Factors affecting the marketing of Montana wool
by Emery G Anderson

A THESIS Submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of Master of Science in Agricultural Economics at Montana State College
Montana State University

Abstract:
This study is primarily concerned with differences in returns per pound of wool accruing to Montana wool growers by the alternative methods of sale to various types of buyers. The results presented in the table's indicate that no appreciable difference can be attributed to selling wool either on a graded or ungraded basis. They do indicate an advantage for the farm flock grower, who produced less than 3,000 pounds, to sell his wool by consignment to local wool pools. The results also imply an advantage for the farm flock grower producing from 3,000 to 5,000 pounds and above, to sell their wool directly to buyers. The results of this study also indicate that net returns are largest on both direct and consignment sales to manufacturers, implying that returns are highest " to growers when handler's margins are not a cost to manufacturers. This indication must-be qualified, however, because of the limited number of manufacturers who bought wool in the state in 1956. In certain instances it may be less costly for the manufacturer to buy in volume from handlers in the central markets.

The price paid for wool is affected by the competitive structure of the market and by supply and demand conditions within the market.

This study points out that the wool grower can sell all of his wool at the market price, but can sell none at a higher asking price because the competition between buyers is oligopsonistic in nature and wool growers lack bargaining power in the market. This suggests that advantages may result from volume expansion, and increased volume is facilitated by pooling of wool or by producer's group action.

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June, 1960

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ACKNOWLEDGEMENTS

The author wishes to express sincere thanks and appreciation to Dr. Clive Harston, Chairman, and Mr. Hugh Winn, project advisor, of the Agricultural Economics Department and Mr. James Drummond, Head of the Montana Wool Laboratory for their counsel, guidance, and suggestions throughout the development and writing of this thesis. Thanks are also due Dr. John Fischer and Mr. Helmer Holje of the Agricultural Economics Department, members of the examining committee.

Special recognition is also due Owen Dornblaser who devoted much time and effort to the gathering of data for this study, to my wife who helped in the coding, and to Donna Smith for typing this thesis.

The author is indebted to all members of the staff with whom he has had contact during the course of his graduate study. All have helped to make his stay at Montana State College both a challenging and rewarding experience.

The author assumes the responsibility for any errors or ommissions in this study.

ABSTRACT

This study is primarily concerned with differences in returns per pound of wool accruing to Montana wool growers by the alternative methods of sale to various types of buyers. The results presented in the tables indicate that no appreciable difference can be attributed to selling wool either on a graded or ungraded basis. They do indicate an advantage for the farm flock grower, who produced less than 3,000 pounds, to sell his wool by consignment to local wool pools. The results also imply an advantage for the farm flock grower producing from 3,000 to 5,000 pounds and above, to sell their wool directly to buyers. The results of this study also indicate that net returns are largest on both direct and consignment sales to manufacturers, implying that returns are highest to growers when handler's margins are not a cost to manufacturers. This indication must be qualified, however, because of the limited number of manufacturers who bought wool in the state in 1956. In certain instances it may be less costly for the manufacturer to buy in volume from handlers in the central markets.

The price paid for wool is affected by the competitive structure of the market and by supply and demand conditions within the market. This study points out that the wool grower can sell all of his wool at the market price, but can sell none at a higher asking price because the competition between buyers is oligopsonistic in nature and wool growers lack bargaining power in the market. This suggests that advantages may result from volume expansion, and increased volume is facilitated by pooling of wool or by producer's group action.

PART I

INTRODUCTION

The Problem Situation

Montana continues to be the fourth largest wool producing state in the nation. In 1956, the shorn wool produced in Montana was estimated at 14,519,975 pounds.[1] In 1958, production was estimated at 15,805,000 pounds. Only Texas, Wyoming, and California had higher production figures.[2]

The grade, condition, and quality of Montana wool varies greatly. Because of this variation in wool clips, many wool buyers are reluctant to bid on clips of wool, especially on farm flock and wool pool clips that have not been catalogued or handled by these buyers in previous years. The risk involved in buying mixed clips and different types of wool causes wool buyers to bid conservatively. In wool pools this situation unduly rewards the producer of poorer quality wool and unjustifiably restricts premiums to the better producer, as the buyer tends to average out the price paid to all producers.[3]

Some producers of grease wool do not realize or bother with controlling the various market factors that affect the value of their product.[4] Market factors that can be controlled by the growers are tagging and crutching of ewes before lambing time. This practice involves clipping the wool around the udder up to the base of the tail to prevent filth and dung locks from developing in this area. Tagging

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1/ United States Department of Agriculture, Montana Statistical Summary of 1956, Bozeman, Montana, Agricultural Stabilization and Conservation, p. 104.

2/ United States Department of Agriculture, Agricultural Statistics, Helena, Montana, Agricultural Marketing Service and Montana Department of Agriculture, March 2, 1957.

3/ Montana Agricultural Experiment Station, Research Project Statement, M.S. 949, Contributing to Regional Project No. WM-23, Bozeman, Montana, July 1, 1958, p. 2.

4/ Ibid.

helps to prevent losses caused by dung locks that initiate heavier shrinkage and cause wool to become unattractive. This tagged wool should also be sacked separately and marked as tagged wool. The use of such wool in manufacturing is limited and is bought at a discount.[1]

Another market factor that can be controlled is the occurrence of foreign matter in wool. When possible the grower should not allow his sheep to trail through pasture or range lands that are covered with grasses or weeds that will leave seeds or burrs clinging to wools. This is especially important before shearing time.[2]

Other practices important to the wool producer are keeping fleeces as dry as possible before shearing, shearing the sheep on a wood platform or floor to keep wool clean, tying fleeces with bright side out to make them more attractive, and use of paper twine to facilitate handling.[3]

Research in the economics of wool preparation and marketing has given support to the belief that some firms engaged in the assembling and processing of wool are able to take advantage of some elements of imperfect competition because they are more experienced than the producers in determining the value of the product bought.

There has been a need for more information on how wool is marketed in Montana and the Western states, how marketing differs from region to region or between groups or growers within a region.[4] Significant are the various types of market transactions that take place in the sale of wool. A large amount of Montana wool is sold directly to mills for processing. Some wool goes to dealer representatives, who prepare and resell the wool to manufacturers. Another important market outlet

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1/ James Drummond, J. W. Bassett, and K. L. Colman, Marketing and Preparing Montana Wool, Montana Wool Laboratory, Circular 218, May 1959, p. 12.

2/ Ibid.

3/ Ibid.

4/ Montana Agricultural Experiment Station, op.cit.

for wool is through local wool pools. They receive wool on a consignment basis from the growers and sell the wool, charging only operating costs. These market outlets are relevant to wool marketing problems. The outlets used may differ from area to area.

Information on the source, volume and grade of wool originating in Montana was not available until 1946, when the Commodity Credit Corporation began to keep records on wool purchases or loans.[1/]

Table I shows that sheep production changes from year to year in Montana. Sheep production runs in cycles hitting high and low peaks alternately from cattle production. The long term trend has been for decreasing numbers of sheep in the United States. In more recent years, sheep numbers have been increasing. There has been a trend toward more farm flock production in some areas of the United States. Sheep production is still concentrated more on range areas in Montana.

Montana experienced a decline in numbers of sheep in 1956 and 1957 as shown in Table I. One of the causes of the decline was the lack of

TABLE I. CHANGES IN NUMBERS OF SHEEP, VOLUMES OF WOOL, AND VALUE, FOR MONTANA, 1951-1959*

Classification	1951	1952	1953	1954	1955	1956	1957	1958	1959
	thousands of head								
No. of sheep	1,502	1,605	1,573	1,510	1,510	1,495	1,462	1,548	1,609
	thousands of pounds								
Production of shorn wool	14,870	15,729	15,415	15,251	15,553	14,651	14,850	15,805	15,800
	thousands of dollars								
Value of wool	15,911	9,437	9,095	9,303	6,999	6,739	8,316	6,322	--

* Source: United States Department of Agriculture, Wool Statistics and Related Data, Statistical Bulletin No. 250, December, 1959.

1/ Ibid.

experienced labor. Another cause was an increase in labor costs which are a relatively high percentage of total costs in a sheep enterprise. The primary cause was a drop in the price paid for wool on the market further narrowing the grower's margin for profit.

Figure 1 is an illustration of the data presented in Table I and shows a decline in the value of wool from 1952 to 1955. From 1955 on the value of wool tends to level out, probably due in part to the National Wool Act.

The need for research on current marketing practices in Montana is demonstrated by a lack of published material on this subject for the state. A valuable discussion on the wool pools in Montana has been written by E. D. Vaughan, Marketing Specialist, Montana Extension Service, for the year 1957. Some additional data have been collected in connection with a Montana research project, "Grading and Selling Pooled Wool in Montana," that gives information on channels, costs, and practices, as well as wool grades marketed of a few wool pools in Montana.[1/]

The Research Problem

Montana wool growers sell their wool under conditions of considerable uncertainty. They lack general information on the supply and demand situations in the wool industry, and are often unaware of the ability of the major buying firms to control prices, due to their oligposonistic competitive structure. This study is consequently concerned then with helping the wool grower to better adapt his marketing to changing demand situations and buying techniques.

A better knowledge of the marketing outlets which net the wool growers the greater return per pound is needed.

To add insight to the basic problems outlined above, this research project is concerned with determining methods used in marketing Montana wool. Relevant to this research project on wool marketing are the outlets, the pricing, the functions, and costs to the growers, buying

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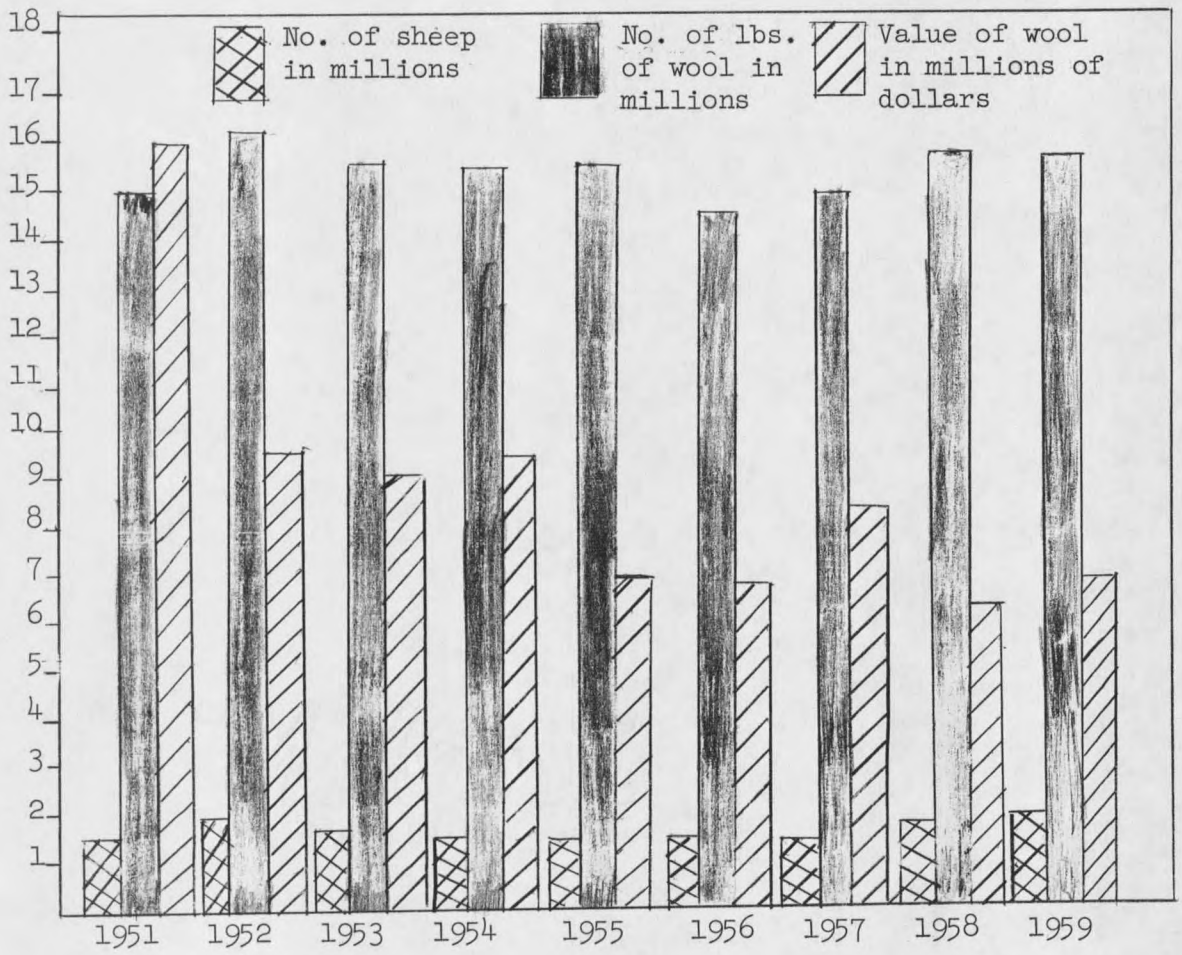
1/ Montana Agricultural Experiment Station, Research Project No. M.S. 957.



*Source: Derived from data given in Table I.

Figure 1. Changes in numbers of sheep, volumes of wool, and value, for Montana, 1951-1959.

firms, and agents in the market. In addition this project is concerned with examining the competitive structure of the buyers, and the subsequent effect of this competitive structure on the producers.

Objectives

The first objective of this study is to determine which sales alternatives offer the greater net returns to growers. Relative to this determination is a description of the various marketing practices that occur and the marketing costs incurred through the use of each method of sale.

The second objective of this study is to determine the extent to which Montana wool purchases are concentrated among major buying firms, and estimate the relationships between the volumes purchased by the several major firms and their power and ability to control the market price for wool.

Hypothesis

Montana wool growers produce different grades of wool. They can sell this wool directly to a manufacturer, handler, or cooperative, or they can sell the wool through a local wool pool that represents the grower in the sales transaction. The local pool consigns or sells direct to manufacturer, handler, or cooperative.

Buying firms purchase wool at a margin that allows them to make a profit either on the manufacturing or resale of the wool. The major buying firms are able to exercise some control over price due to their competitive position in the market.

Since the wool grower must sell to an oligopsonistic buyer's market he must accept the best bid offered on his wool. Due to these economic conditions the specific hypothesis is: For the small producer the optimum method of selling wool, for greatest average return per pound is to market through pools, that receive sealed bids from buyers.

For the larger producers, the optimum method of selling their wool is by direct sale through bids from buyers.

Procedure

The payment of wool incentives by the United States Government to wool growers since 1955 makes available detailed Agricultural Stabilization and Conservation records of the amount and location of wool production in each county in Montana. A census was taken of these records for the years 1956 and 1957. The information on 1956 sales was recorded on the schedule identifying each grower, the amount and type of sale, marketing costs incurred, and the amount of incentive payment earned. This information was then coded enabling its assimilation and tabulation via machine records processing to yield basic information used in this project.

Several agents representing ten major buying firms were contacted to obtain information on buyer's opinions and attitudes concerning the marketing practices, purchases of wool, and the competition involved in buying wool in Montana.

An examination of the competitive structure of wool buying firms operating in Montana in 1956 was made. Data obtained concerning their operations, included volumes of purchases, prices paid, and the number of firms which went out of business due to losses incurred in handling of wool.

