

BOTANICAL STATION, BARBADOS. Occasional Bulletin of Miscellaneous Information No.-3.

WATTLES AND THEIR CULTIVATION.

Mr. Morris, F. L. S., Assistant Director Royal Gardens, Kew, in the lecture he gave in this colony on "The Cultivation of Economic Plants suited to West Indian requirements" mentioned inter alia the cultivation of certain of the Australian Wattles and he kindly sent me last September an extract on the subject taken from the Cape Agricultural Journal of the 13th August, 1891, advising me at the same time to embody it in one of the occasional Bulletins issued from this Station; however, shortly after receiving the extract from Mr. Morris, I received from Mr. Fawcett, F. L. S., Director of the Public Gardens and Plantations, Jamaica, one of his bulletins in which he goes much more fully into the subject than the writer in the Cape Journal, and as I can of myself add no information to that given by Mr. Fawcett, I beg to submit in extenso the portion of his bulletin on the subject of wattle cultivation.

The Golden Wattle.

The bark of the Wattle Trees of Australia is a valuable tanning material. There is a large number of species varying in the percentage of tannic acid contained in their bark, and varying also in their suitability for different soils and climates.

In Jamaica the probability is that all good soil, where other conditions are favourable, will in the near future be devoted to the cultivation of fruits and vegetables, together with sugar and coffee. But no opportunity should be lost of testing the capabilities of even our worst soils and our driest situations. The Sisal Hemp plant is now in process of trial, but as it requires machinery for the extraction of the fibre, it is quite possible that this fact may deter some from entering upon the cultivation. To these, the "Golden Wattle" Tree may be commended, for while the cultivation is of an equally simple nature with that of the Sisal Plant, no machinery is required.

Seeds have just been received from Kew of the "Golden Wattle" of South Australia and Victoria (Acacia pycnantha.) Mr. Morris in forwarding the seeds remarks that this tree "seems to afford the richest tanning bark known. It contains sometimes even more than 40 per cent. of tannic acid."

The seed was sent to the Director of the Royal Gardens, Kew, by Mr. J. H. Maiden, Curator of the Technological Museum, Sydney, who writes as follows:—"The seed is remarkably fine owing to the good season, is quite fresh, and has been gathered from selected thick-barked trees. As you are quite aware, this Acacia yields the richest tan bark in the world and is eagerly sought after. I beg to refer you for full particulars to my pamphlet "Wattle and Wattle-barks." In Australia this Acacia flourishes best in warm dry situations, with rainfall not much exceeding 20 inches. The tree flourishes in the poorest soil. The pamphlet mentioned, is "the practical outcome of many years of research and observation" on the subject by Mr. Maiden. It has been prepared, at the request of the Department of Public Instruction, New South Wales. The following extracts are taken from this valuable pamphlet, which can be purchased from the Department, Sydney. A small quantity of seed can be obtained for trial on application to the Director of Public Gardens and Plantations, and further supplies can be forwarded from Australia.

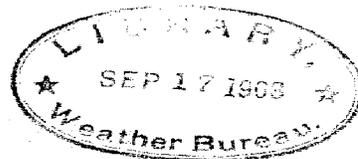
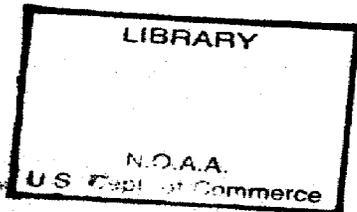
WATTLES AND WATTLE-BARKS.

EXTRACTS FROM A PAMPHLET, BY J. H. MAIDEN, F.L.S., F.C.S., &c. CURATOR OF THE TECHNOLOGICAL MUSEUM, SYDNEY

Demand and Supply.

As regards the importance of a supply of wattle-bark to European manufacturers, and the remote possibility of the market being over-supplied, I quote the following, by a correspondent of Mr. J. E. Brown, Conservator of Forests of South Australia:—"The matter

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of supply and demand can be compressed into small compass. British and Continental tanners are languishing for ample and continuous supply and South Australia exports in such dribbles that very many of the large firms in Great Britain have given over using it, falling back on Valonia and other barks more *fully* and *regularly* supplied. I may be allowed to remark here, reliable leather cannot be produced by intermittent and inadequate supply of bark, on which the tanner relies when laying down his hide; indeed, in large yards such as with 50,000 hides always in the pits, it becomes a very serious difficulty, attended with anxiety and loss not to be able, through want of sufficiency of bark of a class to work them through successfully. It therefore becomes a matter of necessity that the exports of bark may be abundant and regular to such an extent as tanners may confidently rely on. To such low export of wattle bark have your growers now arrived that *one yard* could manage to take fully *one fourth*—say 1,000 tons—of all the bark shipped from your ports to England in 1882, and about one-third of the shipments for 1883. I am aware French and German tanners highly approve of the wattle for tanning purposes." (Report to S. A. Legislative Council, 1884.)

Mr. F. Donovan, representative of the 'Tanners' and Curriers' Union of Melbourne, in giving evidence before the Royal Commission on vegetable products, states that for the bark which in 1872, cost £3 15s. per ton, £8 or £9 was paid in 1887, and he is very emphatic on the necessity of wattle culture on a large scale. Mr. Dunn, a tanner, gave evidence to the effect that in 1872 wattle-bark was selling from £2 10s. to £3 a ton. In 1879 the price had gone up as high as £9 10s. and since then it has varied from £8 10s. to £11; in 1887 the best bark was £10.

The best Sydney bark has fetched £10 this season, and this appears to be the top price on the average.

#### CULTIVATION OF WATTLES.

##### (a.) Soil.

There is a consensus of opinion that wattles will grow on the poorest soil, and thus it is that land can be utilized in this industry when it can scarcely be put under any other cultivation, and where not even grass grows. At the same time, bark richer in tannic acid and maturing earlier, may be obtained from trees growing on richer soil.

In preparing the land, if it be virgin soil unencumbered with scrub and of a light nature, breaking up of the surface, sowing the seeds, and harrowing is all that is necessary. If the land be covered with scrub or other vegetation these should be cut down, burnt, and the land prepared in the usual way. It must not be understood that any careless kind of cultivation will do for wattles, although when once started, they will thrive with scarcely any attention, but like other crops, the better the system of cultivation adopted, the better the yield and therefore the greater the profit.

##### (b.) Moisture.

Wattles like a moderate amount of moisture, say from 18 to 20 inches. (F. Abbott.)

Mr. J. E. Brown has grown wattles successfully with 10 inches of rainfall, but ordinary cultivators will not usually succeed with less than 16 to 20 inches per annum.

On the other hand, it is not good for wattle-trees to have an unlimited supply of water, as they then tend to throw out too much leaf, and the bark becomes flabby and deficient in tannic acid.

##### (c.) Sowing and Germination of the Seed.

The outer covering of the seed is of great hardness, and under ordinary circumstances it will remain in the ground for many years before germination.

Bush-fires, however, usually hasten matters; and it is well known that perfect forests of young wattles spring up in many places after these occurrences. The operations of nature are therefore assisted in practice by means of heat, and this heat may be either dry or moist. For the first, Mr. J. E. Brown recommends a quantity of brushwork to be burnt down to the condition of expiring embers. "In this residuum of the fire the seed is placed and mixed up with the ashes and charred coals, and the whole is then allowed to remain until cooled down. The seed is now ready for sowing. If the intention be to sow it singly by dibbling or in some other way, it will have to be cleaned and separated, from the residue of the fire by riddling, or by the aid of an ordinary grain-winnower. If however, the seed is to be sown broad-cast, it will be sufficient if the embers are raked off the heap, and the remainder, containing both ash and seed, stored ready for sowing. The advantage claimed for this method of preparation is that the seed can be sown either broad-cast upon the ground without covering or dibbled in the soil in the ordinary way, at any season of the year, and especially before the winter rains set in." Care will of

course require to be exercised to prevent loss by over-burning. A frying-pan\* is used by some people for roasting wattle seed.

Secondly, the method of treatment by boiling, or hot water. Mr. Brown has recommended that the seed be placed in a vessel, water *almost boiling* poured upon it, and left to soak for one or two days; the seed is then taken out and kept damp in a bag until swelling takes place. The only drawback to this system is that, when sown, the seed must of necessity be covered with soil, and that the operation be carried out in the winter season only.

Unless the seed be covered as it is put out, so as to keep up the necessary supply of moisture to complete germination, a change of dry weather would undoubtedly result in its entire loss. Nevertheless, this is the method which Mr. Brown recommends growers, especially beginners, to adopt.

Following are extracts from a leaflet, giving a few simple directions in regard to wattle cultivation which has been issued by the Superintendent of Technical Education under the direction of the Minister of Public Instruction. Some of the points have already been touched upon:—

"Nursery—If there be only a small area to be planted with wattles it is best to raise seedlings in a nursery. Whilst young they can be easier looked after and protected. Wattles will not stand transplanting at every season of the year with any degree of success; therefore they should be planted in small flour-pots or bamboos, in which they can be readily taken to the open ground. If grown in flour-pots, three or four seeds in each will be sufficient. When the plants are up, weed out all but the strongest one. After they are a few weeks old the pots will be found to be full of root; they should then be removed to their permanent home. To take them out of the pots turn them upside down, and by placing a finger in the drainage hole at the bottom of the pot the plant with its roots can be easily taken out, and will suffer nothing by removal.

In the State Nursery at Gosford the seeds are sown in boxes containing peaty loam, mixed with clean, sharp sand, the soil being kept always moist. When the seedlings are sufficiently established they are transferred to the open ground.

"To sow broad cast or in drills.—If the seeds have been assisted in their germination by means of hot ashes, rake or sift out the larger coals and sow the ashes with the seeds. If the germination has been commenced by the hot water process, mix the seed thoroughly with dry ashes or sand—this will prevent the seeds from sticking together—then sow broad-cast or in drills in the usual way.

"If the seeds are to be dibbled they must be freed from the ashes. Whichever method be adopted for sowing, the seed should be well covered, and in the case of those that have been soaked in water this is essential, for a few hot and dry days would effectually check all further growth. Three or four seeds at about *three feet* apart is the distance required; this will allow for thinning.

"Do not cover the seeds too deeply; about an inch underground will be ample."

"Sow sparingly; this will save a lot of thinning afterwards."

#### (e.) *Thinning.*

Wattle-trees are sometimes recommended to be pruned. "The advantages of this are larger dimensions of individual trees, and hence more bark in proportion, cleaner stems, easier stripping at less expense, less liability to disease, and quicker returns, because the tree will arrive at the stripping stage sooner by having its vitality confined chiefly to the stem."—(J. E. Brown)

Mr. A. L. Thrupp however deprecates pruning in warm northern exposures, as too much sun would be admitted to the stem of the tree.

Mr. F. Abbott recommends that wattle seedlings be thinned out, as soon as they are big enough to handle, to 10 feet apart. This is perhaps a fair distance, but authorities do not agree as to the precise distance. It rather resolves itself into a matter of common sense, for one must on the one hand avoid having wattles too close to each other, otherwise "leggy" trees are the result, and on the other hand trees too bushy are not desirable.

Wattle-trees should be transplanted with a moderate amount of care, as they are not the hardiest of plants to stand moving.

#### PROFITS TO BE DERIVED FROM WATTLE CULTIVATION.

Wattle cultivation is in its infancy, and as far as I know, no wattle grower has favoured the world with a peep at the item "Wattle Cultivation" in his ledger.

\*The danger of over-heating will be minimised if a little water be put into the frying-pan.

We are, therefore, chiefly dependent on estimates in lieu of statements of results attained, but those which follow are as trustworthy as can be supplied. Wattle conservation and cultivation have been little taken up in our own Colony, but we are already taking steps to remedy this.

Following are the opinions of gentlemen in the several Colonies on the prospect of profit in wattle-planting. They are culled from the reports of the Victorian Royal Commission on Vegetable Products.

