products, oilcake bran, pollard, brewers' grains, &c., we go still further and remove from the grain particular substances or elements, reserving the ill-balanced residues for stock food. All of this the practical man knows or may know; but science alone can teach him the exact gains and losses from these practises, and the reason why these results are obtained.

From the foregoing it is, to my mind, clearly inferable that all of the different classes of animals have definite food wants, which may be met more or less completely by the different stock-foods singly or in combination. I desire here to emphasize the statement that all these are matters of very direct and practical importance to stockowners. If, for instance, the farmer is feeding his dairy cows with some hay or grain, of which they can

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utilise, in the process of nutrition, only one-half or three-fourths, it is most important that he shall know this and the way to remedy the waste. The owner of work horses, who by substituting for the grain he has been using another equally good, costing 25 per cent. less, will not dispute the proposition that science thus employed is practical.

It must be remembered in the outset that the values assigned the various food stuffs in the pages which follow are subject to various modifications. The nutritive functions of animals of the same class and age are not nearly alike. Foods of the same class also differ greatly among themselves. Hay may have been slightly over or under ripe when cut, or it may have been imperfectly cured, and yet pass muster as "good hay." Again, foods may possess poisonous qualities, or may unfavourably affect the quality of the products of the animals fed; as for instance, the flavour of milk or the colour or consistency of butter, and chemistry gives us no hint of their presence. For these and other reasons the chemical formulæ may not, in feeding, be followed implicitly. They serve us as a valuable guide, aiding us in correcting errors in practice, and suggesting new and valuable uses for products often otherwise wasted; but the stockowner who acts upon the assumption that chemical knowledge alone is sufficient will certainly fail. Here, as elsewhere in farming, "practice, with science" should be the motto.

EXPLANATORY.

The tables which follow have been taken from a variety of sources. The composition of feeding stuffs is mostly obtained from the published reports of the American experiment stations, while the tables of feeding standards give the results chiefly of German experiments. The table showing the digestibility of many of the articles which are common in Queensland it has been necessary to calculate, using for this purpose the coefficients of like and closely-allied substances. It is reasonably certain that the results given in the tables will not vary materially from those obtainable from the like products given and fed under Queensland conditions.

Moisture.—All vegetable substances, whatever their condition, contain moisture, the amount varying greatly. Green crops often contain 90 per cent of water, and cured hay 10 to 15 per cent.

Ash.—The principal ash constituents of plants are phosphoric acid, potash, soda, lime, and magnesia. The amount and proportion of these vary greatly with the kind of plant, the time of cutting, and the soil on which it grew. To the stock-feeder, neither the ash or moisture of food stuffs are of much importance, except as they affect quantity. In the ensuing calculations foods are invariably taken as "dry matter," and from them the ash is always subtracted.

Protein or Albuminoids.—Under these names are included all the nitrogenous substances of the plant. In the animal they undergo transformation into muscle, hair, horns, the solid matter of the blood and nerves, the curd (caseine) of milk, and the white of the egg, the latter being almost pure albumminoid. All the class of leguminous plants, the clovers, lucerne, cow-peas, etc., are, in plant and seed, rich in the albuminoids. The great importance of this group will be marked by every reader. Other things being equal, the food that is richest in digestive albuminoids has the largest feeding value.

Fat.—This nutrient is found in comparatively small quantity in plants. Cotton seed, flax seed, castor beans, and the seeds of other oil bearing plants are exceptions to this rule.

Fibre.—Chemically, fibre is closely related to starch. It belongs to the group of carbo-hydrates, and when digestible is given a feeding value equal to that of starch and nitrogen-free extract. Fibre is really the walls of the microscopic cells which make up the bulk of all plants. In old and woody plants fibre is for the most part indigestible.

Nitrogen-free extract.—This term refers to compounds which, like the two immediately preceding, are wanting in nitrogen. The most important of these are sugar, starch, and gum. With fibre and fat this non-nitrogenous extract is employed, in nutrition, in forming fat in the body, and in supplying animal heat. To some extent the albuminoids are able, besides being "flesh formers," to form fat in the body and give to it warmth.

FEEDING STANDARDS.

Scientific feeding consists in apportioning to animals according to the condition in which they are kept, foods containing the chemical compounds above referred to, in such proportions as experiments have shown each to demand. In the table of feeding standards following is given the exact requirements of each animal—assumed to weigh 1,000 lbs.—as has been shown from numerous and carefully conducted experiments. While these experiments have been made under conditions very different to those obtaining here, there are no reasons for doubting their substantial applicability to Queensland conditions.

TABLE OF FEEDING STANDARDS.

	Total Organic Matter.	Albuminoid or Protein.	Nitrogen-free Extract and Fibre.	Fat.	Total Nutritive Substances.	Nutritive Ratio.
A.—Pounds	per day	per 1,000	pounds	live	weight.	
Horse at light work	21·00	1·50	9·50	0·40	11·40	1:7·00
Horse at average work	22·50	1·80	11·20	0·60	13·60	1:7·00
Horse at hard work	25·00	2·80	13·40	0·80	17·00	1:5·50
Oxen at rest in stall	17·50	0·70	8·00	0·15	8·85	1:1·20
Oxen at ordinary work	24·00	1·60	11·30	0·30	13·20	1:7·50
Oxen at hard work	26·00	2·40	13·20	0·50	16·10	1:6·00
Oxen, fattening, first period	27·00	2·50	15·00	0·50	18·00	1:6·50
Oxen, fattening, second period	26·00	3·00	14·80	0·70	18·50	1:5·50
Oxen, fattening, third period	25·00	2·70	14·80	0·60	18·10	1:6·00
Milch Cows	24·00	2·50	12·50	0·40	15·40	1:5·40
Sheep, wool producing (coarser breeds)	20·00	1·20	10·30	0·20	11·70	1:9·00
Sheep, wool producing (finer breeds)	22·50	1·50	11·40	0·25	13·15	1:8·00
Sheep, fattening, first period	26·00	3·00	15·20	0·50	18·70	1:5·50
Sheep, fattening, second period	25·00	3·50	14·40	0·60	18·50	1:4·50
Swine, fattening, first period	36·00	5·90	27·50		32·50	1:5·50
Swine, fattening, second period	31·00	4·90	24·00		28·00	1:6·00
Swine, fattening, third period	23·50	2·70	17·50		20·20	1:6·50
GROWING CATTLE.						
Age — Av. live weight ℔ head.						
2- 3 months ... 150lbs.	22·00	4·00	13·80	2·00	19·80	1:4·70
3- 6 „ ... 300 „	23·40	3·20	13·50	1·30	17·70	1:5·00
6-12 „ ... 500 „	24·00	2·50	13·50	0·60	16·60	1:6·00
12-18 „ ... 700 „	24·00	2·00	13·00	0·40	15·40	1:7·00
18-24 „ ... 850 „	24·00	1·60	12·00	0·30	13·00	1:8·00
GROWING SHEEP.						
5- 6 months ... 56lb	28·00	3·20	15·60	0·80	19·60	1:5·50
6- 8 „ ... 67 „	25·00	2·70	13·30	0·60	16·60	1.5·50
8-11 „ ... 75 „	23·00	2·10	11·40	0·50	14·00	1:6·00
11-15 „ ... 82 „	22·50	1·70	10·90	0·40	13·00	1:7·00
15-20 „ ... 85 „	22·00	1·40	10·40	0·30	12·10	1:8·00
GROWING PIGS.						
2- 3 months ... 50 „	42·00	7·70	30·00		37·50	1:4·00
3- 5 „ ... 100 „	34·00	5·50	25·00		30·00	1:5·00
5- 6 „ ... 125 „	31·50	4·30	23·70		28·40	1:5·50
6- 8 „ ... 170 „	27·00	3·40	20·40		23·80	1:5·00
8-12 „ ... 250 „	21·00	2·50	16·20		18·70	1:6·50

TABLE OF FEEDING STANDARDS—Continued.

	Total Organic Matter.	Albuminoid of Protein.	Nitrogen free Extract & Fibre	Fat.	Total Nutritive Substances.	Nutritive Ratio.
B.—Pounds per day per head.						
GROWING CATTLE.						
Age. Av. light weight ℔ head						
2-3 months..... 150 lb.	3·30	0·60	2.10	0·30	3·00	1:4·70
3-6 „ ..... 300 lb.	7·00	1·00	4 10	0·30	5·40	1:5·00
6-12 „ ..... 500 lb.	12 00	1·30	6·80	0·30	8·40	1:6·00
12-18 „ ..... 700 lb.	16·80	1·40	9·10	0·28	10·78	1:7·06
18-24 „ ..... 850 lb.	20·40	1·40	10·30	0·26	11·96	1:8·00
GROWING SHEEP.						
5-6 months..... 56 lb.	1·60	0·18	0·87	0·045	1·095	1;5·50
6-8 „ ..... 67 lb.	1·70	0·17	0·85	0·040	1·060	1:5·50
8-11 „ ..... 75 lb.	1·70	0·16	0·85	0·037	1·047	1:6·00
11-15 „ ..... 82 lb.	1·80	0·14	0·89	0·032	1·062	1:7·00
15 20 „ ..... 85 lb.	1·90	0·12	0 88	0·025	1·047	1:8·00
GROWING PIGS.						
2-3 months..... 50 lb.	2·10	0·38	1·50		1·88	1:4·00
3-5 „ ..... 100 lb.	3·40	0·50	2·50		3·00	1:5·00
5-6 „ ..... 125 lb.	3·90	0·54	2·96		3·50	1:5·50
6-8 „ ..... 170 lb.	4·60	0·58	3·47		4·05	1:6·00
8-12 „ ..... 250 lb.	5·20	0·62	4·05		4·67	1:6·50

These tables do not call for much explanation. The column headed "Total Organic Matter" in Table A. gives the number of pounds of feed free of water and ash, required daily for each animal weighing 1,000lb.; and in Table B. by the animal weighing the amount givenin the table. For less weight or more a corresponding diminution or increase in the amount of feed required must be made. Thus with a cow weighing 900lb.: the daily ration must be deminished one-tenth, and increased by a like amount if the weight of the animal reaches 1,100lb. Take for example the requirements of milk cows, as given in Table A. We are here told that a cow in full milk requires a daily allowance of—

Total organic matter.....	24·0lb.
Digestible Protein.....	2·5 ,,
Digestible fat.....	0·4 ,,
Digestible carbo-hydrates.....	12·5 ,,

adding to the carbo-hydrates the amount of fat multiplied by 2½, and dividing the same by the amount of digestive protein, and we have 5·4, giving as the nutritive ratio of the food of cows in milk 1 to 5·4.