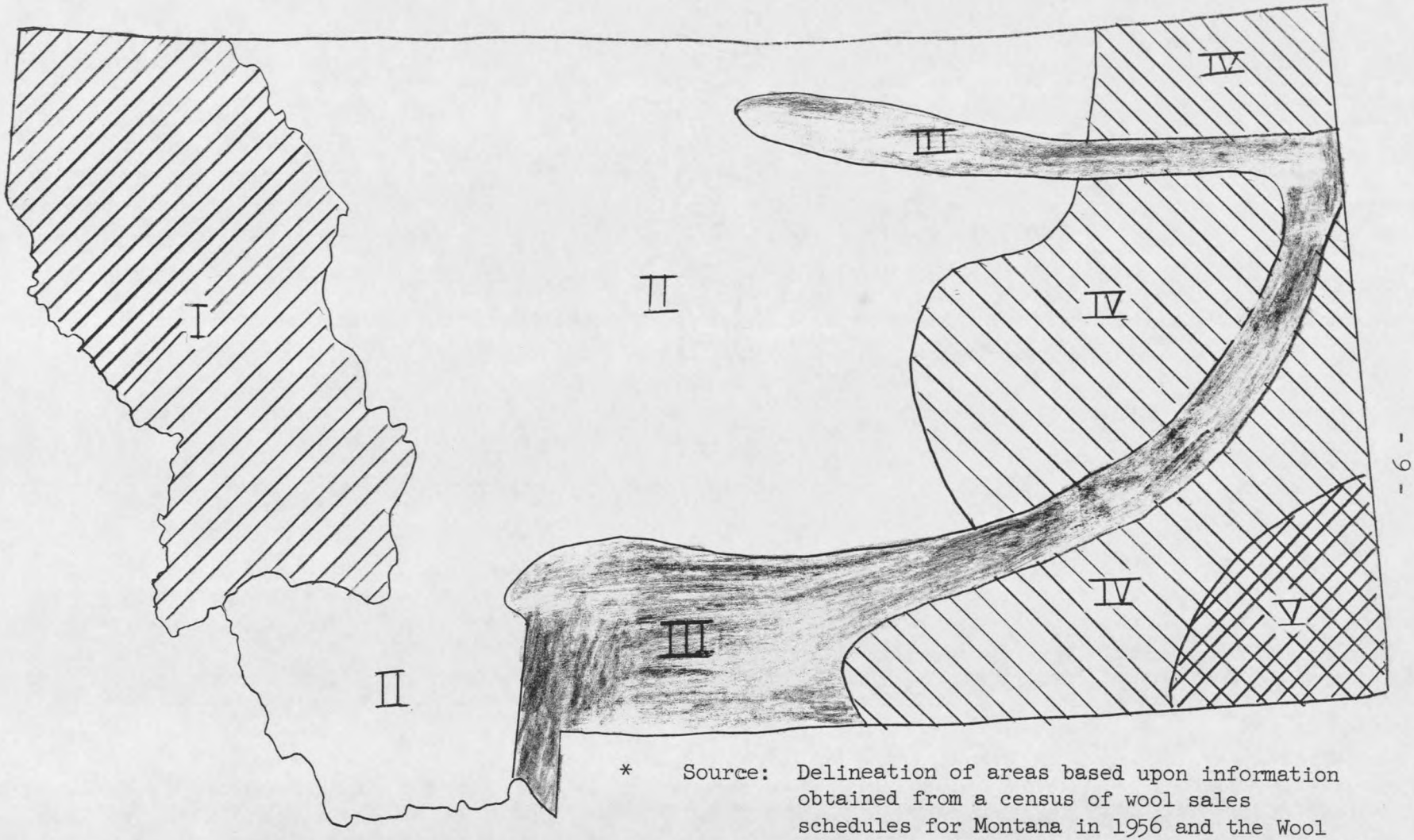
PART II

WOOL PRODUCTION AREAS IN MONTANA

A stratification of Montana wool growers by volume of production in 1956 was made. Five strata were made. Stratum number one included 2,003 growers in Montana who produced up to 999 pounds of wool each in 1956. Stratum number two included 716 growers who produced from 1,000 to 1,999 pounds of wool. Stratum number three included 572 growers who produced from 2,000 to 4,999 pounds of wool. Stratum number four included 261 growers who produced from 5,000 to 9,999 pounds of wool. Stratum number five included 363 growers who produced 10,000 pounds of wool or more. These strata were made to determine the number and relative volumes of growers that occurred in each area of Montana.

There are five major wool production areas in Montana. The delineation of the major areas is based in part upon the major types of production within an area, varying from farm flocks to range land production. The delineation of areas is also based in part upon indications of major grades produced within an area, and upon the topography of an area. Area I includes all of the land area west of the Continental Divide in Montana. Area II includes the Southwest, Central and North Central crop reporting districts of Montana. Area III includes the South Central crop reporting district plus the Yellowstone River and Milk River bottomlands, which extend from the South Central and North Central crop reporting districts, respectively, to the Eastern edge of the state. Area IV includes the Northeast and Southeast crop reporting districts and part of Bighorn County, except for the river bottomland belonging to Area III, and part of Powder River and Carter Counties which belong to Area V. Area V includes most of the land area of Powder River and Carter Counties. (See Figure 2.)

The predominant breeds used in Montana are Rambouillet for fine wool, Targhee for one-half blood wool, and Columbia for three-eighths wool respectively. Hampshire is the predominant mutton breed and are used for crossbreeding on white faced ewes.



* Source: Delineation of areas based upon information obtained from a census of wool sales schedules for Montana in 1956 and the Wool Laboratory of Montana Agricultural Experiment Station

Figure 2. The Wool Production areas in Montana.

Production in Area I

The wool in Area I is produced largely by farm flocks. The wool is lighter shrinking in nature from this area.

The topography of Area I is mountainous. Timber, grazing, and some ranch land exist here.

Area I produced 566,752 pounds of wool in 1956. This was 3.48 percent of the total volume produced in the state. Gross receipts for Area I were $282,266.90 which comprised 4.18 percent of total receipts for the state.

A stratification of growers by volume of production revealed that 329 growers produced less than 1,000 pounds of wool, 59 growers produced from 1,000 to 1,999 pounds, 18 growers produced from 2,000 to 4,999 pounds, and 7 growers produced 10,000 pounds or more. These strata show a majority of farm flock producers. This study arbitrarily assumes a farm flock produces less than 5,000 pounds of wool or less than 500 head of sheep. The average size per farm was 189 head.

Production in Area II

Area II has mixed production because of the farm flock growers located close to the Milk River bottomlands in the North Central counties of Blaine, Phillips, and Valley. Because of the majority of farm flock producers, the land area adjacent to the river is included in Area III. Range operations are common throughout the higher, flatter parts of Area II.

Area II produced 7,399,474 pounds or 50.17 percent of the total for the state. Gross receipts for Area II were $3,304,640.15 or 49.02 percent of total receipts for the state.

Area II is characterized by a dryland type of farming with some irrigation in certain regions.

A stratification of growers by volumes of production revealed that 642 growers produced less than 1,000 pounds of wool, 245 growers produced from 2,000 to 4,999 pounds, 91 growers produced from 5,000 to 9,999 pounds, and 156 growers produced 10,000 pounds or more. These strata

show a mixture of farm flock and ranch type producers throughout the area.

The average sized flock in this area was 564 head.

Production in Area III

Most of the wool produced along the Milk River on the North side of the state and the Yellowstone River on the south side of the state, comes from farm flocks and is lighter shrinking in nature.

Area III produced approximately 2,124,976 pounds of wool in 1956, which comprised 14.40 percent of the total volume for the state. Of this amount 244,962 pounds were sold on a graded basis, comprising 11.52 percent of the wool produced in this area. Gross receipts for Area III were $992,614.81 or 14.72 percent of total receipts for the state.

Area III has a mixture of dryland and irrigated types of farming. There are minor mountain ranges in this area.

A stratification of growers by volumes of production revealed that 567 growers produced less than 1,000 pounds of wool, 198 growers produced from 1,000 to 1,999 pounds, 137 growers produced from 2,000 to 4,999 pounds, 35 growers produced from 5,000 to 9,999 pounds, and 41 growers produced 10,000 pounds or more. These strata show a majority of farm flock producers.

The average size of flock in this area was 293 head.

Production in Area IV

The Northeast part of Area IV has wools with heavier shrinkage. The major portion of the wool in this part of the area is produced by small farm flocks. The Central and Southern parts of this area are characterized more by range type of production. The wools produced in the Southern part of the area are of lighter shrinking nature.

Area IV produced approximately 2,801,104 pounds of wool. This amount was 18.99 percent of the states total production. Gross receipts for the area were $1,246,084.23, accounting for 18.48 percent of total receipts for the state.

A stratification of growers in this area revealed that there were 389 growers who produced less than 1,000 pounds of wool, 168 growers produced from 1,000 to 1,999 pounds, 116 growers produced from 2,000 to 4,999 pounds, 71 growers produced from 5,000 to 9,999 pounds, and 93 growers produced 10,000 pounds or more.

The average sized flock for the whole area was 593 head.

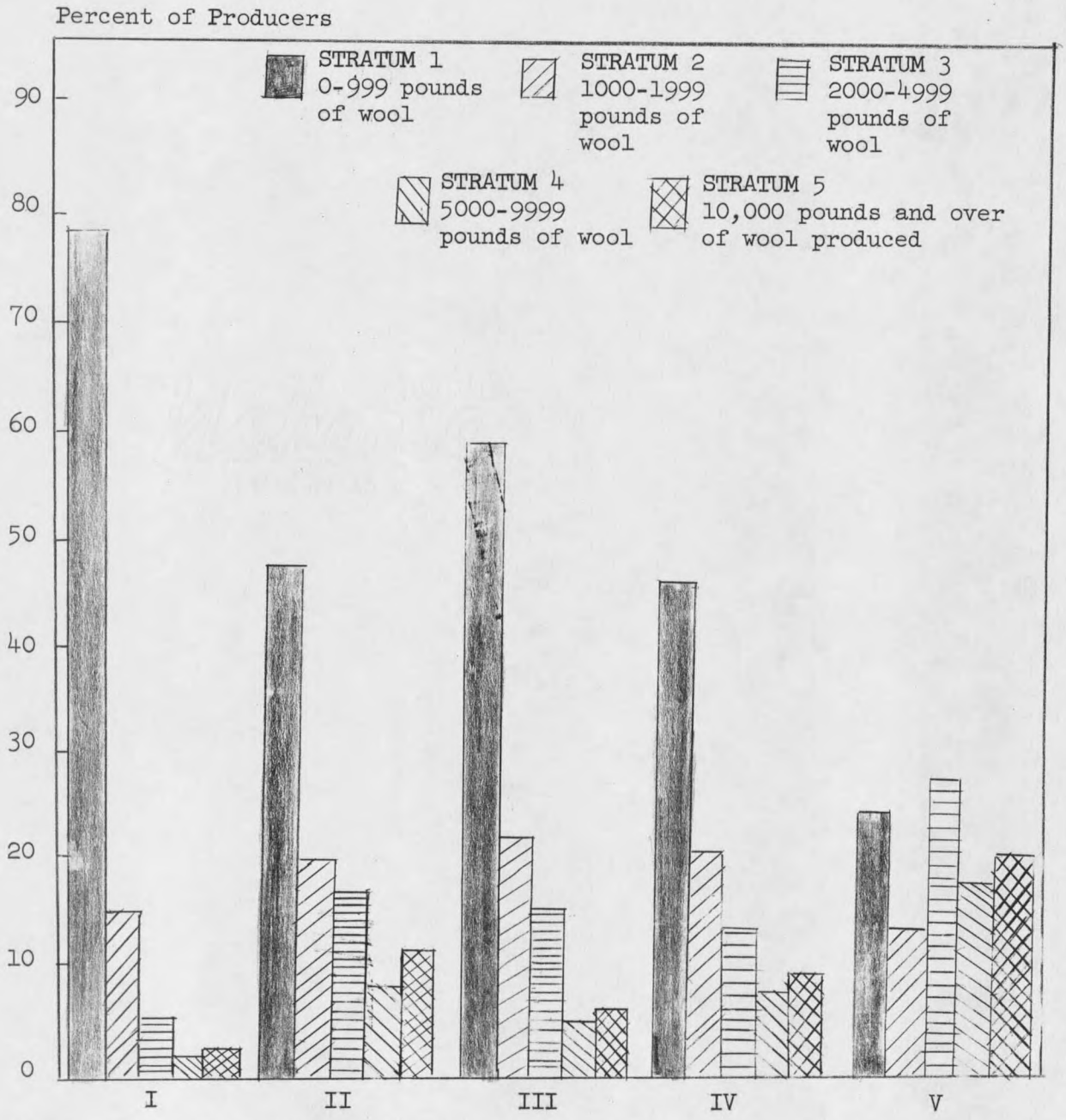
Production in Area V

Area V is characterized by range production, some fenced and some herded. Wools produced in this area are of lighter shrinking nature.

Area V produced approximately 1,856,212 pounds of wool. This was 12.58 percent of the states total clip. Gross receipts were $914,442.26, comprising 13.56 percent of total receipts for the state.

A stratification of growers by volumes of production for this area revealed that 76 growers produced less than 1,000 pounds, 46 growers produced from 1,000 to 1,999 pounds, 83 growers produced from 2,000 to 4,999 pounds, 58 growers produced from 5,000 to 9,999 pounds and 66 growers produced 10,000 pounds or more. This shows that the range operators produced the larger percentage of wool in the area.

Figure 3 illustrates the number of producers occurring within each stratum by areas of production, and serves to point out the relative importance of each stratum.



*Source: Based on information obtained from a census taken of all county Agricultural Stabilization and Conservation office's wool sales receipts for Montana's 1956 marketing year.

Figure 3. The percentage of growers included in each size stratum by areas in Montana, 1956.

PART III

PRICE RELATIONSHIPS, MARKETING COSTS, CLASSIFICATION OF BUYERS AND CHANNELS OF DISTRIBTUION OF MONTANA WOOL

Total Sales

Montana wool growers sold a total of 14,370,951 pounds of wool in 1956, for an average price of 46.34 cents per pound after the marketing charges were deducted. Offering prices ranged from a low of approximately 35.00 cents per pound to a high of 65.00 cents per pound per grower. There were 3,918 wool growers signed up for the incentive payment and 4,399 different sales. This does not mean that all the wool was represented, however, as some growers may have held wool over for sale the following year.[1/] (See Appendix A.) Each grower sold an average of 3,668 pounds of grease wool for an average return of $1,729. Total incentive payments amounted to $2,625,845 or 40 percent of net proceeds after marketing deductions for 1956. The average incentive payment per grower was $670.20. The number of pounds sold by any one grower ranged from a low of approximately 10 pounds to a high of 99,869 pounds. Corresponding gross receipts ranged from approximately $5.00 to $43,117.15.

Five and one-half percent of the wool was sold on a graded basis, while 94.5 percent was sold on an ungraded basis.

Marketing Channels and Types of Transactions

Forty-five different buyers purchased wool in Montana during the 1956 marketing year. Ten of these firms were manufacturers, 22 were out-of-state dealer handlers, 13 were in-state dealer-handlers (speculators) and 1 was an out-of-state cooperative. These buyers purchased all of the wool on which incentive payment applications were made in Montana during the 1956 marketing year.

The manufacturers purchased 10.3 percent of the total volume sold for an average price of 49.92 cents. This was the highest average price paid by any type of wool buyer. Out-of-state dealer-handlers bought

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1/ The Montana Wool Grower, Vol. XXXII, No. 12, December 1958, p. 4.