*New South Wales*.—Mr. Charles Moore, F. L. S., Director of the Botanic Gardens, Sydney :—“ They are a very profitable crop indeed.”

*Tasmania*.—Mr. F. Abbott, Curator of the Botanic Gardens, Hobart :—“ I have not the shadow of a doubt that they are a valuable crop to any farmer; they come on in a very short period, and there is always a revenue from them.”

*South Australia*.—Mr. J. E. Brown, F. L. S., Conservator of Forests, Adelaide :—“ With regard, however, to the wattles, there can be but one opinion as to their cultivation being the means of a large and most valuable source of revenue both to individuals and to the State.”

*Victoria*.—Mr. I. Hallenstein, Tanner, Currier, and Leather Merchant, Melbourne :—“ I do not think a farmer or anyone with the means could produce any crop more valuable than the wattle-bark. We have got faith in it, or we would not have gone to the expense of putting 800 or 1,000 acres under cultivation.” The following evidence was given by Mr. W. Ferguson, Inspector of State Forests, Victoria :—“ I calculated that from the time the seed was sown at the Majorca Plantations, Ballarat, in seven years we should get about 10 tons to the acre of bark. That is, off the trees that were fit for barking at that time, and at the rate—of the present rate—of bark—it varies from £8 to £10 per ton. “ You would get 10 tons to the acre? Yes. “ From trees that have been how many years growing? Seven years.

“ That would average £10 a ton? Yes, at the present, and it is likely to be more.

“ That is, £90 per acre? Yes.

“ That will be about £13 per acre per annum? Yes. “ Would that take all the trees or leave a portion remaining? No, only the first thinning out. How many thinnings would that plantation admit of year after year? For years and years to come, because you will find them in all stages of growth. But I calculated that from the first thinning-out,

“ And would that yield as much each succeeding year? It would yield as much each succeeding year.

“ So that you might get 10 tons per acre in each succeeding year? Annually for years to come, if they are judiciously thinned, but not as they are thinning (destroying) them in the forest. If they are properly cultivated—cultivated for profit.

“ Can you mention any other crop grown in Victoria more profitable than that? No, and it is grown on such poor land, where neither grass nor anything will grow. In Rodney, where I mention, there is not a bit of grass to be seen, and there the wattles come up thick.”

At the irrigation farm at Islington, near Adelaide, Mr. J. E. Brown planted 40 acres in wattles. “ The seed was simply soaked in hot water and broad-casted, and the soil afterwards harrowed with brush harrow; altogether, the whole expense of seed, preparation of the ground, and putting the seed in cost about £15. Four years afterwards the wattles were simply thinned, and the bark of the thinnings realized £25, thus more than refunding the original outlay. Next year I hope the thinning will realize something like £3 per acre. In three years time from this we purpose stripping the whole crop, when I am certain it will realize at least £50 per acre.

#### Detailed Estimates.

1. The following statement showing the profit to be derived from the systematic cultivation of wattles, was compiled from the evidence given before the Board of Enquiry on Wattle Cultivation, Melbourne, 1878, and forms an appendix to their report. (The Board recommend *A. decurrens* \* and *A. pycnantha*.)

\* *A. decurrens* var. *mollis*—*A. mollissima*, this so called variety having again been raised to the rank of a species. J. H. M.

Receipts derivable from a Wattle Plantation of say 100 acres, planted in the manner proposed—

	£	s	d	£	s	d
Each acre planted with wattles, 10 feet apart, would carry 400 trees; at the end of fifth year, trees would yield say 56lbs matured bark; stripping only every third tree 333 tons would be obtained off 100 acres; this, at £4 per ton, would give at first stripping	£1,332	0	0			
In the sixth (or following) year, a similar number of trees would be stripped, the bark having increased in weight say 14lbs., the increased yield of second stripping would therefore be 400 tons at £4, making	1,600	0	0			
In the seventh year the remaining trees would be stripped, from which a still greater increase would be obtained, say 480 tons at £4, making	1,920	0	0			
The aggregate yield of bark during the first eight years, 1,215 tons, amounting in value to	£4,852	0	0			
Estimate of Expenditure on a Wattle Plantation of 100 acres during eight years:—						
Rent of 100 acres for eight years, at 6s. per acre per annum	£240	0	0			
Ploughing 100 acres in drills 10 feet apart	25	0	0			
Sowing Wattles and actual cultivation, including cost of seed	37	10	0			
Supervision for eight years, say £10 per annum	80	0	0			
Pruning the trees, taking off useless wood, &c. (only necessary for 2 years) 10/ per acre	50	0	0			
Incidental and unforeseen expenses	27	10	0			
Interest on the whole amount expended during eight years	240	0	0	700	0	0
Actual cost of stripping and carting, as shown below*	1,515	0	0	1,515	0	0
+ Profit balance, exclusive of improvements or supplementary sowings	£2,637	0	0	2,637	0	0
				£4,852	0	0

2. The following estimate is by Mr. J. E. Brown, and is taken from a Report by that gentleman to the South Australian Legislative Council in 1884. (Mr. Brown recommends *A. pycnantha*) :—

REVENUE.				
To value of property increased and improvements, say	...		£400	0 0
“ value of 500 tons of bark, at £5 per ton	...		2,500	0 0
EXPENDITURE.				
By purchase of 100 acres, at £3 per acre	...	£300	0	0
“ cost of substantial fence all round, say 1½ mile at £50 per mile	...	75	0	0
“ ploughing 100 acres, 8s. per acre	...	40	0	0
“ of 30 lbs. of seed, at 1s. per lb	...	1	10	0
“ labour, sowing the seed in rows, say, at 5s. per acre	...	25	0	0
“ scarifying between the rows twice, at 4s. per acre	...	20	0	0
“ thinning and pruning for two years, at 10s. per acre per annum	...	100	0	0
“ forming fire-breaks during the third to seventh year say, £5 per annum	...	25	0	0
By sundries	...	50	0	0
“ interest on money expended during the seven years, say	...	280	0	0
“ cost of stripping 500 tons of bark, at 25s. per ton	...	625	0	0
“ cost of carting same to market, at 10s. per ton	...	250	0	0
Balance, being clear profit	...	1,108	0	0
		2,900	0	0
		2,900	0	0

Notes on above Estimate.—At the distances apart which I recommend the trees to be

\* The cost of stripping would not exceed 15s. per ton, on account of the facilities presented by the regularity of the trees, while carting would represent another 10s. per ton. These combined charges would be 25s. per ton, and on 1,215 tons would be £1,515, leaving a clear profit on 100 acres (after allowing for primary expenditure) of £2,637.

+ In addition to the bark taken off the land, a fresh supply would be available in two years. Afterwards as the Board recommend that every tree stripped should be replaced by another sowing, all improvement effected may be calculated as additional profit.

grown, namely, 4 to 6 feet, there will be an average of 1,200 trees to the acre. In order however, to make due allowance for blanks, I base my calculations upon there being 1,000 only to each acre. £5 per ton is only two-thirds of the present selling price bark. I give 5 tons as the probable yield per acre. That this is a low estimate will be admitted, when it is considered that this only allows for 10lbs. of bark to be taken from each tree. (J. E. Brown).

3. Estimate of Expenditure upon and Revenue from a Wattle Plantation of 100 acres during a term of seven years, by Mr. G. Perrin, Conservator of State Forests, Victoria, 1889. He recommends the cultivation of the broad-leaf wattle (*A. pycnantha*); broad-cast sowing.

## EXPENDITURE.

	£	s	d
To rent of land at 4d. per acre under Wattle Cultivation Bill ... ..	1	13	4
.. fencing, say, 1 mile and 3 quarters. at £40 per mile... ..	70	0	0
.. ploughing (and harrowing twice) at 14s. per acre ... ..	70	0	0
.. purchase of seed, 1lb. per acre, 100lbs. at 1s ... ..	5	0	0
.. ploughing and burning of fire-breaks, four blocks of } 20 acres each, with 20 feet roadway between each } block, three furrows on each side at £10 per annum } ... ..	70	0	0
.. vermin destruction and unforeseen expenses, say ... ..	50	0	0
.. first pruning and thinning at end of second year after } sowing, say 10s. per acre ... .. } ... ..	50	0	0
.. final pruning about fourth year (superficial only) at 5s } per acre ... .. } ... ..	25	0	0
.. interest on seven years' rental ... ..	£	3	15
.. interest on expenditure, say ... ..	206	10	0
.. stripping 100 acres of wattles (1,200 trees to the acre) } producing 12lbs of the bark per tree, or 642 tons } in all, 25s. per ton ... .. } ... ..	802	10	0
.. cartage to a railway station, say 5s. per ton ... ..	160	10	0
	£	1,514	18
			4

## RECEIPTS.

By 100 acres of wattle-bark from 1,200 trees to the } acre, each producing 12lbs. of bark--642 tons } £ 4,815 0 0	£	4,815	0	0
£7 10s. per ton... ..				
Less expenditure ... ..	1,514	18	4	
Profit ... ..	£	3,300	1	8

Table to aid in the comparison of the more important items contained in the three foregoing estimates.

## A.—Out-goings.

	Victorian Board.	Mr. Brown.	Mr. Perrin.
	£ s d.	£ s d.	
Cost of land per acre ... ..	...	3 0 0	...
Rent per acre per annum ... ..	6 0	...	4d. under Wattle Cultivation Bill.
Fencing per mile ... ..	...	50 0 0	£40 0s 0d.
Ploughing ... ..	25 0 0	40 0 0	£79 (includes harrowing.)
Scarifying, per acre... ..	...	4 0	...
Fire breaks ... ..	...	25 0 0	£70 (fuller specification.)
Seed and sowing ... ..	37 10 0	26 10 0	£5 (seed only.)
Pruning, &c., per acre ... ..	10 0	10 0	10s 0d.
Stripping, per ton ... ..	15 0	1 5 0	£ 1 5s 0d.
Carting, per ton ... ..	10 0	10 0	5s 0d.
Supervision for eight years... ..	80 0 0	...	...
Interest on money ... ..	240 (8 years)	280 (7 years)	£210 10 (7 years)
Contingencies ... ..	27 10 0	50 0 0	£50 0s 0d.

## B.—Income.

	Victorian Board.	Mr. Brown.	Mr. Perrin,
Yield of 5th year trees each ...	56lb.	10lb. from each tree admittedly a low estimate.	12lb.
Yield 6th year ...	70lb.		
Yield 7th year ...	84lb.*		
Value of bark, per ton ...	£4	£5	£7 10/
Total yield in tons ...	1,215 (8 years)	500 (7 years)	642 (7 years).

## HARVESTING WATTLE-BARKS.

## (a.) Time of Year for Stripping.

Wattle-barks are often gathered all the year round, whereas they should only be stripped for three or four months in the year; (the months recommended are September, October, November, and December)† out of that season there is usually a depreciation of tannin in the bark. In these months, also, the sap usually rises without intermission, and the bark is easily removed from the tree. The impression appears to have prevailed amongst bark-strippers that whenever the bark would strip it possessed full tannin properties, but this is erroneous. After a few days of rain during other seasons of the year, a temporary flow of sap will cause the bark to be easily detached from the trunk, but then it is greatly inferior in quality. (*Report Victorian Board.*)

Mr. A. L. Thrupp, in a paper read in March, 1890, before the Congress of Agricultural Bureaux in Adelaide, carefully warns tanners and others against receiving wattle bark damp, pointing out that bark in that state engenders mould "of a most virulent form," is liable to spontaneous combustion if stacked in the hold of a vessel, and, while bark received green will tan hides as fast as bark received dry, still, there is the undeniable fact, in nine cases out of ten, that leather produced from bark so received, so stacked, and used for tanning purposes is spotted, and therefore of second rate or third rate value..... Mr. Thrupp states that if the bark of a wattle-tree of three or four years be slit down on the south side with a sharp knife, from root to first branch, the increase in the bulk of the bark will be considerable. This has been tried in the Montacute District of South Australia successfully for years. Spring is the proper time for this work. (*Journal, South Australian Bureaux of Agriculture November, 1889.*) A correspondent of mine, engaged in wattle cultivation in the Blue Mountain, has also practised this method with success. He has instituted comparative experiments, and is convinced of the advantage of the process in increasing bulk of bark. He performs the operation in the early winter (May or June).....