Nutritive Ratio.— By this there is meant the ratio of the protein or albuminous matters of feed to the non-nitrogenous or carbonaceous. Fat is found to possess 2½ times the heating power of starch. On this acccount in all of our computations under this head fat is multiplied by 2½, and added to the sum of all the carbo-hydrates. Where the proportion of these is large the nutritive ratio is said to be a wide one—where small, narrow. In general it may be said that animals at rest demand a wide ratio, while those kept in a state of activity must be furnished largely with nitrogenous (muscle making) foods—foods in which the nutritive ratio is narrow. The question may here be asked: what ensues if these principles are ignored by the feeder? What, for example, results from using foods having a wide ratio of protein carbo-hydrates when the aminals demand a narrow one? In this case the unnecessary surplus is wasted, if not worse than wasted, for this unused, because uneeded surplus must act more or less as an irritant to the animal until its final discharge from the body. Whether it is profitable to use thus wastefully the feeding stuffs that are at hand, or substitute boughten ones, is a question that every stock-owner must determine for himself.

It now remains to give the composition of some of the commonest of feeding stuffs available to Queensland stock-owners. With this knowledge the feeder may easily shape the daily ration of his animals to suit their actual requirements; or wanting the means for accurately accomplishing this he may use the products of his own fields so as to obtain the best results possible. The knowledge of the chemical composition of foods alone will not be of much service to the feeder if he does not know how much of this is utilisable or digestible by the animal. In all food a certain large per cent. of each nutrient is not digested in its passage through the body. In the ensuing table, giving the composition of feeding stuffs, the actual composition of the several articles is given, and in parallel columns the amount of each digestible as shown by the most reliable data available. Thus taking the first item of the table-couch grass—we see here that protein (albuminoids) make up 2·15 parts in the 100 lb. of the grass; but under the heading per cent. digestible, we may learn that 1·61 lb. only of this protein is available to the animal consuming it.

COMPOSITION OF FEEDING STUFFS.

	Water.	Ash.	Protien.	Fibre.	Nitrogen, free extract.	Fat.	Per cent digestible.				Nutritive Ratio.
							Protein.	Fibre.	Nitrogen, free extract.	Fat.	
Green Fodders.											
Couch Grass (Cynodon dactylon)	71·70	2·00	2·15	5·89	17·31	0·25	1·61	6·30	13·50	0·71	1:13·4
Maize Fodder	80·98	1·13	1·62	5·23	10·62	0·41	1·19	10·87		0·31	1:9·9
Maize Ensilage	80·50	1·30	1·50	5·80	10·20	0·70	1.10	11·00		0·59	1:11·1
Sorghum	76·08	0·91	1·10	6·25	13·08	0·36	0·80	12·26		0·28	1:16·0
Sorghum Ensilage	75·83	1·01	0·75	6·28	15·82	0·28	0·54	15·12		0·17	1:28·7
Cow Pea Vines	80·31	1·89	2·70	7·22	7·41	0·47	2·05	8·71		0·28	1:4.5
Cow Pea Vine Ensilage	81·64	1·99	2·40	5·57	7·60	0·80	1·82	7·91		0·48	1:4·9
Rhye Fodder	75·28	1·88	2·61	12·73	6·94	0·56	1·77	13·38		0·39	1:8·0
Rhye Fodder Ensilaged	80·75	1·62	2·42	5·76	9·18	0·40	1·64	12·00		0·28	1:7.7
Lucerne	71.80	2·70	4·80	7·40	12·30	1·00	3·55	3·99	8·24	0·39	1:3·7
Oats	62·20	2·51	3·43	11·16	19·32	1·68	2·52	8·36	15·06	0·91	1:10·1
Prairie Grass (Bromus unoloides)	67·50	2·17	3·52	8·23	17·81	0·77	2·64	6·17	13·89	0·66	1:8·1
Teosinti (Euchloena luxurians)	66·77	3·97	2·54	12·33	13·60	0·79	1·57	7·36	10·60	0·67	1:13·0
Cactus (Opuntia)...	88·00	2·73	0·82	1·80	6·35	0·30	0·62	6·30		0·20	1:11·1
Fodder Cabbages...	84· 7	1·16	2· 5	2· 4	8· 1	0· 7	1· 8	0·82	...	0· 4	1:5·2
Johnson Grass (Sorghum halepense) ...	68·62	1·74	2·80	9·37	16·44	0·94	1·79	5·52	12·82	0·80	1:11·3
Kaffir Corn...	76·13	1·75	3·22	6·16	11·96	0·78	2·00	3·63	9·32	0·66	1:7·3
Sugar Cane	71·04	0·48	0·55	9·56	18·02	0·35	0·40	5·92	14·05	0·30	1:63·6
Hay, Straw and Coarse Fodder.											
Lucerine, in flower	8·44	7·44	14·28	25·01	42·68	2·15	12·61	13·00	24·50	0·80	1:3·1
Oats, cut in full bloom	6·43	6·00	6·16	31·87	46·81	2·73	3·81	18·16	29·95	1·41	1:13·5
Oats, seed in milk	9·55	5·50	9·85	31·04	41·63	2·43	6·10	17·69	26·64	1·26	1:7·8
Oats, when nearly ripe	13·78	6·31	7·99	33.62	36·23	2·07	4·95	19·16	23·18	1·07	1:9·0

COMPOSITION OF FEEDING STUFFS.—CONTINUED.

	Water.	Ash.	Protien.	Fibre.	Nitrogen free extract.	Fat.	Per cent digestible.				Nutritive Ratio.
							Protein	Fibre.	Nitrogen free extract.	Fat.	
Barley, seed in milk...	10·25	4·44	9·21	26·14	47·49	2·47	5·24	44·82		1·18	1:9·0
Maize Fodder (field cured)	32·1	4·30	4·30	22·10	36·00	1·20	2·5	35·10		0·60	1:20·0
Johnson Grass (Sorghum halapense)... ...	14·30	6·92	11·80	21·47	44·77	2·43	6·73	41·00		1·20	1:6·5
Cow Pea (Dolichos)	10·70	7·50	16·6	20·10	42·20	2·90	11·92	10·69	27·83	1·72	1:3·5
Red Clover...	15·30	6·20	12·30	24·80	36·10	3·30	6·90	12·09	26·36	1·24	1:6·0
White Clover	9·70	8·30	15·70	24·10	39·30	2·90	8·63	10·84	25·54	0·68	1:4·5
Vetches	9·45	7·70	13·06	27·21	40·15	2·43	9·92	14·69	26·09	1·45	1:4·6
Prarie Grass (Bromus unoloides)	14·30	8·35	11·67	17·64	44·97	3·07	7·23	10·00	28·78	1·55	1:5·9
German Millet (Setaria Italica) / Panicum of Queensland ...	7·66	5·99	7·46	27·72	49·05	2·12	4·62	15·80	25·50	2·66	1:10·3
Couch Grass (Cynodon dactylon)	14·30	8·49	9·16	20·16	46·06	1·83	5·67	11·49	29·47	0·95	1:7·6
Rice Straw	3·66	10·71	4·68	28·31	50·90	1·74	1·92	40·40		0·52	1:21·7
Wheat Straw	14·30	4·60	3·00	40·00	36·90	1·20	0·80	35·30		0·40	1:45·8
Wheat Chaff...	14·30	9·20	4·30	36·00	34·60	1·40	1·40	32·80		0·40	1:24·1
Rye Straw	14·30	4·10	3·00	44·00	33·30	1·30	0·80	36·50		0·40	1:46·9
Barley Straw	14·30	5·50	3·30	43·00	32·50	1·40	0·80	31·40		0·40	1:40·5
Oat Straw	14·30	4·00	4·00	39·50	36·20	2·00	1·40	40·10		0·60	1:29·9
Rape Straw...	16·00	3·50	3·50	40·00	35·40	1·00	1·40	35·00		0·50	1:25·9
ROOTS AND TUBERS.											
Potatoes	75·00	0·90	2·10	1·10	20·70	0·20	2·11	21·80		0·20	1:10·66
Sweet Potatoes	69·70	1·10	1·90	1·70	26·30	0·30	0·90	28·00		0·30	1:31·9
Sugar Beets...	81·5	0·70	1·00	1·30	15·40	0·10	1·00	16·70		0·10	1:17·00
Sweedish Turnips	87·00	1·00	1·30	1·10	9·50	0·10	1·30	10·6		0·10	1:8·30
Carrots	85·00	0·90	1·40	1·70	10·80	0·20	1·40	12·5		0·20	1:9·30
Yam, American	71·2	0·60	2·10	0·70	25·20	0·20	2·10	25·9		0·20	1:12·50
Mangel Wurzel	90·85	1·05	1·39	0·87	5·68	0·16	0·86	...	5·39	...	1:7·7

COMPOSITION OF FEEDING STUFFS—CONTINUED.

	Water.	Ash.	Protein.	Fibre.	Nitrogen free extract.	Fat.	Per cent digestible.				Nutritive Ratio.
							Protein.	Fibre.	Nitrogen, free extract.	Fat.	
GRAINS AND FRUITS.											
Maize	14·40	1·50	10·00	5·50	62·10	6·50	8·40	60·60		4·80	1:8·6
Oats	14·30	2·70	12·00	9·30	55·70	6·00	9·00	43·30		4·70	1:6:1
Wheat	14·40	1·70	13·00	3·00	66·40	1·50	11·70	64·30		1·20	1:5·8
Barley	14·30	2·20	10·00	7·10	63·90	2·50	8·00	58·90		1·70	1:7·9
Peas	14·30	2·40	22·40	6·40	52·50	2·00	20·20	54·40		1·7	1:2·9
Cow-peas, American	20·00	3·10	21·60	4·7	49·3	1·3	19·4	49·6		1·1	1:2·7
Flax Seed	12·3	3·4	20·5	7·2	19·6	37·0	17·2	18·9		35·2	1:6·2
Rape Seed	11·8	3·9	19·4	10·3	12·1	42·5	15·5	10·2		40·4	1:7·2
Cotton Seed	7·7	7·8	22·8	16·0	15.4	30·3	17·1	14·7		27·3	1:4·6
Sorghum Seed	12·52	1·8	8·88	1·88	71·27	3·65	6·84	53·06		2·99	1:8·5
Cow Melons	91·4	0·7	1·2	1·5	5·2	...	0·9	5·6		...	1:6·2
Pumpkins, American	89·1	1·00	0·6	2·7	6·5	0·1	0·4	7·1		0·1	1:18·4
Squash, American	88·1	0·7	0·9	1·0	9·1	0·2	0·6	9·0		0·2	1:15·8
BY PRODUCTS AND REFUSE.											
Wheat Bran (Roller process)	12·0	5·6	16·1	8·4	53·7	4·2	12·6	44·1		2·9	1:4·1
Wheat Bran (old process)	12·0	4·9	13·0	8·1	58·2	3·8	10·2	47·5		2·6	1:5·40
Wheat middlings	11·8	2·3	11·4	4·8	56·8	2·9	8·9	54·8		2·6	1:6·9
Rice Meal	9·9	10·6	10·9	1·1	47·6	9·9	8·6	47·2		8·8	1:8·0
Rice Polish	11·21	2·80	12·93	2·41	62·96	7·59	9·31	48·13		5·92	1:6·6
Rice Bran hulls	9·5	12·0	6·0	25·1	44·1	3·3	4·2	42·8		2·3	1:11·5
Cotton Seed Meal (decorticated)	7·2	5·8	41·5	3·1	24·4	18·0	33·2	17·6		8·0	1:1·1
Cotton Seed Meal (undecorticated)	11·3	6·4	23·6	22·0	30·5	6·1	17·5	14·9		5·5	1:1·7
Linseed Cake	9·1	8·2	32·4	7·3	31·5	11·6	27·6	27·0		6·0	1:1·5
Brewers' Grains	75·2	0·3	5·9	3·9	13·2	1·5	4·8	11·3		1·2	1:3·0
Malt Sprouts	11·6	6·7	25·9	9·3	45·5	1·1	20·8	43·7		0·9	1:2·2
Maize Cob	9·33	1·33	2·50	30·36	55·99	0·47	1·05	43·17		0.24	1:41·6

TO MAKE UP A RATION.