70.99 percent of the total volume produced in the state at an average price of 45.82 cents per pound. This was the largest volume purchased by any class of buyers in the state. Independent in-state dealer-handlers (speculators) bought only 2.26 percent of the total volume produced in the state for an average price of 43.78 cents per pound. One out-of-state cooperative purchased 11.21 percent for an average price of 46.93 cents per pound. Out-of-state hide-and-fur dealers purchased .012 percent of Montana wool, for an average price of 40.45 cents per pound for the lowest average price paid by any type of buyers in the state. In-state hide-and-fur dealers purchased .337 percent of total clip for the state for an average price of 41.33 cents per pound. (See Appendix B for the values on which the above computations are based.)

Seventy-nine percent of Montana's 1956 wool sales were direct to handlers, manufacturers or cooperatives. Of the wool sold through direct channels 9.81 percent was sold to manufacturers, 76.74 percent of direct sales were to dealer-handlers, and 13.34 percent was to cooperatives. Unlisted buyers purchased .05 percent of direct sales.

Twenty-one percent (3,008,325 pounds) of Montana's 1956 clip was sold through local wool pools. Of wool consigned to pools 8.47 percent (255,063 pounds) was sold to manufacturers, 71.44 percent (2,149,237 pounds) was sold to dealer-handlers, and 11.80 percent (355,158 pounds) was sold to cooperatives. Unlisted buyers bought 8.27 percent of pool sales. Dealer-handlers purchased the greatest percentages of both direct sales and consignment sales. (See Appendix C.)

Organization and Operation of Local Wool Pools

A wool pool is organized by a group of producers who feel that they can get a higher price for their wool by combining individual member's clips into a larger lot. Advantages of pooling the production of a number of small producers are:

1. Buyers competition is increased when larger lots are offered for sale.
2. Buying costs are reduced since the firm need not go to the country to purchase wools.

3. The market value of wool is necessarily higher, because pools have to build reputation on quality and they do so by regulations of grower practices in preparation of wools.

4. Members of wool pools have common interests and objectives. More accurate market information can be dissiminated to members when they are organized.[1]

A wool pool should be organized where there is a need for one and where greater returns per grower can be realized by the organization of a marketing association. A minimum volume for the efficient organization of a wool pool is approximately 24,000 pounds, which is the amount upon which the minimum rail freight rates are based.

The typical wool pool is organized on a cooperative basis and only the members of the association are given the benefits of the cooperative in the marketing of wool. Each member signs a contract of membership for five to ten years. During the contract period the member agrees to consign his wool to the pool for sale, unless he designates to be dropped from the pool within a specified period of time, usually 120 days after the delivery of his wool. The member is also required to specify the number of pounds he intends to sell the first year and to sell within 10 percent of the aforesaid amount in each succeeding year.

One feature of the typical pool is that the individual member loses title to his wool when he consigns the wool to the pool. Smaller pools may allow individual members to vote on the acceptance or rejection of a buyer's bid on a pool's clip, but larger pools may not allow a vote because of the number of growers involved and the time necessary to poll members.

The wool pools operate to cover costs only. They do not realize profits. Therefore, the pool abides by the cooperative objective to be of service to members only. Since pools do not realize profits they are exempt from income taxation.

1/ Extension Service, State College of Washington, Organizing Wool Pools, Extension Mimeo, 1830, June 1957, p. 1.

In 1957, there were 26 organized wool pools in Montana. The typical wool pool had 51 members shipping wool. Each member shipped an average of 126 fleeces, or an approximate total of 1,281 pounds.

The typical pool had a sales committee that advertised the wool, received bids, and sold the wool. Most pools received four or five bids on their wool and advanced $1.00 per fleece to their members.

Wool was received from members from April to September but the bulk of the wool was received during June and July. A few pools rejected small amounts of wool because of dirt, moisture, or dead wool. The typical pool loaded the wool out during June or July by members and hired help.

The typical pool sold a total of 6,343 fleeces or 65,326 pounds, and received $36,422 in gross receipts. Members received $35,174, the balance or $820 covered the cost of pool operations.[1/]

Marketing Charges

Charges on Graded Sales

As shown in Table II, 40 counties sold a small percent of their wool on a graded basis. The remaining 16 counties in Montana sold all of their wool on an ungraded basis only.

A limitation to the study of marketing costs on graded wool sales, or their comparison with ungraded sales costs, is that only 5.48 percent of the wool was sold on a graded basis. This means the figures for marketing charges are representative of only 5.48 percent of total sales. These charges are indicative of marketing charges on all sales, however, since charges that do not appear on a sales receipt are still subtracted before an offering price is made to the grower. Variations exist in the amount of the charges per item by counties.

Charges itemized on graded sales were handling, grading, storage, coring, freight, commission, and insurance. Trucking charges were included with freight charges and loading charges were included in handling charges on all sales. Most counties reported charges on

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1/ E. D. Vaughan, Marketing Specialist, Montana Extension Service, Montana Wool Pools, 1957 Record of Operations, Unpublished manuscript, Bozeman, Montana, 1957, p. 1.

handling, grading and freight, but only one county reported storage charges on graded sales, one county reported a charge on coring, 20 counties reported commission charges, and 17 counties reported insurance charges on graded sales.

Handling charges in the 37 counties reporting such charges, ranged from .29 cents per pound in Deer Lodge County to 6.03 cents per pound in Judith Basin County. Handling charges included more services in Judith Basin County than in Deer Lodge County. The average handling charge for all counties was 3.41 cents per pound. Grading charges in the 37 counties ranged from a low of 1.00 cents per pound in Sheridan County to a high of 2.30 cents per pound in Bighorn County for an average of 1.89 cents per pound. The only county reporting a storage charge was Beaverhead, at 1.13 cents per pound. Coring charges in the one county reporting were .012 cents per pound. Freight charges were reported in all counties and ranged from a high of 6.82 cents per pound in Lake County to a low of 2.22 cents per pound in Lincoln County. This difference in freight rates is explained by the differences in destinations of the wools. Lincoln County's graded wool sales went to Portland, Oregon while the destination of Lake, Missoula, and Powell Counties graded wool was Boston. Lake, Missoula, and Powell Counties all had freight rates of six cents a pound or more. The modal figure for commission charges was constant at 1.00 cents per pound for all but four counties reporting. The four counties, with differing commission charges, rates ranged from .15 cents per pound to 1.89 cents per pound. The average commission charge was 1.04 cents per pound. The modal charge on insurance was .10 cents per pound. The average insurance charge was .13 cents per pound. The average total charge on all items for all counties reporting was 9.40 cents per pound for graded wool. Handling charges vary in part because of difference in costs between buying firms. Freight charges vary because of differing destinations for clips of wool. The values for marketing charges on graded sales by counties are given in Table II.

TABLE II. MARKETING CHARGES ON GRADED SALES BY COUNTIES FOR MONTANA WOOLS IN CENTS PER POUND -- 1956 MARKETING YEAR*

Counties	Handling	Grading	Storage	Coring	Freight	Comm.	Ins.	Total
			(cents per pound)					
Beaverhead	2.59	1.50	1.13	--	3.17	1.00	.10	9.49
Bighorn	4.90	2.30	--	--	3.70	1.00	.10	12.00
Blaine	4.55	2.25	--	--	3.55	1.00	--	11.35
Broadwater	4.90	2.25	--	--	4.10	1.00	.18	12.45
Carbon	4.85	2.25	--	--	3.67	1.00	.12	11.90
Carter	--	--	--	--	3.07	--	--	3.07
Cascade	4.42	1.75	--	.012	3.10	1.89	.49	11.68
Chouteau	4.55	2.25	--	--	4.28	1.00	.01	12.09
Custer	4.84	2.25	--	--	3.66	1.00	.21	11.97
Daniels	1.75	1.50	--	--	3.38	--	--	6.63
Dawson	2.64	1.71	--	--	3.69	--	--	8.04
Deer Lodge	.29	1.50	--	--	3.39	1.75	--	6.93
Fergus	4.85	2.24	--	--	3.94	1.00	.12	12.17
Glacier	4.85	2.25	--	--	3.67	1.00	.10	11.88
Golden Valley	4.87	2.25	--	--	3.68	1.00	.10	11.91
Hill	2.11	1.61	--	--	3.26	--	--	6.98
Judith Basin	4.74	2.25	--	--	3.65	1.00	.10	11.74
Lake	3.00	1.50	--	--	6.82	--	--	11.32
Liberty	3.00	1.50	--	--	3.58	--	--	8.08
Lincoln	--	--	--	--	2.22	--	--	2.22
McCone	1.56	1.75	--	--	3.28	--	--	6.60
Madison	2.75	1.65	--	--	2.38	.15	--	6.93
Meagher	1.75	1.50	--	--	3.48	--	--	6.73
Missoula	4.25	2.25	--	--	6.47	--	--	12.97
Musselshell	4.87	2.25	--	--	3.68	1.00	.147	11.95
Park	4.25	2.25	--	--	4.18	--	--	10.68
Petroleum	2.34	1.50	--	--	3.66	1.00	.10	8.60
Phillips	4.25	2.25	--	--	3.34	1.00	.10	10.94
Powder River	3.38	1.58	--	--	3.73	1.00	.10	9.81
Powell	4.25	2.25	--	--	6.27	--	--	12.77
Prairie	3.25	1.65	--	--	4.12	--	--	9.03
Richland	1.53	1.83	--	--	3.06	--	--	6.43
Roosevelt	1.37	2.00	--	--	3.00	--	--	6.37
Sheridan	1.37	1.00	--	--	3.00	--	--	5.37
Sweetgrass	2.16	1.51	--	--	3.84	1.01	.197	8.73
Toole	4.25	2.00	--	--	3.70	--	--	9.95
Treasure	4.93	2.24	--	--	3.73	1.00	.110	12.01
Valley	3.00	1.87	--	--	3.36	--	--	8.23
Wibaux	1.75	1.50	--	--	3.49	--	--	6.74
Total Ave.	3.41	1.89	1.13	.01	3.63	1.04	.13	9.40

* Source: Based on information obtained from a census taken of all county Agricultural Stabilization and Conservation office's wool sales receipts for Montana's 1956 marketing year.

Charges by Buyers of Graded Wool

Ten buying firms bought all of the wool sold on a graded basis in Montana in 1956. Five of these firms were out-of-state dealer-handlers, there were out-of-state wool marketing associations, one was an out-of-state cooperative and one was a manufacturer. The dealer-handlers had the highest average total charges on graded sales. The marketing charges itemized in Table III are the same as included in Table II, but the breakdown on charges is by buying firms in Table III.

Handling charges ranged from .29 cents per pound to 4.93 cents per pound, for an average of 3.41 cents per pound per buyer. This variation is due to differences in cost to buyers. Grading charges ranged from .83 of a cent per pound to 2.15 cents per pound for an average price of 1.89 cents per pound per buyer. Only one buyer deducted a storage charge of .11 of a cent per pound. One firm deducted a coring charge of .01 of a cent per pound. Freight charges were reported by eight firms, ranging from a high of 6.82 cents per pound to a low of 2.22 cents per pound. The average freight charge for all firms was 3.63 cents per pound. Again, the variation in freight charges is due to different rates in different areas of Montana and to the differing destinations of wools. Five firms reported commission charges ranging from a high of 1.89 cents per pound to a low of .15 of a cent per pound. The average commission charge for all firms was 1.04 cents per pound. Only one buyer reported an insurance charge which was .13 of a cent per pound. The total average charges for the 10 firms correspond to total average charges by counties at 9.40 cents per pound. See Table III.

Charges on Ungraded Sales

Marketing charges on ungraded sales were reported in 25 counties, but only 21 counties had marketing charges reported on over 50 percent of sales. If 50 percent or more sales recorded marketing charges they were considered accurate representations of marketing costs on all ungraded sales within each county. In the four remaining counties reporting charges they represent one or two transactions only. The charges for the 21 counties giving accurate representations are given

in Table IV as averages of all reporting charges occurring within each county. Marketing charges are not reported on sales for the rest of the counties.

Handling charges on ungraded sales in 14 counties where pools sold the majority of wool, varied from a high of .99 cents per pound, in Flathead and Lake Counties, to a low of .04 cents per pound in Musselshell County. Handling charges, recorded on only one or two direct sales in several counties, ranged from .28 cents per pound in Powell County to 1.75 cents per pound in Valley and Phillips Counties. Richland County had a majority or over 50 percent of direct sales with an average handling charge of 4.25 cents per pound. It should be noted that in the case of the direct sales marketing charges are deducted after the offering price is made. Therefore, higher handling costs are shown on a direct sales receipt than on a consignment (pool sales) where most of the handling charges are deducted before an offering price is made.

TABLE III. MARKETING CHARGES ON GRADED WOOL SALES BY BUYING FIRMS IN CENTS PER POUND FOR MONTANA WOOL, 1956.*

Buyer	Handling	Grading	Storage	Coring	Freight	Commission	Insurance	Total
					(cents per pound)			
2	.29	1.5	--	--	3.39	1.75	--	6.93
7	--	--	--	--	--	--	--	7.85
10	4.93	2.15	--	--	3.88	1.00	.13	12.09
15	3.21	1.86	--	--	3.83	.15	--	9.05
19	3.04	.83	--	--	2.20	1.50	--	7.57
27	2.59	1.37	.11	--	3.16	--	--	7.23
28	--	--	--	--	3.19	--	--	3.19
30	7.18	--	--	--	--	1.89	--	9.07
36	1.45	1.83	--	--	3.49	--	--	6.77
47	2.30	1.00	--	.01	3.18	--	--	6.49
Ave. Total	3.41	1.89	.11	.01	3.63	1.04	.13	9.40

* Source: Based on information obtained from a census taken of all county Agricultural Stabilization and Conservation offices wool sales receipts for Montana's 1956 marketing year.

TABLE IV. MARKETING CHARGES ON UNGRADED WOOL SALES, MONTANA,* IN CENTS PER POUND FOR 1956.[a]

County[b]	Handling	Grading	Storage	Coring	Freight	Comm.	Ins.	Total
				(cents per pound)				
Beaverhead	.49	--	--	--	--	--	--	.49
Bighorn	.59	--	--	--	--	--	--	.59
Broadwater	.37	--	--	--	--	--	--	.37
Flathead	.99	--	--	--	--	--	--	.99
Gallatin	.30	--	--	--	--	--	--	.30
Garfield[c]	.34	--	--	--	.28	--	--	.62
Golden Valley	.04	--	--	--	--	--	--	.04
Jefferson[c]	.45	--	--	--	--	--	--	.45
Lake	.99	--	--	--	--	--	--	.99
Lewis & C.[c]	.18	--	--	.10	3.57	--	--	3.85
Madison	.42	--	--	--	--	--	--	.42
Meagher[c]	.05	--	--	--	--	--	--	.05
Musselshell	.04	--	--	--	--	--	--	.04
Park	.22	--	--	--	--	--	--	.22
Phillips[d]	1.75	1.50	--	--	3.40	--	--	6.65
Powell[d]	.28	--	.06	.02	3.13	--	.02	3.51
Richland[e]	4.25	--	--	--	3.23	--	--	7.48
Sanders	.77	--	--	--	2.74	--	--	3.51
Silver Bow[c]	.37	--	--	--	--	--	--	.37
Stillwater[c]	.21	--	.36	--	--	--	--	.57
Sweetgrass	.05	--	--	--	--	--	--	.05
Valley[d]	1.75	1.50	--	--	3.31	--	--	6.56
Wheatland[c]	.11	--	--	.17	2.94	1.87	.10	5.19
Wibaux	.05	--	--	--	--	--	--	.05
Yellowstone	.90	--	--	.11	3.26	1.99	.26	6.52

*Source: Based on information obtained from a census taken of all county Agricultural Stabilization and Conservation office's wool sales receipts for Montana's 1956 marketing year.

