Preparation and marketing of wool
by Owen S Wirak

A THESIS Submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of Master of Science in Animal Industry
Montana State University
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Abstract:
The purpose of this study was to investigate methods of preparing and marketing apparel wool. This involved several problems: 1. To outline the practices that have been and are being used to prepare wool for market in the United States and other major apparel wool producing countries, 2. To outline the wool marketing practices used in the United States and other major apparel wool producing countries, 3. To determine the feasibility of skirting and grading wool at the shearing corral in Montana.

The data used in this study came from primary and secondary sources. Primary data came from the actual skirting, grading and marketing of 5,723 fleeces from two central Montana range sheep clips. Secondary sources used included most of the information available on the subject of preparing and marketing wool.

This study revealed that, in general, domestic producers offer wool for sale without knowing its shrinkage, grade, or quality, whereas the buyer is usually equipped to know the value of the wool. Domestic wools are prepared for market in a manner inferior to foreign wools. Only twenty-five houses were reported as operating in marketing the Australian wool clip as contrasted to the United States where over four hundred central dealers and a large number of local buyers are employed in buying and disposing of a wool clip much smaller in else. Wool is purchased from American growers by a great variety of methods whereas 90 percent of Australian wool is sold at public auction. Skirting wool at the shearing shed does not appear to be practical in Montana. Two bids were made on the skirted and graded wool which reflected the enhanced value of the wool due to the improved method of preparation. Detagging and grading of some of the larger Territory clips at the shearing shed may be feasible.

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Montana State College

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TABLE OF CONTENTS

ABSTRACT. 5

I. INTRODUCTION. 6

The Problem. 6

Review of Literature 6

Need for the Study 8

Procedure. 9

II. METHODS OF PREPARING WOOL FOR MARKET IN THE UNITED STATES AND OTHER WOOL PRODUCING COUNTRIES 10

Preparation of Wool for Market in United States. 10

Preparation of Wool for Market in Australia. 12

Preparation of Wool for Market in New Zealand. 15

Preparation of Wool for Market in South Africa 16

Preparation of Wool for Market in Canada 16

III. METHODS OF MARKETING WOOL IN THE UNITED STATES AND OTHER MAJOR APPAREL WOOL PRODUCING COUNTRIES 18

World Apparel Wool Production. 18

Factors Determining the Value of Grease Wool 18

Shrinkage of Grease Wool in Relation to Prices 20

Definition of Shrinkage 20
Importance of Shrinkage in Determining Wool Value . . 21
Variation in Shrinkage of Domestic Wools. 22
Shrinkage and Grade 24
Shrinkage and Length of Staple. 25
Shrinkage and Locality. 25
Shrinkage and Climatic Conditions 26
Wools Marketed in Greasy Condition. 27
Greasy Wools Quoted on a Scoured Basis. 27
Efficiency in Marketing Needed. 28

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Marketing Practices. 29

Time of Selling Shorn Wool. 29
Contracting of Wool 30
Consigning of Wool. 31
Cooperative Marketing of Wool 31
How Wool is Bought from Growers 32
Texas Warehouse System. 33
Direct Buying by Consumers. 34
Dealer Organizations. 35
Handling of Wool in Central Markets 35

Wool Auctions in the United States 36

Sales Procedure 37
Buying Competition. 40
Advantages of Auctions. 40
Disadvantages of Auctions 41

Marketing Wool in Australia. 42

Sales Organization. 43
Showing the Sample Bales. 45
Quantities Offered. 46
Repacked or Reconditioned Wool. 46
Advantages of Present Australian System of Wool Marketing. 47

Marketing Wool in New Zealand. 50

Marketing Wool in South Africa 50

Marketing Wool in South America. 53

IV. SKIRTING AND GRADING MONTANA WOOL 54

Actual Skirting and Grading Process. 55

Method of Operation 57
Grades and Off-sorts Made 58
Labor Costs 58

V. SELLING THE SKIRTED WOOL. 62

Core Shrinkage Data 62
Sale of Skirted Wool. 62
Bids Resulting from the Skirting and Grading Process. 65

VI. SUMMARY AND CONCLUSIONS 76

Summary. 76

Conclusions. 77

LITERATURE CITED. 80

ABSTRACT

The purpose of this study was to investigate methods of preparing and marketing apparel wool. This involved several problems: 1. To outline the practices that have been and are being used to prepare wool for market in the United States and other major apparel wool producing countries, 2. To outline the wool marketing practices used in the United States and other major apparel wool producing countries, 3. To determine the feasibility of skirting and grading wool at the shearing corral in Montana.

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CHAPTER I

INTRODUCTION

The Problem

The purpose of this study was to investigate methods of preparing and marketing apparel wool. This involved five problems:

1. To outline the practices that have been and are being used to prepare wool for market in the United States and other major apparel wool producing countries.

2. To outline the wool marketing practices used in the United States and other major apparel wool producing countries.

3. To skirt and grade a sufficient number of fleeces at the shearing shed to obtain actual cost data and to ascertain the various factors involved in such a procedure.

4. To trace the selling of this specially prepared wool.

5. To evaluate the skirting and grading processes on the basis of the current wool preparation and marketing picture in Montana and other territory wool states.

Review of Literature

Johnston (7) has reviewed the endeavors of a number of American wool growers in the western states to establish a system of wool improvement and marketing patterned after Australian methods during the years just prior to 1920. He reports their attempts were doomed to failure due to the lack of wider organization among their associates in the trade and the disastrous opposition of interests opposed to the new system. Harrowell (10)

stated that any well-classed American clips face a ring of prejudiced buyers. Hagenbarth (9) made the following statement in his opening address at the fifth annual convention of the National Wool Growers Association. "It is generally acknowledged that the ideal method of marketing wool is through auction sales. Yet it is doubtful if this system can ever be successful until the American flock-master has learned to produce a more uniform and staple product." Hill (6) has briefly outlined the attempted establishment of the Australian system in the United States beginning in 1915. He reports failure of the system due to lack of a proper kind of selling system and the fact that American buyers had not been in the habit of buying pieces and locks, even from Australia. Another factor that contributed to the failure of this system was propaganda by dealers who were very well satisfied with the old methods of selling the wool ungraded. Merrion and Wilkins (8), in 1939, graded the largest clip in Utah at the shearing corrals. This clip was owned by the Deseret Livestock Company and consisted of some 400,000 pounds. The National Wool Grower (14) describes an attempt at improved wool preparation in Montana in 1947 when the Williams and Pauly Company clip was skirted and graded by Wm. Hartpence of Wilkins and Company. Melvin Fell, Pendleton Woolen Mills, paid 55 cents per pound for the tied fleeces, f.o.b. Billings. Coon (3) made observations on corral skirting projects in Idaho and Oregon. He found the skirting process to be impractical because of lack of qualified wool men, weather hazards, lack of proper equipment, small size of average clips, and the difficulty of grading accurately in the shearing shed.

Need for the Study

The present day sheep in the western region of the United States are much superior to the types of thirty-five years ago. The range sheepmen have learned by experience to produce larger, fleshier lambs and heavier fleeces of more uniform wool resulting in a progressive improvement from the production standpoint. However, an investigation of the present system of marketing wool will show that the wool producers' major system of marketing raw wool is almost exactly the same as that in use forty to fifty years ago.

At the present time sheep numbers in Montana and in the United States are extremely low and the trend continues downward. There are a number of good reasons why this trend should be stopped and reversed.

1. National Security. Wool played an important part in winning World War II.

2. Sheep furnish an essential part of the national meat supply which is essential to the security and well-being of the Nation.

3. The economy of a great many Western communities is almost wholly dependent upon the sheep industry. Seventy-five per cent of the sheep in the United States are located in the twelve Western range states and Texas. These sheep provide $125,000,000 worth of wool and about $125,000,000 of meat annually, all of which is income that goes to maintain the local communities in which the sheepmen live. Investment in sheep, land, improvements, etc., is estimated to be in excess of $750,000,000 requiring the services of over 500,000 operators and hired help. Ninty-six per cent of the Western range land is adapted only to

the raising of livestock. Further, the balance of the acreage is given over almost entirely to raising feed for the stock in the area. Except for the sheep industry, much of this land would be non-producing and non-taxable. (17 -- p. 935)

A sound wool marketing program would add security to the sheep and wool industry and would go a long way toward encouraging sheepmen to maintain or increase present numbers or even to change back to raising of sheep.

Practically every agricultural commodity, except wool, is sold by producers on the particular merits of the commodity.

In general, the producers offer wool for sale without knowing its shrinkage, grade, or quality, whereas the buyer is usually equipped to know the value of the wool.

It is to help, in a small way, in overcoming some of the many difficulties which are causing the downward trend in sheep numbers and preventing modernization of the wool marketing processes, that this study was undertaken.

Procedure

The data used in this study came from both primary and secondary sources. Primary data came from the actual skirting, grading, and marketing of 5,723 fleeces from two central Montana range sheep clips. Secondary sources used included most of the information available on the subject of preparing and marketing wool.

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CHAPTER II

METHODS OF PREPARING WOOL FOR MARKET IN THE UNITED STATES AND OTHER APPAREL WOOL PRODUCING COUNTRIES

Preparation of Wool for Market in United States

Domestic wools in a free market usually sell at a clean price several cents less than foreign wools of comparable grade. This is largely because domestic wools are prepared for market in a manner inferior to foreign wools. Domestic wools often contain excessive tags, paint, and string which result in processing difficulties and much higher costs. Better marketing practices are needed, but there is little or no incentive to attain them. A domestic wool grower who improves his clip by crutching the sheep, bagging tags, and crutching separately, segregating buck and black fleeces, and avoiding the over-use of paint, generally receives no premium over his neighbor who makes no attempt to improve his product. In fact, the grower who attempts to improve his product by such practices may suffer financially, since buyers generally will not pay sufficiently more for the improved wool. A more efficient appraisal system based upon adequate sampling would recognize the greater value of an improved product and would undoubtedly yield a higher return to the producer of improved wools. (17 - p. 225)

Even though the average American wool producer has not reached the high degree of efficiency in preparing his clip for market as that attained by the Australian grower, he has made considerable progress since the turn of the century. In those days, according to Johnston, sheepmen were very careless in preparing their wool for market. Shearing sheds were for the most part, very primitive. Any kind of shed was good enough to shear in.

Most of them had dirt floors which were seldom cleaned, were inadequately lighted, and had cramped shearing and pen space. The shearers squatted the sheep in the dust and manure and "hacked and slashed" at the wool until the fleece came off, very often in pieces. The fleece was then rolled up in a rough bundle, tied with string or binder twine and thrown up on the packing stand to be tramped into a coarse jute hessian sack. Buck fleeces and black fleeces were not sacked separately in the majority of cases. False packing of wool seemed to have been popular. (7)

More recently, preparing of wool for market has been improved somewhat. Pens are kept clean and fleeces are tied so they can be handled better in the subsequent operations. At first, any kind of twine was considered good enough to tie wool with but now it is known that the vegetable fibers cause trouble because they will not take the same dye that is used for dyeing wool. Paper twine is now used very largely in the range states. Any bits of paper twine that stay with the fleece are dissolved in the scouring vats and cause no trouble. Black fleeces and buck fleeces are packed separately. (6)

There are two kinds of shears in use, hand shears, and machine shears. The hand shearer, as the name indicates, shears directly by hand using a shears much like those used to trim hedges. Machine men work with power shears run by gas engine or by electric motor. The machine shearer does a faster job and the shorn sheep looks smoother than the hand-shorn animal. The shearing is usually done on a smooth floor, platform or large piece of heavy canvas. After the shearing is completed, the fleece is kicked aside by the shearer. The fleece is tied with the flesh side out with an eight and one-half foot length of paper twine.

After the fleece is tied, it is packed directly in the bags for the market. This work is done by the wool tramper, whose business it is to tramp the fleeces as solidly as possible into the six foot sacks that carry them to market. The sacks are suspended free of the ground in a frame, and the wool tramper, starting at the bottom, rises as his sack fills. This tramping is only customary in the United States - in Australia the fleeces are pressed into the bales right at the shearing shed. (19 - p. 110)

Preparation of Wool for Market in Australia

According to Wilson, preparation of the clip for market means more than putting wool in bags, it includes growing the clip. Preparation starts just twelve months in advance of shearing.