## (b.) Age and size of Trees.

Wattle-bark should only be procured from mature trees, i.e., from those whose bark possesses the full natural strength. The Victorian Board states, as has already been noted that bark-stripping may profitably commence at the end of the fifth year, and returns undoubtedly commence not later than this period.

Mr. J. E. Brown strips his wattles at about 6 years of age, but the exact period can only be decided by the cultivator's common sense. Mr. A. Bucknell mentions that wattle trees mature in seven years in the Majorca plantation, Ballarat. Mr. W. Ferguson of Victoria makes the general statement that none should be cut under five inches in diameter—a reasonable suggestion which might be enforced, on Crown lands, by legislature enactment.

Some people fell their wattles before stripping, and use the wood for fire-wood.

Bark-strippers as a rule leave about a third of the bark on the tree, besides leaving

\* An extravagant estimate, except for picked trees. Every third tree stripped.

† No fixed time, applicable to all parts of New South Wales and to varying seasons can be given. Farmers and others will have to find the best time from their own experience, supplemented, of course, by assays of bark stripped at various periods.

unsightly dead trees. It should also be borne in mind that dead and decaying trees are a source of danger to the plantation, owing to the harbour they give to insect pests. The matter of utilizing the bark on the twigs, &c., will be alluded to below.

(c.) *Export, Packing, &c.*

In regard to the preparation of bark for export, the following letter from a well-known London firm of brokers, which appeared in the *Leather Trades' Circular and Review* of the 8th March 1887, is valuable:—

"In reply to a question as to the best form in which to ship mimosa (wattle) bark, we beg to state that the trade, as a rule, prefer it ground, so long as they can be sure it is not adulterated. Some few, however, cannot be satisfied unless they grind it themselves. We should recommend shipments of well-ground, with a few parcels chopped or crushed in *bags*, but, as we know that freight is heavier on the latter, and buyers expect a reduction of from 10s to 20s a ton to cover cost of grinding, the former will generally be most satisfactory to shippers. We think that the strength is better preserved in the chopped than in the ground, but there is nothing we can suggest as an improvement on the best standard mark of Adelaide ground. If shipments of chopped be made it should on no account be shot loose in the ship's hold."

Barks are sent into commercial in one or more of four forms:—

1. In the bundle.
2. Chopped, i.e., into pieces a few inches in length.
3. Ground forming a substance something like "tow;" and
4. Powdered, that is of course, if the bark is not too fibrous to permit of this being done.

It is not desirable to push the process of grinding too far, as wattle-bark is no exception to the generality of powders, in forming "balls" when thrown into water when too finely ground.

BARBADOS RAINFALL FROM JANUARY TO DECEMBER, 1891.

NAME OF STATION.	Elevation Feet.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Totals.	
		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.
<b>I. DISTRICT A.</b>																											
St. Michael (Lowlands)																											
Lower Estate	237	14	2.82	12	4.00	1	1.13	8	1.05	9	1.49	13	12.27	17	5.85	23	8.45	11	3.12	30	11.97	20	8.59	13	4.80	161	64.57
Haggatt Hall	152	13	2.21	12	2.46	3	.95	8	.88	8	.87	11	11.30	16	4.78	20	6.21	13	2.74	22	11.62	21	7.74	8	2.05	155	53.69
Clapham	216	15	2.26	11	1.88	2	.32	4	.82	14	.88	15	6.40	23	3.94	19	3.36	13	3.86	9	9.24	19	7.88	11	1.55	165	42.48
Leans	320	10	2.34	8	3.25	1	1.10	4	.55	5	.68	14	11.42	11	3.92	18	7.26	11	3.21	15	10.89	15	9.00	8	5.17	136	59.39
Reservoir	191	6	1.34	8	2.44	2	1.02	4	.66	5	.64	11	9.90	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hazelwood	90	2	2.04	7	1.68	2	.98	4	.52	8	.73	14	4.30	10	4.30	11	4.87	..	..	15	11.22	17	6.38	5	1.62	103	46.28
Government House	97	9	1.86	8	2.33	2	.73	3	.41	5	.36	11	10.29	15	3.12	19	4.95	8	2.94	20	10.55	16	7.30	7	1.79	126	46.86
District A	17	17	1.56	16	2.27	1	1.02	9	.35	10	.85	14	9.13	20	3.75	25	6.27	15	3.34	23	11.16	24	6.32	11	1.63	158	42.90
Central Police Station	110	12	1.84	12	2.20	5	1.22	8	.69	13	.91	13	10.63	16	4.39	21	6.09	10	2.87	19	10.51	21	6.35	11	1.55	190	46.43
French Hall	223	10	1.78	10	2.86	1	.64	3	.38	4	.64	9	10.78	13	5.22	18	7.34	10	3.16	15	9.91	17	6.68	10	3.58	129	52.90
White Hall	70	11	1.36	9	1.18	3	1.53	6	.41	11	1.11	12	11.05	15	4.92	17	6.69	10	3.27	18	11.48	21	5.84	9	1.92	132	50.00
Grazetts	..	16	2.84	10	3.29	1	.98	1	.50	5	.75	14	11.59	19	5.26	20	8.50	11	2.70	17	10.36	16	9.10	10	4.49	140	59.46
Totals	..	135	23.75	123	29.34	26	8.76	73	7.38	118	10.45	166	131.66	207	55.88	235	76.92	137	36.35	223	129.27	229	87.30	114	32.17	1,786	628.78
Averages	..	11.25	1.98	10.25	2.44	2.00	.67	5.62	.57	9.08	.80	12.77	10.13	17.25	4.65	19.58	6.38	11.42	3.03	18.58	10.77	19.08	7.37	9.50	2.68	146.38	51.37
<b>II. DISTRICT B.</b>																											
St. Christ Church (Lowlands)																											
Woodbourne	150	10	2.72	1	1.72	1	1.87	1	.71	1	.61	1	9.75	1	4.92	1	5.96	1	2.84	1	7.06	1	8.14	1	4.39	21	50.59
Lowthers	220	9	2.15	8	1.80	1	.07	8	.90	7	.33	13	10.63	13	4.68	13	4.32	10	2.20	17	8.24	15	8.06	12	3.50	126	47.54
Seawell	254	12	1.98	4	1.76	1	1.10	4	.59	4	1.08	13	8.42	12	4.17	13	5.27	5	1.55	15	8.90	13	9.38	5	1.53	100	45.04
Fairy Valley	232	10	2.20	8	1.92	no	..	6	.59	11	..	17	9.64	17	4.21	19	4.95	6	1.72	17	11.22	17	8.08	11	2.20	141	47.42
Hannays	183	10	2.86	8	1.78	1	1.10	7	1.08	6	.81	11	11.47	11	5.15	17	6.19	12	3.32	18	8.20	18	8.24	11	3.08	133	52.47
Bentleys	169	13	3.60	5	2.69	1	.25	6	1.39	7	1.24	12	9.56	13	3.88	22	6.74	10	2.92	19	7.91	20	6.98	10	2.88	138	52.47
Seals	283	14	2.46	9	1.63	no	..	5	.59	8	1.37	14	10.33	14	3.88	14	4.89	8	2.52	20	10.08	15	8.39	12	3.02	189	50.71
Balls	270	14	2.44	13	1.47	..	..	5	.40	11	.89	15	8.25	17	3.94	18	5.50	9	2.16	20	13.48	20	7.95	7	1.70	149	49.18
Gilbous	195	10	2.25	10	2.19	..	..	7	.74	8	1.13	13	8.89	17	5.31	19	5.10	11	1.43	20	10.28	20	7.86	11	1.66	146	46.78
Lower Greys	..	14	2.05	9	2.19	1	.08	9	1.03	11	1.40	14	13.29	17	5.80	21	6.70	12	3.02	22	11.10	18	8.82	14	3.52	162	59.90
Nexton	..	17	3.10	13	1.87	1	.96	7	.74	13	1.12	15	9.75	19	3.90	19	5.21	10	2.31	19	11.75	19	9.16	11	2.49	163	51.46
Bridge	371	14	3.32	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bannatone	207	15	3.45	13	2.16	1	.02	9	.59	13	1.25	13	10.22	20	4.01	16	5.21	13	2.16	17	11.42	21	9.18	16	2.79	167	54.43
Maxwells	20	10	2.07	12	1.94	1	1.1	5	.85	12	1.2	12	10.65	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dover	8	1	1.92	12	2.31	7	3.6	5	.54	10	1.14	11	9.90	17	5.69	14	6.16	5	2.09	15	12.55	17	10.54	10	2.30	131	55.40
Amity Lodge	60	18	2.43	19	3.15	5	1.13	9	.71	15	1.59	16	8.31	25	5.05	24	5.91	19	4.35	24	11.49	17	10.96	17	1.90	206	56.68
Hopewell	..	13	1.69	10	1.81	3	.68	7	.80	7	.87	12	8.28	19	4.51	19	4.28	15	3.75	19	8.10	19	8.27	6	1.16	146	46.12
Hastings	..	11	1.65	11	2.23	2	2.45	6	.29	12	.73	14	6.64	19	4.28	15	3.75	10	2.58	19	10.50	19	8.27	6	1.16	146	46.12
Entrepise	..	1	1.50	1	2.23	2	.25	1	.70	1	.90	1	9.15	1	5.00	1	4.67	1	1.90	1	10.50	1	8.27	1	1.06	13	46.12
Fonsquare	..	..	..	..	..	..	..	..	..	..	..	..	11.69	13	4.81	13	5.44	9	2.61	13	7.82	14	7.63	7	3.69	86	49.35
Totals	..	232	45.53	165	36.44	28	6.63	107	13.33	159	19.10	229	185.86	272	84.41	259	91.91	151	41.48	282	170.11	265	147.23	164	42.92	2,314	887.55
Averages	..	11.60	2.43	9.22	2.92	1.87	.31	5.93	.74	8.83	1.06	12.05	9.78	15.11	4.69	15.24	5.41	9.00	3.44	16.59	10.06	15.59	8.66	9.65	2.92	120.24	50.15
<b>St. George (Highlands)</b>																											
Drax Hall	631	17	4.01	15	2.50	3	.88	9	1.50	12	.92	14	10.74	16	5.81	20	8.18	12	3.42	21	8.94	19	7.84	10	4.51	168	60.85
Mount	539	13	4.08	10	2.97	1	.83	1	.42	1	1.30	14	11.33	16	7.61	16	8.21	9	5.02	24	9.64	20	9.71	..	..	135	61.12
Carried forward	..	30	8.09	25	5.47	4	1.71	10	1.92	13	2.22	28	22.07	32	13.42	36	16.39	21	10.44	45	18.18	39	17.55	10	4.51	233	121.97

BARRADOS RAINFALL FROM JANUARY TO DECEMBER 1891.