[a] The counties not shown reported no marketing charges.

[b] Mostly pool sales in unmarked counties.

[c] Mixed sales represented (pools and direct.)

[d] Three or fewer direct sales listed marketing charges.

[e] Represents majority of direct sales.

Graded charges were recorded for ungraded sales in Phillips and Valley Counties. This charge was constant at 1.50 cents per pound and imposed by a buyer that passed on this cost to the grower, though the wool was not purchased on a graded basis. This practice seems inconsistent with the way wool was marketed in all the other counties.

Storage charges were reported in two counties and coring charges were reported in four counties. These charges were reported on relatively insignificant percentages of total sales in the counties represented.

Freight charges made up the greatest percentage of total charges in a majority of counties, for ungraded sales ranging from a high of 3.57 cents per pound in Lewis and Clark County to a low of .28 cents per pound in Garfield County. Distances that the wool moved did not vary greatly since most of the wool from these counties went to the Boston area.

The total average charges for counties with a majority of pools sales was 1.24 cents per pound. Total average charges for counties with a majority of direct sales was 6.05 cents per pound. The reason for the differences in charges is the type of sale, as pointed out before in this study. Consequently, total net returns to the grower after deductions averaged out to nearly the same figures, as buyers cover costs in purchases from pools by reducing the offering price. Marketing through a pool still nets the small producer a greater return.

Relationship of Deductions and Prices in Graded Versus Ungraded Sales

In the 40 counties where comparison was possible on graded versus ungraded wool sales, 18 counties received a higher average price per pound when their wool was sold on a graded basis. Wool sold at a higher average price in 22 counties when marketed as ungraded. Fifteen counties sold only ungraded wool and one county sold only graded wool. The ungraded sales average .07 cents per pound more after deductions than the graded sales average per pound for the entire state in 1956.

Table V lists the gross price, market deductions, and net price by counties for 1956.

TABLE V. COMPARISON OF GROSS PRICE, MARKET DEDUCTIONS, AND NET PRICE FOR GRADED VERSUS UNGRADED WOOLS, BY COUNTIES, MONTANA, 1956*

Counties	Gross Price	Mkt. Ded.	Net Price	Gross Price	Mkt. Ded.	Net Price
	Graded Sales			Ungraded Sales		
	(cents per pound)					
Beaverhead	54.23	9.49	44.74	45.63	.49	45.14
Bighorn	54.11	12.00	42.11	45.38	.59	44.79
Blaine	52.05	11.35	40.70	48.38	--	48.38
Broadwater	53.98	12.45	41.53	46.11	.37	45.74
Carbon	45.63	11.90	33.73	42.73	--	42.72
Carter	52.35	3.07	49.28	50.14	--	50.14
Cascade	68.73	11.68	57.05	51.67	--	51.67
Chouteau	49.40	12.09	37.31	42.08	--	42.08
Custer	54.82	11.97	42.85	43.70	--	43.70
Daniels	54.20	6.63	47.57	43.70	--	43.70
Dawson	53.50	8.04	45.46	44.67	--	44.67
Fergus	49.57	12.17	37.40	40.89	--	40.89
Gallatin	49.47	7.85	41.62	47.75	.30	47.45
Glacier	47.42	11.88	35.54	44.76	--	44.76
Golden Valley	47.34	11.91	35.43	45.50	.04	45.46
Hill	54.81	6.98	47.83	42.83	--	42.83
Judith Basin	47.72	13.04	34.68	43.56	--	43.56
Lake	54.94	11.58	43.36	45.83	.99	44.84
Liberty	55.41	8.08	47.33	48.39	--	48.39
Lincoln	47.53	2.22	45.31	46.30	--	46.30
McCone	55.90	6.60	49.30	43.76	--	43.76
Madison	54.15	6.93	47.22	44.28	.42	43.86
Meagher	57.22	6.73	50.49	50.51	.05	50.46
Missoula	54.23	13.33	40.90	45.28	--	45.28
Musselshell	53.20	11.95	41.25	44.01	.04	43.97
Park	57.31	10.68	46.63	46.07	.22	45.85
Petroleum	54.07	8.61	45.46	46.47	--	46.47
Phillips	54.93	10.94	43.99	46.71	--	46.71
Powder River	49.98	9.81	40.17	46.45	--	46.45
Powell	53.63	13.36	40.27	54.82	--	54.82
Prairie	56.70	9.03	47.67	43.52	--	43.52
Richland	54.80	6.43	48.37	43.78	7.48	36.30
Roosevelt	51.59	6.37	45.22	43.05	--	43.05
Sanders	43.91	--	43.91	44.45	3.51	40.94
Sheridan	49.22	5.37	43.85	42.95	--	42.95
Sweetgrass	53.89	8.73	45.16	48.86	.05	48.81
Toole	56.35	9.95	46.40	46.35	--	46.35
Treasure	58.10	10.02	48.08	45.49	--	45.49
Valley	56.08	8.23	47.85	47.49	--	47.49
Wibaux	56.16	6.74	49.42	43.50	.05	43.45

* Source: Based on information obtained from a census taken of all county Agricultural Stabilization and Conservation office's wool sales receipts for Montana's 1956 marketing year.

The average price paid for 787,772 pounds of graded wool produced in all counties recording such sales was 55.03 cents per pound with an average marketing deduction of 9.40 cents per pound. The net returns then, after deductions, was 45.63 cents per pound on graded wool sales. The average price paid for 13,584,180 pounds of ungraded wool in all counties was 46.70 cents per pound with an average deduction of 1.04 cents per pound. The net return, after deductions, was then 45.66 cents per pound on ungraded sales.

On the basis of limited amounts of graded sales, with quality a variable factor no appreciable difference can be ascertained in net return to the grower between graded and ungraded sales. The major buying firms subtract marketing costs from the clean price limits per pound in Boston, before making an offering price on ungraded sales and after making an offering price on graded sales. Thus the net price to the grower is nearly the same for both basis of sale.

A limitation to this analysis is that only 5.48 percent of the wool was sold on a graded basis in Montana during 1956 marketing year.

Comparison of Prices and Charges According to Types of Transactions and Buyer

The highest average prices were paid for wool by manufacturers and topmakers, both for direct purchases and consignment purchases through local wool pools. Dealer-handlers paid second highest prices on both direct purchases and consignment purchases through local wool pools. Cooperatives paid the lowest average prices on both direct purchases and consignment purchases through local wool pools. These purchases included all grades of wool.

If the average deduction on direct sales is subtracted from the average price paid on direct sales, the net price per pound received by the grower is only slightly higher than for consignment sales after deductions. In the case of dealer-handlers purchases, after the average deductions are subtracted from average price for both types of sales, the wool sold through pools receives a higher net price per pound than does the direct seller. This difference indicates that due to less volume

dealer-handlers have higher costs on some direct purchases than on pool purchases. (See Table IV). Since the averages on deductions and prices paid are figured on gross pounds sold, gross receipts, and gross deductions they furnish a reliable indication of net returns to the grower according to types of transactions.

TABLE VI. TOTAL AVERAGE PRICE PAID, AVERAGE DEDUCTIONS, AND NET PRICE ACCORDING TO TYPE OF BUYER AND TRANSACTIONS, MONTANA WOOLS, 1956.*

Prices and Deductions	Direct Sales			Wool Pool Sales		
	Mfg.	Dealer-H.	Co-op	Mfg.	Dealer-H.	Co-op
	(in cents per pound)					
Total Average Price	55.43	46.70	46.92	47.02	44.78	41.84
Less Average Deduction	6.05	6.05	6.05	1.24[a]/	1.24[a]/	1.24[a]/
Net Price After Deduction	49.38	40.65	40.87	45.78	43.54	40.60

* Source: Based on information obtained from a census of wool sales in Montana for 1956.

a/ This deduction includes only local pool charges to growers; Charges against the pool were deducted from total average price.

Buyers Estimates of Marketing Charges

The cost of moving wool from Montana country points to Boston was estimated by four of the buyers contacted. Average marketing charges were computed from their estimates, taken as a group.

The average handling charge, based on the estimates of the group, was 1.83 cents per pound. The average grading charges, based on the estimates of the group, was 1.50 cents per pound. The average freight charge, based on the estimates of the group was 3.04 cents per pound. The combined total average for all three charges listed, based on the group estimates was 6.37 cents per pound to move wools from Montana country points to Boston. This average figure, based on buyers estimates, does not differ significantly from averages computed on actual costs.

Pricing According to Grower Size in Direct Versus Consignment Sales

The wool growers are stratified, in this study, according to volumes of wool sold and by type of sales for 1956. The data illustrates that the growers in the smallest stratum, selling from 10 to 999 pounds of wool, receive more return per pound from sales through local wool pools than from direct sales. This indicates the ability of the small producer who sells less than 3,000 pounds, to gain advantage of competitive bidding by marketing his wool through a local wool pool. The trend for slightly higher returns to consignment sales holds through the 1,000 to 2,000 pound strata also. The 3,000 pound stratum is the level where direct sales gain an advantage over consignment sales. Returns continue higher from this level of sales through to the 40,000 to 49,999 stratum for the direct seller, with the exception of the 20,000 pound stratum where consignment sales again show more returns per pound. It is important to note, however, that only five sellers are included in consignment sales at this level, suggesting that the average price at this level may have been affected by the offering prices of the particular buying firms involved in those transactions.

No individual sold more than 49,999 pounds of wool by consignment through pools. This fact limits comparisons to the same strata in direct sales.

From the 49,999 stratum level through the 99,999 level direct sales averaged higher returns per pound than at lower stratum levels, where comparisons with consignment sales were possible.

Over 48 percent or 1,897 Montana wool growers sold through local wool pools in 1956. The remaining 2,021 growers or 52 percent sold or consigned their wool directly to firms.

There were 623 range operators (with 500 head or more) comprising 15.90 percent of the total number of growers in Montana who produced 82 percent of Montana's total clip in 1956. Farm flock operators (with 500 head or less) numbered 3,295 or 84.10 percent of Montana's wool growers produced 18 percent of Montana's clip in 1956. (See Table VII.)

TABLE VII. NET POUNDS, GROSS PROCEEDS, AVERAGE PRICE, AND NUMBER OF GROWERS IN DIRECT SALES VERSUS WOOL POOL SALES MONTANA WOOLS, 1956: BY STRATA OF GROWER VOLUMES*

Grower's Strata by Volume in Pounds	Total Net Lbs. Produced per stratum	Direct Sales Gross Proceeds (Dollars)	Ave. Price Paid per Pound per Stratum	No. of Growers per Stratum
10- 999	378,985	163,649	43.18	890
1,000- 1,999	534,426	237,930	44.52	305
2,000- 2,999	337,983	153,773	45.49	138
3,000- 3,999	399,222	190,592	47.74	85
4,000- 4,999	354,791	162,564	45.81	79
5,000-10,999	2,495,389	1,157,766	46.39	232
11,000-15,999	1,774,635	848,178	47.79	127
16,000-19,999	781,292	366,928	46.96	44
20,000-29,999	1,698,958	801,044	47.14	57
30,000-39,999	625,139	293,068	46.88	18
40,000-49,999	841,654	397,202	47.19	19
50,000-59,999	321,414	169,270	52.66	6
60,000-69,999	583,640	274,761	47.07	9
70,000-79,999	392,986	179,679	45.72	4
80,000-89,999	247,477	123,785	50.01	3
90,000-99,999	477,716	223,243	46.73	5
Totals	11,392,625	5,417,999	46.90	2,021

Grower's Strata by Volume in Pounds	Total Net Lbs. Produced per stratum	Wool Pool Sales Gross Proceeds (Dollars)	Ave. Price Paid per Pound per Stratum	No. of Growers per Stratum
10- 999	511,136	230,833	45.16	1,106
1,000- 1,999	586,251	269,526	45.97	416
2,000- 2,999	345,203	157,589	45.65	142
3,000- 3,999	327,052	147,048	44.96	97
4,000- 4,999	166,742	76,072	45.62	37
5,000-10,999	969,947	437,304	45.08	68
11,000-15,999	199,905	90,696	45.36	15
16,000-19,999	141,984	61,927	43.61	8
30,000-39,999	--	--	--	--
40,000-49,999	130,391	57,119.19	43.80	3
Totals	3,008,325	1,231,116.19	45.37	1,897

* Source: Based on information obtained from a census of wool sales receipts recorded in the County Agricultural Stabilization and Conservation offices for Montana -- 1956 Marketing Year.

Analysis of Major Buying Firms' Practices and Attitudes

Volumes Purchased

Ten agents representing ten major buying firms were either interviewed or contacted by mail questionnaire. Seven of these firms were out-of-state dealer-handlers and three firms were out-of-state manufacturers. These firms combined bought 69.19 percent of the total volume sold in Montana in 1956. The dealer-handlers negotiated for 8,947,027 pounds or 89.98 percent of the total volume purchased by all ten of the firms represented. Manufacturers bought 996,244 pounds or 10.02 percent of the total volume purchased by the firms represented.

All of the agents contacted were residents of Montana. Five of the agents worked for the firms they represented on a commission basis, one agent worked on a salary basis, and three agents received a combination of a commission and salary.

Three of the agents contacted purchased wool from all areas in Montana, four agents purchased wool in two different areas of Montana, and three agents purchased wool in only one area of Montana.

Only two agents specialized in any particular grades of wool in their buying. One of the agents purchased only 64's and 62's staple wool. The other agent purchased only fine wool.

The highest percentages of the total volumes purchased by these agents came from ranches. Four agents purchased 100 percent of their wool from ranches, three agents purchased from both ranches and pools, and three agents purchased from three or more sources including ranches, pools, and farm flocks.

The proportion of grease wool purchased by the ten firms contacted varied from 70 percent to 100 percent. Nine of the buyers purchased 90 percent or more of their wool on a grease basis. Four firms bought 100 percent of their wool on a grease basis. The remainder of wool was purchased on a clean basis by all firms.

Offsorts Practices

The proportions of 1956 Montana wools purchased with offsorts sacked separately varied from 5 percent to 100 percent. One buyer purchased 5 percent of his wool with offsorts sacked separately, two buyers purchased 75 percent of their wool with offsorts sacked separately, three buyers purchased their wool with 90 percent of the offsorts sacked separately, and two firms purchased 100 percent of their wool with offsorts sacked separately. The balance of all wools were purchased with offsorts mixed with the clips.

Eight buyers estimated that offsorts comprised five percent of the total volume of wool they purchased, one buyer estimated two percent of the total volume purchased was offsorts, and one buyer estimated from 5 to 10 percent of total volume purchased was offsorts.

The majority of the 10 buyers contacted indicated that they expected the offsorts to be sacked separately, especially from larger clips. When asked what premium each buyer could afford to pay if offsorts were sacked separately, eight buyers said they had no idea, two buyers said the would deduct from 5 to 10 percent if offsorts were not sacked separately.

The normal or "standard" deductions contained in most wool contracts included one percent off for tags, one-half price for crutchings, one-third off regular price for black wool, no deductions for ram's wool, and a range of 5 to 15 percent could be deducted on burry or seedy wool, depending on the amount of fault. See Appendix D for an example of a uniform contract.

