BRITISH GUIANA

ANNUAL REPORT

OF THE

FOREST DEPARTMENT

FOR THE YEAR

1961.

Printed by the Authority of His Excellency the Governor.

Printed Joi- the Govcrmncnt of British Guiana by the "B.G. Lithographic Company," Limited, La Penitence, E.B., Demerara, British Guiana.

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Note: Figures giveffl in brackets in the text following hereafter are the corrs ponding statistics for the previous year, 1960.

FOREST POLICY AND LEGISLATION

Forest Policy.

2. The forest policy of British Guiana is -'--

(i) To develop the forest resources of the country as part of an integrated land use policy for the conservation and develo_pment or all natural resources.

(ii) To manage the forests on the basis of sustained yield.

(iii) To increase production from the forests, subject to (ii) above, with a view to -

(a) filling the country's requirements of domestic products;

(b) developing secondary processing industries within the country;

(c) exporting a maximum of forest products;

(iv) To ensure a reasonable return to the community on the exploitation of the forest crop.

(v) To develop markets for species now considered to be unmerchantable.

(vi) To provicle access to forest areas.

Legislation.

3. The Forests (Amendment) Regulations - No. 1 of 1961 - were passed early in the year. These amendments were inserted after Forests Regulation 6 (of the Principal Regulations) and were numbered 6A to 6E. They prescribe the procedure relating to the transfers of titles gr-anted under the Forests Ordinance.

THE FOREST ESTATE

4. There was no change in the constitution or management of the Crown Forests as originally proclaimed by the Forests Ordinance of 1953, and these forests continue under the charge of the Forest Department. They cover, in a single block, an area of some 29,000 square miles, and within them are found all of the major and most of the smaller logging leases and operations.

5. Outside of the Crown Forests - to the north-east and south - lie the Crown Lands which contain, approximately, a further 41,000 square miles of forest. The region to the south of the Crown Forests rs presently inaccessible to logging and will remain so for many years to come. In the north-east, however, (1.e. between the lower courses of the Essequibo and Corentyne Rivers:) there are logging operations within the Crown Lands, but these produce less than 3% of the total output. These areas are 'salvage' forests, generally of a poor type - either naturally so. or reduced to this state by repeated creaming and abuse over the last half centQry. It is of interest to note, ,however, that within this oortion cf the Crown Lands are to be found many area,s of possible use for the large-scale introduction of fast-growing exotic species. But such operations would require not only finance, but also careful formation of properly demarcated and protected forest reserves - as distinct from the administrative Crown Forests.

6. As the e%tent etc. of the forests are thus simply described, Standard Forms I and II have been omitted from this report.

ADMINISTRATION

7. In September, 1961, the Forest Department was transferred from the portfolio of the Minister of Trade and Industry to that of the Minister of Natural Resom:ces. This move was a part of the re-organization of ministries which took place after the General Elections of 1961.

8. Two Assistant Conservators were recruited during the year thus making it possible .to post a second officer to the Essequibo Division as well as to re.: start the Aerial Photo-Interpretation and Survey Division. This latter section had been closed since mid- J959 when, upon the expiry of his contract, the officer-in-c:iarge had left the country.

9. Because of a resignation in 1960, the senior staff in the Essequibo Division had been reduced to one Assistant Conservator. The lone officer had

been obliged to take over the silvicultural duties together with the territorial management of the division. It was, therefore verv pleasing: to be able to give him an assistant. Meaw hile, until the staf position really improves and becomes reasonably stable, it has been decided to leave the Divisional Forest Officer, Essequibo, in charge of both silviculture and management and to have his assist-ant understudy him in both phases of the work. Though by no means an ideal solution to the problem, better continuity can thus be assured and just now, after the numerous changes of recent years, the Silvicultural Division is in sore need of such.

10. The administration of the North West Division was handed over to one of the more senior Forest Inspectors. Almost the entire production of this area comes from a few large leases which are easy to control and there are none of the administrative problems which beset the other divisions.

MANAGEMENT AND SURVEY

Mana2.ement

11. The distribution of Crown Forest Woodcutting Leases in force at the end of 1961 was as follows:

Acreage		\North West Divi5ion	Essequibo Division	Demerara Division	Berbicc Division	Total
Under	500		11			11
501	3,000	1	27	2	1	31
3,001	10,000	2	8	3	1	14
10,001	50,000	1	2	5	8	16
Over	50,000	3	5			8
All	number	7	53	IO	,u	80
All	acreage	327,100	1,679,960	142.000	180.920	2,329.980

12. The total number of leases in existence was fourteen less than at the end of 1960, and the area involved was 294,394 acres smaller. This decrease was due to the fact that many short-term leases expired and were not renewed. A few lessees also surrendered their leases prior to expiry. All the loggers concerned claim that these leases are no longer profitable to operate - which really means that the Greenheart has been worked .out and the operators are not prepared to carry the obligations of exclusive leases merely to exploit other species.

13. In the meantime, these men join the growing band of wood-cutters who operate under non-exclusive permissions which are granted only for a restricted number of trees in certain well-defmed areas (not areas of virgin forest.) The number of such permissions issued was 1932(1696) - an increase of 236. Fears have previously been expressed (Annual Report, 1960) that these permissions might well have an adverse offect on forests that have already been creamed. Recent invest1gations have shown that the problem has social as well as technical implications and that, on the balance, the advantages and benefits obtained outweight the adverse effects.

14. In the first place, these permissions provide work and some ready-cash for loggers who would otherwise be unemployed and who, without such work would forsake logging altogether. They operate in restricted areas which are as near as possible to their homes and farms. They do produce species other than Greenheart or Crabwood, at a very much lower price than that of these well known timbers and this difference in price is helping to put these 9iher species on the market. Unfortunately, this price-differential is not so marked in the cost of sawn lumber i.e. the sawmillers make a greater profit out of this business than the loggers do. Finally, in the majority of cases, the work is confined to areas of what can be regarded as 'salvage-forest'.

15. No formal working plans can yet be drawn up and the day for such is still far distant even though some progress bas been made by securing block-working and annual coupes in some of the bigger leases as well as by restricting non-exclusive permission to salvage areas. We would need to know a great deal more than we presently do about the composition and possibilities of individual areas of forests (for which work money is not available) and, in addition, the entire pattern of exploitation would have to be changed before working plans could be drawn up to mean anything tangible or worthwhile.

Stockmapping

16. Since the Aerial Photo-Interpretation and Survey Division was re-started only in December no forest-type maps were prepared during 1961. The new officer was, however, able to familiarize himself with what had been done previously and to pick up the techniques used very quickly. In doing so he was assisted both by the excellent records which had been kept previously as well as by the Directorate of Overseas Surveys, Londoo, and, in particular, by Mr. T. I. Rees of the Directorate and UNTAB (see para. 19 **et seq.)**

17. The following aerial photographs were received as a result of the 196Q contract which had been flown by Fairey Air Surveys Ltd.:-

Scale	No. of photos	Area covered
1 : 30,000	327	5,200 sq. miles
1 : 10,000	753	480 sq. miles

18. No contract for further aerial photography in British Guiana was awarded during 1961. This is most oofortunate since several gaps remain in the air-photo coverag of the county, and many important forest areas lies within these gaps.

Surveys and Enumerations

19. No surveys or enumerations were made during 1961. However, UNTAB approved an application made in 1960 by the Government of British Guiana for the services of a forest inventory expert to come to the country and advise on all aspects of forest inventory, mapping and survey. We were most fortunate in the appointment of Mr. T. I. Rees of the Directorate of Overseas Surveys (Forestry and Land Use) to this assignment, and our gratitude must be

extended to the authorities at F.A.0., Rome, the then Forestry Adviser to the Colonial Office, and to the Directorate for making it possible for Mr. Recs to be sent to do the job.

20. Mr. Rees paid a preliminary visit and spent a very busy period of two months (June and July) in the country. During this time be was able to study and evaluate all previous work done in connection with the inventory of British Guiana's forests - including the older ground surveys as well as more recent work based upon the interpretation of aerial photographs. He paid visits to the major producing areas and made flights by light aeroplane over various types of forest. Finally, he discussed priority areas and staffing with us and it was direct result of this that when the officer was appointed to take -ove_r the Aerial Photo-Interpretation & Surveys branch, it was possible to send him to the Directorate for a period of six weeks to be briefed by Mr. Rees as well as to receive some preliminary training before corning to British Guiana. The programme called for Mr. Rees to return to British Guiana early in 1962, when be would get down to the detailed work of setting up the Aerial Photo-Interp_retation and Surveys Division and initiating its early work in mapping, surveying and evaluations.

