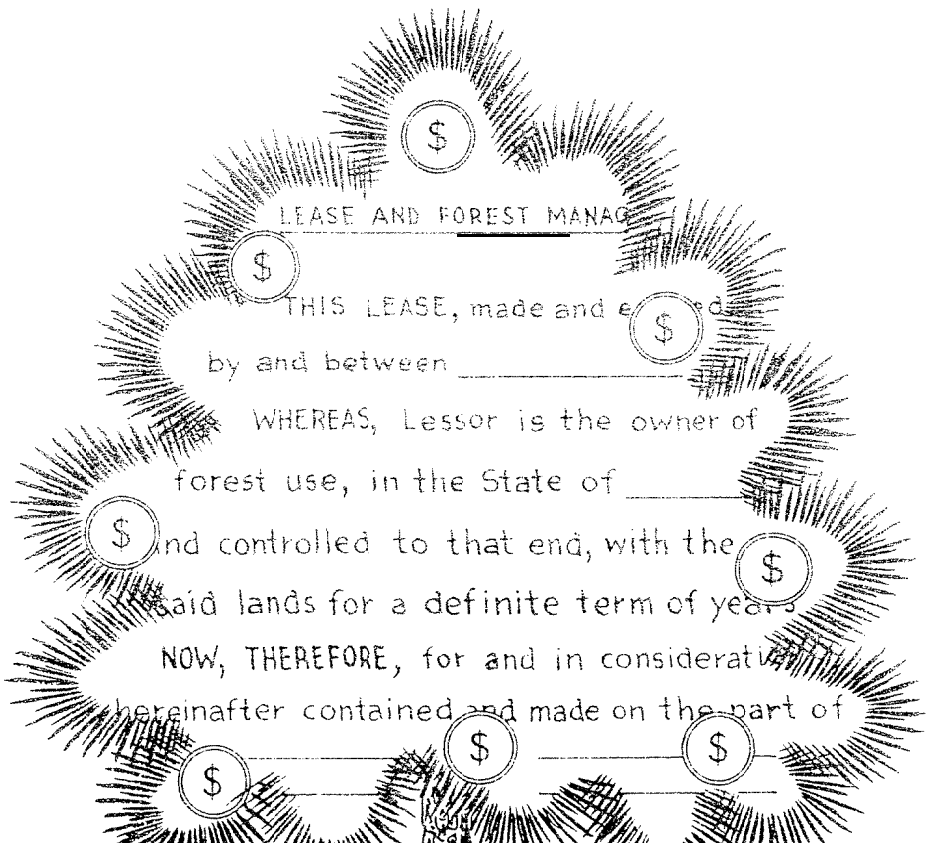
Long-Term Contracts For Forest Land and Timber in the South

William C. Siegel



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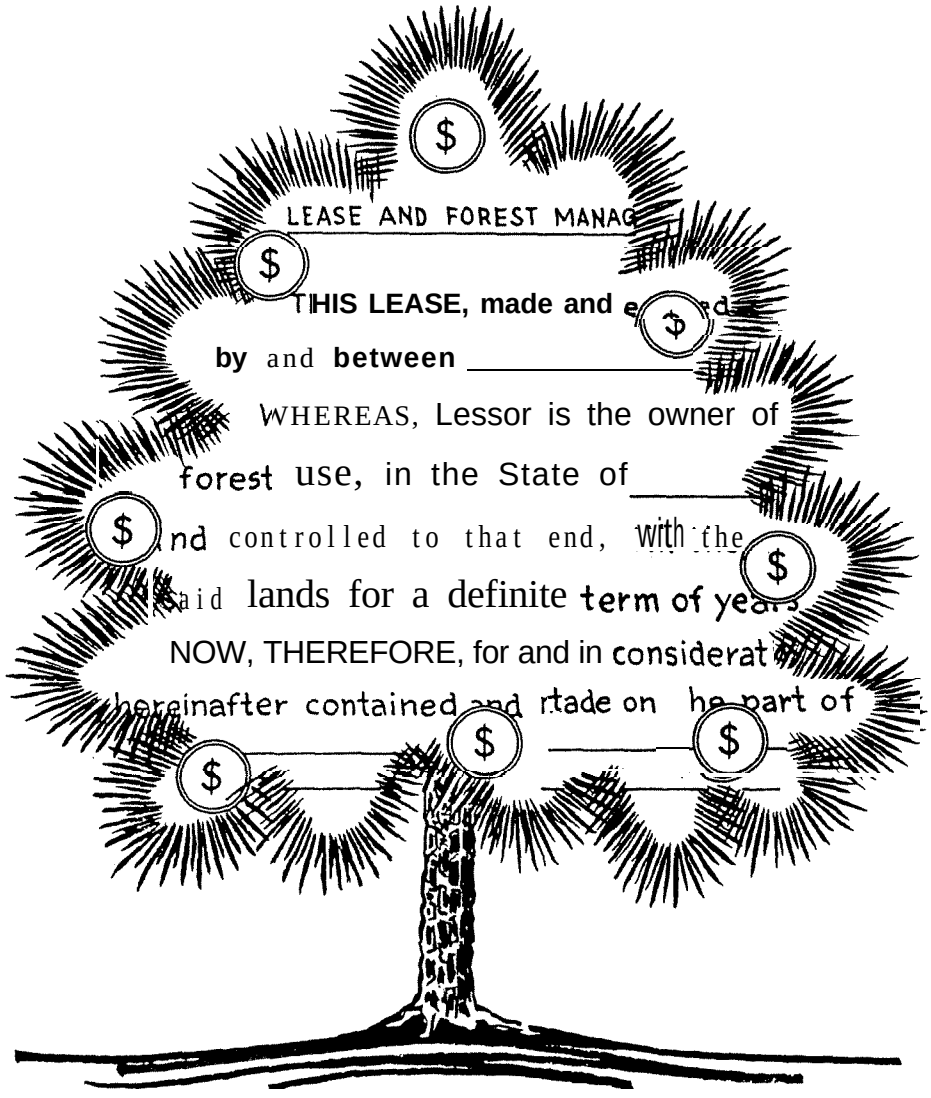