Offsorts deduction practices on all wools produced in Montana in 1956 were according to ASC records as follows: Weight deductions and no payment on offsorts for 40.96 percent of the wool sold, payment for offsorts on 25.23 percent of the wool sold, a combination of weight deduction for particular kinds of offsorts and payments on other kinds of offsorts were made on 14.35 percent of the wool sold, and no visible deductions were shown on the bills of sale for 19.46 percent of the wool sold.

Table VIII illustrates the percentages and volumes of wool sold by the various deduction practices.

TABLE VIII. AMOUNTS OF WOOL AFFECTED BY VARIOUS DEDUCTION PRACTICES*

Deduction Practice	Total Weight	Percent of Total Volume
1. Weight Deduction	5,886,754	40.96
2. Payment for offsorts	3,625,359	25.23
3. Combination of 1 & 2	2,062,872	14.35
4. No visible deduction	2,795,966	19.46
Totals	14,370,951	100.00

* Source: Based on information obtained from a census of wool sales recorded in Montana for 1956.

Contract Delivery Points

Seven of the ten buyers contacted specified a railhead as the delivery point for 100 percent of their purchases in Montana. One buyer specified a warehouse as the delivery point for 100 percent of his purchases. One buyer specified a railhead as the delivery point for 95 percent of purchases and Boston for 5 percent of purchases. One buyer specified the ranches where the wool was purchased as delivery point for 25 percent of purchases, a railhead for 50 percent of purchases, and a warehouse as delivery point for 25 percent of purchases.

Estimated Volumes of Direct Purchases Versus Consignment Purchases

The ten buyers estimated an average of 61 percent of their 1956 wool purchases were outright on pre-shearing contracts. Their average group estimate of wool purchased outright on after-shearing contracts was 34 percent, and their group estimate for wool received on consignment to other handlers outside the state was 5 percent.

Channels

The physical channels through which the wool moved after purchases varied with individual buyers. Four of the ten buyers contacted shipped 100 percent of their wool directly to manufacturers. Two buyers shipped 100 percent of their wool to central market in Boston. One buyer shipped

his wool through a concentration point, located within the state, enroute to a manufacturer. Three buyers did not describe the physical channels through which their wool moved.

The chief method of transportation for Montana wool purchased by the ten buyers contacted was by railroad, accounting for an estimated 83.5 percent of total shipments. The balance of wool was shipped by truck, accounting for an estimated 16.5 percent of total shipments for the firms represented.

According to one buyer high freight rates in one county of Montana caused his firm to ship their wool by truck to concentration points within the state. For a description of total marketing movements, see Figure 4.

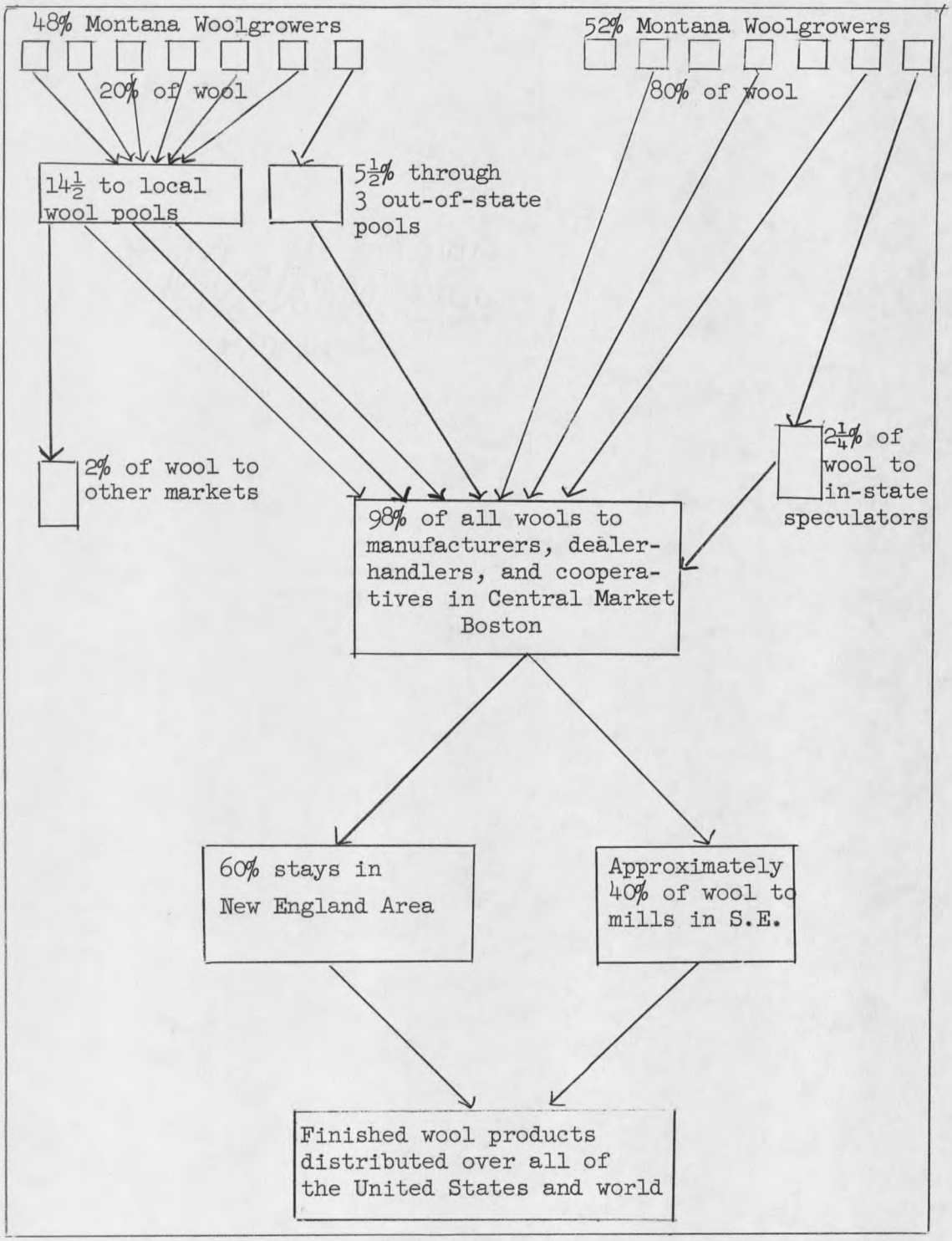
Destinations of Montana Wools

The buyers contacted shipped 100 percent of Montana wool purchased to either the New England area or the Southeastern area of the United States. They estimated that 56.5 percent of the wool purchased went to the New England area. All of the wool designated for shipment to the New England area does not actually arrive there, however, as the wool may be rerouted after it leaves Montana to mills in the Southeast. The buyers estimated that 43.5 percent of their purchases went directly to mills in the Southeast. (See Figure 4.)

Pricing Practices by the Major Buying Firms

The price per pound that the wool grower in Montana received on his grease wool depends on the clean price limits allowed in Boston, on the amount of shrinkage in his wool, and upon the market deductions. Table IX illustrates the returns per pound that a Montana grower might receive from specified grades after deductions in an October 1956 sale.

If all of the wool in the clip is well grown, all staple and contains the specified percentages of the grades illustrated in Table X, the price per pound that the grower should receive can be computed. A hypothetical clip is used in Table X to illustrate how an offering price is arrived at by buyers.



*Source: Based on information obtained from a census of wool sales recorded in Montana for 1956.

Figure 4. Channels of Wool Movements from Montana in 1956.

TABLE IX. CLEAN PRICE LIMITS LANDED IN BOSTON, DEDUCTIONS, AND PRICE TO GROWER ON MONTANA WOOL.

Grades	Clean Price Boston[a] (Dollars and cents per pound)	Shrink Percentage	Grease Price Boston (Cents per pound)	Mkt. Ded. (Cents per pound)	Price Rec'd by Grower (Cents per pound)
Fine Staple	1.47	59%	60.27	9.98	50.29
Fine Average	1.37	61	53.43	9.98	43.45
1/2 Staple	1.32	56	58.08	9.98	48.10
1/2 Average	1.26	58	52.92	9.98	42.94
3/8 Staple	1.21	53	56.87	9.98	46.89
3/8 Average	1.12	55	50.40	9.98	40.42
1/4 Staple	1.11	50	55.50	9.98	45.52

a/ United States Department of Agriculture, Wool Statistics and Related Data, Statistical Bulletin No. 750, May 1959, pp. 118-128, taken from tables giving spot prices, Boston, October, 1956.

TABLE X. AN ILLUSTRATION OF PRICE COMPUTATION ON A HYPOTHETICAL CLIP OF MONTANA WOOL*

Grade	Percentage of Grade in clip	Boston Grease price	Amt. of proceeds per lb. per grade
		Cents per pound	
Fine Staple	40%	50	20.00
1/2 Staple	40	48	19.20
1/2 Staple	10	45	4.50
3/8 Staple	10	47	4.70
Total offering price		100	48.40

*Source: Based on information given by one wool buyer who purchased wool in Montana in 1956.

As illustrated in Table X the price that could be paid the grower on the basis of the computation is 48.40 cents per pound. Market factors other than grades may cause the buyer to offer a cent or two more or less than the computed price for the wool.

Eight of the ten buyers contacted used the price limits furnished by the firm they represented to develop offering prices to growers. One buyer used United States Department of Agriculture quotations of spot prices in Boston in developing an offering price, and four buyers who used price limits furnished by their firms also used future quotations as an aid in developing an offering price.

All of the buyers arrived at the final price and sales conditions by submitting a bid on a clip of wool, or by uniform contracts. The bids could be either accepted or rejected by the party involved. A uniform contract signed by a grower or a pool representative completed the agreement for a sale.

How Buyers Keep Informed

The majority of buyers contacted kept informed on wool available for sale by personal contacts developed in previous years or just by keeping their eyes and ears open for possible buying opportunities.

The majority of buyers felt there was competition from other buyers in all areas of Montana, but there was definitely more competition for some clips than others.

The majority of the buyers contacted tried to buy the same clips year after year because they knew the uniformity, condition, and quality of such clips. They are generally instructed by their firms to purchase "reputation" clips, as manufacturers are already acquainted with the type, quality, and preparation of these wool clips from previous years.[1/]

Buyers Opinions

The buyers contacted were asked if they preferred to buy their wool from any particular source. Two buyers preferred to buy either from

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1/ Drummond, Bassett, Colman, op cit., p. 3.

ranchers or wool pools. Two buyers had no preference as to source as long as they had orders and could find sellers to fill those orders. Six buyers were noncommital on this point.

When asked if they would like to see any changes in the preparation of wool for sale by the growers, one buyer said he would like to see all offsorts sacked separately, another buyer said he would like to see all fleeces cleanly tagged and put on dry, well swept floors. A third buyer said he would like to see all black sheep fleeces kept out of contact with the other wool. The other buyers offered no suggestions for preparations of wool.

The ten buyers were asked if they preferred to buy graded or ungraded wools. Two buyers stated a preference for ungraded wools because their firms preferred to grade the wools to suit their own particular need. Two other buyers felt that buying on a graded or ungraded basis was immaterial. The other buyers were noncommital on this point.

Monthly Wool Movements

The 1956 marketing year covers the time period from the dates, April 1, 1956 to March 31, 1957 inclusively. This period of time is designated by the Agricultural Stabilization and Conservation Service as the period during which incentive payment applications on wool can be filed by growers. Incentive payments on wool were authorized by the Federal Government under the National Wool Act of 1954.

The net proceeds, net pounds and average price per pound were tabulated for each month of Montana wool sales during the 1956 marketing year. The procedure indicates a price and volume trend in the marketing of wool throughout the marketing year. This trend is illustrated in Table XI.

The greatest bulk of Montana wool, including 66 percent of the states total clip for 1956, was sold during the three months of May, June, and July. The lowest average price was received by growers during the same three months, indicating the effect of increased supplies on prices. Over 50 percent of Montana's wool growers marketed their wool during the three months of May, June and July.

TABLE XI. VOLUMES MARKETED, GROSS PROCEEDS, AVERAGE PRICE PAID AND NUMBER OF GROWERS SELLING MONTANA WOOL -- 1956 MARKETING YEAR.*

Year	Months	Gross Pounds Sold	Gross Proceeds	Average Price Paid	Number of Growers Selling
				(per pound)	
1956	April	291,516	133,972.55	45.95	243
	May	2,354,047	1,066,628.54	45.31	949
	June	4,859,153	2,158,044.04	44.41	1,300
	July	2,321,196	1,038,628.26	44.91	675
	August	930,698	446,032.89	47.92	167
	September	575,805	284,134.12	49.34	44
	October	450,667	258,522.63	57.36	71
	November	167,474	87,097.20	52.00	75
	December	85,296	40,120.33	47.00	10
1957	January	469,854	249,907.03	53.18	96
	February	377,453	194,820.41	51.61	84
	March	1,532,822	774,700.81	50.54	178
Totals		14,406,981	6,732,608.81		3,892

* Source: Based on information obtained from a census of wool sales recorded in Agricultural Conservation and Stabilization offices for 1956.

The highest average price was paid during the month of October when only 3.12 percent of the wool was sold. Average price then turned downward through November and December, until January of 1957 when small percentages of wool were sold and prices moved up again.

PART IV

THE COMPETITIVE STRUCTURE OF THE WOOL MARKET

Description of the Wool Market

The wool market may be described as a place where the forces representing the demand for wool and the supply of wool meet. A market price is derived from the meeting of these forces which represent supply and demand.

The wool market is geographical in nature, because it includes local, regional, national, and even international avenues of exchange. The forces of supply and demand affect all avenues of exchange from the local market involving the producer exchanging his wool for a price offered by an agent, to the world market where wool is a commodity of international exchange.

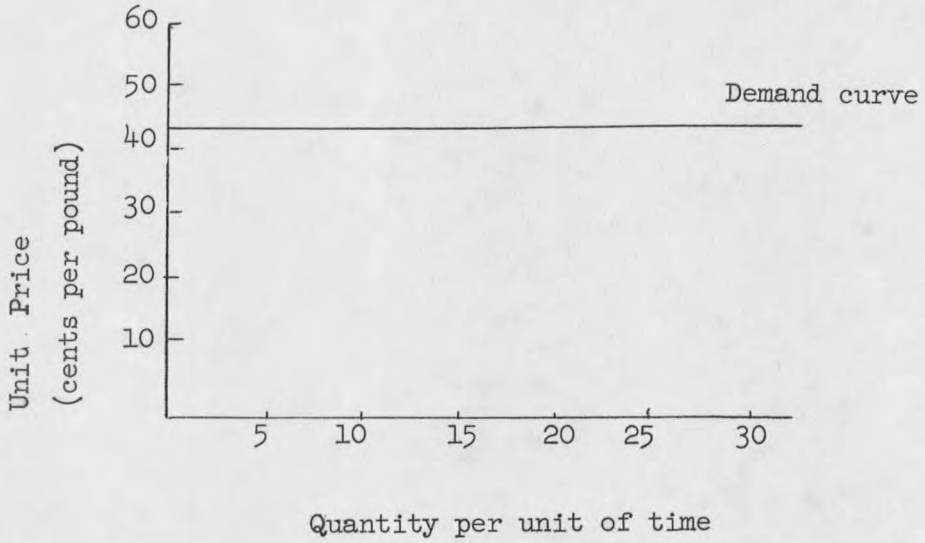
The price paid for wool in the market is subject to limited variation in the short run. Wool derives its value ultimately from its use as a raw material in the manufacture of textile products. The demand for wool is then derived indirectly from the demand for textile products. Price is affected by changes in the demand for textile products.