NAME OF STATION	January		February		March		April		May		June		July		August		September		October		November		December		Totals		
	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	
Brought Forward.....	30	8.09	25	5.47	4	1.71	10	1.92	13	2.22	28	22.07	32	13.42	36	16.39	21	10.44	45	18.18	39	17.55	10	4.51	239	121.97	
Leon Arber.....	9	3.73	8	2.99	1	.87	5	2.55	6	1.91	10	13.33	8	7.01	12	9.16	8	2.87	16	8.26	12	8.33	7	4.06	102	65.87	
Asbury.....	19	3.98	17	3.02	4	1.54	14	2.23	15	1.73	16	10.46	20	6.73	19	8.72	12	3.74	22	7.73	22	9.23	10	3.77	130	61.88	
Fair View.....	15	4.12	19	3.25	5	4.0	11	1.70	17	1.54	16	10.91	23	6.21	22	8.43	14	3.38	22	6.46	22	10.41	16	5.46	206	62.57	
Cottage.....	17	4.06	17	3.36	3	1.3	13	1.46	16	1.96	19	13.29	26	7.34	25	9.36	15	3.05	20	6.53	24	12.19	15	4.40	210	67.17	
Grove.....	19	4.63	16	4.37	6	3.4	13	1.65	14	2.19	14	13.56	19	9.33	15	9.30	15	3.42	22	7.07	25	12.13	12	5.22	191	73.81	
Moonshine.....	14	3.42	12	3.49	2	.20	18	1.00	12	1.66	16	11.33	16	5.21	21	8.51	11	3.80	20	9.47	20	11.08	17	3.84	165	61.67	
Golden Ridge.....	17	4.09	17	3.55	2	.20	8	1.40	13	2.20	18	12.98	24	8.88	21	9.51	14	2.41	24	7.28	23	11.08	17	4.81	198	68.89	
Hope.....	15	3.31	12	4.02	2	.29	7	1.08	9	1.09	16	13.08	15	7.38	20	9.61	7	3.25	18	7.52	19	11.47	7	4.06	147	66.06	
Totals.....	159	39.43	143	33.32	27	5.52	92	14.99	115	16.50	183	121.01	183	71.51	192	88.97	117	35.46	209	79.10	206	84.77	106	40.73	1,702	649.09	
Average.....	15.90	3.94	14.30	3.35	3.00	.61	9.20	1.50	11.50	1.65	15.30	12.10	18.30	7.15	19.20	8.97	11.70	3.53	20.90	7.91	20.60	10.23	11.78	4.53	171.68	56.82	
b. St. George, (Lowlands.)	21	2.96	18	2.88	6	.32	9	1.09	17	1.63	22	12.04	25	5.08	23	5.79	12	3.31	25	11.10	22	9.88	17	3.55	217	59.61	
District B.....	15	2.68	17	3.18	4	.37	9	1.35	8	1.32	15	12.88	13	5.29	17	7.33	11	5.68	16	8.60	20	11.29	12	4.13	135	59.90	
Carmichael.....	16	2.02	17	3.18	4	.37	9	1.35	8	1.32	15	12.88	13	5.29	17	7.33	11	5.68	16	8.60	20	11.29	12	4.13	135	59.90	
Constant Valley.....	11	2.45	18	3.84	6	.32	5	.55	14	1.29	12	13.79	14	6.54	20	8.73	9	5.77	17	12.68	...	...	...	...	...	125	56.96
Totals.....	63	10.14	53	9.35	16	1.51	31	3.88	54	5.81	63	51.28	72	22.53	83	29.19	45	20.75	78	41.32	64	30.95	41	12.24	663	238.95	
Average.....	15.75	2.53	17.67	3.12	3.00	.30	7.75	.97	13.50	1.45	15.75	12.82	18.00	5.63	20.75	7.29	11.25	5.19	19.50	10.33	21.33	10.31	13.67	4.08	180.25	64.22	
III. Distracter C. a. St. Philip, (Highlands.)	18	3.18	13	1.89	2	.26	10	1.64	12	8.7	14	9.27	18	5.23	19	8.71	15	3.76	15	8.04	17	9.12	11	4.82	145	48.08	
District C.....	16	3.65	10	2.03	3	.34	10	2.03	14	1.49	14	11.27	19	6.65	19	8.71	15	4.78	22	7.84	1	8.26	16	5.86	153	62.41	
Children.....	19	3.02	10	2.19	4	.30	8	1.06	2	1.02	16	9.43	16	5.00	21	7.67	...	...	...	...	18	7.70	16	5.12	162	49.75	
Hill View.....	53	9.85	33	6.11	9	.90	28	4.73	38	3.38	44	29.97	53	17.48	40	16.38	30	8.54	59	22.52	36	25.08	43	15.30	466	160.24	
Totals.....	17.67	3.28	11.00	2.04	3.00	.30	9.33	1.38	12.67	1.13	14.67	9.99	17.67	5.83	20.00	8.19	15.00	4.27	19.67	7.51	12.00	8.36	14.53	5.10	167.01	57.58	
Average.....	12	2.00	7	1.49	1	.33	6	.71	5	.30	12	8.62	15	4.92	18	6.50	13	3.23	16	9.09	16	7.11	8	3.35	130	47.74	
a. St. Philip Lowlands.	14	1.69	9	1.36	4	.39	5	.49	9	.69	11	8.67	17	5.33	19	6.39	22	2.86	17	8.35	21	8.19	8	2.90	157	47.51	
Bayleys.....	13	2.34	9	1.64	4	.81	5	.98	10	1.00	14	9.51	17	5.68	19	7.15	14	4.08	21	9.14	17	8.25	8	3.47	156	54.05	
Mapps.....	12	2.46	11	1.50	3	.55	6	.70	7	.81	13	10.32	18	6.04	21	7.37	13	3.89	20	10.29	16	10.34	9	4.03	149	58.92	
Golden Grove.....	13	2.51	12	1.46	3	.76	7	.98	11	1.16	15	9.84	21	5.84	19	7.11	12	3.04	18	7.02	18	8.17	11	3.84	156	52.42	
Wiltshires.....	15	2.50	12	1.94	2	.17	12	.93	12	.98	14	10.51	20	5.79	19	7.07	14	2.58	21	6.62	16	10.48	7	3.26	140	54.16	
Three Houses.....	12	2.24	4	2.10	1	.85	11	1.14	6	.80	11	9.93	16	5.80	17	7.68	12	3.62	16	7.62	17	10.48	7	3.84	148	52.66	
Sandy Hill.....	15	2.19	9	1.47	4	.73	8	1.25	9	1.01	14	10.22	18	5.91	20	7.63	14	3.49	18	10.43	14	10.43	16	10.66	122	58.26	
Kirton.....	14	2.44	12	1.77	3	.73	8	1.25	9	1.01	14	10.22	18	5.91	20	7.63	14	3.49	18	10.43	14	10.43	16	10.66	148	52.66	
Palmers.....	12	2.57	7	1.78	1	.63	9	.82	9	.67	15	9.71	13	5.53	21	7.84	12	3.66	21	8.54	20	9.01	13	3.83	122	58.26	
Thatched.....	16	2.37	11	1.30	6	.68	9	.82	9	.67	15	9.71	13	5.53	21	7.84	12	3.66	21	8.54	20	9.01	13	3.83	131	47.36	
Busby Park.....	14	1.95	6	1.30	1	.08	5	.70	12	1.20	16	10.40	17	4.35	19	8.29	12	3.66	21	8.54	20	9.01	13	3.83	172	53.37	
Congo Road.....	10	2.28	13	2.00	2	.06	8	.96	13	.91	14	9.19	17	5.80	21	7.18	14	4.13	22	9.16	17	8.62	14	3.76	176	53.97	
Seahouse Grove.....	16	2.42	14	1.57	5	.76	8	.96	13	.91	14	9.19	17	5.80	21	7.18	14	4.13	22	9.16	17	8.62	14	3.76	186	51.98	
Oughtersons.....	20	3.15	13	2.16	3	.16	7	.72	11	1.35	18	9.43	22	5.09	23	7.63	13	4.22	23	7.97	22	7.86	11	2.73	159	52.81	
Dodds.....	14	3.15	9	2.16	3	.16	7	.72	11	1.35	18	9.43	22	5.09	23	7.63	13	4.22	23	7.97	22	7.86	11	2.73	159	52.81	
Sunbury.....	14	3.15	9	2.16	3	.16	7	.72	11	1.35	18	9.43	22	5.09	23	7.63	13	4.22	23	7.97	22	7.86	11	2.73	159	52.81	
Carringtons.....	8	2.17	6	1.25	1	.06	7	.81	4	.61	13	8.54	15	5.64	18	7.06	10	4.13	20	6.04	18	6.80	11	3.08	131	46.06	
Hampton.....	10	2.17	6	1.25	1	.06	7	.81	4	.61	13	8.54	15	5.64	18	7.06	10	4.13	20	6.04	18	6.80	11	3.08	131	46.06	
Carringtons.....	22	3.02	12	2.53	3	.20	10	1.35	14	2.10	16	13.15	22	6.54	20	7.74	16	3.55	24	8.12	23	7.92	12	4.69	109	51.92	
Chapel.....	22	3.02	12	2.53	3	.20	10	1.35	14	2.10	16	13.15	22	6.54	20	7.74	16	3.55	24	8.12	23	7.92	12	4.69	109	51.92	
Halton.....	20	2.74	16	2.17	5	.23	13	1.23	12	1.11	17	8.97	17	8.97	20	6.76	20	6.76	24	8.12	18	8.72	13	3.98	206	82.77	
Edgcombe.....	13	2.58	8	2.28	1	.90	6	1.25	9	1.18	15	10.03	16	5.39	20	6.76	20	6.76	24	8.12	18	8.72	13	3.98	162	50.97	
Harrow.....	16	2.61	12	1.81	4	.29	11	.95	11	.95	14	9.49	18	4.49	18	7.95	11	3.73	23	7.35	18	8.01	11	3.56	167	50.97	
Fonsquare.....	7	2.16	9	2.15	4	.66	4	.66	2	.23	10	9.43	...	...	...	...	...	...	...	...	...	...	...	...	...	32	14.63
Totals.....	336	56.33	243	43.27	67	8.19	178	21.13	217	22.56	314	224.40															

BARBADOS RAINFALL FROM JANUARY TO DECEMBER 1891.

