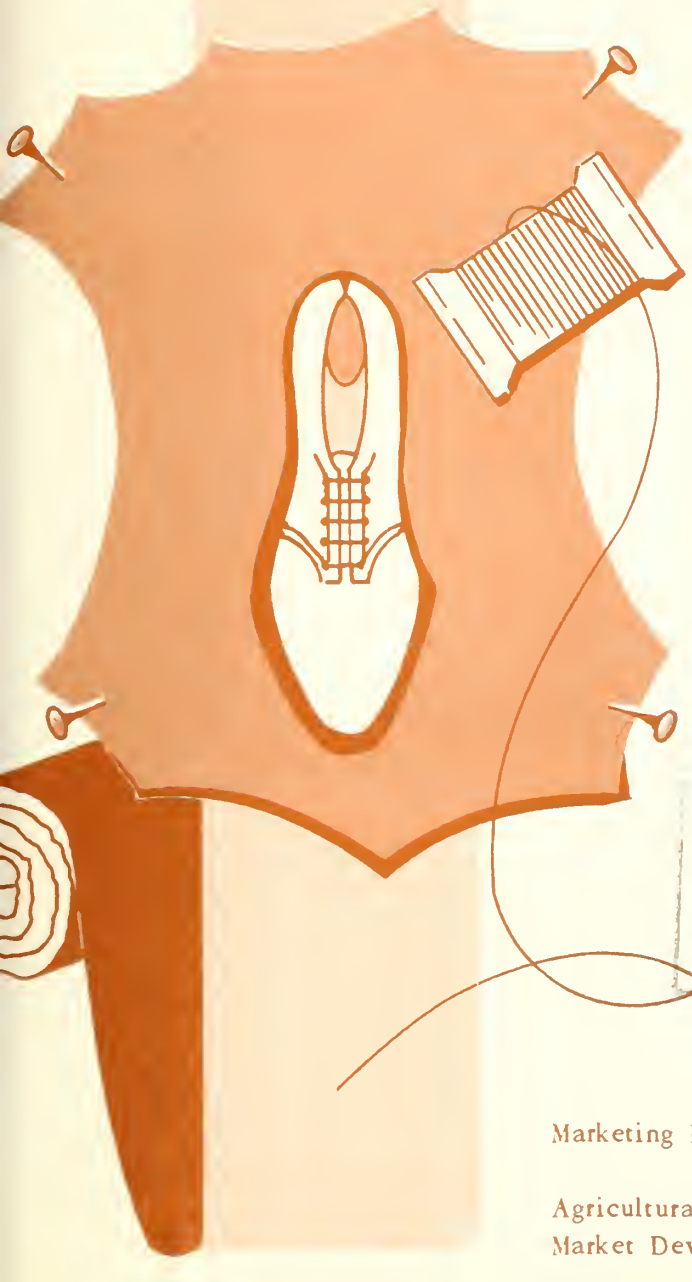
Manufacturers' Opinions OF COTTON AND LEATHER USED IN SHOES



Marketing Research Report No. 392

Agricultural Marketing Service
Market Development Research Division

UNITED STATES DEPARTMENT OF AGRICULTURE

PREFACE

This report deals with the industrial consumption of agricultural products in the shoe industry. The study was conducted by the Market Development Research Division, Agricultural Marketing Service, as part of a broad program of continuing research to expand the consumption of farm products.

It is designed specifically to provide information to the cotton and leather industries which will be helpful to them in maintaining or expanding markets for these agricultural products, and to provide guidelines to the shoe industry concerning probable future trends in shoe construction and material usage.

The research was performed under the general direction of Trienah Meyers. Pauline Kartalos assisted in the study. L. Yvonne Clayton supervised the data processing.

Major responsibility for the study rests with the Agricultural Marketing Service, with cooperation and advice from other services in the Department, the National Shoe Manufacturers Association, the National Cotton Council of America, and the Tanners Council of America.

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MANUFACTURERS' OPINIONS OF COTTON AND LEATHER USED IN SHOES

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HIGHLIGHTS

Cotton and leather continue to play an important role in the manufacture of shoes. Competition from manmade materials, however, appears to be increasing steadily.

Shoe linings continue to be an item using large volumes of cotton. Almost two-thirds of the shoes produced in 1958 contained vamp or forepart linings made of cotton or part cotton; approximately a third had cotton quarter linings.