Application to United Nati,ons Special Fund

21. The application to the United Nations Special Fund for assistance in appraising the forest resource and investigating its potential was still pending at year-end. During the latter part of the year, while on leave in E11rope, the Conservator visited F.A.O. in Rome where, along with Mr. Recs, he discussed with the officials concerned all the various aspects of the United Nations programme of assistance to forestry in British Guiana. Among the matters discussed was the possibility of the United Nations providing a marketing expert for assessing the most suitable methods by which British Guiana's lumber industry could play a larger part in the Caribbean lumber market. Plans were also drawn-up for assistance in the training of senior staff, but the major item of discussion was the representation of the application to the Special Fund. The help to be sought and the manner of reframing the application were decided and it was loft open for Mr. Rees and the Conservator to initiate the new approach from British Guiana when the former paid his second visit to the country (proposed for early iu 1962). It was accepted, however, that these plans all depended upon the agreement of the Government of British Guiana to go :1head with the project.

22. The Conservator would like to record his personal thanks as wcll as the gratitude of the Government of British Guiana to the many officials at F.A.0. who were so helpful and who did everything possible to make bis sojourn in Rome officially both useful and interesting and personally most happy and memorable.

COMMUNICATIONS AND BUILDINGS

Roads

23. Standard Form lV is omitted from this report as no roads or other internal forest cqmmunications are constructed or maintained by the Department.

24. No further action has bcrn taken, Ju ring 1961, to provide access to the well-wooded area above Looking Glass Falls on the Mazaruni River because

it was decided early in the year to keep this area in reserve and, particularly, closed to applications by any other but large-scale operators with sufficient finance to undertake proper operations.

Road Vehicles

25. No new road vehicles were purchased during the year. Our workshops, however, completely overhauled one Land Rover, and did various minor repairs to three other vehicles.

Waterways

26. Once again, severe seasonal droughts affected the extraction of logs from the upper reaches of several rivers - especially the Corentyne and Berbice Rivers but also, to a lesser extent, those in the North est District.

27. Twc stretches of river were cleared by the Forest Department of fallen trees and other snags - a 16-mile stretch of the Pomeroon River and seven miles of the Aruka River. This work was done to assist Amerindian loggers in these areas to get their rafts down to the mills.

Boats

28. A concrete floor was laid in the boat-building shop. During the year the following work was done:-

(!) New boats built - one 20-foot Ranger tentboat and two 22-foot patrol bateaux.

(2) Major overhauls - two 22-foot bnteaux.

(3) Minor overhauls - one 32-foot bateau-cruiser and one 22-foot bateau.

29. Three bateaux-one 30-foot, one 22-foot and one 20-foot were condemned by the Board of Survey during the year. One 22-foot patrol bateau complete with outboard engine and field equipment for a Ranger patrol was stolen from its moorings when left untended overnight at a beach near Bartica. By year-end the- Police had been unable to find any trace of its whereabouts.

30. At 31st December, 1961, there were 32 boats in commission listed as follows:-

2	-	32'	Cabin Cruisers
3	-	32'	Bateau Cruisers
		30'	Bat,eau Tentboat
4	-	20'	Ranger Launches
11	-	22'	Patrol Bateaux
4	-	18'	Patrol Ba:teaux
3	-	17'	Ballahoos
2	-	14'	Bateau Tenders
2	-	20'	Coria

Engines

31. Twenty-one major engine overhauls and two minor repair-jobs were completed during 1961. In addition a new Kelvin Diesel engine was fitted into the Cabin Cruiser "Bartaballi" and another new gasolene-driven engine was also fitted into the 20' launch "Kufiballi".

Requests for Transport

32. The department rendered the usual assistance to other Gov,ernment services by lending its boats and crews whenever it was po55ible to meet requests for their use. A great deal more assistance could be given if other departments would always make these requests a reasonable time before the boats are required.

Buildings

33. Normal repairs were carried out by the Public Works Department to Forest Department quarters-the Range Officer's house at Barama Mouth, North West District, beilllg completely renovated. The old gasolene bond at Carabisi, Bartica, was demolished and the Forest Department given its own section of the new general bond that had been constructed nearby. A bridge-wide enough to allow the passage of a motor car-was constructed for the Forest Inspector's quarters at Fort Canje, Berbice.

34. Approval was at lca obtined for the construction of an office and storeroom below the Forest Guard's quarters at Supenaam Station, Essequibo, and also for similar accommodation below the Guard's quarters at .Axapiako Station, Pomeroon. At year-end building was in progre's at Supenaam. These improvements mean that the district offices would not nmv occupy a goodly part of the quarters and married guards can finally be stationed at these places.

PROTECTION

35. A total of 223 (239) forest offences were reported during the year. Of this number 213 (206} were dealt with departmentally and 10 (33} cases were pending at year-end. Offences with regard to removal permits were the most prevalent-96 (58) having been dealt with. However. despite a decrease when compared with the figures for 1960 (98), there were 79 cases of illicit felling and this figure is considered to be yet too high.

36. Increased pressure was put, with some success, upon defaulters in the payment of forest revenue. Thus, 20 (12) offenders were tal,en t f court for the non-payment of royalty on forest produce and judgements amounting to $2,601.57 ($315.13) were secured. With regard to the failure to pav minimum royalty due 15 (8) offenders were sued and judgements totalling $4,211.27 ($487.87) were obtained.

37. Continued vigilance is required in order to reduce all types of offences to a satisfactory minimum level and, particularly, in order to prevent forest offences as well as to detect them. This calls for a high standard of administraltive org13,n.iz-ation in addition to good field-work and constitutes a challenge to our youthful oivisional officers. Unfortunately, at this time when a change is taking place in

which small and medium-sized loggers are gradually going out of business for lack of suitable working areas, the failure, not only to pay, but to be able to afford to pay minimum royalty, is becoming more and more prevalent. The result is that our officers spend a great .deal of time in court, obtaining judgements which are difficult to collect afterwards.

SILVICULTURE

Natural Regeneration.

38. Experimental work on the natural regeneration of exploited forest was continued, and a further 'Dreatment was given to 289 acres of mixed forest in the Moraballi Reserve. The object of the treatment was to free existing regeneration of desired species from the competition of unwanted species. As was the usual practice, there was some removal of canopy trees (by frill-girdling followed by poisoning with sodium arsenite). This removal was carefully done so as to avoid allowing too much light to enter the stands.

39. Such work, over the years, has produced excellent results and the profuse regeneration of Greenheart which can presently be seen (particularly at Barabara. Mazaruni River) fully vindicates the operations when considered purely as a silvicullural exercise. But from the economic aspect, it is far too cos,Uy-and too slow. Hence there is obvious need to alter our policy so as to make full economic use of all worthwhile species which are readily found growing naturally in these exploited fOlrests. It was with this in mind that it was decided to take advantage of a visi't to the Caribbean area by Mr. H. C. Dawkins of the Uganda Forest Service, and to ask his advice and assistance (see paras. 41-43).

Artificial Regeneration

40. During 1961, a total of 35 acres of *Pinus caribaea* were planted at *Five* Miles, Bartica-Potaro Road. This brought the total a.rea under pine cultivation to 162 acres. Normal tending operations were done in the es'tablished plantations and it was very pleasing to be able to sell the thinnings (tops) as Christmas 'trteeis.- yielding a gross value of $372.50. A preliminary study was made to determine the feasibility of establishing pine trials on the Intermediate Savannahs along the Berbice River. No decision has yet been taken.

INVESTIGATIONS AND RESEARCH

Silviculture

41. Mr. H. C. Dawkins of the Uganda Forest Service visited British Guiana at the request of the Government to advise on:-

(a) the treatment of worked-out Gr.eenheart forest;

(b) the preparation of a programme of silvicultural .research.

42. Mr. Dawkins spent just under one week in the country and, in getting around the forests, spared muscular fatigue in neither himself nor local forest officers. This being his second visit to the coun-try he was able to get down to the problem immediately. He has set out his suggestions for priorities in the silvicul-

tural programme-in volv ng both natural forests and artificial plantations. In all cas· he has clearly defined the problems and put forward his views a5 to how th ey could be solved most •thoroughly and economically. With regard to work in the natural fOTests, he has la.id out the pattern of diagnostic and dynamic sampling to be followed and has stressed the need for the institution of replicated reseaxdb records. It is to be noted here that Mr. Dawkins favours the acceptance of a "long list of desirable species" at the present stage of our knowledge and e:;-..-perience.

43. His report has been accepted by Government and, by year-end, the first proposals had been put into action. I would like to take this opportunity to convey the gratitude of both the Government and the Forest Department to Mr. Dawkins for the great assistance which be has so willingly given to us and also to extend our good wishes for his future career.

Increment Studies

44. The Dalli (Virola suri.namensis) plots on the Waini River were re-measured during the year.

Ecological and Botanical

45. No ecological collectiO!lls were made by the Department during the year but assistance was given to Dr. Bassett Maguire of the New York Botanical Gardens who worked at Kurukabaru in the Southern Pakaraimas between August and October.

Enquiries for Material

46. Pla nt material was collected and supplied to various institutions as follows:-

(1) *Ocotea rodiaei* (seeds) - Swansea University and Dr. Moody.