NAME OF STATION.	Elevation Feet.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Totals.			
		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.
b. St. John (Highlands.)		16	2.95	11	2.07	4	1.13	8	1.20	14	1.04	6	10.35	21	6.60	12	11.30	16	3.63	19	7.32	23	11.84	18	4.77	144	49.88		
Stewart's Hill.....	580	17	3.32	10	1.94	3	4.8	3	1.50	5	1.16	11	10.35	22	6.91	12	11.30	16	3.63	19	7.32	23	11.84	18	4.77	156	56.49		
Montereffe.....	582	15	2.82	13	2.42	2	6.0	1	1.31	8	9.5	11	11.23	16	6.96	21	9.12	16	4.26	18	6.77	25	9.96	10	4.46	108	60.86		
Society.....	583	21	3.02	15	1.90	5	7.6	13	1.42	17	1.32	17	10.86	23	6.59	27	9.03	18	4.40	24	6.71	23	8.96	17	4.27	224	59.25		
Gunn.....	584	19	4.03	19	2.09	5	7.6	13	2.18	15	1.94	14	10.95	20	6.84	23	9.14	14	4.66	22	7.68	23	8.96	14	4.70	201	63.93		
Cliff.....	584	15	4.38	14	3.37	4	8.0	11	1.71	8	2.0	12	15.03	16	9.99	19	10.49	14	4.29	20	8.94	24	12.77	12	6.26	169	73.53		
Colleton.....	584	15	4.38	14	3.37	4	8.0	11	1.71	8	2.0	12	15.03	16	9.99	19	10.49	14	4.29	20	8.94	24	12.77	12	6.26	169	73.53		
Ashford.....	606	18	3.46	16	2.82	4	1.00	11	1.55	13	1.23	12	12.97	18	7.86	23	8.94	14	3.71	21	10.01	12	4.41	181	64.60				
Pool.....	716	18	3.95	17	3.35	5	7.3	11	1.71	13	1.23	12	12.97	18	7.86	23	8.94	14	3.71	21	10.01	12	4.41	181	64.60				
Kemall.....	544	20	3.54	13	2.63	5	1.05	13	2.17	15	1.15	14	14.29	22	9.39	18	9.69	14	3.75	23	9.07	23	12.02	11	6.04	162	76.81		
Revanston.....	521	15	3.54	13	2.63	5	1.05	13	2.17	15	1.15	14	14.29	22	9.39	18	9.69	14	3.75	23	9.07	23	12.02	11	6.04	162	76.81		
Hewley.....	553	17	4.38	9	2.47	4	9.4	11	1.67	13	1.91	16	10.65	22	9.29	20	10.89	14	4.55	22	9.52	23	10.74	13	6.25	191	75.81		
Todd.....	641	16	3.85	19	2.94	4	9.4	11	1.67	13	1.91	16	10.65	22	9.29	20	10.89	14	4.55	22	9.52	23	10.74	13	6.25	191	75.81		
Clifton Hall.....	702	13	2.61	11	2.55	3	2.2	13	1.72	16	2.07	15	18.27	21	9.40	25	10.01	16	4.12	21	9.48	22	10.48	14	4.86	170	65.42		
Hochersal.....	742	13	3.32	11	3.29	3	2.2	13	1.72	16	2.07	15	18.27	21	9.40	25	10.01	16	4.12	21	9.48	22	10.48	14	4.86	170	65.42		
Haynesfield.....	707	22	3.84	19	3.80	13	7.7	21	2.88	24	2.96	24	11.27	26	9.93	23	10.65	22	5.34	25	9.85	22	12.78	15	4.83	170	69.60		
Claybury.....	750	10	3.71	10	2.69	1	7.5	13	3.11	13	2.12	19	11.91	19	8.43	17	9.89	13	3.24	23	10.13	22	11.80	15	4.57	169	72.15		
Total.....		202	57.05	223	44.29	67	11.99	194	30.78	208	24.62	1218	179.65	287	126.03	301	141.53	226	61.17	325	126.76	338	162.91	198	73.27	2857	1040.07		
Average.....		16.37	3.37	13.94	2.77	4.19	7.5	12.12	1.92	13.00	1.54	8.62	11.23	19.80	8.40	20.07	9.44	15.07	4.08	21.67	8.45	22.53	10.86	13.20	4.88	185.58	67.89		
b. St. John (Lowlands)																													
Codrington College.....		9	2.85	7	1.70	2	2.1	12	1.17	10	7.6	10	11.47	19	7.29	17	7.42	11	4.06	18	7.00	16	13.87	10	3.67	141	61.47		
College.....		12	2.54	8	1.80	2	1.5	8	7.3	6	3.2	10	9.64	13	5.65	14	7.67	11	3.45	17	7.15	17	13.90	5	2.88	133	54.91		
Newcastle.....	338	17	2.54	14	2.24	3	1.9	11	1.12	13	10.05	...	...	18	9.95	21	8.31	9	2.45	20	9.40	22	12.90	13	5.46	161	64.62		
Total.....		38	7.93	29	5.74	7	5.5	31	3.02	29	11.14	20	21.11	50	22.89	52	33.40	31	9.99	55	33.55	55	39.67	28	12.01	425	181.0		
Average.....		12.67	2.64	9.67	1.91	2.33	1.8	10.33	1.01	9.67	3.71	10.30	10.55	16.67	7.63	17.33	7.80	10.33	3.33	18.33	7.85	13.22	9.33	4.00	144.39	63.830			
IV. District D																													
a. St. Thomas (Highlands)																													
Mount Wilton.....	987	15	4.00	11	3.79	2	6.2	12	2.59	9	1.49	9	14.31	15	10.50	15	8.14	12	4.34	28	13.88	20	13.22	19	5.18	155	80.56		
Bloonsbury.....	1035	17	5.29	17	5.39	7	1.7	17	2.72	17	2.00	11	15.37	22	10.75	20	9.63	17	4.52	27	12.42	24	14.84	13	4.77	209	88.87		
Sarges.....	905	17	5.41	18	4.98	4	1.14	15	2.53	19	1.64	19	15.21	25	10.53	26	8.38	15	5.48	26	12.51	23	15.43	16	4.59	233	88.02		
Westwood.....	1002	21	5.45	18	5.64	8	1.35	14	2.80	18	2.24	17	15.07	24	10.52	22	9.09	18	5.65	29	12.13	23	14.69	16	5.66	215	90.90		
Lion Castle.....	990	17	5.65	19	5.41	5	5.3	11	2.21	17	1.78	19	15.12	27	9.48	25	8.84	16	6.34	27	11.13	24	15.22	18	5.22	225	80.38		
Canefield.....	1024	14	5.22	16	5.11	1	3.9	13	2.20	12	1.57	11	13.55	21	8.86	21	8.27	17	6.85	25	10.43	20	14.34	10	4.08	181	80.92		
Dunscombe.....	850	18	7.19	18	7.29	6	4.8	14	2.92	18	2.39	16	12.87	23	10.94	25	8.59	17	7.33	23	12.06	16	17.40	10	4.82	202	93.96		
Farmers.....	903	13	6.18	10	4.69	2	2.9	8	1.48	9	2.25	15	12.79	17	11.46	13	8.39	12	4.93	23	12.06	16	17.18	10	3.90	185	86.24		
Dukes.....	817	17	4.39	11	4.56	2	2.5	11	2.08	12	1.35	15	12.79	24	7.81	19	7.35	16	6.55	21	9.84	22	12.96	15	4.54	93	32.63		
Vanchise.....	731	15	3.68	13	3.93	3	1.1	12	2.14	14	1.45	13	13.59	22	7.73	27	9.48	15	8.09	23	11.05	21	16.90	17	4.72	219	85.59		
District D.....	678	21	4.66	17	5.09	5	3.9	15	2.16	17	1.72	16	14.26	21	12.42	18	6.34	13	5.73	18	7.27	20	13.05	18	4.08	99	80.11		
Lewis.....	747	15	5.44	17	6.68	4	5.4	12	2.11	16	2.07	16	14.26	18	6.34	13	5.73	17	5.50	16	13.10	24	13.95	17	5.18	231	88.06		
Grand View.....	747	15	5.44	17	6.68	4	5.4	12	2.11	16	2.07	16	14.26	18	6.34	13	5.73	17	5.50	16	13.10	24	13.95	17	5.18	231	88.06		
Aysford.....	...	13	4.78	20	4.66	6	7.1	15	2.85	18	1.76	19	15.85	23	9.35	23	10.37	17	5.50	16	13.10	24	13.95	17	5.18	231	88.06		
Total.....		218	66.74	205	67.13	55	8.17	170	30.89	196	23.71	163	186.34	310	133.32	370	111.10	188	75.71	307	145.91	271	187.71	181	60.23	561	1099.05		
Averages.....		16.77	5.13	15.77	3.16	4.23	6.3	13.08	2.38	15.08	1.82	14.85	14.33	22.14	9.67	20.77	8.55	14.46	5.82	23.62	11.22	20.85	14.44	13.92	4.63	195.54	88.78		
a. St. Thomas (Lowlands.)																													
Fisher Pond.....	725	16	4.29	11	3.17	...	...	9	2.15	8	1.70	12	16.11	15	11.74	16	7.72	8	3.74	23	12.79	20	15.48	12	4.64	96	57.88		
Bushy Park.....	700	21	5.36	16	4.00	3	3.9	13	2.65	11	1.78	13	14.12	18	9.75	18	10.50	8	2.73	23	12.79	20	15.48	12	4.64	171	80.02		
Oliver Branch.....	680	9	4.93	11	4.65	6	6.0	13	2.26	20	2																		

BARRADOS RAINFALL JANUARY TO DECEMBER 1891.

NAME OF STATION.	Elevation Feet.	January		February		March		April		May		June		July		August		September		October		November		December		Totals.		
		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.	
Brought forward.....	...	65	20.27	52	16.64	12	1.22	50	9.11	57	7.73	59	55.91	76	42.65	49	23.26	37	11.70	65	35.51	88	50.55	44	15.11	654	244.66	
Clifton.....	756	15	4.12	8	3.47	2	.21	7	1.44	9	1.23	15	15.62	24	10.47	18	10.54	10	3.04	24	10.39	21	14.02	14	5.02	167	82.27	
Strong Hope.....	580	...	5.03	...	3.89	...	.53	...	2.19	...	1.64	...	14.67	24	9.05	15	9.09	9	3.58	...	11.18	19	12.82	10	5.38	59	79.05	
Walks.....	670	20	4.54	11	3.37	2	.15	10	2.08	12	1.43	14	14.27	22	9.14	20	9.54	9	4.46	24	12.76	21	12.90	13	4.01	163	74.84	
Hopewell.....	534	19	5.21	14	3.89	...	...	12	2.06	15	1.51	16	13.78	28	8.52	21	8.80	13	4.52	...	11.06	21	11.50	13	4.01	184	74.81	
Cane Garden.....	360	19	3.37	16	4.37	1	.20	9	1.14	13	1.33	18	11.64	...	...	...	...	...	...	...	...	...	...	...	...	78	22.81	
Edgill.....	453	18	3.81	16	4.50	...	...	9	1.23	12	1.34	13	10.39	16	7.17	16	7.66	8	2.66	...	9.87	19	8.44	13	3.35	139	61.37	
McBrose.....	398	21	3.64	23	4.86	3	.08	14	1.21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	60	9.79	
Welchse.....	350	21	3.78	18	4.68	3	.15	13	1.04	15	1.22	18	10.87	20	6.90	15	7.46	13	3.06	...	7.83	19	7.27	13	2.74	188	56.00	
Bennetts.....	350	21	4.66	22	5.38	5	.50	13	1.73	18	1.52	22	13.44	29	10.08	21	9.12	17	3.13	24	9.50	23	11.02	19	5.09	234	75.17	
Bugatelle.....	...	16	3.08	14	3.63	1	.06	9	.90	8	1.04	16	12.79	23	7.08	19	7.28	10	2.00	20	8.33	19	8.12	12	4.14	167	58.65	
Total.....	...	235	61.51	194	59.42	28	3.10	146	24.18	161	20.35	191	173.93	262	111.06	194	97.81	126	37.15	240	119.33	270	136.64	138	45.34	21.63	889.72	
Average.....	...	18.08	4.39	14.92	4.24	2.33	.24	11.23	1.73	13.42	1.56	15.92	13.88	23.50	9.25	17.64	8.89	10.50	3.09	10.82	21.82	10.85	20.83	11.38	13.80	4.33	183.99	73.19
b. St. James. (Highlands)	860	14	5.34	2	3.21	3	.50	11	1.66	8	1.70	10	12.24	18	9.95	11	6.56	8	2.02	24	10.54	19	16.50	11	3.63	139	73.85	
Spring Head.....	...	1	7.25	14	5.45	1	.25	7	1.50	12	2.65	12	14.80	19	14.05	18	9.50	11	4.38	24	12.85	18	16.05	12	3.80	149	92.73	
Apes Hill.....	684	15	7.43	4	5.93	3	.82	12	1.96	9	1.20	13	9.60	18	11.35	16	8.21	12	4.48	25	11.69	19	15.15	15	3.99	161	82.43	
Taites.....	618	16	5.37	18	4.27	3	1.05	11	1.39	10	1.29	15	12.05	23	9.27	17	7.07	10	4.22	26	10.60	19	11.67	9	2.59	177	70.84	
Total.....	...	46	25.39	38	18.86	10	2.62	41	6.51	39	6.84	50	49.01	78	44.62	62	31.34	41	15.30	99	45.63	75	59.37	47	14.01	626	319.55	
Average.....	...	11.50	6.35	9.50	4.71	2.50	.65	10.25	1.63	9.75	1.71	12.50	12.23	19.50	11.15	16.50	7.83	10.25	3.82	24.75	11.42	18.75	14.84	11.75	3.50	136.50	79.89	
b. St. James. (Lowlands)	...	10	4.68	12	4.89	1	.04	9	1.96	8	.99	13	11.87	23	8.98	22	7.67	13	4.18	30	9.35	19	11.31	12	2.35	162	68.77	
Blowers.....	413	13	5.64	13	5.56	3	.27	10	2.12	6	1.91	13	12.73	20	11.27	21	8.71	11	4.65	21	9.58	15	12.00	...	...	146	74.44	
Leicester.....	...	15	5.58	14	4.05	1	.04	8	.91	8	.43	17	11.19	19	7.25	17	7.51	6	.93	18	7.46	22	7.44	15	4.54	160	52.98	
Westmoreland.....	332	12	5.58	9	3.79	3	.76	5	1.03	10	1.24	9	10.67	17	9.62	18	5.64	11	6.63	25	9.17	20	11.03	12	2.84	151	67.89	
Carlton.....	130	15	4.39	19	4.52	...	...	14	.98	16	1.37	15	11.32	25	10.45	19	6.83	14	10.51	26	11.24	17	11.21	11	2.40	191	75.29	
Trents.....	198	15	3.82	15	5.06	3	.17	4	1.32	6	.75	14	9.91	25	7.52	20	7.67	16	2.93	23	8.00	12	7.13	10	2.46	166	57.63	
Mount Standfast.....	...	14	4.47	15	4.05	2	.22	7	1.35	9	1.27	14	10.67	21	9.65	13	6.55	5	3.67	17	9.89	12	9.56	8	2.15	137	64.87	
Porters.....	...	14	3.89	10	5.02	3	.20	6	.83	5	.78	10	9.41	22	8.88	16	7.22	7	2.66	22	10.06	13	8.96	...	...	133	57.31	
Holtown Police Station	...	16	3.65	16	4.03	3	.10	9	.98	7	.30	13	9.40	22	7.38	19	7.35	9	2.43	32	9.03	18	7.50	10	2.37	164	54.67	
Total.....	...	124	38.65	126	40.97	19	1.37	72	11.58	75	9.04	118	97.37	194	80.90	165	65.15	92	38.55	194	88.78	153	86.74	78	19.81	1440	573.81	
Average.....	...	13.78	4.29	14.00	4.55	2.37	.23	8.00	1.29	8.33	1.00	13.11	10.82	21.56	8.99	13.33	7.24	10.22	4.28	24.66	9.31	17.00	9.57	11.14	2.83	159.40	64.40	
V. District E. a. St. Peter. (Highlands)	824	12	3.10	12	2.34	4	.83	12	1.63	6	1.09	14	9.65	16	6.02	15	6.47	7	2.49	18	8.08	21	11.76	8	2.55	145	55.51	
Nicholas Abbey.....	...	12	2.10	12	2.34	4	.83	12	1.63	6	1.09	14	9.65	16	6.02	15	6.47	7	2.49	18	8.08	21	11.76	8	2.55	145	55.51	
Carried forward.....	...	12	2.10	12	2.34	4	.83	12	1.63	6	1.09	14	9.65	16	6.02	15	6.47	7	2.49	18	8.08	21	11.76	8	2.55	145	55.51	

