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Effect of freight rates on the competitive position of the Montana Christmas tree industry

Malvin Tracy Alexander
The University of Montana

THE EFFECT OF FREIGHT RATES on the COMPETITIVE POSITION of the MONTANA CHRISTMAS TREE INDUSTRY

by

Malvin T. Alexander
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Approved:

F. G. Clark
Chairman of Board of Examiners

W. T. Clark
Dean, Graduate School

ProQuest LLC.
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TABLE OF CONTENTS

CHAPTER PAGE

LIST OF TABLES

TABLE PAGE

LIST OF FIGURES

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One who undertakes a general survey in a subject with which he is only slightly familiar is continually impressed by his own limitations and by the need for the wise counsel of others. The writer is glad to express his gratitude to his professors and others without whose help and advice this paper would not have been possible.

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on the production, transportation, and marketing aspects of the Christmas tree industry in their areas.

The personnel of the Pacific Northwest Forest and Range Experiment Station, particularly R. K. Le Barron, Blaire Hutchison and Ben Huey were generous with suggestions and assistance.

Other individuals that made the compilation and writing of this report easier are O. C. Garlington of the Missoula Mercantile Co., M. Lucy, Lucy's Department Store, Missoula, Montana, John Drummond, Montana State Extension Forester and many more that are not mentioned.

CHAPTER I

INTRODUCTION AND SOURCES OF INFORMATION

INTRODUCTION

Montana supplies between one-eighth and one-twelfth of all Christmas trees consumed in the United States. About ninety-eight and one-half per cent of the annual harvest is shipped widely outside the state mostly to the Central, South Central, Plains and Western States. Shipments to the Northeast and Middle Atlantic and the Southeastern States amount to approximately three per cent of the total or 100,000 trees. An annual production of 1,676,000 trees in 1938 has increased to 3,123,000 trees in 1948 /7. This increase is much more than Montana's share of the increase in national consumption indicating that Montana has increased its market area.

Long shipping distances make transportation cost an important consideration in determining the areas in which Montana's Christmas trees can be marketed successfully in competition with trees produced in other regions, often nearer to the consuming area.

The purpose of this study is to determine on the basis of information available, what affect freight costs have or may have on the competitive position of the Montana

Christmas tree industry. To arrive at an answer to this question, since many factors and situations affect freight costs, it was necessary to study the Christmas tree industry, as it related to transportation matters. Information was obtained and is presented in this report concerning the general nature and characteristics of the national and local Christmas tree industry, major producing and consuming areas of the United States and Canada, and freight rates, costs and increases from Montana and other principal producing centers to consuming areas.

HOW THE STUDY WAS CONDUCTED AND SOURCES OF INFORMATION

This study was made by mail questionnaire and personal contacts during the fall and winter of 1948-49. Particular emphasis was placed on the period from 1939 to 1949 since this is the period of largest growth and development of the Christmas tree industry in Montana.

The kind and extent of information obtained is summarized below.

Original Sources

1. Northeastern and Lake States Forest Experiment Stations, United States Forest Service. Information on Christmas tree marketing and shipment was requested. No information was available on those subjects for the Northeast. The Lake States Experiment Station supplied data on

production, producers, number of trees per carload and shipment destinations for that area.

2. Northern Pacific Railroad. Information was requested on Christmas tree freight rates, for 1939 and 1949, to thirty-four centers of distribution from Montana, Washington, California, Minnesota, Wisconsin, Lower Michigan, New Hampshire and New Brunswick. The 1939 freight rates from Lower Michigan, New Hampshire or New Brunswick were not available.

3. Extension Foresters and State Foresters. A questionaire was sent to the State and Extension Foresters of Washington, Idaho, Minnesota, Wisconsin, Michigan, Maine, Vermont, and New Hampshire. Information on consuming markets, shipping points and representative figures for number of trees per railroad car, car weight, type of car used, and value per car was requested. Data on car weights, number of trees per car, consuming markets and shipping points was received from the above states. Other information requested was not available.

4. Dominion Forest Service, Ottawa Canada. Information was requested by questionnaire on Canadian Christmas tree exports to the United States, shipping points, destinations and carload weights. The names and addresses of American importers of Canadian trees was supplied and Irishtown, New Brunswick was designated as an important shipping point. The other information requested was not available.

5. Interviews with personnel of the Northern Rocky Mountain Forest and Range Experiment Station, O. C. Garlington of the Missoula Mercantile Company, and E. J. Stiles of the Northern Pacific Railroad provided much miscellaneous information on Christmas tree transportation and freight rates.

Literature

1. Most of the information Montana Christmas tree production and distribution was obtained from publications of the Northern Rocky Mountain Forest and Range Experiment Station. (See Bibliography) The report, "A Survey of Christmas Tree Production on Private Lands in Western Montana", by Thomas A. Walbridge Jr. (Master thesis, Montana State University) also gave helpful information on handling and shipping practices in Montana.

2. An "American Forests" publication of December 1947, "Christmas Tree Farming", by J. A. Cope contained valuable information on Christmas tree marketing methods in the Northeast. Christmas tree plantations were also discussed.

3. G. A. Cromie has written a paper published in the Journal of Forestry, July 1944. It is titled "Perfect Christmas Trees for the Northeast." Information on Northeastern Plantations and a detailed description of the qualities of Allegenies Frazer fir (Abies Frazeri)-- is the subject matter covered.

4. An article "Christmas Tree Rackets" written by J. C. Hunt was published in "American Forests" in December 1944. Much revealing information on the characteristics of the Christmas tree business was presented.

5. A contribution to the 1948 Agricultural yearbook by A. M. Sowder provided important information on Christmas tree production.

6. The General Extension Service Univ. of New Hampshire provided Ext. Cir. 278, October 1948, "Christmas Trees a Cash Crop", by D. E. Barraclough. This publication gave some indication or production and distribution of Christmas trees in the Northeast.

7. Publications on transportation and railroad freight rates are numerous. The following books and documents were valuable to the author in obtaining a knowledge of Railroad Freight Rates and theory: (a) The Interritorial Freight Problem of the United States, 75-1,

H. Doc. 264. (b) Regionalized Freight Rates Barrier to National Productions, 78-1, H. Doc. 137. (c) Report on Interritorial Freight Rates, 78-1, H. Doc. 303.

8. "The Structure of Transcontinental Railroad Rates", by Stuart Dagget and John P. Carter provided clues to methods of presentation that were valuable in the preparation of this report. It presented information on freight rates for other commodities on shipments from the Pacific coast to other sections of the country. The freight rates provided indications of regional freight rate differences.

9. Proceedings of the April, 1948 Wood Products Clinic at Spokane, Washington contained information on freight problems faced by the Pacific Northwest Lumber Industry. Ways of solving some of these problems were presented.

10. "The Text-book Economics of Transportation", by Phillip D. Locklin provided much confirming theory on transportation of all kinds and railroad transportation in particular. Possession of that book in the early periods of study and planning would have eliminated many hours of work and heart ache.

CHAPTER II

THE NATIONAL CHRISTMAS TREE INDUSTRY

Characteristics of the Christmas Tree Business

The Christmas tree industry is active two and one-half months a year. Harvesting operations begin slowly in Mid-October and a back log of trees is built up to supply the heavy rush of orders shortly before Christmas. Any trees that are not sold by Christmas Day become valueless. This highly seasonal characteristic, coupled with high risks and transient and fly by night dealers has made the Christmas tree industry a losing proposition for many operators.

Many uninformed people have regarded handling Christmas trees as an easy way to make money. This has resulted in wide fluctuations in the number of people engaged in the business and has often lead to a heavy over-supply. In 1943 this was the case throughout the country. For example, there were 15,000 vendors in Chicago in that year in comparison to a normal of about 3,000. In Los Angeles there were 1,000,000 surplus trees /18. The waste throughout the industry that year is estimated at 5,000,000 trees.

Transactions used in the marketing of Christmas trees are usually not based on binding contracts. Trees are bought from small producers on the stump or at the railroad siding without any commitment as to the number, grade, or size by the buyer. These loopholes allow excess culling which results in a heavy waste /24.

The concentrator is also subject to a heavy loss after the trees are shipped. There is no way to tell how many trees are going to be supplied to any given market, and the retail market price fluctuates widely. Variations in prices from day to day are as much as three dollars, consequently, no estimate of profit or loss can be made until the season is over. It is partially because of these insecure business conditions that there is so much waste in the industry.

Production and Consumption

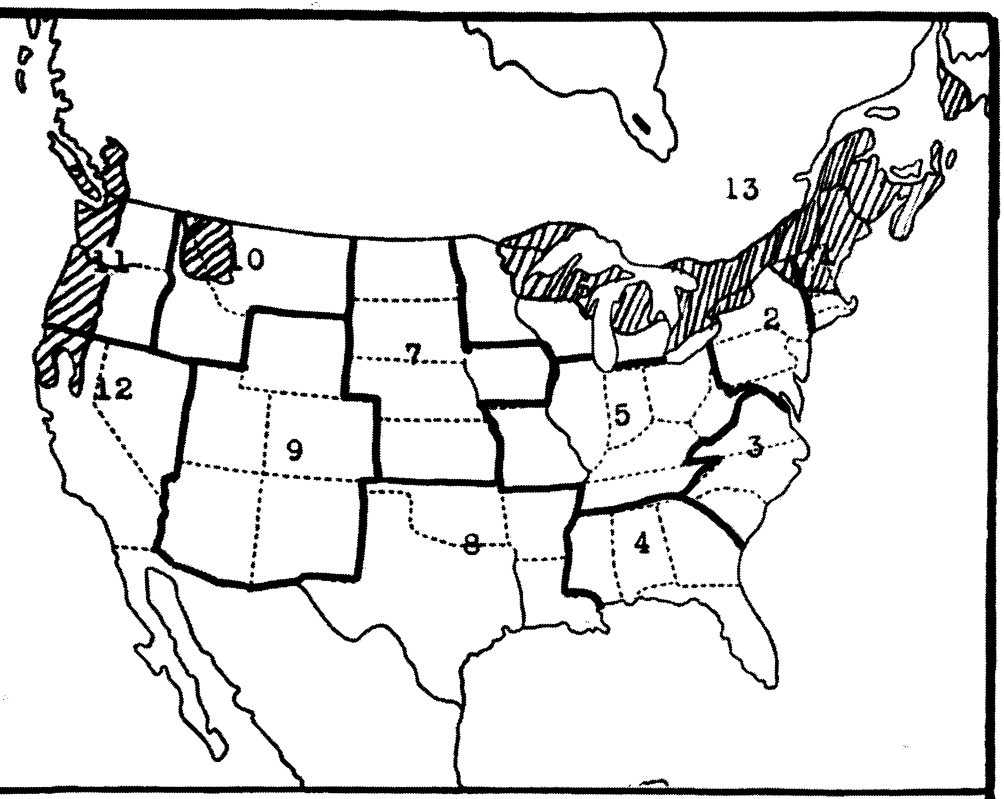
The United States produces for national consumption 21,500,000 Christmas trees per season and imports 6,808,000 from Canada. For the most part these are harvested in northern states and borderline provinces of Canada, although southern forests of the United States produce many for local consumption.

Evergreen shrubs, seedlings, and saplings are cut

for Christmas tree use to some extent in every state of the nation, but eleven species of conifers with a restricted range provide ninety-seven per cent of the production. Fourteen other evergreen produce only five per cent of the national total as shown in Figure 2. Balsam, fir, Douglas fir, Black spruce, red cedar and White spruce are the major export trees. Many or the others also find their way out of the producing areas along with the principal exports.

Public land is contributing an increasing number of trees to the national production. In 1948 federal and state land provided thirteen per cent of the 21,500,000 trees produced in the United States.

Canada is a major supplier for United States markets. In 1947 6,808,158 trees were shipped into this country. 6,100,000 of these trees came from the spruce and balsam regions of eastern Canada, 500,000 from British Columbia and 200,000 from Newfoundland. (Table I)



Legend

Export areas		Import areas	
East Canada	13	Middle Atlantic	2
Northeast	1	Southeast	3, 4
Lake States	6	Central	5
Montana	10	South Central	8
Pacific Coast	11, 12	Plains	7
		Southern Rocky Mountain	9

FIGURE 1

CHRISTMAS TREE EXPORT AND IMPORT AREAS
OF THE UNITED STATES

TABLE I

UNITED STATES CHRISTMAS TREE IMPORTS FROM CANADA AND NEWFOUNDLAND

From Canada			From Newfoundland		
Year	Number	Value	Year	Number	Value
1937	4,934,525	534,467	1937	359,705	24,465
1943	5,419,962	896,317	1943	None	
1947	6,781,118	1,901,033	1947	27,040	8,134

/18

These imports vary from year to year due to tree diseases and economic factors. Imports from Newfoundland which were suspended during the war are now on their way up again.

There are only five United States forest areas that support a Christmas tree export business as shown in Table II and Figure 1. The Central States (5), the Plains States (7), the Southern States (3 and 4), and the Southern Rocky Mountain States (9) produce very few Christmas trees and these are consumed locally. The Northeast and Middle Atlantic States (1 and 2), the Lake States (6), Montana (10) and the Pacific Coast States (11 and 12) produce 18,000,000 Christmas trees. Many of these are shipped to other areas. Each of these regions are briefly described in the following.

The Northeast and Middle Atlantic States (11 States)

Maryland, Pennsylvania, New Jersey, New York and the New England States produce 6,428,000 Christmas trees annually /18. Most of this production is from private lands and is almost entirely consumed within the area. It is in this region that Christmas tree farms have reached the greatest development. They have become a factor in the production of the Northeast. There are approximately 100,000 acres of Christmas tree farms in this area and tyey produce 1,500,000 trees per year. Pennsylvania is the leading state with an area of 50,000 acres in plantations.

Maine, Vermont, and New Hampshire produce a large number of trees for shipment to other states. The past few years these movements have been impeded because of Gypsy Moth infestation in New England. In 1947 only 320,000 cut trees were certified by the United States /27d. The normal yearly cut is 4,000,000 trees.

The production in this area is sixty per cent balsam, twenty-five per cent spruce (Englemann, white, black, and red spruce), ten per cent Douglas fir, and five per cent other species /27d. This is the native habitat of balsam and a large percentage of the production is composed of this very fine Christmas tree.

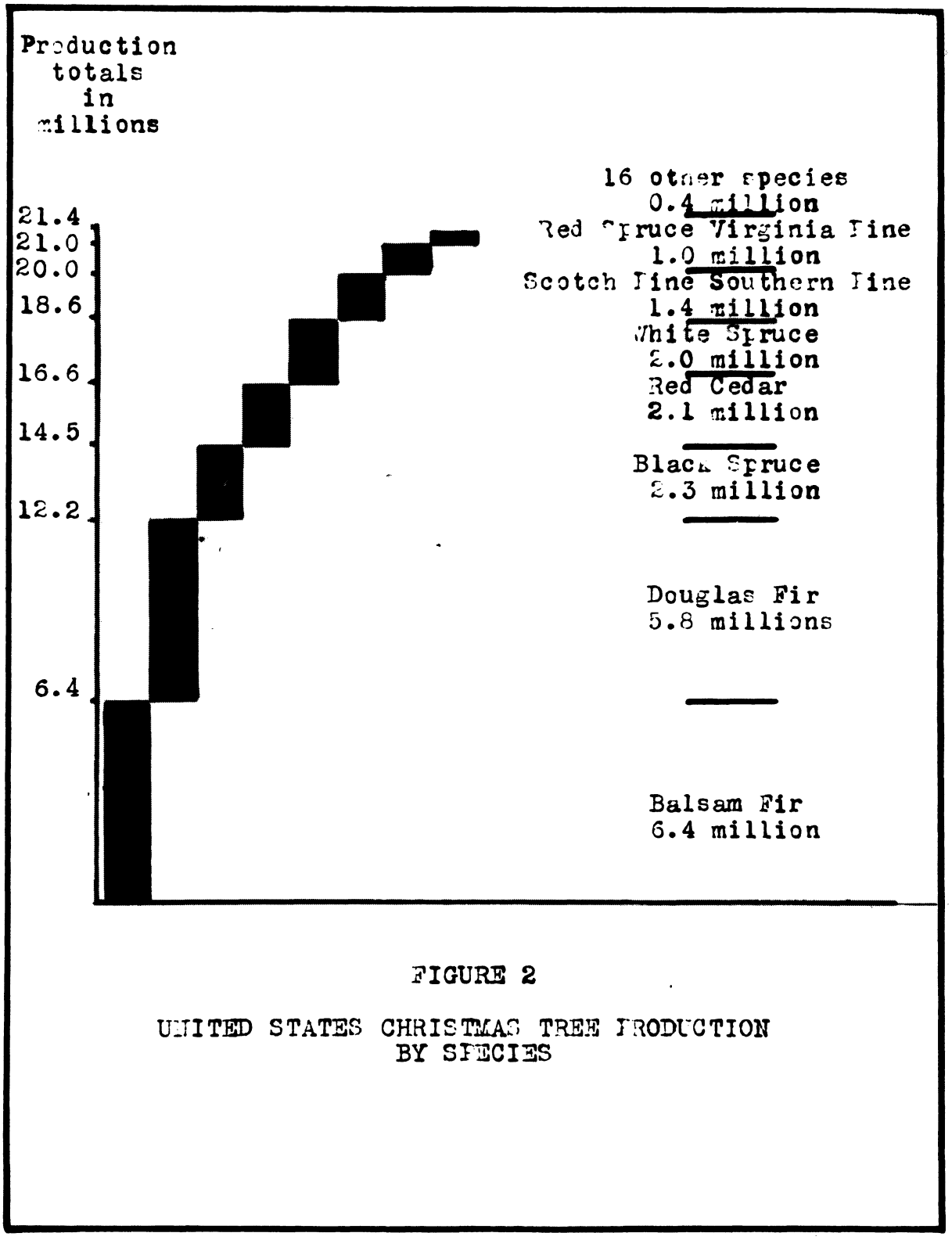


FIGURE 2

UNITED STATES CHRISTMAS TREE PRODUCTION
BY SPECIES

The Christmas tree tradition is strong in the Northeast and Middle Atlantic States and consumption is large. In 1948 11,730,000 trees were consumed. They came from the following areas:

East Canada	5,000,000	Balsam and Spruce
Pacific Coast	15,000	Douglas fir
Montana	15,000	Douglas fir
Northeast and Middle Atlantic	6,500,000	Balsam and Spruce
Lake States	200,000	Spruce
Total	11,730,000	

As indicated this region is a minor consumer of Montana trees. Tradition has built up a preference for balsam fir Christmas trees and East Canada is the only major source outside the Northeast. Lake States products distributed in this area are for the most part 2-3 foot table size black spruce.

TABLE II

UNITED STATES CHRISTMAS TREE PRODUCTION BY REGION
(FIVE YEAR AVERAGE)

Northeast and Middle Atlantic States (11 States)	6,428,000
Lake States (3 States)	5,200,000
Central States (5 States)	207,500
Southern States (14 States)	3,163,000
Prairie States (4 States)	5,000
Southern Rocky Mountain States (6 States)	150,000
Pacific Coast and Northwestern States (5 States)	6,296,000
	21,449,500
Canadian Export Production - 1947	
British Columbia 200,000	
Eastern Canada 6,581,118	
Newfoundland 27,040	6,808,158
Total United States Consumption	28,257,158

Contributed by:
A. M. Sowder, Ext. Forester, U. S. F. S., Washington, D.C. /16.

The Lake and Central States

Minnesota, Wisconsin and Michigan cut 5,200,000 trees yearly (Table II). A large share of the production of Minnesota and Wisconsin is accomplished by three or four operators who produce a million or more trees per season.

In Minnesota there are only four firms with export licenses. These are the Hofert, Kirk, Halvorsen and Thomas Companies, which together account for sixty per cent of production /27c. The exports of these companies are mostly in 2-3 foot table size trees.

Michigan trees are produced largely by small landowners.

Public lands of the Lake States produce many Christmas trees, but most of the cut is from private lands. In many areas these lands are managed mainly for Christmas tree production. Plantations a re becoming of increasing importance, especially in lower Michigan. It is estimated that there are 25,000 acres of plantations in this area.

The trees harvested in the Lake States are largely Black spruce, with comparatively small quantities of balsam fir making up most of the balance. Michigan markets some Jack pine, Scotch pine and other varities of spruce.

The total production of the Central States region

(Ohio, Illinois, Indiana, Missouri, Kentucky and Tennessee) is only 207,000 (Table IV). The majority of this limited production is of the spruce and pine type; it is all locally consumed.