(2) Wood specimens - *Manilkara* sp.
Andira sp.
Simaruba sp. - Professor Cocker - Dublin University.

(3) Stem and Bark *Ya'uru*
Shibadan) Botanist - U.S. Departmel11t of Agriculture.

Weather Records

47. Rainfall data were collected from 22 stations and have been tabulated in Appendix B.

UTILIZATION

Sawmilling

48. A sawmill census was completed by 31st December, 1961 and the results are as follows:-

Type of mill	Demerara	Berbice	Essequibo	N.W.D.	Total
Circular ..	10	10	5	7	32
Circular/Gang	4	8	10	1	23
Gang	10	5	5	1	21
Band	2			1	3
TOTAL	26	23	20	10	79

49. The 1956 sawmill census showed a total of 91 mills as follows: 55 Circular, 23 CircuJa.r/gangs, 12 Gallgs and 1 Band.

50. The 1961 results showed an overall decrease of 12 - in the total number of sawmills - since the 1956 census. The following changes were recorded:

(a) 23 less circular saws;
(b) 9 more gang saws;
(c) 2 more band saws.

This change over from the use of circular saws to gang and band saws marks a definite improvement in the sawmillrng industry and should result in less sawmill waste and better quality sawn material.

Utilization of Local Timber

51. The main uses of various local timbers are shown in Appendix C. As can be seen from the figures of production, the majority of these timbers are neither used locally nor exported on any significant scale. The reasons for this unsatisfactory state of affairs are various, but perhaps the most important is the "Greenheart complex" which besets most Guianese. This species is demalllded almost exclusively for all types of uses. Next, many other worthwhile species do not occur in quantity in any one area and must be carefully collected over relatively large areas. This is an admitted drawback, but the protestations of the trade would be more convincing if Joggers and millers did attempt to make reasonable use of those species which do occur in commercial quruntities within reasonably restricted areas. It appears obvious that the reigning thought is "Why bother to push other species, when Greenheart sells itself?"

52. There is also the unfortunate absence of the lighter (= softer) hardwoods in our forests which are predominantly heavy hardwoods. The scarcity of such general utility timbers leads to the importation of large quantites of Crabwood logs (Carapa guianensis) mostly from neighbouring Surinam rund, also, of dressed pine from North America. Again, however, arguments based upon this are weakened by the fact that several worthwhile species are nonetheless bypassed in the search for Greenheart *e.g.* the Kereti group--(Ocotea spp.) and Simarupa (Simaruba amara). These species occur in sufficient quantities, if not for a large export trade, at least enough to replace most imports of pine from North America (See Fonn X).

53. Finally, the local building trade is turning, in a constantly increasing volume, to the use of concrete for exterior work and to particle boards, fibre-boards, etc., for interior use. Tiles are also replacing hard-wood floors. While such substitution and competition is to be expected, in the case of British Guiana, rival materials are given a very fiille handicap and, in many cases, were able to enter the race only because of the poor quality of lumber produced locally. The wood is generally badly sawn, even more badly planed and finished and is, finally, sold wet. Under these circumstances users are to be expected to seek substitutes.

54. It has been solely to lead the way in overcoming these many and flagrant abuses in the use of our forests that Government established the Central Timber Manufacturing Plant at the Forest Department (see paras. 82 et seq.). But a great deal of propaganda, education and, in certain cases, financial assistance is needed if any true and permanent improvement is to be obtained.

Timber Samples

55. The request, local and foreign, for leaflets and hand-samples of wood continued and were duly met. These were for 14 boxes of samples (20 species per box), 270 single samples, and 800 leaflets.

Particle Board

56. The local particle board company-Timber Developments (B.G.) Ltd. --has report.:d contil1lued ditliculli..:::; and problems in marketing their product. A new formula has been introduced in the manufacture of one particular type of board (called "Beta-Board") and has resulted in faster cooking time and an accelerated rate of production. The Plant has, however, not been' able to make a profit and can work only ooe shift for three days a week.

57. The main problem is the low volume of sales-both locally and abroad. Costs are generally too high to enable competition with rivals and substitutes, while the lack of sales results in low production and prevents any attempt to lower costs. ln order to break this vicious circle, the company hcls approached Government for assistance in the form of:-

(1) the imposition of restrictions on imports of similar or substitute building materials;

(2) the increase of customs tariffs levied on any such imports as are allowed.

These requests by the company are, however, still under consideration.

58. It is proposed to send the first thinnings of the Cc1ribbean Pi,ne plantations (made in December, 1961) to Georgetown for manufacture into particle board.

59. No startling developments have be n noted in the sale of prefabricated houses-even though the local market did increase during this year.

Wood Pulp

60. The Columbium Corporation of the United States of America has not resumed operations on its multi-million dollar project on thF Essequibo and

Mazaruni Rivers. The reasons for the continued delay in re-starting the work are not known.

Utilization Workshop

61. No additions were made to the Utilization Workshop in 1961, but certain plans were drawn up for improvements should the money be forthcoming in 1962.

62. In addition to its normal duties, the Utilization Workshop also maintained a Central Workshop for the overhaul and repair of departmental boats, engines and Land Rovers. This division also services the machinery in the Central Timber Manufacturing Plant. One of the extra jobs undertaken during 1961 was the designing and making of the wooden inkstand presented by the Government of British Guiana to the Government of Tanganyika on the attainment of independence by that country.

PRODUCTION AND TRADE

63. Details of production from Government forests are given in Appendix C, which also shows the common uses of the various timbers. Volumes are expressed in cubic feet (Hoppus measure) in this appendix and in the sections which follow.

64. The total production of timber from Government forests in 1961 was 5,625,000 (5,362,000) cubic feet, of which 3,608,900 (3,359,200) cubic feet was Greenheart. It is obvious that the increase in total production could very nearly be accounted for by the increase in the output of Greenheart. Over two-thirds of the falter increase was produced in the Essequibo Division (see para. 66)

65. The distribution of log production between the four territorial divisions is indicated by the following figures. Note that only species with a production of 20,000 cubic feet or greater are shown individually.

(i) *Essequibo Division*

	Cubic Feet
Greenheart	2,983,000
Mora	162,900
Purpleheart	76,500
Crabwood	75,400
KabukaUi	58,200
Wallaba	35,000
Duka	33,700
Kereti	31,400
Tauroniro	30,600
Kurahara	30,200
Karahoro	**29,500**
Other Species	129,800
	3,676,200

(ii) *Demerara Division*

	Cubic Feet
Greenheart	441,000
Wallaba	220,600
Mora	46,000
Other Species	90,800
	798,400

(iii) *Berbice Division*

Greenheart	[84,900
Crabwood	159,900
Mora	89,100
Kereti	68,700
Wallaba	64,900
Kabukalli	20,800
Other Species	64,200
	652,500

(iv) *North West Division*

Crabwood	187,700
Kirikaua	104,700
Dalli	79,300
Kurokai	49,100
Other Species	77,100
	497,900

GRAND TOTAL 5,625,000 cu. ft. Hoppus

NOTE: These figures include timber removed as logs, roundwood, and split-wood, but do not include logs sawn in the forest.

66. In the Essequibo Division - the major logging area of Guiana - the total production of all timber increased by 153,200 cu. ft. The production of Greenheart, however, increased by 192,300 cu. ft. (7%). These changes were due to nonual trade fluctuations.

67. In the Demerara Division, the total production of timber increased by 21 % (Greenheart and Wallaba increasing by 24% and 31 ro respectively).

68. In the Berbice Division, the total production of all species decreased slightly, the decline being most marked in Greenheart and Wallaba. There was, however, an increase in the output of Mora.

69. Total production showed only a marginal increase in the North West Division. Dalli output fell by 41 %, but Kirikaua increased by 98%. TIle main reason for the decrease in the production of Dalli was a falliing-off of exports

to Surinam. New areas will need to be opened to exploitation by the digging of floating canals.

70. The production of timber from privately owned forests was recorded at 309,000 (380,000) cubic feet for the year. The continued efforts of the department to control shipments fro,m private properties and to ensure that the latter are not used as 'blinds' for illicit removals from Crown Forests are yearly producing better results. Such protection work is much hampered by the lack of established boundaries to many properties, and as a result surveys have to be made for each suspected illegal operation. In many cases, offenders genuinely believe that they are ·within the booods of their own properties.

71. Standard Form IX gives production data relating to local primary forest industries, which are taken, for this purpose, to include all sawmills, the match factory and the particle board factory.

Fuel

72. The produotion of firew-ood duri-ng the year decreased slightly to 1,148,900 cu.ft. (1,352,000) and charcoal production was also lower than in 1960 being 13,114,000 lb. (14,528,000). This product is mainly for export.

