

219
G U Y A N A

ANNUAL REPORT

OF THE

FOREST DEPARTMENT

FOR THE YEAR

1967

C O N T E N T S

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GENERAL REVIEW

1. The most noteworthy features of the year vis-a-vis forestry are given below. Figures in brackets refer to the relevant paragraphs in the Report.

- (i) Government takes an important step towards the implementation of the forest policy of Guyana (2)
- (ii) Continued decline in number of small loggers (13)
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FOREST POLICY AND LEGISLATION

FOREST POLICY

2. The forest policy of Guyana remains as follows:-
- (i) To develop the forest resources of the country as part of an integrated land use policy for the conservation and development of 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 exploration of the forest crop.
 - (v) To develop markets for species now considered to be unmerchantable.
 - (vi) To provide access to forest areas.

Government's joint venture with the UNSF (The Forest Industries Development Survey Project - See Appendix F) must be regarded as an earnest of its intention to take the necessary steps towards implementation of this policy. For far too many years the policy has remained as just a statement on a piece of paper.

LEGISLATION

3. There were no changes in the forest laws during 1966 and the forests of the country continue to be administered according to the provisions of the Forests Ordinance of 1953 and the Forest Regulations of 1953 together with the Forests (Amendment) Regulations of 1961. During the year, however, certain suggested amendments were made to the Forests Regulations and these were being studied by the law officers at year-end.

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 is presently inaccessible to logging and unless there is a considerable opening of the interior - by roads and settlement - the forests of this area are likely to remain beyond the reach of commercial logging for many years to come. In the north-east, however, (i.e. between the lower courses of the Essequibo and Corontyne Rivers) there are logging operations within the Crown Lands, but these produce less than 8% 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 century. It is of interest to note, however, that within this portion of the Crown Lands are to be found many areas of possible use for large-scale introduction of fast-growing exotic species. It is proposed - in the 1966 - 72 Development Plan - to carry out extensive field trials along these lines and it will become necessary to ensure that all plantations which will be established are given adequate protection against other forms of land use.

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

ADMINISTRATION AND MANAGEMENT

7. The Forest Department continued to operate under the Ministry of Agriculture and Natural Resources.

8. Once again, during 1967, the strength of the clerical staff of the Forest Department was unsatisfactory, even though at year-end one Class I Clerk was added to take charge of the Cashier's job - which had previously been done by a Class II Clerk. On the other hand, all four of the experienced Class II Clerks left the department (two left the service) and their places were taken by young and inexperienced, even though very willing, temporary clerks.

9. The administration of the department was firmly established under the new specialized administrative and management unit. This unit, centralized at headquarters, is under charge of a Senior Assistant Conservator of Forests with one Assistant Conservator of Forests to help him. Each territorial division (four) is headed by a Senior Forest Inspector who is, in turn, assisted by a Forest Inspector. The chain of command, therefore, extends from the division to the central unit, through the Conservator (where necessary) to the Ministry. All the snags and problems which must of necessity arise from this type of centralisation and integration have not yet been overcome or solved, but, on the whole, the system is working well and difficulties arise more through personalities than because of weakness in the principle under which the system is designed to operate.

10. The distribution and area of Crown Forest leases in force at the end of 1967 were as follows:-

ACREAGE	North West Division	Essequibo Division	Demerara Division	Berbice Division	TOTAL
Under - 500	-	3	-	-	3
501 - 3,000	-	13	1	-	14
3,001 - 10,000	-	2	6	4	12
10,001 - 50,000	1	7	12	9	29
Over - 50,000	-	4	-	1	5
TOTAL - NUMBER	1	29	19	14	63
TOTAL - ACREAGE	46,350	1,794,270	320,850	276,840	2,438,310

11. There is really no significant change either in the number or sizes of leases as compared to the year before. A number of leases expired during 1967 and have not yet been renewed for one of a variety of reasons e.g. failure of the logger to clear or re-demarcate his boundary lines. One more disturbing reason, however, for the failure to effect early renewals is that, because of the lack of trained staff, the department finds itself unable to survey these leases as quickly as it would like to do.

However, in any such case, the lessee's operations are not affected as he is allowed to continue work under a temporary permission (exclusive).

12. A total of 1,291 (1,333) non-exclusive permissions was issued during 1967. The distribution was as follows:-

DIVISIONS:

NORTH WEST	505
Essequibo	423
Berbice	271
Demerara	92
	<hr/>
	1,291
	<hr/>

The continued decline in the number of these permissions (1964 - 1,486; 1965 - 1,372; 1966 - 1,333) is worthy of note.

13. The reason for this continued decrease as well as for the comparatively small number of leases below, 3,000 acres in area (1958-84, 1967-17) is simply that there is an ever decreasing number of areas which are sufficiently well wooded and near to a river for small men to work profitably, whether it is accepted or not, logging now requires capital and expertise and the day of the small lessee with his agricultural-type tractor and, maybe, a 7 ton truck is rapidly coming to a close.

14. No formal working plans have yet been drawn up because of the present - and long established - wide-ranging pattern of forest exploitation coupled with the lack of certain basic data necessary for planned management. The system of block-working continues to be operated in the bigger leases. This system, however, leaves much to be desired being very difficult to enforce consistently. It is hoped that one effect of the present U.N.S.F. Forest Industries Development Survey will be to enable proper plans to be drawn up for, at least, the better forest areas.

STOCKMAPPING

15. During the year forest type maps of the following areas were prepared by the use of aerial photographs:-

- (a) The Iturbisi River Basin (Essequibo); scale 1:30,000; area covered - 36,000 acres approximately.
- (b) The Blue Mountains Region, L.B. Cuyuni River; scale 1:50,000; area covered - 216,000 acres approximately.
- (c) The Bartica Triangle - from Mile 43 to Mile 72 on the Bartica-Potaro Road; scale 1:25,000 area covered - 531,000 acres approximately.
- (d) The Paidaka - Kamwatta Basins, L.B. Berbice River; scale 1:25,000; area covered 107,000 acres approximately.

16. Thus a total area of 1,391 square miles approximately (890,000 acres) was typed-mapped. Unfortunately, the scale of the maps, depending upon the scale of the photography or of the available base maps, could not be made uniform.

17. In addition to the above, work was started on the type-mapping of a belt of forest approximately 50 miles wide which is considered to contain the most accessible areas of the presently unexploited forest of the Country. This work was done under the U.N.S.F. project (Forest Industries Development Survey) about which more details are given in Appendix F.

18. Apart from the prints (44) of a test strip flown over the dalli-bearing forests between the Waini and the Barima Rivers, N.W.D., (scale 1:10,000) no new photographs were obtained during 1967, but an order for 796 prints of the aerial photographs taken by the RAF in 1964 was placed with the Crown Agents and delivery was expected early in 1968.

SURVEYS

19. The entire surveys division has been working full time on the U.N.S.F. Forest Industries Development Survey project - the Assistant Conservator of Forests in charge being the counterpart of the U.W. Officer. An account of the work done during the year is given in Appendix F. Since the Surveys Division lacked sufficient staff to engage in this work, two Forest Rangers and two Forest Guards, who had shown aptitude for this type of work, were transferred to this division during the year.

COMMUNICATIONS AND BUILDINGS

ROADS

20. Standard Form IV is omitted from this report as no roads or other internal forest communications are constructed or maintained by the Forest Department.

ROAD VEHICLES

21. No new road vehicles were purchased during the year, but one Land Rover was condemned. The work-shop continued to service and repair all departmental vehicles - as well as those belonging to the U.N.S.F. Forest Industries Development Survey Project (a total of nine vehicles). Major repairs were done to four vehicles and normal maintenance to the remainder. All work is being considerably hampered by the difficulty experienced in obtaining spare parts of all types.