The population of the Lake and Central States is confronted with a variety of Christmas trees from all of the industry's exporting areas. In 1948 the Lake States' producing region consumed 3,100,000 Christmas trees and the Central States consumed 5,396,000. These trees came from the following sources:

Lake States

East Canada	500,000	Balsam and Spruce
Northeast and Middle Atlantic	100,000	Balsam and Spruce
Pacific Coast and British Columbia	4,000	Douglas fir
Montana	205,000	Douglas fir
Lake States	2,200,000	Black spruce
Total	3,009,000	

Central States

East Canada	1,608,000	Balsam and Spruce
Northeast and Middle Atlantic	200,000	Balsam and Spruce
Lake States	1,900,000	Black spruce
Pacific Coast and British Columbia	97,000	Douglas fir
Montana	1,384,000	Douglas fir
Central States	207,000	
Total	5,396,000	

As indicated this region is a major market area for Montana trees. The Douglas fir is preferred because

of the good needle-holding ability of the species and lower prices /27c. Black spruce from the Lake States is widely marketed and is a popular tree. However it loses its needles more quickly than Douglas fir and hence cannot be shipped and stored over as long a period.

TABLE III

CHRISTMAS TREE SHIPMENTS, 1948
(IN THOUSANDS)

To	From			
	East Canada	Northeast and Middle Atlantic States	Lake States	Pacific Coas And British
Northeast and Middle Atlantic States (11 States)	*5,000		* 250	16
Central States (5 States)	*1,108	*200	*1,900	97
Plains States (4 States)	* 200		* 650	88
South Central States (5 States)			* 200	220
Lake States (3 States)	* 500	*100		4
Southern States (9 States)	* 200			51
Southern Rocky Mountain States (6 States)				280
Pacific Coast (3 States) And British Columbia				
Northern Rocky Mountain States (2 States)				5
Export Totals	6,808	500	3,000	761

* Estimates
Above figures are estimates based on available information

/16.

** To Montana and Idaho

The Southern States

The seven Southern States included in areas 3 and 4 (Map No. I) produce 1,581,000 trees per year. The Christmas tree tradition is not as firmly established in that region as it is in the Northern States. The low production of suitable, available trees and the noncommercial basis upon which they are cut are good indications of this condition.

The land in the south is approximately ninety-five per cent privately owned. The managed forests in this area produce products that are best suited to the timber types. Christmas trees do not fall in this category in the southern pine region.

Southern pine Christmas trees seldom find their way outside the area where they are cut. They usually cannot compete with the products of the North and the West. The extensive range of the southern forests makes the export of trees from state to state throughout the south unnecessary.

The Christmas tree tradition is not as firmly established in the Southern States as it is in the Northern sections of the country. In 1948 1,848,000 trees were consumed (Table III and IV). They came from the following areas:

Southern States	1,381,000	Pine and Spruce
Northeast and Middle Atlantic	200,000	Balsam and Spruce
Pacific Coast and British Columbia	51,000	Douglas fir
Montana	15,000	Douglas fir
Total	1,848,000	

The light distribution of Northern trees is probably mostly limited to residents familiar with Northern trees and traditions. Longtime residents of the south naturally prefer native trees. Suitable pine Christmas trees are available in most areas. Spruce is utilized in the Allegenies Mountain areas. Consumers cut many Christmas trees in this area. Estimates of the number are not available.

The Plains and South Central States

Christmas tree production in the five prairie states of North Dakota, South Dakota, Iowa, Nebraska and Kansas is naturally low--only about 5,000 annually (Table III). These are entirely grown on private land in plantations established for the purpose or in connection with shelter belts. There are no organized producers of Christmas trees in the area.

The South Central States produce 1,581,000 Christmas trees annually (Table III). This production is used locally and is short-leaf pine. It is available in

nearly all sections of the South Central States.

The Christmas tree tradition is strong in the Plain and South Central States and consumption is large. In 1948 3,909,000 trees were consumed coming from the following sources:

Montana	965,000	Douglas fir
Pacific Coast	307,000	Douglas fir
Lake States	850,000	Black spruce
Eastern Canada	200,000	Balsam and Spruce
Local production	1,586,000	Mostly shortleaf pine
Total	3,908,600	

As indicated, this region is a major market area for Montana trees. The Douglas fir is a preferred Christmas tree because of the good needle-holding characteristic of the species. Black spruce from the Lake States is widely marketed and is a popular tree. However, it loses its needles more quickly than the Douglas fir and hence cannot be shipped and stored over as long a period.

TABLE IV

CHRISTMAS TREE
EXPORTS IMPORTS PRODUCTION AND CONSUMPTION, 1948
(IN THOUSANDS)

a	Production	Exports	Consumed Locally	Imports	Area Consumpti
theast and Middle antic States States)	*6,428	500	5,928	5,281	11,207
tral States States)	* 207		207	5,189	5,396
irie States States)	* .5	5	1,446	1,446	1,451
th Central States States)	*1,581		1,581	877	2,458
e States States)	*5,200	3,000	2,200	809	3,009
thern States States)	*1,581		1,581	266	1,848
thern Rocky Mountain tes States)	150		150	446	596
ific Coast States States) British Columbia	3,750	1,014	2,138	189	2,327
thern Rocky Mountain tes States)	3,123	3,123	200	5	205
t Canada	6,808				
als	14,445	13,991	14,508	14,508	28,500

igures based on five year average /16.

Western States

Montana produces more Christmas trees than any other individual state. In 1948 the production of 3,122,886 trees nearly equalled the state's all time record of 1946 when 3,3 million trees were cut. (See Table II) /27b.

Three-quarters of Montana's 1948 production was cut from private lands. The Christmas tree producers are mainly small land owners that make use of the natural forest growth on their property. It has not yet become necessary to plant trees to assure Christmas tree production, and plantations for that purpose are rare.

The Treasure State's Christmas tree cut is entirely Douglas fir of the Rocky Mountain variety. The Christmas tree industry is ideally suited to effect utilization of this forest crop.

In 1948 all but five per cent (185,000) of the Christmas trees cut in Montana were exported. These trees are shipped by rail and truck to every section of the country and compete successfully with local products and other imports. The export volume has risen steadily since 1936 when 1,242,500 trees were shipped. The 1948 exports were 3,000,000 trees.

Washington, Oregon and California produce 3,500,000 Christmas trees per year. The land used for Christmas tree production on the Pacific Coast is eighty-five per cent privately owned /27e. In this area Christmas trees are still easy to get and the establishment of Christmas tree plantations has not been necessary.

There are large areas of recently cut-over timber land that are available for Christmas tree harvest. Many of the farmers and small land owners make use of the trees on their land. County foresters have been provided in recent years and wise cutting practices are making their appearance.

The principal species harvested for Christmas trees in this area is the Douglas fir. Many of the true firs are utilized and Western Red cedar greens and boughs are collected extensively for ornamental purposes during the Christmas season.

The Pacific Northwest is a heavy exporting area. It is estimated that Washington exports 2,000,000 Christmas trees annually and 850,000 trees are produced for consumption in the state. The state of Oregon exports 300,000 trees and consumes 150,000 (Table IV). California's estimated total production of 500,000 Christmas trees is marketed entirely within the state. This figure of 2,500,000 trees places the Pacific coast among the leaders in the export industry (Table IV).

The Southern Rocky Mountain region is a thinly populated area with large inaccessible forests not suitable for Christmas tree production in large volume.

The timber land is mostly in public ownership. The Forest Service and the States are the administrators and they manage the land for the timber crops that will bring the area the most wealth. Development of suitable Christmas tree lands would not pay.

Spruce and Douglas fir comprise most of the production. The drought resistant evergreen, particularly the Junipers and Cypress are used if nothing else is available.

Production in the Southern Rocky Mountains is not heavy enough to support an export industry. Much of the spruce and the fir is accessible and should find a ready market.

The consumption of Christmas trees in the Intermountain and Pacific Coast areas is as follows:

Pacific Coast	
Washington, Oregon and British Columbia	2,900,000 Douglas fir
Montana	189,000 Douglas fir
Total	3,089,000 Douglas fir
Other Western States	
Washington Oregon and British Columbia	892,000 Douglas fir
Montana	350,000 Douglas fir
Local	150,000 Douglas fir

There are many non-producing states in the western region. The producing areas of Montana and the Pacific Coast compete for the markets of these sparsely populated states. Imports to the area west of the Rockies from other sections of the country are insignificant.

Douglas fir is the most available Christmas tree in the west. Scattered imports are made from other producing regions, but not on a scale that provides competition for the products of Montana and the Pacific Coast.

United States Christmas Tree Imports From Canada

The United States imported 6,781,000 Christmas trees from Canada in 1947 (Table I). These trees came almost entirely from the provinces of Ontario, Quebec, New Brunswick, Nova Scotia and Newfoundland (200,000) trees and were shipped to the Eastern Seaboard and Central States. British Columbia exported 200,000 trees to the Plains and Western States.

Fluctuations in production are similar to those experienced in producing areas of the United States. In the British Columbia Douglas fir producing area, Douglas fir blight (Rabdocline Pseudotugae) reduced United States shipments forty per cent in 1948. In eastern Canada the harvest has been affected by necessary shifting of cutting from old producing areas of Quebec and Ontario to new

areas in Nova Scotia and New Brunswick.

Dominion Christmas tree land is in much the same ownership classes as the lands of the United States. The Christmas tree producers are farmers with a small acreage. They want to see their property produce immediate cash. Many of the farmers in this area manage their timber lands for Christmas tree production, but plantations as yet are not necessary.

Balsam fir provides the heaviest cut in Eastern Canada although the spruces are produced throughout the region. In British Columbia the harvest is entirely Douglas fir.

Latin American points absorb some production. In 1948 Cuba, Barbados, Columbia, Panama, Paramaribo, Puerto Rico, Trinidad and Venezuela imported 8,450 bales.

SUMMARY

The United States consumes 28,700,000 commercially distributed Christmas trees annually and Canada contributes 6,781,000 trees to that total (Table IV). Several tree genera are represented in this figure, but three, true firs, spruces and Douglas fir, produce 28,000,000 trees. These trees are marketed throughout the country's major consuming areas in the following numbers: 12,000,000 balsam, 9,000,000 spruce, and 7,000,000 Douglas fir. They compete with each other under many types of conditions.

The Christmas tree exporting areas are Canada (eastern Canada and British Columbia), the Northeast, the Lake States, Montana and the North Pacific. The combined export total of these areas was 14,500,000 trees in 1948 (Table IV).

The Northeast and Middle Atlantic States export 500,000 trees annually. These trees come from Maine, Vermont, and New Hampshire. Their destinations are close points in the Central States and cities on the Atlantic Seaboard from Virginia to Florida.

The Lake States, particularly Wisconsin and Minnesota, market most of their production in the centers of population of that area and adjacent states. Some Minnesota trees are marketed throughout the central part of the nation as far west as the Rockies and as far south

as the Gulf of Mexico. The yearly exports amount to 3,000,000 trees.

The Pacific Coast has exceptionally wide distribution of its exports. Shipments are sent as far east as Philadelphia and to Florida and other parts of the deep South.

The Western part of the nation consumed eighty-six per cent (2,423,000) of Pacific Coast production with California accounting for thirty-seven per cent (1,400,000). The Central United States consumed eleven per cent and the East three per cent. Pacific Coast distribution in the deep South was better than that of any other exporting area.

The distribution of Montana's product is the widest of any exporting area. Shipments went to thirty-three states in 1948 including Florida, Kentucky, Pennsylvania and New York. No shipments were sent to the other states of the East and the South.

The big consuming areas of Montana trees were the Central States, (1,384,000) the Plains States, (508,000) and the Southern States of Louisiana, Texas, Oklahoma and Arkansas (457,000). Those areas consumed eighty-one per cent of Montana's shipments. The West consumed seventeen per cent (583,900) and the east two per cent (20,000).

Canadian trees cut in British Columbia (200,000) enter the same markets that are served by the Pacific Coast and Montana--the West and Central United States. Shipments from eastern Canada (6,808,000) are distributed almost entirely in the Northeast Middle Atlantic and the Central States (6,108,000).

Distribution is uneven in relation to sources of supply. Natural obstacles, regional preferences and economic status cause this distribution pattern. The natural obstacles are characterized by Christmas tree defects (legginess, needle fall, etc.) that cannot be remedied. The regional preferences of the Pacific Coast (Douglas fir) and the East (Balsam) are justified by availability. The economic obstacles are not all the fault of man. The scattered population and great distances of the West cannot be remedied by command but their affect on Christmas tree distribution can be reduced.

Producers profit, production and transportation costs, and the competitive retail price in the market area all affect the extent of distribution for a particular producing region.

The factor, transportation cost, is a substantial contributor to the retail value of all commodities. Christmas trees are not an exception.

CHAPTER III

TRANSPORTATION COST AND OTHER FACTORS THAT AFFECT CHRISTMAS TREE DISTRIBUTION

The United States has an excellent system of transportation. The Christmas tree export industry owes its existance to the railroad's ability to supply efficient seasonal long haul transportation.

A community without cheap transportation must be largely self-sufficing. Many areas in the United States would have to sacrifice the Christmas tree tradition if transportation became expensive.

The railroads make it possible for widely separated producing areas to compete in the same markets. There are many factors that affect the competitive position of the various export regions. The comparative value of the products in the retail markets, their shipping qualities, producing area productive capacity, and freight rates all affect the price the producer can demand.

Freight Rates

The producing regions of the country supply local markets by utilizing truck transportation. It is usually cheaper for short hauls. In instances where this practice has resulted in a loss of revenue for the railroads, freight rates have been adjusted downward.

Freight rates are of several types. The products of the United States are grouped into classes in three regions, the Eastern, Southern and Western classification territories. These groups are given a designation (called the class) and a rate (called a class rate). The products that have similiar distribution and transportation problems are placed in the same class.

A product that has a transportation or distribution problem of its own often is assigned a rate of its own. These individual rates are called commodity rates and are mostly less than the corresponding class rates. Commodity rates are adjusted to enable the railroads to maintain the maximum amount of revenue producing business. Truck transport, water transport, and competing railroads sometimes force rail freight rates very close to the actual cost of transportation. When the railroads position is favorable rates are often raised to increase revenue. Often only a few commodities are in a position to carry this burden. There are many special charges that can be levied against the shipper. These are charges for services rendered (icing, grading etc.) or car retainage (demurrage).

There are carload, "less than carload" and "mixed car" rates. All Christmas tree commodity rates are applied on a carload basis. The required weight varies for different

commodities for different rate territories and for different shipping points within the same territory.

The carload requirements for Christmas trees vary from 20-40,000 lbs. In all export regions but the Lake States a carload of Christmas trees for the smallest car sizes must weigh a minimum of 24,000 lbs. There are indications that the variations in the Lake States are caused by special shipping problems and truck competition /27c. The railroads have adjusted rates to solve these problems and meet this competition by raising and lowering carload requirements. Freight rates from the Christmas tree industries main export areas to thirty four important Christmas tree consuming centers have been obtained from the Missoula Division of the Northern Pacific Railway. A comparative picture of these commodity rates is diagramma tically presented by map No's 2,3,4, 5,6,7. The maps present the freight cost per 100 lbs. This is not a true measure of the competitive positions due to freight differences because products of different regions are not standard and do not have equal carloading capabilities. The railroads adjusted the weight requirements and the corresponding rates when it was competitively advantageous to do so. This situation is discussed in the following section of this chapter.

TABLE V

CHRISTMAS TREE CARLOAD FREIGHT RATES
JANUARY 11, 1949

To	From							
	(1) Pacific Coast		(1) Western	Duluth	Tomahawk	(1) Grand Rapids	(1) Coos	(1) Irishtown
	California	Washington	Montana	Minnesota	Wisconsin	Michigan	New Hampshire	New Brunswick
South Central States								
		(5)	(6)					
Kansas City, Missouri	1.88	1.88	1.74	(2) 1.21	(2) 1.23	1.09	1.86	2.67
Galveston, Texas	1.88	2.17	2.03	(1) 2.00	1.98	1.90	2.46	3.28
Dallas, Texas	1.88	2.17	2.03	(1) 1.74	1.80	1.75	2.38	3.20
St. Louis, Missouri	2.22	2.22	2.03	(2) 1.21	(2) 1.05	.79	1.39	1.69
Oklahoma City, Oklahoma	1.88	2.17	2.03	(1) 1.55	1.62	1.55	2.19	3.01
New Orleans, Louisiana	2.17	2.17	2.17	(1) 1.85	1.96	1.61	2.10	3.03
Little Rock, Arkansas	2.17	2.17	2.03	(1) 1.55	1.47	1.35	1.96	2.77
Western States								
Los Angeles, California		1.38	2.42	(1) 4.09	4.31	4.50	4.75	5.37
Denver, Colorado	1.54	1.54	1.43	(2) 1.81	(2) 1.98	1.84	2.61	3.32
Eastern States								
Baltimore, Maryland	2.76	2.76	2.76	(1) 1.45	1.25	1.04	.98	1.47
New York, New York	2.76	2.76	2.76	(1) 1.48	1.25	1.08	.81	1.18
Washington D.C.	2.76	2.76	2.76	(1) 1.45	1.25	1.04	.99	1.47
Philadelphia, Pennsylvania	2.76	2.76	2.76	(1) 1.48	1.25	1.06	.87	1.38
Boston, Massachusetts	2.76	2.76	2.76	(1) 1.54	1.28	1.08	.64	.98
Southern States								
Birmingham, Alabama	2.40	2.40	2.40	(1) 1.64	1.68	1.31	1.84	2.76
Jacksonville, Florida	2.76	2.76	2.76	(1) 2.06	2.15	1.69	1.76	2.67
Tampa, Florida	3.30	3.30	3.30	(1) 2.34	2.48	1.91	1.96	2.88
Atlanta, Georgia	2.50	2.50	2.50	(1) 1.71	1.76	1.34	1.70	2.62
Raleigh, North Carolina	2.76	2.76	2.76	(1) 1.73	1.71	1.30	1.25	2.10
Charlotte, North Carolina	2.76	2.76	2.76	(1) 1.79	1.83	1.34	1.43	2.23
Norfolk, Virginia	2.76	2.76	2.76	(1) 1.56	1.36	1.18	1.11	1.60
Central States								
Chicago, Illinois	2.26	2.26	2.08	(2) .58	(2) .58	.55	1.22	1.55
Cleveland, Ohio	2.50	2.50	2.50	(1) 1.10	.96	.64	1.00	1.30
Cincinnati, Ohio	2.40	2.40	2.40	(1) 1.09	.95	.66	1.18	1.53
Springfield, Illinois	2.26	2.26	2.08	(2) 1.15	(2) .96	.70	1.34	1.64
Nashville, Tennessee	2.40	2.40	2.40	(1) 1.39	1.41	1.06	1.73	2.70
Memphis, Tennessee	2.17	2.17	2.17	(1) 1.45	1.50	1.18	1.86	2.83
Des Moines, Iowa	2.22	2.22	2.03	(2) .93	(2) 1.03	.95	1.71	2.51
Lake States								
Detroit, Michigan	2.40	2.40	2.40	(1) .96	.84	.51	1.07	1.29
Minneapolis, Minnesota	2.17	1.88	1.74	(4) .28	(2) .66	.93	1.78	2.37
Milwaukee, Wisconsin	2.26	2.26	2.08	(2) .58	(2) .58	.47	1.22	1.53
Plains States								
Topeka, Kansas	1.88	1.88	1.74	(2) 1.25	(2) 1.32	1.18	1.96	2.80
Wichita, Kansas	1.88	1.88	1.74	(2) 1.50	(2) 1.61	1.38	2.06	2.91
Omaha, Nebraska	1.88	1.88	1.74	(2) 1.05	(2) 1.11	1.09	1.90	2.72

(1) 24,000 R
(2) 20,000 R
(3) 40,000 R
(4) 34,000 R
(5) Olympia, Washington
(6) Polson, Montana

Data for above table supplied by the Northern Pacific Railroad
St. Paul, Minnesota

Coos, New Hampshire

The freight rates from Coos, New Hampshire to the thirty four consuming centers are presented in Figure 3 and accompaning tables. Comparison with the profile maps of the other exporting regions show a freight rate advantage throughout the United States over Irishtown, New Brunswick; an advantage over Duluth, Minnesota, in Florida and the Atlantic Coast State, Northeast and Middle Atlantic States, Eastern Ohio and West Virginia; an advantage over Grand Rapids, Michigan in the Coastal area from North Carolina North and in New England; an advantage over Western Montana in the Eastern United States from Minneapolis, Minnesota, Western Iowa, Missouri, Arkansas and Louisiana; an advantage over Olympia, Washington exists throughout the same area.

It will not be necessary to discuss the differences in freight costs that limit the exports of the Coos, New Hampshire area. The production of the Northeast and Middle Atlantic States is approximately one-half of that areas consumption (see Table IV) Exports, though widely scattered from Florida to California, are relatively insignificant, and are not dependent on freight advantages.