BARRADOS RAINFALL FROM JANUARY TO DECEMBER 1891.

NAME OF STATION.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Totals.	
	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.
	Feet.																									
Brought forward.....	12	2.10	12	2.34	4	.83	12	1.63	6	1.09	14	9.65	16	6.02	15	6.47	7	2.89	18	8.08	21	11.76	8	2.55	145	25.51
Oxford.....	14	2.17	13	3.35	4	1.42	9	1.59	6	.67	13	11.25	20	5.91	20	6.93	11	2.43	21	11.47	18	10.90	14	3.65	165	61.77
Orange Hill.....	15	2.16	10	2.78	5	1.33	15	2.15	6	.57	11	10.79	19	7.10	18	6.32	10	1.95	20	9.92	21	10.86	10	2.81	160	58.81
Rock Hall.....	14	4.89	13	5.24	4	1.20	9	2.95	10	1.35	12	17.26	17	10.46	22	9.99	12	2.47	20	11.25	22	17.23	13	4.06	168	88.39
Mangrove.....	16	3.96	12	2.97	7	1.25	12	2.08	15	1.69	15	10.93	19	7.64	22	8.97	11	2.60	24	11.54	29	13.29	14	3.00	187	69.92
Black Bess.....	10	3.73	...	...	3	.95	6	1.50	4	1.37	12	11.19	11	7.77	14	6.59	7	3.47	15	12.33	15	10.80	7	2.73	104	62.48
Total.....	81	19.06	60	16.68	27	6.98	63	11.90	47	6.74	79	71.07	102	44.30	111	45.30	58	15.91	118	64.70	117	74.84	66	18.80	929	336.88
Average.....	13.50	3.18	12.00	3.34	4.50	1.16	10.50	1.98	7.83	1.12	13.17	11.84	17.00	7.48	18.50	7.55	9.67	2.63	19.67	10.78	19.50	12.47	11.00	3.13	154.83	66.15
a. St. Peter (Lowlands) Whitehall.....	13	2.45	16	3.14	6	1.94	14	2.80	7	.63	12	9.46	18	6.45	17	6.06	9	1.75	19	10.73	17	12.81	9	2.54	157	60.76
Alleynevale.....	9	1.68	10	3.11	3	1.03	6	1.51	5	.56	13	10.11	13	5.54	15	5.01	11	2.39	22	16.00	18	14.49	8	1.69	133	63.85
Bakers.....	11	3.70	11	3.64	2	.88	4	1.50	4	1.50	13	9.14	15	7.00	18	6.94	8	3.70	18	11.34	15	10.50	6	2.28	125	62.45
Maynards.....	11	1.77	17	3.39	5	1.25	12	1.84	9	1.11	14	9.37	18	6.06	14	5.30	13	1.91	21	14.15	19	13.22	11	2.60	164	62.47
District E.....	14	2.24	16	3.05	8	.73	14	1.96	13	.75	16	9.23	22	6.40	20	6.28	13	2.43	26	15.57	20	15.40	12	2.56	194	66.60
Ashton Hall.....	10	1.12	13	2.18	...	...	10	2.05	6	.77	11	8.97	18	6.39	15	5.60	14	2.99	19	13.84	15	19.69	6	1.74	137	65.34
Six Mens.....	12	2.00	20	4.04	6	1.54	14	1.92	8	.98	16	10.44	21	5.99	16	5.87	13	2.63	21	12.16	23	13.62	10	2.00	180	61.69
Heywoods.....	10	1.38	12	2.65	5	.61	10	2.18	8	.71	12	8.34	19	5.54	17	5.68	9	2.08	18	15.00	16	15.88	9	2.05	145	62.10
Gibbes.....	11	2.33	10	3.42	3	.36	8	.80	10	1.59	15	10.92	15	8.21	13	5.61	13	6.92	18	10.25	12	10.10	6	2.36	127	65.57
Total.....	101	19.20	125	28.62	38	9.21	92	16.56	70	8.60	122	86.78	139	56.48	145	52.38	96	38.40	182	119.04	155	123.71	77	19.82	1362	570.83
Average.....	11.22	3.47	13.89	3.18	4.75	1.15	10.22	1.84	7.78	.96	13.56	9.64	17.67	6.28	16.11	5.82	10.67	3.16	20.22	13.23	17.23	13.97	8.56	2.20	151.33	63.43
b. St. Lucy (Lowlands) Lamberts.....	15	1.55	15	2.72	4	.84	10	1.63	10	1.13	14	8.80	15	5.61	20	7.41	9	1.80	24	7.83	22	9.83	12	2.69	170	51.34
Mount Gay.....	17	1.90	15	3.50	3	.96	8	1.47	8	1.17	11	12.43	11	8.96	19	8.45	13	1.70	19	11.30	16	12.15	9	2.97	149	66.96
Picketings.....	16	2.10	15	3.57	4	.84	11	1.75	10	1.56	12	12.37	12	9.96	21	9.27	9	1.70	22	11.50	19	12.16	10	2.79	161	69.57
Spring Hall.....	7	.99	11	2.33	4	.86	14	2.10	7	1.22	12	9.48	...	...	13	8.19	9	1.75	24	10.96	18	11.23	13	2.57	132	51.48
Hope.....	15	1.80	18	3.43	4	.82	11	2.31	11	1.40	13	9.21	19	7.08	23	6.25	10	2.35	20	11.99	19	13.63	10	2.81	173	63.27
Husbands.....	10	1.63	9	3.08	4	1.73	4	1.80	10	1.41	11	10.32	11	7.07	...	...	...	...	...	...	...	...	...	...	59	27.04
Harrisons.....	18	2.01	15	2.52	9	2.67	11	1.89	10	.97	11	9.17	18	6.47	21	5.88	12	2.24	19	9.95	17	11.35	9	1.76	170	56.88
Checker Hall.....	12	1.60	17	4.30	8	1.18	8	1.41	7	.98	13	9.99	13	7.16	15	6.03	10	1.98	20	16.06	15	14.34	7	2.17	145	67.20
Lowlands.....	...	...	12	2.16	3	.37	8	.98	6	.92	9	8.58	13	5.02	16	7.40	7	1.38	17	7.92	10	10.70	8	3.63	109	49.35
Total.....	110	13.77	127	27.61	43	9.77	85	15.34	79	10.76	106	90.35	112	57.33	148	58.97	79	15.10	165	87.51	136	95.39	78	21.10	1268	503.09
Average.....	13.75	1.72	11.11	3.07	4.78	1.09	9.44	1.70	8.78	1.20	11.78	10.04	14.00	7.17	18.50	7.37	9.87	1.89	20.62	10.94	17.00	11.92	9.75	2.65	140.89	55.90

BARRADOS RAINFALL FROM JANUARY TO DECEMBER, 1891.