Cotton thread was used in some 85 percent of the 1958 shoe production; nylon in about 40 percent. For the time being, at least, the competition between cotton and nylon for the thread market seems to have resulted in an uneasy type of stalemate, with both materials having their place. Nylon offers strength, but at relatively high cost; cotton is less sturdy, but is easier to work with, and much less expensive. Thus, nylon tends to find its way into stress points and cotton in those parts where strength is less important.

The shoe lace market belongs almost exclusively to cotton. About 80 percent of all lace-style shoes come with cotton laces. Men's and boys' shoes provided the largest market for laces; women's shoes accounted for the smallest. However, in total, half of the 1958 output of shoes contained no laces.

The major selling feature of cotton as a shoe material is its low cost. Only after price is dispensed with does the discussion turn to the desirable

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1/ Mr. Levine is a former staff member of Agricultural Marketing Service.

absorbent qualities of cotton as a lining material, to the fact that cotton threads are easy to sew with and don't overheat the needle, cotton laces retain their shape and stay tied, cotton uppers are attractive and easy to produce and, overall, cotton has "known" qualities.

Lack of durability is the single major disadvantage of cotton, no matter what the part of the shoe. On a somewhat broader framework, however, executives complained that the cotton industry's program of education and assistance was not as active as that of the producers of synthetic materials.

Leather remains the most popular and prevalent shoe upper material. It found its way into 85 percent of the 1958 output. Leather's assets are many, including the feeling of comfort it provides, its good appearance, its favorable dyeing characteristics, and its durability. A lack of uniformity in the hide which results in production problems and increased cost was the major disadvantage of leather.

Rubber, both natural and synthetic, led the list in the outer-sole market, with 48 percent. Leather soles account for only a third of the annual production, followed by composition materials. Durability is the key requirement for a soling material, followed by a need for flexibility and for comfort to the foot.

Style changes begin in the high priced shoes and gradually work their way down through the industry. Copying the styles and ideas of others appears to be the rule of the day, so that company "stylists" in many cases are only "style tailors." Shoe retailers, those nearest the shoe-wearing public, strongly affect manufacturers' decisions on styles and materials, but price remains a major governing factor. Others playing an important role are the manufacturers' sale staff, and company stylists, particularly among the larger concerns. The ultimate authority, however, clearly rests with top management.

The vulcanization process of shoe construction, the production of molded shoes and parts, and an increased use of synthetics are among the future changes foreseen by industry experts. If these changes take place, leather will probably suffer at least a partial loss of some of the markets it now holds.

As far as cotton is concerned, officials in almost two-thirds of the industry felt that moderate changes in the price of cotton, whatever the direction, would have almost no effect on its use. A substantial increase in price, on the other hand, might result in shifts away from cotton. Future opportunities for cotton lie in the expanded use of coated cottons both for shoe uppers and cotton linings.

These results were obtained through a national survey of 81 shoe manufacturers selected in such a way as to represent the entire industry. The study was conducted between October 1958 and January 1959.

INTRODUCTION

The shoe industry is reported to be the second largest industrial user of cotton in the United States today, but potential annual consumption is thought to be much greater than the estimated 168,500 bales used by the industry in 1958. 2/ Despite an overall increase in shoe and slipper production of some 100 million pairs from 1948 to a total output of 582 million pairs in 1958, comparable gains have not been recorded in cotton utilization. Instead, nylon threads, nylon and silk mesh toppings and inserts, and plastics for many uses have all found their way into the industry in increasing amounts. The trend toward lighter, unlined shoes also has had an effect on cotton's situation.

The situation is much the same for leather. In the period between 1947 and 1958, the proportion of shoes made with leather soles dropped from 74 percent to 33 percent of total production, while the use of rubber and composition soles more than doubled. In similar fashion, the use of leather uppers declined somewhat in this period (from 90 percent in 1947 to 80 percent in 1958).

With cotton and leather facing further inroads from the newly developed synthetics, it is imperative that the natural raw materials be improved in ways best calculated to place them in a strong competitive position.