U. S. Department of Agriculture
Forest Service Research Paper SO-87

1973

Southern Forest Experiment Station

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LONG-TERM CONTRACTS FOR FOREST LAND AND TIMBER IN THE SOUTH

William C. Siegel

To help ensure a supply of raw material, the South's ***wood-using industries have negotiated long-term contracts with non-industrial private woodland owners. A study of the agreements of 54 firms revealed that, between 1967 and 1970,*** *long-*term contract ***acreage in the South increased from 6.0 to 6.7 million acres. More than half of the 54 companies have at least 50,000 acres under contracts of various types. Most of the agreements have been written in the last 20 years.***

Southern ***pine is the most prevalent timber type on contract acreage, but there are also substantial volumes of hardwoods. Management ranges from very intensive to merely custodial. Two-thirds of the firms assume all management costs on contract woodlands.***

Most agreements that provide for rental ***and stumpage payments contain adjustment indexes. A variety of arrangements are used to pay ad valorem taxes; to provide for losses by disaster, trespass, and theft; and to provide for condemnations and expropriations.***

Additional keywords: Land leases, timber leases, long term cutting contracts.

Forest land values in. the South have risen rapidly during the last two decades. In many areas external factors have supplanted timber production as the dominant consideration in pricing woodland. As a result, forest product firms striving to expand their holdings have often found prices to be beyond the payout capabilities of forestry. And large forest tracts are not often put on the open market.

Some landowners are becoming increasingly reluctant to sell because of existing or potential benefits from oil, gas, and mineral rights. Others tend to hold out for extraordinary gains in the indefinite future. Still others have no definite purpose but just do not want to give up their forest ownership. In our affluent society many landowners are free of pressing financial needs and, with out-of-pocket costs of proprietorship low, have no motive for selling.

For these reasons and others, few of the South's wood-using industries have acquired enough timberland in fee-simple ownership to supply their present and projected requirements for raw material. The problem has been partially solved by long-term contracts providing various degrees of resource control without change of ownership. These agreements, often a matter of necessity rather than choice, exist in infinite variety. They range from simple contracts between vendor and vendee to complicated arrangements that may involve lease of land; lease of timber; purchase of timber or cutting rights or both, and with or without retained economic interest; management services; and options to purchase land in fee simple. The agreements may extend to all timber on the land as of the date of contract: to trees of certain sizes at the present time or to achieve those sizes in future years, and possibly to timber yet to be grown. In recent years there has been considerable innovation in formulating long-term contracts. The changes have been motivated by a number of forestry, accounting, tax, legal, and economic considerations on the part of both timberland owners and users.

Long-term agreements hold promise for improving large segments of the southern forest resource. In the 12 Southern States 147 million acres of commercial forest (73 percent of

the total) are held by 1.6 million private nonindustrial owners. The vast majority of these owners under-manage their stands. Most of them have little or no technical forestry interest, knowledge, or skills. And some who have the ability are unable or unwilling to spend the time and effort required. For these persons, long-term contracts with industry will usually insure a periodic income with minimum effort and also provide good management for their holdings.

Industrial leasing of timberland in the South was initiated in the early 1930's by the Union Bag-Camp Paper Corporation (now Union-Camp Corporation) and the St. Regis Paper Company (Segur, 1960). In 1947 St. Regis began to supplement its leasing program with numerous long-term cutting contracts (Segur, 1960). Hundreds of thousands of southern acres are presently under contract to these two companies. Since the end of the Second World War, many other forest-prcduct firms, large and small, have obtained leases and cutting agreements.

Today, close to 7 million acres of privately owned nonindustrial woodland are under long-term agreements in the South. This acreage is more than one-fifth of that owned by firms using these agreements. Thus long-term contracts have come to represent an important raw-material source, and supplement to land ownership, for many timber products companies.

In 1967 the Southern Forest Experiment Station sent questionnaires to primary wood-using firms drawing timber from the Southern States. Included were all multiproduct companies, all pulp and paper mills, all veneer and plywood manufacturers, sawmills with an annual output of at least 5 million board feet of lumber, and some miscellaneous-product firms. More than three-fourths of the companies responded-including virtually all of the large ones. A total of 92 respondents reported having long-term leases or cutting contracts of some type. Long-term was defined as 10 years or more. The basic statistics were published in 1968 (Siegel and Guttenberg, 1968).

THE STUDY

Of the 92 firms identified in 1967, a total of 64 reported 10,000 or more acres under contract. These 64, plus four others who began operations in the South after 1967 and were known to have long-term agreements, comprised the initial population for the study reported here. Five of the companies have separate Midsouth and Southeastern divisions that in effect operate autonomously. Each of these 10 divisions was counted as a single unit, making a preliminary total of 73 industry programs to be studied.

Investigation revealed, however, that 18 companies who had reported long-term agreements in 1967 no longer fell into this category in 1970. Most of these firms had been merged into bigger ones, and the contracts largely assumed by the new owners, all of whom were already included in the study. A few companies no longer had contract lands. The final count of eligible respondents was 55, of which all but one cooperated in the study.

Personal interviews were held with knowledgeable officials of the 54 firms. Although some questions were statistical in nature, most were designed to stimulate a full, informal discussion. The results were analyzed and the factual portions provide the subject of this paper.

THE CONTRACTS

In 1967 6 million acres of nonindustrial private lands were under long-term contracts (Siegel and Guttenberg, 1968). By 1970 this acreage had increased to 6.7 million.

Long-term contracts are a much more significant source of timber in the Central Gulf and East Gulf regions of the South than they are in the South Atlantic and West Gulf States. The five Central and East Gulf States contain approximately two-thirds of the acres under agreement. Only about 10 percent is found in Virginia, North Carolina, and South Carolina, and less than one-fourth in the four West Gulf States.

Contractual acreage is most important to firms whose principal product is paper or lumber. More than three-fourths of the contracting companies primarily manufacture these products. Few firms whose main output is plywood or veneer or other products utilize long-term agreements.