TABLE VI

CHRISTMAS TREE FREIGHT RATES FROM
COOS, NEW HAMPSHIRE

Number on Figure 3	Rate Per 100 lbs.	To
1	4.75	Los Angeles, California
2	2.51	Denver, Colorado
3	2.46	Galveston, Texas
4	2.38	Dallas, Texas
5	2.19	Oklahoma City, Oklahoma
6	2.10	New Orleans, Louisiana
7	2.06	Wichita, Kansas
8	1.96	Topeka, Kansas
9	1.96	Tampa, Florida
10	1.96	Little Rock, Arkansas
11	1.90	Omaha, Nebraska
12	1.86	Memphis, Tennessee
13	1.86	Kansas City, Missouri
14	1.84	Birmingham, Alabama
15	1.78	Minneapolis, Minnesota
16	1.76	Jacksonville, Florida
17	1.73	Nashville, Tennessee
18	1.71	Des Moines, Iowa
19	1.70	Atlanta, Georgia
20	1.43	Charlotte, North Carolina
21	1.39	St. Louis, Missouri
22	1.34	Springfield, Illinois
23	1.25	Raleigh, North Carolina
24	1.22	Chicago, Illinois
25	1.22	Milwaukee, Wisconsin
26	1.18	Cinncinnati, Ohio
27	1.11	Norfolk, Virginia
28	1.07	Detroit, Michigan
29	1.00	Cleveland, Ohio
30	.99	Washington, D. C.
31	.98	Baltimore, Maryland
32	.87	Philadelphia, Pennsylvania
33	.81	New York, New York
34	.64	Boston, Massachusetts

Northern Pacific Rates, 1949

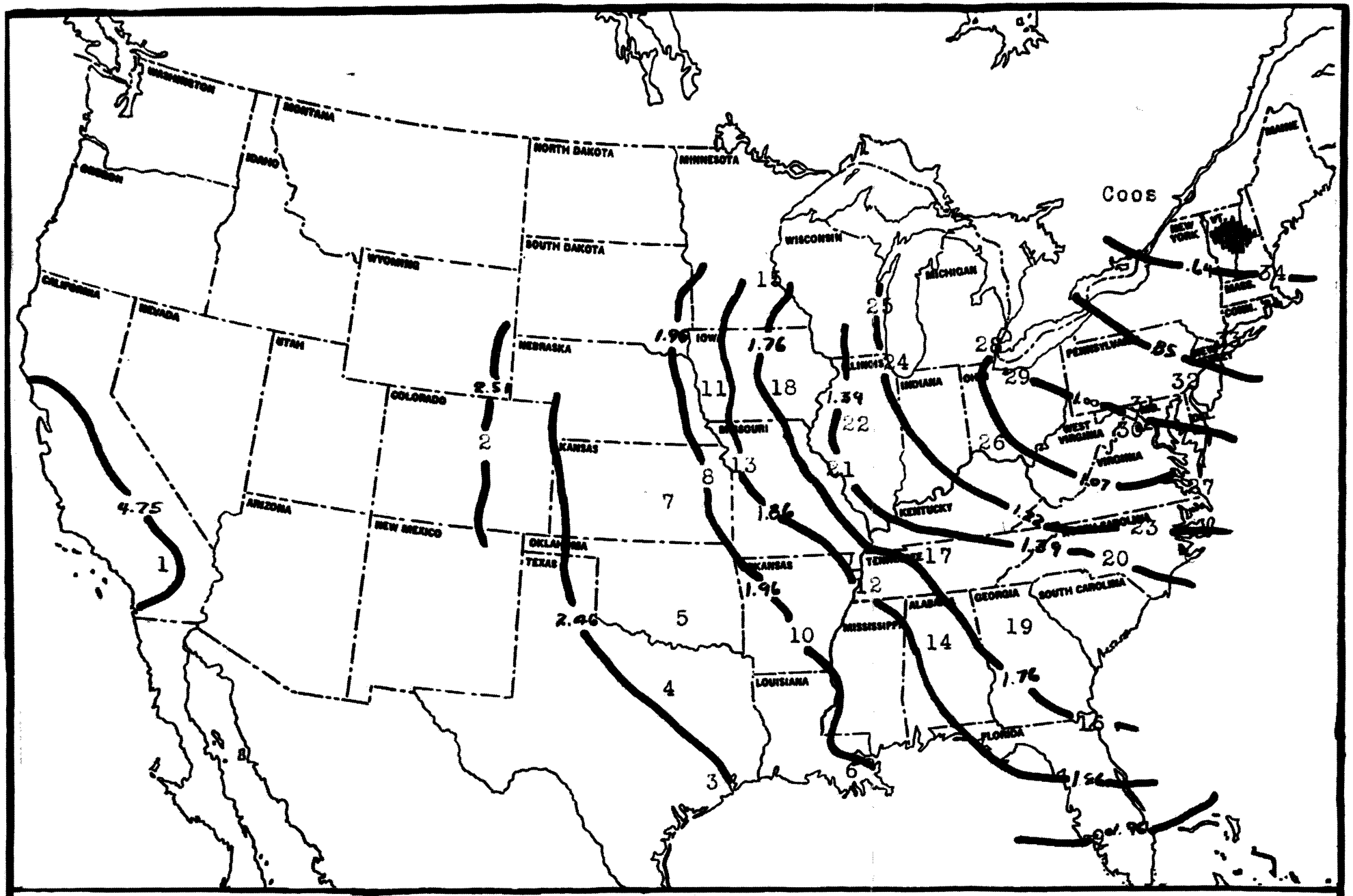


FIGURE 3

MAP OF FREIGHT RATES FROM
COOS, NEW HAMPSHIRE

TABLE VII

SHIPPING COSTS OF CHRISTMAS TREES

To	From Coos, New Hampshire				
	Car Weight *24,000 lbs. Minimum	Freight Rate Per 100 lbs.	Freight Cost Per Car	No. of Trees Per Car	Freight Cost Per Tree
South Central States	28,000			** 4,500	
Kansas City, Missouri		1.86	521		11.5
Galveston, Texas		2.46	689		15.3
Dallas, Texas		2.38	666		14.8
St. Louis, Missouri		1.39	389		8.6
Oklahoma City, Oklahoma		2.19	613		13.6
New Orleans, Louisiana		2.10	588		13.1
Little Rock, Arkansas		1.96	549		12.2
Western States					
Los Angeles, California		4.75	1330		29.6
Denver, Colorado		2.51	703		15.6
Eastern States					
Baltimore Maryland		.98	274		6.1
New York, New York		.81	227		5.0
Washington, D.C.		.99	636		14.1
Philadelphia, Pennsylvania		.87	244		5.4
Boston, Massachusets		.64	179		4.0
Southern States					
Birmingham, Alabama		1.84	515		11.4
Jacksonville, Florida		1.76	493		10.9
Tampa, Florida		1.96	549		12.2
Atlanta, Georgia		1.70	476		10.5
Raleigh, North Carolina		1.25	350		7.7
Charlotte, North Carolina		1.43	400		8.8
Norfolk, Virginia		1.11	311		6.9
Central States					
Chicago, Illinois		1.22	342		7.6
Cleveland, Ohio		1.00	280		6.2
Cincinnati, Ohio		1.18	330		7.3
Springfield, Illinois		1.34	375		8.3
Nashville, Tennessee		1.73	484		10.7
Memphis, Tennessee		1.86	521		11.5
Des Moines, Iowa		1.71	479		10.6
Lake States					
Detroit, Michigan		1.07	300		6.6
Minneapolis, Minnesota		1.78	498		11.1
Milwaukee, Wisconsin		1.22	342		7.6
Plains States					
Topeka, Kansas		1.96	549		12.2
Wichita, Kansas		2.06	577		12.8
Omaha, Nebraska		1.90	532		11.8

*Based on Rates Supplied by Northern Pacific Railroad
January 11, 1949

** P. Merrill, Extension Forester
University of Vermont

Table V presents a comparison of minimum carloadings and freight rates between the five export territories. Table VII presents the following information for Christmas tree carload freight from Coos, New Hampshire to destinations within the seven market areas as defined on Figure 1: (1) freight rates per 100 lbs., (2) freight cost per car, (3) number of trees per car, (4) freight cost per tree, (5) average cost per tree.

The average freight cost per tree by producing regions gives a basis for comparison of competitive position. In the compilation of the freight cost per tree actual car weights and number of trees per car (as supplied by railroads, foresters, and merchants /27a b c d e) have been used. Table XVII and Figure 9 and the accompanying discussion bring out the competitive picture due to freight costs and other factors.

Irishtown, New Brunswick

The freight rates from Irishtown, New Brunswick to the thirty four selected consuming centers are presented in Figure 4 and accompanying tables. Comparison with the profile maps of the other producing regions show the following freight rate advantages: (1) an advantage over Duluth, Minnesota throughout the Northeast and Middle Atlantic States; (2) an advantage over Grand Rapids,

Michigan in the New England States; (3) an advantage over Western Montana, in the states of Wisconsin, Illinois, Indiana, Ohio, Kentucky, Florida, the Atlantic Coast States, West Virginia and the Northeast and Middle Atlantic States; (4) an advantage over Olympia, Washington exists throughout the same area.

The freight rate advantages of the Irishtown, New Brunswick area are not as significant as they appear. Examination of Table IX shows that the actual car weight is high, the freight rates are not comparatively high, and the number of trees per car is comparatively low. This low figure throws the transportation cost per tree very high. The figures for car weight and number of trees per car on which the transportation cost per tree depends were obtained from reliable merchants and are considered to be accurate /27f.

Table XVII, Figure 9 and the accompanying discussion show New Brunswick's competitive position due to freight cost and other factors.

TABLE VIII

CHRISTMAS TREE FREIGHT RATES FROM
IRISHTOWN, NEW BRUNSWICK

Number on Figure 4	Rate Per 100 lbs.	To
1	5.37	Los Angeles, California
2	3.32	Denver, Colorado
3	3.28	Galveston, Texas
4	3.20	Dallas, Texas
5	3.03	New Orleans, Louisiana
6	3.01	Oklahoma City, Oklahoma
7	2.91	Wichita, Kansas
8	2.88	Tampa, Florida
9	2.83	Memphis, Tennessee
10	2.80	Topeka, Kansas
11	2.77	Little Rock, Arkansas
12	2.76	Birmingham, Alabama
13	2.72	Omaha, Nebraska
14	2.70	Nashville, Tennessee
15	2.67	Jacksonville, Florida
16	2.67	Kansas City, Missouri
17	2.62	Atlanta, Georgia
18	2.51	Des Moines, Iowa
19	2.37	Minneapolis, Minnesota
20	2.23	Charlotte, North Carolina
21	2.10	Raleigh, North Carolina
22	1.69	St. Louis, Missouri
23	1.64	Springfield, Illinois
24	1.60	Norfolk, Virginia
25	1.55	Chicago, Illinois
26	1.53	Milwaukee, Wisconsin
27	1.53	Cinncinnati, Ohio
28	1.47	Baltimore, Maryland
29	1.47	Washington, D. C.
30	1.38	Philadelphia, Pennsylvania
31	1.30	Cleveland, Ohio
32	1.29	Detroit, Michigan
33	1.18	New York, New York
34	.98	Boston, Massachussets

Northern Pacific Rates, January, 1949

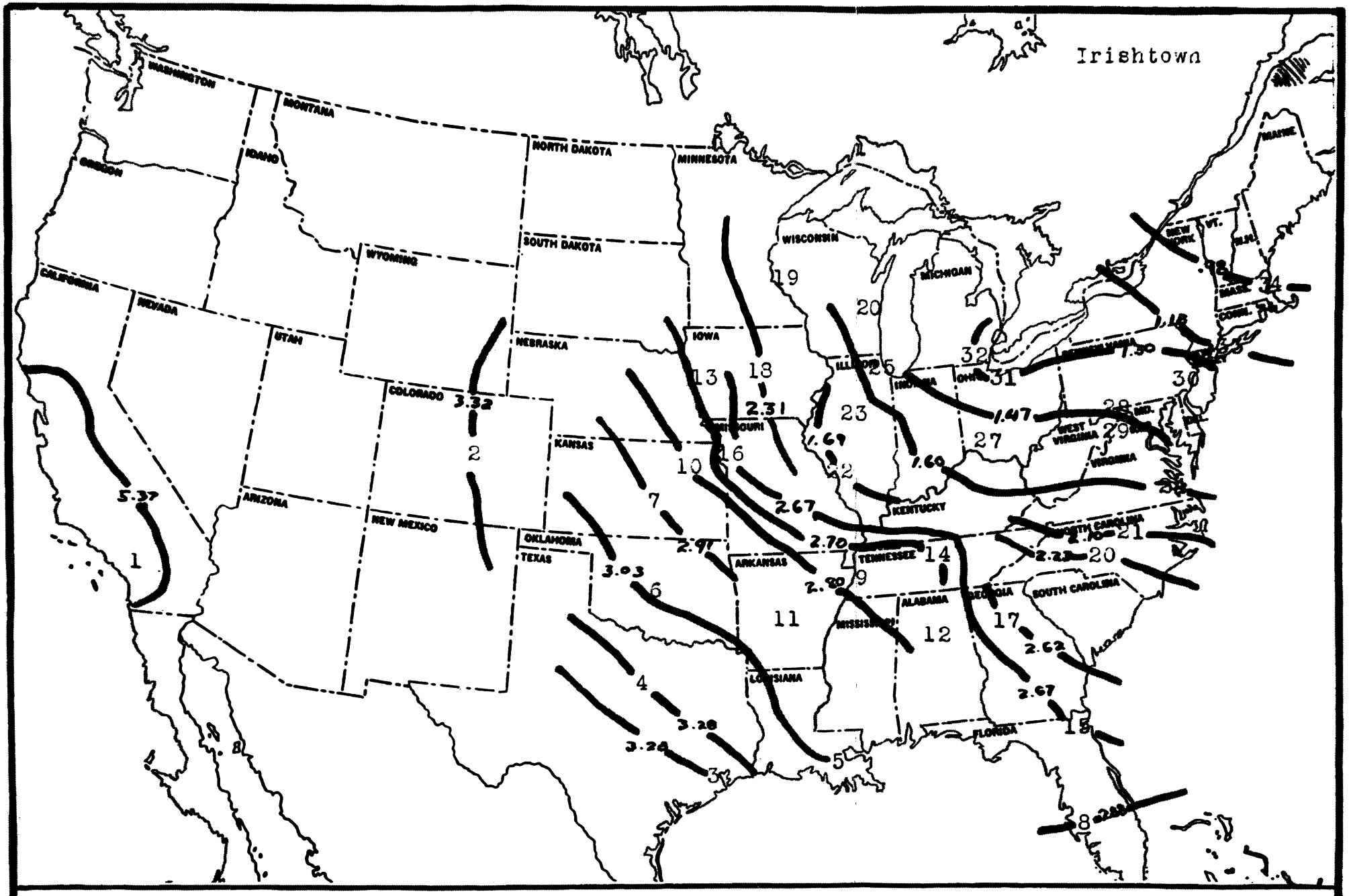


FIGURE 4

MAP OF FREIGHT RATES FROM
IRISHTOWN, NEW BRUNSWICK

TABLE IX

SHIPPING COSTS OF CHRISTMAS TREES

To	From Irishtown, New Brunswick				
	Car Weight * 24,000 Minimum	Freight Rate Per 100 lbs.	Freight Cost Per Car	No. of Trees Per Car	Freight Cost Per Tree
South Central States	*34,000			** 2,000	
Kansas City, Missouri		2.67	$ 926		46.2¢
Galveston, Texas		3.28	1115		55.7
Dallas, Texas		3.20	1088		54.4
St. Louis, Missouri		1.69	575		28.7
Oklahoma City, Oklahoma		3.01	1023		51.1
New Orleans, Louisiana		3.03	1030		51.5
Little Rock, Arkansas		2.77	942		47.1
Western States					
Los Angeles, California		5.37	1826		91.3
Denver, Colorado		3.32	1129		56.4
Eastern States					
Baltimore, Maryland		1.47	500		25.0
New York, New York		1.18	401		20.0
Washington, D.C.		1.47	500		25.0
Philadelphia, Pennsylvania		1.38	469		23.4
Boston, Massachusetts		.98	333		16.6
Southern States					
Birmingham, Alabama		2.76	938		46.9
Jacksonville, Florida		2.67	926		46.3
Tampa, Florida		2.88	979		48.9
Atlanta, Georgia		2.62	891		44.5
Raleigh, North Carolina		2.10	714		25.7
Charlotte, North Carolina		2.23	758		37.9
Norfolk, Virginia		1.60	544		27.2
Central States					
Chicago, Illinois		1.55	527		26.3
Cleveland, Ohio		1.30	442		22.1
Cincinnati, Ohio		1.53	520		26.0
Springfield, Illinois		1.64	577		28.8
Nashville, Tennessee		2.70	918		45.9
Memphis, Tennessee		2.83	862		46.1
Des Moines, Iowa		2.51	853		42.6
Lake States					
Detroit, Michigan		1.29	439		21.9
Minneapolis, Minnesota		2.37	506		40.3
Milwaukee, Wisconsin		1.53	520		26.0
Plains States					
Topeka, Kansas		2.80	952		47.1
Wichita, Kansas		2.91	989		49.4
Omaha, Nebraska		2.72	925		46.2

*Based on Rates Supplied by Northern Pacific Railroad January 11, 1949

** M. Burd, Philadelphia, Pennsylvania

Duluth, Minnesota

The freight rates from Duluth, Minnesota to the thirty four selected consuming centers are presented in Figure 5 and accompanying tables. Comparison with the profile maps of other exporting regions show a freight rate advantage over Coos, New Hampshire in North Georgia, Alabama, Mississippi, the Central and Lake States, and the United States west of the Mississippi River; an advantage over Irishtown, New Brunswick in the entire United States except New England and the coastal areas of the Middle Atlantic States; an advantage over Grand Rapids, Michigan in North and South Dakota, Nebraska and the Western States; an advantage over Western Montana, in East Texas, Oklahoma, Kansas, Nebraska, the Dakotas and in East Texas, Oklahoma, Kansas, Nebraska, the Dakotas and in the States East of that line; an advantage over Olympia, Washington throughout the same area; an advantage over California in substantially the same area except in Texas where the advantage extends only as far west as the Texas-Louisiana border.

Table XI shows that minimum car weights for Christmas tree shipments from Duluth are variable by destination. Several destinations have two minimum carload weights and two corresponding rates.