WATERWAYS

22. Only one minor work of creek-clearance (Haiama Creek) was done in 1967.

BOATS

23. Two new bateaux were built in the boat-building shop during the year and a third was nearing completion at year-end. One bateau was completely overhauled and refitted and general repairs were done to three other boats. In addition, the two new bateaux, built in 1966 for the U.N.S.F. scheme, were launched in 1967.

24. There were 30 boats in service or under repair at the end of 1967. One bateau was condemned and sold during the year.

ENGINES

25. The mechanical workshop carried out major overhauls to two outboard and six inboard engines during the year as well as normal maintenance and minor repairs to several other engines and ancillary equipment. The responsibilities of the workshop increased considerably during the year - by the addition of two new departmental outboard engines as well as nine outboard and two inboard - outboard engines belonging to the U.N.S.F. project. This is, of course, in addition to the road vehicles (para. 21). The continuing shortage of spare parts in the country makes the task of the workshop exceedingly difficult and frustrating.

REQUESTS FOR TRANSPORT

26. The department continued to assist other government departments by the loan of its boats and crews. It is now considered necessary that full charge must be made for such services since the Forest Department is presently absorbing all the maintenance costs involved.

BUILDINGS

27. A part of the new office for the Surveys Division was completed at year end - sufficient for occupation. A new pre-fabricated building (made in the workshop) was erected at Siparuta Forest Station to house the new office there. The Forest Rangers' quarters were also repaired and repainted and a new trestle and overhead water-tank erected.

28. The extensions to the office of the C.T.M.P. were completed and the various new officers for the U.N.S.F. project (See Appendix F) were finally outfitted and furnished.

29. The Ministry of Works was given the warrant to build a boat-house on the Canje River (outside New Amsterdam) and also to install a water pump at Siparuta, Corentyne River, and build a fuel bond at Paradise, Berbice River. The boat-house was not started at year end but materials had been purchased.

PROTECTION

30. A total of 84 (101) forest offences was brought forward or reported during 1967. Of this amount 75 (89) were dealt with and 9 (12) were pending at the end of the year. The illicit felling of trees - 41 (60) cases - continued to be the most prevalent offence. (See from V for details.)

SILVICULTURE

31. With the help of the Youth Division and through careful husbanding of the current (maintenance) vote for Silviculture it was possible to carry out a very limited programme of work.

ARTIFICIAL REGENERATION - EXOTICS

32. At Haiama Creek, L.B. Demerara River, a further 15 acres were put under Caribbean pine - bringing the total acreage in this area to 100. At Ebini, Berbice River, only one acre could be planted - for laying out a research plot in 1968. However, at this nursery, 82,000 seedlings were lined out in polythene bags, while at Haiama Creek Station, four pounds of Caribbean pine seed were sown and, at year end, there was a stocking of 52,000 seedlings in the nursery.

33. Eighty acres of pine plantation at Five Miles, Bartica-Potaro Road and further five acres at Wauna, North West District, were weeded and cleaned (climbers cut back) and the normal acoushi ant (leaf cutting *Atta* spp) patrols were maintained. Trials were being made with a new type of poison bait ("New Mirex") to compare its effectiveness, costs etc., with those of the long established fogging techniques using Aldrin.

NATURAL REGENERATION

34. Work continued satisfactorily.

INVESTIGATION AND RESEARCH

35. No new work was done but the normal prescribed treatments and measurements were carried out in the research and sample plots (eleven of each).

WEATHER RECORDS

36. Rainfall data are given in Appendix B.

UTILIZATION

SAWMILLING

37. The most important development during 1967 was the work done by the U.N.S.F. project officers in helping and advising sawmillers in the lay-out and improvement of their mills. (see Appendix F) Many sawmills have received considerable assistance which is already evident from their improved production. This work has clearly shown that, even in the best mills, there is a great gap between present methods and production and truly efficient operations. Within this area of un-economic working lies the danger to the lumber trade - which is finally translated into the hard facts of low quality and expensive prices. The success of the Forest Industries Development Survey Project in closing this gap will eventually decide whether or not the lumber trade can expand to take an important place in the country's economy.

38. Two new mills were completed during 1967 - bringing the total of licensed mills to 78. Two new applications to erect new mills were approved and permits issued.

USE OF LOCAL TIMBER

39. The year 1966 had seen considerable activity by the Forest Department in the campaign to foster the use of species other than greenheart and crabwood and significant advances were made (see paras. 44-49 Annual Report 1966). Success or failure of the initial stages of the campaign is obviously to be found in the production and use of the species during 1967.

40. It is, therefore, heartening to report that in 1967, in a year when greenheart exports were severely restricted and there was plenty of this species available for local use, the other species have more than held their own in competition with greenheart. Thus in 1966, these species accounted for 34% of the total timber output (saw logs) while in 1967, they accounted for 35%. Greenheart comprised the balance - 66% in 1966, and 65% in 1967. Even though it was the increased production of crabwood (5% of total in 1966, 7% in 1967) which actually caused the improved position of other species relative to greenheart in 1967, it will be seen that the remaining species have done very well in holding back the swamping of local market by greenheart for which there were no export orders. Thus it is that greater volumes of many of these species were produced in 1967 than in 1966 (viz: mora, purpleheart, kereti, kabukalli, simarupa).

41. These are most encouraging signs - especially coming as they do in the midst of a big building boom locally and a restriction of exports of greenheart, and, especially when, it is regrettably true to say, just a very few sawmillers were actively pushing sales of species other than greenheart. It is now reasonable to hope that when the U.N.S.F. Forest Industries Development Survey project shall have been able to make its full impact - especially with regards to wood preservation - the exploitation of all worthwhile species would indeed become a reality.

PARTICLE BOARD

42. The particle board factory is now in receivership, but during the year several attempts were made to find some means of resuscitating it.

PLYWOOD AND WOOD PULP

43. There was continued interest in the establishment of these industries and at year-end plans were made for a visit to Guyana - early in 1968 - by representatives of a large overseas firm.

UTILIZATION SECTION, FOREST DEPARTMENT

44. In 1967, two more posts were added to the strength of this section viz: 2 timber technicians. However, no appointments were made. At year-end the posts of carpenter-joiner (one) and workshop assistants (two) were advertised for filling early in 1968, but during 1967 they were filled by open vote (daily paid) employees.

45. Two trainee timber technicians (open vote) were appointed and attached to the U.N.S.F. F.I.D.S. project to work in the utilization section. Additional trainees will be appointed as need arises and training facilities become available. The trainees will work in the various fields - wood-machining, seasoning (kiln-drying), preservation, saw doctoring, sawmill maintenance.

46. The most important work in this section centered around the activities of the U.N. team (utilization officer, saw-milling officer, sawdoctor) in sawmill improvement (see para. 37). In addition, the wood preservation officer arrived in November and immediately started upon a programme of basic studies in preservation and seasoning.

47. After many unfortunate set backs, a Moore Experimental Dry Kiln (maximum capacity 40 cubic feet) was eventually purchased during the year and was set up by year-end. However, the compressor had been damaged in transit and a replacement was awaited. All electrical connections were installed. The Hounsfield Tensometer and Hatt Turner Impact Testing Machine were also installed and tested.

48. The highlight the year's work of the building section of this division of the department was its participation in the Exhibition of Local Products arranged by the Ministry of Agriculture and Natural Resources. A prefabricated building (made in the department's workshop) was erected and furnished to represent an office and reception room. Local timbers (produced by the Central Timber Manufacturing Plant flooring (strip and parquet blocks), panelling, furniture and turnery, and the accent was placed on the use of well manufactured, fully seasoned lumber. The exhibit won the governor General's cup for the best display.

49. It is of interest to record here the theme of our display since it illustrates government's policy with regard both to the lumber industry and to the use of local materials and manufactures.

"This display is intended to show, in the setting of an office, some of the many useful and interesting ways in which Guyana's woods can be used other than merely as a rough, inferior building material which is then 'hidden away' as far as possible by the introduction of imported substitutes. Given good material with which to work, the Guyanese craftsman

can hold his own in competition with his rival from any other nation. The Forest Department is dedicated to ensuring that a plentiful supply of good material is produced for good craftsmen.