Equivalent Out-tum

73. Standard Form VII shows the "equivalent volume of round timber" in true measure under bark for the following categories:- timber, round-wooGl, split-wood, wood for fuel, wood for charcoal. These figures have been obtained by applying suitable factors (given in a footnote to Form VII) to •the volumes recorded for royalty purposes and seek to represent the actual volume of growing timber which went into their production.

Minor Forest Products

74. Balata: Total collection continues to show signs of improvement amounting to 505,242 lb. (497,372 lb.)

75. Ma:ngrove Bark: The amount of mangrove bark collected during 1961 was 640,500 lb. (496,000). This prroduce is used in the local tanneries and is obtained from the banks of the Lower Waini River, North West Division.

76. The indusion here of statistics relating to these two items of minor forest produce renders the use of Standard Form VIII unnecessary and it has accordingly been, omitted.

Imports

77. The gros·s value of imports of timber and wood plfoducts amounted. to $4,192,325 ($3,532,534). There was, therefore, a gross increase of nearly $660,000 or about 19% a!bove the 1960 figUlre. The greater part of this growth could be accounted for by the increased cost of paper and paper products. The gross value of the latter was $2,901,979 ($2,293,540). Other important items which showed increases in the cost of imports were:-

(i) boxes, shooks and cooperage - $440,423 (324,680).
(ii) veneer, plywood, chipboard, fibreboard - $265,336 ($262,800).

There was a welcome_ decline in the value of imported saw-logs (non-conifer) the gross value of which was $354,145 ($447,509); also of sawn timber (conifer) $215,396 ($285,788). It would, however, be imprudent to forecast that any of the declining values are the forerunners of a permanent state. Full details of importtS aire given in Standard Form X.

Exports

78. The total value of exports of forest produce in 1961 amounted to Si4,0ll,811 ($4,413,779). Most authorities feel that the decrease from 1960 levels is due largely to normal trade fluctuations - pairticularly in the timber trade which supplies the bulk of this produce. It is claimed ,that, in 1961, overseas markets were very variable but that, despite this uncertainty, toward!; year-end prospects improved and orders began to pick up again. However, it may be quite possible that this decline is a warning to all concerned of the effects of the increasingly severe competition which Greenheart is being made to face in overseas markets-both because of the growing volume of substitutes and because of price differentials. It would not be unreasonable or too soon for the trade to heed such a warning and be prepared to take all measures not only to be able to push Greenheart more vigorously but also to have another look at their use of the forests and ensure that ıuo potential is being wasted. After all, as bas been pointed out time and again, the accessible Greenheart forests are disappearing and there is a physical and economic limit to the distance inland from which a timber like Greenheart can be extracted.

79. In order to enable easy comparison of the trading years 1960 and 1961 and to show the pattern of the decline, the volumes of the main items of export (timber - n cu.ft. trne measure) are summarized below. Full details are given in Standard Forms X.

Category	1960	1961
I. Logs (non-conifer)	252,242 cu. ft.	120,404 cu. ft.
2. Poles, piling, posts	755.289	481,437
3. Sawn timber	1,364,702	1.148,108
4. Hewn timber	274,935	286.561
TOTALS:	2,647,168 cu. ft.	2,036,510 cu. ft.

The corresponding values are as follows:--

Category	1960	1961
1. Logs (non-conifer)	$ 95,445	$ 54.414
2. Poles, piling, posts	918,637	726,845
3. Sawn timber	2.043,289	1,617,858
4. Hewn timber	450,004	586,258
TOTALS:	$3,507,375	$2,985,375

80. With regard to the import-export trade in wood and wood-products perhaps the most significant feature of 1961 was the fact that for th first time in

recent history the value of imports exceeded the value of exports - as obtained by using the categories shown. In the early 19SO's our returns showed a similar result, but that was prior to the adoption of the Standard International Trade Classification as presently used. In those days, therefore, all imports of "cellulose products" (irncluding artificial silk) were classed under "wood products" and, therefore, augmented the value of imports. Without these, the value of exports would have exceeded that of imports.

81. This unfavournble balance of exports to imports when viewed in the light of the foregoing account of the trade seems to emphasize the general picture of the decreasing value (and unfortunately in this case, volume also) of primary raw-materials exported when compared to the increasing cost and volume of imported manufactured products. It must be expected that the social and economic factors which give rise to the necessity for increasing imports of this type will grow stronger w.ith each passing year and, in a heavily forested tropical country, there will be need for clear thinking and careful planming if the forests are to be used to offset these tendencies as well as to play any significant pa.rt in developing the economy of the country.

Forest Department Timber Yard

82. The Central Timber Manufacturing Plant which is operated by the Forest Department marks the only tangible effort being made by Governmet to implement the fo·est policy of the country. It is Government's earnest that it believes in the future of the timber industry of British Guiana.

83. This Plant purchases rough sawn lumber 0l some twenty-four useful commercial species--other than Greenheart or Crabwood. These purchases are made from private sawmillers throughout the country, and the latter are, therefore, encouraged to produce lumber from species which would not nonnally be sold. The lumber is air-seasoned in the Central Timber Manufacturing Plant, manufactured to lligh quality and iin,ternational standards and specifications, and finally sold in three grades-A, B or D e g rade (u-ejects from A or B.) It is tht only Plant from which such timber, air-seasoned, can be purchased in the country. It can readily be seen, therefore, that it is not the sort of Plant that a businessman would have started in the first place. All men of the latter ilk who deal in lumber are busily selling Greenhea•rt an<l Crabwood - mostly the former species.

84. The Central Timber Manufacturing Plant has been losing money since its inception. This loss is of two types viz:-

(1) An expected trading loss;

(2) A loss due to pilfering, thefts, defalcations and all the abuses to which such concerns can, be subjected.

There will be no likelihood of avoiding losses of the first type until the Plant is so organized as to produce a sufficient volume and to be able to sell it in competition with established mills. fovestigations during 1960 and 1961 proved conclusively that there had been a great deal of pilfering, thefts and defalcations in the past - all of which had resulted in there being far less stock in the Plant than there should have been.

85. During the year. definite attempts to pilfer and defalcate were discovered and frustrated. The Police, who were called in, could not find sufficient evidence to pin-point the evil-doers and departmental discipline **was exer-**

cised as necessary. These incidents concerned both buyilng and selling. In addition several stacks of lumber purchased in the years prior to 1960, when broken for manufacture, were discovered to be considerably short of the recorded volume.

86. The year 1961 marked a continuing effort to prevent such losses. Most procedures and systems were re-.orga!Ilized and greater control secured. Only time will tell how successful the changes will prove to be. However, it is far from being our belief that there is no ro.om for further improvement of our administration and every opportunity is being sought and grasped in order to obtain such results.

87. It was, indeed, unfortunate that I961 proved to be a bad trading year in the timber industry. The decline of the local lumber market, which had taken place in 1960, continued in 196] as there was oo increase in building activity particularly in Georgetown and its environs. Thus, total sales for 1961 - 519, 610 F.B.M. - remained at about the same level as in 1960 (523, 759 F.B.M.). Even this volume was possible only because of the directive that all Government departments must purchase their supplies of lumber from the Central Timher Manufacturing Plant or must secure a certificate of "unavailability" from us to enable purchase from outside sources. In spite of the fact, that, in many instances, Government orders specified "Greenheart" or "Crabwood" which species the Central Timber Manufacturiing Plant purposely does not stock (and, therefore, such orders had to be allowed to be sent outside) and despite, also, a general decrease in the amount of Government building, yet total purchases of all Government departments from the Central Timber Manufacturing Plant increased from J65,089 F.B.M. in 1960 to 193,439 F.B.M. in 1961. There is a far way yet to go in this sector of our business.

88. Exports, which had shown si g n s of being on the upgrade in 1960, fell, very disappointingly, in the latter half of 1961 and finally amounted only to 53,943 F.B.M. (67,509) for the year. There arc many reasons for our continued failure to make more of the timber-deficit Caribbean market and it is hoped that the Marketing E x p ert to be obtained under the auspices of F.A.0. will be -able to help to overcome these obstacles. There is one, however, which deserves mention here and that is due to the dismganized state of our timber industry when species other than Greenheart are concemed. Because of this it is impossible, at this Hme, to guarantee to supply any reasonably large order in a sin l e species. For instance, several orders from Trinidad for Tauroniro (Humiria balsamifera) had to be refused during the year.

89. Other notable events which occurred during 1961 w c r e: -

(1) The incinerator was completely re-sheeted - the old plates having deteriorated to a very dangerous state. The old screen was also replaced.

(2) A new shed was built to store manufactured lumber.

(3) A portion of the land reserved for expansion of the Plant had to be handed over to the British Guiana Electricity Corporation for expansion of their works.