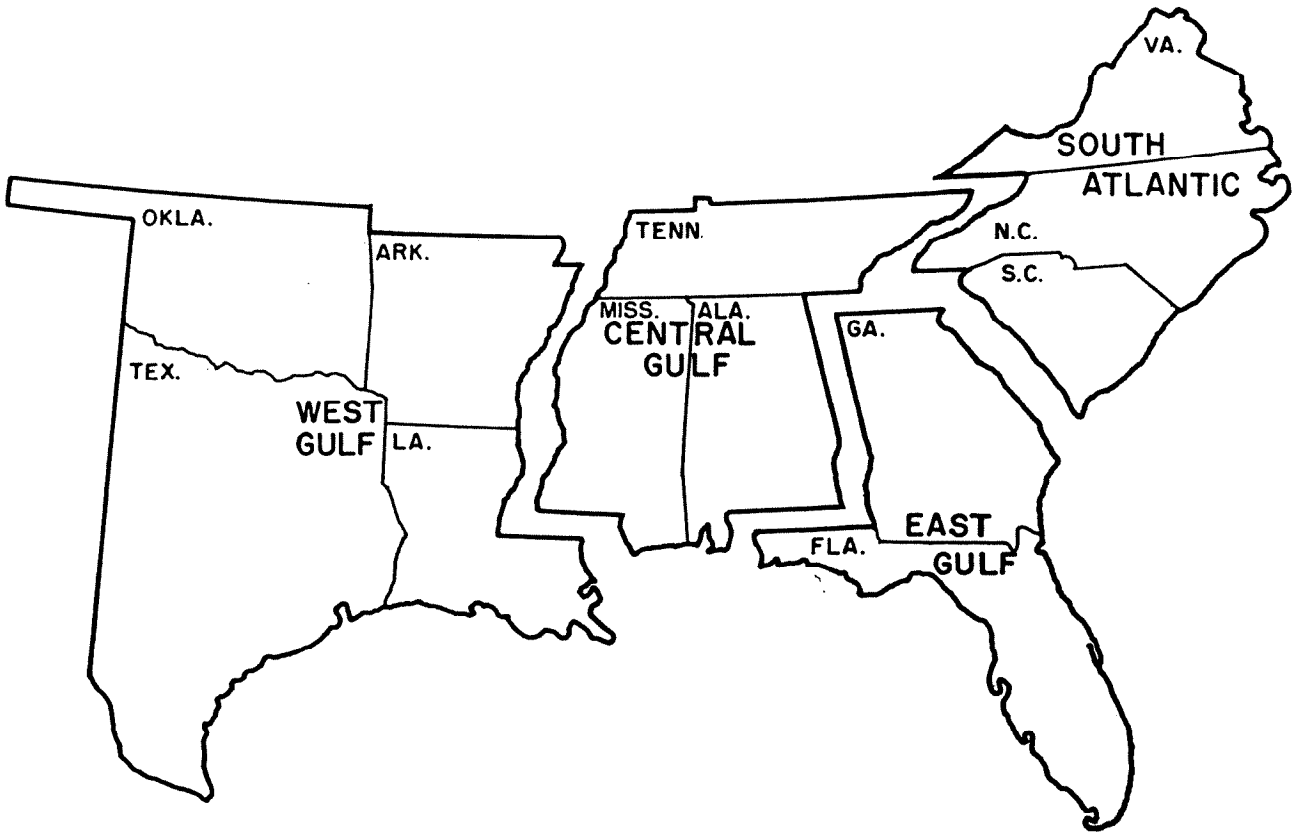

Figure l.-Forest regions of the South.

Most existing contracts are recent. More than half of the 54 firms have made such arrangements only since 1955. Just 10 entered into their first agreements before 1946. The recent increases appear related not only to the scarcity of suitable land for purchase, but also to the large expansion in wood-processing facilities during the last decade. This period witnessed many mergers and purchases of existing firms.

The 6.7 million acres reported in 1970 are controlled by 2,191 contracts for an average of 2,725 acres each. Although the number of agreements per firm averages 41, the range is from one to 304. As shown in table 1, more than half the companies had 10 or less. Only five had more than 100.

Table l.-Range in ***number*** of long-term agreements per firm

Agreements (number)	Firms	
	Number	Percent
l-5	23	43
6-10	7	13
11-20	5	9
21-50	8	15
51-75	4	7
76-100	2	4
101-200	3	5
Over 200	2	4
Total	54	100

Contract Category

Virtually all long-term agreements are written on an individual basis; that is, the particular circumstances of each situation are incorporated into the document. However, most of the agreements do fit into one of the broad categories shown in table 2.

Lump-sum agreements.—Slightly more than a third of the contracts stipulate a lump-sum payment that covers both land rental and timber purchase. Sometimes the entire payment is made at the beginning of the agreement, and sometimes it is made in two to five equal annual installments during the first few

Table 2 of long-term *land and* timber *contracts in the South, 1970*

Type of agreement	Number	Percent of total	Acres	Percent of total	Average contract acreage
One lump-sum payment that covers both land rental and timber purchase for term of contract	737	33.6	137,033	2.3	186
Specified timber cutting rights with payment on a volume basis as cut. No lease of land or timber. Lessee has management responsibilities	526	24.0	1,281,495	21.5	2,436
Same as above but with no management responsibilities	31	1.5	1,120,126	18.8	36,133
Lease of land plus lump-sum purchase of timber	230	10.5	861,823	14.4	3,747
Lease of bare land	71	3.2	190,487	3.2	2,683
Lease of land plus timber cutting rights with timber payments on a volume basis as cut	71	3.2	1,007,376	16.9	14,188
Lease of both land and timber with no other payment when timber is cut and with stipulation as to standing timber volume to be returned at contractor's end	274	12.6	520,058	8.7	1,825
Same as above but with no stipulation as to volume to be returned	12	.5	19,025	.3	1,585
Share-crop contract-company manages the tract, sells the timber to itself or on open market, and shares proceeds as agreed with landowner	8	.4	21,433	.3	2,679
Combinations or variations of preceding	231	10.5	812,506	13.6	3,517
Total	2,191	100.0	5,971,362	100.0	2,725

years. The timber to be returned at the end of the contract ranges from none to an amount equal to the original volume. Sometimes the provision for return of timber is expressed as a certain number of stems per acre. Sometimes, also, the lessee is required to prepare and plant the tract to trees before returning it. Many of the older contracts are of the lump-sum type. As landowners have become more sophisticated, however, and as land and timber values have risen, contracts more closely tied to changing economic conditions have been insisted upon. Although lump-sum agreements are still the most numerous, they represent only 2.3 percent of the total contract acreage and the average tract size is only 186 acres.