Australians take good care of their sheep to insure having something to prepare at shearing time. Their system of marketing wool on its merits taught them long ago that the fellow whose clip is not well grown and sound gets slapped around plenty when the buyers bid on it. As a usual thing, clips of Australian wool are well grown, sound, and attractive.

Shed-catching pens, alley-ways, and holding pens are all made with slatted floors so that urine and droppings fall through to the ground and no wool is stained by a sheep that falls down. The shearing floor is made of first class matched lumber, often hardwood, and it is kept clean. In fact, it may be scrubbed every two or three days while shearing is in progress.

Australian shearers are no faster than United States shearers, but there are two striking differences. First, the Australian shearer never

puts his foot on any part of the shorn fleece and second, shen he raises the sheep to shear the far side, he does it gradually in order not to tear the fleece apart. When he turns the animal, his right foot turns the fleece with the sheep so that when shearing is completed, the fleece is lying in a small compact pile with the britch on top. The belly is lying separately on the floor. While the shearer is getting his next sheep, the fleece thrower, usually a boy about High School age, picks up the fleece in one piece hooking his two thumbs into the britch end. He runs with it to the end of the skirters' table where he tosses it through the air, being careful to keep those thumbs in the britch. The fleece spreads out and, if the boy is skillful, it lands on the table like a spread-out blanket. Two skirters then go after it, removing all tags, stained wool, burry and seedy portions, and head and neck pieces. The operation varies not only with the kind of sheep but with the characteristics of the season's clip. At times the entire back may be removed from each fleece by the skirters, if, for seasonal or other reasons it does not match up well with the other parts. Everything removed from the main part of the fleece is gone over by a piece-picker who segregates it according to type. The skirters fold in the two long edges of the skirted fleeces toward the center. They then fold the head end in a short way, after which they roll the fleece up beginning at the britch. When they have finished, the fleece is in a roll like the cotton batting seen in American stores. It is then placed on the long narrow "classer's" table where the real expert, the wool classer, boss of the entire shed of shearers, determines its quality or grade. The fleece is not tied.

Along the wall are bins, each of which is reserved for one grade of wool. The classer moves the fleeces from his table to their proper places and soon one or two bins will have accumulated enough wool to fill a bale. Then the balers go into action, compressing approximately three hundred pounds of wool of one grade only into each bale. Thus when the clip moves into the great concentration centers to be sold, it has already been, not only graded, but partially sorted. It is even and attractive. Buyers can appraise its value far more accurately than they can appraise American wool where fleeces of various grades, varying in color, length, and strength, are co-mingled.

Wool classers in Australia are highly skilled people, licensed by the Government to practice their profession. According to Wilson, every college of agriculture in the Commonwealth teaches every able-bodied student how to shear sheep and how to class wool. If a student decides to become a professional wool classer and devote his life to it, he will probably attend the Gordon Institute of Technology at Geelong. When he gets through he knows every major clause of the laws regulating the conduct of the shearing shed and the relations between owner, classer, shearers, and shed hands. He knows how to operate all the machinery and how to boss the whole show. Above all, he has a thorough knowledge of wool. Armed with his certificate, he will go to work on very small clips in sheds employing only four or five shearers. As he gains in experience and knowledge, he will move to larger tasks and after some time, may get good enough and fast enough to handle the big sheds where twenty-five or thirty shearers, or even more shearers, are going at top speed. (13)

Preparation of Wool for Market in New Zealand.

In New Zealand, the principles of preparation followed are quite similar to those in Australia, but operations are simpler. Whereas about 85 percent of Australian flocks are Merinos (13), 98 percent of New Zealand wool is crossbred. (1 - p.84)

New Zealand flocks are smaller and crossbred wool is more easily handled and classed than fine wool. Because of the smaller average size of the flocks, it is not customary to make as many sorts as in Australia. The wool is skirted. Belly wool is kept to itself, as are the leg wools, neck wools, buck wool, and crutchings. These, with the small bits of good wool which drop from the fleece in classing, constitute the grades as wool comes from the farms. Therefore, the following classifications are generally found; (1) skirted fleeces marked according to grade, (2) bellies, (3) necks, (4) pieces, (5) breech wool, and (6) crutchings or tags.

This classing is done only in the very large holdings - usually about all that is done with the smaller clips is to remove the belly wool, the seedy or burry portions, and the crutchings. Each sort is packed in a separate bale and is labeled with the brand of the owner and the character of the bale. Many of the owners of smaller flocks make no effort to class their wool but pack it lightly in bales and bring it to the broker's warehouse, where it is opened and classed and mingled with wool of similar type and grade to be repacked under some name adopted by the broker. This is called binning and the process is similar to that followed by cooperative wool associations in the United States with regard to small lots,

save for the opening of the fleece. In New Zealand, as in Australia, all fleeces are classed in the binning process. (20 - p. 53)

Preparation of Wool for Market in South Africa

The pastoral industry in the Union of South Africa, though it has developed much more slowly than in Australia and New Zealand, dates back to the early years of the 18th Century when the first Merino sheep were imported by the Dutch settlers. Sporadic importations continued but it was not until the last quarter of the 19th Century that any concerted effort was made to improve the stocks by the importation of pedigree sheep in large numbers from France, the United States, and later, Australia.

The Merino is now the predominant sheep throughout South Africa.

A rapid advance, both in the improvement of South African wools and in methods of marketing has taken place since the first World War. Shearing is done by hand by native labor and though the organization of shearing is less elaborate than in Australia, the work is usually carried out efficiently.

Skirting is undertaken in most cases but a certain proportion of unskirted wool still finds its way onto the market. Owing to the smaller size of flocks, less elaborate classification is practiced than in Australia, in consequence, there is a smaller number of skilled classers. (5 - p. 66)

Preparation of Wool for Market in Canada

Canada ranks low in total production of apparel wool but the

principals of preparation are generally superior to those in the United States, hence its mention in this paper.

There are two methods of shearing in Canada, hand and machine, with the latter rapidly replacing the old-time hand method. Recently well-organized shearing schools under government direction have endendered greater interest in improved shearing and fleece preparation methods. The old-time, careless, haphazard practice of removal and indifferent packaging is being replaced with up-to-date preparation and packing of each individual fleece for a market which is more and more discriminating.

As it falls away from the body of the sheep, each fleece is spread out on a clean surface, shorn side down, and all tag-locks, burry, or very chaffy portions are removed before the sides are folded over and the fleece is rolled tightly from britch to neck. In many cases a cheap, specially designed, slatted table is used, each fleece being removed from shearing floor to the table where it is shaken out, tag-locks removed and, if deemed necessary, certain undesirable portions are skirted before rolling or tying. Each fleece is tied with a special eight foot length of paper twine and the fleeces are tramped into standard jute wool sacks, thirty inches by ninty inches in size. A wool sack holds between twenty-five to fifty fleeces and weighs from two hundred to four hundred pounds, depending upon the weight and condition of the fleeces. (2 - p. 123)

CHAPTER III

METHODS OF MARKETING WOOL IN THE UNITED STATES AND OTHER MAJOR APPAREL WOOL PRODUCING COUNTRIES

World Apparel Wool Production

About four-fifths of the world wool production is classified as apparel wool (Merino and Crossbred) and one-fifth as carpet wool.

Some wool is produced in nearly every country in the world, but the bulk of the world's clothing wool entering International Trade comes from five countries in the Southern Hemisphere, namely Australia, Argentina, New Zealand, South Africa, and Uruguay. Together these five countries account for over 80 percent of world wool exports, well over one-half of world wool production, and three-fourths of world output of apparel wool. The United States is the world's fourth largest producer of wool, ranking after Australia, Argentina, and New Zealand. At the same time, the United States belongs to the group of "deficit countries" with substantial quantities of wool being imported. The other main "deficit countries" are the United Kingdom, France, Germany, and Canada. (1 - p. 82)

Factors Determining the Value of Grease Wool

In any discussion or study of wool marketing, consideration must be given to the factors determining the value of grease wool.

First in importance is the shrinkage of the wool.

Second in importance is the grade or quality of the wool. Technically the quality is the diameter of the fiber.

Third, and of practically equal importance to grade or quality, is length. Although there has been a gradual improvement in combing machinery enabling manufacturers to utilize comparatively short wool in tops, there still remains a marked premium for wools of extra good length, hence the shorter wools are less valuable than the strictly long wools.

Fourth, and still of almost equal importance to the second and third factors, is strength. The fiber must be strong enough to withstand the strain of manufacture. It follows that if the wool is tender, frequently called "a break" by the grower, it is greatly depreciated in value as it not only fails to produce a strong yarn but will also produce more "noils", a by-product usually one-half to one-third less valuable than scoured wool.

Other factors entering into the determination of value are colors as they pertain to the scoured product. (Certain ones, for example, have a yellowish color when scoured). Wools should have a certain softness or "feel", though for some materials harshness is desired.

Another important factor is the uniformity of the fleece as a whole, that is, a class which is "run off" or of a low quality on the skirts, is worth much less than one which does not have such characteristics. The amount of tags in wool greatly affects its value. The extent to which tags will depreciate the value of a clip is very difficult to estimate and excessive tags will very largely alter the clean cost of wool. A clip with excessive tags but in other respects a very good clip, will sometimes be depreciated 2 to 3 cents in the grease. Wool should have proper felting qualities if the material to be made requires "fulling".

Fleeces should be well tied so as to insure the manufacturer easy sorting as well as easy grading for the merchant. Poorly tied fleeces yield much broken and off pieces known as "locks" which must be sold at a big discount. Black fleeces should be tied separately. Black sheep should really be shorn in a separate pen so as to avoid having any black fibers in the wool. For some materials it is ruinous to have even a single black fiber to a million white ones. Therefore, a mill buyer wanting wool for such materials will be compelled to avoid carelessly packed wool. Burrs or the vegetable matter seriously affect the value of wool. Excessive paint is also a factor.

Regarding the grading of wool, the grader is guided by the major portion of the fleece, hence a whole fleece must be considered in determining its grade and not a handful of fibers taken from the fleece at random. A fleece graded into a pile of half blood wool, if bench sorted, will be further divided into three to seven sorts depending upon the evenness of the fleece and the amount of off-sorts such as tags, burrs, bellies, etc. (11 - p. 20)

Shrinkage of Grease Wool in Relation to Prices

Definition of Shrinkage. When shorn from the sheep, wool carries varied quantities of natural wool grease, dried perspiration, dirt, chaff, seeds, and burrs. In this condition, it is called "greasy wool" or "grease wool". Before "grease wool" is manufactured, the natural grease and foreign matter must be removed. This is usually accomplished by a cleansing process called "scouring" which causes a considerable loss from the weight of the original "grease wool". This loss in weight is known

in the trade as "shrinkage". It is expressed as a percentage of the original weight of the "grease wool".

Thus a pound of "grease wool" is not a pound of pure wool fiber. A pound of "grease wool" that shrinks 60 percent consists of four-tenths of a pound of pure wool fiber and six-tenths of a pound of grease, dirt, and other foreign matter.

Importance of Shrinkage in Determining Wool Value. Although discussed among sheepmen for years and years, the question of shrinkage of clips is rarely understood by a wool grower. Often times, those who consign and have their clips sold at the markets by experts who can estimate shrinkages as accurately as can the mill buyers, do not always get from the consignee the information as to the estimate of shrinkage upon which sale of the clip was based. And yet shrinkage is the principal factor in setting the price of any clip at any time or place. Of course, length and grade, character, color, and other factors are important, but the shrinkage must be determined by the buyer so that he may know what percentage of the grease and dirt of buying weight will come out in the scouring process.

A few growers have had tests of their clips made and know its approximate shrinkage, or yield for the test year. When there is knowledge of the actual shrinkage in a recent year, the grower can estimate, in a useful way, the yield of the next year's clip through his knowledge of the difference in weather and feed conditions under which the untested clip was grown, provided too, that there has been no material change in the character of the range or in the breeding and care of the flock.