90. The Trading Account and the Sales aind Expcns1:s Account for 1960 and 1961 are given at Appendix E. These ac ounts together with the explana-

tory notes thereon, give a complete picture of the financial position of the Plant. It is regretted that it was found necessary to combine the two years for this purpose, but the u:ncertainty of the 1960 stock position precludes any attempt at obtaining a complete picture of that year alone. This, in turn, leaves us with no definite point at wbich to start the account for 196 l. We have, therefore, gone back to the "book" stocks as given at 1st January, 1960 and tried to tie the stock-taking, completed in 1961, to these beginnings. A return to the normal annual Trading Account will be made in the Report for 1962.

REVENUE AND EXPENDITURE

91. Standard Forms XI & XII give details of revenue and expenditure. Standard Form XI (a) has been omitted from this report since all former Deve-l.op,ment Schemes have now been included in the Recurrent Estimates, and no new schemes have been formulated.

Revenue

92. The total revenue derived from the forest amounted to $430,674 ($436,815). Of this, royalty on forest produce accounted for $423,942 (422,574).

93. Proceeds from the sale of seasoned timber from the Central Timber Manufacturing Plant totalled $152,721 ($159,130).

Expenditure

94. Expenditure (annually recurrent estimates) amounted to $360,691 ($353,505).

95. The Expenditure incurred by the Central Timber Manufacturing Plant in the purchase of unseasoned timber, labour and operating expenses totalled $215,787 ($214,800).

Net Financial Position

96. During the year, there was a surplus of $69,983 ($83,310) of llloc-mal forest revenue over normal expenditure incurred in running the forest service.

97. Regarding the net financial posltlon of the Central Timber Manufacturing Pla.nt, when the accumulated stock loss ($88,777) over several previous years as well as that of the years 1960 and 1961 is brought to account in the latter years and added to the trading losses ($76,369) incurred in those years, it will be seen that the gross loss on trading has to be adjusted at the figure of $165,146.

EDUCATION

Training

98. Mr. K. F. S. King (Assistant Conservator of Forests) left for the United K.iingdom to attend the one year Forest Officers' Post-Graduate training course at the Commonwealth Forestry Institute, Oxford - commencing October, 1961.

99. A five week course was run by the Forest Department at Bartica for the selection and training of Forest Guards.

Publications

100. The 1960 Annual Report of the Forest Department was sent to the printers during 1961 and had not been returned by year end.

101. A start was made in the revision of Forestry Bulletin No. 1 (New Series) with a view to the publication of a third edition.

.Rxhibitions

102. The Forest Department did not participate in any exhibitions during the year.

Talks

103. Mr. K. F. S. King gave a talk entitled "Forestry and its prospects m British Guiana'· to the Royal Agricultural and Commercial Society.

SI'AFF AND LABOUR

Staff

I04. The disposition of staff at the end of the year was:-

Charge	Senior Staff	Intermediate Staff	Subordinate Staff	Clerical Staff
Headquarters	2	1	4	10
Timber Yard	J	1		1
A.P.I. & Survey Division	1	1		
Utilization Division		1	7	
North West Division		1	11	
Essequibo Division (including Silviculture Div.)	2	1	37	2
Demerara Division	1	I	15	1
Berbice Division	/	1	25	2
Vacation Leave (Overseas)	1		1	1
Vacation Leave (Local)			2	
Study Leave (Overseas)				
Vacant Posts		2	3	
Total Stnff	11	10	105	17

Full Establishment - 143

105. Mr. L. E. Dow, Conservator of Forests, proceeded on 6 mOllths' vacation leave on 29th Junc.

I06. During Mr. Dow's absence, Messrs. G. P. A. Forbes, Deputy Conservator of Forests and G. A. Phillips, Utilization Officer, acted as Conservator of Forests and Deputy Conservator of Forests respectively.

107. Mr. C. A. John, Assistaint Conservator of Forests, completed the Forest Officers' Post-graduate course at Commonwealth Forestly Institute, Oxford, and returned to British Guiana during August, 1961.

108. Mr. I. A. Welch, a Guianese who was pursuing studies in Forestry at the University of Michigan, returned to British Guiana in September after graduating with an M. F. degree. He has bem offered an appointment as an Assistant Conservator of Forests.

109. Mr. C. F. Collins, Technical Assistant Grade I, returned to duty after completing a 2-year course in Timber Technology at High Wycombe, U.K., and assumed duty as Assistant Utilization Officer on 30th November, 1961.

110. Mr. F. Hegyi, Assistant Conservator of Forests, assumed duties in November on contract for 3 years. He has taken charge of the Aerial Photo-Interpretation & Survey unit of the Department.

111. Movements in subordinate staff were:-

New Appointments:

Messrs. Deokinandan, M. Shewram. S. Perry and G. Mc. Intyre: Forest Guards

Messrs. L. Phang, F. Hosannah, 0. Clement and R. Morgan: Boathands

Promotions:

Messrs. H. Boodram, G. Boyce, P. Gordon, J. F. H. Ross, and L. Wong: from Forest Guards to Forest Rangers.

Messrs. R. Burrowes, H. S. Dey and L. De Freitas: from Grade II Engineer to Grade I Engineer.

Mr. W. Thom, from Boathand to Forest Guard

Mr. V. Jordan, from Boathand to Grade H Engineer.

Resignations:

Mr. R. B. Chase, Forest Ranger.

Mr. D. Davis, Forest Guard.

Retirement :

Mr. H. F. Charles, Forest Ranger.

Transfers to/from other Departments:-

Mr. W. B. Beck, Forest Ranger. on promotion as Crown Lands Officer to Department of Lands & Mines.

Dismissals.'

Mr. J. Smith - Boathand

112. It is with deep regret that the deaths of Messrs. V. J. Beno (Grade I Engineer) and R. Francis (Boathand) are recorded. Mr. Benn died in January, 1961, at the Public Hospital, Georgetown, after a protracted illness. He was a worker of the 'old school' - willing, diligent, unassuming and capable of quietly getting on with the job. Mr. Francis was tragically drowned at **Para-**

clise, Berbice River in April, 1961. He was a recent appointmeint and was reported to be a good and willing worker. I wish to record the deepest sympathy to the families of these two fellow workers.

Labour

113. The Central Timber Manufacturing Plant employed a labour force of 61 and 6 clerical assistants at 31st December, 1961.

114. Temporary gangs (mainly Amerindian) were recruited as required for silvicultural work.

MISCELLANEOUS

Visitors

115. Mr. Kl!en - regional represeintative of UNTAB visited during January, 1961.

116. Mr. H. C. Dawkins - Silviculturist, Uganda Forest Department, visited during February.

117. Mr. Trafford Smith, C.M.G., Assistant Under Secretary of State, and Mr. A. M. Mac. Kintosh, C.M.G., of the Colonial Office visited during March, 1961.

118. Messrs. Dyke and Dove - members of the Crown Agents visited during May, 1961.

119. Senior pupils of Queens College visited during July, 1961.

120. J. P. Veillon - Professor of Forest Management - University of Merida, Venezue1a, visited during August, 1961.

121. Dr. Bassett Maguire of the New York Botanical Gardens led a Botanical expedition to the Southern Pakaraimas during August to October.

122. Mr. Kasasian - Herbicide agronomist - visited during October, 1961.

123. Mr. Hall - Assistant Conserva.tor ol' Forests, Jamaica - visited during October, 1961.

124. Messrs. Clare & Beaver - of the Caribbia Road Materials Survey, visited during October, 1961.

125. Mr. Gray - F.A.O. Forestry Officer in charge at Belem - visited during December, 1961.

Trade Mission

126. The Conservator of Forests and Mill Manager of the Central Timber Manufacturing Plant paid a short visit to Trinidad in June in connection with the supply of lumber to that Island,

Acknowledgements

127. I wish to record my gratitude to all the numerous people who have in various ways given some assistance to the progress of forestry in British Guiana. Within the confines of the Government itself, 1 wish to convey my gratitude to the Honourable Ministers and staffs of the Ministry of Trade and Industry and the Ministry of Natural Resources. Their willingness to help at all times, their co-operation and their invaluable support have all made my many pressing tasks bearable and, indeed, have often enabled me to accomplish them.

128. Finally, my thanks are due to the staff ot the Forest Department. Many have worked very willingly and very hard and, on the whole, I can truly say that the response and good work have outweighed the lapses. Both the hard workers and those who have erred significantly know my views on their work and attitude. I trust that, in future, I would have no need to end my report on such a note which tells that all is not as well as it should be in the department.

L. ERNEST DOW
Conservator of Forests.

FORM V.

SUMMARY OF FOREST OFFENCES FOR THE YEAR ENDED 31st DECEMBER, 1961.