For the processors and fabricators of the materials used in shoes, then, this research supplies information regarding characteristics that industry considers desirable and undesirable in the materials. The results should stimulate efforts to improve existing agricultural products. To those industries dependent upon shoe manufacturing for the bulk of their business, information is provided on the extent of usage of their products along with their strong and weak points. More important, from the standpoint of the shoe manufacturer, this research presents the large and small companies with an overall view of the trends and expected changes in shoe construction and materials, information which may serve them in future planning and designing.

Scope of the Study

This study deals with "conventional footwear." Conventional footwear includes shoes and slippers of leather, part-leather, or other materials which are produced on shoe machinery by the various constructions (welt, McKay, cement, etc.). It does not include shoes or slippers typical of the "canvas upper - rubber bottom" footwear industry.

2/ National Cotton Council of America. Cotton Counts Its Customers. Preliminary 1958. June 1959.

Objectives.--The broad objectives of the study were to:

1. Determine what materials are currently in use for selected parts of the shoe

2. Ascertain the extent of satisfaction with the materials, as well as their desirable and undesirable attributes

3. Describe the characteristics desired in the materials used for each part of the shoe and the material considered best for each use

4. Ascertain expectations as to future use of fibers and materials

5. Determine the pattern of decision making for selecting materials and styles.

Parts of the shoe included in the study.--The survey provides detailed information on the following parts of the shoe:

Linings, including vamp and quarter

Uppers

Soles

Laces

Threads

In addition, limited data are presented on materials used in other parts of a shoe, such as doublers and stiffeners, tongue and sock linings, innersoles, bindings, and reinforcings.

As defined in this study--

> The vamp lining (or forepart lining) is the lining in the front part of the shoe underneath the upper. This lining extends back to the general area of the arch of the foot, where it is joined to the quarter.
>
> The quarter lining is the upper lining at the back part of the shoe, extending forward to the vamp line.
>
> The upper includes all of the outer surface of the shoe, excluding the sole and heel.

HOW THE STUDY WAS MADE

Sample Selection

The findings are based on the responses of executives in a sample of 81 shoe companies located in 57 cities in 14 States.

The sample was selected to be representative of the approximately 1,100 shoe companies in the United States. As such, the results of the survey reflect the actions and opinions of the entire shoe industry. The selection procedure involved:

1. Listing all shoe companies (not plants or establishments) in the United States on the basis of production.

2. Selecting all companies whose production equalled or exceeded a predetermined amount to be included in the sample.

3. For the remaining companies, summing the production of successively listed companies until the combined total reached or exceeded a predetermined amount. Each time this point was reached, the procedure was repeated, thus breaking the listing into a number of groups, each of which represented a given amount of shoe production.

4. The last company listed in each group was selected as the sample unit.

Selection was independent of the type of shoe produced. The percentage of total annual output accounted for by the sample, by type of shoe, is as follows:

Type of shoe	Percent of total production covered by the sample in each class
Men's and boys'	62
Women's	45
Misses', children's and infants'	41
House slippers	30
All others	21
Total -	47

The 5 groups shown above were used as the basis for classifying all companies. No attempt was made to subdivide the sample further, or to present results separately for any of the types included in the 5 major groups.

A number of technical difficulties were encountered in computing sampling error for the survey estimates. Since the method of selection in no way approximates that of a simple random sample, the application of the binomial theorem, utilizing the pq/n formula, is not appropriate. A recent journal article

discusses the approaches that are available for determining a measure of the sampling error of estimates derived from a stratified sample with one primary sampling unit per stratum. 3/

Characteristics of the Sample

About half of the shoe companies visited produced mostly women's shoes. This is not to say that these firms produced only women's shoes, but rather that this was the dominant line with respect to pairs of shoes produced per year. An additional 20 percent of the companies indicated that their major production line was men's shoes. Misses', children's, infants' and babies' shoes, taken as a combined unit, were dominant in 15 percent of the companies, while slippers and miscellaneous types of footwear, such as athletic and theatrical footwear, predominated in the remaining companies (table 1).

Table 1.--Distribution of shoe companies in the sample, by major line of production

Major production line	Unweighted sample	Weighted to represent all companies
	Percent	Percent
Women's	48	21
Men's and youths'	21	19
Misses', children's, infants', and babies'	15	31
Slippers and miscellaneous footwear	16	29
Total	100	100

When the sample companies are weighted to represent the shoe industry as a whole, misses' and children's shoes are found to be the major production item of almost a third of the industry. Slippers and miscellaneous footwear are most important in 29 percent of the companies, followed by women's shoes and men's and youths', which are each the dominant line in about 20 percent of the companies (table 1).