The meaning of the tables, and much besides of the foregoing, will be made clear by an example of how rations are made up. To begin with, we must take some fodder, hay, corn-fodder, sorghum or straw, as the foundation of the proposed ration. In the case of cattle and sheep we take for each animal about 2½ per cent of its live weight in this dry fodder. If green fodder is used the amount should be put at 5 per cent. To this fodder supply we must add so much of grain or other concentrated food as will bring the total to the required standard of quantity and quality. We will suppose that a dairyman wishes to compound a ration for his cows, having for its basis green sorghum of good quality, of which he has a supply. Turning to the table we see, under the heading green fodder, that the nutritive ration of sorghum is 1 to 16, whereas the requirements of the cows will be met by a much narrower ration, namely, 1 to 5·4. The cows weigh we will assume, an average of 800lbs. per head, but as the calculations of the table are for an animal weighing 1000lbs., we must reduce the amount there given by two-tenths. We thus have for the requirements of a milk cow weighing 800lb. Organic matter 19·20lb., containing protein 2·0, carbo-hydrates 10lb., and fat 0·32lb. The 800lb cow will receive 5 per cent of her weight in green sorghum daily— 40lbs. Taking the composition of 100lb of green sorghum as given in the table, we deduct from this the water, 76·08lb, and ash 0·91lb., leaving of dry matter in the 100lb. of sorghum 23·01. By moving the point two places to the left, thereby dividing by 100, we get the dry matter of 1lb of green sorghum ; multiplying this by 40 gives us 9·20, the number of pounds of dry matter in 40lb of green sorghum. Proceeding in this way with each item—moving the point two places to the left and multiplying by 40 and we get of digestible protein 0·32lb. of carbo-hydrates 4·9, and of fat ·11lb. It is clear that unless our data is badly at fault, feeding sorghum, with its very wide ratio—1 to 16, when the cow demands a ratio of 1 to 5·4 is a most wasteful process. We must therefore add some grain or other concentrated feed having protein (albuminoids) in such quantity as to furnish these compounds in quantity sufficient to make up for their deficiency in the sorghum. On consulting the table we find that roller process bran, which is available in quantity, with its narrow ratio will help us to the needed proportion of nutriments. On trial we find that 13lb. of bran will approximately make the ration what it should be for our requirements. The case, stated in tabular form, will then stand as follows :—

	Dry Matter.	Protein.	Carbo-Hyrates.	Fat.
	lbs.	lbs.	lbs.	lbs.
Cow weighing 800 lb. requires.....	19·20	2·00	10·00	0·32
Sorghum (Green) 40 lb.....	9·20	0·32	4·90	0·10
Bran, 13 lb.....	10·71	1·63	5·73	0·37
Total.....	19·91	1·95	10·63	0·17

I purposely use here a ration having as few constituents as possible, knowing that farmers generally are not in a position to make up rations having a number of ingredients. The compound does not completely meet the requirements of the cow, as laid down in Table A, the proportion of carbo-hydrates and fat being somewhat too large ; but this is as near to accuracy as in practice we may expect to reach where only one sort of hay and grain are employed. Below are given a number of rations suitable for milk cows weighing 800 to 900lb., with the cost of each at the present market price of the different ingredients :—

	Dry Organic Matter.	Protein.	Carbo-Hydrates.	Fat.
Sugar cane Tops, 40lb	11·39	0·16	7·99	0·12
Bran, 9lb	7·31	1·13	3·97	0·26
Cotton seed meal, 4lb. (undecorticated)	3·29	0·70	0·59	0·22
	21·99	1·99	12·55	0·60
900 lb. cow requires	24·60	2·25	11·25	0·36

Cost of ration thirteen pence.

	Dry Organic Matter.	Protein.	Carbo-Hydrates.	Fat.
Cow-pea vines (green), 45lb	8·01	0·92	3·92	0·13
Maize (ground), 10lb	8·41	0·84	6·06	0·48
Brewers' Grains, 20lb	4·90	0·96	2·26	0·24
Total	21·32	2·72	12·24	0·85

Cost of ration, twelve pence.

	Total Organic Matter.	Protein.	Carbo-Hydrates.	Fat.
Sweet Potatoes, 15lb	4·38	0·13	4·20	0·04
Lucerne Hay, 10lb	8·40	1·26	3·75	0·08
Bran 10lb	8·24	1·26	4·41	0·29
Total	21·02	2·65	12·36	0·41

Cost of ration, thirteen pence.

The following are rations for dairy cows proposed by the Wisconsin Experiment Station, slightly modified to suit Queensland conditions :—

1. Maize ensilage, 40lb.; lucerne hay, 10lb.; wheat bran, 6lb.; Maize meal 3lb.
2. Fodder maize 20lb.; hay, 6lb.; oats, 4lb.; shorts, 4lb.; oil meal 2lb.
3. Maize ensilage, 50lbs.; maize stalks (stover), 6lb.; oats, 6lb.; malt sprouts, 4lb.; maize meal 2lb.
4. Lucerne silage, 30lb.; hay, 15lb.; wheat bran, 3lb.; maize meal, 3lbs.; cotton-seed meal, 2lb.
5. Panicum hay, 10lb.; lucerne hay, 10lb.; wheat bran, 6lb.; oats 6lb.
6. Fodder maize, 20 lb.; lucerne hay, 10lb.; oats 6lb.; oil meal, 3lb.

These examples sufficiently illustrate the principle of ration-making from scientific deductions. Any stock-owner may, with a very little experience, after taking into account the products of his fields and the contents of his barn, or, wanting these, the feed stuffs to be had by purchase, put these together in a ration properly proportioned to suit the want of his animals, whether they be dairy cows, fattening pigs, or work horses. Figures given for the cost of the several rations must be taken for no more than they are worth. They are based upon Brisbane prices, so far as there are such prices, but articles like sugar-cane tops or cow-pea vines, which as yet are unknown to the market, have necessarily been arbitrarily priced. Not unlikely these rations could be made up upon the farm where they are grown at one-third or even one-half below those named above.

Meteorological Report of Dodds Botanical Station 1894—Height above sea level 210 Feet.

MONTHS.	Barometric Pressure			Temperature.									Tension of Vapour.			Humidity.			Rainfall for 1894.	Number of wet days.
	9 a. m.	3 p. m.	Mean.	Maximum, mean.	Minimum, mean.	Maximum, extreme.	Minimum, extreme.	Maximum blackened bulb, 4ft. from ground in vacuo.	Mean for month.	Range.	Dew Point 9 a.m.	Dew Point 3 p.m.	9 a. m.	3 p. m.	Mean.	9 a. m.	3 p. m.	Mean.		
January	29·969	29·883	29·926	82·2	75·3	85·1	69·0	149·8	78·7	16·1	68·8	68·4	·704	·694	·699	71·7	66·9	69·3	1·90	11
Febraury	30·025	29·947	29·986	82·1	74·5	84·6	64·6	151·0	78·8	20·0	65·8	65·9	·635	·637	·636	65·6	61·2	63·4	1·23	7
March	30·014	29·993	30·003	82·1	75·2	84·9	66·4	153·0	78·6	18·5	65·9	65·0	·637	·617	·627	64·9	60·5	62·7	2·09	10
April	29·986	29·909	29·947	83·2	75·7	85·7	68·9	147·6	79·4	16·8	67·6	66·1	·675	·641	·658	65·0	60·0	62·5	1·26	6
May	29·939	29·877	29·908	85·6	77·3	87·7	70·2	151·0	81·4	17·5	70·3	69·4	·738	·718	·728	65·8	60·9	63·3	·73	9
June	29·999	29·953	29·976	85·9	76·5	88·2	70·9	146·7	81·2	17·3	70·0	69·1	·733	·711	·722	66·0	60·6	63·3	1·68	12
July	29·994	29·954	29·974	85·2	75·9	87·9	70·0	144·9	80·5	17·9	70·9	70·0	·756	·733	·744	69·5	64·2	66·8	3·86	13
August	29·960	29·902	29·931	85·4	76·3	87·8	72·1	148·7	80·8	15·7	72·2	71·3	·790	·766	·778	71·0	65·0	68·0	2·75	13
September	29·949	29·888	29·918	85·0	76·4	88·4	70·0	153·8	80·7	18·4	72·7	72·8	·804	·807	·805	75·0	72·0	73·5	11·46	19
October	29·902	29·851	29·876	83·9	76·3	86·7	70·8	151·3	80·1	15·9	72·7	72·2	·804	·790	·797	73·9	71·9	72·9	5·65	12
November	29·933	29·849	29·891	83·3	75·6	86·2	71·8	149·5	79·4	14·4	72·0	71·5	·785	·772	·778	74·3	73·9	73·6	4·05	14
December	29·950	29·864	29·907	82·5	76·3	84·3	70·8	152·8	79·4	13·5	70·9	70·9	·756	·756	·756	74·4	71·5	72·9	2·48	17
	29·968	29·906	29·937	83·9	75·9	86·4	69·6	150·0	79·9	16·8	70·0	69·4	·735	·720	·727	69·8	65·6	67·7	39·14	143

JOHN R. BOVELL, Superintendent.

BARBADOS RAINFALL FROM JANUARY TO DECEMBER, 1894.