Category of Offences	Cases reported and brought forward	Cases taken to court				Cases dealt with departmentally			Offenders Unknown		Proceeds from sale of forfeited property	Total No. of cases dealt with	Cases pending
		Fined		Cautioned and discharged	Acquitted	Compounded		Cancelled	Cases	Sale of produce			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
							$ c.			$ c.			
Illicit felling ..	85	—	—	—	—	65	831.50	12	2	43.00	—	79	6
Unlawful possession of forest produce	4	—	—	—	—	2	40.00	1	—	—	—	3	1
Removal permits incomplete; not produced; defaced	97	—	—	—	—	64	596.00	32	—	—	—	96	1
Felling undersized trees	24	—	—	—	—	21	171.00	1	—	—	—	22	2
Making false declaration on a permit	1	—	—	—	—	—	—	1	—	—	—	1	—
Removing and sawing detained logs	1	—	—	—	—	1	25.00	—	—	—	—	1	—
Failing to produce a permit within 24 hours after arrival at destination	8	—	—	—	—	7	228.00	1	—	—	—	8	—
Sawing unmarked logs	3	—	—	—	—	2	18.00	1	—	—	—	3	—
Total ..	223	—	—	—	—	162	1,909.50	49	2	43.00	—	213	10

909

FORM VII

OUTTURN IN SOLID CUBIC FEET* OF TIMBER AND FUEL FOR THE YEAR ENDED 31ST DECEMBER, 1961.

Timber	Roundwood	Splitwood	Wood for Fuel	Wood for Charcoal	Total
6,927,593 (6,565,615)	140,179 (164,679)	75,796 (56,827)	1,436,070 (1,690,000)	1,580,715 (1,751,203)	10,160,353 (10,228,324)

NOTE :—

* The equivalent of round timber in true measure under bark.

Timber :— Logs and wood sawn in the forest, and transmission poles.
Roundwood :— Posts and Spars
Splitwood :— Shingles, paling and vat staves.

Figures in brackets are corresponding statistics for previous year, 1960.

CONVERSION FACTORS

The equivalent of round timber in true measure under bark is obtained from the various units in the following manner:

Category	Unit	Conversion Factor
1. Logs (including transmission poles) ..	cu.ft. Hoppus	× 5/4
2. Roundwood spars	lin. ft.	÷ 100
3. Paling Posts	lin. ft.	÷ 5
4. Shingles	pieces	÷ 50
5. Paling Staves	pieces	÷ 12
6. Vat Staves	lin. ft.	÷ 25
7. Sawn timber	ft. B.M.	÷ 6 x 5/4
8. Firewood	tons	× 40
9. Charcoal	tons	× 270

FORM IX

PRIMARY FOREST INDUSTRIES, 1961

Particulars of Industry	Quantity of Wood (home grown or imported) consumed in cu. ft. Hoppus (i).	No. of Persons Employed (ii)
Sawmills	5,091,465	2,220
Match Factory ..	49,159	211
Particle board factory ..	272,320	40
TOTAL	5,412,944	2,471

NOTE :—

(i) These figures are based on those supplied by the industry concerned.
(ii) These figures are rough estimates only and are not based on a census.
(iii) Value of outturn ex factory is not available

FORM X

IMPORTS AND EXPORTS OF TIMBER, WOOD PRODUCTS AND MINOR FOREST PRODUCTS DURING THE YEAR ENDED 31ST DECEMBER, 1961.

Category	Gross Imports		Gross Exports (a)		Nett Imports or Exports *		Average Annual Nett Imports or Exports* for quinquennium ended 31.12.61		Item No.	Percentage by value of gross imports from different sources, or exports to different destinations during the year, 1961. 10% and over
	Q'ty.	Value	Q'ty.	Value	Q'ty.	Value	Q'ty.	Value		
1. Fuelwood	40	281	52,640	9,524	52,600*	9,243*	1,328,677*	248,403*	1	To W.I. 100
2. Charcoal	—	103	1,279,260	236,500	1,279,260*	236,397*			1	From W. Germany 100
									2	To U.K. 84; W.I. 16
3. Logs (non-conifer) ..	354,145	81,111	120,404	54,414	233,741	26,697			2	From U.K. 95
									3	To Surinam 100
4. Hewn Timber	—	—	286,561	586,258	286,561*	586,258*			3	From Surinam 96
									4	To U.K. 78; Netherlands 19
5. Poles, Piling and Posts (Non-conifer) ..	7,112	2,110	481,437	726,845	474,325*	724,735*			5	From Canada 100
6. Railway Sleepers ..	—	—	7,655	11,894	7,655*	11,894*	1,747,245*	3,003,237*	5	To U.S.A. 42; W.I. 41
7. Sawn Timber (conifer) ..	182,472	215,396	—	—	182,472*	215,396			6	To W.I. 100
8. Sawn Timber (non-conifer)	—	—	1,148,108	1,617,858	1,148,108*	1,617,858*			7	From Canada 99
									8	To U.K. 30; W.I. 25; U.S.A. 20
9. Veneer, Plywood, Chipboard, etc.	24,086	140,489	—	53,938	—	86,551	—	113,044	9	To W.I. 99
									9	From Surinam 50; U.K. 17; Canada 10
10. Fibreboard	—	124,847	—	—	—	124,847	—	142,178	10	From Sweden 71
11. Boxes, Shooks, Cooperage, etc.		440,423		31,930 (b)		408,493		487,563	11	To W.I. 100
									11	From US.A. 68; France 23
12. Miscellaneous Manufactured Wooden Articles ..		55,577		2,127		53,450		42,586	12	To U.K. 15; Surinam 11; W.I. 70
									12	From U.K. 29; Denmark 11; Netherlands 11; Canada 11: U.S.A. 10

FORM X.—(Cont'd)

IMPORTS AND EXPORTS OF TIMBER, WOOD PRODUCTS AND MINOR FOREST PRODUCTS DURING THE YEAR ENDED 31ST DECEMBER, 1961.

(Continued from page 28)

Category	Gross Imports		Gross Exports (a)		Nett Imports or Exports *		Average Annual Nett Imports or Exports* for quin-quennium ended 31.12.61		Item No.	Percentage by value of gross imports from different sources, or exports to different destinations during the year, 1961 10% and over
	Q'ty.	Value $	Q'ty.	Value $	Q'ty.	Value $	Q'ty.	Value $		
13. Furniture & Cabinet ware		189,010		3,363		185,647		172,701	13	To U.S.A. 14; W.I. 80 From Romania 29; CZ 22; U.K. 17; U.S.A. 16
14. Matches		2,160		45,834		43,674*		43,326*	14	To W.I. 100 From U.S.A. 54; U.K. 39
15. Newsprint		377,295		—		377,295)			15	From Canada 89
16. Paper and Paper Board ..		884,890		—		884,890)		2,294,176	16	From U.K. 49; Canada 18; Sweden 11
17. Paper and Paper Board Manufactures		1.639,794		—		1,639,794)			17	From U.K. 40; Sweden 16; Canada 14; U.S.A. 11
18. Gums, Resins & Latex ..		37,748		631,326 (c)		593,578*		468,368*	18	To U. K. 100 From U.S.A. 60; India 10
19. Tanstuffs		—		—		—		(d)		
20. Plaiting Materials and Manufactures		1,091		—		1,091		4,282	20	From Hong Kong 82; W.I. 18
		4,192,325		4,011,811		180,514		506,804*		

Notes:— Quantities, where mentioned are given in cubic feet, the equivalent of round timber in true measure under bark.

(a) Domestic Produce
(b) Including Shingles 95,821 doz. valued at $27,840.
(c) Balata Latex
(d) Not available.

FORM XI

SUMMARY IN DOLLARS OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED 31ST DECEMBER 1961

REVENUE			EXPENDITURE												
			Annually Recurrent												
Royalty on Forest Produce	Other Forest Revenue	Total	Personal Emoluments	Travelling	Other Administrative Charges	Equipment & Materials	Research and Investigations	Revenue Protection	Silviculture	Utilisation	Miscellaneous	Total Annually Recurrent	Special Non-recurrent	Grand Total	Surplus
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
423,942	6,732 (a)	430,674	255,054	30,419	33,239	1,340	4,817	1,030	21,125	(b)	9,425	356,449	4,242	360,691	69,983

(a) Revenue from fees, licences, fines, compounding fees and seizures.

(b) Revenue and expenditure in connection with the Central Timber Manufacturing Plant are given at Appendix E.

FORM XI (a) has been omitted since there has been no development Expenditure for the year ended 31st December, 1961.

FORM XII

COMPARATIVE STATEMENT IN DOLLARS OF REVENUE AND EXPENDITURE (FROM FOREST DEPARTMENT VOTES) FOR THE TEN YEARS ENDED 31st DECEMBER, 1961.

	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Revenue ..	302,960	295,551	392,544	448,200	467,672	437,184	421,153	429,766	536,815	430,674
Expenditure ..	148,500	160,170	190,317	225.248	242,246	254,792	278,110	281,816	353,505	360,691
Surplus ..	154,460	135,381	202,227	222,952	225,426	182,392	143,043	147,950	83,310	69,983

APPENDIX A.

Explanation of terms used in the Report

The local currency sign $ refers to British Caribbean Dollars. The sterling equivalent of the dollar is 4s. 2d.