Cutting contracts.-Nearly 2% million acres are controlled by long-term cutting contracts, making this type of agreement the most important in terms of acreage. Contracts with the lessee having management responsibilities account for almost one-fourth of the total agreements and slightly more than one-fifth of the total acreage. Similar arrangements, but with no management functions on the lessee's part, numbered only 31 but accounted for 19 percent of the total acreage. Thus the average contract in this subcategory is tremendously large--36,133 acres or 15 times the size of the average holding under cutting contracts with management responsibilities. More than 70 percent of the woodland under cutting contract is in the Central and West Gulf States. Only 300,000 acres are controlled by this means in Virginia and the Carolinas.

The landowners generally sell the timber growth at an agreed-upon unit price as it is removed. Alternatively, they may sell the right to remove a given quantity of timber with payment also made on a volume basis as cut. There is no lease of either the land or the timber. Many cutting agreements assure an annual minimum payment which may be designated as an advance or "cord credit" against future cuts. Thus the landowner is assured some annual income. In many instances, the initial volume of timber, unless independently purchased by specific lump-sum principal payment, must be returned with the land when the contract expires.

Land leases with timber purchases.-Three general types of agreement involve lease or rental of the land, coupled with various stipulations as to how payment for the timber is to

be made. Under each type the lease payments are usually made annually, but some are made periodically at lesser intervals.

The most common contract in this category is lease of the land coupled with an initial lump-sum purchase of the timber. About 10 percent of the agreements--covering 14 percent of the acreage--are of this type. Such leases usually are not as strict as others in regard to the conditions of stocking when the land is returned to the lessor. In some instances the tracts can be clearcut just prior to lease termination. Since the socking is initially purchased outright rather than rented, the periodic payments are normally smaller than if both assets were rented. The basis for adjustment usually is the prorated principal and the interest credit accruing on the value of the purchased timber.

The other two general types of land-lease contracts each comprise 3 percent of the South's long-term agreements. These are : lease of bare land for timber-growing, and land leases coupled with timber payments to be made on a volume basis as cut. The former cover less than 200,000 acres. The latter, however, control more than a million acres, with the average contract acreage exceeding 14,000. Again, provisions regarding cutting rights and returnable timber differ widely. The bare-land leases, of course, involve initial stocking by the lessee.

Lease of both *land* and timber.-Contracts that provide for lease of both the land and the timber, with no other payments made when timber is cut, number 286-about 13 percent of the South's total. However, only slightly more than a half million acres, or 9 percent of the total, are controlled by this means. The average contract is for less than 2,000 acres. The most prevalent arrangement is for the lessee to have cutting rights to the growth and to return the original volume to the lessor at the close of the contract. Thus the timber stand as a whole is actually rented, and in effect treated as a factory, with only the production being utilized. These contracts, which are perhaps the most sophisticated in terms of provisions and conditions, are used only by a small number of the largest firms-principally in the Southeast. All but 12 of the 286 reported have some stipulation as to the volume of timber to be returned when the agreement ends.

Nearly half of the acreage under the five types of leases-as opposed to the other types of long-term contracts-is in Florida and Georgia. Another one-fourth is in Alabama, Mississippi, and Tennessee.

Share-crop *contracts.*—Only eight share-crop contracts were reported, all written by three companies in Louisiana and Tennessee. Under this type of agreement, the company manages the tract and has the option of making timber sales either to itself or on the open market at prevailing stumpage rates. The proceeds are then shared as agreed upon with the landowner. The first contract of this type was written in 1953.

Other *contracts.*—About 10 percent of the South's long-term agreements, covering more than 800,000 acres, do not fit into any of the categories that have been described. They are principally combinations of one or more types, but some are extreme variations of a particular category. The situation was typified by one woodland manager who said, "Our contracts are highly variable, and it would be next to impossible to separate them into meaningful categories."

Contract Acreage

What minimum acreage are the companies willing to put under contract? Almost half—25 firms-reported that they set no limit. They look at each tract as a separate entity and determine whether it can fit into their plans. Some of these companies have agreements for tracts of less than 200 acres.

The other 29 firms have set a minimum tract size below which no contract can be written regardless of how favorable other factors are. The range for these minimums is shown in table 3. Under optimum conditions, all but three of the 54 companies will consider holdings of 1,000 acres or less. And 38 of these take tracts smaller than 500 acres. Usually a woodland of less than 500 acres is placed under contract only if its productive potential is very high and it is near one of the firm's mills or else contiguous to other lands owned or controlled by the company.

Table 3.-Minimum tract size required *for long-term contracts*

Acres (number)	Firms	
	Number	Percent
No minimum	25	46
Less than 100	2	4
100-250	5	9
251-500	6	11
501-1,000	13	24
l,OOl-2,000	1	2
2,001-3,000	1	2
3,001-5,000	1	2
Total	54	100

The range in total acreage for the 54 firms is shown in table 4. Only nine companies reported less than 10,000 acres under contract. Some of these had reported more than 10,000 in 1967 and thus were included in the current study. Others of the nine had just begun utilizing long-term agreements and were not in the 1967 group. More than half the companies have 50,000 or more acres under contract. Generally, those with the most acreage are pulp and paper manufacturers in the Southeast.