However, cases in which the grower is able to figure at all accurately the value of his clip from a good estimate of its shrink are quite rare. For the majority, the appraisal before pricing must be made principally on the basis of what supposedly similar clips are selling for and on the hope of sufficient competition among buying houses to get a price somewhere near the true value.

The home selling of wool cannot approach a scientific business practice until the grower can tell within 2 or 3 percent of what his clip will shrink and can calculate from reports of market prices on a scoured basis for the class or grade comprised in what he seeks to sell.

Variation in Shrinkage of Domestic Wools. Taking into consideration all wool producing areas in the United States and all grades of wool, the shrinkages of greasy, shorn domestic wools range from approximately 38 percent to around 75 percent. The average shrinkage of the domestic clips of recent years has been estimated by members of the wool trade and manufacturers at around 60 percent. This means that, on the average, only about forty pounds of scoured wool will be obtained from one hundred pounds of greasy shorn wools. A few of the lightest shrinking domestic wools may yield as much as sixty-five pounds of scoured wool, whereas many of the heaviest shrinking domestic wools yield only twenty-five pounds of scoured wool from one hundred pounds of greasy wool.

TABLE I - APPROXIMATE SHRINKAGE RANGES OF DOMESTIC WOOLS

Grade	Fleece Wools		Territory Wools
	Bright	Semi-Bright	
	Percent	Percent	Percent
Fine	57-63	63-70	64-75
1/2 Blood	52-68	57-64	58-67
3/8 Blood	44-50	52-58	53-62
1/4 Blood	41-46	47-55	48-57
Low 1/4 Blood	38-43	43-50	44-53
Common & Braid	38-43	43-50	44-53

Source: National Wool Grower, January, 1939.

The above table roughly indicates the ranges of shrinkage found in two well-known groups of domestic wools. These shrinkage percentages were compiled from estimates reported by dealers, mill buyers, and investigators who are experienced in handling or studying domestic wools.

Territory wools are wools grown under range conditions in the range areas of Washington, Oregon, and Intermountain States including Arizona and New Mexico and in the range areas of the Dakotas, Nebraska, Kansas, and Oklahoma. Territory wools have a wide range in shrinkage and in color.

Other western wool-growing states produce wools that show wide ranges of shrinkages. Texas flocks under normal conditions produce some clips that shrink only 55 to 57 percent for good length twelve months' wool. The average twelve months' wools are usually estimated to shrink around 60 percent to 64 percent but some shrink over 65 percent and in the Pan

Handle, occasional clips with shrinkages running between 70 and 80 percent have been reported.

California produced wools show a wide range of shrinkages. Fine clips from sheep of Merino and Rambouillet flocks of Humboldt and Mendocino counties sometimes have shrinkages under 50 percent but the average for these counties is 52 percent to 61 percent. Southern California, on the other hand, have shrinkages as high as 70 percent or more.

Oregon wools likewise have varied shrinkages. The so-called "valley wools" of Oregon - those produced from farm flocks in the Willamette Valley, sometimes have shrinkages lighter than the shrinkages of Ohio fleece wools, while some of the range wools of Oregon may have shrinkages equal to the heaviest shrinking in Territory wools.

Shrinkage variations are closely associated with fineness and length of wool staple as well as with the locality in which the wool is grown, production practices, and climatic conditions.

Shrinkage and Grade. Shrinkages of greasy wools vary directly with the degree of fineness or grade. Under ordinary conditions in a given locality, fine wools shrink more than half blood wools and half blood wools shrink more than three-eighths blood wools. Hence, shrinkages of greasy wools tend to decline with each step of increase in the coarseness of the fiber. However, conditions vary from one locality to another. As an illustration, the three-eighths and quarter blood grades of wool of one locality may have heavier shrinkages than the half blood grade wool of another locality, as can be readily noted by a study of the overlapping of the shrinkage range for Territory wools shown in Table I. This makes it

necessary to study the grade of wool in connection with the local conditions that influence shrinkage.

Shrinkage and Length of Staple. Shrinkage variations are also related to length of staple. This is especially true of fine and half blood wools. In coarser wools, length is not so important a factor in shrinkage variations as it is in half blood and fine wools. The usual tendency in fine wools is for the long staple to show lighter shrinkages than the short staple wools. Shrinkages of staple combing length fine wools in individual lots may run 1 percent to 2 percent lighter than shrinkages of French combing length and 2 percent to 3 percent lighter than shrinkages of clothing length wools. The same tendency is found in different lengths of half blood wools, but the difference in shrinkage due to length is inclined to be smaller than in fine wools.

Shrinkage and Locality. Variability of shrinkages in greasy wool is a characteristic by no means peculiar to the wools of this country. Wools from Australia and South America have variation in shrinkages that are closely associated with the country in which the wools are produced. Likewise, the wools of each country have shrinkage differences that are more or less characteristic of the different producing areas in the country. Recognition of the universal tendency of the shrinkages of wools to vary led to the adoption by the Congress of the United States of a tariff law which, in regard to wool, provides that the duties be levied upon the clean content rather than upon the actual weight of the wool imported.

That shrinkages vary as between particular localities is true because of natural conditions characteristic of the locality. The character of the

soil over which sheep graze has a decided bearing upon the shrinkage of the wool. In pastures and ranges that have a loose sandy soil and a thin covering of vegetation, foreign material like sand is likely to get into the fleeces. Shrinkages are inclined to be heavy when sand comprises any considerable part of the foreign matter in fleeces, although appearances of fleeces may be misleading for the wool may be light in color, suggesting lightness of shrinkage. On the other hand, fleeces may often be quite dark because of the presence of dark colored soil of the grazing land or dust from corrals, but the shrinkage may not be very heavy because such dirt is comparatively light in weight.

Sheep that have been grazed on high-producing pastures produce fleeces with comparatively light shrinkages because the dense sod reduces the quantity of loose soil or sand that comes in contact with the wool. The bluegrass pastures of Kentucky have contributed to the reputation of wools from this area for light shrinkages. The sandy, sparsely vegetated acreages common to many of the western sheep producing states are largely responsible for the heavy shrinkage of wools coming from that area.

Variations in natural conditions that influence shrinkages, like soils and vegetation, are such that sometimes within a distance of fifty miles, differences in shrinkage of 5 percent to 8 percent are found in wool clips of comparable grade and length from sheep of similar breeds.

Shrinkage and Climatic Conditions. The climatic conditions that prevail in a given locality during a year are taken into consideration in estimating the probable shrinkage of wool produced in that locality. Droughts and their detrimental effect upon pastures and ranges may cause

the growth of the wool to be less than normal and short staple wools tend to run heavier in shrinkages than do long staple wools. Then droughts frequently are attended by dust and sand storms which may greatly increase the shrinkage of wools produced in drought areas or in the areas over which clouds of dust and sand are driven. Heavy rains that occur just before shearing may wash a considerable portion of the foreign matter out of the fleeces before they are shorn and cause wools to have unusually light shrinkages. A continuous blanket of snow on ranges during the winter helps to keep fleeces clean and free from foreign matter which means that the shrinkages will be light while an open winter tends to increase shrinkages as the sheep constantly come into contact with dirt, sand, and other foreign materials that get into the fleeces.

Wools Marketed in Greasy Condition. Growers sell their wools in the greasy condition as the established practice. Worsted manufacturers and topmakers prefer to make their original examination of a lot of wool to ascertain the grade, length, strength, character, and uniformity before the wool is scoured. They usually refuse to buy wools that have been scoured. This practice is generally followed the world over by processors who use the worsted system of manufacturing.

The wool is paid for at a certain price per pound of greasy wool, but before the bid is made, the buyer estimates the approximate percentage of clean wool fiber that the greasy wool will yield, and bases his bid on that estimate.

Greasy Wools Quoted on a Scoured Basis. Market prices of wool, with but few exceptions, are quoted on a scoured basis. Wools grown in the West,

Southwest, and in several states of the corn belt have shrinkages of such wide variations that prices on a grease basis alone give little information as to market prices. The grease basis price on the individual lot of greasy wool may represent the market price for that particular lot but may not be within five cents per pound of the market price of another lot of wool having a similar degree of fineness and length of staple but a different shrinkage.

Wools that are quoted on a scoured basis are actually wools that are still in the greasy condition - not yet scoured. This fact is often misunderstood. The scoured basis price is for the clean wool fiber that will be gotten from the greasy wool. In actual trading, the quantity of pure wool fiber in greasy wool is estimated or obtained from a core test. The cost of scouring is not included in the scoured-basis price.

In accordance with shrinkage variations, prices paid for greasy wool vary over a rather wide range. Usually prices for grease wool show a range much wider than the range for scoured-basis prices for wools of similar fineness and length. Grease-basis prices on original bag lines of fine Territory wools of comparable length have been observed to vary as much as ten to twelve cents per pound during the same week in the Boston market, because of the wide variations in shrinkages of the greasy wools. (12)

Efficiency in Marketing Needed. Greater efficiency in production, preparation for market, and marketing is strongly indicated if we are to have a sheep and wool industry capable of overcoming present and future difficulties. Many wool growers are aware of that fact but unfortunately,

too many persons having an interest in the wool industry are not fully aware of this situation.

Growers still suffer from the "average price" or "area buying" system of marketing. Not many years ago, the average grower was unable to value his clip because of lack of information on the shrinkage and grades in his wool. Wools from large areas were sold to buyers for very nearly the same price, finding a spread of only a few cents per pound between the best and the worst clips in some large areas. The producer of heavy shrinking, poorly prepared wool often received very nearly as much per pound for his wool as did the producer of well prepared light shrinking wool.

According to the Farm Credit Administration, in one Wyoming County, wools sold during the shearing season in any one year prior to the War were sold within a spread of less than 5 cents per pound between "best" and "least desirable" clips. The "area buying system" puts a premium on heavy shrinking and poorly prepared wools and a discount on light shrinking and well prepared clips. This system naturally causes the wool grower to produce heavy fleeces, paying secondary or little attention to shrinkage or proper clip.

Wool growers have been greatly enlightened on the nature of their wool clips during the Commodity Credit Corporation buying program. (15)

Marketing Practices

Time of Selling Shorn Wool. It has been noted that the annually shorn portion of the domestic clip, which constitutes roughly 95 percent of the

total shorn wool output of the country, is shorn chiefly in the months from February to July, inclusive.

In most years the majority of growers sell their wool at or soon after shearing time. Hence, the greater portion of the shorn wool produced in this country is usually sold by the producers in the Spring and Summer. However, the time when the growers sell is subject to considerable variation. In all year, some wool and in some years a considerable portion of the clip is sold by the growers well in advance of shearing. Such advance selling usually occurs in December, January, and February. On the other hand, in all years a substantial portion of the clip, and in some years well over one-half of it is consigned by the growers, i.e., shipped unsold, to dealers and growers' cooperative associations. Consigned wool may not be sold for many months. Sometimes it is held for one or two years.

Contracting of Wool. The buying of wool from growers in advance of shearing is termed "buying wool on the sheep's back", or "contracting". Dealers contract on their own account when they believe that the consumer demand for wool will be large relative to the supply of it and that prices will consequently advance. Consumers frequently contract by executing contracting purchases through dealers.

Both dealers and consumers contract in terms of grease prices, just as they buy wool at shearing time. Since it is impossible to estimate the shrinkage of wool on the sheep's back with any degree of exactness, contracting buyers run the risk of incurring heavy losses by underestimating shrinkages, as well as assume the risk of later downward movements of clean wool prices. The shrinkage of a clip may increase after a buyer has contracted

for such clip, due to weather conditions, such as dust storms. In consequence of the risks involved in contracting, dealers and consumers are necessarily conservative in setting the grease prices that they will pay for wool on the sheep's back.

Consigning of Wool. Growers consign wool to dealers in greatest volume in years when prices at shearing time are relatively low, the lowness of prices leading the growers to anticipate higher prices later.