The Competitive Situation of the Wool Grower

The individual wool grower in Montana operates in a purely competitive sellers market. The individual grower's contribution to the market is such a relatively small part of the total market that he cannot appreciably affect market price or the quantities offered on the market by other growers. The grower can sell all of the wool he has at current market prices but he cannot sell any wool if he is unwilling to accept the prevailing market prices for his product. Growers cannot profitably differentiate their wool from other lots of wool of equal quantity and quality.

The demand curve faced by each wool grower is highly elastic (See Figure 5.)

Figure 5 shows that the individual wool grower can sell all of his wool at a market price that tends toward an equilibrium but could sell none at a higher price than the offer which he receives from the buyer.



* Source: Based on theory as presented by Paul A. Samuelson, Economics 3rd Edition, McGraw-Hill Book Co., Inc., New York, 1955, Chapters 19, 20, and 21

Figure 5. Demand faced by the Individual Wool Grower is Highly Elastic.

There were approximately 3,918 growers in Montana in 1956 who sold various amounts of wool at prices tending towards an equilibrium market price. Their competitive stiuation is modified to an extent by the formation of cooperative marketing associations that are able through better preparation to obtain higher prices for their member's wool.

The demand for wool is a schedule of quantities offered for sale at various prices. The equilibrium market price is determined only when the demand schedule meets or crosses the supply schedule. Table XII is a demand schedule for one seller's wool that has only one market price but the quantities that the given seller can produce are relatively unlimited and price for another grower may differ. (A perfectly elastic demand curve.)

Columes (1) one and (2) two represent the individual seller's demand schedule. By multiplying these two together the total revenue is found for the seller if he produced any one of these particular quantities. The horizontal rows represent alternative levels of output at which the seller

TABLE XII. DEMAND SCHEDULE FOR INDIVIDUAL SELLERS WOOL UNDER CONDITIONS OF PURE COMPETITION.

Ave. Net Price (per unit) (dollars)	Quantity[a] (lbs.)	Total Revenue (dollars)	Marginal Revenue (dollars)	Average Revenue (dollars)
(1)	(2)	(3)	(4)	
4.50	1,000	450.00	4.50	4.50
4.50	1,010	454.50	4.50	4.50
4.50	1,020	459.00	4.50	4.50
4.50	1,030	463.00	4.50	4.50
4.50	1,040	468.00	4.50	4.50
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--	--	--	--	--
4.50	1,500	675.00	--	--
4.50	2,000	900.00	--	--
4.50	2,500	1,125.00	--	--

[a] Since a grower can increase production only by increasing the number of head in his flock, each level of output must be 10 pounds higher for each head added (the average weight of one fleece) than the previous level.

could produce. He will produce at only one of these levels. The data simply show what changes will occur in his total revenue and his marginal (additional) revenue if he should choose to produce one more unit at any given level of output. At the 1,000 pound level of output his total revenue will be $450. At 1,010 pounds his total revenue would be $454.50. The change in total revenue between the 1,000 pound and 1,010 pound level was $4.50 or $454.50 - $450.00 = $4.50. Thus marginal revenue (additional revenue) is defined as the change in total revenue which occurs as a result of an increase in the level of output of one more head of sheep or ten pounds of wool. Since the seller produced ten more pounds and increased his level of output by one head (unit) with price at $4.50, the marginal revenue is equal to price received at $4.50.

At any level of output the average revenue is also equal to price since the average price per unit is average revenue. Thus average revenue, marginal revenue, and price are all equal in this case.

The price per pound used above was determined by the collective action of all sellers (wool producers) who were willing and able to supply different quantities of wool on the market at different prices and the collective action of all buyers (manufacturers, handlers, or cooperatives) who were willing and able to purchase different quantities, in 1956, of wool on the same market at different prices. The demand schedule and supply schedule actually met somewhere determining the market price at an equilibrium level of approximately 45 cents per pound.

Figure 6 illustrates the meeting of the market supply and market demand schedules for wool to establish the market price for the industry and for the individual producer. Figure 7 illustrates that the same price is paid to the individual producers.

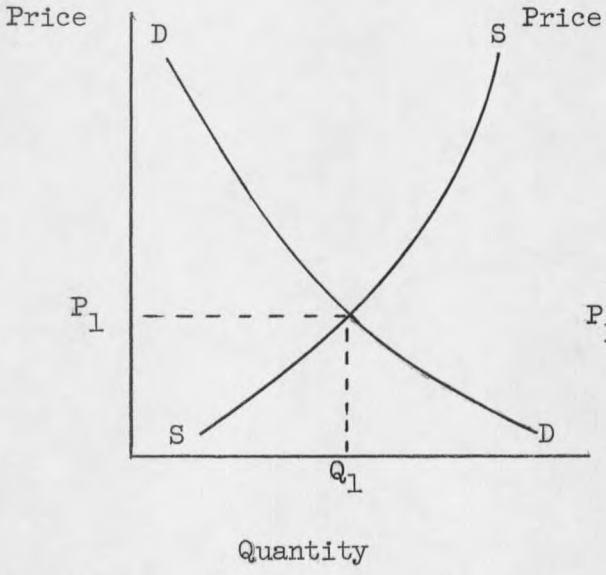

Figure 6. Industry market price of wool.

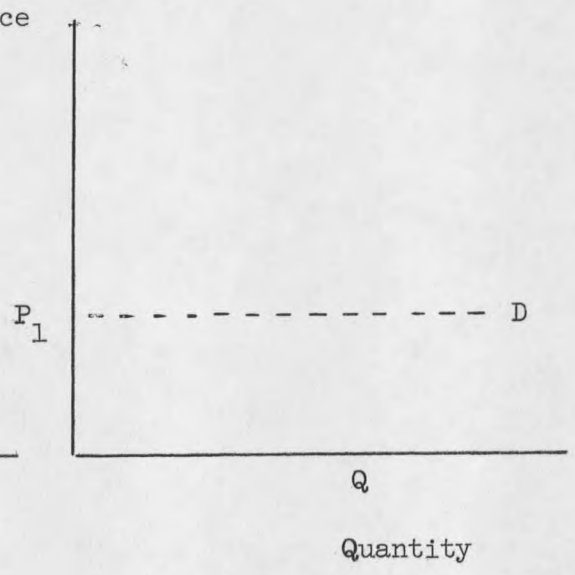

Figure 7. Producer price of wool.

In Figure 6 the price for wool has been determined for all sellers within the industry and for all buyers as well. Yet when a single seller attempts to determine the market value for his wool looks out to see his particular demand (Figure 6) he only sees a single price -- the market price which has been determined by all sellers and all buyers in the

market for him. However, due to imperfect knowledge of short run market conditions on the part of buyers, sellers may have a narrow range of prices offered them. Again, since the individual seller sells so small a part of the total amount of wool offered in the market he cannot influence price. To him demand appears as price. It should be noted that the demand curve for the industry is downward sloping to the right, indicating a different relationship between quantity and price for wool for industry than for the seller.1/

Competitive Situations of Firms

The wool buying firms that operate in Montana are members of a buying market that is oligopsonistic in nature.

These oligopsonistic firms have some control over the price they pay for wool in the market. The number of firms operating in the industry is limited. Therefore, they consider the actions or probable actions of other firms in deciding on a certain course of action to be taken in pricing.

In the wool industry there is a trend toward the vertical integration of manufacturers and topmakers. One of the major topmakers has its own country buying organization with a warehouse in Montana where the firm assembles and grades the wool before the wool is shipped to the firms own mills. Two other topmakers have warehouse facilities in the South for combining the wool there. These topmakers are integrating their functions to include dealing, topmaking, spinning and cutting. The concentration of buying power of the topmakers is increasing. One buyer stated that the majority of wool goes to only three mills and four topmakers.2/

The concentration of buying power is effected not only by the trend toward vertical integration of manufacturers but also by the reduction in numbers of major buyers. At least five major handlers have gone out

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1/ Paul A. Samuelson, Economics, Third Edition, McGraw-Hill Book Co., Inc., New York, 1955, Chapters 19, 20, and 21.

2/ Department of Agricultural Economics -- Price Relationships and Economics of Marketing Wyoming Wools, Progress Report 1958-1959 WS 706 (WM-23) p. 3.

of business in the Boston area since 1956. According to one buyer, handlers go out of business as the result of overextending themselves financially. This happened because they bought wool with credit from financial institutions hoping to make a profit by resale to manufacturers. Uncertain margins sometimes dropped below profitable resale values and caused them to become insolvent. Several of the handlers were then bought out by other major handlers who were operating successfully.

The Proportion of Retail Price for Wool Products Received by the Producer

The value added by the marketing of raw wool through manufacturing of wool products and distribution of these products to consumers is so great that returns to growers for raw wool amount to only a small percentage of the total price paid by consumers for the finished wool product.1/

The spread between prices to producers of raw wool and prices to consumers for the finished products, averages more than four-fifths of the retail price to consumers. This spread is indicated in Figure 8 where the margins above the price paid to the producer cover the assembling, merchandising, manufacturing, fabricating, and distribution of wool products.2/

Returns to the producers of raw wool averaged about 14 percent of the retail prices to consumers of the finished product for the years 1926 to 1950. Data gathered for more recent years indicate the proportion of retail price received by the producer has not changed significantly since 1950.3/

With the development of man-made fibers it may be necessary for producers and manufacturers to take prompt and effective actions to

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1/ United States Department of Agriculture, An Analysis of Trends in the Wool Industry, Regional Conference on Wool Production and Marketing, Montana State College, Bozeman, Montana, June 1958, p. 27.

2/ Ibid.

3/ Ibid.

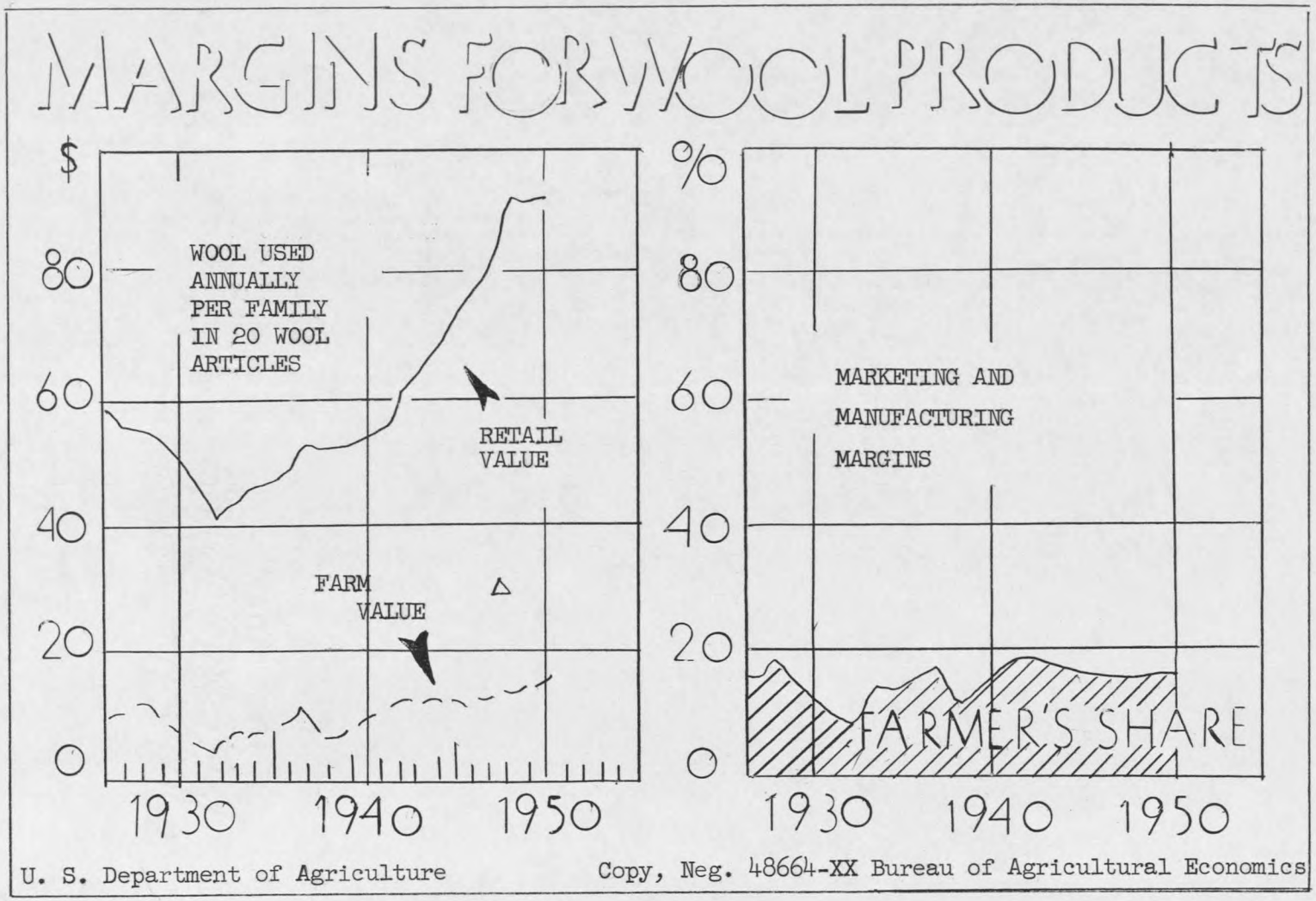


Figure 8. Source: United States Department of Agriculture, An Analysis of Trends in the Wool Industry, Regional Conference on Wool preparation and marketing, Montana State College, Bozeman, Montana, June 1958, p. 26.

maintain adequate market outlets for wool at profitable prices. Increases in population along with a reasonably prosperous economy indicate the possibilities for maintaining and expanding the consumption of wool.[1/]

The wool buyers market is an oligopsonistic situation where there are few enough buyers of wool for the activities of one buyer to be important to all the other buyers. The wool market also has another oligopsonistic characteristic, the dominance of several major buyers over a cluster of small buyers, who follow the price trends of the major buyers. Oligopsonistic classification is necessarily unique in each and every industry because of differences in products and number of firms.[2/] Therefore, an accurate graphic analysis of supply and demand is difficult to ascertain.

An important factor or possibly the key factor to oligopsonistic pricing in the wool buyers market is the demand situation facing the major buying firms.