Table 4.-Range in total acreage under contract *per firm*

Acres (number)	Firms	
	Number	Percent
Less than 10,000	9	16
10,000-24,999	5	9
25,000-49,999	10	19
50,000-99,999	10	19
100,000-199,999	13	24
200,000-499,999	6	11
Over 500,000	1	2
Total	54	100

Contract Length

About two-thirds of the companies have set a minimum length for their agreements, but only two out of five have set a maximum (table 5) . A lo-year minimum, specified by one-fourth of the firms, is the most prevalent. The maximum used most often is 99 years-specified by nearly one firm in five. Some companies will waive their minimum if the terms include a purchase option.

Table 5.-Minimum and maximum terms required by *firms* for long-term agreements

Term (years)	Minimum term		Maximum term	
	No. firms	Percent	No. firms	Percent
10	15	28	1	2
13	1	2	.	.
18			1	2
20	3	5		
21			1	2
25	1	2	1	2
30	4	7	2	4
33	2	4	1	2
35	1	2		
40	3	5		
50	1	2	.	.
60	2	4	3	5
66	2	4	1	2
99	. . .			19
None	19	‘35	33 10	60
Total	54	100	54	100

More than one-third of the agreements are for 81 to 100 years (table 6). And nearly three of every four are for 21 years or longer. Thus, many contracts are for terms far in excess of company minimums.

Tract Size

More than half of the woodland holdings under contract are less than 500 acres in size. On the other hand, almost one of every 10 is 5,000 acres or larger.

Of the 1,206 tracts that are smaller than 500 acres, nearly three in every five are under contract for 81 years or more, and about one-third for 10 to 20 years (table 6). These small ownerships account for 93 percent of all the contracts with terms of 81 years or longer. Most larger tracts are controlled for 60 years or less. Just 54 woodlands larger than 500 acres are under contract for 81 to 100 years.

These findings are as expected. It is usually not economical to put a natural stand of less than 500 acres under contract unless the term is long enough-more than 80 years-to enable complete sustained integration of the tract into the company's operation. On the other hand, most of the 383 small holdings (those less than 500 acres) that are under 10- to 20-year contracts are even-aged plantations for which management integration is not essential. Such tracts are usually of above-average quality and

Table 6.—*Land* and timber contracts in the South, 1970, by acreage category and length of term

Acreage	Contract term, in years										Totals	
	10-20		21-40		41-60		61-80		81-100			
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Less than 500	383	31.8	50	4.1	63	5.2	24	2.0	686	56.9	1,206	100.0
500-999	56	16.2	42	12.1	185	53.5	35	10.1	28	8.1	346	100.0
1,000-1,999	64	29.9	37	1'7.3	79	36.9	26	12.1	8	3.8	214	100.0
2,000-4,999	25	14.7	43	25.3	72	42.4	27	15.9	3	1.7	170	100.0
5,000-9,999	14	16.9	15	18.1	32	38.6	19	22.9	3	3.5	83	100.0
10,000 +	29	26.6	9	8.3	31	28.4	28	25.7	12	11.0	109	100.0
Total	571	26.8	196	9.2	462	21.7	159	7.5	740	34.8	2,128	100.0

stocking, and soon reach economic maturity. They can then be clearcut and the land returned to the owner. Shorter terms are possible for large natural stands, particularly those of 2,000 acres or more, because they tend to be self-sufficient units.

THE TIMBER AND ITS MANAGEMENT

Timber Types

Nearly two-thirds of the southern acreage under long-term contract can be classified as pine type (table 7). Upland hardwood is next most prevalent, and is followed in order by mixed pine-hardwood, bottom-land hardwood, and open land.

All but eight firms have some pine land under agreement, and nearly 60 percent some bottom-land hardwood. Less than half the companies, however, reported mixed pine-hardwood or upland hardwood. And only one-fourth have open land under contract. Six firms reported all five forest types, nine reported four, 10 specified three, 14 have two, and 15 have only one type.

Hardwood Contracts

A total of 156 hardwood contracts-7 per cent of the total, and including both uplan and bottom-land-were reported. Rather sur prisingly, 21 companies-nearly 40 percent— have agreements for some tracts that are ex clusively hardwood. Eight of these firms, al hardwood lumber producers, limit their agree ments entirely to hardwood holdings.

The 33 firms with no hardwood contract were asked if they would consider them if th opportunity arose. Twelve replied affirmative ly. Most of the 21 who said no are either pin lumber producers or paper companies wh require only a small percentage of hardwoo pulp. The latter reported that sufficient hard woods are obtainable from their own lands o on the open market.

The 12 firms who said yes either operat hardwood sawmills or are paper producer who use 20 percent or more hardwood pulp Several are in both categories. Certain conditions, however, were specified as prerequisites Most commonly mentioned were long terms

Table 7.-Long-term contract acreage by *general forest type*

General forest type	Acres		Firms		Average acreage per firm
	Number	Proportion	Number	Proportion	
		Percent		Percent	
Pine (more than 50 percent pine)	3,826,726	64	46	85	83,168
Mixed pine-hardwood (50-75 percent hardwood and 25-50 percent pine)	594,559	10	24	44	24,773
Upland hardwood (more than '75 percent hardwoods)	899,846	15	[1] 24	44	37,494
Bottom-land hardwood	554,038	9	[1] 32	59	17,314
Open or nonstocked land	122,993	2	13	24	9,461
Total	5,998,162	100			

[1] Eight firms lease entirely hardwood.

good sites, and extensive acreages. Four firms said, though, that average hardwood tracts would be acceptable. One specified a minimum 7-percent return.

Nonmerchantable Tracts

Fifteen companies will not contract for lands having only premerchantable lumber. These firms require either sawtimber or pulpwood-size stands at the beginning of the agreement. The other 39 will consider nonmerchantable tracts if certain standards are met. These firms generally evaluate site, stocking, location, and growth potential. One company, however, considers site only. Two firms would prefer to contract exclusively for precommercial stands.

Eleven of the 39 who will consider nonmerchantable stands limit such agreements to plantations. And one-a hardwood firm-will consider only cottonwood plantations. Another will contract only for pine plantations at least 10 years old. Most of the others will enter into agreements for plantings as young as 1 year. Three reported that they had tried but failed to negotiate plantation contracts.