In years in which prices of wool at shearing time are low, the consignments to dealers are large and many growers in certain areas in the Territory States and in Texas and many local buyers in the fleece wool States, are likely to carry substantial amounts of wool in storage in the producing areas, having declined to sell because prevailing prices are unsatisfactory to them. The smaller growers in the fleece wool States, other than members of the cooperative associations and pools, usually sell their clips at shearing time regardless of prices, but the local buyers in those States may hold substantial accumulations.

Cooperative Marketing of Wool. In each of about twenty major wool growing States, there is a wool growers' cooperative marketing association, the membership of which consists of individual growers within the State. Every grower belonging to a State association enters into a contract with it, by which he agrees to consign his entire clip to the association each year during the life of the Contract. All of the State associations except that in Ohio, hold stock in, and are, therefore, share owners of a selling agency called the National Wool Marketing Corporation, the offices of which are in Boston. The State associations

have contracts with the National Wool Marketing Corporation under which they consign all wool received from their grower members to the Corporation.

The National Wool Marketing Corporation thus acts as the selling agency for the State associations, and, in effect, for the grower members of those associations. It makes advances to the State associations on the wool received by it from the growers belonging to those associations. The State associations in turn make advances to the growers. The National Marketing Corporation obtains loan capital partly from private banks and partly from the Farm Credit Administration. The National Wool Marketing Corporation sells only to consumers - that is to say, to topmakers and manufacturers. The Ohio Wool Growers Cooperative Association sells the wool received from its grower members through an agency in Boston which serves only that association.

Beside the State cooperative associations and the National Wool Marketing Corporation, there is a cooperative association which operates in the far West, called the Pacific Wool Growers. This association consists of individual wool growers like the State associations described, but its membership is distributed over several States. It merchandises the wool that it receives from its grower members from its office in Portland, Oregon, chiefly through selling connections in Boston.

How Wool is Bought from Growers. In the Territory States, where the clips run to large weights, the buyers generally buy at the ranches. As a rule, they make an effort to be at the shearing pens when the clips are being shorn, to see how the wool runs in shrinkage and quality. In

periods of active buying, however, they may not be able to see the shearing of the greater portion of the wool that they purchase. When a buyer does not see a clip shorn, he may examine it in the barn on the grower's ranch or he may buy it without examining it, on the basis of his knowledge of previous clips of the same grower. Most of the buyers are resident agents or traveling buyers for central market dealers, more particularly Boston dealers. Thus, most Territory wool is virtually sold direct to central market dealers.

In the fleece wool States, where most of the clips are small, the bulk of the wool is bought on the farms. The buyers are generally either country dealers who reside in nearby towns and who buy wool as only one of their business activities or the local agents of such dealers. The country dealers commonly accumulate wool on their own account, speculatively, but to a large extent they buy on commission against orders from central market dealers. In many cases, dealers in central markets finance the country dealers in the fleece wool states through whom they obtain fleece wool. (4)

Texas Warehouse System. In Texas, in most years, growers ship a large portion of wool produced in that State to warehousemen in nearby towns and have the warehousemen sell it for them. However, when buyers are eager for wool, many of them go to the ranches and buy direct from the growers.

A typical Texas warehouse is a business establishment, either incorporated or privately owned, that offers to the customers complete facilities for handling either wool or mohair from the time it is hauled in from the

Permanized
PLOVER LINEN BOND

ranches until it is sold, shipped, and paid for. The process is something like this.

The clip is hauled into the warehouse, weighed in and each bag is given an identifying mark. As soon as it is in the warehouse, it is immediately and automatically covered with insurance. After wool is sold, it is again weighed as it is loaded into railroad cars.

The grower is usually consulted about the selling price. Many growers give specific instructions that their approval must be obtained before a sale is concluded.

One of the methods of selling is through sealed-bid sales. The option of refusing bids is always reserved. If all bids are rejected, that fact is announced, and the name of the highest bidder is given, but no prices bid are given out.

Mohair is never sold at sealed bid sales, always by private negotiation and usually in large lines.

The commission share varies but it is usually about 2 1/2 percent of the proceeds of the clip. The warehouses do a considerable amount of financing. There is very little consignment to eastern dealers. Recently, there has been considerable sentiment for auction type selling. (16)

Direct Buying by Consumers. Consumers of wool - that is topmakers and manufacturers - buy from 5 to 10 percent of the total clip of the country direct from growers or country dealers. Consumers who are located outside of the wool growing sections generally make such direct purchases in producing areas by sending their own men to those areas on buying trips. They do not generally have permanent buying organizations or permanent

buying connections in the wool growing sections. The greater portion of the direct buying by distant consumers occurs in Texas, but there is much of it in the fleece wool States also.

Dealer Organizations. Perhaps three-fourths or more of the shorn wool goes through dealers in central markets. The majority of such dealers are in Boston, where there are about fifty dealers houses engaged in merchandising shorn wool, pulled wool, or both.

Wool dealer houses vary greatly in size of organization and in volume of wool handled. The majority of them are individual proprietorships or partnerships, but many are corporations. There has been a tendency for dealer houses to change from partnerships to corporations. A small house, handling wool from only one part of the country, may have only one traveling buyer, perhaps five or six resident agents in the producing area in which it operates, and one salesman. A large house, handling wools from various parts of the country, may have two or three traveling buyers, forty or fifty resident agents in producing areas, and three or four salesmen. The majority of houses handle Territory and Texas wools.

Handling of Wool in Central Market. If the Boston dealer has already sold the wool to a consumer when the resident agent buys it for him, the dealer has the wool shipped direct to the mill of the buyer or to whatever other destination the buyer has specified as the point at which he will accept delivery. Otherwise, the dealer has the wool shipped to Boston, and it goes into the dealer's warehouse there. Should the wool be of mixed lots and hence it has to be graded, the dealer has it taken out of the original bags and graded into piles on the warehouse floor for inspection

by consumer buyers. If the wool can be merchandised to consumers in the original bags, it remains in those bags. (4)

Wool Auctions in The United States

The greater part of the World's wool clip originating in Australia, New Zealand, and the Union of South Africa, is marketed through auctions. In the United States, however, this method of marketing is comparatively new. During the past forty years, some marketing efforts have been advertised as auctions which, in reality, were only sealed-bid sales.

The first of the present-day auctions was held in 1934, with a private concern assembling the wool for an auction in Ogden, Utah. This same concern also opened auctions in Denver, Colorado, in 1936, and Billings and Miles City, Montana and Boston, Massachusetts, in 1940. A private individual held auctions in San Angelo, Texas in 1939 and 1940, and a cooperative opened auctions in Portland, Oregon, and Stockton, California in 1940. In 1940 ten auction sales were held in seven states. Four of these auctions were conducted by a cooperative agency, the remaining six by private firms.

The offerings of wool at all series of sales at any one point from 1934 through 1940 ranged from a low of 428,000 pounds to a high of 6,500,000 pounds, with a total of 54,341,000 pounds offered. Of this amount, 24,453,000 pounds, or 51 percent, was sold.

In 1940, 14,900,000 pounds of wool was offered at auctions. This tonnage originated in fifteen states, with Wyoming, Utah, Montana, and Colorado supplying 74 percent of the volume. It is interesting to note

that in the case of Colorado, 15 percent of the total production of the State was consigned to auctions for sale; the next three ranking States in the proportion of production consigned to auctions were Nevada with 14 percent, Wyoming with 13 percent, and Utah with 12 percent (Table II)

The firms conducting the auctions, both cooperative and private, carry on a year-round program of education and field work. Material is published at various times telling of results of previous auctions and comparing auction sales with market quotations. Pamphlets are also sent out to growers from time to time explaining the auctions in detail and answering questions which might arise. During the active market season, the radio has been used extensively to link auction activities with general market news. Auction selling dates are announced through the trade papers, grower house organs, and the general press.

Sales Procedure. On the morning of the day on which the auction opens, sample bags of individual clips and graded lots are open for inspection and appraisal of buyers, and a sample of each lot is displayed in well-lighted showrooms. Ample space is provided for the handling and inspection of these samples. Here buyers formulate their own ideas of shrinkage and value. Catalogs listing the lots, giving size of clip and classification of the wool, along with some description of the clip and classification of the wool, along with some description of the clip being offered, are issued for the use of buyers.

At most auctions, the actual selling takes place in another room away from the warehouse where the wools are displayed. The buyers bid on the basis of the notes made while inspecting the samples.

TABLE II - WOOL PRODUCTION, AMOUNT OFFERED AT SUMMER AUCTIONS, AND THE PERCENTAGE OF PRODUCTION OFFERED AT AUCTIONS BY STATES, 1940

State	Wool Production	Offered at Auction 1/	Percentage of Production Offered at Auction
	Thousand Pounds	Thousand Pounds	Percent
Arizona	4,471	134	3.0
California	27,280	432	1.6
Colorado	14,170	2,175	15.3
Idaho	16,627	939	5.6
Kansas 2/	4,053	30	0.7
Montana	29,946	2,384	8.0
Nebraska 2/	3,274	45	1.4
Nevada	5,840	805	13.8
New Mexico	15,944	536	3.4
North Dakota 2/	7,108	149	2.1
Oregon	16,446	462	2.8
South Dakota 2/	11,706	60	0.5
Utah	20,581	2,384	11.6
Washington	5,804	208	3.6
Wyoming	33,271	4,157	12.5
Total	216,521	14,900	6.9
11 Western Range States	190,380	14,616	7.7

1/ Distribution among the States based on incomplete catalog listings which accounted for 82.4 percent of the total offerings.

2/ Other than Western Range States.

Source: Production figures from U. S. Bureau of Agricultural Economics. Origin and amount of offerings from catalogs and reports of the Merrion and Wilkins Auction Company, Ogden, Utah, and the Pacific Wool Growers, Portland, Oregon.

Each day's offerings usually consist of a wide variety of types of wools, both graded and original bag, as well as a wide range in size of lots offered. This wide variation in offerings gives the smaller consumer as good a chance to buy as the larger operator.

The auction begins early in the afternoon with an auctioneer in charge of the selling. The auctioneer calls each lot by number, announces the weight, and gives a description of the lot of wool by type, origin, and grade. Then he asks for bids. All bids are made by bona fide buyers. Most of the bids advance by a quarter of a cent. The auctioneer is assisted by a ring man who checks the bid with the bidder and by one or more clerks who check on bids, sales, and lots that are passed. Ring men do not solicit bids.

The grower has a right to place a reserve bid on his clip, which he usually does. The high bidder either has the clip knocked down to him in the ring or passed to him at his bid. If his bid does not equal the reserve bid and the clip is passed to him, he has the sole privilege for the next twenty-four hours of dealing privately with the owner of the wool. The auction firm brings the bidder and owner together by telephone or personal interview. Whether this practice has benefited the grower or not is difficult to determine. It seems not to have discouraged the buyers; on the other hand, neither the grower nor the bidder shows his full hand at the open auction, and it is possible, if too much of the wool is sold by private treaty, that it will defeat some of the purposes of the auction. In most instances of private-treaty sales, the buyer raises his bid and

the grower lowers his asking price. Some growers have reported that very substantial raises in bids have been made following the open auction.

All sales are f.o.b. western auction point and the auction officials give buyers information on freight rates to eastern points.

If the wools are not disposed of at the auction sales or immediately following, the auction company arranges for a sale, with the grower's permission, whenever the market appears to justify it.

Buying Competition. A study of the bidding practices and a comparison of bids with Boston quotations indicates that competition at the auctions is real. Because topmakers and manufacturers are sometimes represented in the ring by dealers or order buyers, it is impossible to determine the number of each making bids. It is believed that the number of dealers and speculators greatly outnumber the topmakers and manufacturers, however, available information indicates that 60 to 70 percent of wool sold in the auction was purchased by topmakers and manufacturers. At certain sales, dealers outbid mill buyers, particularly on graded lots, however, it is not known whether these dealers were bidding for their own account or had buying orders from mills. There has been no doubt that some of the best buying power in the country has participated in the auctions.

Advantages of Auctions. Many growers who have patronized the auctions have expressed themselves in favor of them because, as they stated, it gives them an opportunity to make immediate sales. This condition, however, is not always true. Sometimes only a small percentage of the offerings may be sold with the result that clips may be held over for another auction sale several months later.