Name of Station.	Elevation.	January.		February.		March.		April		May.		June.		July.		August.		September.		October.		November.		December		Total.	
	Feet.	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.
I. District A.																											
St. Michael. (Lowlands.)																											
Lower Estate	257	14	2·67	12	2·08	11	1·97	5	1·83	7	·85	14	2·48	15	3·90	15	3·86	21	11·16	14	9·94	17	5·49	16	2·88	161	49·11
Haggatt Hall	152	14	2·04	8	·91	13	1·62	5	2·28	6	·80	12	2·93	16	3·24	17	3·24	19	11·53	13	7·89	17	5·79	11	2·14	151	44·44
Clapham	216	8	1·34	7	·76	5	1·08	3	1·92	5	·56	9	1·94	13	2·55	6	2·30	19	11·02	12	6·06	11	5·79	9	1·31	107	36·63
Lears	220	16	2·81	10	1·80	7	1·23	6	1·22	6	·88	16	2·56	22	5·40	16	3·45	19	11·25	14	8.23	21	5·53	18	2·45	171	46·81
Government House	90	...	...	...	...	...	...	9	1·94	8	·72	14	2·49	16	3·12	17	3·08	23	8·05	18	8·48	18	5·25	11	1·42	164	34·55
District A	97	11	1·68	13	·97	10	·98	6	1·78	7	·70	13	2·89	13	2·99	17	3.71	20	10·49	18	6·85	19	4·64	13	1·28	163	38·96
Central Police Station	17	15	1·66	13	1·09	8	·56	9	1·87	6	·96	14	2·16	18	3·19	13	2·94	19	10·88	13	6·95	18	4·63	11	1·47	152	37·86
Bush Hall	110	9	1·65	11	·90	12	·99	4	1·63	7	·45	10	2·04	20	2·63	13	3·00	21	11·69	10	5·00	18	4·47	10	1·57	143	36·02
White Hall	223	15	2·58	5	1·32	3	·96	7	1·58	4	·44	9	1·92	8	3·00	8	2·75	19	10·90	10	6·94	17	4·45	8	1·46	113	38·30
Grazettes	70	12	2·15	9	1·52	7	1·39	3	1·61	6	·62	12	2·35	18	3·07	13	2·64	20	12·88	16	7·99	13	4·62	10	1·59	139	42·43
Dayrells	...	12	2·75	6	1·92	7	1·50	2	1·06	7	·92	11	2·23	14	3·73	11	3·58	20	10·87	...	...	16	5·02	...	...	106	33·48
Total	...	126	21·33	94	13·27	·83	12·28	59	18·72	69	7·90	134	25·99	168	36·82	146	34·55	220	120·15	138	75·23	185	55·68	117	17·57	1,539	439·49
Average	...	12·60	2·13	9·40	1·33	8·30	1·23	5·36	1·70	6·27	·72	12·18	2·36	15·27	3·35	13·27	3·14	20·00	10·92	13·80	7·52	16·82	5·06	11·70	1·76	14·497	41·22
II.—District B.																											
Christ Church. (Lowlands.)																											
Woodbourne	150	8	2·30	6	1·10	5	2·33	2	·98	3	·56	8	1·41	10	2·73	8	2·37	17	8·72	8	5·46	11	6·12	6	1·99	92	36·27
Lowthers	220	9	2·29	8	·61	10	1·88	7	·95	6	·51	13	2·22	12	2·62	15	2·25	17	8·59	12	5·94	16	6·46	10	2·15	135	36·47
Seawell	...	3	1·50	5	·94	5	1·64	4	1·52	2	·14	10	1·43	7	2·00	8	·90	18	8·18	10	4·70	12	7·14	5	1·75	89	31·84
Coverley	254	12	2·12	10	1·36	6	1·19	5	1·60	4	·47	13	2·04	14	3·02	13	2·02	19	9·36	11	6·72	15	8·22	8	2·13	130	40·25
Hannays	188	3	2·03	3	·34	8	3·26	3	1·27	2	·42	8	1·72	16	3·75	9	3·06	17	8·57	14	7·63	16	5·84	13	2·91	112	41·30
Searles	283	13	2·62	7	·82	6	2·00	4	1·61	2	·24	11	2·55	16	3·10	13	2·06	18	8·14	13	6·86	14	7·13	11	2·02	128	36·15
Balls	270	14	2·19	10	·83	9	2·30	9	1·85	6	·44	13	1·57	12	2·56	17	2·33	19	10·30	16	6·42	14	7·20	12	1·16	156	32·48
Gibbons	135	17	2·43	8	1·67	10	2·04	6	1·70	8	·80	12	2·40	10	2·91	12	2·05	19	8·24	15	6·77	18	7·75	11	1·75	145	40·65
Lower Greys	...	14	2·76	7	·69	15	2·60	7	1.56	5	·30	11	1·83	16	3·29	12	2·49	20	8·21	15	6·65	18	4·97	15	2·72	155	38·16
Newton	...	10	2·30	9	·84	9	2·89	6	2·11	8	·40	13	2·00	10	2·68	9	1·73	15	9·56	9	6·92	11	7·06	8	2·05	117	40·10
Bannatyne	207	12	2·84	8	·99	12	2·99	4	2·22	8	·49	15	2·91	15	2·92	13	2·63	19	9·86	14	7·18	14	6·72	11	2·19	145	43·94
Maynards	...	10	2·47	9	1·01	6	2·89	4	1·88	5	·76	13	2·29	9	2·80	13	1·94	16	9·03	9	5·95	11	6·98	7	1·82	112	40·90
Maxwells	20	10	2·15	8	·98	7	2·34	4	1·88	5	·49	11	1·86	13	3·26	10	2·29	13	10·19	14	6·99	11	7·17	7	1·66	113	41·26
Hastings	...	12	1·96	12	·69	10	1·10	7	1·89	8	·82	12	1·86	14	3·25	15	2·02	19	8·94	15	5·53	16	5·28	10	·71	150	33·55
Durants	...	7	2·01	7	1·12	2	2·00	4	1·74	3	·37	5	1·68	8	3·21	7	1·94	16	9·37	11	5·41	10	6.59	6	1·48	87	36·92
Ridge	...	10	3·05	5	·92	7	2·83	4	1·81	2	·48	10	2·49	9	3·39	7	2·14	17	8·29	11	8·37	16	6·89	15	2·83	115	43·49
Total	...	164	37·24	122	15·45	128	35·78	79	26·76	77	7·28	178	32·41	191	47·40	1·81	31·25	279	144·45	196	103·50	223	107·52	155	31·62	1,973	628·73
Average	...	10·25	2·33	7·63	·96	8·00	2·24	4·94	1·67	4·81	·45	11·13	2·03	11·94	2·97	11·31	2·14	17·44	9·03	12·25	6·47	13·94	6·72	9·69	1·98	123·33	38·99
St. George. (Highlands)																											
Lemon Arbor	720	7	3·37	2	1·50	5	2·53	3	1·74	3	1·13	13	2·69	8	2·85	13	5·59	11	8·42	6	6·99	11	5·86	8	3·39	90	46·96
Ashbury	...	16	3·16	11	1·41	12	3·00	7	2·05	11	1·47	14	2·42	17	3·57	15	5·59	18	8·98	14	8·36	19	5·49	12	3·60	174	50·10
Cottage	720	11	3·06	8	1·63	8	2·79	5	1·43	7	1·32	13	3·56	17	4·01	15	4·29	17	9·13	11	7·07	18	5·93	13	2·10	115	46·32
Groves	747	16	4·09	..	2·51	15	3·73	9	1·66	12	1·65	18	3·51	12	5·14	18	5·91	23	11·62	13	10·57	23	7·46	13	3·89	173	61·68
Moonshine	537	15	2·42	11	1·59	10	1·88	3	1·00	4	·57	13	2·77	17	4·05	11	3·78	19	11·21	10	8·05	14	6·55	10	2·90	137	46·76
Golden Ridge	...	20	5·29	15	1·84	15	3·48	7	1·70	11	1·31	15	2·48	19	4·05	17	5·66	21	10·58	14	8·40	20	6·4[illegible]	12	3·82	186	53·02
Woodland	...	18	2·08	12	1·04	12	1·55	11	1·28	9	·66	14	1·37	24	3·31	19	4·10	18	9·01	13	6·38	19	4·5[illegible]	19	2·72	188	3[illegible]·02
The Farm	...	...	...	...	...	...	...	...	...	...	...	...	...	15	4·73	17	4·82	18	11·04	14	8·59	18	6·43	13	3·94	95	39·55
Total	...	103	21·47	59	11·52	77	18·96	45	10·86	57	8·11	106	18·80	129	32·71	125	39·69	1·45	79·99	95	64·31	142	48·63	1·00	26·36	1,177	381·41
Average	...	14·71	3·07	8·43	1·65	11·00	2·71	6·43	1·55	8·14	1·16	14·29	2·69	16·13	4·09	15·63	4·96	18·13	10·00	11·88	8·04	17·75	6·08	12·50	3·30	155·02	49·30

BARBADOS RAINFALL FROM JANUARY TO DECEMBER, 1894.—CONTINUED.