TABLE X

CHRISTMAS TREE FREIGHT RATES FROM
DULUTH, MINNESOTA

Number on Figure 5	Rate Per 100 lbs.	To
1	.28	Los Angeles, California
2	2.34	Tampa, Florida
3	2.06	Jacksonville, Florida
4	2.00	Galveston, Florida
5	1.85	New Orleans, Louisiana
6	1.81	Denver, Colorado
7	1.79	Charlotte, North Carolina
8	1.74	Dallas, Texas
9	1.73	Raleigh, North Carolina
10	1.71	Atlanta, Georgia
11	1.64	Birmingham, Alabama
12	1.56	Norfolk, Virginia
13	1.55	Oklahoma City, Oklahoma
14	1.55	Little Rock, Arkansas
15	1.54	Boston, Massachussets
16	1.50	Wichita, Kansas
17	1.48	New York, New York
18	1.48	Philadelphia, Pennsylvania
19	1.45	Memphis, Tennessee
20	1.45	Washington, D. C.
21	1.45	Baltimore, Maryland
22	1.39	Nashville, Tennessee
23	1.25	Topeka, Kansas
24	1.21	St. Louis, Missouri
25	.99	Kansas City, Missouri
26	1.15	Springfield, Illinois
27	1.10	Cleveland, Ohio
28	1.09	Cincinnati, Ohio
29	1.05	Omaha, Nebraska
30	.96	Detroit, Michigan
31	.93	Des Moines, Iowa
32	.58	Milwaukee, Wisconsin
33	.58	Chicago, Illinois
34	.28	Minneapolis, Minnesota

Northern Pacific Rates, January 1949

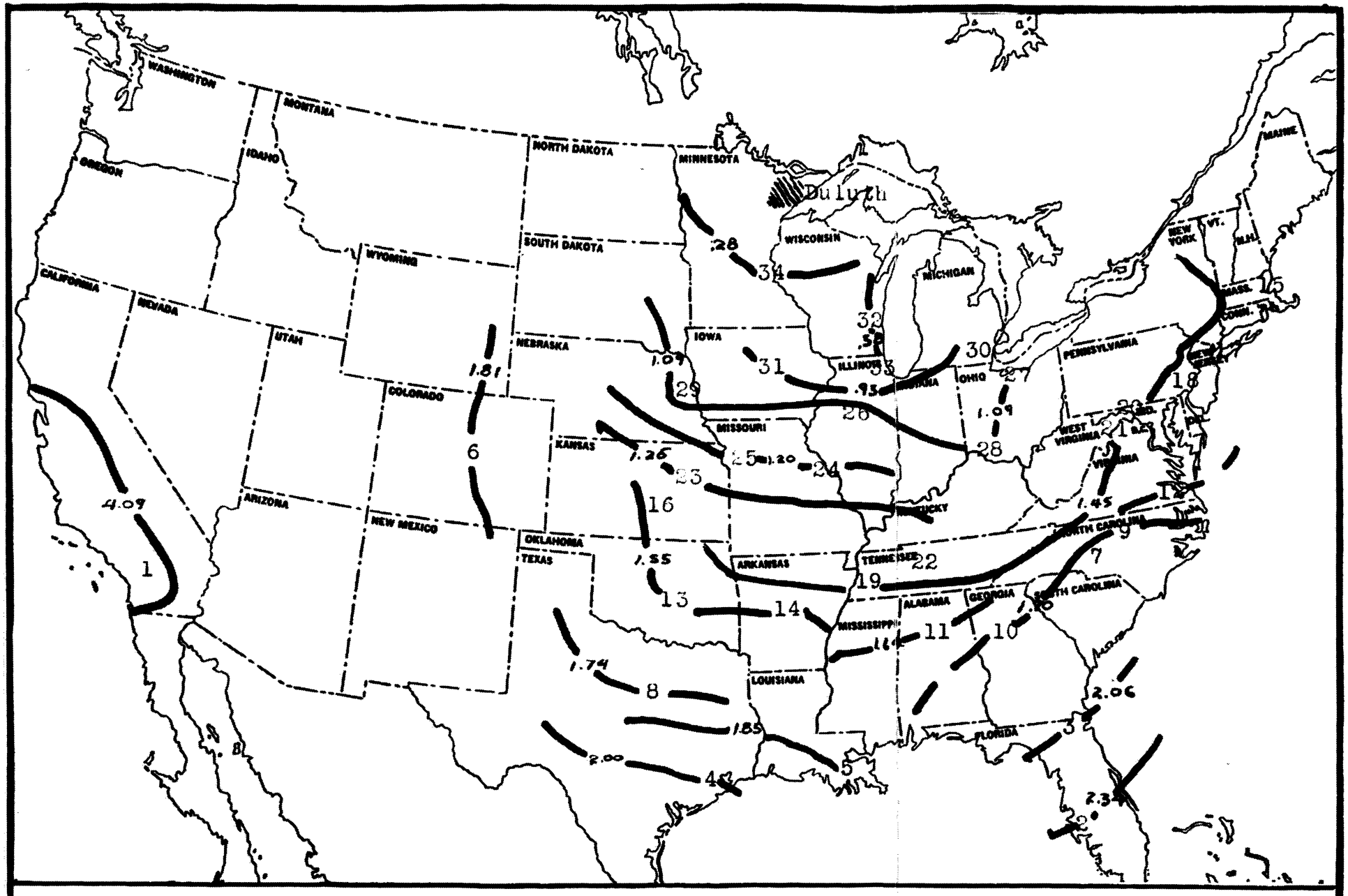


FIGURE 5

MAP OF FREIGHT RATES FROM

DULUTH, MINNESOTA

TABLE XI

SHIPPING COSTS OF CHRISTMAS TREES

To	From Duluth, Minnesota				
	Car Weight Variable *Minimum	Freight Rate Per 100 lbs.	Freight Cost Per Car	No. of Trees Per Car	Freight Cost Per Tree
South Central States					
Kansas City, Missouri	20,000	1.21	$ 242	*2500	9.6¢
Kansas City, Missouri	40,000	.99	396	**4000	9.9
Galveston, Texas	24,000	2.00	480	4000	12.0
Dallas, Texas	24,000	1.74	418		10.4
St. Louis, Missouri	20,000	1.21	242	2500	9.6
Oklahoma City, Oklahoma	24,000	1.55	372	3000	
New Orleans, Louisiana	24,000	1.85	444	4000	11.1
New Orleans, Louisiana	40,000	.85	340	4000	8.5
Little Rock, Arkansas	24,000	1.55	372	4000	9.3
Western States					
Los Angeles, California	24,000	4.09	982	4000	24.5
Denver, Colorado	20,000	1.81	362	2500	14.4
Eastern States					
Baltimore, Maryland	24,000	1.45	348	4000	8.7
New York, New York	24,000	1.48	355	4000	8.9
Washington D.C.	24,000	1.45	348	4000	8.7
Philadelphia, Pennsylvania	24,000	1.48	355	4000	8.8
Boston, Massachusetts	24,000	1.54	370	4000	9.2
Southern States					
Birmingham, Alabama	24,000	1.64	394	4000	9.8
Jacksonville, Florida	24,000	2.06	494	4000	12.3
Tampa, Florida	24,000	2.34	562	4000	14.0
Atlanta, Georgia	24,000	1.71	410	4000	10.2
Raleigh, North Carolina	24,000	1.73	415	4000	10.3
Charlotte, North Carolina	24,000	1.79	430	4000	10.7
Norfolk, Virginia	24,000	1.56	374	4000	9.3
Central States					
Chicago, Illinois	20,000	.58	116	2500	4.6
Cleveland, Ohio	24,000	1.10	264	4000	6.6
Cincinnati, Ohio	24,000	1.09	262	4000	6.5
Springfield, Illinois	20,000	1.15	230	2500	9.2
Springfield, Illinois	40,000	.94	376	4000	9.4
Nashville, Tennessee	24,000	1.39	334	4000	8.3
Memphis, Tennessee	24,000	1.45	348	4000	8.7
Des Moines, Iowa	20,000	.93	186	2500	7.4
Des Moines, Iowa	40,000	.75	300	4000	7.5
Lake States					
Detroit, Michigan	24,000	.96	230	4000	9.2
Minneapolis, Minnesota	34,000	.28	95	4000	2.3
Milwaukee, Wisconsin	20,000	.58	116	2500	4.6
Plains States					
Topeka, Kansas	20,000	1.25	250	2500	10.0
Topeka, Kansas	40,000	1.01	404	4000	10.1
Wichita, Kansas	20,000	1.50	300	2500	12.0

* Lake States Experiment Station, U.S.F.S.

** Chicago, Milwaukee and Pacific Railroad

Based on Rates Supplied by Northern Pacific Railroad, January 11, 1949

It is obvious that the number of trees per car must vary as the minimum car weights. Costs per tree will, in instances of this kind, remain close to the same figure. Material to substantiate this assumption is not complete. The Northern Pacific and the Chicago Milwaukee St. Paul and Pacific and Pacific Railroads and the Lake States Experiment Station of the U.S. Forest Service have provided data that indicated this situation /27c. The important freight rate a dvantages enjoyed by the Duluth, Minnesota exporting area are reflected in the freight costs per tree. These costs indicate that if production was sufficient and other competitive factors were equal Minnesota could dominate the Christmas tree market in the central United States. Minnesota's true competitive position is presented in Table XVI and figure 9 and accompanying discussion.

Grand Rapids, Michigan

Lower Michigan is not an exporting area. The freight rates from Grand Rapids, Michigan were obtained because of the belief they would indicate the position of the Canadian Great Lakes export regions. They are presented in Figure 6 and Table XII.

The Grand Rapids area has the following freight rate advantages: (1) over Coos, New Hampshire--the entire

United States except the Northeast and Middle Atlantic States; (2) over Irishtown, New Brunswick--the entire United States except the Northeast States; (3) over Duluth, Minnesota--the states east of the Wisconsin-Minnesota Border, Iowa, West Kansas, and West Texas; (4) over Western Montana--the states east of the Rocky Mountain States; (5) over California--the states east of the Rocky Mountains except Texas.

Computations for transportation cost per tree have not been made for this area because Michigan exports very few trees. The Michigan State Bureau of Plant Quarantine checks all shipments into and out of the state of Michigan. They report that "trucks handle most of the out of State shipments, and none leave Michigan by rail" /27c. A large share of Michigan's truck imports from Canada (150,000) are actually through shipments to the central states /27c.

TABLE XII

CHRISTMAS TREE FREIGHT RATES FROM
GRAND RAPIDS, MICHIGAN

Number on Figure 6	Rate Per 100 lbs.	To
1	4.50	Los Angeles, California
2	1.91	Tampa, Florida
3	1.90	Galveston, Texas
4	1.84	Denver, Colorado
5	1.75	Dallas, Texas
6	1.69	Jacksonville, Florida
7	1.61	New Orleans, Louisiana
8	1.50	Oklahoma City, Oklahoma
9	1.38 -	Wichita, Kansas
10	1.35	Little Rock, Arkansas
11	1.34	Atlanta, Georgia
12	1.34	Charlotte, North Carolina
13	1.31	Birmingham, Alabama
14	1.30	Raleigh, North Carolina
15	1.18	Topeka, Kansas
16	1.18	Norfolk, Virginia
17	1.18	Memphis, Tennessee
18	1.09	Kansas City, Missouri
19	1.09	Omaha, Nebraska
20	1.08	New York, New York
21	1.08	Philadelphia, Pennsylvania
22	1.08	Boston, Massachussets
23	1.06	Nashville, Tennessee
24	1.04	Baltimore, Maryland
25	1.04	Washington, D. C.
26	.95	Des Moines, Iowa
27	.93	Minneapolis, Minnesota
28	.79	St. Louis, Missouri
29	.70	Springfield, Illinois
30	.66	Cinncinnati, Ohio
31	.64	Cleveland, Ohio
32	.55	Chicago, Illinois
33	.51	Detroit, Michigan
34	.47	Milwaukee, Wisconsin

Northern Pacific Rates, January 1949

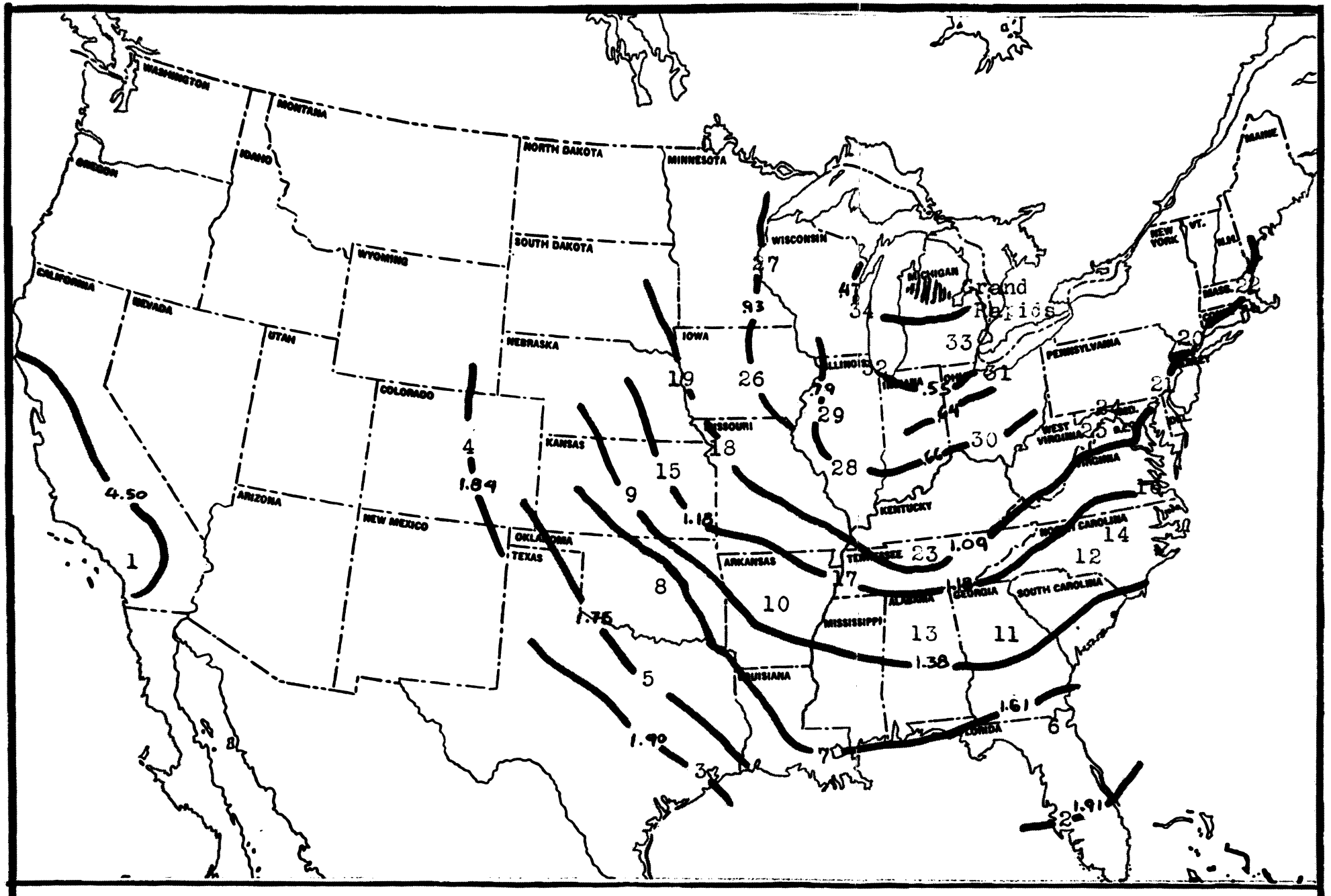


FIGURE 6

MAP OF FREIGHT RATES FROM
GRAND RAPIDS, MICHIGAN

Polson, Montana

The freight rates from Polson, Montana to the thirty four selected consuming centers are presented in Figure 7 and accompanying tables. Comparison with the profile maps of the other exporting regions show that Montana has a freight rate advantage over Coos, New Hampshire west of the eastern border of the plains states and in Oklahoma and Texas; an advantage over Irishtown, New Brunswick, in Western Georgia, Alabama, Mississippi, Western Tennessee, and in the states west of the Mississippi River; an advantage over Duluth, Minnesota in West Texas, the Rocky Mountain states and points west; an advantage over Olympia, Washington in Indiana, Illinois, Wisconsin and points west from the Mississippi River to the western borders of Idaho, Utah and New Mexico; an advantage over California throughout the same territory excluding Texas, New Mexico and Utah.

Figure 7 and Tables XIII and XIIIA present the rates of two competitive railroad systems, the Northern Pacific and the Great Northern. The Great Northern is the only railroad directly accesible to Montana's principal producing area--Lincoln and Flathead Counties (Principal loading, Eureka). The Great Northern is in a position

TABLE XIII

CHRISTMAS TREE FREIGHT RATES FROM
POLSON, MONTANA

Number on Figure 7	Rate Per 100 lbs.	To
1	3.30	Tampa, Florida
2	2.76	Jacksonville, Florida
3		Baltimore, Maryland
4		New York, New York
5		Washington D. C.
6		Norfolk, Virginia
7		Raleigh, North Carolina
8		Charlotte, North Carolina
9		Philadelphia, Pennsylvania
10		Boston, Massachusetts
11	2.50	Cleveland, Ohio
12		Atlanta, Georgia
14	2.40	Birmingham, Alabama
15		Cincinnati, Ohio
16		Nashville, Tennessee
17		Detroit, Michigan
20	2.08	Springfield, Illinois
21		Chicago, Illinois
22		Milwaukee, Wisconsin
23	2.03	Des Moines, Iowa
24		St. Louis, Missouri
25	2.03	Little Rock, Arkansas
18	2.17	Memphis, Tennessee
19	2.17	New Orleans, Louisiana
29	1.74	Minneapolis, Minnesota
30	1.74	Topeka, Kansas
31	1.74	Kansas City, Missouri
26	2.03	Galveston, Texas
27	2.03	Dallas, Texas
32	1.74	Wichita, Kansas
28	2.03	Oklahoma City, Oklahoma
33	1.74	Omaha, Nebraska
34	1.43	Denver, Colorado
13	2.42	Los Angeles, California

Northern Pacific Railroad. January 1949

TABLE XIII A

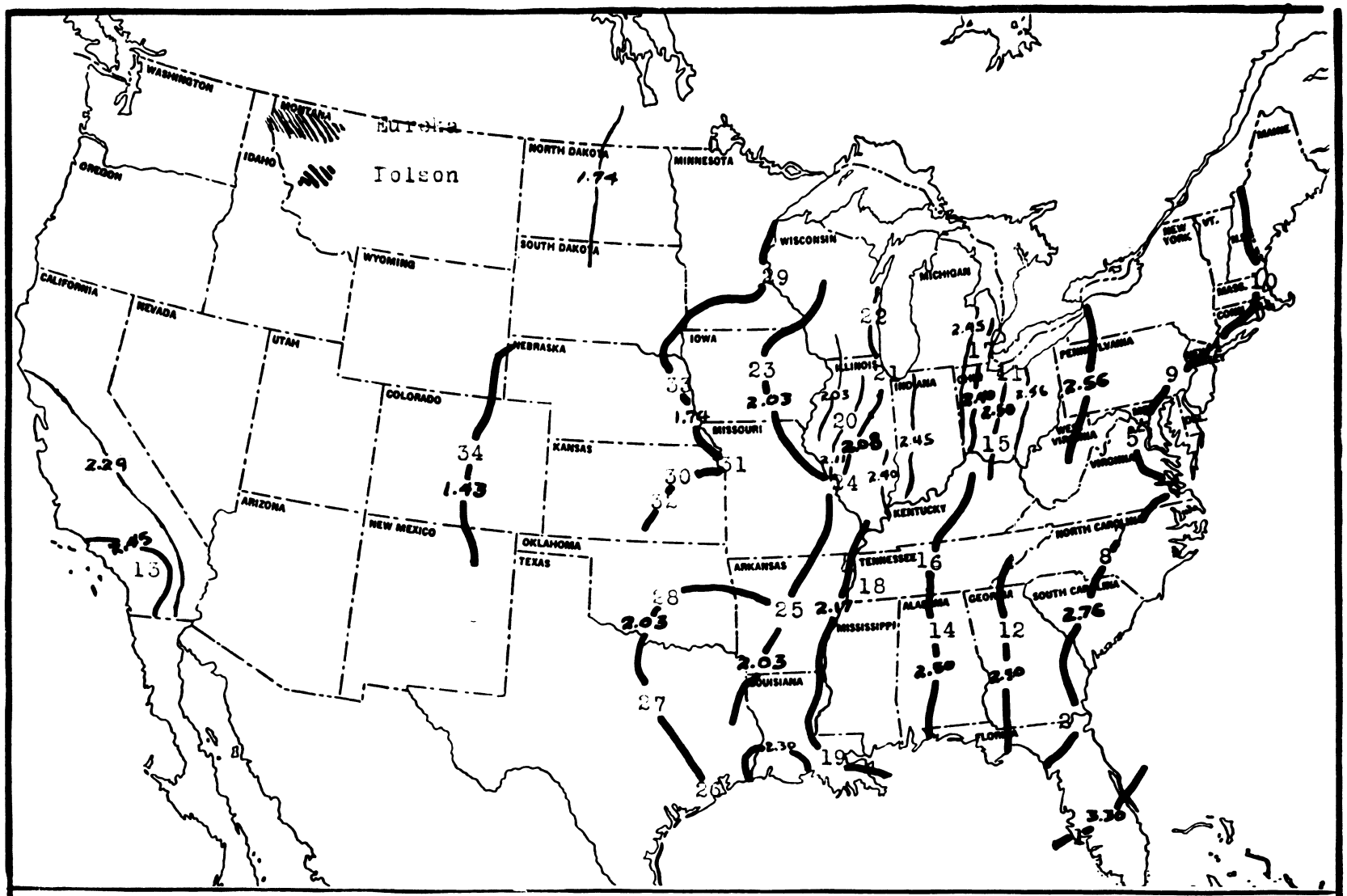
FREIGHT RATES FROM EURAKA, MONTANA
DECEMBER 1948

California		**Iowa**	
Los Angeles	$ 2.29	Carroll	$ 2.03
San Francisco	2.29	Cedar Falls	2.03
		Ceda r Rapids	2.03
Colorado		Cresten	2.03
		Davenport	2.08
Denver	1.43	Des Moines	2.03
Pueblo	1.43	Elbeville	2.03
		Fort Dodge	2.03
Illinois		Fort Madison	2.08
		Lauren	2.03
Bloomington	2.11	Mason City	2.03
Brookport	2.11	Muscature	2.08
Champaigne	2.11	Ottowa	2.03
Chicago	2.11	Ottumwa	2.03
Canton	2.11	Shenandoah	2.03
Decatur	2.11	Souix City	1.78
Freeport	2.11	Waterloo	2.03
La Salle	2.11		
Moline	2.08	**South Dakota**	
Monmouth	2.11		
Murphysboro	2.11	Aberdeen	1.74
Peoria	2.11	Huron	1.74
Pontiac	2.11	Souix Falls	1.74
Quincy	2.11	Watertown	1.74
Rockford	2.11	Yankton	1.74
Springfiedl	2.11		
Streator	2.11	**Texas**	
Indiana		Corpus Christi	2.03
		Dallas	2.03
Elkhart	2.45	Galveston	2.03
La Fayette	2.45	Fort Worth	2.03
Indianopolis	2.45	Houston	2.03
Marion	2.45	San Antonio	2.03
South Bend	2.45		

continued

continued

Wyoming	
Cheyenne	1.43
Kansas	
Concordia	1.74
Great Bend	1.74
Hutchinson	1.74
Leberd	1.74
Manhattan	1.74
Topeka	1.74
Salina	1.74
Victoria	1.74
Wichita	1.74
Kentucky	
Owenbore	2.40
Louisiana	
Shreveport	2.03
Lake Charles	2.30
Minnesota	
Clara City	1.74
Elmore	1.74
Faribault	1.99
Marshall	1.74
St. Cloud	1.74
Winona	1.99
Missouri	
Jefferson City	2.03
Joplin	1.74
Kansas City	1.74
Springfeild	1.99
St. Charles	2.03
St. Louis	2.03
Columbia	1.74
Nebraska	
Grand Islands	1.74
Hastings	1.74
Omaha	1.74
Scolls Bluff	1.54
Grand Forks	1.74
North Dakota	
Minot	1.74
Clinton	2.03
Oklahoma	
Hobart	2.03
Oklahoma City	2.03
Shawnee	2.03
Tulsa	2.03
Ohio	
Cincinnati	2.45
Cleveland	2.56
Columbus	2.56
Dayton	2.45
Fostoria	2.45
Pennsylvania	
Pittsburg	2.56



Legend

Freight rates from Polson, Montana via Northern Pacific Railroad

Freight rates from Eureka, Montana via Great Northern Railroad

Common railroad freight rates from Montana

FIGURE 7

MAP OF FREIGHT RATES FROM POLSON, MONTANA AND EUREKA, MONTANA

to demand a higher freight rate than the Northern Pacific Railroad. The higher rates extend through the Northern Plains States, the Lake States, and the Central States. Most of this area is served directly by the two roads or their affiliate, the Chicago Burlington and Quincey Railroad. The rate differences are carried on joint hauls throughout the Central States north of the Ohio river as far as Western Pennsylvania.