You can help - "BUY LOCAL"

50. Later in the year the department also took part in an exhibition at Mackenzie at which the theme of the display was timber seasoning and what it meant. Actual exhibits were demonstrated - a model stack, a baulk of timber one cubic foot in volume and a demijohn filled with an equal volume of water as the baulk contained at 50% moisture content. There were graphic aids also.

PRODUCTION AND TRADE

TIMBER

51. Details of total production of timber (by species) are given in Appendix C. Volumes are expressed in cubic feet (Hoppus) in this appendix and in the sections which follow here. Figures enclosed in brackets are for 1966 and are given to enable quick and easy comparison.

52. The total production of timber (logs, splitwood and roundwood) from Government forests in 1967 was 5,974,200 cu. ft. (6,185,200). In sawn lumber, the equivalent of 106,700 cu.ft. (70,900) was extracted from the forest. Of the former, greenheart (*Ocotea rodiaei*) accounted for 3,617,400 cu. ft. (3,896,800) or 60.5% (63). The position of this species with respect to sawlog only is given in paragraph 40.

53. The distribution of timber production between the four territorial divisions is given below. Individual species are named only if their production exceeded 20,000 cu.ft.

DIVISIONAL LOG PRODUCTION - INDIVIDUAL SPECIES 20,000 cu. ft. AND OVER

<u>ESSEQUIBO DIVISION:</u>	<u>CUFT. HOPPUS</u>	
Greenheart	3,271,400	(3,527,300)
Purpleheart	240,000	(197,000)
Mora	186,000	(193,700)
Wallaba	182,200	(119,900)
Crabwood	112,400	(57,400)
Tauroniro	56,400	(52,600)
Kabukalli	52,100	(65,100)
Locust	35,400	-
Kereti	31,300	(29,100)
Karohoro	29,200	(32,300)
Tatabu	26,500	-
Simarupa	26,200	(31,400)
Dalli	24,300	
Other species	115,200	(255,300)
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Total:-	4,389,400	(4,591,100)

DIVISIONAL LOG PRODUCTION - INDIVIDUAL SPECIES 20,000 CUFT. AND OVER

DEMERARA DIVISION:

CUFT. HOPPUS

Greenheart	163,500	(167,200)
Wallaba	51,400	(81,400)
Mora	42,900	(41,100)
Other species	86,700	(132,500)

Total:-	344,500	(428,200)
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BERBICE DIVISION:

Greenheart	181,400	(202,400)
Kereti	178,900	(134,200)
Kabukalli	160,000	(80,700)
Crabwood	101,500	(155,000)
Mora	74,400	(59,700)
Wallaba	42,600	(46,600)
Tauroniro	27,900	-
Simarupa	25,100	(23,200)
Dukali	20,400	-
Other species	41,300	(130,100)

Total:-	853,500	(785,300)
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NORTH WEST DIVISION:

Crabwood	182,000	(69,900)
Dalli	64,300	(73,900)
Kirikaua	59,200	(163,500)
Kurokai	32,000	(36,000)
Other species	49,300	(37,300)

Total:-	386,800	(380,600)
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SUMMARY

ESSEQUIBO DIVISION	4,389,400	(4,591,100)
DEMERARA DIVISION	344,500	(428,200)
BERBICE DIVISION	853,500	(785,300)
NORTH WEST DIVISION	386,800	(380,600)

Grand Total:-	5,974,200	(6,185,200)
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54. Production during the year was dominated by the peculiar conditions arising from a heavy and consistent local demand by the building trade at the same time as a sudden restriction of exports.

FOREST DEPARTMENT TIMBER YARD

The main objective of the Central Timber Manufacturing Plant are as follows:-

- (1) To promote the use of timber species not now in full use or not now considered to be merchantable (See section V of Statement of Forest Policy at paragraph 2).
- (2) To promote the use of seasoned, well machined and graded lumber.
- (3) To provide a nucleus around which a serious and determined effort can be made to enter the export market in lumber - especially in the Caribbean countries.
- (4) To guide progressive thought and action (in the sawmilling industry) in the technical and mechanical field of the local timber industry e.g. seasoning before machining, production of lumber to international (graded) specifications, acceptance of standards, installation and proper maintenance of the right equipment and machines.
- (5) To assist small sawmillers:-
 - (a) by providing a ready market for their production in species other than greenheart and crabwood;
 - (b) by encouraging and guiding the improvement of the quality of their products.

Throughout the years of financial stringencies and restrictions since 1962 - this Plant has struggled and striven but it has kept firmly on the course to its objectives. This moral success has been achieved, admittedly, only at the cost of a large annual trading loss, but this deficit was inevitable and very little could be done about it until conditions of trading improved - especially, until sufficient finance to allow normal trading was secured.

Such conditions first arose in 1966 - in which year, especially in the latter half, the Plant was able to purchase nearly as much as it had bought in the previous four years together (615,000 f.b.m. against 691,000 f.b.m.). The results and benefits appeared in 1967 which represented the best trading year for the period. Sales amounted to 496,000 f.b.m. (199,000) valued at \$152,155 (\$59,000). Purchases totalled 709,000 f.b.m. (615,000) for \$131,400 (\$115,000). Stock on hand at 31st December, 1967 was 225,000 f.b.m. (20,000) dressed lumber and 552,000 f.b.m. (544,000) rough sawn valued at \$170,600 (\$104,200). The trading loss in 1967 was, therefore, only \$28,518 and when compared to that of 1966 - \$62,665 clearly show a healthy improvement in the financial situation of the Plant.

A number of improvements were made in the Plant as a part of the Development Programme. Certain roads were built in and around the sheds and the area between the sheds and the seawall was paved to enable mechanical handling of the lumber coming off the wharf. A small cub tractor was purchased - to pull trailers filled with lumber. The rehabilitation and extension of the offices were also finally completed and certain repairs and improvements made to various sheds.

During the year government decided to re-establish the post of Assistant Mill Manager which had been abolished in 1962. This was a most welcome step and the Mill Manager can now look forward to being able to spend his time more usefully than on routine administrative chores - especially, being now free to act as full-time counterpart to the U.N. adviser (Mill Manager).

The U.N.S.F. Forest Industries Development Survey project has made a great impact in this sector of the Forest Department's activities. The assistance and guidance given to many workers in the Plant have certainly helped to improve the operations in many departments and have been particularly effective in tightening up the grading rules for the purchase of rough sawn lumber. A new system of costing of individual operations has been introduced and this enables the department to value its stocks accurately, and, of course, shows where operations are weakest or most expensive and uneconomic and where, therefore, there is urgent need for improvement.

Throughout 1967 there was considerable study, discussion and formulation of various plans for the future of the Central Timber Manufacturing Plant in which the U.N. Mill Manager and the U.N. Utilization Officer, the Project Manager, the Conservator and the Mill Manager, Forest Department were much involved. It was also frequently necessary to seek the advice of the Minister of Agriculture and Natural Resources for decisions on matters of policy. The F.A.O. authorities in Rome were also consulted and were most interested and helpful at all times.

By year-end the principle was accepted that the Plant should be improved where it is - both government and the U.N.S.F. participating in this improvement which would aim at an annual turnover of 1½-2 million f.b.m. A plan detailing the necessary system and the equipment required was drawn up and was awaiting confirmation by Government and F.A.O. This was expected early in 1968.

Over the years, the Plant has had many criticisms and even more detractors. It has also cost government a great deal of money. But besides attaining many of its objectives and in spite of the vicissitudes of the latter part of this period, during the last ten years, it has actually produced nearly five million board feet of timber - well seasoned and well manufactured and not obtainable in the country otherwise. Some 95% of this amount has gone into the home market and it is this material which has given rise to the increasing demand for seasoned, high quality lumber. It will never now be known how much import substitution has been achieved by the sale of this stock, but it must be considerable and, in terms of the future of the timber industry vis-a-vis the present policies of government with regard to:

- (a) local housing and house building;
- (b) import substitution;
- (c) Caribbean trade;

it becomes obvious that the future existence and success of the Plant are of paramount importance.