Name of Station.	Elevation.	January.		February.		March.		April		May.		June.		July.		August.		September.		October.		November.		December.		Total.	
	Feet.	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.
II.—District B.—Contd.																											
S. George. (Lowlands.)																											
District B	...	13	2·80	11	1·36	13	2·28	6	1·87	9	·70	14	2·68	17	3·57	16	3·28	23	8·76	11	7·77	16	6·46	15	2·84	164	44·37
Carmichaels	...	9	2·88	7	1·61	8	2·59	5	1·84	7	·64	10	3·18	12	3·81	8	3·00	15	9·62	11	7·43	10	5·40	11	2·84	113	44·84
Constant	194	16	2·52	13	1·58	14	2·36	4	1·52	8	·84	10	2·65	12	3·28	12	3·71	16	11·41	13	7·82	14	5·09	13	3·09	145	45·91
Valley	162	17	3·07	14	1·62	10	1·70	4	2·07	7	·82	14	2·96	11	3·46	13	4·14	18	12·01	8	8·29	12	4·61	6	2·15	134	46·90
Brighton	...	15	2·83	10	1·46	11	2·43	5	1·39	6	·69	13	2·55	17	4·43	16	3·61	21	9·91	18	7·31	18	5·94	19	3·45	169	46·00
Total	...	70	14·20	55	7·63	56	11·36	24	8·69	37	3·69	61	14·02	69	18·55	65	17·74	93	51·71	61	38·62	70	27·41	64	14·37	725	228·02
Average	...	14·00	2·84	11·00	1·53	11·20	2·27	4·80	1·74	7·40	·74	12·20	2·80	13·80	3·71	13·00	3·55	18·60	10·34	12·20	7·72	14·00	5·48	12·80	2·87	145·00	45·60
III.—District C.																											
St. Philip. (Highlands.)																											
District C	505	13	2·28	8	1·06	14	1·71	7	1·38	7	·81	18	1·83	14	3·81	16	3·50	19	11·29	11	5·78	17	4·18	15	2·60	154	40·23
Clifton	...	17	2·67	12	1·40	11	2·04	9	1·38	7	·86	16	2·03	18	3·84	20	4·60	19	11·87	15	5·98	18	5·17	19	3·45	181	46·69
Hill View	567	13	2·32	10	1·25	12	2·04	4	1·20	10	·87	16	1·74	17	3·38	12	3·28	20	10·35	15	5·79	15	4·66	18	2·79	162	39·67
Total	...	43	7·27	30	3·71	37	5·79	20	3·96	24	2·54	45	5·60	49	11·03	48	11·28	58	33·01	41	19·55	50	14·01	52	8·84	497	126·59
Average	...	14·33	2·42	10·00	1·24	12·33	1·93	6·67	1·32	8·00	·85	15·00	1·87	16·33	3·68	16·00	3·76	19·33	11·00	13·67	6·52	16·67	4·67	17·33	2·95	165·66	42·21
St. Philip. (Lowlands.)																											
Bayleys	128	10	1·91	6	·76	9	1·16	3	1·02	3	·32	11	1·35	10	3·15	10	2·25	15	9·72	10	3·68	12	2·81	10	1·58	109	29·92
Mapps	150	11	2·24	2	·37	5	1·77	6	1·56	4	·53	10	1·47	8	3·38	12	2·84	18	11·47	10	4·53	13	3·78	8	1·98	107	35·92
Golden Grove	113	10	2·07	11	·88	11	1·34	7	1·42	5	·62	15	2·31	15	3·83	15	3·13	20	9·54	11	4·86	15	3·29	14	2·13	149	35·42
Eastbourne	...	10	1·75	6	·61	6	1·89	3	1·21	4	·57	4	·97	12	4·01	9	2·41	12	11·17	11	5·11	11	4·13	9	1·78	97	35·61
Wiltshires	121	8	2·37	4	·54	7	1·13	4	1·32	4	·48	9	2·09	7	3·42	12	3·17	12	10·37	8	4·98	11	3·34	8	2·76	94	35·97
Three Houses	135	12	2·06	8	1·01	8	1·36	3	1·35	3	·60	12	2·18	11	3·62	14	3·73	17	10·24	9	4·24	12	3·81	7	2·34	116	36·54
Sandy Hill	125	12	1·85	5	·36	10	1·79	3	·25	2	·34	11	·95	11	2·70	11	2·04	14	9·40	10	4·12	11	3·80	6	1·37	106	29·57
Kirton	74	14	1·81	11	·73	10	2·06	6	1·23	7	·62	10	1·81	13	3·33	15	2·75	20	8·65	13	6·20	15	5·04	8	1·86	142	36·09
Fortescue	150	12	1·88	2	·38	6	1·01	3	1·99	6	·89	10	2·30	14	3·43	11	3·60	14	8·49	12	4·82	12	3·59	9	2·39	111	34·70
Thicket	243	7	1·99	2	·55	4	1·21	2	1·39	1	·30	8	2·06	8	3·55	14	3·42	18	10·81	13	4·57	12	3·87	8	1·92	97	35·64
Bushy Park	161	12	1·83	9	1·08	10	2·32	8	1·35	8	·80	13	1·65	13	4·04	13	3·10	19	11·38	13	4·79	17	3·89	13	2·17	148	38·34
Congo Road	119	11	1·71	6	·45	7	1·95	4	1·08	5	·56	12	1·58	17	3·45	14	2·18	21	10·87	12	4·89	15	4·03	11	1·73	135	34·48
Benhouse Grove	105	11	2·65	6	·70	5	1·62	2	·78	5	·60	11	1·21	12	3·24	12	2·84	15	9·90	11	6·96	12	4·76	9	2·27	111	37·53
Oughtersons	291	14	2·37	9	1·21	12	1·74	4	1·11	7	·66	13	1·55	15	3·74	19	3·29	17	11·78	11	5·75	14	4·15	14	2·04	149	39·39
Dodds	210	11	1·90	7	1·23	10	2·09	6	1·26	9	·73	12	1·68	13	3·86	13	2·75	19	11·46	12	5·65	14	4·05	17	2·48	142	39·14
Sunbury	...	7	1·44	8	·71	9	2·97	4	1·25	4	·69	10	1·52	14	3·92	10	2·38	15	11·61	11	6·73	10	4·75	10	2·55	112	40·55
Hampton	103	11	1·62	5	·35	10	2·80	3	·61	6	·46	10	1·50	15	3·61	11	2·79	15	8·44	11	7·72	12	4·97	10	2·18	119	37·05
Carringtons	110	15	2·79	14	1·07	11	3·68	6	1·49	7	·74	9	1·74	12	4·80	10	3·19	13	9·21	10	7·44	9	4·11	11	2·05	127	41·81
Chapel	228	14	2·35	9	1·18	8	2·12	7	1·56	6	·59	11	1·61	14	4·51	13	2·98	15	10·88	10	5·53	10	4·36	13	2·37	130	40·04
Hallon	264	15	1·88	...	...	15	1·80	7	1·14	12	·61	14	1·35	21	4·68	18	3·38	25	11·98	15	6·36	19	5·35	22	2·29	183	40·17
Edgecombe	207	13	2·25	7	·93	10	2·89	5	1·10	9	·72	11	2·20	17	4·64	13	3·01	19	9·13	13	7·12	17	5·55	13	2·06	147	41·60
Foresquare	...	14	2·09	8	·71	14	3·18	5	·77	5	·79	17	2·71	16	3·26	12	2·98	19	9·63	14	6·85	15	5·70	11	1·95	150	40·02
Summervale	...	14	2·11	7	1·05	12	1·92	5	1·04	9	·67	14	1·28	14	3·69	16	3·22	15	10·95	13	5·61	13	4·02	9	1·95	141	37·51
Mitchfield	...	16	1·91	7	·79	10	2·80	6	1·31	9	·73	14	1·50	17	3·84	13	2·58	21	11·15	16	7·33	16	4·74	12	2·58	157	41·26
Total	...	284	48·78	159	17·65	219	48·60	112	28·59	140	14·62	271	40·57	319	89·20	310	70·61	408	246·99	279	135·84	317	101·83	262	50·78	3,086	894·06
Average	...	11·83	2·03	6·91	·74	9·13	2·03	4·67	1·19	5·83	·61	11·29	1·69	13·29	3·72	12·92	2·94	17·00	10·29	11·63	5·66	13·21	4·24	10·92	2·12	128·58	37·26

BARBADOS RAINFALL FROM JANUARY TO DECEMBER, 1894.—CONTINUED.

Name of Station.	Elevation.	January.		February.		March.		April		May.		June.		July.		August.		September.		October.		November.		December		Total.	
	Feet.	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.
III.—District C.—Contd.																											
St. John. (Highlands.)																											
Stewarts Hill	580	10	2·26	5	·43	8	1·10	3	1·32	6	·92	11	2·03	14	3·22	13	3·68	19	9·85	12	4·47	15	4·16	12	2·94	128	36·38
Moncrieffe	552	15	1·71	8	·90	9	1·35	4	1·64	4	·69	11	1·67	13	3·40	15	3·92	17	10·86	11	6·30	18	3·98	10	2·70	135	38·62
Society	...	15	2·23	9	1·14	13	2·16	7	2·27	9	1·43	13	2·64	19	3·89	13	4·73	19	9·61	15	6·43	18	4·97	13	3·29	168	44·79
Guinea	538	16	2·19	16	2·06	15	1·51	9	1·62	9	1·07	17	2·16	21	3·65	21	4·30	22	10·05	17	6·64	20	5·32	24	3·34	207	43·81
Colleton	767	16	3·25	10	1·65	8	1·94	5	2·31	11	1·50	15	3·64	15	4·14	16	5·31	18	11·48	12	9·06	15	4·67	11	3·18	152	52·13
Ashford	606	16	2·86	8	1·36	11	1·75	6	2·00	8	1·27	13	2·52	16	4·14	12	4·93	20	9·23	12	7·18	16	5·21	15	4·06	163	46·51
Pool	716	17	3·55	13	2·11	12	2·91	6	2·47	13	2·23	17	3·60	17	3·81	16	5·71	20	8·81	13	6·99	15	5·93	12	3·98	171	51·83
Henley	553	13	2·70	10	1·97	10	1·90	6	1·62	...	1·21	...	2·30	...	4·31	...	5·06	...	8·10	...	7·37	...	5·02	...	4·14	39	45·70
Todds	641	18	3·72	10	1·46	12	2·21	6	1·84	9	1·24	18	2·73	17	4·18	16	5·03	18	8·64	15	7·91	20	5·50	15	4·09	174	48·55
Hothersal	742	16	3·46	11	1·69	8	2·09	4	2·23	15	3·10	8	1·17	12	3·79	16	5·46	20	9·83	10	7·39	17	6·11	14	4·72	151	50·70
Haynesfield	707	8	1·42	13	1·40	16	3·40	6	1·73	6	1·88	17	2·75	18	3·31	18	6·56	22	10·79	16	9·09	16	6·06	12	4·05	168	52·44
Malvern	900	18	3·91	12	1·80	11	2·79	8	2·27	10	1·47	14	3·96	16	4·26	19	4·82	23	9·73	12	7·00	16	6·38	11	3·32	170	52·61
Kendal	...	13	2·38	10	1·50	7	1·52	5	1.58	5	1·11	14	2·35	15	4·36	16	5·45	19	9·60	13	8.52	18	5·32	10	3·56	145	47·25
Claybury	...	16	3·29	12	1·86	14	2·81	8	2·34	11	2·21	15	3·41	8	3·14	20	6·54	18	9·15	10	8·17	18	6·73	16	4·62	166	54·27
Total	...	207	38·93	147	21·33	154	29·14	83	27·24	116	21·33	188	36·63	201	53·50	211	71·50	255	135·29	168	103·42	223	75·39	175	51·59	2,127	665·59
Average	...	14·79	2·78	10·50	1·52	11·00	2·10	5·93	1·95	8·32	1·52	14·46	2·62	15·46	3·82	16·23	5·11	19·62	9·66	12·92	7·39	17·08	5·39	13·46	3·69	160·37	47·55
S. John. (Lowlands.)																											
Codrington College	...	17	4·11	11	1·18	6	1·77	4	1·86	11	1·19	9	2·84	14	4·09	12	3·86	15	8·14	12	5·57	17	4·34	11	2·61	139	41·56
College	...	9	1·48	6	·43	6	1·03	4	1·52	8	·93	10	2·16	9	3·77	9	2·33	...	5·75	7	4·00	11	3·26	8	1·75	87	28·41
Newcastle	238	17	2·89	14	1·15	8	1·60	4	1·87	10	1·25	16	3·34	11	3·46	18	2·24	19	9·83	13	6·46	16	4·75	12	2·29	158	43·12
Total	...	43	8·48	31	2·76	20	4·40	12	5·25	29	3·37	35	8·34	34	11·32	39	10·43	34	23·72	32	16·03	44	12·35	31	6·64	384	113·09
Average	...	14·33	2·83	10·33	·92	6·67	1·47	4·00	1·75	9·67	1·12	11·67	2·78	11·33	3·77	13·00	3·47	11·33	7·91	10·67	5·34	14·67	4·12	10·33	2·21	128·00	37·69
IV.—District D.																											
S. Thomas (Highlands)																											
Mount Wilton	987	15	2·92	12	1·89	14	2·15	7	2·11	11	1·92	12	2·49	17	3·82	16	4·63	20	11·53	13	8·29	20	7·74	14	4·94	171	54·43
Bloomsbury	1035	15	5·03	13	2·59	10	3·21	7	2·91	12	2·38	13	3·84	14	5·56	13	5·25	21	9·41	13	8·47	16	6·43	12	4·41	159	59·44
Sturges	905	21	6·11	17	2·43	18	3·65	11	3·67	15	3·01	20	4·38	25	6·20	25	6·24	25	10·64	18	9·36	21	7·75	19	5·32	235	68·76
Westwood	1002	19	5·59	16	2·41	15	3·53	10	2·26	10	2·64	16	3·88	19	5·23	18	5·77	23	9·59	12	7·66	21	6·72	14	4·22	193	59·00
Lion Castle	900	22	5·24	19	2·40	18	3·02	10	2·58	15	2·75	18	3·89	21	5·18	23	6·19	23	10·13	18	8·85	25	6·31	22	4·15	234	60·69
Canefield	1024	17	3·03	15	2·29	7	2·21	8	2·89	14	2·48	13	2·72	17	5·20	17	4·87	20	9·93	15	9·88	22	6·56	17	4·21	182	54·27
Dunscombe	850	18	3·88	14	2·37	12	2·81	9	2·49	14	2·50	14	3·76	20	5·32	13	4·59	20	10·55	15	8·49	22	7·06	10	4·01	182	57·77
Farmers	903	15	3·63	9	2·29	13	3·44	6	2·71	9	2·91	14	3·70	13	5·40	13	5·99	21	13·22	10	7·58	17	7·13	11	4·69	151	62·75
Dukes	817	18	4·63	15	2·43	13	2·58	8	1·88	8	1·93	16	3·10	18	4·39	17	5·91	22	12·48	14	8·57	23	7·20	17	4·15	189	59·25
District D.	678	20	4·50	19	2·74	16	2·60	12	2·08	14	2·24	18	3·78	23	3·81	20	5·22	25	10·47	16	8·31	26	7·70	21	4·30	230	57·75
Ashford	...	21	5·56	17	2·60	18	3·80	12	2·52	11	2·17	17	3·15	20	4·59	21	5·59	25	10·66	17	7·86	24	6.35	21	4·12	224	58·97
Vaucluse	...	15	3·62	14	1·91	8	2·58	8	1·39	4	1·26	12	2·74	14	4·13	12	4·90	18	12·19	11	9·61	19	6·83	9	3·19	144	54·55
Lewis	...	19	3·48	12	1·88	13	2·59	9	1·99	14	2·40	13	3·29	29	4·87	13	4·37	20	12·33	15	7·36	20	6·74	9	3·46	177	54·86
Total	...	235	57·22	192	30·23	176	38·27	117	31·48	151	30·54	196	44·22	241	63·70	221	69·52	283	143·13	147	108·29	276	90·52	196	55·17	2,471	762·29
Average	...	18·08	4·40	14·77	2·33	13·54	2·94	9·00	2·42	11·62	2·35	15·08	3·40	18·54	4·90	17·00	5·35	21·77	11·01	14·38	8·33	21·23	6·96	15·08	4·24	190·09	58·63