Montana's Christmas trees load exceptionally well. Table XIV uses the average figure of 4,750 trees per carload. The actual weight of a carload is 28,000 pounds. This load weight is light if compared with the loads of Eastern export regions. The railroads are justified on the basis of higher carload value, in charging Montana Christmas trees a higher rate.

The high number of trees per carload (4,750) lowers Montana's freight cost per tree (Table XIV). This loading advantage enables Montana's Christmas trees to absorb high freight rates.

Montana Christmas trees are profitably sold throughout areas where Minnesota and East Canada have freight rate advantages.

The Central United States has become Western Montana's natural market for a wide variety of reasons. The factors that make this possible are presented in Table XVII and Figure 9 and the accompanying discussion.

TABLE XIV

SHIPPING COSTS OF CHRISTMAS TREES

To	From Polson, Montana				
	Car Weight 24,000 lbs. Minimum	Freight Rate Per 100 lbs.	Freight Cost Per Car	No. of Trees Per Car	Freight Cost Per Tree
South Central States	Average *28,000			Average **4750	
Kansas City, Missouri		1.74	487		10.2
Galveston, Texas		2.03	568		11.9
Dallas, Texas		2.03	568		11.9
St. Louis, Missouri		2.03	568		11.9
Oklahoma City, Oklahoma		2.03	568		11.9
New Orleans, Louisiana		2.17	608		12.8
Little Rock, Arkansas		2.03	568		11.9
Western States					
Los Angeles, California		2.42	678		14.2
Denver, Colorado		1.43	400		8.4
Eastern States					
Baltimore, Maryland		2.76	773		16.2
New York, New York		2.76	773		16.2
Washington D.C.		2.76	773		16.2
Philadelphia, Pennsylvania		2.76	773		16.2
Boston, Massachusetts		2.76	773		16.2
Southern States					
Birmingham, Alabama		2.40	672		14.1
Jacksonville, Florida		2.76	773		16.2
Tampa, Florida		3.30	924		19.4
Atlanta, Georgia		2.50	700		14.7
Raleigh, North Carolina		2.76	773		16.2
Charlotte, North Carolina		2.76	773		16.2
Norfolk, Virginia		2.76	773		16.2
Central States					
Chicago, Illinois		2.08	582		12.2
Cleveland, Ohio		2.50	700		14.7
Cincinnati, Ohio		2.40	672		14.1
Springfield, Illinois		2.08	582		12.2
Nashville, Tennessee		2.40	672		14.1
Memphis, Tennessee		2.17	608		12.8
Des Moines, Iowa		2.03	568		11.9
Lake States					
Detroit, Michigan		2.40	672		14.1
Minneapolis, Minnesota		1.74	487		10.2
Milwaukee, Wisconsin		2.08	582		12.2
Plains States					
Topeka Kansas		1.74	487		10.2
Wichita, Kansas		1.74	487		10.2
Omaha, Nebraska		1.74	487		10.2

** B. Huey - U.S.F.S.

* Based on Rates Supplied by Northern Pacific Railroad, January 11, 1949

Olympia, Washington And California Points

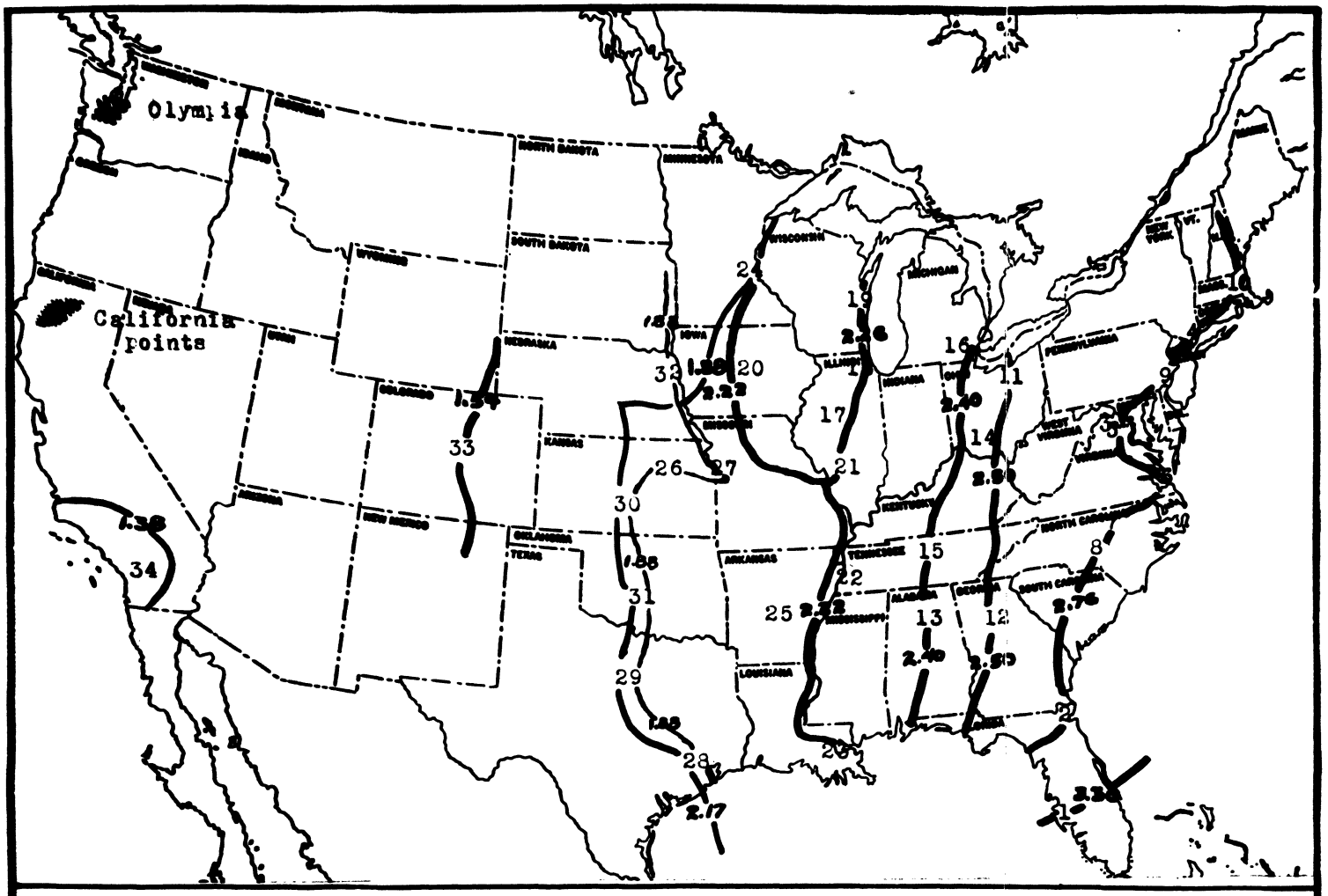
The freight rates from Olympia, Washington and Northern California points are shown on Figure 8. The rates for the two shipping points are the same from the Mississippi river area east. California holds a slight advantage in the South West, and Washington holds a slight advantage in the North West. Regardless of advantages California shipping points may hold, Washington is the major Pacific Coast exporting state /27e. The freight rates show that Olympia, Washington has a freight rate advantage over Coos, New Hampshire in the Western United States from Minneapolis, Minnesota, Omaha, Nebraska and East Texas, an advantage over Irishtown, New Brunswick in Western Georgia, Alabama, Mississippi, Western Tennessee, and the states west of the Mississippi river; an advantage over Duluth, Minnesota in West Texas, the Rocky Mountain States and the Pacific Coast; an advantage over Grand Rapids, Michigan in the same area; an advantage over Polson, Montana in the Pacific Coast States and Arizona.

TABLE XV

FREIGHT RATES FROM THE PACIFIC COAST

From California			From Washington
Number on Figure 8	Rate Per 100 lbs.	To	Rate Per 100 lbs.
1	3.30	Tampa, Florida	3.30
2	2.76	Jacksonville, Florida	2.76
3	2.76	Baltimore, Maryland	2.76
4	2.76	New York, New York	2.76
5	2.76	Washington D. C.	2.76
6	2.76	Norfolk, Virginia	2.76
7	2.76	Raleigh, North Carolina	2.76
8	2.76	Charlotte, North Carolina	2.76
9	2.76	Philadelphia, Pennsylvania	2.76
10	2.76	Boston, Massachusetts	2.76
11	2.50	Cleveland, Ohio	2.50
12	2.50	Atlanta, Georgia	2.50
13	2.40	Birmingham, Alabama	2.40
14	2.40	Cincinnati, Ohio	2.40
15	2.40	Nashville, Tennessee	2.40
16	2.40	Detroit, Michigan	2.40
17	2.26	Springfield, Illinois	2.26
18	2.26	Chicago, Illinois	2.26
19	2.26	Milwaukee, Wisconsin	2.26
20	2.22	Des Moines, Iowa	2.22
21	2.22	St. Louis, Missouri	2.22
22	2.17	Memphis, Tennessee	2.17
23	2.17	New Orleans, Louisiana	2.17
24	2.17	Minneapolis, Minnesto	1.88
25	2.17	Little Rock Arkansas	2.17
26	1.88	Topeka, Kansas	1.88
27	1.88	Kansas City, Missouri	1.88
28	1.88	Galveston, Texas	1.88
		Fargo, North Dakota	2.17
29	1.88	Dallas, Texas	2.17
30	1.88	Wichita, Kansas	1.88
31	1.88	Oklahoma City, Oklahoma	2.17
32	1.88	Omaha, Nebraska	1.88
33	1.54	Denver, Colorado	1.54
34		Los Angeles, California	1.38

Northern Pacific Rates, January 1949



Legend

Freight rates from Pacific Coast

Freight rates from Olympia, Washington

Freight rates from California Points

FIGURE 8

MAP OF FREIGHT RATES FROM OLYMPIA, WASHINGTON AND CALIFORNIA POINTS

TABLE XVI

SHIPPING COSTS OF CHRISTMAS TREES

From Olympia, Washington

	Car Weight 24,000 Minimum	Freight Rate Per 100 lbs.	Freight Cost Per Car	No. of Trees Per Car	Freight Cost Per Tree
uth Central States	Average *27,500			Average * *4,000	
nsas City, Missouri		1.88	$ 517		12.9
lveston, Texas		2.17	597		14.9
lls, Texas		2.17	597		14.9
. Louis, Missouri		2.22	610		15.2
lahoma City, Oklahoma		2.17	597		14.9
w Orleans, Louisiana		2.17	597		14.9
ttle Rock, Arkansas		2.17	597		14.9
stern States					
s Angeles, California		1.38	379		09.5
nver, Colorado		1.54	423		10.6
stern States					
ltimore, Maryland		2.76	759		19.0
w York, New York		2.76	759		19.0
shington, D.C.		2.76	759		19.0
iladelphia, Pennsylvania		2.76	759		19.0
ston, Massachusetts		2.76	759		19.0
uthern States					
rmingham, Alabama		2.40	660		16.5
cksonville, Florida		2.76	759		19.0
mpa, Florida		3.30	907		22.7
lanta, Georgia		2.50	687		17.2
leigh, North Carolina		2.76	759		19.0
rlotte, North Carolina		2.76	759		19.0
rfolk, Virginia		2.76	759		19.0
ntral States					
icago, Illinois		2.26	621		15.5
leveland, Ohio		2.50	687		17.2
ncinnati, Ohio		2.40	660		16.5
ringfield, Illinois		2.26	621		15.5
shville, Tennessee		2.40	660		16.5
mphis, Tennessee		2.17	597		14.9
s Moines, Iowa		2.22	610		15.2
ke States					
troit, Michigan		2.40	660		16.5
nneapolis, Minnesota		1.88	517		12.9
lwaukee, Wisconsin		2.26	621		15.5
ins States					
peka, Kansas		1.88	517		12.9
chita, Kansas		1.88	517		12.9
ha, Nebraska		1.88	517		12.9

Based on Rates Supplied by Northern Pacific Railroad, January 11, 1949.

* K. Lunnum Extension Forester
Washington State College, Pullman, Washington

Railroad freight rates between Washington and California points are low. Short distance, and competition between railroads, truckers and water transport are the reasons for favorable rates.

The average figures for carload weight and number of trees per car are given in Table XVI. Comparison with Montana figures will show that Washington has a disadvantage of 750 trees in an average carload. However, Montana and Washington Christmas trees are of the same species and should load the same. If a larger sample had been taken it is felt that figure would not conflict. Table XVII and Figure 9 and accompanying discussion present the affect the low transportation cost per tree, enjoyed by Montana and the Pacific Coast, has on competitive position.

Freight Costs and Other Factors

Freight costs per tree carried by the different exporting regions on shipments to the consuming areas was presented in Tables VII, IX, XI, XIV, XVI. A comparison of these figures is shown in Table XVII and Figure 9. The results of that comparison if tempered by product quality, production cost, and production will indicate the true competitive position of competing export area. Production potential must be weighed heavily when considering

future sources of supply.

Northeast And Middle Atlantic States

The present limited production of the Northeast and Middle Atlantic and the Lake States prevents exploitation of market advantages enjoyed by these areas. Lack of ability to increase production will prevent any future market expansion. These two areas (Minnesota and the Northeast) supply local and adjacent markets in their respective areas. The carloading advantage enjoyed by these areas over the New Brunswick region fortifies the position of the local industry and allows high mark-ups and higher profit for Northeast and Central States plantation grown trees (Figure 9).

The Northeast's preference for Balsam is strong. Balsam has been the Christmas tree of the Northeast since colonial times. This wide consumer preference has worked against the establishment of Eastern markets for Western trees. East Canada supplies what the Eastern market demands--Balsams.

The freight cost per tree from Irishtown, New Brunswick to the Northeast and Middle Atlantic States is higher than any other exporting region. Regardless of that, Eastern Canada supplies ninety four per cent of the Northeast's annual imports /TABLE III. It is the only area that

has Balsam Christmas trees available for export. When availability is taken into consideration it is realized thst trees to supply a 6,000,000 tree market must come from the Western producing areas or Eastern Canada.

Southern States

A few trees from the Northeast and Middle Atlantic States and the Lake States reach southern markets. Trees available for export from these two regions will not increase. The advantage of low transportation freight cost per tree cannot be utilized for that reason.

The western exporting areas (Montana and the Pacific Coast) have a carloading advantage over the East Canadian area. The transportation cost per tree of Western products is twenty-five cents lower than East Canadian transportation costs (Figure 9).

The freight cost advantage enjoyed by the Western producing area will not result in market expansion for western trees. The southern states have available locally, satisfactory trees for Christmas tree use. The people of the south regard the Shortleaf Pine as an ideal Christmas tree. The market for Northern trees will continue to be limited to those Southern residents that are familiar with Northern trees and traditions.

The Lake States

The Lake States area is a major exporting region and most intra-region shipments are made by truck. A deficiency of quality family class trees (4-8) is experienced in some areas. In lower Minnesota and lower Michigan imported trees find a ready market.

Western trees are preferred to local products in lower Minnesota localities on the basis of price /27c. High producing and processing costs of local products may be the reason for this difference. Many East Canadian trees are imported by lower Michigan.

Opportunities are negligible for Western Christmas tree market expansion. The competition from local trees is severe in Minnesota and Wisconsin. Canadian imports by truck are will established in lower Michigan /27c.

Central States

The Central States region is the natural market area for available exports from the Lake States regions. The trees produced in Minnesota for export are mostly 2-3 table size. The central states markets for (2-3) trees are well filled by Lake States products.

The Northeast furnishes trees of variable size in limited quantities. Trees that are exported from the Northeast must bw replaced by imports. Approximately

one-half of the central states market for family size trees must be supplied by Washington, Montana or East Canada.

The Western producing regions freight costs per tree are low (Figure 9). In this case it is indicative of the main Christmas tree sources. The cost difference between Washington and Montana is not in itself sufficient cause for the differences in shipment sizes (Table III). (In 1948 Montana exported 1,384,000 trees to the Central States and the Pacific Coast exported 97,000).

New Brunswick Central States shipments carry an additional freight cost of fifteen cents per tree. In spite of this increased cost the Central States are a market for 1,106,500 East Canadian Christmas trees (Table III).

The central states market has no traditional preference. East Canadian Balsam and spruce compete side by side if quality and prices are the same /27d. The western regions can increase their distribution in the Central States if freight costs remain relatively the same. Western trees can successfully challenge the portion of the Central States Market held by railroad freight imports from East Canada.

South Central States

The Pacific Coast, Montana and Minnesota are the competing suppliers in the South Central States. Minnesota's contributions are mostly small easily transported table class trees (2'-3').* The remainder of the market is jointly supplied by the Pacific Coast and Montana (Table III).

Montana has a freight cost advantage over Washington and Oregon, to points in the South Central States. This advantage is a good reason for Montana's larger share of the market.

The freight costs from California to West and Central Texas are low (Figure 8). Utilization of this advantage by the Pacific Coast area could cut Montana's market.

Montana's market position is secure in the South Central States. California production is consumed within the state. There is little likelihood of an increase in Texas shipments from the Pacific Coast.

Plains States

The freight costs per tree are approximately equal from Duluth, Minnesota and Polson, Montana to most areas in the Plains States. Many table class trees (2'-3') are

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* R. K. Le Barron, U.S.F.S.

supplied by Minnesota. Christmas trees of other classes come almost entirely from Montana (Table III).

Montana has a freight cost advantage in the Plains States over all other possible suppliers. A few trees from the Pacific Coast are marketed in this area. Shipments from the Pacific Coast to the Plains area must pay a higher rate than shipments from Montana. New Brunswick Christmas trees would pay a prohibitive price for transportation.

Montana holds a dominant market position in the Plains States. It is not threatened by competition from any other export area.

The Western States

The Pacific coast is the main supplier of Western States markets (Table III). The states of Oregon and Washington hold a freight cost advantage over the only other logical supplier, Montana. This advantage extends throughout the Pacific Coast and Nevada, Arizona, and New Mexico.

The state of California is a big importing market. It is supplied by large imports from Washington and Oregon and a few trees from Montana /27e.

Montana holds a freight cost advantage in the states of Utah, Colorado, Wyoming, Idaho and Montana. These states are sparsely populated and partly supplied

by local producers. Montana's 1948 exports to these states amounted to only 250,000 trees /27b. The other states in the western group consumed 200,000 Montana trees.