REVENUE AND EXPENDITURE

REVENUE

The total revenue collected amounted to \$439,438 (\$480,051) which, considering the depressed state of the export trade, is a good figure and clearly reflects the considerable local demand because of the building boom. (see paragraphs 41, 54) The collections from

royalty on timber realised \$430,356 (\$470,325). Proceeds from the sale of timber by the Central Timber Manufacturing Plant are not counted as revenue from the forest and a full account of the trading position of this Plant is given at page 10.

EXPENDITURE

Expenditure under annually recurrent estimates amounted to \$377,999 (\$351,158) and under special non-recurrent to \$3,153 (\$1,244) Expenditure on development projects (capital estimates) totaled \$241,360 (\$140,774).

NET FINANCIAL POSITION

During the year, there was a surplus of revenue over current expenditure of \$58,286 (\$127,649).

EXPORT DUTY LEVIED ON GREENHEART

The export duty on greenheart (equivalent to 8 cents per cu.ft. HP.) realised the sum of (\$81,572) during the year 1967.

IMPORT DUTY ON TIMBER

The amount of duty collected on imported timber during 1967 was

STAFF AND LABOUR

STAFF

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

CHARGE	Senior Staff	Intermediate Staff	Subordinate Staff	Clerical Staff
Headquarters	4	-	7	9
Timber Yard (Central Timber Manufacturing Plant)	1	-	-	10
A.P.I. Survey Division	1	-	5	1
Utilisation Division	1	-	9	-
Silviculture and Research	1	-	6	-
Demerara Division	-	1	14	1
Essequibo Division	-	2	28	2
Berbice Division	-	2	17	2
North West Division	-	1	9	-
Vacation Leave (overseas)	-	-	-	-
Study Leave (Overseas)	-	-	-	-
Vacant Posts	3	3	14	-
TOTAL STAFF	11	9	109	25

NOTE: FULL ESTABLISHMENT - 129

excluding all clerical staff (now integrated with the Ministry).

The vacant posts at 31st December, 1967 were:-

- 3 Assistant Conservators of Forests
- 1 Assistant Utilisation Officer
- 1 Assistant Mill Manager
- 1 Forest Inspector
- 1 Departmental Class II Clerk
- 1 Drawing Office Assistant
- 2 Timber Technicians
- 1 Carpenter/Joiner
- 4 Forest Rangers
- 2 Engineers
- 2 Workshop Assistants
- 1 Boathand

EDUCATION:

Mr. L.E. Dow Conservator of Forests, represented Guyana at the 10th Session of Latin American Forestry Commission held in Port-of-Spain, Trinidad from 4th - 9th December, 1967. During this period a meeting of the Governing Council of the Latin American Forestry Research and Training Institute was also held and the Conservator attended as the delegate from Guyana.

Mr. C. Colins, Utilization Officer, visited Bruynzeel Sawmill in Surinaam from 27th November to 1st December, 1967 to study the feasibility of installing at the Central Timber Manufacturing Plant a Bridge-Type-Overhead Travelling Crane similar to the one used by Bruynzeel.

Mr. D.H. Persram, Assistant Conservator of Forests, Silviculture and Research, attended in Surinaam, from 16th - 19th October, 1967, a Seminar on Land Clearing organised by Surinaam Machinery Company.

Mr. V. Vieira, Assistant Conservator of Forests (Management) resumed duty on 14th July, 1967 after participating in the Symposium and study tour on forest tractors in connection with the 6th session of the Joint FAO/ECE/ILO Committee on Forest Working Techniques and Training of Forest Workers and completed the post-graduate course for forest officers at the Commonwealth Forestry Institute in Oxford.

PUBLICATIONS:

The Annual Report for 1965 was published and that for 1966 was laid in the Assembly and awaiting publication at the end of 1967.

SECONDMENT:

Forest Ranger, J.N. Daniels was seconded to the Ministry of Economic Development as a Co-operative Officer on 14th January, 1967 but returned to his substantive post on 1st September, 1967.

VACATION LEAVE:

Mr. E. N. Rickford, Assistant Conservator of Forests, proceeded on four (4) months' vacation leave with effect from 1st June, to 30th September, 1967.

Mr. C. Collins, Utilization Officer, was on 136 days' vacation leave with effect from 6th May - 18th September, 1967.

Mr. L. Harry, Mill Manager, was on 177 days' vacation leave with effect from 19th June - 12th December, 1967.

Mr. R. Grenville, Forest Ranger, was on 96 days' vacation leave with effect from 15th June - 18th September, 1967.

Mr. J. Knights, Forest Guard, proceeded on 84 days' vacation leave with effect from 9th October, 1967.

Mr. R. Boyan, Technical Assistant Grade II, resumed duty on 29th March, 1967 after spending 77 days' vacation leave.

Mr. J. Ferdinand, Senior Forest Inspector, resumed duty on 16th March, 1967 after spending 203 days' vacation leave.

APPOINTMENTS AND PROMOTIONS:

The following appointments were made:-

<u>Name</u>	<u>Post</u>	<u>Date</u>
E. Mohamed	Class II, Clerk	18.8.67
L. Roopchand	" " "	1.9.67
B. Singh	" " "	11.9.67
S. Husain	" " "	1.11.67
L. Persaud (Miss)	Clerical Assistant	26.4.67
D. Benny	Boathand	2.5.67
B. Duncan	"	"
M. McKenzie	"	"
E.W. Schlouten	"	"
C. Humphrey	"	1.8.67
L. Waddell	"	1.9.67

The following promotions were made:-

<u>Name</u>	<u>Post</u>	<u>Date</u>
R.A. Boyan	Technical Assistant Grade II	1.1.65
R. Lepps	Forest Guard	1.6.67
R.M. Boyan	" "	"
W.C. Klien	" "	"
E. Fraser	" "	"
B.C. Halley	Senior Forest Inspector	1.12.67

TRANSFERS FROM/TO OTHER DEPARTMENTS:

<u>Name</u>	<u>Post</u>	<u>Department</u>	<u>Date</u>
(Miss) A.M. Arjune	Clerical Assistant	to External Affairs	16.3.67
(") G. Linder	" "	" Analyst	2.5.67
(") E. Worrell	Senior Clerical Assistant	" Ministry of Agric. & Nat. Resources	27.9.67
(") S. Ali	" " "	" Lands	8.5.67

TRANSFERS FROM/TO OTHER DEPARTMENT: (CONT'D)

<u>Name</u>	<u>Post</u>	<u>Department</u>	<u>Date</u>
L. Garnett	Engineer	to Home Affairs	5.9.67
(Miss) E. Worrell	Senior Clerical Assistant	from Ministry of Agric. & Nat Resources	2.5.67
(") H. Anthony	Clerical Assistant	from Agriculture	23.9.67
(") J. Persaud	" "	" Ministry of Agric. & Nat. Resources	2.11.67
M. Ganesh	Class I Clerk	" " " " "	5.10.67

RESIGNATIONS:

Mr. E.N. Rickford, Assistant Conservator of Forests, resigned from the service with effect from 1st October, 1967.

Messrs. R.A. Wade and R. Gunraj, Class II, Clerks, resigned from the service with effect from 1st September, 1967 and 15th November, 1967, respectively.

Mr. L. Girdharry, Class II, Clerk resigned from the service with effect from 31st December, 1967.

Miss W. Jackson, Clerical Assistant, resigned from the service with effect from 31st August, 1967.

Messrs. E. Thomas, Engineer, and J.C. De Freitas, Boathand, resigned from the service during the year.