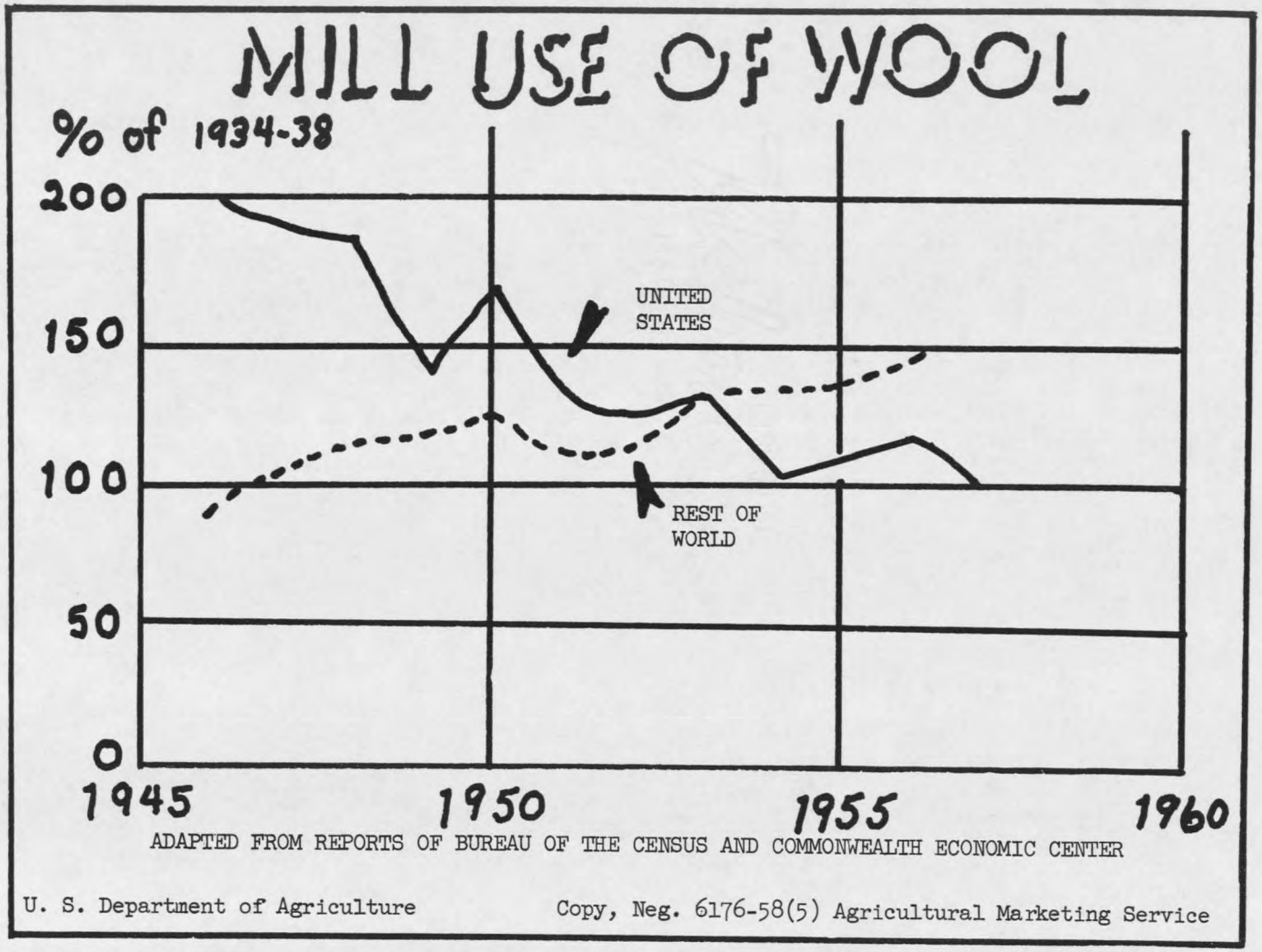
Effective Demand for Wool and How Demand Affects Major Buyers Activities

The per capita demand for wool in the United States has been decreasing by the development of many new man-made fibers, reducing the use of wool for apparel purposes. The use of man-made fibers has increased about 325 percent since prewar periods (prior to 1941.) Consequently, wools share of the total market has declined in the United States. However, the use of apparel wool has been steadily increasing in the rest of the world since prewar days.[3/] Figure 9 illustrates the comparative percentage uses (of wool) by mills for the United States and the rest of the world.

1/ Ibid., p. 25.

2/ For a description of oligopsonistic characteristics from which oligopsonistic practices are derived, see Richard H. Leftwich, The Price System and Resource Allocation, Rinehart and Company, Inc., New York, 1955, pp. 229-231. Also see Baumol and Chandlers, Economics Processes and Policies, Harper and Brothers Publishers, New York, 1954, pp. 423,424.

3/ Op. cit., pp. 5-6.



* Source: United States Department of Agriculture, An Analysis of Trends in the Wool Industry, Regional Conference on Wool Preparation and Marketing, Montana State College, Bozeman, Montana, June, 1958, p. 7.

Figure 9. Mill Use of Wool

The demand for domestic wool supplies must be supplemented by imports of wool from foreign countries as the United States is a deficit wool producing country.[1]

Another factor affecting the demand for apparel wool in the United States has been the decline in per capita consumer expenditures for woolen clothing in the United States during the postwar period. An increase in the population of children and old people who require relatively smaller clothing expenditures and changes in the geographic distribution of population plus the trend toward suburban living all contributed to the decline in per capita consumer expenditure for wool clothing.[2]

Relationship of Foreign Supplies to Demand

There have been fluctuations in the percentages of domestic wool used out of total wool consumption. These fluctuations have been caused largely by changes in demand and by changes in production. From 1935 to 1941, wool consumption was increasing moderately for the world as a whole, then increased rapidly with the advent of World War II. But since production increased only slightly in the United States the percentage of our domestic wools used for total consumption decreased. From 1944 to 1948, consumption remained high while domestic production decreased so the percentage of domestic wool used for consumption again decreased.

The significance of the decrease in percentage use of domestic wool supplies, is that total consumption is then met from increased percentages of foreign imports.

Foreign wool imports differed from domestic clips in prices due to differences in costs of production and methods of preparation. Tariffs on wool imports tend to offset these price differentials however, on the domestic market for mill use.

The following trends are discernable in the relationship between use of domestic and foreign wools. The first trend discernable is that when wool imports are small, mill consumption is similarly small because of relatively unfavorable demand situations. On the other hand, wool imports

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1/ Op. cit., pp. 18-19.

2/ Op. cit.

are large when wool prices are high and mill operations are relatively favorable. When the demand declines for wool products, mill activity also declines and wool importations drop. Prices for wool rise when demand for wool products increases. This causes a higher level of mill activity and calls for more foreign imports to supplement domestic supplies.[1/] The above relationship demonstrates that when domestic wool prices are highest, the importations are largest; when domestic wool prices were lowest foreign importations were lowest. This relationship reflects the situation of the United States as a deficit wool producing country.

The Interrelationships of Demand for Producers Buyers, Manufacturers, and Consumers

In summary the demand for raw wool by buyers is dependent upon the demand for finished wool products by consumers.

Wool buyers, in this oligopsonistic market may decide, due to increased demand for wool products that they can either (a) purchase larger quantities of raw wool at the same prices that were paid earlier, or (b) that they can afford to pay a higher price for the same quantities that were purchased earlier. Oligopsonies avoid price competition between firms, however. Then either of these conditions or a combination of these conditions will create an effective increase of demand to producers. This situation is illustrated graphically in Figure 10 and a shift in the demand curve to the right. A decrease in demand illustrated in Figure 11 is shown as a shift in the curve to the left. Even though the supply of wool remains unchanged during the production year, the demand for wool may increase or decrease and the price of wool and the quantity sold may also change.

In Figure 10 an increase in the demand for wool is shown with the corresponding changes in price and quantity. Q_2 depicts the increased quantity of wool sold and P_2 depicts the higher price received for wool sold.

1/ United States Department of Agriculture, Domestic Wool Requirements and Sources of Supply, June, 1950.

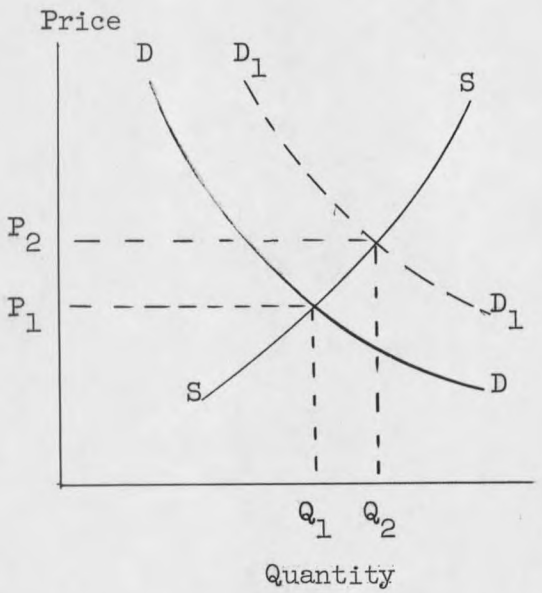

Figure 10.
An Increase in Demand for Wool.

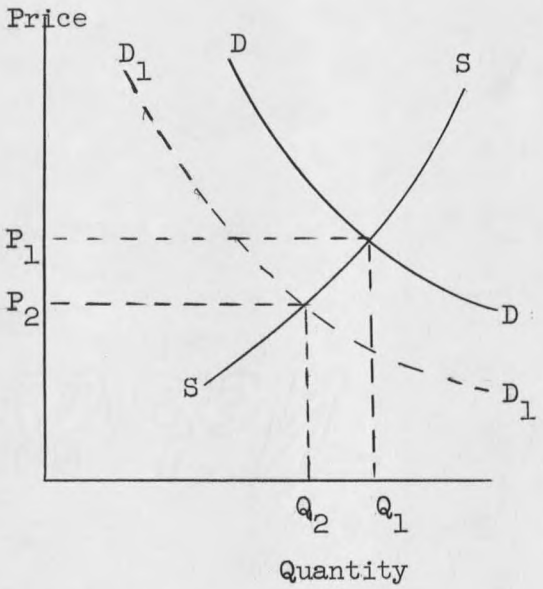

Figure 11.
A Decrease in Demand for Wool.

Figure 11 illustrates the effects of a decrease in demand on the price paid and quantity taken of wool for the industry. In both of these cases supply is assumed to have remained unchanged which is true of any marketing year. (The amounts offered for sale by the wool producers did not vary.) To the individual wool producers all price changes that occur from year to year or month to month appear as a change in demand only, since all he can see is the market price of his wool. This is not categorically true, however, as a change in price can and does occur from a change in supply from one production year to the next, even if the demand for wool remains the same.

Figure 12 illustrates an increase in the supply of wool with a corresponding drop in price, brought about by an increase in the quantity of wool sold on the market.

Figure 13 illustrates a decrease in the supply of wool with a corresponding increase in price, brought about by a decrease in the

quantity of wool sold on the market.[1] In both cases demand was assumed to remain constant

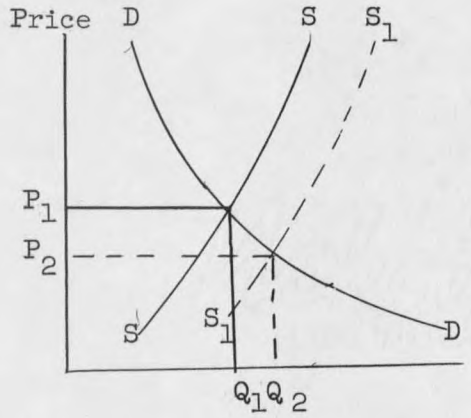

Figure 12. The Effect of an Increase in Supply of Wool on Market Price.

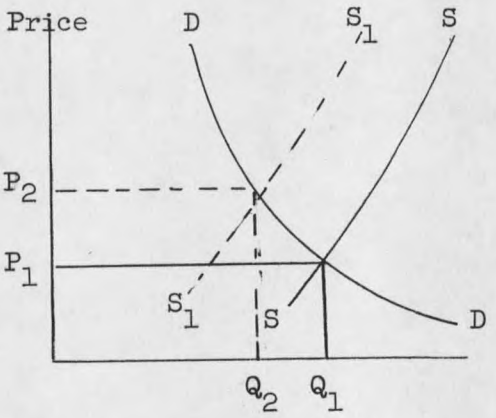

Figure 13. The Effect of a Decrease in Supply of Wool on Market Price.

The illustrations show that all of the changes in supply and demand have some effect in changing the industry price and total quantities of wool sold. Producers in the competitive situation of the wool industry should recognize that price changes can reflect either changes in demand or supply, or both. They should determine, if possible, which of these changes brought about the price change. While the decisions of all producers to offer larger quantities for sale at the same time would greatly increase the supply of wool and would have a price decreasing effect if demand remained unchanged or even if demand increased but does not keep pace with the increase in supplies of wool. Price is probably affected more by world supplies than by domestic supplies, however.

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[1] For a description of how supply and demand determine price in an industry, see: Samuelson, loc.cit.

As shown in Figure 5, individual producers in the wool industry are faced with a demand curve that is highly elastic and the average price he receives for any quantity of wool he might sell is equal to market price for the domestic market.

The structure of the price making forces for the wool industry is illustrated in Figure 14. The demand of consumers for finished wool products initiates the demand by wholesalers and retailers for clothing. Demand is a chain reaction down the line from the consumers of wool products to producers of raw wool. Price is affected all along the line by the demand for wool in the various forms, from raw wool to tops, to yarn to fabrics and finally results in the retail price of finished woolen goods.

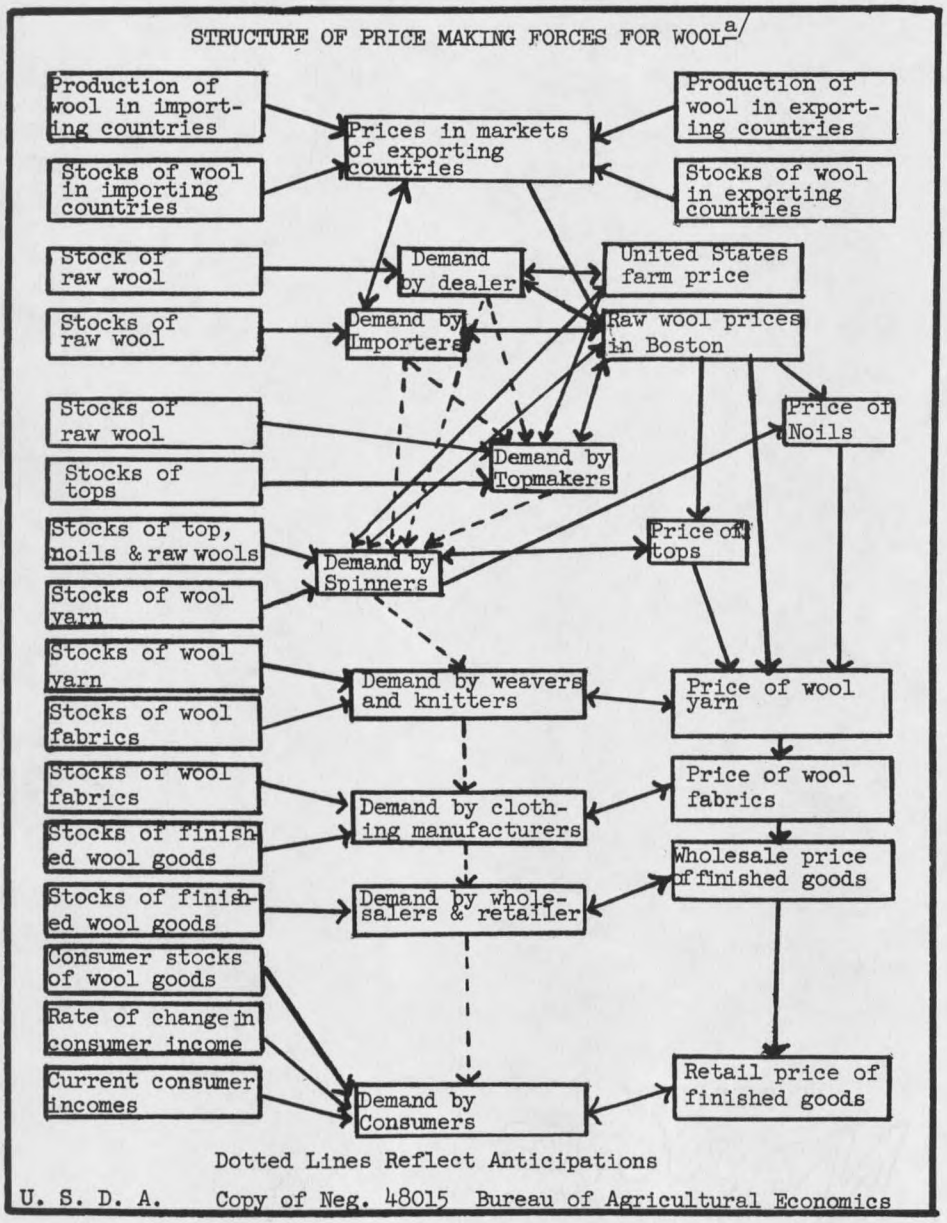

Figure 14. "The demand for wool at the farm level is derived from the combined demands of the many processors and users of wool. Domestic prices tend to exceed world prices by approximately the amount of our tariff, but prices rise and fall with changes in world supply and demand."