Montana's market cannot be expanded in the Western States. Expansion is prevented by the Pacific Coast freight cost advantage in the areas of population.

The Rocky Mountain and Intermountain States are sparsely populated. Montana's present market in the Western States is secure. The scattered markets and high freight costs a re not interesting to Eastern exporters.

Summary

Montana Christmas trees are in a dominant market position in the Plains, South Central, and Northern Rocky Mountain States as shown in Table VII and Figure 9. Throughout this area Minnesota distributes table size Christmas trees and maintains a favorable position in that portion of the market. Washington ships a few trees to the same distribution centers.

Montana's position is good in the Central States. East Canadian trees are well established in this market, but good Western Douglas fir can displace the spruce and balsams of the New Brunswick area. Market expansion possibilities are equal in this area for Montana and the Pacific Coast. Expansion in any other area is not logical.

TABLE VII

AVERAGE RAILROAD FREIGHT COSTS PER CHRISTMAS TREE
JANUARY 11, 1949

To	From				
	Olympia Washington	Polson Montana	Duluth Minnesota	Coos New Hampshire	Irishtown New Brunswick
South Central States	0.15	11.8	9.9	12.7	47.8
Western States	0.10	11.3	19.5	22.6	73.8
Eastern States	0.19	16.2	8.9	6.9	25.0
Southern States	0.19	11.5	10.9	9.8	39.6
Central States	0.16	13.1	7.6	8.9	34.3
Lake States	0.14	12.2	5.4	8.4	29.4
Plains States	0.13	10.2	10.1	12.3	47.6

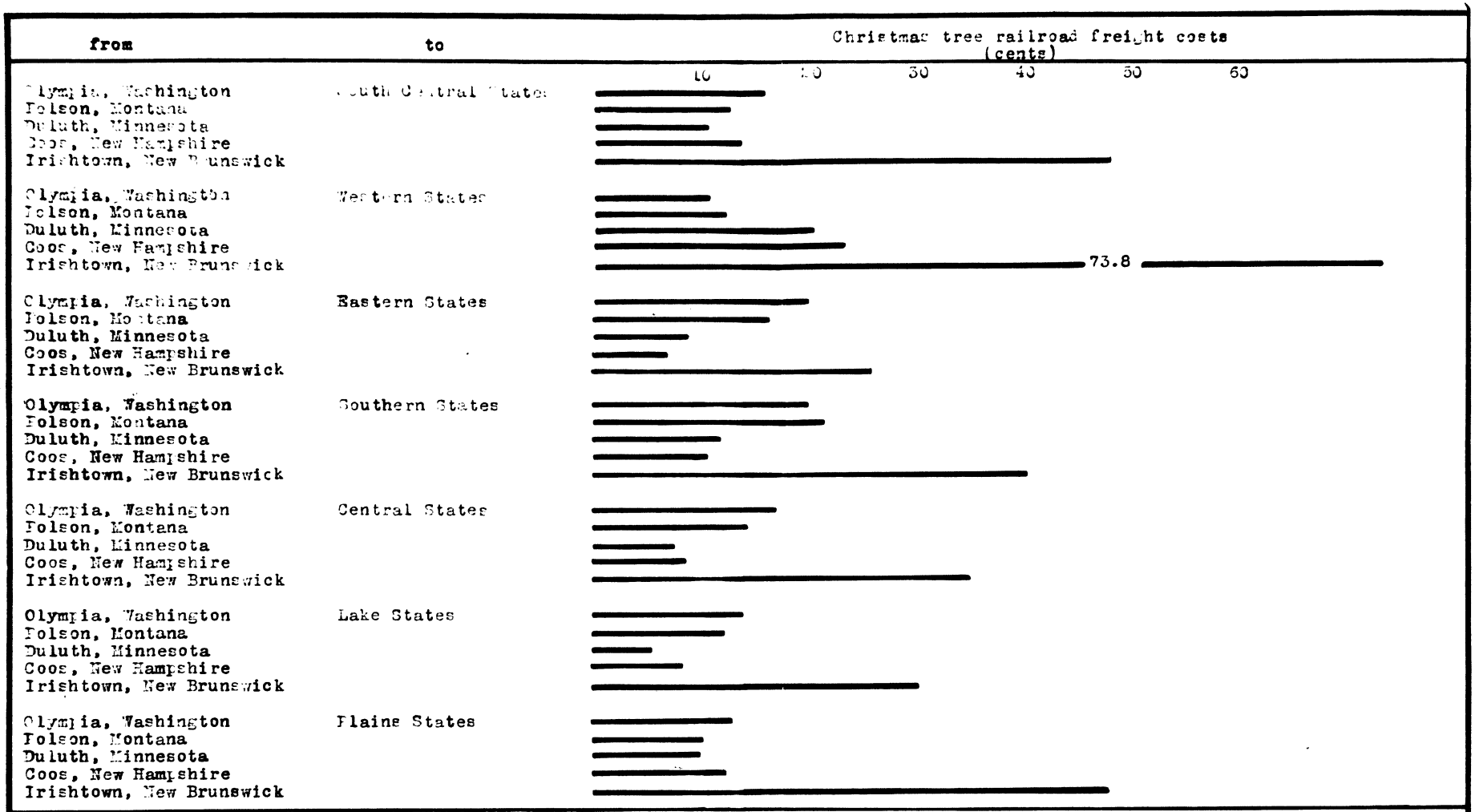

FIGURE 9

RAILROAD FREIGHT COSTS PER CHRISTMAS TREE
FROM PRODUCING REGIONS TO CONSUMING AREAS

Freight Rate Increases 1939-1949

Freight rates have increased greatly in the last ten years. These increases may have been applied on the percentage or on the blanket principle. Proposed increase x-168 is a percentage increase and will apply increases of varying amounts depending on the base rate from which the percentage is calculated. (Example)

EXAMPLE

Base rate, Polson, Montana to Kansas City	$ 1.75
x-168 increase 4%	.07
New Rate	1.82

The other method is the blanket increase. This method puts an equal monetary burden on all areas regardless of the base rate.

Many authorities resent the percentage method of increasing rates. In the long run the results may be the same. The railroads adjust to provide the maximum revenue.

Freight rates, becuase of carloading differences, are not an exact measure of comparative freight costs between different exporting regions. The carloading capacities and weights of trees produced in the Pacific

TABLE XVIII

CHRISTMAS TREE CARLOAD FREIGHT RATES
1939 AND 1949

To / From

To	(1) Washington			(1) Western Montana			Duluth, Minnesota			(1) Coos, New Hampshire			(1) Irishtown, New Brunswick		
	1/1/39	1/11/49	(7) x-168	1/1/39	1/11/49	(7) x-168	6/7/39	1/11/49	(7) x-168	1/1/39	1/11/49	(7) x-168	1/1/39	1/11/49	(7) x-168
South Central States	(5)	(5)	(5)	(6)	(6)	(6)									
Kansas City, Missouri	1.31	1.88	4% 1.94	1.21	1.74	4% 1.81	(3) .60	(2) 1.21	5% 1.27	1.86	5% 1.95		2.67	5% 2.80	
Galveston, Texas	1.81	2.17	4% 2.26	1.41	2.03	4% 2.11	1.52	(1) 2.00	4% 2.08	2.46	5% 2.58		3.28	5% 3.44	
Dallas, Texas	1.81	2.17	4% 2.26	1.41	2.03	4% 2.11	1.31	(1) 1.74	4% 1.81	2.38	5% 2.50		3.20	5% 3.36	
St. Louis, Missouri	1.81	2.22	5% 2.33	1.38	2.03	5% 2.13	(3) .59	(2) 1.21	5% 1.27	1.39	6% 1.47		1.69	6% 1.79	
Oklahoma City, Oklahoma	1.81	2.17	4% 2.26	1.41	2.03	4% 2.11	1.17	(1) 1.55	4% 1.61	2.19	5% 2.30		3.01	5% 3.16	
New Orleans, Louisiana	1.81	2.17	4% 2.26	1.81	2.17	4% 2.26	1.36	(1) 1.82	5% 1.94	2.10	6% 2.23		3.03	6% 3.21	
Little Rock, Arkansas	1.81	2.17	4% 2.26	1.41	2.03	4% 2.11	1.17	(1) 1.55	4% 1.61	1.96	5% 2.06		2.77	5% 2.91	
Average Rate	1.49	2.16	2.22	1.39	2.01	2.09	1.10	1.59	1.66	2.06	2.16		2.81	2.96	
Western States															
Los Angeles, California		1.38	4% 1.44	1.68	2.42	4% 2.52	2.84	(1) 4.09	4% 4.25	4.75	5% 4.99		5.37	5% 5.64	
Denver, Colorado	1.07	1.54	4% 1.60	.99	1.43	4% 1.49	1.04	(2) 1.81	4% 1.88	2.51	5% 2.64		3.32	5% 3.49	
Average Rate	1.07	1.46	1.52	1.33	1.94	2.00	1.94	2.95	3.06	3.63	3.81		4.34	4.56	
Eastern States															
Baltimore, Maryland	1.84	2.76	5% 2.90	1.84	2.76	5% 2.90	.95	(1) 1.45	5% 1.52	0.98	6% 1.04		1.47	6% 1.56	
New York, New York	1.84	2.76	5% 2.90	1.84	2.76	5% 2.90	.96	(1) 1.48	5% 1.55	0.81	6% 0.86		1.18	6% 1.25	
Washington, D.C.	1.84	2.76	5% 2.90	1.84	2.76	5% 2.90	.95	(1) 1.45	5% 1.52	0.99	6% 1.05		1.47	6% 1.56	
Philadelphia, Pennsylvania	1.84	2.76	5% 2.90	1.84	2.76	5% 2.90	.96	(1) 1.48	5% 1.55	0.87	6% 0.92		1.38	6% 1.46	
Boston, Massachusetts	1.84	2.76	5% 2.90	1.84	2.76	5% 2.90	1.00	(1) 1.54	5% 1.61	0.64	6% 0.68		0.98	6% 1.04	
Average Rate	1.84	2.76	2.90	1.84	2.76	2.90	.96	1.48	1.55	0.86	0.91		1.30	1.38	
Southern States															
Birmingham, Alabama	1.60	2.40	5% 2.52	1.60	2.40	5% 2.52	1.19	(1) 1.64	5% 1.72	1.84	6% 1.95		2.76	6% 2.93	
Jacksonville, Florida	1.84	2.76	5% 2.90	1.84	2.76	5% 2.90	1.50	(1) 2.06	5% 2.16	1.76	6% 1.86		2.67	6% 2.83	
Tampa, Florida	2.20	3.30	5% 3.47	2.70	3.30	5% 3.47	1.70	(1) 2.34	5% 2.46	1.96	6% 2.08		2.88	6% 3.05	
Atlanta, Georgia	1.67	2.50	5% 2.63	1.67	2.50	5% 2.63	1.26	(1) 1.71	5% 1.79	1.70	6% 1.80		2.62	6% 2.78	
Raleigh, North Carolina	1.84	2.76	5% 2.90	1.84	2.76	5% 2.90	1.26	(1) 1.73	5% 1.81	1.25	6% 1.32		2.10	6% 2.23	
Charlotte, North Carolina	1.84	2.76	5% 2.90	1.84	2.76	5% 2.90	1.30	(1) 1.79	5% 1.87	1.43	6% 1.52		2.23	6% 2.36	
Norfolk, Virginia	1.84	2.76	5% 2.90	1.84	2.76	5% 2.90	1.02	(1) 1.56	5% 1.63	1.11	6% 1.21		1.60	6% 1.70	
Average Rate	1.83	2.75	2.89	1.83	2.75	2.89	1.32	1.83	1.92	1.58	1.68		2.41	2.55	
Central States															
Chicago, Illinois	1.51	2.26	5% 2.37	1.38	2.08	5% 2.18	(2) .38	(2) .58	5% .61	1.22	6% 1.29		1.55	6% 1.64	
Cleveland, Ohio	1.67	2.50	5% 2.63	1.67	2.50	5% 2.63	.74	(1) 1.10	5% 1.15	1.00	6% 1.06		1.30	6% 1.38	
Cincinnati, Ohio	1.60	2.40	5% 2.52	1.60	2.40	5% 2.52	.74	(1) 1.09	5% 1.14	1.18	6% 1.25		1.53	6% 1.62	
Springfield, Illinois	1.51	2.26	5% 2.37	1.38	2.08	5% 2.18	(3) .58	(2) 1.15	5% 1.21	1.34	6% 1.42		1.64	6% 1.74	
Nashville, Tennessee	1.60	2.40	5% 2.52	1.60	2.40	5% 2.52	1.01	(1) 1.39	5% 1.46	1.73	6% 1.83		2.70	6% 2.86	
Memphis, Tennessee	1.51	2.17	5% 2.28	1.51	2.17	4% 2.26	1.08	(1) 1.45	5% 1.52	1.86	6% 1.97		2.83	6% 3.00	
Des Moines, Iowa	1.51	2.22	5% 2.33	1.38	2.03	5% 2.13	(3) .47	(2) .93	5% .98	1.71	5% 1.80		2.51	5% 2.64	
Average Rate	1.56	2.31	2.43	1.50	2.24	2.35	.70	1.10	1.15	1.43	1.66		2.01	2.13	
Lake States															
Detroit, Michigan	1.60	2.40	5% 2.52	1.60	2.40	5% 2.52	.67	(1) .96	5% 1.01	1.07	6% 1.13		1.29	6% 1.37	
Minneapolis, Minnesota	1.31	1.88	4% 1.94	1.21	1.74	4% 1.81	(4) .19	(4) .28	.28	1.78	5% 1.88		2.37	5% 2.49	
Milwaukee, Wisconsin	1.51	2.26	5% 2.37	1.38	2.08	5% 2.18	(2) .38	(2) .58	5% .61	1.22	6% 1.29		1.53	6% 1.62	
Average Rate	1.47	3.47	2.28	1.40	2.07	2.07	.41	.61	.63	1.36	1.43		1.73	1.83	
Plains States															
Topeka, Kansas	1.31	1.88	4% 1.94	1.21	1.74	4% 1.81	.79	(2) 1.25	4% 1.30	1.96	5% 2.06		2.80	5% 2.94	
Wichita, Kansas	1.31	1.88	4% 1.94	1.21	1.74	4% 1.81	.94	(2) 1.50	4% 1.56	2.06	5% 2.16		2.91	5% 3.06	
Omaha, Nebraska	1.31	1.88	4% 1.94	1.21	1.74	4% 1.81	(3) .52	(2) 1.06	5% 1.10	1.90	5% 1.99		2.72	5% 2.86	
Average Rate	1.31	1.88	1.94	1.21	1.74	1.81	.75	1.20	1.25	1.97	2.07		2.81	2.95	

(1) 24,000 R
(2) 30,000 R
(3) 40,000 R
} Carload Minimum Wts.

Coast, Montana and Minnesota are nearly equal. Freight rates and freight rate increases have been used as a measure of cost in the following discussions of these areas.

The carloading capacity of East Canadian trees if far below the carloading capacities of other export areas, but the carload weights are comparable. Discussion of freight rate increases for the New Brunswick area is confined to freight cost per tree. It is the only universally true measure of transportation cost.

From Polson, Montana and Duluth, Minnesota

South Central States

The rates from Duluth, Minnesota to St. Louis, Missouri increased 103% in the period 1939-1949. The rates from Polson, Montana to St. Louis, Missouri increased forty six per cent /Table XVIII. The difference in the actual rates ten years ago and today are given in the following Table.

TABLE XIX

RATE DIFFERENCES AND INCREASES
TO ST. LOUIS, MISSOURI

From	1939	1949	Increases Per Cent
Duluth, Minnesota	.59	1.21	103
Polson, Montana	1.38	2.03	46
Difference	.79	.82	

The actual rate differences (seventy-nine and eighty-two cents) have not changed greatly in the last ten years. Actually this means that the relative positions of the areas have not changed. In order to maintain revenue from this traffic, the respective railroads have had to institute the equivalent of blanket increases. This is not the case in all areas. Prospective increase x-168 should not alter that relationship.

Southern States

The rates to the Southern States from Duluth, Minnesota have increased much less than the rates from Polson, Montana. (Table XX)

TABLE XX

RATE DIFFERENCES AND INCREASES
TO THE SOUTHERN STATES

From	1939	1949	Increases Per Cent
Polson, Montana	1.83	2.75	50
Duluth, Minnesota	1.32	1.83	39
Difference	.51	.92	

The percentage increases are not radically different (eleven per cent). The actual monetary differences have almost doubled. The change in the rate differences may have been brought about by Montana's increased production and distribution in the last ten years. Rate differences on shipments to the Southern States will probably not decline until distribution ceases to increase.

Prospective freight rate increases, x-168 should not affect Montana's current position in the Southern States.

Plains States

In the Plains States the rates have increased nearly equally from Montana and Minnesota in the last ten years (Table XXI). The proportionate increase

TABLE XXI

RATE DIFFERENCES AND INCREASES
TO THE PLAINS STATES

From	1939	1936	Increases Per Cent
Polson, Montana	1.21	1.74	44
Duluth, Minnesota	.75	1.20	73
Difference	.56	.54	

has been in Montana's favor. The rate differences between the two periods have changed very little. The increase in freight rates has not altered the competitive positions of the Montana and Minnesota exporting areas in the Plains States. There is no indication that prospective increase x-168 (four per cent) will effect the market stability of these two major plains states supplies /Table XVIII.

Central States

Freight rate increases are low from Duluth, Minnesota to the Central States. The two areas are adjacent and trucks transport a large share of the traffic. Rail increases are not as restrictive to Minnesota Central States shipments as they are to shipments from Polson, Montana.

TABLE XXII

RATE DIFFERENCES AND INCREASES
TO THE CENTRAL STATES

From	1939	1949	Actual Increase	Increases Per Cent
Polson, Montana	1.50	2.24	.74	50
Duluth, Minnesota	.70	1.10	.40	57
Difference	.80	1.14	.34	

The ten year rate increase in per cent is higher for Minnesota than Montana. The actual rate increase is 34¢ / cwt. in Minnesota's favor (Table XXII).

It has not multiplied Minnesota distribution in the Central States. Lack of additional suitable quality production has prevented utilization of this advantage. Additional difference in freight increase to the Central States should not be to Montana's disadvantage.

Freight Rate Increases From Polson, Montana And Olympia, Washington

Central States

Christmas tree freight rates to the Central States from Olympia, Washington and Polson, Montana have increased seventy-four cents and seventy-five cents respectively in the last ten years. (Table XVIII)

TABLE XXIII

RATE DIFFERENCES AND INCREASES TO THE CENTRAL STATES

From	1939	1949	Increases Per Cent
Olympia, Washington	1.56	2.31	48
Polson, Montana	1.50	2.24	49
Increases	.06	.07	

The rate differences have increased one cent and the percentage increases for the two exporting points have increased one per cent. On the basis of these comparisons there is no reason to believe that freight increases have affected Christmas tree distribution of Western Montana or the Pacific Coast in the Central States. (Table XXIII).

The proposed increases x-168 should not alter the present competitive situation.

Plains States

The Christmas tree freight rates from Olympia, Washington to the Plains States increased fifty-seven cents in the last ten years. Freight rates from Polson, Montana to the Plains States increased fifty-three cents in the same period (Table XVII).

TABLE XXIV

RATE DIFFERENCES AND INCREASES
TO THE PLAINS STATES

From	1939	1949	Actual Increases	Increases Per Cent
Olympia, Washington	1.31	1.88	.57	43
Polson, Montana	1.21	1.74	.53	44
Difference	.10	.14	.04	

The differences in the rates have increased 4¢ / cwt. in Montana's favor in that ten year period (Table XXIV). The effect that this has had on the distribution of the two areas in the Plains States can not be ascertained. Data on Pacific Coast distribution for years prior to 1948 is not available, but Montana's distribution has increased in this area /27b while the population of the

Plains States has decreased. The Pacific Coast is the logical contributor of most of Montana's increase. Prospective freight increase x-168 will emphasize Montana's advantage over the Pacific Coast in the Plains States area.

South Central States

The freight rate advantage of Montana over the Pacific Coast in the South Central States has increased in the last ten years.

TABLE XXV

RATE DIFFERENCES AND INCREASES
TO THE SOUTH CENTRAL STATES

From	1939	1949	Actual Increase	Increases Per Cent
Olympia, Washington	1.49	2.16	.67	45
Polson, Montana	1.39	2.01	.62	45
Difference	.10	.15		

Table XXV shows that the percentage of increase has been the same in both cases. The larger base rate for Washington shipments has resulted in a larger increase (five cents). As the rates have increased, Montana's advantage has grown. The proposed increase x-168 will give Montana an additional advantage over the North Pacific Coast in the South Central States area.