VISITORS:

Vladimir Carol Hasek	-	F.A.O. Rome.
M.S. Hollick	-	Celcure, London
Ben B. Nizio, M.E.	-	c/o E. & B. Cowan Consulting Engineers, Montreal, Canada
Warren K. Gilbert	-	International Consulting Engineer Nebraska, U.S.A.
F. Bruce Lamb	-	United States Plywood Corporation New York
John M. Smuk	-	Ruble-Miller Association Inc. U.S.A.
W.E. Bromley	-	Bromley Lumber Limited, Montreal, Canada
B. den Hoedt	-	Bruynzeel, Surinam, N.V.
Chr. Spinelli	-	" " "
H. Zeeman	-	" " "
Fernando Barrientos	-	F.A.O., Santiago, Chile
A.V. Maynard	-	Cooper, Pegler & Co. Ltd. Sussex, England.

VISITORS: (CONT'D)

Charles W. Magee, PH.D.	-	Consulting Economist, Toronto, Canada
Chester Kwien	-	New York, U.S.A.
John W. Rosenbagen	-	New York, U.S.A.

SUMMARY OF FOREST OFFENCES FOR THE YEAR ENDED 31st DECEMBER, 1967

Category of Offences	No. of cases Reported and brought forward	Cases taken to court				Cases dealt with departmentally		Offenders Unknown		Proceeds from sale of forfeited property	Total number of cases dealt with	Cases pending	
		Fined Judgement	Cautioned and discharged	Acquitted withdrawn	Compounded	Cancelled	Cases	Sale of Produce					
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Illicit felling	41	-	\$ -	-	-	34	\$ 1,189.00	2	2	\$ 105.32	-	38	3
2. Felling undersized trees	7	-	-	-	-	5	270.00	-	-	-	-	5	2
3. Conveying forest produce without a removal permit	17	-	-	-	-	13	138.00	1	-	-	-	14	3
4. Failing to submit a permit wit'in 24 hrs. after arrival at destination	6	-	-	-	-	6	155.00	-	-	-	-	6	-
5. Failing to record forest produce on removal permit	1	-	-	-	-	1	40.00	-	-	-	-	1	-
6. Felling protected trees without permission	1	-	-	-	-	1	5.00	-	-	-	-	1	-
7. Non payment of Minimum Royalty	4	3	252.18*	-	1#	-	-	-	-	-	-	-	-
8. Non payment of Royalty	7	3	408.80*	-	3#	-	-	-	-	-	-	-	1
T O T A L	84	6	660.98	-	4	60	1,797.00	3	2	105.32	-	75	9

* Judgement obtained

Settled out of court

FORM VII

OUTTURN IN SOLID CUBIC FEET# OF TIMBER AND FUEL FOR THE
YEAR ENDED 31st DECEMBER, 1967

TIMBER	ROUNDWOOD	SPLITWOOD	WOOD FOR FUEL	WOOD FOR CHARCOAL	TOTAL
7,473,074 (7,668,390)	100,959 (100,822)	30,166 (50,920)	896,960 (759,530)	146,340 (433,863)	8,647,499 (9,013,525)

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:- Paling and vat staves, shingles.

Figures in brackets are corresponding statistics for previous year 1966.

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. Hop.	x 5/4
2. Round spars	lin.ft.	+ 100
3. Paling posts	" "	+ 5
4. Shingles	pieces	+ 50
5. Paling staves	"	+ 12
6. Vat staves	lin.ft.	+ 25
7. Sawn timber	ft. B.M.	+ 6 x 5/4
8. Firewood	tons	x 40
9. Charcoal	tons	x 270

FORM IX (a)

PRIMARY FOREST INDUSTRIES, 1967

Particulars of Industry	Quantity of wood (home grown for import) consumed in cu. ft. (Hoppus) (i)	No. of persons employed (ii)
Sawmills	4,941,948	2,652
Match Factory	86,353	202
T O T A L	5,028,301	2,854

NOTE: -

- (i) These figures are based on those supplied by the industry concerned.
- (ii) These figures are rough estimates only and not based on a census.

GENERAL:- Value of outturn ex-factory is not available.

FORM IX (b)

LABOUR - NUMBER EMPLOYED

CATEGORY	ESSEQUIBO DIVISION	DEMERARA DIVISION	BERBOCE DIVISION	NORTH WEST DIVISION	TOTAL
Logging - Crown Forest Leases	1,000	286	467	84	1,837
Logging - Crown Forest Permissions	60	-	974	280	1,314
Logging - Amerindian Permits	40	12	-	-	52
Sawmills - Sawpits	298	1,097	1,109	148	2,652
Match Factory	-	202	-	-	202
Charcoal	10	20	45	2	77
Wallaba Transmission Poles	100	59	-	-	159
TOTAL	1,508	1,676	2,595	514	6,293

FORM X

IMPORTS AND EXPORTS OF TIMBER, WOOD PRODUCTS AND MINOR FOREST PRODUCTS DURING
THE YEAR ENDED 31st DECEMBER, 1967

SEE OVER

IMPORTS AND EXPORTS OF TIMBER, WOOD PRODUCTS AND MINOR FOREST PRODUCTS DURING THE YEAR ENDED
31st December, 1967

Category	Gross Imports		Gross Exports		Nett Imports or Exports*		Average Annual Nett Imports or Exports* for quinquennium ended 31.12.67		Item No.	Percentage by value of gross imports from different sources or exports to different destinations during the year 1967. 10% and over.
	Q'ty 2 (a)	Value 3 \$	Q'ty 4 (a)	Value 5 \$	Q'ty 6 (a)	Value 7 \$	Q'ty 8 (a)	Value 9 \$		
1. Fuelwood	-	-	-	1,139	-	1,139*	-	11,395*		To W.I. 100
2. Charcoal	-	99	-	47,214	-	47,115*	-	240,960*		To U.K. 85, W.I. 15
3. Logs (non-conifer)	427,943	95,102	76,488	79,261	351,455	15,841	276,437	40,723		From Surinam 100, to Surinam 100
4. Hewn Timber	-	-	257,076	505,143	257,076	505,143*	346,174*	603,131*		To U.K. 82
5. Poles, Piles & Posts (Non-conifer)	20	11	463,368	864,106	463,848	864,095*	441,949	658,596*		From U.S.A. to W.I. 62 U.S.A. 24
6. Railway Sleepers	-	-	877	1,957	877*	1,957*	48,709	86,154*		To W. I. 100
7. Sawn Timber (conifer)	92,510	291,453	-	-	92,510	291,453	57,392	166,335		From Canada 99
8. Sawn Timber (non-conifer)	320	150	362,753	1,214,479	362,433*	1,214,329*	405,749*	1,462,433		To U.S.A. 21 W.I. 22 U.K. 33

1	Q'ty 2(a)	Value 3 \$	Q'ty 4 (a)	Value 5 \$	Q'ty 6 (a)	Value 7 \$	Q'ty 8 (a)	Value 9 \$	10	11
9. Veneer, Plywood, Chipboard, etc.	-	333,890	-	1	-	333,889	-	130,595		From Surinam 74
10. Fibreboard	-	111,390	-	-	-	111,390	-	78,854		From Australia 63
11. Boxes, Shooks, Coop- erage etc.	-	1,278,541	-	308,900	-	969,641	-	469,388		From U.S.A. 92 To U.S.A. 36 W.I. 44
12. Misc. Manufacture wooden articles	-	72,380	-	462	-	71,918	-	43,657		From U.K. 26 Czechoslovakia NIE To W.I. 100
13. Furniture & Cabinet- ware	-	74,901	-	2,014	-	72,887	-	98,124		From U.S.A. 62 U.K. 21 CANADA 54 U.S.A. 19
14. Matches	-	18	-	33,517	-	33,499*	-	42,473*		To W.I. 100
15. Newsprint	-	419,206	-	-	-	419,206	-	369,505		From Canada 97
16. Paper & Paperboard	-	1,326,148	-	4,048	-	1,322,100	-	884,972		From U.K. 43 Canada 19 To W.I. 100
17. Paper & Paperboard Manufactures	-	2,294,354	-	151,903	-	2,142,451	-	1,566,578		From U.K. 24 To U.S.A. 89
18. Gums, Resins & Latex	-	136,181	-	140	-	136,041	-	48,353		From U.K. 53; Trinidad & Tobago 13: U.S.A. 21, To Surinam 100