NAME OF STATION	Elevation	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Totals.		
		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.	
<b>DISTRICT F</b>																												
<i>a</i> St. Joseph																												
(Highlands)																												
Malvern	900	15	4.32	16	3.98	4	.49	14	2.06	14	1.54	11	12.37	19	9.63	15	8.15	10	4.17	21	10.30	19	15.88	11	4.54	172	75.78	
Baldwin	...	17	5.19	9	3.67	3	.70	12	2.73	12	1.88	14	11.66	18	10.61	21	9.51	9	3.88	25	10.24	23	13.73	8	3.00	171	76.30	
Sultram	...	15	4.09	16	4.14	10	1.97	14	1.97	14	1.97	12	12.66	15	9.37	15	9.37	10	3.61	22	9.76	23	13.90	11	4.33	184	75.57	
Little Island	1030	21	4.59	20	4.40	8	.85	15	2.58	21	1.56	18	14.28	20	10.61	22	8.90	12	3.65	27	11.84	22	12.46	17	4.68	222	80.00	
Blackmans	910	18	4.69	20	4.40	8	.90	17	3.30	21	1.87	17	14.35	23	10.30	22	8.90	14	3.66	25	10.35	21	12.63	14	4.76	234	60.18	
Blackmans House	960	22	4.92	22	4.34	5	.91	17	2.94	21	1.87	19	13.91	24	10.31	24	9.51	14	3.47	26	11.06	23	12.36	13	4.99	230	31.29	
Castle Grant	1079	20	3.80	16	3.84	6	.80	15	2.32	9	1.11	11	12.74	19	10.25	18	8.11	10	3.29	25	11.48	25	11.27	10	3.69	182	72.70	
Andrews	780	22	5.35	15	3.89	3	.69	15	2.93	20	2.25	17	13.69	26	11.17	21	9.98	12	2.79	23	11.20	23	13.50	17	4.20	214	83.64	
Clement Rocks	1010	14	4.45	14	4.52	3	.69	14	2.77	14	1.69	14	13.11	21	10.31	16	9.48	12	2.79	22	11.71	19	12.12	16	4.85	163	74.36	
Lammings	...	14	4.8	12	4.27	3	.74	12	2.41	14	1.80	13	13.33	19	11.22	21	8.69	13	3.80	24	12.76	21	13.09	16	4.85	182	81.82	
Restraet	...	21	5.16	5	3.16	5	.71	16	3.50	17	2.28	14	14.54	19	11.22	19	11.06	12	2.73	23	11.53	21	13.39	15	4.95	200	85.22	
Total	...	193	66.57	178	60.46	47	7.45	159	29.51	177	111.82	168	1462.24	249	1466.24	214	1632.24	138	1041.86	269	132.25	265	143.44	143	43.39	2144	838.76	
Average	...	1810	4.02	1627	4.22	470	7.5	1410	2.68	1610	1.80	1436	13.57	2027	10.61	1945	9.30	1164	3.85	2418	11.11	2210	13.04	1350	4.40	19477	79.45	
<i>a</i> St. Joseph																												
(Lowlands)																												
Foster Hall	193	12	3.76	7	1.95	1	.30	7	1.12	5	.58	11	8.45	13	7.81	15	7.35	12	2.63	19	9.21	23	12.77	12	3.56	90	39.63	
Hillside	147	16	1.97	14	2.36	4	.35	12	1.18	9	.73	13	9.24	25	9.88	18	6.03	12	2.63	25	8.93	23	16.65	12	4.11	179	75.64	
Joes River	424	15	3.61	13	3.20	4	.62	11	1.42	10	1.55	13	16.32	21	11.94	18	6.96	8	2.75	20	12.25	20	19.30	9	4.89	143	81.39	
Joes River House	430	11	2.13	11	3.75	3	.44	9	1.01	7	.76	14	11.16	22	8.74	19	6.45	10	1.68	22	9.79	20	13.53	8	3.22	136	60.41	
Prizes	...	13	3.20	11	3.76	3	.46	10	1.73	12	1.97	11	13.81	17	11.54	15	7.95	13	3.21	23	10.88	17	15.15	5	3.43	132	77.47	
Mellows	...	14	2.65	10	2.88	3	.46	11	1.28	13	1.32	12	10.37	19	9.48	17	7.95	16	3.24	22	10.00	19	13.45	13	3.45	166	64.35	
Bissex Hill	966	12	2.54	10	3.00	5	.49	8	1.31	13	1.40	16	12.06	22	8.45	16	6.78	8	1.21	22	9.60	19	13.85	13	3.45	164	65.16	
District F	...	14	2.66	15	2.28	7	.34	12	1.20	13	1.06	16	10.74	22	8.15	22	6.06	9	1.43	21	8.81	22	13.29	13	2.99	192	59.01	
Parks	...	11	3.23	10	3.63	2	.26	8	1.65	10	1.45	12	14.71	22	10.10	19	7.77	11	1.82	23	11.36	21	15.94	10	4.27	159	76.28	
Spa	...	13	4.33	13	3.96	4	.64	15	1.86	10	1.85	12	15.47	16	12.10	17	8.69	8	1.99	24	10.58	21	15.75	10	3.39	163	80.01	
Total	...	131	28.48	125	32.60	38	4.53	114	15.34	113	14.26	146	134.98	224	107.40	196	78.26	106	22.85	250	111.72	265	151.98	92	33.31	1720	735.43	
Average	...	1310	2.85	1136	2.96	380	4.5	1036	1.39	1027	1.30	1327	12.27	2036	9.76	1782	7.11	1060	2.38	2273	10.16	2050	15.17	1022	3.70	16439	69.40	
<i>b</i> St. Andrew																												
(Highlands)																												
Gregg Farm	...	15	5.83	13	3.73	3	.29	13	1.61	17	1.76	15	10.80	22	11.50	17	7.01	14	3.30	25	11.92	21	18.42	14	2.98	189	79.15	
Swans	...	15	3.15	14	2.37	5	.64	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	34	6.16
Total	...	30	8.98	27	6.10	8	.93	13	1.61	17	1.76	15	10.80	22	11.50	17	7.01	14	3.30	25	11.92	21	18.42	14	2.98	223	85.31	
Average	...	1500	4.49	1330	3.05	400	4.6	1300	1.61	1700	1.76	1500	10.80	2200	11.50	1700	7.01	1400	3.30	2500	11.92	2100	18.42	1400	2.98	9050	77.30	
<i>b</i> St. Andrew																												
(Lowlands)																												
Belle Plaine	...	7	2.29	7	2.07	...	...	12	1.42	10	.82	12	10.77	11	6.03	19	6.47	7	1.28	19	10.77	17	14.89	8	2.79	159	60.00	
Baxters	...	11	3.79	81	2.85	3	.36	7	1.07	6	.88	12	14.33	18	9.50	18	7.47	10	1.41	23	10.75	18	13.51	8	3.02	142	68.94	
Walkers	...	9	2.71	10	2.76	6	.80	11	2.28	7	.84	12	12.93	17	7.11	20	7.29	7	1.38	20	10.65	20	15.27	8	2.26	147	66.30	
Spring Vale	...	14	4.07	14	4.46	6	.46	14	1.93	13	2.11	...	...	19	10.42	16	8.63	13	3.62	22	11.38	17	15.24	11	3.73	159	60.28	
Greenland	...	8	2.13	8	2.42	2	.52	6	1.30	5	.80	11	9.79	15	6.46	17	6.71	7	1.62	18	10.96	19	16.22	11	3.61	127	62.94	
Total	...	47	14.99	47	14.56	17	2.14	50	8.00	41	5.45	47	47.84	80	39.92	90	36.60	44	9.31	102	54.71	91	75.13	46	16.41	704	324.06	
Average	...	980	300	940	291	340	43	1000	160	830	109	1175	1196	1600	738	1800	732	880	156	2040	1094	1820	1508	920	308	14680	64.81	

SUMMARY OF BARBADOS RAINFALL FROM JANUARY TO DECEMBER 1891.

Name of Districts.	Number of Stations.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Totals.	
		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.)	13	11-25	1-88	10-25	2-44	2-00	6-7	5-62	5-7	9-08	8-0	12-77	10-13	17-25	4-65	19-58	6-38	11-42	3-05	18-58	10-77	19-08	7-27	9-20	2-68	146-38	51-37
II. District B. Christ Church. a. (Lowlands.)	21	11-60	2-43	9-22	2-03	1-87	3-4	5-93	7-4	8-83	1-06	12-05	9-78	15-11	4-63	15-24	5-41	9-00	2-44	16-59	10-06	15-53	8-65	9-65	2-52	130-68	50-15
b. St. George. (Highlands.)	10	15-90	3-94	14-30	3-35	3-00	6-1	9-20	1-50	11-50	1-65	15-33	12-10	19-30	7-15	19-20	8-07	11-70	3-55	20-90	7-91	20-60	10-23	11-78	4-58	171-68	65-49
b. St. George. (Lowlands.)	4	15-75	2-53	17-67	3-12	5-35	5-0	7-75	3-7	13-50	1-45	15-75	12-82	18-00	5-63	20-75	7-29	11-25	5-10	19-50	10-38	21-33	10-31	13-67	4-08	180-25	64-22
III. District C. St. Philip. a. (Highlands.)	3	17-67	3-23	11-00	2-04	3-00	3-0	9-33	1-58	12-67	1-13	14-67	9-99	17-67	5-83	20-00	8-19	15-00	4-27	19-67	7-51	12-00	8-36	14-33	5-10	167-01	57-58
St. Philip. (Lowlands.)	23	14-61	2-45	10-57	1-88	3-05	3-7	7-74	2-2	9-45	9-8	13-65	9-75	18-14	5-41	19-48	7-31	13-57	3-77	19-86	8-23	18-90	8-65	11-15	3-47	160-15	53-20
b. St. John. (Highlands.)	16	16-37	3-57	13-94	2-77	4-19	7-5	12-12	1-92	13-00	1-54	13-62	11-23	19-80	8-40	20-07	9-44	15-07	4-08	21-67	8-45	22-53	10-86	13-20	4-88	185-58	67-89
b. St. John. (Lowlands.)	3	12-67	2-04	9-67	1-91	2-35	1-8	10-33	1-01	9-67	3-71	10-00	10-55	16-67	7-63	17-33	7-80	10-33	3-33	18-83	7-85	18-33	13-22	9-33	4-00	144-99	63-83
IV. District D. St. Thomas. a. (Highlands.)	14	16-77	5-13	15-77	5-16	4-25	6-3	13-08	2-38	15-08	1-82	14-85	14-33	22-14	9-67	20-77	8-55	14-46	5-82	23-62	11-22	20-53	14-44	13-92	4-63	195-54	83-78
a. St. Thomas. (Lowlands.)	14	18-98	4-39	14-92	4-24	2-33	2-4	11-23	1-73	13-42	1-56	15-92	13-38	23-50	9-35	17-64	8-89	10-50	3-00	21-82	10-85	20-83	11-38	13-80	4-53	183-99	73-53
b. St. James. (Highlands.)	4	11-60	6-35	9-50	4-71	2-30	3-5	10-25	1-63	9-75	1-71	12-50	12-25	16-50	11-15	15-50	7-83	10-25	3-82	24-75	11-12	18-75	11-84	11-75	3-50	156-50	79-86
b. St. James. (Lowlands.)	9	13-78	4-23	14-00	4-55	2-37	2-3	8-00	1-29	8-33	1-00	13-11	10-82	21-56	8-99	18-33	7-24	10-22	4-23	21-56	9-31	17-00	9-57	11-11	2-38	139-40	43-40
V. District E. St. Peter. a. (Highlands.)	6	13-60	3-18	12-00	3-34	4-50	1-16	10-50	1-98	7-88	1-12	13-17	11-84	17-00	7-48	18-50	7-55	9-67	2-65	19-67	10-78	19-50	12-47	11-00	3-13	156-84	66-68
a. St. Peter. (Lowlands.)	9	11-22	2-13	13-80	3-15	4-75	1-15	10-22	1-84	7-78	9-6	13-50	9-64	17-67	6-28	16-11	5-82	10-67	3-16	20-22	13-23	17-23	13-97	8-56	2-20	151-88	63-56
b. St. Lucy. (Lowlands.)	9	13-78	1-72	14-11	3-07	4-78	1-09	9-44	1-70	8-78	1-20	11-78	10-04	14-00	7-17	18-50	7-37	9-87	1-80	20-62	10-94	17-00	11-92	9-75	2-65	152-38	69-76
VI. District F. St. Joseph. a. (Highlands.)	11	18-10	4-62	16-27	4-22	4-70	7-5	14-10	2-68	16-10	1-80	14-36	13-57	20-27	10-61	19-45	9-30	11-64	3-35	24-18	11-11	22-10	13-04	13-50	4-40	194-77	79-45
a. St. Joseph. (Lowlands.)	11	18-10	2-85	11-36	2-96	3-80	4-5	10-36	1-39	10-27	1-30	13-27	12-27	20-36	9-76	17-82	7-11	10-60	2-58	22-73	10-16	20-30	15-17	10-22	3-70	164-39	69-40
b. St. Andrew. (Highlands.)	2	15-00	4-19	13-50	3-05	4-00	4-6	13-00	1-61	17-00	1-76	15-00	10-80	22-00	11-30	17-00	7-01	14-00	3-30	25-00	11-92	21-00	18-42	14-04	2-98	160-50	77-30
b. St. Andrew. (Lowlands.)	5	9-80	3-00	9-40	2-91	3-40	1-3	10-00	1-00	8-20	1-09	11-75	11-06	16-00	7-98	18-00	7-32	8-80	1-86	20-40	10-94	18-20	15-03	9-20	3-08	143-15	67-20
Total	187	279-42	64-97	241-34	60-92	66-13	10-96	188-20	29-04	210-22	27-64	257-08	217-36	334-94	149-23	349-27	144-78	218-03	65-16	399-67	192-99	361-32	227-81	219-45	68-89	3136-06	1259-65
Average		14-23	3-43	12-70	3-21	3-48	5-8	9-91	1-53	11-06	1-45	13-53	11-43	18-68	7-85	18-38	7-62	11-47	3-63	21-04	10-16	19-02	11-99	11-55	3-63	165-06	66-30

TABLE OF THE RAINFALL OF THE ISLAND OF BARBADOS W. I. FROM THE YEAR 1847 TO 1891--A PERIOD OF 45 YEARS.