The acreage of Soil Bank plantations in the South has been estimated at 1.9 million in commercial species (Kalmar, 1967). Many companies would welcome formal agreements for such plantations but few have been able to accumulate many. The most successful attempts have been in Georgia and Florida, where three pulp and paper companies reported a total of 275 Soil Bank leases. Firms in the Midsouth say opportunities are scarce. Several mentioned that many Soil Bank plantations in Alabama have been cut, and the land put into crops.

In general, leases would *seem* to be an attractive arrangement for plantation owners, particularly those with stands 10 years or more in age. Companies can pay well for such stands, because the period of high risk is past and the time to merchantability is short. Apparently, however, industry has been able to contract with relatively few plantation owners.

Management of Contract Lands

When the 54 firms were asked to compare management on their fee lands with management on their contract acreage, 20 reported no difference. Two said there was no difference if the agreement was long enough for two rotations-otherwise management was only custodial in nature. Five others owned no forest land at the time of the study. A variety of differences were specified by the remainder.

Fourteen companies manage contract woodlands more intensively than their fee holdings. And four others manage more 'intensively if the agreement does not contain a purchase option. These 18 firms argue that the limited span for which the land is under their control, and the higher capital investment, justify more intensive management to recapture the investment and realize a suitable rate of return. They usually accelerate the cutting cycles on contract lands. Most are pulp and paper companies who primarily utilize leases.

One company practices the same degree of management on both types of tracts except that it uses fertilizer on company lands. One lumber company applies selection cutting on its own forests and diameter-limit logging on contract lands. The other seven firms, all of whom write primarily cutting contracts, only give custodial management to controlled woodlands. If the term permits, more than half of the companies prefer rotations of 20 to 50 years on their managed contract acreage.

Regeneration Treatments

Table 8 shows how the 54 companies have treated contract acreage from which they harvested the initial stand of commercial timber. The most prevalent of the four treatments was planting-utilized to some extent by 40 firms. Some planned natural regeneration was reported by 37 companies. Only 13 direct-seeded any of their contract woodlands, and the acreage seeded usually was less than 25 percent of the total to be regenerated. Of 15 firms that had drained or bedded leased land, six had treated more than 75 percent of their regenerated contract acreage in this manner.

Only three companies had not applied any of the four treatments. All four were reported by seven firms, three by 10 firms, two by 17, and only one by the remaining 17.

Table &-Regeneration treatments on contract acreage from which the commercial timber had been harvested

Percent of acreage	Planned natural regeneration		Planted		Direct-seeded		Drained or bedded	
	No. firms	Percent	No. firms	Percent	No. firms	Percent	No. firms	Percent
0	17	32	14	26	41	76	39	72
1-25	15	28	17	32	10	20	5	9
26-50	6	11	6	11	2	3	4	a
51-75	1	1	1	1	1	1	0	0
76-100	15	28	16	30	0	0	6	11
Total	54	100	54	100	54	100	54	100

FINANCIAL CONSIDERATIONS

A major concern in writing long-term forestry contracts is that of financial stipulations. How should timber-both merchantable and nonmerchantable-standing at the beginning of the agreement be priced and how should growth be paid for? What indexes are the most suitable for adjusting payments? What types of periodic financial reviews are most appropriate to protect both the company's interest and that of the landowner? What provisions will be made for payment or assumption of management costs and ad valorem taxes? What kinds of revenue sharing and reimbursement should there be if contract land is condemned or appropriated? How should losses from natural disasters, fire, or theft be shared? Equitable answers to these questions are not easy to determine.

Landowners should recognize that companies contracting for their land and timber will usually have to make sizable investments to get the stands into full production-particularly during the critical first 10 years. This is especially true for long-term management leases as opposed to nonmanagement cutting contracts. At least 35 years are required to justify a program of intensive management. The financial risks are largely one-sided, since many years usually pass before a substantial payoff can be realized.

Rental Payments for Land and Timber

The 36 companies with agreements that embody periodic rental payments for land or timber, or both, were asked to discuss the bases for adjustments as economic conditions change. The existing rental contracts of 13 of these firms have no provisions for adjustment; the payment negotiated at the outset prevails throughout the term of the agreement, which sometimes is for 99 years. With a few exceptions, these 13 companies have little acreage under contract and most of their agreements are rather old. Representatives of several firms commented that any rental contracts negotiated today would have to contain an escalation clause, since landowners have been acquainted with the effects of inflation.

The 23 producers who do have contracts with rental escalation clauses utilize various indexes. Nineteen of them, however, base their adjustments for both land and timber rentals on the All-Commodities Wholesale Price Index issued by the Bureau of Labor Statistics of the U. S. Department of Labor.

Only two firms utilize BLS wholesale price indexes for specific products. One utilizes the index for "Paper except- Newsprint, Paperboard, and Building Paper and Board," while the other relies on a consolidation of all the forest product indexes. The former is used for both land and timber rentals whereas the latter is applied only to land.

The U. S. Department of Labor (1967) considers the All-Commodities Index to have more statistical accuracy than the component group indexes. Perhaps this is the reason for its widespread usage in rental escalation clauses. It measures general price changes for more than 2,000 types of goods sold in U. S. primary markets. The intention is to measure pure price changes-that is, those not influenced by such factors as changes in quality, quantity, shipping terms, and product mix. The prices, insofar as possible, are FOB production point and refer to sales for immediate delivery. Whole-

sale price indexes are presently computed on the base that 1957-1959 equals 100. Wholesale is used to mean sales in large quantities and not necessarily prices received by wholesalers. Most of the quotations built into the index are the selling prices of representative manufacturers or producers.

Review intervals and provisions for price change vary among firms. Eight companies review the index yearly and seven of these adjust their payments proportionately for every 5-percent change. The eighth adjusts proportionately as the index changes, with no minimum time period or percentage interval required. The remaining 11 review at intervals of 3, 4, or 5 years; some adjust only in 5-percent increments, while others adjust with any amount of change.