If the wool is properly appraised and shown, it is quite likely that each clip would sell at the auction on a grade and merit basis. The merits and faults of a clip show plainly when displayed along with other clips. Prices, therefore, should reach their proper level when buyers are bidding seriously.

Auctions are of educational value to growers, too, because for the first time a great many growers learn something about the grade and shrinkage of their clips. They are able to compare their clips with those of their neighbors and also with clips from other sections and other States. For the first time, too, actual sales prices are being made public and growers are comparing prices and finding out why one clip sells for more than another. Growers are enabled to know their handling and marketing costs and thus are able to figure the spread between local bids and Boston quotations.

Disadvantages of Auctions. A common criticism of the auctions has been the comparatively small number of manufacturers participating in the bidding. The buyer registration lists indicate that dealers have been in the majority at practically every sale. Some of the large manufacturers, have expressed a lukewarm attitude toward the auction method of selling. Some were very outspoken against auctions. Other manufacturers, when discussing the Eastern auctions, stated that they were not in favor of auctions or any other new system, but if auctions were held, they would certainly send a representative to attend them. It was learned that certain manufacturers, while not favorable to auctions, did purchase wool through them by giving their orders to an independent buyer or a dealer.

The argument put forth by some manufacturers is that they do not want their competitors to know what they are doing by bidding at auctions. These same manufacturers, however, buy at foreign auctions through brokers. Information concerning purchasing operations cannot usually be kept from the competitor, however, even when the manufacturer does not buy through an auction. The smaller manufacturers, especially those in the Western part of the country, appear to like the auction system. It offers them an opportunity to bid on certain small lots which they might not otherwise have a chance to buy.

Millmen have indicated that their main objection to auctions is that there is no assurance of getting the grade they want, thus necessitating the sale of substantial percentages of their purchases as rejects. (18)

Another disadvantage of auctions is the practice of having one sale day in the year rather than several.

Marketing Wool in Australia.

The great bulk of the wool exported from Australia is sold in the greasy state, not more than 5 percent being scoured in the Dominion. Roughly, 90 percent is sold at public auction at central markets in Sydney, Melborne, Brisbane, and elsewhere. Nearly three-fourths of the Australian clip is sold at Sydney, Melborne, and Brisbane, and the size of these sales, apart from the quality of the wool, justifies the attendance of large buyers from all over the world. The wool is consigned to the selling brokers at the ports of shipment - it is there stored on the brokers' premises and samples are drawn, valued as a basis for a reserve and

offered for inspection by buyers. These premises are, as a rule, very up-to-date, and the top floor, which is commonly devoted to sampling, always has special lighting facilities. (5 - p. 55)

The leading brokerage concerns are stock companies, formed through the sale of shares. Such stock may be held by anyone, and large blocks of it are to be found in wool producers' hands.

Some of the brokerage concerns are classed as cooperative, but the system of handling products and making returns is identical. The cooperative wool-brokerage houses are financed through selling stock, and the savings that accrue above operating expenses are returned to grower members on a patronage basis.

Sales Organization. There are three organizations in connection with the wool trade: 1. The Australian Wool Growers Council; 2. The National Council of Wool-Selling Brokers, which consists of all wool-selling brokerage houses, including cooperatives; 3. The Wool Buyers' Association. Naturally the selling brokers, who occupy an intermediate position, have agreements with both the producer and the purchaser. The relation with the producer will be considered first.

The broker holds no contract with the grower for the delivery of his wool except as he may have a claim to it on money advanced. This holds true of the cooperatives as well. Under these conditions, the grower is at liberty to consign his wool to the concern which he thinks can give him the best service or net him the greatest return for his wool,

The wool brokerage house does a strictly brokerage business and buys no wool for its own account. This is one point in favor of the grower. He

He is not compelled to have his wool in competition with privately purchased wool which might get the advantage of a good sale. The following are other conditions of the wool-brokerage house system which are favorable to the growers' interests:

The wool must be offered at auction sale, and the grower may set a minimum price which, if not reached, withdraws the wool from the auction. Such wool may be offered later at private sale under certain conditions.

Wool is sold or catalogued for sale in the order in which it arrives at the broker's warehouse, and at least 20 percent of the total clip must be in store to constitute an entry. This provides that early shorn and delivered wool is the first listed for sale, unless the grower wishes to reserve it for a later date, which must be done at the time of the arrival of the wool. It also prevents the delivery of a few bales out of a large clip in order to secure a place early in the sales, as was done occasionally before the 20 percent clause went into effect.

Advances on wool may be made upon such terms as the grower and broker may determine. There is no specific rule covering the amount or rate of advance, except as may be agreed upon in conjunction with the Australian Wool Growers Council.

The broker furnishes storage space for holding wool and show floors for displaying auction lots, and he covers the wool with insurance. The charge for this service appears to be uniform. He also places approximate valuations on the wool as it enters his stores, for the growers' guidance.

The broker prepares catalogs for the auction sales, listing each consignment offered as to markings, grade, and such items, and in conjunction with other brokers, he determines the time of each series of auction sales.

There are certain matters which the associations of brokers and wool producers work out jointly, in a meeting of the two bodies. These are as follows:

They allocate the quantity of wool to be offered at any series of sales or during any month, and work out quantities to be offered by each selling center, based on quantity of wool held in such centers on a percentage basis.

They determine the time of sales and the period through which they may run. This period generally covers about seven months.

They arrive at some basis for financing the clip, depending on its character and other factors.

The National Council of Wool-Selling Brokers and Wool Buyers' Association are voluntary organizations and have no Government supervision or control. Agreements reached may be changed from time to time as the exigencies of the business may demand.

The National Council of Wool-Selling Brokers determines: 1. The brokerage fee charged; 2. Storage and insurance rates; 3. Terms of sale, jointly with the wool buyers.

Showing the Sample Bales. All sample bales must be shown on top floors only, and must be properly lighted and spaced for easy inspection. In five to ten bale lots, three bales are shown, 20 percent of lots over

ten and under twenty bales, 15 percent of lots of twenty bales or over and under one hundred bales, and 10 percent of lots of one hundred bales or over. The bales are drawn at random so that they may more fully represent the entire lot. For bales not carrying the original branch of the grower, a greater percentage of the lot must be shown.

Quantities Offered. The offerings are divided into two classes - large lots consisting of five bales or more of one type of wool and star lots of four bales or under. These classes of wool are catalogued separately and are shown on different floors in the auction room. Under certain conditions, it is permissable to combine two or more lots of the same type and grade from different owners so as to make large lots. In this event, all original marks or brands must be kept intact. This practice is called interlotting.

Repacked or Reconditioned Wool. Repacking or reconditioning must not be done by the broker who sells the wool, but is done at separate stores under authorized classers, and the wool, when placed on sale, is designated as having been classed or reclassed at such authorized place.

Small lots may be so classed and the wool of various owners combined to make uniform lots. It is then sold as reconditioned wool and bears some distinctive brand to identify it. In such cases, growers are credited with the quantity of wool of each type or grade which they contribute to the lot and are paid according to prices received for the various grades.

Wool is not permitted to come up for auction more than twice in one season, nor can it be transferred to another broker for sale after a bid has been rejected. If the wool is not sold after being offered the second

time, it must be disposed of privately. No wool can be offered at private sale unless it has been first offered at auction, and then not until the last bidder has been notified in writing and given an opportunity to purchase the lot at the reserve prices. From two to three days time is granted the bidder in which to make his decision.

Bidding is done orally, and after the initial bid all bids must advance at least a farthing (1/2 cent) a bid. Sales are put through very rapidly, averaging around four hundred lots an hour.

Sales are made on guaranty that outweights shall total or exceed inweights. The inweight is the amount invoiced to the buyer, however, unless outwieghts are demanded.

The buyer is allowed three days in which to pay for the wool and remove it from the store. After this period, storage charges are made and a fee is granted the selling broker for delivery of the wool. An allowance of one pound tare of each one hundred twelve pounds is made to the buyer and eleven and one-half pounds is allowed for each bale. This tare allowance of one pound is an old-established custom and really amounts to almost 1 percent discount, as most wool gains in weight at seaboard and is purchased on inweights.

In the event of a dispute as to a sale, the matter is left to an umpire or arbitrator, and his decision is final.

Advantages of Present Australian System of Wool Marketing. The chief advantages of the present system of marketing wool in Australia, as revealed by the present study, may be summarized as follows:

Classing of wool provides exactly the type and grade which the buyer desires, without his having to consider the resale value of "offsorts". Some other concern may be interested only in wool that is not useful to the first purchaser, and each party will pay more for the wool which is just what he wants. For example, a mill interested in staple wool may have no use for the percentage of clothing wool found in cases in which the entire fleece is put up together; another buyer may want only clothing wool, or one mill may want only wool free from burrs, whereas another may not be so exacting. All wool is classed before it enters the process of manufacture, and mills that purchase unsorted or unclassed wool must make estimates on "offsorts" sufficiently high to make themselves safe and allow for extra expense and transportation costs in the disposition of such wool. All of these charges come out of the grower's returns and could be eliminated by classing wool before it is sold to mills.

The handling of wool by marketing firms on a brokerage basis tends to react to the owner's advantage. Such firms are dependent upon the good will of their clients for continuation in business and so must render efficient service at fair rates.

The understanding between growers' and brokers' associations as to the quantity of wool to be offered from time to time prevents, to some extent, market gluts and resultant price drops. It also gives the producer some voice in the sale of his product.

The auction sale system as developed in Australia, is perhaps the best that could be devised for such a country, as wool is a product that

is almost wholly exported (less than 5 percent is manufactured locally), and which commands the attention of the whole textile world on account of its volume and quality. This provides an abundance of competition for all of the various types of wool produced and sales generally reflect the world's current values. Holding the sales at the point of origin permits the closest and cheapest delivery of the product to any purchasing country, without added charges.

The education of boys in the technical side of sheep and wool production and classing in agricultural and technical schools, provides a great number of men who are capable of preparing wool for market and of intelligently breeding sheep. This assures a constant supply of trained men for every branch of the business.

The classing of his wool and its subsequent comparative value affords the producer an index to his breeding operations which should be of great benefit to him.

The number of wool-brokerage houses engaged in handling wool are few, thus affording a good volume of business for each and the corresponding advantages of better-trained men, wider trade contracts, and lower overhead expense. Only twenty-five houses were reported by Dalgety as operating in marketing the Australian wool clip - of these, ten concerns handled 80 percent of the business. In the United States over four hundred central dealers and a large number of local buyers are employed in buying and disposing of a wool clip much smaller in size.

In Australia, where the sheep producing area is much more extensive than that of the United States and with wool production about five times

as large, the clip is sold through only six strategic marketing centers, namely Sydney, Melbourne, Brisbane, Adelaide, Perth, Geelong, and Albury. (8 - p. 12)

Marketing Wool in New Zealand

In broad outline, the system of marketing in New Zealand corresponds to that in Australia. Nearly all wool is sold by public auction at the ports of dispatch. The wool markets in New Zealand are Wellington, Auckland, Dunedin, and Cristchurch. (5 - p. 62)

Marketing Wool in South Africa

Modern methods of wool selling in South Africa have developed coincident with better wool production. In fact, a distinct relation may be seen between the two. It is somewhat debatable whether a better method of merchandising came about through the efforts of those who were improving their flocks to obtain full value for their wool, or whether the institution of a sales system which included payment according to the value of the clip led to a better product. (8 - p. 19)

Until the First World War, production conditions and outworn marketing methods combined to gain an unenviable reputation for South African wools in the buying centers. The employment of comparatively unskilled labor, shearing under poor conditions, and the sale of wool to up-country dealers and storekeepers, who were financed by large suppliers on the coast and who, in turn, financed the producer, all reacted adversely on the clip. "Get-up" was bad, complaints of deceitful packing were frequent, and little or no differentiation in price was made by the pedler-purchaser

between "good" and "bad" wool. A rapid advance, both in the improvement of South African wools and methods of marketing, has taken place in recent years. (5 - p. 66)

There is no doubt that the enhanced values during the First World War, and governmental control had much to do with bringing about a better system of wool selling. By 1927, about 90 to 95 percent of the wool of the Union was handled on a brokerage basis for the account of the producer or through his own cooperative associations. The small portion which was purchased outright was similarly disposed of by the buyers, so that practically the entire clip passed through the hands of the brokers.