Balata: the coagulated latex of the tree, Manilkara bidentata, used in the manufacture of machine belting.

Ballahoo: a flat bottomed boat.

Bateau: a round bottomed, steamless boat with rising keelson.

Division: a major administrative unit, in the charge of a senior officer.

Forest station: the headquarters of any forest administrative unit, comprising officers' quarters, office accommodation, storeroom, boathouse, etc.

Hoppus measure: the volume of round timber obtained from the formula

$$\frac{(\text{girth})}{4} \times \frac{(\text{girth})}{4} \times \text{length}.$$

Particle-board a material made by consolidating a mixture of wood particles (in the form of chips, shavings or sawdust) and glue into boards or sheets with pressure and heat.

Range: a minor administrative unit, in charge of a sub-ordinate officer.

Regeneration: the renewal of a forest crop by natural or artificial means.

Seasoning: the drying of timber, under suitable conditions, before use.

Wood pulp: Wood fibres which have been separated by chemical or mechanical means and used for making paper, textile, and many other products derived from cellulose.

APPENDIX B

RAINFALL (in inches) 1961.

Locality of Guage	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
North West Division													
Mabaruma ..	7.16	1.74	.68	.10	7.05	14.82	12·16	13.12	19.89	10.81	10·20	6.48	104.21
Morawhanna ..	7.32	1.93	.61	.48	6.02	11.35	11.99	9.82	9.91	6.60	9.99	6.41	82.43
Hosororo	4.07	.89	.38	.05	4.13	9.17	7.33	8.82	9.63	3.81	6.88	3.87	59.03
Acquero ..	3.73	2.55	1.28	.22	9.43	17.69	10.00	5.86	8.30	4.80	9.71	8.70	82.27
Essequibo Division													
Winiperu	4.89	2.36	.27	.26	7.29	11.30	8.25	3.68	6.98	3.80	5.95	4.35	59.38
1½ miles Potaro Road	9.75	.81	.37	.30	9.33	16.33	5.72	5.56	10.35	3.54	6.32	8.74	77.12
72 miles Potaro Road	7.02	2.30	.45	.47	11.39	17.03	10.37	5.82	3.34	2.11	4.81	8.06	73.17
Penal Settlement ..	5.80	1.63	1.49	.12	5.99	16·22	6.10	6.29	6.99	7.33	4.90	7.97	70.83
Pickersgill ..	10.34	3.02	.64	.21	5.82	12.15	7.07	3.12	8·06	3.55	9.27	11.18	74.43
Demerara Division													
Ituni	6.05	2.15	—	—	6.67	15.28	8.96	9.98	8.78	3.16	2.39	9.29	72.71
Vreed-en-hoop ..	2.59	1.10	.38	.36	3·67	13.74	11.73	8.97	1.63	1.65	3.95	6.10	55.87
Georgetown ..	4.39	2.09	.81	·50	4.41	14.83	10.10	10.17	1.69	2.53	5.16	6.28	62.96
Mahaicony ..	2.75	1.81	.39	.57	3.76	12.30	7.41	7·53	1.13	.99	3.57	3.56	45.77
Mahaica	5.93	.94	·36	—	6.55	12.89	7.54	7.53	3.96	3.63	3.16	5.58	58.07
Soesdyke	4.27	2·20	.35	.21	7.16	13.07	9·29	6.70	4.01	4.24	8.58	7.35	67·43
Mackenzie ..	3.75	3.64	.26	.16	5.87	11.71	10.58	9.98	7.49	7.96	6.82	10.76	78.98
Berbice Division													
New Amsterdam ..	3.99	1.83	.10	.57	5.51	13.27	20.00	11.43	1.27	1.00	4.02	5.16	68.15
Skeldon ..	1.74	2.34	.71	.37	8.57	10.64	13.93	2.78	1.20	2.25	2.72	7.81	55.06
Rosehall Front ..	3.25	.82	.24	.38	5.04	11.70	15.75	7.30	2.04	2.50	3.52	4.48	57.12
Rosehall Back ..	3.32	1.12	.18	.30	5.97	12.87	15.36	8.34	1.59	1.93	4.18	5.86	61.02
Kwakwani ..	9.46	2.11	.66	.38	7.05	13.93	11.85	9.41	2.23	3.05	2.15	6.86	69.14
Siparuta ..	4.28	1.25	.49	.46	4.77	11.68	9.04	6.24	1.51	1.17	—	7.47	48.36

Note : These figures are obtained from the Departments of Agriculture and Drainage and Irrigation.

APPENDIX C.

PRODUCTION OF TIMBER FROM GOVERNMENT FORESTS IN 1961.

(a) Logs, Splitwood and Roundwood.

Local Name	Botanical Name	Volume to nearest 100 cu. ft. (Hoppus)	Royalty to nearest $10.00	Main Use
1. Greenheart ..	Ocotea rodiaei ..	3,608,900	288,710	1 (Export trade), 5, 6, 8, 10 (Vat bottoms).
2. Crabwood ..	Carapa guianensis ..	428,200	34,260	5, 6, 7, 8, 13
3. Wallaba ..	Eperua spp. ..	320,500	16,020	2 (Export trade) 3, 9, 19
4. Mora ..	Mora excelsa ..	307,100	15,360	4 (Export trade), 5, 6, 8, 12, 14 (Felloes, Naves)
5. Kereti ..	Ocotea spp. ..	126,100	6,300	7, 11, 13, 16
6. Kirikaua ..	Iryanthera lancifolia ..	104,700	5,230	7, 11, 16
7. Dalli ..	Virola surinamensis ..	98,400	2,950	7, 11, 18, (logs—Export trade).
8. Kabukalli ..	Goupia glabra ..	84,300	4,210	5, 6
9. Purpleheart ..	Peltogyne spp. ..	78,300	6,160	5, 6, 8, 13
10. Kurokai ..	Protium decandrum ..	60,800	3,040	7, 13
11. Karohoro ..	Didymopanax morototoni ..	60,100	1,800	17 (splints)
12. Tauroniro ..	Humiria balsamifera ..	54,500	2,730	5, 6, 8
13. Duka ..	Tapirira marchandii ..	45,900	1,380	7, 11, 17, (boxes)
14. Simarupa ..	Simaruba amara ..	38,100	1,900	7, 11, 16
15. Brown and Yellow Silverballi ..	Aniba and Licaria spp...	20,000	1,600	7, 11, 13, 15, 16
16. Futui ..	Jacaranda copaia ..	17,600	530	11, 16
17. Locust ..	Hymenaea spp. ..	16,700	840	5, 6, 8, 13
18. White Cedar	Tabebuia insignis var. ..	14,200	430	7, 8
19. Red Cedar ..	Cedrela odorata ..	14,200	1,140	13
20. Manui ..	Symphonia globulifera..	9,900	490	5, 6, 8
21. Bulletwood ..	Manilkara bidentata ..	9,800	780	4, 5, 12, 14
22. Determa ..	Ocotea rubra ..	9,700	490	7
23. Dukali ..	Parahancornia amapa	8,900	440	7, 11, 16, 18
24. Tatabu ..	Diplotropis purpurea	5,900	290	5, 13, 14, 15
25. Warimia ..	Tapirira guianensis ..	5,800	170	7, 11, 17 (boxes)
26. Hububalli ..	Loxopterygium sagotii..	5,300	270	13, 18
27. Manniballi ..	Moronobea coccinea ..	5,200	260	5, 13
28. Kurahara ..	Calophyllum lucidum ..	3,000	150	7, 13
29. Kakaralli ..	Eschweilera spp. ..	1,900	100	1
30. Kanakudiballi	Alchornea spp ..	1,400	40	16
31. Baradan ..	Ocotea tomentella ..	1,200	40	11, 16
All other species		58,400	1,750	
Total		5,625,000	399,860	

APPENDIX C — (Cont'd.).

(b) Sawn Lumber*

Category	Volume to nearest 100 ft. B.M.	Equivalent Volume H.P. to nearest 100 cu. ft.	Royalty to nearest $10.00
Class I	70,300	11,700	840
Class II	455,300	75,900	3,640
Class III	7,700	1,300	30
	533,300	88,900	4.510

Note: * Lumber produced in sawpits, royalty being paid on the sawn volume and not on the round log.