BARBADOS RAINFALL FROM JANUARY TO DECEMBER, 1894.—CONTINUED.

Name of Station.	Elevation.	January.		February.		March.		April		May.		June.		July.		August.		September.		October.		November.		December.		Total.	
	Feet.	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.
St. Thomas, (Lowlands.)																											
Fisherpond	725	15	2·61	12	1·53	13	2·75	6	2·26	11	1·49	14	2·51	16	3·08	20	5·58	19	10·30	14	9·03	19	6·20	14	3·19	173	50·53
Bushy Park	700	18	4·30	13	2·20	9	3·22	7	2·67	9	2·63	13	2·39	20	5·41	18	6·17	22	10·12	15	10·17	23	7·33	18	5.60	185	62·21
Olive Branch	680	13	4·11	20	2·60	12	3·63	6	2·50	4	2·00	13	3·60	16	4·00	20	6·32	12	9·32	8	8·35	16	7·03	17	4·83	157	58·32
Selmans	616	18	3·65	12	1·82	17	3·26	10	1·95	11	1·74	15	2·85	18	4·43	21	5·99	19	11·22	15	10·66	20	7·15	19	4·17	185	58·89
Hopewell	534	16	3·74	16	2·67	18	3·71	7	1·94	9	1·49	16	3·58	18	3·80	14	5·33	23	10·38	16	9·29	21	5·88	18	3·87	192	56·18
Edghill	453	7	2·34	4	2·00	5	2·22	2	·95	3	·65	7	2·33	10	3·05	8	4·26	16	13·58	8	8·22	9	4·22	7	2·23	96	46·03
Welches	398	16	3·20	11	1·41	9	1·18	6	1·59	7	·74	13	2·04	17	3·28	14	3·63	17	10·39	10	8·24	15	5·61	12	1·64	147	42·95
Bennetts	350	22	5·31	15	2·13	14	3·33	8	1·80	9	1·01	16	3·00	17	3·82	18	6·27	22	12·25	...	...	22	6·94	18	2·88	181	48·72
Bagatelle	...	17	4·00	12	1·83	14	2·11	8	1·54	7	·84	16	2·21	14	2·89	13	3·71	17	10·05	11	7·65	17	5·79	16	1·80	162	48·82
Grand View	...	15	2·77	11	1·82	9	1·53	5	1·21	4	·58	14	1·75	14	2·44	12	3·46	18	9·03	12	6·81	19	4·17	14	1·66	146	37·23
Mangrove Pond	...	17	3·45	14	1·99	14	2·13	8	1·65	8	1·39	16	2·56	20	2·86	16	4·21	22	11·84	14	6·97	20	6·91	15	3·98	184	49·64
Strong Hope	...	17	3·59	15	2·24	12	3·19	4	1·72	10	1·32	17	3·05	17	2·99	16	4·54	22	10·25	14	8·04	20	6·12	15	3·49	179	50·52
Total	...	191	43·07	155	24·24	145	32·26	77	21·78	92	15·88	170	31·87	197	42·05	190	52·67	229	113·67	137	93·43	221	72·78	183	39·34	1,987	605·04
Average	...	15·92	3·59	12·92	2·02	12·08	2·69	6·42	1·82	7·67	1·32	14·17	2·66	16·42	3·50	15·	4·97	19·08	10·72	12·45	8·49	18·42	6·07	15·25	3·28	136·63	51·13
St. James. (Highlands)																											
Springhead	860	13	2·72	8	1·40	10	2·13	5	2·42	9	1·73	10	3·09	18	4·31	16	5·76	19	9·26	17	7·31	19	7·97	11	4·61	155	52·71
Tatts	684	12	2·60	8	1·70	10	2·06	8	2·32	8	1·32	12	3·61	13	4·67	16	5·95	19	10·09	15	7·64	16	7·49	13	4·16	150	53·31
Sion Hill	618	15	2·75	13	2·07	8	1·68	5	2·31	11	1·45	11	1·05	12	4·52	12	6·11	18	8·91	16	8·31	20	7·36	11	4·57	152	51·59
Total	...	40	8·07	29	5·17	28	5·87	18	7·05	28	4·50	33	7·75	43	13·20	44	17·82	56	28·26	48	23·76	55	22·82	35	13·34	457	157·61
Average	...	13·33	2·69	9·67	1·72	9·33	1·96	6·00	2·35	9·33	1·50	11·00	2·58	14·33	4·40	14·67	5·94	18·67	9·42	16·00	7·92	18·33	7·61	11·67	4·45	152·33	52·54
St. James. (Lowlands.)																											
Blowers	...	17	2·97	10	1·69	12	2·80	4	1·54	9	1·87	13	2·86	13	3·37	10	3·69	21	10·07	10	4·90	17	6·14	11	2·79	147	44·69
Westmoreland	332	10	1·19	10	1·29	8	1·18	5	1·58	6	·76	11	2·22	12	2·96	15	4·71	18	7·59	14	6·28	16	4·16	15	2·88	140	36·74
Carlton	130	22	3·02	14	2·08	10	2·33	10	2·31	10	1·88	15	3·90	19	4·13	18	5·71	23	9·09	16	7·21	22	5·90	13	3·37	192	50·88
Mountstandfast	198	12	1·58	9	1·25	10	1·45	6	1·31	5	1·14	14	2·05	13	2·66	14	4·22	18	9·98	15	6·56	18	4·51	12	2·10	146	39·81
Porters	...	17	2·88	11	1·55	12	2·48	6	1·63	7	1·61	15	2·90	16	3·23	14	4·36	20	12·13	15	5·75	19	5·08	9	2·23	161	45·83
Trents	...	15	2·59	10	1·94	9	2·30	6	1·11	8	1·46	12	2·20	9	2·50	12	3·64	14	9·85	8	4·98	12	4·95	8	2·29	123	39·81
Holetown Police Station	...	16	2·95	11	1·04	14	1·56	4	·93	8	1·19	11	1·94	9	1·84	13	3·49	19	9·28	12	4·84	17	5·08	11	2·41	145	36·55
St. Silas Vicarage	...	...	...	...	...	...	...	...	...	...	...	16	3·38	22	3·94	15	5·60	20	11·02	14	5·54	22	5·18	15	2·88	124	37·54
Apes Hill	...	14	2·80	15	1·82	10	2·30	8	2·50	11	1·91	11	3·42	12	3·68	12	4·44	20	10·89	12	5·09	18	6·47	12	4·24	155	51·06
Total	...	123	19·98	90	12·66	85	18·40	49	12·91	64	11·82	118	24·87	125	28·31	123	39·86	173	89·35	116	51·15	161	47·41	106	25·19	1,333	381·91
Average	...	13·37	2·50	11·25	1·58	10·63	2·30	6·13	1·61	8·00	1·48	13·11	2·76	13·89	3·15	13·67	4·43	19·22	9·93	12·89	5·68	17·89	5·27	11·78	2·80	153·83	43·49

BARBADOS RAINFALL FROM JANUARY TO DECEMBER, 1894.—CONTINUED.