The system of marketing varies somewhat in different centers as to minor details, but in the main the methods are similar. No central organization exists which controls wool movements and prices as in Australia, but each wool center maintains an organization of brokers controlling such matters as apply to that particular market. Growers have no such organization representing them as a whole, nor are there even units of growers near marketing centers, but their interests are represented to a certain extent by the brokers, whose local organizations enter into agreements with those of the buyers as to terms of sale, quantities offered, and withdrawals.

The most rapidly growing wool center is Durban. Here are found the strictly enforced rules covering wool selling, which are made and enforced by the Durban Wool Brokers Associations. Briefly these are as follows:

1. All wool coming into the market must first be offered at public auction.

2. No buyer can obtain wool except as so offered or through private sale after it has been so offered through recognized brokerage houses. This prevents buyers from acquiring wool purchased outright from the growers at private treaty.

3. Sales are held weekly during the season, which covers approximately five months, beginning in November and ending early in April - offerings are made in the order of arrival of clips at brokers warehouses.

4. Buyers can demand that all of a clip be placed on the sale floor for inspection, if desired.

5. All lots of two bales or under are classed as star lots and are offered separately.

6. Interlotting may be done at the discretion of the broker.

7. Reclassing may be resorted to, but this is not generally done. An additional charge is made for reclassing.

8. Brokerage charges run from 1 1/2 to 2 1/2 percent for selling, depending upon the size of the clip, plus storage, insurance, and cost of delivery to the buyer. A charge of 24 cents per bale is made for lotting and $1.20 per bale for pressing and marketing.

In Capetown and Port Elizabeth some wool is purchased through private treaty between the buyers and the brokers. At East London the bulk of the wool is so disposed of. There is no agreement to prevent buyers from obtaining wool direct from growers or storekeepers except at Durban. Some growers state that the reason Durban is growing so rapidly as a wool center

is because the regulations in force there protect the producer better than do those of other centers. (8 - p. 20)

Marketing Wool in South America

The major share of all wool entering international trade is sold by public auction. The South American countries are the only important world market centers where farmers sell their wool by private treaty. During World War II, South American wools continued to be sold in a free market, with the United States being by far the largest buyer throughout the War period.

The South American countries have found it more profitable to evolve breeds of a dual-purpose type. Today crossbred wool constitutes 86 percent of the clips of Argentina and Uruguay. (1 - p. 96)

CHAPTER IV

SKIRTING AND GRADING MONTANA WOOL

The "preparation for market" differentials between prices for domestic wools and prices for foreign wools are well known. However, the uneconomic practices of the United States wool growers in packing wool for market give use to these differentials.

Australian wools, to cite an example, are skirted and classed as the fleeces come from the shearing floor. This practice results in relatively homogeneous packages of wool, regardless of the wool type.

In contrast with the Australian practice, United States growers pack fleeces without being skirted, and often without tagging. Burry and seedy wool frequently may be packed with clean wools, and sometimes black or gray wools are found in the same bag with white wools. Such practices have given rise to trade practices of making flat discounts for tags and other off-wools regardless of whether they have been packed separately by growers.

Even where wools are packed free of tags and offs, the fleeces in each package are unskirted and of several grades. All of the wools from the farm states have to be graded before sale to mills. Many of the range clips, however, may be sold in original bags, since these clips often comprise large quantities of relatively uniform fleeces.

Better preparation of wool for market may aid in establishing a sounder marketing program for domestic wools.

Primary consideration has been given in this study to the feasibility of skirting fleeces at the shearing floor and to segregation of off-wool. Consideration has also been given to the grading of wool at the shearing shed.

Actual Skirting and Grading Process

The skirting and grading project was carried out in cooperation with the Montana Wool Laboratory and the United States Department of Agriculture. Cooperating wool growers were the C-B Bar Livestock Company and Wm. Gaugler. A total of 5,723 fleeces was skirted and graded.

The skirting and grading work was done at the C-B Bar Livestock Company shearing shed, located three and one-half miles from Judith Gap in central Montana. Both operations were carried out under direct supervision and guidance of Wm. Hartpence, a commercial wool grader from Billings, Montana.

The following men participated in the skirting process in addition to Hartpence:

G. Curtis Hughes. .Supervisor, Montana Wool Laboratory
James Drummond. . .Assistant Supervisor, Montana Wool Laboratory
Owen S. Wirak . . .Graduate Student, Montana State College
Leslie Burnham. . .Wool Grader, United States Department of Agriculture

At least two of the above men assisted Hartpence at all times.

The shearing crew consisted of eight men for four and one-half days and nine men for one and one-half days. These men were clean, fast shearers, averaging one hundred twenty to one hundred thirty sheep in an eight-hour day. Shearing operations began at eight in the morning and ended at five in the afternoon.

Figure 1, on the following page shows the arrangement of the shearing and skirting facilities. The shed was inadequately lighted, especially in the afternoon, thus necessitating the use of artificial light at all

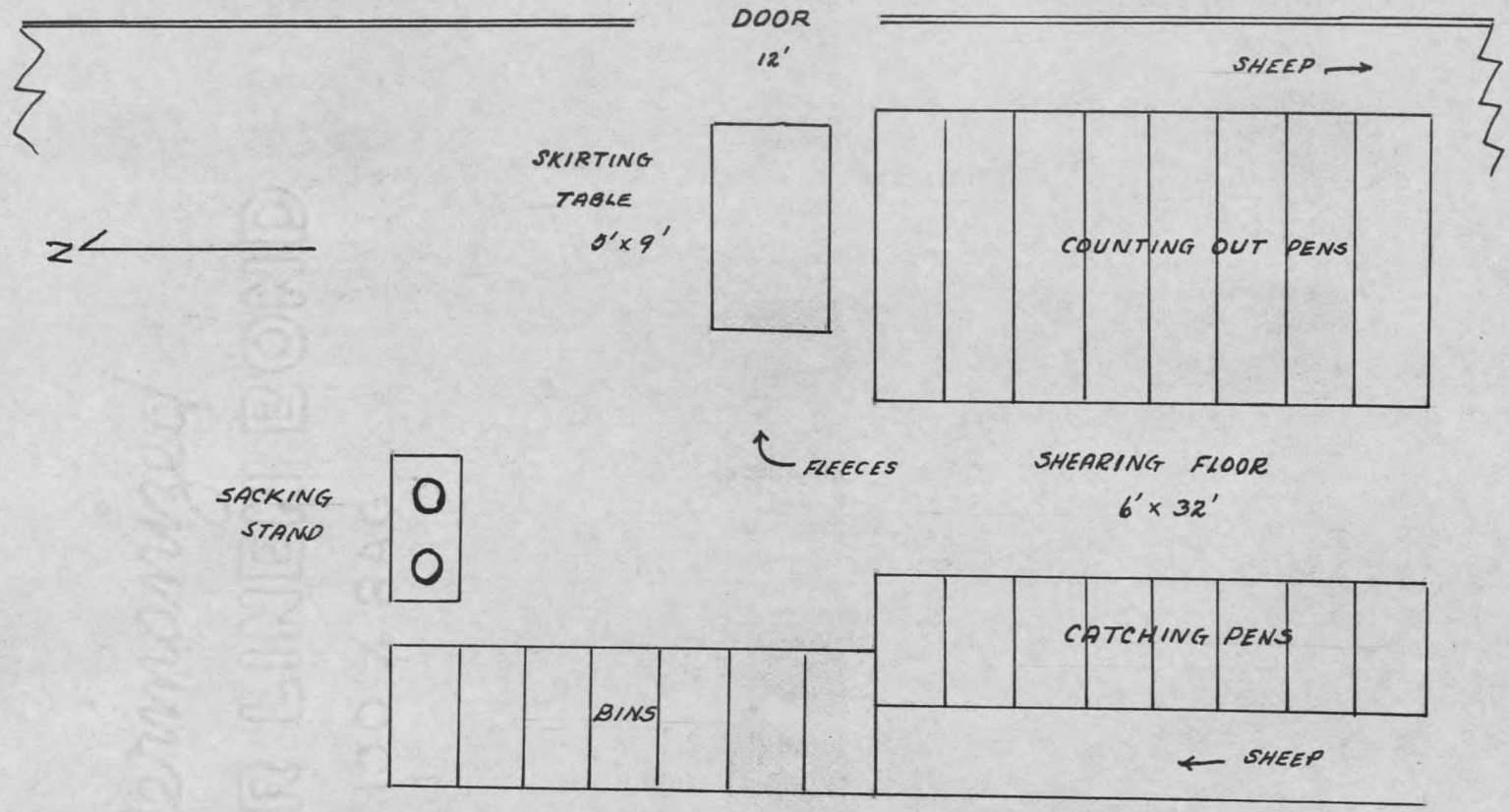


FIGURE 1 - PORTION OF C-B BAR LIVESTOCK COMPANY SHEARING SHED SHOWING SHEARING FLOOR AND SKIRTING FACILITIES

times. The skirting table had a slatted top which allowed small dung balls, fribs, twice-cut wool, etc., to fall through to the floor underneath.

Method of Operation. The fleece carrier, using a large burlap apron, carefully removed the fleece from the shearing floor and tossed it onto the skirting table with the weathered side up. The first process was to remove the belly wool which was binned separately. Next, hairy britches, chaffy necks, stained wool, and other inferior wool was removed whenever found. The fleece was then graded and classified and passed on to the fleece-tier. After rolling and tying, the tier placed the fleece in the proper sack or bin, whichever the case might be. Each grade-line and off-sort was bagged separately and the bags branded with the bag number, grower's brand, grade, and classification. Since no definite contract had been made with any mill in regard to purchase of the wool, it was thought advisable to tie all fleeces so that their individual identity could be maintained.

As much as possible, the sheep were segregated as to black wool, ewes, bucks, and yearlings before they were put into the holding pens. This speeded up work at the grading table and it was especially helpful in keeping the off-color wool from being mixed with the white wool.

The growers of both clips were on hand throughout the whole process and it offered the opportunity for them to learn a great deal more about their sheep and wool than they had ever known before. They were soon able to distinguish between the various grades and to realize the need for skirting.

The bins were not large enough to store a sufficient quantity of the skirted wool and it was difficult for the grader to keep his lines straight, since there was little opportunity to check his sorts to see if he was grading too high or too low.

After shearing operations were completed in the evening and before they began in the morning, the material under the skirting table was sorted into tags and grading locks and wool remaining in the bins was sacked to allow room for the next day's work.

Grades and Off-Sorts Made. Table III shows the various grades and off-sorts made from both of the clips. The C-B Bar Livestock Company clip consisted of almost 70 percent fine wool as contrasted with 55 percent for the Wm. Gaugler clip. The yearling wool of both clips was better-grown, of longer staple, and of lighter shrink than the ewe wool, therefore, the fine and half blood yearling fleeces were bagged separately.

Labor Costs. Tables IV and V show the number and type of sheep owned by each grower, the actual cost of shearing, and the additional costs due to the skirting and grading process. The fleeces of both clips averaged approximately eleven pounds, grease weight.