YEARS.	Number of Stations.	MONTHS.												Totals.	Crop in Hhds for same period.	
		January	February	March	April	May	June	July	August	September	October	November	December		For 1847	For 1885
1847	3	2.83	.95	1.20	2.98	1.02	2.10	2.27	5.26	10.20	7.11	8.45	8.73	48.10	For 1847	98.111
8	3	4.76	2.04	2.66	1.58	6.74	2.21	6.25	7.53	5.41	11.78	5.79	7.04	63.77	" 8	28.165
9	3	3.61	2.72	3.90	2.69	2.34	6.63	5.64	6.82	4.74	8.53	1.42	3.73	52.77	" 9	38.677
1850	3	1.14	2.52	.78	2.96	4.70	10.48	9.01	6.82	3.34	10.17	9.61	6.36	67.88	" 1850	35.302
1	6	1.62	3.01	1.99	1.58	6.13	5.31	6.63	7.00	9.25	6.53	4.29	6.05	59.40	" 1	38.781
2	7	2.80	1.58	1.53	2.17	7.11	2.17	2.49	7.36	3.72	6.53	14.15	6.66	58.77	" 2	48.611
3	11	4.04	3.94	2.83	3.38	9.25	5.21	3.89	8.08	7.75	10.43	8.36	2.20	68.84	" 3	38.719
4	16	2.64	1.95	1.43	1.20	1.83	5.56	5.68	5.11	3.97	7.03	11.19	3.79	59.88	" 4	45.181
5	16	3.96	2.95	1.85	5.49	6.82	6.61	8.00	12.84	9.27	5.12	5.08	5.41	77.31	" 5	39.290
6	17	1.73	2.18	1.19	.81	2.84	5.49	2.86	7.80	5.88	6.15	7.25	4.21	48.49	" 6	43.077
7	20	2.63	5.78	2.02	1.54	2.64	5.43	7.14	6.33	7.93	6.58	9.69	3.10	60.90	" 7	38.798
8	21	1.52	1.28	1.40	.96	2.23	4.54	3.69	4.24	3.54	10.46	6.13	5.22	45.22	" 8	50.778
9	26	2.10	2.64	1.22	1.24	3.35	5.68	5.72	3.21	4.80	10.13	10.18	3.74	54.22	" 9	39.666
1860	23	2.23	2.85	1.13	2.41	.66	3.13	3.90	7.93	7.31	13.30	7.97	5.69	57.91	" 1860	42.634
1	21	3.49	1.96	2.76	6.35	8.01	9.31	8.23	4.65	6.77	7.60	7.50	7.11	73.82	" 1	43.845
2	19	7.03	1.12	.31	1.12	3.53	7.18	5.39	7.23	4.74	11.18	7.40	2.36	59.27	" 2	46.120
3	27	1.19	3.88	2.36	2.26	.56	1.62	3.65	9.34	4.99	2.89	6.45	3.27	42.38	" 3	42.231
4	26	2.74	2.47	.77	.66	3.07	2.17	7.51	7.37	10.77	9.14	6.31	6.16	59.19	" 4	36.139
5	35	2.36	2.19	1.39	4.13	5.59	9.19	7.85	8.91	5.07	11.00	4.53	6.58	68.64	" 5	47.209
6	36	3.75	2.75	1.57	1.26	2.74	2.63	6.23	11.89	4.22	8.99	7.85	5.80	59.65	" 6	57.241
7	40	2.68	4.49	.88	1.64	2.65	10.94	7.50	9.62	8.54	12.74	4.30	3.89	69.93	" 7	53.398
8	42	4.29	1.74	1.93	.97	1.63	3.45	6.26	5.62	4.63	8.20	4.42	1.40	44.60	" 8	58.232
9	45	1.53	1.47	1.03	3.34	4.32	3.05	4.42	6.95	4.56	6.90	5.73	48.52	" 9	32.835	
1870	91	3.96	1.35	.90	.93	2.89	10.15	5.62	5.61	5.03	11.24	8.37	3.88	60.17	" 1870	39.270
1	141	4.13	2.29	1.07	.56	.94	2.71	3.65	5.37	6.70	6.33	4.03	4.08	41.46	" 1	33.907
2	165	2.10	2.38	.96	1.31	1.53	2.90	2.67	4.11	8.50	4.55	9.95	7.72	48.55	" 2	29.167
3	214	3.91	2.00	1.02	1.40	3.71	1.35	5.57	7.09	10.27	10.31	1.76	2.83	51.69	" 3	37.337
4	230	3.77	.93	2.90	2.43	1.23	5.30	5.88	8.11	12.59	8.91	4.06	2.91	59.22	" 4	47.293
5	204	5.29	1.68	1.41	2.30	1.21	1.75	2.94	5.47	18.57	8.12	3.30	9.57	61.71	" 5	65.000
6	78	3.25	1.23	2.37	1.17	1.95	4.61	7.13	3.63	10.64	7.93	4.91	3.89	52.73	" 6	37.347
7	26	4.75	.51	3.96	2.19	5.43	9.27	11.02	4.50	5.60	8.69	8.88	11.11	74.10	" 7	49.879
8	34	4.78	.27	1.53	6.13	5.29	5.31	7.66	9.55	6.53	9.42	13.08	3.56	73.10	" 8	43.511
9	213	4.41	5.23	3.07	1.04	3.83	10.30	4.47	9.30	6.64	6.56	15.30	4.27	74.30	" 9	37.146
1880	222	11.23	4.38	1.75	5.61	1.79	6.26	4.41	9.95	10.90	4.15	6.56	2.16	70.98	" 1880	54.217
1	217	1.60	2.02	.42	2.89	2.26	8.93	7.80	10.29	13.14	9.07	7.07	4.58	70.45	" 1	51.433
2	217	2.48	1.82	2.10	2.11	2.91	4.92	3.76	8.02	5.97	6.78	8.83	3.36	50.06	" 2	54.937
3	233	6.28	2.65	1.01	1.84	2.86	7.11	4.87	5.67	7.02	11.30	6.15	5.54	63.12	" 3	52.851
4	213	2.05	1.64	3.78	3.55	3.25	4.78	4.70	6.09	4.22	7.76	14.32	3.62	57.95	" 4	62.055
5	191	2.17	1.82	1.73	.86	3.24	2.90	3.52	5.92	5.50	6.90	7.22	4.09	44.08	" 5	67.764
6	89	1.79	1.95	1.82	1.08	3.56	4.05	10.80	18.47	12.65	9.73	14.30	2.67	82.81	" 6	45.769
7	152	3.52	2.66	1.72	.55	5.11	6.96	9.76	10.65	6.23	8.03	8.27	6.15	69.01	" 7	68.872
8	99	9.53	3.33	2.31	5.15	4.78	4.73	8.26	12.51	7.93	2.92	5.07	2.57	69.09	" 8	73.009
9	114	3.10	1.66	3.36	1.68	3.48	7.71	9.57	7.22	12.59	5.28	7.72	13.55	76.92	" 9	65.268
1890	178	4.74	1.93	3.25	3.71	2.88	3.83	2.35	8.09	7.39	9.09	2.22	3.05	52.53	" 1890	35.261
1891	187	3.42	3.21	.58	1.53	1.45	11.43	7.85	7.62	3.43	10.16	11.99	3.63	66.80	" 1891	59.547
		3.986	152.08	104.80	80.70	102.94	155.40	247.35	266.02	335.45	329.44	371.82	338.31	217.92	2710.82	
		88.58	3.38	2.33	1.79	2.28	3.43	5.50	5.91	7.45	7.32	8.26	7.52	4.84	60.24	

From 1847 to 1885 is copied from a Table compiled by Dr. Walcott and published in the *Planter's Journal* for 1886.

Weekly Statement of Comparative Prices of West Indian Good Brown Sugar for the fifty two weeks January to December for the past ten years 1882 to 1892.

WEEKS.	West Indian Good Brown Sugar.										WEEKS.	West Indian Good Brown Sugar.									
	1882.		1883.		1884.		1885.		1886.			1887.		1888.		1889.		1890.		1891.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
1	21 0	18 6	17 0	9 9	14 3	10 9	14 6	13 6	11 9	12 0	27	20 6	19 0	12 0	14 9	11 3	11 0	12 3	19 6	12 6	12 3
2	21 0	18 6	17 0	9 9	14 3	10 9	14 6	13 6	11 9	12 0	28	20 6	19 0	12 0	14 0	11 3	11 0	12 3	19 0	12 9	12 3
3	21 0	18 6	16 6	10 6	14 3	10 9	14 0	13 6	11 9	12 0	29	20 3	19 0	12 3	13 3	11 0	11 0	12 3	18 6	12 9	12 3
4	20 0	18 6	16 6	11 0	14 0	10 9	14 0	13 6	11 9	12 0	30	20 0	19 0	12 0	13 6	11 0	11 0	12 0	18 0	13 0	12 3
5	19 6	18 6	16 0	11 0	14 0	10 9	13 9	13 6	11 9	12 0	31	20 0	19 0	11 9	13 6	11 0	11 0	12 0	17 6	13 0	12 3
6	19 8	18 0	16 0	11 0	14 0	10 9	13 0	13 6	11 9	12 0	32	20 0	19 0	11 6	13 3	11 0	11 3	12 3	17 3	13 0	12 3
7	19 9	18 0	16 0	11 0	13 3	10 9	13 0	13 6	11 9	12 0	33	20 0	19 0	10 9	13 6	11 0	11 3	12 0	17 0	13 0	12 0
8	19 9	18 0	16 0	11 0	12 9	10 6	13 0	13 6	11 9	12 0	34	21 0	19 0	11 0	13 9	10 9	11 3	12 9	15 6	12 9	12 0
9	19 9	18 0	16 0	11 0	13 0	10 6	13 0	14 0	12 6	12 6	35	21 0	19 0	12 6	14 0	10 9	11 3	12 9	14 6	13 0	12 0
10	20 0	18 9	16 0	11 6	12 9	10 6	12 9	14 6	12 6	12 6	36	20 6	18 9	12 0	14 6	10 9	11 3	12 9	13 6	13 0	12 0
11	20 3	19 3	15 6	11 6	12 6	10 6	13 0	14 9	12 6	12 9	37	20 0	19 3	11 6	15 0	11 0	11 3	12 9	14 0	13 0	12 0
12	20 6	20 0	15 3	11 6	12 6	10 6	13 0	15 3	12 6	12 3	38	20 0	19 0	10 6	14 9	11 0	11 3	12 9	14 0	12 9	12 0
13	20 6	21 0	14 9	11 6	12 6	10 6	13 0	16 0	12 6	12 3	39	20 3	19 0	10 0	14 3	11 0	11 3	12 9	13 6	12 9	12 0
14	20 6	21 0	14 6	11 6	12 9	10 6	12 9	16 3	12 6	12 3	40	20 6	19 0	9 9	14 0	10 9	11 6	12 6	13 0	12 9	12 0
15	21 6	20 6	14 6	11 9	12 9	10 9	12 9	17 0	12 6	12 3	41	20 0	19 0	10 6	14 3	10 6	11 3	12 6	13 0	12 9	12 0
16	21 3	20 0	14 6	11 9	13 0	10 9	12 9	18 0	12 9	12 3	42	20 0	19 0	11 6	13 9	10 9	11 6	12 6	12 0	12 6	12 3
17	21 6	20 0	14 0	11 9	13 0	10 9	12 6	18 0	12 9	12 3	43	20 0	19								