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a/ Foote, Richard J., and Karl A. Fox, Analytical Tools for Measuring Demand, United States Department of Agriculture, Agricultural Handbook No. 64, Washington D. C., United State Government Printing Office, January 1954, p. 5.

PART V

SUMMARY AND CONCLUSIONS

Summary

In this study differences in marketing charges assessed to the various types of transactions enabled a comparison of costs and net returns to growers from alternative methods of sale. Comparisons of graded versus ungraded sales were made, based on average costs and average net returns to growers, by counties and by buying firms. The relationship of marketing costs to the size of grower were also tabulated, based on averages within and between strata.

Personal interviews and contact by mail of ten agents representing nine major buying firms furnished reliable sources for information on buyers practices, opinions, and attitudes. One buyer gave a complete description of wool pricing which was used as a basis for illustrating the procedure involved in pricing.

The competitive structure of the wool market was analyzed. The basis for the references made to the market was the concentration of volumes purchased by nine major firms. Thirty-six other firms purchased small or insignificant percentages of total sales. The effective supply and demand were described and the way they affect the industry market price.

Conclusions

Table VII supports the hypothesis that small farm flock producers can market their wool to the best advantage through local wool pools, as average returns are higher to growers selling less than 3,000 pounds when sold through pools. Returns to farm flock growers selling from 3,000 pounds to 4,999 pounds are higher for direct sales to buyers. All prices paid to growers above 5,000 pounds averaged higher for direct sales. One reason for these differences in returns to the two methods of sale for the small producer is that combination of small lots of wool into larger lots through the pools gives the small grower the benefit of more competitive bidding. Buyers are more interested in larger lots of wool because marketing costs are less on larger lots and most orders from the

firms they represent are large. The small producer who sells his wool directly to major firms is then at a disadvantage because the buyers are not interested in small individual clips due to increased handling cost and their lack of the sufficient volume to fill most orders. If average market deductions on direct sales and consignment sales are subtracted from average prices for each stratum of producers, in both types of sale as shown in Table VII the results indicate that all strata of producers up to the 49,999 pound level would receive higher net returns by marketing through pools. This again can be attributed to buyer's desires for volume purchasing to reduce handling and transportation costs.[1/]

The results on computation of average deductions and returns for graded versus ungraded sales indicate that there was no appreciable difference in returns between these two methods of sale. These results indicate that the wool market is highly institutionalized. Buyers are reluctant to change their purchasing methods because of the increased competition which results. Most topmakers and manufacturers feel that they can grade wool to better advantage than handlers or sellers, because they want to grade to suit their particular needs and purposes. However, several buyers did feel that marketing firms could profitably develop grading or sorting operations.[2/]

The trend toward more descriptive division of grades and uniformity within grades in many other agricultural commodities suggest that the wool industry is not changing as rapidly toward improved marketing practices. The trend in the future will be toward more description and uniform sales as the demand for more definition of grades and quality increases. These definitions and specifications are set up now but not fully utilized.

1/ Walter D. Hodde, Manufacturers and Topmakers Views on Some Wool Marketing Problems, United States Department of Agriculture, General Report No. 34, Farmer Cooperative Service, Washington, D. C., June 1957, p. 3.

2/ Ibid., pp. 1-2

The highest average returns to growers after marketing deductions were made on sales to manufacturers for both direct and wool pool sales. Because a dealer-handler's margin is not added to marketing costs when wool is sold first to manufacturers, this type of buyer offers greatest returns on the average to growers. Again a restriction on manufacturers purchasing wool directly from the grower is that they are not able to buy in large enough volumes (from farm flocks) to warrant the purchasing.[1/]

The highest bid on a clip of wool does not necessarily mean that it will give the greatest net return because of the difference in marketing costs with the various types of buyers and between alternative methods of sale.

The results obtained in Table XI, Part III, indicate an advantage for the individual wool grower to either sell his wool early on the Wool Futures Contract of the New York Cotton Exchange before large movements at shearing time decrease prices or hold his wool until after large movements have taken place. However, if all producers decided to hold their wool for later delivery the price decrease would change to the time when the most wool was sold again, so that time of movement is a factor which cannot be controlled to gain a price advantage for all producers within a given area or state. The alternative for the individual grower is to sell on a Futures Exchange Contract which furnishes protection against the losses incurred by changes in price from month to month or season to season. Selling on a Futures Contract means that the grower can sell his wool two or three months in advance of shearing time, when wool prices are liable to be low due to increased supplies. For example, the grower can sell his wool on March 1st for July 1st delivery on an exchange contract at $1.30 per pound. Then if the price is down $1.10 per pound on July 1st he can buy back his July 1st contract at $1.10 and in turn sell his clip to a dealer at $1.10. He has realized 20 cents per pound profit by selling early on a Futures Contract, and

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1/ Ibid., p. 3.

protected himself from the fall in price which took place from March to July.[1]

A limitation to the use of the Futures Exchange is that a minimum limit of 6,000 pounds of wool, clean basis of 64's grade and discounted if of lower grade, has been set to deal in futures. This would allow only the larger growers with sufficient volumes and uniformity of clip to meet the minimum limits.[2] Dealers and topmakers use the Futures Exchange advantageously too, as a headge against price changes.[3]

Due to the competitive structure of the wool industry, buyers are able to adjust prices, within certain limits, to allow them margins of profit on the handling and resale of wool. Since the major firms are conscious of each others actions their offering prices to the grower tend toward an equilibrium (uniform) market price in the short run. Supplies of domestic wool, foreign imports, and demand for finished wool products effect the establishment of this industry market price.

The individual wool grower can do much to improve the quality of his wool by improved preparation and handling practices. Also he can strive toward more uniformity within his clip by use of breeds which give grades most in demand in the market.

Need For Further Research

More detailed information is needed on returns to the wool grower for specific grades in graded sales. The analysis did not cover this area, which needs further research. More reliable comparisons can be made between returns to graded versus ungraded sales if and when greater percentages of wool are sold on a graded basis.

Additional study and investigation of the trends toward vertical integration of manufacturers and topmakers would increase knowledge concerning the competitive structure of the wool industry. Determination

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1/ The Five W's of the Wool Exchange, The Wool Associates of the New York Cotton Exchange, New York, 1958, p. 18.

2/ Ibid., p. 12.

3/ Ibid., pp. 19-21.

of the number of buying firms which enter and leave the industry each year and the extent to which the major firms are concentrating their purchasing power would strengthen the wool grower's position in the market.

Comparison of the data compiled and used for computations in this study, with equivalent data available from wool marketing in later years should provide information on which correlations can be run to determine the trends occurring in wool marketing and help to establish increased efficiencies within the market.

APPENDICES

APPENDIX A

TABLE I. TOTAL SALES OF MONTANA WOOL NUMBERS OF GROWERS AND SALE TOTAL, WEIGHTS AND PROCEEDS, AVERAGE RETURNS AND PRICES, BY COUNTIES, 1956.

County	No. of Growers	No. of Sales	Total Wt. of Wool	Total Net Proceeds	Ave. Ret. Per Grower	Ave. Net Price
Beaverhead	117	117	872,208	399,229.00	3,412.21	45.77
Bighorn	84	90	158,283	72,489.65	862.97	45.79
Blaine	93	95	840,098	407,014.98	4,376.61	48.44
Broadwater	31	31	102,454	47,257.27	1,524.43	46.12
Carbon	232	239	357,524	152,821.96	658.72	42.74
Carter	207	255	1,406,697	705,451.05	3,407.98	50.14
Cascade	71	79	561,732	298,761.46	4,207.91	53.18
Chouteau	37	38	53,651	22,855.78	617.72	42.60
Custer	87	98	362,373	159,514.35	1,833.50	44.02
Daniels	13	13	46,194	22,580.99	1,737.00	48.88
Dawson	57	58	145,370	67,395.07	1,182.37	46.36
Deer Lodge	1	1	63,230	32,111.58	32,111.58	50.78
Fallon	31	31	71,479	32,379.77	1,044.51	45.29
Fergus	166	169	317,576	130,470.85	785.97	41.08
Flathead	44	61	27,590	12,694.71	288.52	46.01
Gallatin	166	221	457,958	222,179.47	1,338.43	48.51
Garfield	106	107	746,958	326,296.47	3,078.27	43.68
Glacier	28	32	289,346	129,537.63	4,626.34	44.76
Golden Valley	54	61	183,370	83,712.14	1,550.22	45.65
Granite	17	17	32,466	14,726.22	866.25	45.35
Hill	24	24	45,172	20,457.35	852.39	45.28
Jefferson	30	33	38,321	17,581.51	586.05	45.87
Judith Basin	164	172	273,449	119,169.09	1,453.28	43.58
Lake	104	106	77,748	35,962.93	345.80	46.26
Lewis & Clark	32	32	175,425	141,882.38	4,433.82	48.94
Liberty	13	14	55,860	27,645.44	2,126.57	49.49
Lincoln	7	8	5,313	2,463.52	351.93	46.36
McCone	43	45	272,308	123,047.42	2,861.57	45.19
Madison	171	178	742,151	333,526.07	1,950.44	44.94
Meagher	35	37	407,878	206,873.64	5,910.68	50.72
Mineral	4	4	3,106	1,344.91	336.23	43.30
Missoula	47	47	32,343	14,686.46	312.24	45.40
Musselshell	52	57	155,798	68,945.18	1,325.86	44.25
Park	123	123	283,741	130,708.00	1,062.66	46.07
Petroleum	28	39	166,651	77,894.29	2,781.94	46.74
Phillips	92	97	238,217	113,748.85	1,236.40	47.75
Pondera	30	32	161,346	70,355.48	2,345.18	43.60

TABLE I. (Continued)

County	No. of Growers	No. of Sales	Total Wt. of Wool	Total Net Proceeds	Ave. Ret. Per Grower	Ave. Net Price
Powder River	122	126	449,515	208,991.21	1,713.04	46.49
Powell	29	33	229,295	125,715.66	4,335.02	54.83
Prairie	43	49	123,814	54,368.56	1,264.38	43.91
Ravalli	135	135	68,676	30,567,03	226.42	44.51
Richland	121	136	193,949	85,594.59	707.39	44.13
Roosevelt	19	19	55,877	24,131.16	1,270.06	43.19
Rosebud	85	92	559,843	250,124.27	2,942.63	44.68
Sanders	31	31	26,985	11,993.88	386.90	44.45
Sheridan	34	34	64,656	28,161.93	828.29	43.56
Silver Bow	5	5	10,119	4,597.65	919.53	45.44
Stillwater	146	146	248,133	116,764.20	799.75	47.06
Sweetgrass	196	382	605,510	290,911.14	1,484.24	48.12
Teton	65	68	240,018	103,735.21	1,595.93	43.21
Toole	22	23	164,514	76,282.54	3,467.39	46.36
Treasure	13	14	18,071	8,255.05	635.00	45.68
Valley	72	77	291,348	146,480.22	2,034.44	50.28
Wheatland	77	106	554,808	256,626.14	3,332.81	46.25
Wibaux	42	43	81,373	37,566.66	894.44	46.17
Yellowstone	102	105	154,039	70,974.99	6,958.33	46.08
Totals	3,918	4,399	14,370,951	6,777,615.00	1,729.86	47.16

APPENDIX B

TABLE I. VOLUMES OF WOOL PURCHASED AND AVERAGE PRICE PAID BY VARIOUS CLASSES OF BUYERS IN MONTANA -- 1956.

Class	Company	No. of Counties	Percent of Total	Total Volumes	Total Proceeds	Average Price
Manufac-	03	4	1.70	249,838	121,119.94	48.47
turers	04	6	.90	130,971	64,463.20	49.21
(all out-	05	3	1.50	226,140	114,695.87	50.71
of-state)	09	9	4.30	626,595	292,539.60	46.68
	19	5	1.60	238,678	138,694.88	58.10
	20	1	.10	17,016	12,099.07	71.10
	25	1	--	40	19.75	49.37
	35	1	--	41	17.63	43.00
	37	2	--	2,216	956.53	43.16
	44	1	--	61	36.60	60.00
Total Manufacturers			10.3	1,491,596	744,643.07	49.92
Dealer-	01	40	18.70	2,695,629	1,221,110.51	45.29
Handlers	02	2	.40	64,287	32,552.32	50.63
(out-of-	06	6	1.90	277,758	129,894.04	46.76
state)	07	22	13.10	1,893,280	919,544.42	48.56
	08	18	8.00	1,154,681	537,049.07	46.51
	10	29	4.69	675,215	229,038.04	33.92
	13	6	6.76	972,367	475,205.38	48.87
	17	9	1.76	254,131	113,776.12	44.77
	18	43	12.99	1,867,891	840,095.34	44.97
	24[a/]	1	--	619	257.04	41.52
	26	1	.07	10,842	6,389.58	58.93
	27	1	.50	74,972	35,980.72	47.99
	29	1	--	182	45.56	25.03
	30	3	.09	14,087	8,875.31	63.00
	31	3	1.27	182,817	93,165.47	50.96
	38[a/]	1	--	490	196.00	40.00
	39	1	.70	109,048	53,672.46	49.21
	40	1	--	531	223.02	42.00
	42[a/]	1	--	535	219.35	41.00
	43[a/]	1	--	218	77.32	35.46
	46	1	.06	9,765	3,910.26	40.04
Total Dealer-Handlers (Out-of-state)			70.99	10,259,345	4,701,277.33	45.82

a/ Out-of-state hide-and-fur dealers

TABLE I. (Continued)

Class	Company	No. of Counties	Percent of Total	Total Volume	Total Proceeds	Average Price
Dealer-	11	1	--	242	93.10	38.47
Handler	12	2	0.24	34,851	16,978.24	48.71
(In-state,	14	4	.34	50,035	20,363.59	40.69
speculators)	16[b]	25	.33	47,530	19,666.40	41.38
	21	8	1.09	157,285	70,674.40	44.93
	22	4	.08	12,527	4,911.15	39.20
	32	2	.05	7,280	2,934.40	40.30
	33[b]	1	.04	5,880	2,642.07	44.93
	41[b]	1	--	905	354.90	39.21
	45	1	--	144	54.72	38.00
	48	1	.04	6,832	3,034.35	44.41
	49	1	--	610	210.60	34.52
	50	1	--	713	296.42	41.57
Totals, Dealer- Handlers (In-state speculators			2.26	324,834	142,214.34	43.78
Totals, Out-of-state Cooperatives			16.89	2,428,242	1,008,696.16	41.53
Totals for State			100.00	14,504,017	6,595,830.90	45.47

[b] /In-state Hide-and-fur dealers.

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