TABLE III - GRADES AND OFF-SORTS MADE

GRADE	C-B Bar Livestock Company Clip			Wm. Gaugler Clip		
	No. of Bags	Pounds*	Percent of Total Wt.	No. of Bags	Pounds*	Percent of Total Wt.
Fine Staple & Good French	53	18,154	45.1	26	7,897	38.7
Fine Average French	16	4,349	13.3	8	2,394	11.7
Yearling Fine Staple	14	4,632	11.5	3	957	4.7
Total Fine Wool	83	28,135	69.9	37	11,248	55.1
1/2 Staple & Good French	11	3,017	7.5	12	3,367	16.5
Yearling 1/2 Staple	6	1,816	4.5	3	929	4.5
Total 1/2 Wool	17	4,833	12.0	15	4,296	21.0
3/8 Staple	5	1,090	2.7	4	991	4.9
1/4 Staple	1	145	.4			
Total Medium Wool	6	1,235	3.1	4	991	4.9
Fine & 1/2 Bellies & Pieces	9	3,142	7.8	6	1,943	9.5
Grading Locks	5	2,011	5.0	2	685	3.4
Black Wool	2	453	1.1	2(G)	109	.5
Britch Wool	4(G)	80	.2	1(G)	65	.3
Tags	1	330	.8	2	1,083	5.3
Total Off-Sorts	21	6,016	14.9	13	3,885	19.0
TOTALS	127	40,219	100.0	69	20,420	100.0

* Net Selling Weight

(G) Gunnysack

TABLE IV - LABOR COSTS OF SKIRTING AND GRADING

C-B Bar Livestock Company Clip

3,791 Fleeces Weighing 41,903 lbs.
Net Coring Weight
11.05 pounds grease wool per sheep
4.36 pounds clean wool per sheep

Sheep Sheared:

830 Yearlings
500 2-year-old ewes
700 3-year-old ewes
791 4-year-old ewes
680 5-year-old ewes
200 6-year-old ewes
90 bucks

Costs of Shearing:

Cost of shearing (30¢ per head)	$1,165.73
Tramper (1½¢ per fleece)	56.87
Other Labor	144.00
String (1¢ per fleece)	37.91
Meals	327.00
TOTAL COST	$1,731.51
Cost Per Fleece	.4567

Additional Cost due to Skirting and Grading Process:

1 Supervisor (1¢ per pound)	$ 419.00
1 Pick-up Boy (4 days @ $6.00 per day)	24.00
Meals (Approximately 48 @ $1.00 per meal)	48.00
Skirting and Grading Costs paid by C-B Bar Livestock Company	$ 491.00
Cost of 2 Skirters @ $8.89 per day each. (Borne by Montana State College)	71.12
TOTAL COST	$ 562.12
Cost per pound, Skirting and Grading	$ .0134
Cost per fleece, Skirting and Grading	$ .1482

TABLE V - LABOR COSTS OF SKIRTING AND GRADING

Wm. Gaugler Clip

1,932 Fleeces Weighing 21,037 lbs.
Net Coring Weight
10.89 pounds grease wool per sheep
4.30 pounds clean wool per sheep

Sheep Sheared:

250 Yearlings
400 2-year-old ewes
600 3-year-old ewes
500 4-year-old ewes
152 5-year-old ewes
32 Bucks

Costs of Shearing:

Cost of Shearing (30¢ per fleece)	$ 603.75
Wool Tramper (1½¢ per fleece)	28.98
Other Labor	72.00
String (1¢ per fleece)	19.32
Meals	163.50
TOTAL COST	$ 887.55
Cost Per Fleece	.4593

Additional Cost due to Skirting and Grading Process:

1 Supervisor (1¢ per pound)	$ 210.37
1 Pick-up Boy (2 days @ $6.00 per day)	12.00
Meals (approximately 24 @ $1.00 per meal)	24.00
Skirting and Grading Costs paid by Wm. Gaugler	$ 246.37
Cost of 2 Skirters @ $8.89 per day each. (Borne by Montana State College)	35.56
TOTAL COST	$ 281.93
Cost per pound, Skirting and Grading	$ .0134
Cost per fleece, Skirting and Grading	$ .1459

CHAPTER V

SELLING THE SKIRTED WOOL

Core Shrinkage Data. The wool from both clips was placed in a warehouse along the Great Northern right-of-way in Judith Gap immediately after bagging. Core samples were then taken from each lot and sent to the United States Department of Agriculture Wool Division laboratory at Denver, Colorado, for shrinkage determinations.

Tables VI and VII give the shrinkage data for each lot of wool in the clips. The total average shrinkage was almost exactly the same in both, although there was some variation in shrinkage between the same individual grades. Both growers underestimated the actual shrinkage of their respective clips.

The shrinkage data was sent to the growers within a few days after coring to assist them in marketing the wool. The growers, however, did not make the shrinkage figures available to prospective buyers.

Sale of Skirted Wool. The wool was stored in the Judith Gap warehouse from after shearing in June, 1948 to February, 1949, when it was finally sold by the growers to a Boston wool merchant, on a grease weight basis. During this time, the wool lost 2,301 pounds in total weight.

Several individuals and firms, other than the growers, endeavored to sell the skirted wool but no one individual or firm was given the exclusive commission to handle it. A representative of a certain wool firm which listed the wool said that his firm could not afford to spend a

TABLE VI - CORE SHRINKAGE DATA (1)

C-B Bar Livestock Company Clip

Grade	Coring Weight Pounds	Shrinkage Percent	Yield Percent	Selling Weight Pounds	Clean Weight Pounds
Fine Staple & Good French	18,822	59.8	40.2	18,154	7,298
Fine Average French	5,532	64.3	35.7	5,349	1,910
Yearling Fine Staple	4,830	59.4	40.6	4,632	1,881
1/2 Staple & Good French	3,192	56.2	43.8	3,017	1,321
Yearling 1/2 Staple	1,859	55.3	44.7	1,816	812
3/8 Staple	1,237	52.2	47.8	1,090	521
1/4 Staple	148	50.3	49.7	145	72
Fine & 1/2 Bellies & Pieces	3,292	64.2	35.8	3,142	1,125
Grading Locks	2,082	70.9	29.1	2,011	585
Black Wool	492	52.0*	48.0*	453	217
Britch Wool	82	50.0*	50.0*	80	40
Tags	335	74.4	25.6	330	85
TOTALS	41,903			40,219	15,867

Total Average Shrinkage. 60.54%

Difference in Coring and Selling Weights . . . . .1,684 pounds

(1) Core samples were tested at the P.M.A. Wool Division Laboratory in Denver, Colorado.

* Visual appraisal.

TABLE VII - CORE SHRINKAGE DATA (1)

Wm. Gaugler Clip

Grade	Coring Weight Pounds	Shrinkage Percent	Yield Percent	Selling Weight Pounds	Clean Weight Pounds
Fine Staple & Good French	8,095	59.6	40.6	7,897	3,190
Fine Average French	2,464	62.4	37.6	2,394	900
Yearling Fine Staple	978	55.6	44.4	957	425
1/2 Staple & Good French	3,470	59.6	40.4	3,367	1,360
Yearling 1/2 Staple	946	57.0	43.0	929	400
3/8 Staple	1,016	53.8	46.2	991	458
Fine & 1/2 Bellies & Pieces	2,033	62.8	37.3	1,943	725
Grading Locks	713	64.8	35.2	685	241
Black Wool	122	52.0*	48.0*	109	52
Britch Wool	68	50.0*	50.0*	65	33
Tags	1,132	74.5	25.5	1,083	276
TOTALS	21,037			20,420	8,060

Total Average Shrinkage. 60.53%

Difference in Coring and Selling Weights . . . . . .617 pounds

(1) Core samples were tested at the P.M.A. Wool Division Laboratory in Denver, Colorado.

* Visual Appraisal.

great deal of time or money selling the wool to best advantage since it might be sold by someone else in the meantime.

The skirted wool sold for the same grease price as that offered in a pre-shearing bid of May, 1948 - 60 cents per pounds for all wool except black and tags, which sold for 40 cents and 30 cents per pound, respectively. Tables VIII, IX, and X give an analysis of the actual sales and the pre-shearing bid. Compared to the pre-shearing bid, the actual sales represented a total loss to both growers of $1,581.37, including $844.00 due to loss in weight and $737.37 which was the total skirting and grading cost borne by the growers.

Bids Resulting From the Skirting and Grading Process. In July, 1948, and as a result of the preparation job done on the clips, a dealer bid 65 cents per pound for all graded and belly wool and 35 cents per pound for the off-sorts. If the wool had sold at this bid, the growers would have received $2,817.73 more for their wool after deducting their costs of skirting and grading. Analyses of this bid, using coring weights, are made in Tables XI and XII. Clean values, are given for all the various lots to facilitate a comparison of the prices by grades of the several bids.

A Boston wool mill bid $1.70, clean basis, for all fine wool and $1.53 for all half blood wool in September, 1948. Selling at this bid with the medium wools and off-sorts going to the Commodity Credit Corporation, would have netted the growers $830.07 more than actual receipts after deducting their skirting and grading costs. This bid is outlined in Tables XIII and XIV, using actual selling weights.

TABLE VIII - ACTUAL MARKETING REPORT (1)

C-B Bar Livestock Company Clip

Grade	Selling Weight Pounds	Selling Price Grease Basis	Clean Price Equivalent	Gross Return
Fine Staple & Good French	18,154	$ .60	$1.49	$10,892.40
Fine Average French	5,349	.60	1.70	3,209.40
Yearling Fine Staple	4,632	.60	1.48	2,779.20
1/2 Staple & Good French	3,017	.60	1.37	1,810.20
Yearling 1/2 Staple	1,816	.60	1.34	1,089.60
3/8 Staple	1,090	.60	1.26	654.00
1/4 Staple	145	.60	1.21	87.00
Fine & 1/2 Bellies & Pieces	3,142	.60	1.68	1,885.20
Grading Locks	2,011	.60	2.06	1,206.60
Black Wool	453	.40	.83	181.20
Britch Wool	80	.60	1.20	48.00
Tags	330	.30	1.17	99.00
TOTALS	40,219			$23,941.80

Total Average Price, grease basis . . . . . $ .5952

Total Average Price, clean basis $1.51

(1) Wool sold to Boston Wool Merchant, February, 1949.

TABLE IX - ACTUAL MARKETING REPORT (1)

Wm. Gaugler Clip

Grade	Selling Weight Pounds	Selling Price Grease Basis	Clean Price Equivalent	Gross Return
Fine Staple & Good French	7,897	$ .60	$1.49	$ 4,738.20
Fine Average French	2,394	.60	1.60	1,436.40
Yearling Fine Staple	957	.60	1.35	574.20
1/2 Staple & Good French	3,367	.60	1.49	2,020.20
Yearling 1/2 Staple	929	.60	1.40	557.40
3/8 Staple	991	.60	1.30	594.60
Fine & 1/2 Bellies & Pieces	1,943	.60	1.61	1,165.80
Grading Locks	685	.60	1.70	411.00
Black Wool	109	.40	.83	43.60
Britch Wool	65	.60	1.20	39.00
Tags	1,083	.30	1.18	324.90
TOTALS	20,420			$11,905.30

Total Average Price, grease basis. . . . . $ .5830

Total Average Price, clean basis $1.48

(1) Wool sold to Boston Wool Merchant, February, 1949.

TABLE X - ESTIMATED GROSS RETURNS
SELLING BOTH CLIPS AT PRE-SHEARING BID MAY, 1948 (1)

C-B Bar Livestock Company Clip

39,376 lbs. Wool @ $ .60	$23,625.60
492 lbs. Black Wool @ $ .40	196.80
2,035 lbs. Tags @ $ .30	610.50
(Including 1,700 lbs. pre-shearing tags most of which were hand-sorted into higher value lots during the grading process.)	
Estimated gross return	$24,432.90
Actual gross return	23,941.80
Difference	$ 491.10

Wm. Gaugler Clip

19,783 lbs. Wool @ $ .60	$11,869.80
122 lbs. Black Wool @ $ .40	48.80
1,132 lbs. Tags @ $ .30	339.60
Estimated gross return	$12,258.20
Actual gross return	11,905.30
Difference	$ 352.90

(1) Wool dealer bid $ .60 per lb. for all good wool, $ .30 per lb. for tags, and $ .40 per lb. for black wool before shearing. Bid rejected.