Name of Station.	Elevation.	January.		February.		March.		April		May.		June.		July.		August.		September.		October.		November.		December.		Total.	
	Feet.	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.
V.—District E.																											
St. Peter, (Highlands)																											
Nicholas Abbey	824	9	1·91	9	1·37	8	·88	5	2·93	5	·72	7	4·02	8	5·91	16	3·64	17	11·05	14	9·57	12	6·11	11	3·38	121	51·49
Oxford	436	15	1·17	16	·78	15	·76	8	2·14	11	·60	9	2·07	13	2·73	14	2·54	17	8·06	14	6·70	19	5·64	16	3·11	167	36·30
Orange Hill	...	9	2·53	8	1·88	9	1·84	6	2·93	7	·95	13	4·22	14	6·74	13	3·50	20	11·20	14	7·89	18	6·71	14	3·92	145	51·31
Rock Hall	...	8	2·63	9	2·05	9	1·69	9	3·65	8	1·50	9	3·94	15	5·20	15	5·96	18	12·12	16	8·81	19	7·68	12	5·43	147	61·06
Mangrove	...	9	2·72	8	2·41	8	1·91	6	2·73	6	1·20	10	3·45	18	4·85	14	4·92	17	9·74	15	8·00	18	6·56	16	4·80	145	53·29
Black Bess	581	8	2·69	5	2·17	6	1·99	4	2·13	4	·95	9	3·24	10	4·53	11	4·59	15	8·60	13	7·29	14	7·58	7	4·31	106	56·06
The Castle	...	11	2·11	11	1·69	7	1·38	4	3·39	5	·73	8	3·30	8	4·81	14	3·70	14	11·02	13	9·01	17	6·21	13	3·65	125	51·63
Total	...	69	15·76	66	12·35	62	10·45	42	19·90	46	6·65	65	24·24	86	34·77	97	28·85	118	71·79	99	57·27	117	46·52	89	28·09	936	357·54
Average	...	9·86	2·75	9·43	1·76	8·83	1·49	6·00	2·84	6·57	·95	9·29	3·46	12·29	4·97	13·86	4·12	16·86	10·26	14·14	8·18	16·71	6·65	12·71	4·14	136·58	51·07
St. Peters. (Lowlands.)																											
Alleyndale	353	12	1·78	13	1·58	9	1·22	7	2·65	6	·97	10	3·56	12	4·66	15	3·82	19	9·57	13	6·00	15	5·01	13	2·42	144	41·27
Bakers	380	5	1·67	7	1·57	7	1·37	3	1·66	4	·80	9	2·33	12	4·07	11	4·07	15	7·34	9	4·69	14	5·94	7	2·57	103	38·08
Maynards	69	9	1·86	6	·91	6	·57	8	2·03	7	1·06	11	2·36	15	5·14	15	3·35	19	9·85	16	7·48	22	5·04	18	2·06	152	41·71
District E.	150	16	2·74	15	2·12	13	1·93	10	3·18	6	1·19	14	4·40	14	5·80	23	4·27	21	9·67	17	7·85	19	5·46	17	3·61	185	52·22
Ashton Hall	...	11	1·91	10	1·94	10	1·51	8	2·39	4	·93	...	...	...	...	...	...	...	...	...	...	...	...	...	...	43	8·68
Six Mens	...	11	·74	9	1·00	7	·70	5	1·65	8	·78	11	2·33	18	4·73	16	3·51	20	10·07	16	6·73	22	5·10	15	2·30	158	39·64
Heywoods	...	8	1·68	8	1·52	5	·91	5	2·36	7	·83	12	3·10	12	4·32	13	2·98	15	8·39	10	5·22	10	3·55	6	1·85	111	36·71
Gibbs	50	9	2·00	12	2·69	11	1·93	8	2·16	9	1·54	9	3·28	14	3·90	12	4·29	17	9·41	13	7·11	18	7·32	10	3·18	142	48·81
Total	...	81	14·38	80	13·93	68	10·14	54	18·08	51	8·10	76	21·36	97	32·62	105	26·29	126	64·30	94	45·08	120	37·45	86	17·99	1,038	309·12
Average	...	12·13	1·80	10·00	1·67	8·50	1·27	6·75	2·26	6·37	1·01	10·86	3·05	13·36	4·66	15·00	3·76	18·00	9·19	13·43	6·44	17·14	5·36	12·29	2·57	142·33	43·04
St. Lucy. (Lowlands.)																											
Lamberts	350	12	1·36	11	1·43	12	1·00	5	2·44	6	·75	14	3·48	14	3·40	15	3·18	20	10·28	14	6·19	19	5·14	19	2·82	161	41·46
Mount Gay	...	8	1·93	12	1·63	9	1·25	7	3·57	7	1·13	10	4·53	13	6·39	13	4·12	16	14·85	13	8·77	16	6·24	14	3·21	188	57·62
Pickerings	...	7	1·66	9	1·61	9	1·18	8	3·30	5	·76	7	3·66	14	4·93	14	3·25	17	12·71	11	8·39	17	4·22	...	...	118	45·67
Spring Hall	71	9	1·01	3	1·60	6	·59	4	2·61	7	·90	6	3·13	13	3·30	14	2·42	18	8·93	12	6·18	15	3·68	11	2·11	118	36·46
Hope	...	9	1·83	8	·81	3	·58	12	3·91	8	1·57	9	3·87	14	3·77	12	2·67	18	9·22	14	8·06	18	5·84	13	2·35	138	44·48
Checker Hall	...	10	1·76	4	·44	5	1·11	6	3·15	3	·53	9	3·03	14	4·66	18	2·93	18	11·04	12	5·94	14	4·59	11	2·66	124	41·84
Lowlands	...	9	1·32	11	1·71	5	·47	5	3·05	6	1·23	7	3·77	15	3·89	12	2·18	14	9·92	13	9·10	13	5·07	10	1·99	120	43·65
Total	...	64	10·77	58	9·23	49	6·18	47	22·03	42	6·87	62	25·47	97	30·43	98	20·70	121	76·95	89	52·63	112	34·78	78	15·14	917	311·18
Average	...	9·14	1·54	8·29	1·32	7·00	·88	6·71	3·15	6·00	·98	8·86	3·64	13·86	4·35	14·00	2·96	17·29	10·99	12·71	7·52	16·00	4·97	13·00	2·52	132·36	44·82

BARBADOS RAINFALL FROM JANUARY TO DECEMBER, 1894.—CONTINUED.

Name of Station.	Elevation.	January.		February.		March.		April		May.		June.		July.		August.		September.		October.		November.		December		Total.	
	Feet.	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.
VI.—District F.																											
St. Joseph.																											
(Highlands.)																											
Buckden	...	15	5·00	15	2·57	12	3·31	7	2·62	10	1·66	16	5·11	12	5·23	13	5·17	18	10·89	14	8·75	25	6·12	15	3·49	17[illegible]	59·92
Little Island	1030	20	3·75	15	2·37	16	3·01	7	2·24	14	2·07	17	3·92	21	5·59	18	5·55	24	9·31	15	8·73	22	6·62	23	4·50	212	67·66
Blackmans	910	20	4·19	17	2·22	17	3·50	13	2·73	15	2·11	20	3·84	23	4·17	23	5·30	24	9·15	16	9·68	24	6·81	21	4·85	225	58·05
Blackmans House	960	18	4·99	16	2·37	20	3·82	12	2·55	19	2·36	19	4·03	23	4·64	23	5·74	23	9·20	16	8·84	23	7·42	24	5·10	236	61·07
Castle Grant	1079	18	1·74	11	1·78	13	2·44	8	1·93	19	1·83	10	2·65	17	4·41	18	4·52	22	8·80	14	7·15	21	5·99	16	3·94	187	49·18
Andrews	780	20	3·99	15	1·99	14	3·35	10	3·21	12	2·03	20	3·88	20	4·12	21	6·84	26	11·08	18	8·30	25	7·55	23	5·51	224	61·36
Learnings	1040	...	...	10	2·80	13	3·51	8	2·67	11	2·57	11	3·09	16	5·20	17	5·24	16	7·95	12	7·90	19	6·88	14	4·01	147	52·25
Retreat	...	21	1·25	16	2·36	17	3·97	5	3·20	10	2·57	15	3·07	22	5·17	22	6·27	20	9·08	13	8·43	24	7·56	18	5·29	20[illegible]	62·08
Total	...	182	30·91	115	17·96	122	26·92	70	20·31	110	17·20	128	29·99	152	38·53	155	45·23	176	75·46	118	68·78	183	54·96	154	36·72	1,615	462·97
Average	...	18·86	4·42	14·33	2·25	15·25	3·37	8·75	2·54	13·75	2·15	16·00	3·75	19·00	4·82	19·38	5·65	22·00	9·43	14·75	8·60	22·88	6·87	19·25	4·59	204·25	58·14
St. Joseph.																											
(Lowlands.)																											
Hillswick	...	17	2·29	17	1·13	15	1·77	7	2·12	12	1·21	18	3·10	18	4·33	16	3·36	20	8·79	15	6·68	18	5·09	14	1·87	187	41·84
Friezers	...	15	3·13	16	1·99	12	2·20	5	2·43	10	2·03	14	3·95	14	5·28	18	5·69	19	10·15	14	8·06	18	6·57	13	3·03	168	54·61
Bissix Hill	...	11	2·58	6	1·02	7	1·80	6	3·10	8	1·37	12	3·99	8	3·93	12	4·68	15	10·04	12	7·98	15	6·39	10	3·26	122	50·14
District F.	...	16	2·50	10	1·06	12	1·49	8	2·17	9	·35	14	2·79	12	3·09	12	3·80	17	5·98	11	2·82	18	5·04	14	2·10	151	33·74
Parks	...	17	3·32	11	1·75	12	2·26	6	3·18	11	1·78	16	3·63	16	4·96	16	4·97	17	8·99	13	6·93	20	6·75	14	3·35	166	51·82
Spa	...	18	4·16	13	2·13	11	2·42	6	2·53	10	2·05	7	3·22	9	5·36	11	5·59	16	9·45	12	7·59	17	5·87	10	2·89	140	53·26
Total	...	94	17·98	73	9·08	69	11·94	38	15·53	60	9·44	81	20·68	77	26·95	85	28·09	104	53·25	77	40·66	106	35·81	75	16·50	939	285·41
Average	...	15·67	2·99	12·17	1·51	11·50	1·99	6·33	2·59	10·00	1·57	13·50	3·45	12·83	4·49	14·17	4·68	17·33	8·89	12·83	6·68	17·67	5·97	12·50	2·75	56·50	47·56
St. Andrew.																											
(Highlands.)																											
Gregg Farm	...	16	2·91	15	2·30	15	2·19	7	1·86	11	1·51	15	3·29	13	3·58	12	4·47	18	10·13	12	6·82	21	6·55	16	4·34	171	49·95
Swans	...	15	2·53	11	1·29	14	1·88	7	3·02	10	1·09	11	3·12	14	4·00	16	5·11	19	8·14	17	6·28	17	5·69	17	4·66	168	46·81
Baxters	...	8	2·61	12	2·95	13	4·14	7	2·92	9	1·25	15	3·33	13	3·87	16	4·41	19	9·62	13	7·51	21	7·11	11	3·69	157	55·91
Spring Vale	...	12	2·73	9	1·53	8	2·34	6	2·29	8	2·12	11	3·25	13	4·92	14	4·49	17	9·98	14	8·23	19	6·46	8	3·03	139	51·27
Total	...	51	10·78	47	8·07	50	10·55	27	10·09	38	5·97	52	13·49	53	16·37	58	18·48	73	37·87	56	28·84	78	25·81	52	15·72	635	202·04
Average	...	12·75	2·69	11·75	2·02	12·50	2·64	6·75	2·52	9·50	1·49	13·00	3·37	13·25	4·09	14·50	4·62	18·25	9·47	14·00	7·21	19·50	6·45	13·00	3·93	158·75	50·50

SUMMARY OF BARBADOS RAINFALL FROM JANUARY TO DECEMBER, 1894.