Only one company reported that the All-Commodities Index has not proved satisfactory for rental payments. This firm's experience was that it did not properly reflect regional differences. No one index, of course, can be totally satisfactory. For one thing, stumpage values-which are closely reflected in timber rentals-are not likely to follow the index as closely as do changes in land values. However, contracts involving both types of rentals usually are written in terms of one consolidated payment for both items, and it is thus easier to use a single index for determining changes.

Seven other escalation guides are used for rental clauses, each by a different company. One is based on lo-cent increments in the average annual delivered price of pulpwood at the firm's mill; another is the BLS Cost of Living Index; another utilizes changes in the price of pulpwood per cord FOB railcar; the fourth is based on changes in the wholesale price of lumber sold by the company; the fifth involves a monthly review of the FOB truck-wood price at the company's mill; the sixth entails an annual review of producers' prices of pulpwood delivered to the company's yard; and the seventh is an arbitrary increase per specified period of time.

Once a firm has determined a basis for rental escalations, it seldom changes. Only two companies were utilizing more than one index for agreements current at the time of the study. One was employing four guides and the other two. Evidently most producers are satisfied or at least feel that the present basis cannot be improved upon.

Timber Stumpage Payments

When the landowner's current merchantable timber is purchased outright as part of a long-term contract, prevailing stumpage prices are paid to the extent possible. In many instances, however, these values are negotiated, for the stumpage market is not readily identifiable and prices are affected by differences in species, tree size, volume per acre, and tree quality.

Many contracts have need for an index to be used in making automatic adjustments in the price to be paid by the company for the timber that it grows. The study identified a number of alternatives that are utilized for this purpose.

Twenty of the 54 firms have no long-term contracts that provide for timber payments on a volume basis as cut. One company would not discuss the question. The remaining 33 have at least some long-term agreements that provide for this type of payment, and 27 of them utilize one or more escalation indexes. Contracts of the other six stipulate a set stumpage price for the entire contract term.

Standards for adjusting stumpage payments vary more widely than those for rental changes. Only seven firms rely on the All-Commodities Index. Six review the Index and stipulate a minimum 5-percent swing before payments are altered proportionately. The seventh makes its reviews every 5 years.

Two manufacturers employ the various BLS wholesale price indexes for forest products. One annually reviews the All-Lumber Index, and the other-a hardwood producer-utilizes the index for No. 1 common lumber by species. The latter reported, however, that large recent increases in the price of No. 1 common hardwood lumber have made the index unsatisfactory.

Four hardwood manufacturers tie their timber escalation clauses to the prices quoted in the National Hardwood Lumber Market Report. Two make proportionate adjustments at the first of each year, one adjusts at 6-month intervals, and the fourth reviews and adjusts every time it cuts timber. Four other firms—

all lumber ,nroducers-also rely on lumber prices, but of a more local nature. Three change stumpage rates in proportion to the retail prices of lumber that they sell. The fourth uses local lumber price quotations, which it reviews quarterly.

Stumpage prices are utilized directly by eight firms. Two adjust according to the "'Louisiana Timber Products Quarterly Market Report." This report, issued by the State Department of Agriculture, covers a great variety of species and products. While the data are not necessarily typical for the South as a whole, they are nevertheless serviceable since they move up and down as economic conditions change. Four of these companies use local stumpage price quotations: another adjusts quarterly according to price variations in local USDA Forest Service sales; the eighth has an index based on the average open-market stumpage prices that it pays, with a specified minimum.

Two firms have developed an index based on percentage changes in the FOB price of pulpwood on railcars. Two others annually review FOB prices of timber delivered to their mills and adjust stumpage values proportionately. One producer uses the BLS Cost of Living Index and another has contracts with set increases per specified period of time.

Only four companies presently use more than one index for adjusting stumpage payments. Three have two indexes and the other four. Seven firms have adopted the same index for changes in both stumpage prices and rentals.

Management Costs

Two-thirds of the companies assume all the costs of management on their contract acreage. Payments to landowners are, of necessity, adjusted to reflect the extent to which management expenses are incurred by the company. In most instances the cost of management to the landowner will ultimately be less when the entire expense is borne directly by the contracting firm. The company can usually do the work more cheaply, since it can consolidate operations on both fee and contract acreage and can schedule work at cost-feasible times. Overhead can be kept constant, and men and machinery can be utilized efficiently.

Nevertheless, all the contracts of six companies require the landowner to assume the entire management cost. And four firms have some agreements with this stipulation.

The contracts of eight others all provide for cost-sharing. One firm pays every management cost but that of boundary surveys. Another pays all except road construction and maintenance. A third requires the landowner to pay site-preparation and road costs. Still another assumes only supervisory wages, and another only cruising and marking expenses. A sixth pays all costs except those of labor. The remaining two pay for all management as stipulated in the agreement, and the owner assumes the cost of any additional work that he undertakes.

Only one of the companies with contracts calling for owner assumption of management costs reported having a basis for adjustment as economic conditions change. This firm deducts an annual per-acre management fee from the payments it makes to lessors. The fee is adjusted annually in accordance with the average per-acre costs of management on the company's fee lands.

Ad Valorem Taxes

As with management expenses, there is little cost-sharing of ad valorem taxes. The contracts of 21 firms stipulate that the company will pay all such taxes; those of 15 others require the landowner to pay. Both types are being used by 12 firms. Contractual payments to landowners will, of course, usually reflect the allocation of taxes among the parties.

The other six manufacturers share land taxes with the owners. Some companies pay all ad valorem taxes after the first year. Others pay either the first 50 cents or $1 per acre, with the excess either assumed entirely by the owner or shared equally. In still others, the firm continues to pay the rate in force at the beginning of the contract and the owner absorbs either half or all of any subsequent increases. In some instances, taxes are shared equally. In a few contracts the firm assumes 95 percent and the owner 5 percent. Several stipulate that the company will pay the portion that exceeds a certain percentage of the annual land rental. In other agreements, the company will

agreements except cutting contracts. And still another offers maximum payments only if it receives a purchase option. A number of company spokesmen commented that many well-informed landowners do not want purchase options in their agreements and, even if there is one, do not want to sell. Of the 21 companies who have no purchase options, all but two would include such a stipulation if they could.