Western States

California is the West's major market. No rate was supplied for 1939 coastal Christmas tree shipments. The differences in rate increases (1939-1949) cannot be calculated. Prospective freight rate increases (x-168) from Montana and Washington to Los Angeles and the rates on which the increases are based are given in Table XVIII. The increases a re equal percentages of the January 11, 1949 rates (Table XXVI).

TABLE XXVI

DIFFERENCES AND INCREASES IN RATES TO CALIFORNIA

From	1949	x-168	Actual Increases	Increases Per Cent
Olympia, Washington	1.38	1.44	.06	40
Polson, Montana	2.42	2.52	.10	4
Differences	1.04	1.08		

The base rate from Polson, Montana to Los Angeles, California is larger than the corresponding rate from Olympia, Washington. The actual increase is 4¢ /cwt. larger.

Coastal freight rates must be lower to maintain shipping volume. An increase of a few cents in railroad freight rates may throw a season's "Christmas tree shipment revenue" to highway or water carriers. On that basis it is safe to assume that the situation illustrated in Table XXV has been in effect during the last ten years.

The California market has never been a big consumer of Montana trees. Freight rates in effect and prospective increase x-168 give no indication that the California market will improve.

Olympia, Washington, Polson, Montana And Irishtown, New Brunswick

Northeast and Middle Atlantic States

East Canada is the major supplier of Christmas trees for the Northeast and Middle Atlantic States.

New Brunswick freight rates to the Northeast and Middle Atlantic States are lower than the corresponding rates of the Western export areas.

TABLE XXVIII

RATE DIFFERENCES AND INCREASES TO THE NORTHEAST AND MIDDLE ATLANTIC STATES

From	1939	Increase x-168	Actual Increase	Increase Per Cent
Olympia, Washington and Polson, Montana	2.76	2.90	.24	5
Irishtown, New Brunswick	1.30	1.38	.08	6
Difference	1.46	1.52	.16	

If freight increase x-168 is put into effect, New Brunswick will gain in the Northeast and Middle Atlantic States a larger freight rate advantage over Western suppliers (Table XXVIII).

The freight rate differences now in effect are misleading. Carloads of Christmas trees from New Brunswick carry forty-two per cent as many trees as shipments from Montana or the Pa cific Coast. New Brunswick rates must be forty-two per cent of Montana or Pacific Coast rates to provide the areas with equal transportation costs per tree (Figure 9, Table XVII).

The present rates from New Brunswick to the Northeast are forty-six per cent of Western rates. The Montana

and Pacific Coast advantage is seventy-nine cents per tree expressed in terms of freight cost per tree.

Increase in freight rates will be to the advantage of the Western export areas.

TABLE XXIX

INCREASE IN TRANSPORTATION COST PER TREE TO THE NORTHEAST AND MIDDLE ATLANTIC STATES

From	1949	Increase x-168	Actual Increase	Cost Per Tree
Olympia, Washington and Polson, Montana	17.1¢	5%	.009¢	18¢
Irishtown, New Brunswick	25.0¢	6%	.015¢	26.5¢
Difference	7.9			8.5

(The Northeast's preference for balsam over Douglas fir has absorbed a difference in transportation cost of eight cents per tree.)

The difference in the cost per tree has increased at the expense of the New Brunswick area. (Table XXIX). Additional freight rate percentage increases may be to the advantage of the Pacific Coast and Montana in the Northeast and Middle Atlantic States.

Central States

The Central States import a large number of Christmas trees from New Brunswick and other East Canadian points. The freight cost per tree for New Brunswick shipments is higher than the freight cost per tree for Western shipments (Table XXX).

TABLE XXX

INCREASE IN TRANSPORTATION COST PER TREE TO THE CENTRAL STATES

From	1949	Increase x-168	Actual Increase	x-168 Cost Per Tree
Olympia, Washington and Polson, Montana	14.6	5%	.7¢	15.3¢
Irishtown New Brunswick	34.3	6%	.2¢	36.3¢
Difference	19.7			21.0

x-168 will add 1.3¢ to Western freight cost advantage. Any further freight rate increases should raise the Pacific Coast and Montana freight cost margin over New Brunswick in the Central States.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Freight rates affect every segment of the economy of the United States. Sparsely populated regions that are a long distance from major markets usually are in the bottom of the competitive pile due to the comparatively high transportation costs that they must carry. This is not the case in the Christmas tree industry.

Competition between the producing regions of the Christmas tree industry is not particularly severe. The areas that have any surplus trees to export are limited to four: (1) the Eastern Canadian (2) Lake States (3) Montana (4) the North Pacific Coast. The majority of the surplus production from the Eastern Canadian region is sold in the adjacent Northeast and Middle Atlantic States and about 1,000,000 trees are sold in the Lake and Central States. The Lake States export mostly table size trees (2'-3') and have that market well covered in the central part of the country. A large place in the markets of the Central, Plains, and South Central States is left for other producing areas, namely Montana, and the Pacific Coast. This market of the Central United States is supplied mostly by Montana with the North Pacific Coast filling any orders that Montana cannot supply. The opposite

is true in California and other Pacific Coast markets. The states of Oregon and Washington and the province of British Columbia have the upper hand while Montana supplies only a few trees.

The freight rates (1939-1949) of the four competing export regions do not show the true relationships. The minimum carload weights for the four regions are very similar--24,000 pounds(except shipments from Minnesota) (20,000 pounds minimum) for the smallest car. The actual carload weights are also relatively close together, mostly around 30,000 pounds. The number of trees per carload for the four regions varies only slightly except in the case of New Brunswick. The number of trees in a carload from New Brunswick is less than one-half the number in a carload from Montana and the Pacific Coast and two-thirds of the number contained in a carload from the Lake States. This loading advantage gives Montana a freight cost advantage over New Brunswick in the entire United States except New England. Preference of the Northeast for balsam, a New Brunswick product, makes market expansion for the Pacific Coast or Montana Douglas fir difficult in that area. However in the Central States where the difference in freight costs are even more to the Western producing area's advantage and there is no preferable tree, Montana is in a position to expand her distribution,

except in table class trees (2'-3'). In that class indications are that the Lakes States reign supreme throughout the Central United States.

West of the Mississippi river to the Rocky Mountains, Montana has a freight cost advantage over the Pacific Coast and other areas that have a surplus of family size trees. This freight cost advantage has increased in the last ten years with increases in freight rates. Proposed increase x-168 should further improve Montana's position in the markets of the Central United States.

Montana's market on the Pacific Coast has never been vigorous. Pacific Coast and Montana Douglas fir have equal carloading capabilities and therefore freight rates and freight costs reveal the same relationships. The Pacific Coast has always had a freight cost advantage over Montana on shipments to California points. In the last ten years that advantage has become greater with increases in freight rates. The proposed increase x-168 will raise the rate and cost differences in favor of the Pacific Coast on shipments to the California market.

In summation I wish to say that it is my belief that freight rate increases have mostly improved the competitive position of the Montana Christmas tree industry. Indications are increases from 1939-1949 have been to

Montana's competitive advantage in the following areas:

1. Plains States
2. Northern Rocky Mountain States
3. South Central States

The position of Montana and the Pacific Coast seems to have been improved on shipments to the Central, Northeast, Middle Atlantic, and Lake States as a result of the freight increases.

Increases on shipments to the California and the Southwestern States has been definite disadvantage to the competitive position of the Montana Christmas tree industry.

It should be remembered that the relative competitive positions of Montana and East Canada are based on the low carloading capabilities of East Canadian Christmas trees. The figure for East Canadian Christmas tree carloadings supplied by three reliable merchants that import trees from that region. If other substantion is necessary it can be obtained from the railroads or the list of importers of Canadian trees in the Appendixes of this paper.

BIBLIOGRAPHY

BIBLIOGRAPHY

1. Baraclough, K. E., Christmas Trees a Cash Crop, General Extension Service, Univ. of N. H., Durham, N. H., Ext. Circ. 278, Oct. 1946.

2. Cope, J. A., Christmas Tree Farming, Am. For. 53:544-6, D 47.

3. Cromie, G. A., Perfect Christmas Tree for the Northeast, J. For. 42, 529, July, 1944.

4. Daggett, Stuart, and Carter, John P., The Structure of Transcontinental Railroad Rates, Berkeley, Univ. of California Press, 1947.

5. Dickermann, M. B., Christmas Tree Shipments Drop 24%, Northern Rocky Mtn. Forest and Range Experiment Stat., Res. Note No. 50, March, 1947.

6. Fitzwater, J. A., Christmas Tree Production for the 1944 Season, J. For. 1942: 424 D 44.

7. Holmes, R. N., Le Barron, R. K., Montana Christmas Tree Production Highest on Record, Northern Rocky Mtn. Forest and Range Experiment Stat. Res. Note No. 50, March, 1947.

8. Hunt, H. C., Christmas Tree Rackets, Am. For. 50: 602-4 D 44.

9. Larson, S. H., Christmas Tree Notes, Ranger, Kootenai National Forest.

10. Locklin, Philip D., Economics of Transportation, Richard D. Erwin Inc., Chicago, 1947.

11. Rapraeger, E. F., Christmas Tree Industry of Western Montana, Northern Rocky Mountain Forest and Range Experiment Stat., Misc. Bulletin, 1939.

12. Rapraeger, E. F., Christmas Tree Industry in Montana. Misc. Bulletin, December, 1941.

13. Rapraeger, E. F., Christmas Tree Production in Western Montana, Rapraeger, E. F. Misc. Bulletin Jan. 1941.

14. Regionalized Freight Rates Barrier To National Productiveness 78-1, H. Doc. 137.

15. Report On Interna tional Freight Rates 78-1, H. Doc 303.

16. Rail Freight Service Cost In Various Rate Territories of of the U. S., 78-1, S. Doc. 63.

17. Rand, McNally and Co., Rand, McNally Commercial Atlas and Marketing Guide, 75th Edition, Rand, McNally and Co., Chicago, New York, 1944.

18. Sowder, A. M., Extension Forester, U. S. D. A. Estimated Production of Christmas Trees by Species, Agr. Yearbook, 1948.

19. Timm, J. L., Christmas Tree Production In Western Montana In 1943, Northern Rocky Mtn. Forest and Range Experiment stat. Res. Note 34, Sept. 1943.

20. Timm J. L., Christmas Tree Production In Western Montana In 1944. Northern Rocky Mtn. Range and Experiment Stat. Res. Note 34, Sept. 1943.

21. Turpin, W. E., Christmas Tree Management J. For. '46, '47, Jan. '48.

22. The International Freight Problem of the U. S., 75-1 H. Doc. 264.

23. The Freight Traffic Redbook, The Traffic Publishing Co. 1932 Supp. No 1 to 1932 Edtion.

24. Walbridge, T. Jr., A Survey Of Christmas Tree Production On Private Lands In Western Montana. For Partial Fulfillment of Requirements For Master of Science In Forestry, M. S. U., 1948

25. Whitney, C. N., Christmas Tree Production In Western Montana In 1941. Northern Rocky Mtn. Forest and Range Experiment Stat. Res. Note No. 38, 1942.

26. Whitney, C. N., Christmas Tree Production In Western Montana In 1942. Northern Rocky Mtn. Range and Experiment Stat. Res. Note No. 30, Oct. 1943

27. Data collected by Correspondence from State Foresters, Extension Foresters, the U. S. Forest Service and Railroads: (a) General Information, (b) Montana (c) Lake States, (d) New England, (c) Pacific Coast,

(f) New Brunswick.

28. Wood Products Clinic, Spokane, April, 1948, Clarence O. Bergan, Sec. Treasurer and Manager of the Spokane Merchant's Ass'n.

APPENDIX

Following this page is a copy of the Christmas tree freight rates supplied by the Northern Pacific Railroad, and samples of the two forms and letters used in the collection of the original data cited in this study. The first form was accompanied by the following letter and was sent to the State and Extension Foresters of Washington, Oregon, Idaho, Minnesota, Wisconsin, Michigan, Vermont, New Hampshire and Maine. The other form was used in the collection of data from the Dominion Forest Service, Ottawa, Canada. The letters in the second list were used to collect data on Canadian imports to the United States.

CHRISTMAS TREE CARLOAD FREIGHT RATES
JUNE 7, 1939 AND JANUARY 11, 1949

To

	California			Washington			Western Montana			Duluth, Minnesota			Tomahawk, Wisconson			Grand Rapids, Michigan		Coos, New Hampshire		Irishtown, New Brunswick	
	1/1/1939	1/11/1949		1/1/1939	1/11/1949		1/1/1939	1/11/1949		6/7/1939	1/11/1949		6/7/1939	1/11/1949		6/7/1939	1/11/1949	1/1/1939	1/11/1949	1/1/1939	1/11/1949
	24,000 lbs.		x-168	24,000 lbs.		x-168	24,000 lbs.		x-168			x-168	24,000		x-168	24,000	x-168	24,000	x-168	24,000	x-168
Los Angeles, California				(5)	(5) 1.38	4%	(6) 1.68	2.42	4%	(1) 2.84	(1) 4.09	4%	2.93	4.31	5%	4.50	5%	4.75	5%	3.55	5.37	5%
Cleveland, Ohio	1.67	2.50	5%	1.67	2.50	5%	1.67	2.50	5%	(1) .74	(1) 1.10	5%	.65	.96	5%	.64	6%	1.00	6%		1.30	6%
Topeka, Kansas	1.31	1.88	4%	1.31	1.88	4%	1.21	1.74	4%	(1) .79	(2) 1.25	4%	.82	(2)1.32	5%	1.18	5%	1.96	5%		2.80	5%
														(3)1.01	4%							
Birmingham, Alabama	1.80	2.40	5%	1.60	2.40	5%	1.60	2.40	5%	(1) 1.19	(1) 1.64	5%	1.21	1.68	5%	1.31	6%	1.84	6%		2.76	6%
Kansas City, Missouri	1.31	1.88	4%	1.31	1.88	4%	1.21	1.74	4%	(3) .60	(2) 1.21	5%	.61	(2)1.23	5%	1.09	5%	1.86	5%		2.67	5%
											(3) .99	5%		(3)1.00	5%						
Denver, Colorado	1.07	1.54	4%	1.07	1.54	4%	.99	(1)1.43	4%	(1) 1.04	(2) 1.81	4%	1.17	(2)1.98	5%	1.84	5%	2.51	5%		3.38	5%
Cincinnati, Ohio	1.80	2.40	5%	1.80	2.40	5%	1.60	2.40	5%	(1) .74	(1) 1.09	5%	.63	.95	5%	.66	6%	1.18	6%		1.83	6%
Jacksonville, Florida	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%	(1) 1.50	(1) 2.06	5%	1.56	2.15	5%	1.69	6%	1.76	6%		2.67	6%
Baltimore, Maryland	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%	(1) .95	(1) 1.45	5%	.82	1.25	5%	1.04	6%	.98	6%		1.47	6%
Springfield, Illinois	1.51	2.26	5%	1.51	2.26	5%	1.38	2.08	5%	(3) .55	(2) 1.15	5%	.46	(2) .96	5%	.70	6%	1.34	6%		1.64	6%
											(3) .94	5%		(3) .78	5%						
Des Moines, Iowa	1.51	2.22	5%	1.51	2.22	5%	1.38	2.03	5%	(3) .47	(2) .93	5%	.50	(2)1.03	5%	.95	5%	1.71	5%		2.51	5%
											(3) .75	5%		(3) .83	5%						
New York, New York	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%	(1) .96	(1) 1.48	5%	.82	1.25	5%	1.08	6%	.81	6%		1.18	6%
Washington, D.C.	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%	(1) .95	(1) 1.45	5%	.82	1.25	5%	1.04	6%	.99	6%		1.47	6%
Galveston, Texas	1.51	(1)1.88	4%	1.51	2.17	4%	1.41	2.03	4%	(1) 1.52	(1) 2.00	4%	1.47	1.98	5%	1.90	5%	2.46	5%		3.28	5%
Dallas, Texas	1.31	1.88	4%	1.51	2.17	4%	1.41	2.03	4%	(1) 1.31	(1) 1.74	4%	1.33	1.80	5%	1.75	5%	2.38	5%		3.20	5%
Tampa, Florida	2.20	3.30	5%	2.20	3.30	5%	2.20	3.30	5%	(1) 1.70	(1) 2.34	5%	1.80	2.48	5%	1.91	6%	1.96	6%		2.88	6%
Nashville, Tennessee	1.60	2.40	5%	1.60	2.40	5%	1.60	2.40	5%	(1) 1.01	(1) 1.39	5%	1.02	1.41	5%	1.06	6%	1.73	6%		2.70	6%
Norfolk, Virginia	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%	(1) 1.02	(1) 1.56	5%	.89	1.36	5%	1.18	6%	1.11	6%		1.60	6%
Chicago, Illinois	1.51	2.26	5%	1.51	2.26	5%	1.38	2.08	5%	(2) .38	(2) .58	5%	(2) .38	(2) .58	5%	.55	6%	1.22	6%		1.55	6%
Detroit, Michigan	1.60	2.40	5%	1.60	2.40	5%	1.60	2.40	5%	(1) .67	(1) .96	5%	.56	.84	5%	.51	6%	1.07	6%		1.29	6%
Wichita, Kansas	1.31	1.88	4%	1.31	1.88	4%	1.21	1.74	4%	(1) .94	(2) 1.50	4%	.96	(2)1.61	5%	1.38	5%	2.06	5%		2.91	5%
St. Louis, Missouri	1.51	2.22	5%	1.51	2.22	5%	1.38	2.03	5%	(3) .59	(2) 1.21	5%	.51	(2)1.05	5%	.79	6%	1.39	6%		1.69	6%
											(3) .88	5%		(3) .85	5%						
Memphis, Tennessee	1.51	2.17	5%	1.51	2.17	4%	1.51	2.17	4%	(1) 1.05	(1) 1.45	5%	1.09	1.50	5%	1.18	6%	1.86	6%		2.83	6%
Atlanta, Georgia	1.67	2.50	5%	1.67	2.50	5%	1.67	2.50	5%	(1) 1.25	(1) 1.71	5%	1.28	1.76	5%	1.34	6%	1.70	6%		2.62	6%
Raleigh, North Carolina	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%	(1) 1.26	(1) 1.73	5%	1.24	1.71	5%	1.30	6%	1.25	6%		2.10	6%
Charlotte, North Carolina	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%	(1) 1.30	(1) 1.79	5%	1.32	1.83	5%	1.34	6%	1.43	6%		2.23	6%
Oklahoma City, Oklahoma	1.31	1.88	4%	1.51	2.17	4%	1.41	2.03	4%	(1) 1.17	(1) 1.55	4%	1.20	1.62	5%	1.55	5%	2.19	5%		3.01	5%
Philadelphia, Pennsylvania	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%	(1) .96	(1) 1.48	5%	.82	1.25	5%	1.08	6%	.87	6%		1.38	6%
Boston, Massachusetts	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%	(1) 1.00	(1) 1.54	5%	.83	1.28	5%	1.08	6%	.64	6%		.98	6%
Omaha, Nebraska	1.31	1.88	4%	1.31	1.88	4%	1.21	1.74	4%	(3) .52	(2) 1.06	5%	.55	(2)1.11	5%	1.09	5%	1.90	5%		2.72	5%
New Orleans, Louisiana	1.51	2.17	4%	1.51	2.17	4%	1.51	2.17	4%	(1) 1.35	(1) 1.85	5%	1.42	1.96	5%	1.61	6%	2.10	6%		3.03	6%
											(3) .85	5%		(3) .90	5%						
Minneapolis, Minnesota	1.51	2.17	4%	1.31	1.88	4%	1.21	1.74	4%	(4) .19	(4) .28		.32	(2) .66	5%	.93	5%	1.78	5%		2.57	5%
														(3) .63	5%						
Milwaukee, Wisconsin	1.51	2.26	5%	1.51	2.26	5%	1.38	2.08	5%	(2) .38	(2) .58	5%	.38	(2) .58	5%	.47	6%	1.22	6%		1.83	6%
Little Rock, Arkansas	1.51	2.17	4%	1.51	2.17	4%	1.41	2.03	4%	(1) 1.17	(1) 1.55	4%	1.08	1.47	5%	1.35	5%	1.96	5%		2.77	5%

(1) 24,000 R
(2) 20,000 R } Carload Minimum Wts.
(3) 40,000 R
(4) 34,000 R
(5) Olympia, Washington
(6) Polson, Montana