An examination of the concentration of a number of different lines of shoes produced by the shoe industry indicates that specialization, as such, is comparatively high throughout the different lines. Thus, around 8 companies

3/ Kish, Leslie, and Hess, Irene. On Variances of Ratios and their Differences in Multi-Stage Samples. Amer. Statis. Assoc. Jour., 54: 416-446. 1959.

out of each 10 which produced either women's or men's and youths' shoes made only that one type. In the misses' and children's area, on the other hand, a majority of the companies produced one or more types in addition to their major line. A negligible proportion of the industry produced as many as three or more types (6 percent, overall) but since this group includes many of the large, integrated shoe companies in the United States, their aggregate production represented some 27 percent of all shoes produced in 1958 (table 2).

Table 2.--Distribution of shoe companies, by major line of production and number of other types produced

Major production line	Total	Percentage of companies producing number of types of shoes			
		1	2	3	4
	Percent	Percent	Percent	Percent	Percent
Women's	100	79	19	1	1
Men's and youths'	100	78	18	3	1
Misses', children's, infants' and babies'	100	13	77	10	--
Other	100	72	24	2	2
All companies	100	56	38	5	1

The distribution of the shoe industry, both in terms of number of companies and production, is illustrated below:

Size classification (pairs of shoes)	All companies	Total 1958 production of shoes
	Percent	Percent
Total	100	100
Less than 250,000	46	12
250,000 - 849,000	31	22
850,000 -1,999,999	21	37
2,000,000 and over	2	29

As can be seen, a substantial difference exists between the number of companies in any size category and the contribution of the group to total production. Just under half of the shoe industry, for example, produced less than 250,000 pairs of shoes per company, and, in total, accounted for only 12 percent of all the shoes produced in 1958. At the other extreme, companies producing 2 million or more pairs of shoes per year represented as little as 2 percent of the industry, but produced just under one-third of the 1958 output.

Interviewing Procedures

A letter was sent to the presidents of the firms included in the sample explaining the purpose of the study, some of the major areas of inquiry, and a notification of the week during which an interviewer would be in that firm's area. A copy of an earlier industrial study was enclosed with each letter to provide a better understanding of the use to which such research might be put and to illustrate the types of information to be collected. 4/ After ample allowance of time for receipt of the letter, telephone calls were made to set up definite appointment times with the appropriate company representative. A local phone call to confirm the appointment, once the interviewer had arrived in the company's home city was all that was required to obtain full cooperation from prospective respondents.

The effectiveness of the process employed is evidenced by the fact that no refusals were encountered. Of the 84 firms originally selected for inclusion in the survey, 81 were contacted and each cooperated fully. Of the three companies lost from the sample, one was no longer in business, a second could not be located despite repeated attempts and was therefore assumed to be inoperative, and the third had been destroyed by fire.

Interviews were conducted between late October 1958 and mid-January 1959. The average time of interview was 55 minutes.

Among the 98 company executives who took part in the survey, 51 were either company presidents or vice-presidents. Other officials interviewed included company secretaries, purchasing directors and agents, treasurers, office and production managers and buyers. The distribution of respondents, by position in the firm, is as follows:

Position	Percent
President or owner	48
Manager, superintendent	19
Buyer, purchasing agent	17
Vice-president	14
Secretary, Assistant Secretary	7
Treasurer	6
Other	9
Number of sample cases	81

(NOTE-Percentages add to more than 100 because more than 1 official was interviewed in some firms.)

In those cases where more than one official was present during the interviewing, each concerned himself with his particular function or specialty within the firm. Thus, for the most part, the responses of all of those present during the interview were considered as one overall response to the question.

4/ Jacobs, Milton. Fabrics and Fibers for Passenger Cars. Mktg. Res. Rpt. No. 152, U. S. Dept. Agr., April 1957.

The only exceptions were in a few of the larger firms where separate interviews were conducted with the women's and men's divisions, for example, or with different executives at different time intervals.

Altogether, company executives contributed generously of their time and knowledge. Without their fine cooperation, this study could not have been completed.