At the time of the study one firm had exercised all of its options, and eight had made some purchases during the previous 10 years. Acreage thus acquired ranged from 40 to 9,400 per firm but totaled only 23,000.

Adverse State Laws

Only two State laws were reported by company spokesmen to be deterimental to the formation of long-term forestry contracts. One was Alabama's privilege tax, which is similar to a license to do business and increases with the value of the agreement. The representative of one firm said that plans for a large lease had been cancelled because of the amount of this tax. The other instance concerned the Georgia State income tax laws and regulations, which generally hold that income to lessors under long-term leases is ordinary income even though it may be a capital gain for Federal income tax purposes (see Williams v. Superior Pine Products Co., Georgia Court of Appeals, March 10, 1958).

INFORMAL AGREEMENTS

Numerous firms in the South work with owners of small woodlands under informal, verbal agreements-sometimes referred to as tree farm family agreements. These usually provide the company with first refusals of the stumpage at prevailing rates. In a 1961 study (Whaley and Guttenberg, 1962), at least 14 Midsouth firms were found to have such agreements. It was concluded that the arrangements generally worked well and that the woodlands were being managed substantially better than "nonclient" lands.

The 54 companies with formal long-term contracts were asked if they also utilize informal tree farm family agreements. Twenty-four said yes, and one other planned to start this program soon. Another wanted to begin, but had not received authorization from its home office. Of the 30 firms who avoid these agreements, however, most give free management advice to landowners.

Twenty-three of the 24 users reported a total of 994 informal contracts at the time of the study, for an average of 43 each. Acreage was reported by only 11 companies. The total was 357,880 acres for an average of 32,535 per firm and 848 acres per tract.

Only 13 of the 24 companies with informal agreements are seeking more. The 11 who are dissatisfied prefer formal contracts and feel that the others have been too time-consuming and troublesome for the returns. Several reported that many owners have backed out and thus created supply problems for the firm. The firms who would like additional informal arrangements, however, reported generally good success with them.

PLANS FOR MEETING TIMBER REQUIREMENTS

Resource requirements of the 54 companies are only partially met from long-term leases and cutting contracts. In 1967, two-thirds of the leasing firms drew timber from their contract woodlands and for most of these firms this supply amounted to less than 20 percent of total wood requirements. And only four of them cut more than 60 percent of their wood from leased acreage. Much of the woodland is being developed for future supplies.

Lands under long-term cutting contracts were drawn on more heavily than those under lease. In 1967, more than nine out of 10 firms with such contracts utilized them for part of their timber supply, and more than two-fifths received upwards of 40 percent of their raw material from this source.

Forest Purchase Plans

Of the 54 companies, 35 stated that they were actively seeking more purchases of timberland. Most of these would eventually like enough fee acreage to meet at least 50 percent of their resource requirements, and a few are aiming as high as 75 percent. One Georgia firm that is seeking no new purchases reported that it plans to remove all the timber from its fee lands and put the acreage into agricultural use for a greater return. This firm believes that its

timber requirements can be satisfied from the open market and long-term contracts.

Several manufacturers stipulated that they are only seeking purchases within specified distances of their mills. These distances range from 50 to 125 miles. Others wish to buy land only near new mill sites or to replace acreage lost through condemnation or to block out present holdings. A number of companies plan to buy all the woodlands they can, merely as an investment, and not necessarily to supply their own mills. Those who are not actively seeking more purchases generally cite high prices as the reason and thus plan to utilize long-term contracts to an even greater extent than at present.

Plans for Long-Term Contracts

When the companies were asked if they are actively seeking more long-term contracts, 28 of the 54 said yes. Many of those who answered in the negative-cited legal problems with estates, elderly people, divided ownerships, and second-generation owners. Others mentioned income-tax problems associated with long-term agreements. Still others were discouraged by the reluctance of lessors to invest even minimally in their land.

The 28 seeking more contracts were asked the type they would prefer. Specified most often, and definitely preferred by a majority, were leases of both land and timber, and long-term cutting contracts with management responsibilities. Also mentioned were land leases coupled with lump-sum timber purchases, and land leases coupled with timber payments on an as-cut volume basis. One pulp and paper firm in the Southeast reported that it had turned down many good leases because management thought the money could be used more profitably elsewhere.

The 28 companies were also asked the proportion of their timber requirements they would eventually like to obtain from long-term contracts. The answers ranged from 100 percent (five firms) to 20 percent (two firms). The proportion cited most often was 50 percent; more than two-thirds of the companies are aiming for 50 percent or higher. One is seeking more long-term leases even though it presently has a sufficient land base, and foresees no problems in purchasing more if needed. Its purpose is to get more nonindustrial private ownerships under good management.

Preferred Arrangements

Nineteen of the 54 firms would like both more long-term contracts and more woodland purchases. Nine others are seeking agreements only and 16 want purchases only. The remaining 10 want neither agreements nor purchases.

When asked what they would prefer if they had a clear choice among fee lands, long-term contracts, or informal agreements, 31 mentioned fee lands, 12 favored contracts, and one liked informal agreements. The other 10 preferred combinations of the three arrangements.

Most companies who prefer long-term agreements to fee ownership do so because they believe that there is less tie-up of capital, a better flow of corporate funds, and a better rate of return. On the other hand, those who prefer fee lands gave such reasons as latitude and flexibility in management, ease of long-term planning, and accruals in land value. The five companies who prefer a combination of the three arrangements all emphasized that they need flexibility to adjust to changes in supply and demand and in the cost of money.

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By means of long-term contracts, southern wood-using industries control almost 7 million acres of privately owned, nonindustrial forest. While pine is the prevalent timber type under contract, there are also substantial acreages of hardwood. Nearly all agreements are written on an individual basis, but most fit into one of several broad categories.

Additional keywords: Land leases, timber leases, long term cutting contracts.