KEY TO USES

1. Piles and other marine uses
2. Transmission poles
3. Paling posts, staves (stakes) vat staves
4. Railway sleepers
5. Framing (including rafters)
6. Walls (exterior sheathing)
7. Walls (interior partitions)
8. Floors
9. Shingles
10. Cooperage (tanks, tubs and vats)
11. Boxes, crates and shooks
12. Bridges and culverts
13. Furniture and cabinet ware
14. Wheelwright work (carts etc.)
15. Boat building
16. Concrete shuttering
17. Matches
18. Plywood
19. Particle-board

APPENDIX D

Price ranges in 1961 for the main timber species and other forest products

TIMBER

Species	Lumber at Mill (price in cents per cubic foot)				Lumber ex Mill (price in cents per board foot)			
	Place	Minimum	Place	Maximum	Place	Minimum	Place	Maximum
1. (a) Greenheart (Shipping Squares)	Georgetown	.80c.	Georgetown, Bartica	$1.50	—	—	—	—
(b) Greenheart (local)	Christianburg	.48	New Amsterdam	.96	Soesdyke, Supenaam	.18	Georgetown,	.28
2. Purpleheart	Georgetown, New Amsterdam	.32	Springlands	.90	New Amsterdam	.15	Georgetown, Bartica, Christianburg	.22
3. Crabwood	Christianburg	.20	Springlands	1.04	Springlands, Supenaam	.14	Georgetown, Parika	.24
4. Red Cedar	Christianburg	.20	Springlands	1.12	Pomeroon	.16	Barima	.36
5. Mora	Waini	.18	Springlands	.75	Pomeroon	.08	Georgetown	.20
6. Kurokai	Christianburg, Barima	.18	Parika	.40	Soesdyke, Pomeroon	.12	Christianburg, Barima, Waini	.20
7. Kereti	Barima	.17.	Springlands	.90	Pomeroon	.10	Georgetown, Christianburg	.20
8. Kabukalli	Christianburg	.24	Springlands	1.00	Pomeroon	.10	Georgetown	.25
9. Simarupa	Waini	.15	Springlands	.70	Pomeroon	.10	Christianburg	.20
10. Dalli	New Amsterdam	.12	Mahaicony	.32	Pomeroon	.06	Barima	.19
11. Silverballi (brown)	Christianburg	.32	Mahaicony	.90	Pomeroon	.08	Christianburg	.30
12. Tauroniro	Christianburg	.24	Springlands	1.00	Pomeroon	.10	New Amsterdam	.20
13. Kirikaua	Barima	.15	Soesdyke	.36	Soesdyke,	.10	Christianburg	.20
14. Duka	Barima	.10	Parika	.28	Pomeroon	.06	Parika	.16
15. Karohoro	Soesdyke, Christianburg	.14	Parika	.32	Soesdyke, Mahaicony	.08	Georgetown, Parika	.16

OTHER FOREST PRODUCTS

Forest Products	Location	Price (Minimum)	Location	Price (Maximum)	Per Unit
Wallaba Transmission Poles	New Amsterdam	.62	Georgetown, Mahaicony	1.00	Lin. ft.
Wallaba Posts, 3"—6" diameter	Siparuta	.05	Bartica	.12	Lin. ft.
Wallaba Posts, 6"—10" diameter	Georgetown, Mahaicony	.08	"	.12	Lin. ft.
Wallaba Vat Staves	Soesdyke, Christianburg	.07	Georgetown Bartica Soesdyke	.12	Lin. ft.
Wallaba Paling Staves	Paradise	4.25	Mahaicony	9.00	100
Wallaba Shingles	Pomeroon	11.00	Soesdyke	24.00	1000
Firewood	Mahaicony	4.80	Springlands	10.00	Ton
Charcoal	Siparuta	1.12	Barima	2.75	Cwt.
Mangrove bark	Waini	1.10	Waini	1.10	100 lbs.

APPENDIX E

(i) CENTRAL TIMBER MANUFACTURING PLANT —TRADING ACCOUNT 1960 AND 1961.

Item	Quantity Ft.B.M.	Average rate	Total Value		Item		Quantity ft.b.m.	Average rate	Amount		Total Amount	
Stock at 1/1/60 (1)					**Sales** (3)							
					Manufactured	1960	399,272					
						1961	423,284					
Manufactured ..	179,724	21.8	39,179	83			822,556	30.6	252,461	41		
Rough Sawn ..	1,093,922	16.77	185,966	74	Rough Sawn	1960	124,487					
						1961	96,326					
Purchases (2)							220,813	26.8	59,390	19	311,851	60
Rough 1960 ..	746,374	17.5	131,026	81								
,, 1961 ..	780,746	15.7	122,647	46	**Stock-on-hand** (4)							
Expenditure					Manufactured		110,380	21.8	24,062	84		
Wages 1960 ..			72,563	23	Rough Sawn		922,319	16.77	154,672	90	178,735	74 (6)
1961 ..			81,797	22								
Misc. 1960 ..			11,210	11								
1961 ..			11,341	89	Loss (5)						165,145	95
			655,733	29							655,733	29

NOTES (1) to (6) pl. see p. 40.

APPENDIX E.—Cont'd.

(ii) CENTRAL TIMBER MANUFACTURING PLANT

SALES AND EXPENSES 1960 AND 1961

COST OF SALES

Particulars	ROUGH			DRESSED			Total
	ft. b.m.	Rate	Amount	ft. b.m.	Rate	Amount	Amount
Stock on Hand 1/1/60 (1)	1,093,922	17.	185,966.74	179,724	21.8	39,179.83	
Purchases: 1960 (2)	746,374	17.5	131,026.81				
1961	780,746	15.7	122,647.46				
Produced from Mill 1960/61				826,772	21.8	173,312.08	
	2,621,042	16.77	439,641.01	1,006,496	21.8	212,491.91	652,132.92
Stock at 31/12/61 (4)	922,319		154,672.90	110,380		24,062.84	(6) 178,735.74
	1,698,723		284,968.11	896,116		188,429.07	473,397.18
Sales	1,254,278		232,702.27	822,556		252,461.41	485,163.68
Cost of Sales			52,265.84			64,032.34	11,766.50

EXPENSES	Wages	Power & Misc.	Total
1960	72,563.23	11,210.11	83,773.34
1961	81,797.22	11,341.89	93,139.11
	154,360.45	22,552.00	176,912.45

SALES

Particulars	ROUGH		DRESSED		Total
	ft. b.m.	Amount	ft. b.m.	Amount	Amount
Sent to Mills	1,033,465	173,312.08			173,312.08
Sales (3)	220,813	59,390.19	822,556	252,461.41	311,851.60
	1,254,278	232,702.27	822,556	252,461.41	485,163.68
Cost of Sales					11,766.50
Stock loss (5a)	444,445	72,741.04	73,560	16,036.08	88,777.12
Other Loss (5b)					76,368.83
	1,698,723		896,116		176,912.45

NOTES (1) to (6) pl. see p. 40.

NOTES: APP. E (i) TRADING ACCOUNT, 1960 and 1961.
(ii) SALES AND EXPENSES, 1960 and 1961.

GENERAL: It was found necessary to combine the Trading Accounts for the years 1960 and 1961 because the stock-taking, begun in 1960, was not completed until 1961. As pointed out in paragraph 96 of the Annual Report for 1960, this stock-taking involved far more work than normal.

NOTE (1) This is a 'book' stock only. It also differs from the figure previously given as the closing stock at 31st December, 1959 (See Annual Reports 1959 and 1960) — being 56, 367 F.B.M. less in aggregate. In 1961, when checking the computations (which had been made in the previous year) of the closing stock at 31st December, 1959, it was discovered that several arithmetical errors had been made — giving rise to this difference.

NOTE (2) As has been previously stated there is more than ample evidence of large-scale pilfering and defalcations in the years prior to the early part of 1961 when the entire procedure for tallying and checking were re-organized. Hence, purchases in 1960 and early 1961 were almost certainly subject to these abuses.

NOTE (3) As in Note (2); also, sales in 1960 and early 1961 may well have been subject to the pilferings etc. which had been prevalent before that period.

NOTE (4) These figures were obtained by a physical check of the greater part of all dressed material and some rough material (i.e. that part which had to be collected and sorted from numerous untidy bundles which had been lying around the Yard). Since no standing stacks were broken for stock-taking, the total volume of timber which is recorded for those stacks which were built prior to early 1961, is accepted here, subject to re-tally when they do come to be broken for manufacture.

NOTE (5) These figures do not represent the loss incurred by the Plant in 1960 and 1961 only. They represent:—

(5 a) The accumulated stock-loss over several years — by degrade, normal wastage, theft, defalcations etc.

(5 b) The "Trading Loss" during the two years 1960 and 1961; this includes loss on conversion (i.e. in manufacturing) which, as can be calculated from the Statement, was 206,693 F.B.M. valued at $34,662.42 (i.e. at *cost* value of 16.77 cents per F.B.M.)

NOTE (6) Value of Stock on hand; the table below gives the actual *sales* value of the stock on hand — for comparsion with the *cost* value which is used in the Trading Account:—

Manufactured Stock:		
110,380 F.B.M. @ 30.6 cents per F.B.M.	=	$ 33,776.28
Rough Stock:		
922,319 F.B.M. @ 26.8 cents per F.B.M.	=	$247,181.49
		$280,957.77
Cost of Stock on hand:		$178,735.74
Excess of Value over Cost:		$102,222.03