CONTRIBUTED BY
NORTHERN PACIFIC RAILROAD

	California			Washington			Western Montana		
	1/1/1939	1/11/1949		1/1/1939	1/11/1949		1/1/1939	1/11/1949	
	24,000 lbs.	x-168		24,000 lbs.	x-168		24,000 lbs.	x-168	
Los Angeles, California				(5)	(5) 1.38	4%	(6) 1.68	2.42	4%
Cleveland, Ohio	1.67	2.50	5%	1.67	2.50	5%	1.67	2.50	5%
Topeka, Kansas	1.31	1.88	4%	1.31	1.88	4%	1.21	1.74	4%
Birmingham, Alabama	1.60	2.40	5%	1.60	2.40	5%	1.60	2.40	5%
Kansas City, Missouri	1.31	1.88	4%	1.31	1.88	4%	1.21	1.74	4%
Denver, Colorado	1.07	1.54	4%	1.07	1.54	4%	.99	(1)1.43	4%
Cincinnati, Ohio	1.60	2.40	5%	1.60	2.40	5%	1.60	2.40	5%
Jacksonville, Florida	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%
Baltimore, Maryland	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%
Springfield, Illinois	1.51	2.26	5%	1.51	2.26	5%	1.38	2.08	5%
Des Moines, Iowa	1.51	2.22	5%	1.51	2.22	5%	1.38	2.03	5%
New York, New York	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%
Washington, D.C.	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%
Galveston, Texas	1.31	(1)1.88	4%	1.51	2.17	4%	1.41	2.03	4%
Dallas, Texas	1.31	1.88	4%	1.51	2.17	4%	1.41	2.03	4%
Tampa, Florida	2.20	3.30	5%	2.20	3.30	5%	2.20	3.30	5%
Nashville, Tennessee	1.60	2.40	5%	1.60	2.40	5%	1.60	2.40	5%
Norfolk, Virginia	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%
Chicago, Illinois	1.51	2.26	5%	1.51	2.26	5%	1.38	2.08	5%
Detroit, Michigan	1.60	2.40	5%	1.60	2.40	5%	1.60	2.40	5%
Wichita, Kansas	1.31	1.88	4%	1.31	1.88	4%	1.21	1.74	4%
St. Louis, Missouri	1.51	2.22	5%	1.51	2.22	5%	1.38	2.03	5%
Memphis, Tennessee	1.51	2.17	5%	1.51	2.17	4%	1.51	2.17	4%
Atlanta, Georgia	1.67	2.50	5%	1.67	2.50	5%	1.67	2.50	5%
Raleigh, North Carolina	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%
Charlotte, North Carolina	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%
Oklahoma City, Oklahoma	1.31	1.88	4%	1.51	2.17	4%	1.41	2.03	4%
Philadelphia, Pennsylvania	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%
Boston, Massachusetts	1.84	2.76	5%	1.84	2.76	5%	1.84	2.76	5%
Omaha, Nebraska	1.31	1.88	4%	1.31	1.88	4%	1.21	1.74	4%
New Orleans, Louisiana	1.51	2.17	4%	1.51	2.17	4%	1.51	2.17	4%
Minneapolis, Minnesota	1.51	2.17	4%	1.31	1.88	4%	1.21	1.74	4%
Milwaukee, Wisconsin	1.51	2.26	5%	1.51	2.26	5%	1.38	2.08	5%
Little Rock, Arkansas	1.51	2.17	4%	1.51	2.17	4%	1.41	2.03	4%

(1) 24,000 R
(2) 20,000 R } Carload Minimum Wts.
(3) 40,000 R
(4) 34,000 R
(5) Olympia, Washington
(6) Polson, Montana

CONTRIBUTED BY
NORTHERN PACIFIC RAILROAD

CHRISTMAS TREE CARLOAD FREIGHT RATES
JUNE 7, 1939 AND JANUARY 11, 1949

na	Duluth, Minnesota			Tomahawk, Wisconson			Grand Rapids, Michigan		Coos, N
1949	6/7/1939	1/11/1949		6/7/1939	1/11/1949		6/7/1939	1/11/1949	1/1/1939
-168		x-168		24,000	x-168		24,000	x-168	24,000
4%	(1) 2.84	(1) 4.09	4%	2.93	4.31	5%	4.50	5%	4.75
5%	(1) .74	(1) 1.10	5%	.65	.96	5%	.64	6%	1.00
4%	(1) .79	(2) 1.25	4%	.82	(2)1.32	5%	1.18	5%	1.96
					(3)1.01	4%			
5%	(1) 1.19	(1) 1.64	5%	1.21	1.68	5%	1.31	6%	1.84
4%	(3) .60	(2) 1.21	5%	.61	(2)1.23	5%	1.09	5%	1.86
		(3) .99	5%		(3)1.00	5%			
4%	(1) 1.04	(2) 1.81	4%	1.17	(2)1.98	5%	1.84	5%	2.51
5%	(1) .74	(1) 1.09	5%	.63	.95	5%	.66	6%	1.18
5%	(1) 1.50	(1) 2.06	5%	1.56	2.15	5%	1.69	6%	1.76
5%	(1) .95	(1) 1.45	5%	.82	1.25	5%	1.04	6%	.98
5%	(3) .55	(2) 1.15	5%	.46	(2) .96	5%	.70	6%	1.34
		(3) .94	5%		(3) .78	5%			
5%	(3) .47	(2) .93	5%	.50	(2)1.03	5%	.95	5%	1.71
		(3) .75	5%		(3) .83	5%			
5%	(1) .96	(1) 1.48	5%	.82	1.25	5%	1.08	6%	.81
5%	(1) .95	(1) 1.45	5%	.82	1.25	5%	1.04	6%	.99
4%	(1) 1.52	(1) 2.00	4%	1.47	1.98	5%	1.90	5%	2.46
4%	(1) 1.31	(1) 1.74	4%	1.33	1.80	5%	1.75	5%	2.38
5%	(1) 1.70	(1) 2.34	5%	1.80	2.48	5%	1.91	6%	1.96
5%	(1) 1.01	(1) 1.39	5%	1.02	1.41	5%	1.06	6%	1.73
5%	(1) 1.02	(1) 1.56	5%	.89	1.36	5%	1.18	6%	1.11
5%	(2) .38	(2) .58	5%	(2) .38	(2) .58	5%	.55	6%	1.22
5%	(1) .67	(1) .96	5%	.58	.84	5%	.51	6%	1.07
4%	(1) .94	(2) 1.50	4%	.96	(2)1.61	5%	1.38	5%	2.06
5%	(3) .59	(2) 1.21	5%	.51	(2)1.05	5%	.79	6%	1.39
		(3) .98	5%		(3) .85	5%			
4%	(1) 1.05	(1) 1.45	5%	1.09	1.50	5%	1.18	6%	1.86
5%	(1) 1.25	(1) 1.71	5%	1.28	1.76	5%	1.34	6%	1.70
5%	(1) 1.26	(1) 1.73	5%	1.24	1.71	5%	1.30	6%	1.25
5%	(1) 1.30	(1) 1.79	5%	1.32	1.83	5%	1.34	6%	1.43
4%	(1) 1.17	(1) 1.55	4%	1.20	1.62	5%	1.55	5%	2.19
5%	(1) .96	(1) 1.48	5%	.82	1.25	5%	1.08	6%	.87
5%	(1) 1.00	(1) 1.54	5%	.83	1.28	5%	1.08	6%	.64
4%	(3) .52	(2) 1.05	5%	.55	(2)1.11	5%	1.09	5%	1.90
4%	(1) 1.35	(1) 1.85	5%	1.42	1.96	5%	1.61	6%	2.10
		(3) .85	5%		(3) .90	5%			
4%	(4) .19	(4) .28		.32	(2) .66	5%	.93	5%	1.78
					(3) .53	5%			
5%	(2) .38	(2) .58	5%	.38	(2) .58	5%	.47	6%	1.22
4%	(1) 1.17	(1) 1.55	4%	1.08	1.47	5%	1.35	5%	1.96

Coos, New Hampshire		Irishtown, New Brunswick		
1/1/1939	1/11/1949	1/1/1939		1/11/1949
24,000	x-168	24,000		x-168
4.75	5%	3.55	6.37	5%
1.00	6%		1.30	6%
1.96	5%		2.80	5%
1.84	6%		2.76	6%
1.86	5%		2.67	5%
2.51	5%		3.32	5%
1.18	6%		1.53	6%
1.76	6%		2.57	6%
.98	6%		1.47	6%
1.34	6%		1.64	6%
1.71	5%		2.51	5%
.81	6%		1.18	6%
.99	6%		1.47	6%
2.46	5%		3.28	5%
2.38	5%		3.20	5%
1.96	6%		2.88	6%
1.73	6%		2.70	6%
1.11	6%		1.60	6%
1.22	6%		1.55	6%
1.07	6%		1.29	6%
2.06	5%		2.91	5%
1.39	6%		1.69	6%
1.86	6%		2.83	6%
1.70	6%		2.62	6%
1.25	6%		2.10	6%
1.43	6%		2.23	6%
2.19	5%		3.01	5%
.87	6%		1.38	6%
.64	6%		.98	6%
1.90	5%		2.72	5%
2.10	6%		3.03	6%
1.78	5%		2.37	5%
1.22	6%		1.53	6%
1.96	5%		2.77	5%

Attached letter sent to the following:

State Board of Land Commissioners, Roger L. Guernsey, Extension Forester, 801 Capitol Blvd., Boise, Idaho.

Extension Foresters, Lester, Ball, Extension Forester, Michigan State College, East Lansing, Michigan

Frank Trenk, Extension Forester, University of Wisconsin, Madison, Wisconsin

Parker O. Anderson, Extension Forester, University of Minnesota, St. Paul (8), Minnesota

C. C. Larson, Extension Forester, 481 Main Street, Burlington, Vermont.

Albert D. Nutting, Extension Forester, College of Agriculture, University of Maine, Orono, Maine.

Charles R. Ross, Extension Forester, Oregon State College Corvallis, Oregon

State Board of Forestry, Nelson S. Rogers, State Forester Salem, Oregon.

Forestry and Recreation Department, J. H. Foster, State Forester, Concord, New Hampshire.

Vermont Dept. of Natural Resources, Perry H. Merrill, State Forester, Montpelier, Vermont.

P. T. Hoffmaster, Director, Department of Conservation, Lansing, Michigan

Dept. of Conservation, Director, Division of Forestry, State Office Bldg., St. Paul, Minnesota.

Maine Forest Service, Raymond E. Rendall, Forest Commissioner, August, Maine.

Dept. of Conservation and Development, Division of Forestry, T. S. Goodyear, State Supt. of Forestry, Olympia, Washington

Knut Lunnum, Extension Forester, State College of Washington, Pullman, Washington.

Wisconsin Conservation Dept., E. J. Vanderwall, Director of Conservation, Madison, Wisconsin.

November 12, 1948

State Board of Land Commissioners
Roger L. Guernsey, State Forester
801 Capitol Blvd.
Boise, Idaho

Dear Sir:

The School of Forestry, Montana State University, in cooperation with the Montana Forest and Range Experiment Station is making a study to determine the influence of freight rates on the marketing of Christmas trees.

From your experience in the Idaho region we would like to obtain the following information:

(1) The general consuming markets of trees produced in Idaho. The names of important consuming towns and the approximate amount shipped from each town would be ideal if such information is available.

(2) The main points of origin in shipping Idaho trees.

(3) Representative figures for weight per car, number of trees per railroad car and valuation per car. Also type of car used for shipments, box car, flatcar, gondola, etc.

(4) Information ro suggestions relating to freight cost influence on Christmas tree marketing will be welcomed.

We would greatly appreciate it if you would give this information, to the extent available, on the enclosed form. An extra copy is enclosed for your convenience as well as a self-addressed and stamped letter for your reply.

Your assistance in supplying this information will be a great help. Should you have use for the assembled material, the school will be glad to forward you a copy of the completed report.

Very truly yours,

STUDY OF CHRISTMAS TREE TRANSPORTATION RATES

MONTANA SCHOOL OF FORESTRY AT
MISSOULA, MONTANA

I. The principal consuming markets of Christmas trees produced in the state of _____ are as follows:

Consuming State	Important Consuming Cities	Volume Consumed

II. The principal points of origin of shipments of Christmas trees produced in the state of _____ are as follows:

III. ~~For the State~~ Representative figures for weight and number of trees per railroad car, type of car used, and approximate value per car.

Type of Car Used (Flatcar, Boxcar, Gondola, etc.)	Year to Which Data Apply	Number of Trees Per Car	Approximate Value Per Car FOB Shipping Point	Weight of Car

(Data for years 1938, 1941, 1944 and 1948 particularly desired.)

(over)

Comments, suggestions or other informa ion relating to freight cost influence on Christmas tree marketing.

November 16, 1948

Chief Forester
Dominion Forest Service
Department of Lands and Mines

Dear Sir:

The School of Forestry, Montana State University, in cooperation with the Mountain Forest and Range Experiment Station is making a study to determine the influence of freight rates on the marketing of Christmas trees.

Could you furnish us with the following information:

(1) The principal U. S. consuming markets of trees produced in Canada and Newfoundland.

(2) Representative figures for weight per car, number of trees per railroad car, and valuation per car. Also, type of car used for shipments: boxcar, flatcar, gondola, etc.

(3) Information or suggestions relating to freight cost influence on Christmas tree marketing will be welcomed.

We would greatly appreciate it if you would give this information to the extent available on the enclosed form. An extra copy is enclosed for your convenience as well as a self-addressed and stamped envelope for your reply.

Your assistance in supplying this information will be a great help. Should you have use for the assembled material, the school will be glad to forward you a copy of the completed report.

Very truly yours,

Kenneth P. Davis, Dean

KPD:mp
enclosures 3

I The principal U. S. markets of Christmas tree produced in Canada and Newfoundland are as follows:

(a) For trees produced in Eastern Canada, (Ontario, Quebec, Labrador, Nova Scotia, New Brunswick).

Producing Province	City or Main Shipping Point	Principal Consuming Points in the U. S.	Approximate Volume of Trees Shipped Yearly

(b) For trees produced in Western Canada. (British Columbia, Alberta, Manitoba.

(c) For trees produced in Newfoundland.

II Representative figures for weight, value of car, type of car used, year to which data applies, and number of trees per car for Canada.

Type of Car Used Indicate whether flat-car, boxcar, gondola, etc.	Year to Which Data Applies	Numberof Trees per Car	Approximate Value per Car F.O.B. Shipping Point	Weight of car
FOR EASTERN CANADA				
FOR WESTERN CANADA				
FOR NEWFOUNDLAND				

Data for years 1938, 1941, and 1948 particularly desired.

III Comments, suggestions or other information relating to freight cost influence on Christmas tree marketing.

Attached letter sent to following firms:

Watenmaker & Davis, 187 Miller Street, Newark, New Jersey

Cuomo & De Feo, 26 Bronx Terminal Market
1508 Exterior Street, New York, New York

Nicholas Pepe, Bronx Terminal Market, Bronx, New York

Louis Rosenblum Inc., 283 Johnson Avenue, Brooklyn, New York

A. H. Chapman, Inc., 278 Ray Street, Portland Maine

Bradbury Company, 11 Central Street, Boston Massachusetts

M. Buro, 611 Passyunk Avenue, Philadelphia, Pennsylvania

Perkins Produce, 761 Chenango Street, Binghamton, New York

Harry Altman, 152 Niagara Frontier Food Terminal, Buffalo N. Y.

Bartolomeo Pio, 13 White Marsh Avenue, Chestnut Hill P. O.
Philadelphia, Pennsylvania

M. Altman Produce Co., 13 and 14 Elk Market Terminal,
Buffalo, New York

Allen Hurd Company, New Faneiul Hall Market, Boston, Mass.

J. Hofert, Maritimes Ltd., Smithtower Annex, Seattle, Washington

January 24, 1949

Harry Altman
152 Niagara Frontier Food Terminal
Buffalo, New York

Dear Sir:

The School of Forestry, Montana State University and the Northern Rocky Mountain Forest a nd Range Experiment Station are cooperating in a study of the national Christmas tree industry. The emphasis of this study is on freight cost as a factor in deternining the best source of supply for principal consuming areas.

We would like to obtain any information that you would be willing to give on the transportation and marketing of Christmas trees. The main questions that we would like to have answered are as follows: (Data for 1948)

(1) The number of trees imported from Canada by your firm and the area from which they were imported.

(2) The average transportation cost of the Canadian tree and transportation facilities used for shipment; i.e., truck, railroad, etc.

(3) The general consuming area in which the Canadian trees have been distributed.

If you have other information on Canadian Christmas tree movement and freight charges, we would greatly appreciate its inclusion in your reply.

Sincerly yours,

Kenneth P. Davis, Dean

/sga
encl-

Attached letter sent to the following:

State Board of Land Commissioners, Roger L. Guernsey, Extension Forester, 801 Capitol Blvd., Boise, Idaho.

Extension Foresters, Lester, Ball, Extension Forester, Michigan State College, East Lansing, Michigan

Frank Trenk, Extension Forester, University of Wisconsin, Madison, Wisconsin

Parker O. Anderson, Extension Forester, University of Minnesota, St. Paul (8), Minnesota

C. C. Larson, Extension Forester, 481 Main Street, Burlington, Vermont.

Albert D. Nutting, Extension Forester, College of Agriculture, University of Maine, Orono, Maine.

Charles R. Ross, Extension Forester, Oregon State College Corvallis, Oregon

State Board of Forestry, Nelson S. Rogers, State Forester Salem, Oregon.

Forestry and Recreation Department, J. H. Foster, State Forester, Concord, New Hampshire.

Vermont Dept. of Natural Resources, Perry H. Merrill, State Forester, Montpelier, Vermont.

P. T. Hoffmaster, Director, Department of Conservation, Lansing, Michigan

Dept. of Conservation, Director, Division of Forestry, State Office Bldg., St. Paul, Minnesota.

Maine Forest Service, Raymond E. Rendall, Forest Commissioner, August, Maine.

Dept. of Conservation and Development, Division of Forestry, T. S. Goodyear, State Supt. of Forestry, Olympia, Washington

Knut Lunnum, Extension Forester, State College of Washington, Pullman, Washington.

Wisconsin Conservation Dept., E. J. Vanderwall, Director of Conservation, Madison, Wisconsin.

November 12, 1948

State Board of Land Commissioners
Roger L. Guernsey, State Forester
801 Capitol Blvd.
Boise, Idaho

Dear Sir:

The School of Forestry, Montana State University, in cooperation with the Montana Forest and Range Experiment Station is making a study to determine the influence of freight rates on the marketing of Christmas trees.

From your experience in the Idaho region we would like to obtain the following information:

(1) The general consuming markets of trees produced in Idaho. The names of important consuming towns and the approximate amount shipped from each town would be ideal if such information is available.

(2) The main points of origin in shipping Idaho trees.

(3) Representative figures for weight per car, number of trees per railroad car and valuation per car. Also type of car used for shipments, box car, flatcar, gondola, etc.

(4) Information ro suggestions relating to freight cost influence on Christmas tree marketing will be welcomed.

We would greatly appreciate it if you would give this information, to the extent available, on the enclosed form. An extra copy is enclosed for your convenience as well as a self-addressed and stamped letter for your reply.

Your assistance in supplying this information will be a great help. Should you have use for the assembled material, the school will be glad to forward you a copy of the completed report.

Very truly yours,

STUDY OF CHRISTMAS TREE TRANSPORTATION RATES

MONTANA SCHOOL OF FORESTRY AT
MISSOULA, MONTANA

I. The principal consuming markets of Christmas trees produced in the state of _____ are as follows:

Consuming State	Important Consuming Cities	Volume Consumed

II. The principal points of origin of shipments of Christmas trees produced in the state of _____ are as follows:

III. ~~For the State~~ Representative figures for weight and number of trees per railroad car, type of car used, and approximate value per car.

Type of Car Used (Flatcar, Boxcar, Gondola, etc.)	Year to Which Data Apply	Number of Trees Per Car	Approximate Value Per Car FOB Shipping Point	Weight of Car

(Data for years 1938, 1941, 1944 and 1948 particularly desired.)

(over)

Comments, suggestions or other information relating to freight cost influence on Christmas tree marketing.

November 16, 1948

Chief Forester
Dominion Forest Service
Department of Lands and Mines

Dear Sir:

The School of Forestry, Montana State University, in cooperation with the Mountain Forest and Range Experiment Station is making a study to determine the influence of freight rates on the marketing of Christmas trees.

Could you furnish us with the following information:

(1) The principal U. S. consuming markets of trees produced in Canada and Newfoundland.

(2) Representative figures for weight per car, number of trees per railroad car, and valuation per car. Also, type of car used for shipments: boxcar, flatcar, gondola, etc.

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We would greatly appreciate it if you would give this information to the extent available on the enclosed form. An extra copy is enclosed for your convenience as well as a self-addressed and stamped envelope for your reply.

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KPD:mp
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January 24, 1949

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