Name of Station.	No. of Stations.	January.		February.		March.		April		May.		June.		July.		August.		September.		October.		November.		December		Total.	
		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.
I.—District A. St. Michael (Lowlands)	11	12·60	2·13	9·40	1·33	8·30	1·23	5·36	1·70	6·27	·72	12·18	2·36	15·27	3·35	13·27	3·14	20·00	10·92	13·80	7·52	16·82	5·06	11·70	1·76	144·97	41·22
II.—District B. *a.* Christ Church (Lowlands)	16	10·25	2·33	7·63	·96	8·00	2·24	4·94	1·67	4·81	·45	11·13	2·03	11·94	2·97	11·31	2·14	17·44	9·08	12·25	6·47	13·94	6·72	9·69	1·98	128·33	38·99
b. St. George (Highlands.)	8	14·71	3·07	8·43	1·65	11·00	2·71	6·43	1·55	8·14	1·16	14·29	2·69	16·13	4·09	15·63	4·96	18·13	10·00	11·88	8·04	17·75	6·08	12·50	3·30	155·02	49·30
b. St. George (Lowlands.)	5	14·00	2·84	11·00	1·53	11·20	2·27	4·80	1·74	7·40	·74	12·20	2·80	13·80	3·71	13·00	3·55	18·60	10·34	12·20	7·72	14·00	5·49	12·80	2·87	145·00	45·60
III.—District C. *a.* St. Philip (Highlands)	3	14·33	2·42	10·00	1·24	12·33	1·93	6·67	1·32	8·00	·85	15·00	1·87	16·33	3·68	16·00	3·76	19·33	11·00	13·67	6·52	16·67	4·67	17·33	2·95	165·66	42·21
a. St. Philip (Lowlands.)	24	11·88	2·03	6·91	·74	9·13	2·03	4·67	1·19	5·83	·61	11·29	1·69	13·29	3·72	12·92	2·94	17·00	10·29	11·63	5·66	13·21	4·24	10·92	2·12	128·63	37·26
b. St. John (Highlands.)	14	14·79	2·78	10·50	1·52	11·00	2·10	5·93	1·95	8·92	1·52	14·46	2·62	15·46	3·82	16·23	5·11	19·62	9·66	12·92	7·89	17·08	5·39	13·46	3·69	160·37	47·55
b. St. John (Lowlands.)	3	14·33	2·83	10·33	·92	6·67	1·47	4·00	1·75	9·67	1·12	11·67	2·78	11·33	3·77	13·00	3·47	11·33	7·91	10·67	5·34	14·67	4·12	10·33	2·21	128·00	37·69
IV.—District D. *a.* St. Thomas (Highlands.)	13	18·08	4·40	14·77	2·33	13·54	2·94	9·00	2·42	11·62	2·35	15·08	3·40	18·54	4·90	17·00	5·35	21·77	11·01	14·38	8·33	21·23	6·96	15·08	4·24	190·09	58·63
a. St. Thomas (Lowlands.)	12	15·92	3·59	12·92	2·02	12·08	2·69	6·42	1·82	7·67	1·32	14·17	2·66	16·42	3·50	15·85	4·97	19·08	10·72	12·45	8·49	18·42	6·07	15·25	3·28	186·65	51·13
b. St. James (Highlands.)	3	18·33	2·69	9·67	1·72		1·96	6·00	2·35	9·33	1·50	11·00	2·58	14·33	4·40	14·67	5·94	18·67	9·42	16·00	7·92	18·33	7·61	11·67	4·45	152·33	52·54
b. St. James (Lowlands.)	9	15·87	2·50	11·25	1·58	10·63	2·80	6·13	1·61	8·00	1·48	13·11	2·76	13·89	3·15	13·67	4·43	19·22	9·93	12·89	5·68	17·89	5·27	11·78	2·80	153·88	43·49
V.—District E. *a.* St. Peter (Highlands.)	7	9·86	2·25	9·43	1·76	8·86	1·49	6·00	2·84	6·57	·95	9·29	3·46	12·29	4·97	13·86	4·12	16·86	10·26	14·14	8·18	15·71	6·65	12·71	4·14	136·58	51·07
a. St. Peter (Lowlands.)	8	10·13	1·80	10·00	1·67	8·50	1·27	6·75	2·26	6·37	1·01	10·86	3·05	13·86	4·66	15·00	3·76	18·00	9·19	13·43	6·44	17·14	5·36	12·29	2·57	142·38	43·04
b. St. Lucy (Lowlands.)	8	9·14	1·54	8·29	1·32	7·00	·88	6·71	3·15	6·00	·98	8·86	3·64	13·86	4·35	14·00	2·96	17·29	10·99	12·71	7·52	16·00	4·97	13·00	2·52	132·86	44·82
VI.—District F. *a.* St. Joseph (Highlands.)	8	18·86	4·42	14·38	2·25	15·25	3·37	8·75	2·54	13·75	2·15	16·00	3·75	19·00	4·82	19·38	5·65	22·00	9·43	14·75	8·60	22·88	6·87	19·25	4·59	201·25	58·44
a. St. Joseph (Lowlands.)	6	15·67	2·99	12·17	1·51	11·50	1·99	6·33	2·59	10·00	1·57	13·50	3·45	12·83	4·49	14·17	4·68	17·33	8·89	12·88	6·68	17·67	5·97	12·50	2·75	156·50	47·56
b. St. Andrew (Highlands.)	4	12·75	2·69	11·75	2·02	12·50	2·64	6·75	2·52	9·50	1·49	13·00	3·37	13·25	4·09	14·50	4·62	18·25	9·47	14·00	7·21	19·50	6·45	13·00	3·93	158·75	59·59
	162	245·95	549·30	188·83	28·07	186·82	37·51	111·64	36·97	147·85	21·97	227·09	50·96	261·82	72·44	263·44	75·55	329·92	178·46	236·60	129·71	309·91	103·95	235·26	56·15	2745·13	841·04
		13·66	2·74	10·49	1·56	10.38	2·08	6·20	2·05	8·21	1·22	12·62	2·83	14·55	4·02	14·64	4·20	18·33	9·91	13·14	7·21	17·22	5·77	13·07	3·12	152·51	46·72

The average Rainfall for 1892, 1893 and 1894, as compared with the average for 45 years from 1847 to 1891, inclusive.

Months.	Average for 45 years from 88 Stations.	Average for 1892 from 177 Stations.	Average for 1893 from 167 Stations.	Average for 1894 from 162 Stations.
	Inches.	Inches.	Inches.	Inches.
January	3·38	3·24	2·55	2·74
February	2·33	1·92	1·43	1·56
March	1·79	2·43	1·14	2·08
April	2·28	3·87	3·94	2·05
May	3·45	7·47	4·35	1·22
June	5·30	14·47	7·21	2·33
July	5·91	7·52	10·28	4·03
August	7·45	11·49	12·00	4·20
September... ...	7·32	13·43	10·10	9·91
October	8·26	5·55	11·99	7·21
November... ...	7·52	10·73	6·05	5·77
December	4·84	4·29	5·28	3·12
	60·03	86·46	76·18	46·71

Weekly Statement of Comparative prices of the West Indian good Brown Sugar for the fifty two weeks January to December.

Weeks.	Average for the years 1882-'91.		For the year 1892.		For the year 1893.		For the year 1894.		Weeks.	Average for the 10 years 1882-91		For the year 1892.		For the year 1893		For the year 1894	
	s.	d.	s.	d.	s.	d.	s.	d.		s.	d.	s.	d.	s.	d.	s.	d.
1	14	4·8	13	0	12	9	11	6	27	14	6·0	11	9	16	9	11	3
2	14	3·6	13	0	12	9	11	6	28	14	5·1	11	9	16	3	11	3
3	14	3·3	13	0	12	9	11	6	29	14	3·0	12	0	15	9	11	3
4	14	2·4	12	9	12	9	11	6	30	14	2·1	12	0	15	0	11	0
5	14	0·3	12	9	12	9	11	6	31	14	1·2	12	0	15	0	10	6
6	14	0·3	12	9	12	9	11	6	32	14	0·9	12	0	14	9	10	6
7	13	11·4	12	9	12	9	11	6	33	14	0·0	12	0	14	6	10	9
8	13	11·1	12	6	12	9	11	6	34	13	11·7	12	0	13	9	11	0
9	14	0·9	12	6	12	6	11	6	35	14	0·9	12	3	13	6	11	0
10	14	1·9	12	6	12	9	11	6	36	13	10·8	12	6	13	6	11	0
11	14	3·0	12	6	12	9	11	9	37	13	11·7	12	3	14	0	11	0
12	14	3·9	12	6	13	0	11	9	38	13	9·6	12	0	14	0	10	9
13	14	5·4	12	3	13	3	11	9	39	13	8·1	12	0	14	0	10	6
14	14	5·4	12	3	13	9	11	9	40	13	6·9	12	0	13	0	10	0
15	14	7·5	12	3	14	0	11	9	41	13	6·9	12	0	13	0	9	6
16	14	8·4	12	3	14	6	11	6	42	13	7·2	12	3	12	6	9	0
17	14	9·0	12	3	15	0	11	3	43	13	7·5	12	6	12	3	9	0
18	14	6·6	12	0	15	6	11	3	44	13	6·0	12	9	12	0	9	0
19	14	8·1	12	0	15	3	11	6	45	13	5·7	12	6	12	0	8	6
20	14	7·8	12	0	15	0	11	0	46	13	5·1	12	6	12	0	8	6
21	14	10·2	12	3	15	3	11	3	47	13	5·1	12	6	11	9	8	0
22	14	10·2	12	3	15	6	11	3	48	13	5·4	12	6	11	9	8	0
23	14	9·3	12	3	16	0	11	6	49	13	6·6	12	6	11	9	7	9
24	14	7·5	12	3	16	6	11	9	50	13	6·6	12	6	11	6	7	6
25	14	8·4	12	0	16	9	11	9	51	13	6·3	12	6	11	6	7	6
26	14	7·5	12	0	16	9	11	6	52	13	6·9	12	6	11	6	7	6
Av. for 6 m'ths.	14	5·15	12	4·61	14	0·92	11	6·1	Av. for 6 m'ths.	13	9·6	12	2·31	13	4·3	9	8·1

The average weekly price for West Indian good Brown Sugar for the ten years, 1882-1891 is 14s. 1·37d. ; for 1892,—12s. 3·46d., for 1893—13s. 6·93d., and for 1894 10s. 7·1d.

This Table is compiled from returns published in the "Sugar Cane Magazine."