TABLE XI - ESTIMATED GROSS RETURNS
SELLING AT JULY, 1948 BID (1)

C-B Bar Livestock Company Clip

Grade	Selling Weight* Pounds	Selling Price Grease Basis	Clean Price Equivalent	Gross Return
Fine Staple & Good French	18,822	$ .65	$1.62	$12,234.30
Fine Average French	5,532	.65	1.82	3,595.80
Yearling Fine Staple	4,830	.65	1.60	3,139.50
1/2 Staple & Good French	3,192	.65	1.48	2,074.80
Yearling 1/2 Staple	1,859	.65	1.45	1,208.35
3/8 Staple	1,237	.65	1.36	804.05
1/4 Staple	148	.65	1.31	96.20
Fine & 1/2 Bellies & Pieces	3,292	.65	1.82	2,139.80
Grading Locks	2,082	.35	1.20	728.70
Black Wool	492	.35	.73	172.20
Britch Wool	82	.35	.70	28.70
Tags	335	.35	1.37	117.25

Estimated gross returns. $26,339.65
Actual gross returns 23,941.80

Difference. . .$ 2,397.85

Total average price, grease basis. . . . . $ .6286

Total average price, clean basis $1.66

(1) Dealer bid $ .65 per lb. for all graded and belly wool and $ .35 per lb. for off-sorts. Bid rejected.

* Coring weights used.

TABLE XII - ESTIMATED GROSS RETURNS
SELLING AT JULY, 1948 BID (1)

Wm. Gaugler Clip

Grade	Selling Weight* Pounds	Selling Price Grease Basis	Clean Price Equivalent	Gross Return
Fine Staple & Good French	8,095	$ .65	$1.60	$ 5,261.75
Fine Average French	2,464	.65	1.73	1,601.60
Yearling Fine Staple	978	.65	1.46	635.70
1/2 Staple & Good French	3,470	.65	1.61	2,255.50
Yearling 1/2 Staple	946	.65	1.51	614.90
3/8 Staple	1,016	.65	1.41	660.40
Fine & 1/2 Bellies & Pieces	2,033	.65	1.74	1,321.45
Grading Locks	713	.35	.99	249.55
Black Wool	122	.35	.73	42.70
Britch Wool	68	.35	.70	23.80
Tags	1,132	.35	1.37	396.20

Estimated gross returns. $13,063.55
Actual gross returns 11,905.30

Difference. . $ 1,158.25

Total average price, grease basis. . . . . $ .6210

Total average price, clean basis $1.62

(1) Dealer bid $ .65 per lb. for all graded and belly wool and $ .35 per lb. for off-sorts. Bid rejected.

* Coring weights used.

TABLE XIII - ESTIMATED GROSS RETURNS
SELLING AT SEPTEMBER 10, 1948 BID (1)

C-B Bar Livestock Company Clip

Grade	Selling Weight In Grease	Selling Weight Clean Basis	Bid Clean Basis	C.C.C. Prices*	Gross Return
	Pounds				
Fine Staple & Fine French	18,154	7,298	$1.70		$12,406.60
Fine Average French	5,349	1,910	1.70		3,247.00
Yearling Fine Staple	4,642	1,881	1.70		3,197.70
1/2 Staple & Good French	3,017	1,321	1.53		2,021.13
Yearling 1/2 Staple	1,816	812	1.53		1,242.36
3/8 Staple	1,090	521		$1.20	625.20
1/4 Staple	145	72		1.13	81.36
Fine & 1/2 Bellies & Pieces	3,142	1,125		1.24	1,395.00
Grading Locks	2,011	585		1.00	585.00
Black Wool	453	217		.74	160.58
Britch Wool	80	40		.91	36.40
Tags	330	85		.80	68.00
			Estimated gross return		$25,067.33
			Actual gross return		23,941.80
			Difference		$ 1,125.53
			Total average selling price, clean basis	$1.58	
			Total average selling price, grease basis	$ .6233	

(1) Boston Wool Mill bid $1.70 clean basis for all fine wool and $1.53 for all 1/2 blood wool. Medium wools and off-sorts going to Commodity Credit Corporation.

* Approximate Commodity Credit Corporation prices. Skirting premium of $ .06 added to 3/8 and 1/4 blood wool prices.

TABLE XIV - ESTIMATED GROSS RETURNS
SELLING AT SEPTEMBER 10, 1948 BID (1)

Wm. Gaugler Clip

Grade	Selling Weight In Grease Pounds	Selling Weight Clean Basis	Bid Clean Basis	C.C.C. Prices*	Gross Return
Fine Staple & Good French	7,897	3,190	$1.70		$ 5,423.00
Fine Average French	2,394	900	1.70		1,530.00
Yearling Fine Staple	957	425	1.70		722.50
1/2 Staple & Good French	3,367	1,360	1.53		2,080.80
Yearling 1/2 Staple	929	400	1.53		612.00
3/8 Staple	991	458		$1.20	549.60
Fine & 1/2 Bellies & Pieces	1,943	725		1.24	899.00
Grading Locks	685	241		1.00	241.00
Black Wool	109	52		.74	38.48
Britch Wool	65	33		.91	30.03
Tags	1,083	276		.80	220.80
			Estimated gross return.		$12,347.21
			Actual gross return		11,905.30
			Difference		$ 441.91
			Total average selling price, clean basis.		$1.53
			Total average selling price, grease basis		$ .6047

(1) Boston Wool Mill bid $1.70 clean basis, for all fine wool and $1.53 for all 1/2 blood wool. Medium wools and off-sorts going to Commodity Credit Corporation.

* Approximate Commodity Credit Corporation prices. Skirting premium of $ .06 added to 3/8 blood wool prices.

CLEARANCED FOR PLOVER LINEN BOND

The growers were protected from a severe market break by the Commodity Credit Corporation purchase program. Tables XV and XVI give an approximate account of sales providing all the wool in both clips had been sold to the Commodity Credit Corporation at the time of the actual sale in February, 1949. Actual selling weights are again used.

TABLE XV - ESTIMATED GROSS RETURN
SELLING ALL WOOL TO COMMODITY CREDIT CORPORATION

C-B Bar Livestock Company Clip

Grade	Selling Weight In Grease	Selling Weight Clean Basis	C.C.C. Price*	Skirting Premium/	Total C.C.C. Price	Gross Return
	Pounds	Pounds				
Fine Staple & Good French	18,154	7,298	$1.30	$ .07	$1.37	$ 9,998.26
Fine Average French	5,349	1,910	1.24	.07	1.31	2,502.10
Yearling Fine Staple	4,632	1,881	1.32	.07	1.39	2,614.59
1/2 Staple & Good French	3,017	1,321	1.25	.07	1.32	1,743.72
Yearling 1/2 Staple	1,816	812	1.27	.07	1.34	1,088.08
3/8 Staple	1,090	521	1.14	.06	1.20	625.20
1/4 Staple	145	72	1.07	.06	1.13	81.36
Fine & 1/2 Bellies & Pieces	3,142	1,125	1.24		1.24	1,395.00
Grading Locks	2,011	585	1.00		1.00	585.00
Black Wool	453	217	.74		.74	160.80
Britch Wool	80	40	.91		.91	36.40
Tags	330	85	.80		.80	68.00

Estimated gross return $20,898.51
Actual gross return 23,941.80

Difference . . . $ 3,043.29

Total average selling price, clean basis $1.32
Total average grease equivalent price . . . . . $ .5196

* Approximate 1949 C.C.C. price.

/ Skirting premiums: 60's and finer, $ .07 per lb. clean basis; 48's and 58's, $ .06 per lb. clean basis

TABLE XVI - ESTIMATED GROSS RETURN
SELLING ALL WOOL TO COMMODITY CREDIT CORPORATION

Wm. Gaugler Clip

Grade	Selling Weight In Grease Pounds	Selling Weight Clean Basis Pounds	C.C.C. Price*	Skirting Premium/	Total C.C.C. Price	Gross Return
Fine Staple & Good French	7,897	3,190	$1.30	$ .07	$1.37	$ 4,370.30
Fine Average French	2,394	900	1.24	.07	1.31	1,179.00
Yearling Fine Staple	957	425	1.32	.07	1.39	590.75
1/2 Staple & Good French	3,367	1,360	1.25	.07	1.32	1,795.20
Yearling 1/2 Staple	929	400	1.27	.07	1.34	536.00
3/8 Staple	991	458	1.14	.06	1.20	549.60
Fine & 1/2 Bellies & Pieces	1,943	725	1.24		1.24	899.00
Grading Locks	685	241	1.00		1.00	241.00
Black Wool	109	52	.74		.74	38.48
Britch Wool	65	33	.91		.91	30.03
Tags	1,083	276	.80		.80	220.80
			Estimated gross return.			$10,450.16
			Actual gross return			11,905.30
					Difference. . .	$ 1,455.14

Total average selling price, clean basis $1.30
Total average grease equivalent price. . . . . .$ .5118

* Approximate 1949 C.C.C. prices.

/ Skirting premiums: 60's and finer, $ .07 per lb. clean basis; 48's to 58's, $ .06 per lb. clean basis.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary

1. Wool is one of the few remaining agricultural commodities which, as a general rule, is not sold by the grower on its merits.

2. Domestic wools in a free market usually sell at a clean price several cents less than foreign wools of comparable grade. This is largely because domestic wools are prepared for market in a manner inferior to foreign wools.

3. In general, domestic producers offer wool for sale without knowing its shrinkage, grade, or quality, whereas the buyer is usually equipped to know the value of the wool.

4. Growers still suffer from the "average price" or "area buying" system of marketing.

5. Wool growers have been greatly enlightened on the nature of their wool clips as a result of the Commodity Credit Corporation buying program and the core-sampling for shrinkage program carried on by the United States Department of Agriculture and the various college wool laboratories.

6. Wool is purchased from American growers by a great variety of methods whereas 90 percent of Australian wool is sold at public auction.

7. Only twenty-five houses were reported by Dalgety as operating in marketing the Australian wool clip as contrasted to the United States where over four hundred central dealers and a large number of local buyers are employed in buying and disposing of a wool clip much smaller in size.

8. Primary data was obtained from skirting, grading, and marketing 5,723 fleeces from two central Montana range sheep clips.

9. The skirted wool finally sold for the same price per pound as that offered in the pre-shearing bid.

10. Two separate bids were made on the clips which reflected the enhanced value of the wool due to the skirting and grading job. These bids were rejected. If the wool had been sold at either of these bids, the growers would have received considerably more than they actually did, even after deducting costs of skirting and grading.

Conclusions

1. An outstanding deficiency in the grower's equipment for the efficient production and marketing of wool is his lack of knowledge of market grades and classifications.

2. Although grading is a function carried on in the past, only by dealers, commission merchants, cooperatives, and pools, growers should become acquainted with that operation and what it means to them in terms of returns from the wools they produce.

3. Determination of the shrinkage of grease wool is one of the most important problems facing the wool grower. The core-testing method of estimating shrinkages, as developed by the Department of Agriculture, has proved to be a reliable method, and is more accurate than the "estimates" used by the trade.

4. Better preparation of wool for market should aid in establishing a sounder marketing program for domestic wools.

5. Corral skirting does not appear to be practical because:

a. There is a lack of trained personnel to supervise the process.

b. Mills are slow to accept the finished product.

c. The volume of wool in the various grades and sorts is often too small to attract bids reflecting the true value of the wool.

d. There are few shearing sheds which are adaptable to the necessary operations.

e. It is difficult to grade accurately under conditions ordinarily encountered.

6. The skirting and grading job is an educational demonstration for the wool grower.

7. Corral grading on mill order of some of the larger clips may be practical providing there are:

a. Large bins for graded wool.

b. Adequate lighting.

c. Skilled personnel.

8. Uniform wool "grade", and "classifcation standards" recognized by all factions of the wool industry, are needed.

9. More wool should be sold by growers on a clean basis.

10. The auction system of selling wool should be used to a greater extent.

11. An equitable appraisal for preparing wools on the shearing floor cannot be known until the mills have an opportunity to see and buy such wools.

All but one of the bids submitted for the purchase of the wools in this study were by middlemen.

12. American wool growers can improve their marketing status and inventory values by accomplishing the following practices:

a. Careful selection of rams from flocks with a high average production record.

b. Grade all ewes each fall for lamb production, grade uniformity of fleece and staple length.

c. Sell the wool clip on a clean price basis (must be uniform for grade and length) with the yield to be determined.

13. The american method of manufacture developed during the war (whole fleece used and not skirted or sorted) will probably eliminate the need of fleece preparation except for tags. The future competitive position of fibers will require growers to produce even fiber length and uniformity within the fleece.

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