1	Q'ty 2(a)	Value 3 \$	Q'ty 4(a)	Value 5 \$	Q'ty 6 (a)	Value 7 \$	Q'ty 8 (a)	Value 9 \$	10	11
1). Tonstuffs	-	-	-	-	-	-	-	(d)	
20. Plaiting materials and Manufactures	-	9,039	-	10	-	9,209	-	1,202		From Switzerland 29 U.K. 37
TOTALS	-	6,442,863	-	3,214,294	-	3,228,569	-	793,144		

NOTES:-

- (a) Quantities, where mentioned, are given in cubic feet - the equivalent of round timber in true measure under bark.
- (b) Including shingles - 61,157 dozens valued at \$18,236.
- (c) Balata Latex.
- (d) Not available.
- (e) Suitable value only.
- (o) \$ B.W.I.

*Nett Export

THIS DATA WAS OBTAINED FROM THE STATISTICAL BUREAU.

FORM XI (a)

SUMMARY IN DOLLARS OF REVENUE AND EXPENDITURE FOR THE YEAR
ENDED 31ST DECEMBER, 1967

REVENUE			EXPENDITURE									Special Non-Re- current	Grand Total	Surplus
Royalty on Forest Produce	Other Forest Revenue	Total	Annually Recurrent											
			Personal Emoluments	Travell- ing	Other Admini- strative charges	Equip- ment & Materials	Research and Investi- gations	Silvi- culture	Promo- tion of Exports	Miscel- laneous	Total Annually Recurrent			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
430,356	9,082	439,438	273,121	38,596	41,764	4,911	4,626	8,424	1,010	5,547	377,999	3,153	381,152	58,286

Column 2 Revenue from Fees, licences, fines, compounding fees and seizures

Column 6 Other Administrative Charges

Sub-heads 3 - Miscellaneous

4 - Land & Water Transport

6 - Uniforms

7 - House Rent

8 - Revenue Protection

14 - Forest Surveys

Column 13 Special Non Recurrent
Sub-head 42 Purchase of Equipment

Column 11 Miscellaneous

Sub-Heads 10 - Creek Clearing

11 - Forest Stations

16 - Contributions - Commonwealth Forestry Institute Oxford

17 - Contributions - Latin American Forest Research & Training Institute

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

FORM XII

COMPARATIVE STATEMENT IN DOLLARS OF REVENUE AND EXPENDITURE (FROM FOREST DEPARTMENT VOTES) FOR THE YEAR
ENDED 31ST. DECEMBER, 1967

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Revenue	421,153	429,766	436,815	430,674	431,821	295,939	377,261	396,650	480,051	439,438
Expendi- ture	278,110	281,816	353,505	360,691	383,455	318,641	314,068	353,506	352,402	381,152
Surplus +/ Deficit -	+143,043	+147,950	+ 83,310	+69,983	+48,366	-22,702	+36,193	+43,144	+127,649	+58,286

APPENDIX B

RAINFALL (in inches) 1967

LOCALITY OF GAUGE	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
NORTH WEST DIVISION													
Hosororo	12.07	1.08	2.18	2.00	10.90	10.44	18.03	11.78	5.42	4.09	7.47	10.05	95.51
Wauna	13.93	1.95	4.73	3.10	14.39	14.02	19.24	10.97	7.59	10.24	7.01	14.61	121.78
Moruca	8.70	3.16	3.18	10.08	23.04	17.03	16.36	8.06	No.rec.	No.rec.	No.rec.	No.rec.	89.61
ESSEQUIBO DIVISION													
1½ miles Bartica-Potaro Road	5.92	2.85	5.15	10.81	26.33	14.67	13.18	10.56	3.01	11.22	4.37	5.56	113.63
72 " " " "	No.rec.	No.rec.	No.rec.	No.rec.	No.rec.	No.rec.	12.00	8.44	3.18	4.19	4.64	6.10	38.55
Mazaruni Prisons	No.rec.	No.rec.	No.rec.	12.10	21.51	16.72	13.73	6.86	4.49	7.86	3.14	7.19	93.60
Pickersgill	16.47	2.45	3.20	8.97	18.83	12.25	13.45	6.17	2.55	2.32	1.37	6.55	94.57
Wineperu	11.27	5.07	5.06	10.73	11.95	20.15	20.15	13.65	9.35	3.30	4.20	10.40	125.28
DEMERARA DIVISION													
Ituni	4.56	No.rec.	No.rec.	8.59	11.70	23.77	8.67	2.34	3.00	2.44	4.06	9.03	78.16
Vreed-en-Hoop	10.89	2.29	3.89	6.37	26.61	20.56	14.78	6.07	2.05	1.39	10.84	8.37	114.71
Georgetown (Botanic Gardens)	11.17	1.84	5.16	5.47	25.19	19.30	12.83	7.52	6.69	1.25	12.22	9.17	117.81
Mahaicony (Railway)	9.82	.81	6.22	7.49	16.38	12.56	9.62	8.54	6.70	.58	5.75	7.04	91.51
Mahaica (Hospital)	9.72	.62	2.67	6.43	14.83	16.57	13.16	6.57	2.47	1.04	7.88	13.69	95.65
Atkinson Field	2.67	2.48	3.46	13.50	22.07	18.59	16.05	8.83	5.19	.80	3.84	5.65	103.13
Mackenzie	9.26	2.02	4.62	9.67	13.99	11.38	14.88	12.73	9.43	2.66	5.29	13.47	109.40
BERBICE DIVISION													
New Amsterdam	10.42	2.04	5.88	9.37	11.89	9.49	11.91	9.44	2.47	.77	3.35	10.70	87.73
Skeldon	9.01	2.92	3.80	11.43	9.29	11.72	5.10	6.26	1.17	.84	3.67	9.02	74.23
Rose Hall	11.92	2.47	4.47	9.88	10.28	10.16	25.72	18.86	4.96	1.97	4.30	11.00	115.99
Siparuta	6.70	3.61	3.31	9.70	14.69	10.88	9.40	7.48	.92	4.14	7.65	3.85	82.33
Springlands	10.75	4.56	3.10	10.01	10.12	13.02	7.24	7.73	1.73	.63	2.69	8.99	80.57

APPENDIX C

PRODUCTION OF TIMBER FROM GOVERNMENT FORESTS IN 1967

(a) Logs, splitwood and roundwood

Name	Botanical Name	Volume to nearest 100 cuft Hoppus	Royalty to nearest \$10.	Main Uses
1. Greenheart	<i>Ocotea rodiaei</i>	3,617,400	289,390	1 (Export trade) 5,6,8,10 (vat bottoms)
2. Crabwood	<i>Carapa guianensis</i>	398,800	31,900	5,6,7,8,13
3. Purpleheart	<i>Peltogyne</i> spp.	241,300	19,300	5,6,8,13
4. Mora	<i>Mora excelsa</i>	307,400	15,370	4 (Export trade)
5. Wallaba	<i>Eperua</i> spp.	276,200	13,810	2 (Export trade) 3,9,19
6. Kereti	<i>Ocotea</i> spp.	234,700	11,730	7,11,13,16,2
7. Kabukalli	<i>Goupia glabra</i>	224,900	11,240	5,6
8. Tauroniro	<i>Humiria balsamifera</i>	87,300	4,350	5,6,8
9. Simarupa	<i>Simaruba amara</i>	61,400	3,070	7,11,16
10. Kirikaua	<i>Iryanthera lancifolia</i>	59,300	2,960	7,11,16
11. Dalli	<i>Virola surinamensis</i>	92,900	2,790	7,11,18 (log export trade)
12. Kurokai	<i>Protium decandrum</i>	40,400	2,020	7,13
13. Locust	<i>Hymenaea</i> spp.	40,000	2,000	5,6,8,13
14. Brown and yellow Silverballi	<i>Aniba & Licaria</i> spp.	23,400	1,870	7,11,13,15,16
15. Dukali	<i>Parahancornia amapa</i>	30,200	1,510	7,11,16,18
16. Tatabu	<i>Diploptropis purpurea</i>	27,200	1,360	5,13,14,15
17. Karohoro	<i>Didymopanax morototoni</i>	36,600	1,100	17 (splints)
18. Duka	<i>Tapirira marchandii</i>	33,600	1,010	7,11,17 (boxes)
19. Shibadan	<i>Aspidosperma album</i>	18,600	930	11
20. Manniballi	<i>Moronobea coccinea</i>	16,900	840	4,5,12,14
21. Red Cedar	<i>Cedrela odorata</i>	7,600	610	13
22. Bulletwood	<i>Manilkara bidentata</i>	6,200	500	4,5,12,14
23. Futui	<i>Jacaranda copaia</i>	11,800	350	11,16
24. Baromalli	<i>Catostemma</i> spp.	9,100	270	16
25. Hububalli	<i>Loxoptergium sagotii</i>	5,000	250	13,18
26. White Cedar	<i>Tabebuia insignis</i> var.	5,600	170	7,8
27. Morabukea	<i>Mora gongrippii</i>	3,300	170	4,5 (Export trade)
28. Suya	<i>Pouteria speciosa</i>	3,000	150	7,16
29. Pakuri	<i>Platonia insignis</i>	2,900	140	5,6,7,8
30. Kurahara	<i>Calophyllum lucidum</i>	2,700	130	7,13
31. Ulu	<i>Trattinickia</i> spp.	4,300	130	7,16
32. Baradan	<i>Ocotea tomentella</i>	3,700	110	11,16
33. Wamara	<i>Swartzia leiocalycina</i>	2,200	110	5,6,7,13
34. Kakaralli	<i>Eschweilera</i> spp.	2,200	110	1
35. Other species	-	36,200	1,530	
Totals:-		5,974,200	\$422,310	

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	58,500	9,700	\$ 700
Class II	582,000	97,000	4,660
Class III	-	-	-
Totals:	640,500	106,700	5,360

(c) Other Products

Category	Quantity	Royalty
Wattles	10,367 pieces	\$ 20.
Mangrove Bark	504,590 lbs.	250
Total:-		\$270

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

APPENDIX D

PRICE RANGES IN 1967 FOR THE MAIN TIMBER SPECIES AND OTHER FOREST PROJECTS -

(i) TIMBER

S P E C I E S	Timber 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 (Round Piling)	Bartica	1.00	Bartica	1.20	Paradise	.16	Christianburg	.32
(b) Greenheart (Local)	Pomeroon	.48	New Amsterdam	.96	-	-	-	-
			Soesdyke	.96				
2. Bulletwood	Aruka	.45	Springlands	1.00	New Amsterdam	.18	Aruka	.34
					Springlands	.18	-	-
3. Red Cedar	Waini	.28	Springlands	.90	New Amsterdam	.14	Aruka	.34
			Siparuta	.90				
4. Crabwood	Aruka	.26	Siparuta	.90	Paradise	.12	Georgetown	.28
			Springlands	.90			Bartica	.28
							Parika	.28
5. Purpleheart	Georgetown	.46	Siparuta	.80	Soesdyke	.18	Georgetown	.28
6. Silverballi (Brown)	Aruka	.26	Parika	.90	Aruka	.16	Parika	.36
7. Determa	Bartica	.48	Bartica	.56	Bartica	.20	Bartica	.26
8. Hububalli	Aruka	.14	Parika	.56	Aruka	.08	Parika	.24
9. Kabukalli	Aruka	.18	Springlands	.80	Aruka	.08	Paradise	.36
			Siparuta	.80				
10. Kereti Silverballi	Waini	.08	Springlands	.72	Aruka	.10	Paradise	.32
1					Pomeroon	.10		
11. Kirikaua	Waini	.08	Parika	.48	Aruka	.16	Parika	.27
12. Kurahara	Waini	.10	Parika	.50	Aruka	.10	Parika	.24
							Georgetown	.24
13. Kurokai	Waini	.08	Parika	.44	Aruka	.14	Parika	.23
			Supenaam	.44				
14. Locust	Supenaam	.50	Supenaam	.60	Bartica	.16	Parika	.24
15. Manni	Aruka	.18	Supenaam	.44	-	-	-	-
			Parika	.44	Pomeroon	.08	Georgetown	.24
16. Manniballi	Bartica	.25	Georgetown	.44	Soesdyke	.14	Parika Parika	.24 ²⁴
			Parika	.44	-	-		
			Supenaam	.44				
17. Mora	Waini	.16	New Amsterdam	.50	Pomeroon	.10	Georgetown	.28
			Springlands	.50				
			Siparuta	.50				

APPENDIX D (Cont'd)

PRICE RANGES IN 1967 FOR THE MAIN TIMBER SPECIES AND OTHER FOREST PRODUCTS-
(ii) OTHER FOREST PRODUCTS

FOREST PRODUCTS	Location	Price (Minimum)	Location	Price (Maximum)	Per Unit
Wallaba Transmission Poles	Springlands	\$.30	Siparuta	\$1.00	Lin. ft.
Wallaba Posts 3"-6" diameter	Pomeroon	.04	New Amsterdam	.10	" "
			Georgetown	.10	" "
			Parika	.10	" "
Wallaba Posts 6"-10" diameter	Springlands	.11	Springlands	.12	" "
			New Amsterdam	.12	" "
Wallaba Paling Staves	Paradise	4.00	Bartica	10.50	100
Wallaba Shingles	Pomeroon	10.00	New Amsterdam	60.00	1,000
Firewood	Paradise	3.00	New Amsterdam	15.00	ton
Charcoal	Soesdyke	1.80	Georgetown	3.50	cwt.
			Parika	3.50	"
			Bartica	3.50	"
Mangrove Bark	Waini	.80	Waini	1.20	lb.

APPENDIX D Cont'd

S P E C I E S	Timber 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
18. Simarupa	Waini	.12	Springlands	.60	New Amsterdam	.12	Georgetown	.24
					Springlands	.12	Parika	.24
					Paradise	.12	Georgetown	.24
19. Tauroniro	Pomeroon	.20	Springlands	.80	Pomeroon	.14	Parika	.24
			Siparuta	.80				
20. White Cedar	Waini	.10	Aruka	.18	Aruka	.08	Aruka	.16
21. Dalli	Pomeroon	.10	Springlands	.45	Pomeroon	.08	Parika	.24
					Springlands	.08		
					Waini	.08		
22. Duka	Waini	.08	Supenaam	.35	Aruka	.08	Parika	.24
			Parika	.35	Pomeroon	.08		
23. Dukali	Waini	.12	Springlands	.80	Pomeroon	.08	Georgetown	.22
24. Futui	Aruka	.10	Georgetown	.32	Aruka	.08	Georgetown	.22
25. Karohoro	Aruka	.08	Parika	.35	Aruka	.08	Georgetown	.22
26. Tatabu	Bartica	.26	Georgetown	.44	Supenaam	.16	Georgetown	.24
			Supenaam	.44	-	-	Parika	.24
			Parika	.44				
27. Baromalli	Soesdyke	.16	Soesdyke	.22	Soesdyke	.10	Soesdyke	.14
28. Fukadi	Bartica	.28	Soesdyke	.56	Supenaam	.14	Georgetown	.22

APPENDIX E(ii)

CENTRAL TIMBER MANUFACTURING PLANT

STOCK STATEMENT FOR 1967

PARTICULARS	Rough			Dressed			Total Amount \$
	ft. bm.	Rate ¢	Amount \$	ft. bm.	Rate ¢	Amount \$	
Stock at 31/12/66	543,757	20.7	112,557.70	19,675	25.0	4,918.75	117,476.45
+ Purchases 1967	708,803	18.5	131,379.50	-	-	-	131,379.50
TOTAL	1,252,560		243,937.20	19,675		4,918.75	248,855.95
Less Issues to Mill, 1967	695,401			15,944			
BALANCE	557,159			3,731			
+ Plant Production 1967	364			693,044			
TOTAL	557,523			696,775			
Less Sales 1967	17,856	24.0	4,292.62	478,131	30.9	147,862.34	152,154.96
BALANCE	539,667			218,644			
Stock on hand 31/12/67	552,289	20.7	114,323.82	225,184	25.0	56,296.00	170,619.82 ⁽¹⁾
Difference + or -	+ 12,622			+ 6,540			

Value of stock at 31/12/67 at average selling prices for the year

Rough: 552,289 @ 24.0¢ 132,549.36

Dressed: 225,184 @ 30.9¢ 69,581.86

Cost of Stock on hand at 31/12/67

\$ 202,131.22

\$ 170,619.92⁽¹⁾

Excess of value over cost:

\$ 31,511.40

255

APPENDIX F

U.N.S.F FOREST INDUSTRIES DEVELOPMENT SURVEY PROJECT

1. The objects of this project are to provide the authorities responsible for forestry and forest industries development with adequate information on:-

- (i) the extent and composition of the accessible forests of the country;
- (ii) the most suitable methods of extracting processing and marketing those commodities which it is found possible and economic to produce from the forest resource.

It must be emphasized that this project contains a step-by-step plan for assessing, evaluating and developing the present productivity and future potential of the forests. It will not provide a cure for the physical disadvantages of the forests, but will show clearly what these are and show how best they can be circumvented or overcome, if it is at all possible to do so.

2. In particular, the project will assist the Forestry Department to formulate and implement specific forest industry development plans by:

- (a) Evaluating all previous and current survey work related to the forest resources, complementing these results where required for the accessible forests by a low intensity forest reconnaissance survey and selecting the most suitable areas for detailed forest inventories;
- (b) Determining the extent and composition of the forests of the selected priority areas through detailed forest inventories;
- (c) Developing suitable methods for extraction of logs and production of lumber;
- (d) Drawing up detailed management plans for selected areas;
- (e) Formulating plans and procedures for marketing forest products locally and on external markets; and
- (f) Investigating the technical and economic feasibility of establishing forest industries including bulk-processing such as pulp and paper.

3. It is envisaged that the key to the final development of the lumber industry will be the Forest Department's Central Timber Manufacturing Plant and a strong marketing organisation. These branches will, therefore, be given special assistance e.g. drying kilns, wood preservation plants, wood working facilities of all suitable types will be added to the Central Timber Manufacturing Plant. In addition full studies will be made of the possibilities of veneer, plywood and furniture manufacture.

4. Despite initial problems and obstacles, each sector of this project became operational during 1967. Mention has already been made of all such work which overlaps or is difficult to differentiate

from...

from the normal current work of the Forest Department (see paras. 37, 46 - Saw-milling, - Central Timber Manufacturing Plant). However, for the purpose of completeness, brief reports are given below on the most important aspects of the work of all sections.

Forest Inventory

5. The consultant, Dr. E.K.Haller of Lubeck, Germany, visited the country and, after spending sometime in the forest, he and the U.N. Inventory Officer together with the Guyanese counterpart, prepared the plan of work to be followed. To date the following items have been started or accomplished:-

- (a) Defect studies have been made in an area of the Mixed Forest type in the Bartica Triangle and the report was being prepared at year-end.
- (b) Data for the preparation of volume tables were collected and tables for greenheart (*Ocotea rodiaei*) and wallaba (*Eperua* spp) were being prepared. More information is required for the other species before volume tables can be prepared for them.
- (c) Preliminary reconnaissance surveys were started (including photo-interpretation and forest type mapping) on the forests in the area between the Bartica Triangle - Tiboku (Mazaruni River) - Kuribrong River - Potaro River.
- (d) Detailed enumeration was begun in an area suitable for the location of a portable (forest) sawmill.
- (e) Type-mapping of the dalli-bearing forests (*Virola surinamensis*) of the North West District.

Forest Products Marketing

- 6. (a) Report prepared on Caribbean Forest Products Marketing Survey.
- (b) Assistance to the greenheart exporters especially re
 - (i) formation of export consortium;
 - (ii) grading rules for greenheart (exported);
 - (iii) advertising campaign in overseas markets;
- (c) Study of local consumption 1957-66, forecasts to 1985.
- (d) Study of possible markets for wallaba chips.

Economics

- 7. Studies have been made on several subjects viz:
 - (i) profitability of Caribbean pine plantations under various conditions;
 - (ii) wage structure in the industry;
 - (iii) Wallaba - areas, volume, cost of production in the pole industry;

(iv) ...

- (iv) Conversion studies - sawn volume from log volume for different species and different mills.

The Economics Officer also assisted in the forest inventory section.

Logging and Transport

8. (1) Training and advice to loggers on methods of improving the alignment, construction and maintenance of logging roads.
- (2) Training of loggers (in conjunction with McCulloch chain Saw Company) and improvement of logging methods by use of chain saws.
- (3) Advice to loggers and demonstration (with co-operation of the Clark Equipment Company) of use of a rubber-tyred skidding operations.
- (4) Costing of logging and transport operations in various areas.

Some impact has already been made on the industry by the demonstration of the rubber-tyred skidders.

The logging and Transport Officer began acting as Project Manager in December (see para 14 below).

Sawmilling and Sawdoctoring

9. Assistance in improving sawmills - design, layout, installation of new equipment, maintenance, servicing, repairs, saw-sharpening, design of new mills.

10. The majority of the 83 mills were visited by the team - Utilisation and Sawmilling Officers and Saw-doctor - together with Forest Department staff wherever possible. (See also paras. 37 & 41 in the main report).

Wood Seasoning and Preservation

11. The Utilisation and Sawmill Officers assisted in the installation of the Forest Department's dry kiln (see para. 47). The project purchased an experimental pressure impregnation plant and this was installed just before the end of the year.

12. By year-end, the Wood Preservation Officer (who had arrived in November) had set up his plan of work and started preliminary studies on the pressure impregnation of various species. It is possible that he will also assist in the seasoning section.

Lumber Yard

13. (i) The Lumber Yard Manager and the Utilisation Officer have made full studies of the operations of the C.T.M.P. and submitted several reports which give alternative possibilities for the future development of the Central Timber Manufacturing Plant (including equipment and machinery requirements).
- (ii) The grading of incoming lumber (purchases) has been re-organised.

(iii) ...

APPENDIX F Cont'd

- (iii) A system of costing each operation in the yard has been introduced and is working well. The monthly operational statements which are produced are proving to be very useful indeed.

Departures

14. The Project Manager, Mr. H.P.Ellis had to retire because of reasons of health and left Guyana in December. It is hoped that he will soon be fit again and we thank him for all his efforts on behalf of forestry in Guyana.

15. The Utilisation Officer, Mr. J.D.McVeigh, left Guyana in November on transfer to another U.N.S.F. project in Panama. During the short period which he spent in Guyana (one year) he made a valuable contribution to the sawmilling industry as is evidenced by the increased production and improved quality of lumber in many mills. He was also of great assistance to the project in the study which have been made of the operations of the C.T.M.P. and in making plans for its future. The assistance which he gave to the Forest Department in the erection of its dry-kiln was very much appreciated. His zest and his cheerful manner will be missed and we wish him good luck in his present assignment.