TREATMENT OF THE RESULTS

In a study such as this, information is customarily obtained from all varieties of concerns ranging from the very large to the very small. In order to give as much information as possible to the reader, the data are shown in two forms: (a) simple percentage distributions based on the weighted number of companies in the universe, and (b) results based on the replies of the 28 largest shoe manufacturers in the United States, which were automatically included in the sample.

The universe (all companies) and the 28 largest companies are shown separately in the tables to permit comparisons of the relative importance of the shoe companies (and their opinions) in terms of contribution to total production. In evaluating the results on either basis, however, numbers of companies and production are both important. For example, several firms with a substantial annual output may conceivably offset as many as 10 or more smaller manufacturers; yet, certain style or material fads may well start among the smaller shoe producers who are often leaders in the field.

In a number of tables, the data are further arranged by the major type of shoe produced. In referring to these results, it should be remembered that any one company may have produced a number of different types of shoes. Thus, the opinions expressed by the executives in these multi-type companies also reflect to some extent their experiences outside the major production type.

In this report:

1. Men's includes men's, youths', and boys' dress, casual, and work shoes

2. Women's includes women's dress, work, casual, and play shoes

3. Misses' and children's includes misses', children's, infants', and babies' shoes

4. Slippers and miscellaneous footwear includes all other footwear, but NOT canvas-topped rubber-soled shoes

The findings presented are summaries of the statements made by the respondents and are subject to any errors in their beliefs and attitudes. This caution also applies to some of the data on identification of fibers and materials, since these were not obtained from records but were estimated directly by respondents. For example, references to cotton materials may include some combinations of cotton and other materials, such as vinyl coated or vinyl backed cottons, because the respondent was not aware of the contents of the mixture. For this reason, the data should be used with care. However, the results are considered reliable indications of practices in industry.

A PROFILE OF THE SHOE INDUSTRY

The shoe industry can best be described as a heterogeneous mixture of approximately 1,100 firms, ranging from the few who produce 100,000 or more pairs of shoes per day to small firms producing only 2,500 pairs per day. Altogether, the conventional footwear industry in the United States produced around 582 million pairs of shoes in 1958, which compares with 523 million pairs in 1950. The range of production in the industry is illustrated by the fact that, in 1956, the largest 4 companies accounted for 23 percent of total production; the next 46 companies accounted for only an additional 22 percent of the total.

This industry is also characterized by a high labor input ratio; that is, a relatively large number of employees are required to produce a pair of shoes. Despite the trend toward mechanization and automation of American industry, the shoe producing segment remains largely a hand-tailored enterprise. In many cases 100 or more separate hand operations are involved in the manufacture of a single pair of shoes. Machinery can and does assist the worker; so far, it cannot replace him. For this reason, labor costs bulk large in any determination of what can be made, changed, or adapted.

One of the major reasons for extensive use of labor is the lack of consistency in the natural materials used in shoes; that is, the natural blemishes in leather require careful hand labor in cutting the skins to minimize waste. Similarly, variations in tensile strength of skins requires hand labor to shape a shoe to the last. The use of more consistent manmade materials overcomes some of these problems, thus permitting more automation. At present, however, the manmade materials lack many of the wear characteristics considered necessary.

In general, manufacturers of shoes tend to produce within fixed price ranges. Any change in requirements, whether of materials, machinery, or manpower, which places the end product outside of its present price level can seriously affect market position. Thus, cost and its effect on price become major considerations in the adoption of new styles, materials, or processing methods.

SURVEY RESULTS

Materials for Linings

For many years, the use of linings in shoes has provided cotton with a major outlet. Cotton continues to dominate the lining market. Altogether, some 75 percent of the shoe companies in the United States had used cotton or a material containing cotton in the vamp or forepart linings of approximately 60 percent of the shoes produced in 1958, which would indicate a fairly wide acceptance of cotton and cotton mixtures for this end use (table 3).

Following far down the scale after cotton as lining materials for the vamp were leather, used by a third of the companies, and rayon, reported by about 7 percent. As a proportion of total production, however, shoes containing leather or rayon vamp linings each accounted for less than 10 percent. By comparison, about 25 percent of total production contained no linings.

The use of cotton in vamp linings varied somewhat by the different types of shoes produced. Among companies whose major production line was in misses', children's, and infants' shoes or in men's, youths' and boys' shoes, around 75 percent of the shoes were reported to contain forepart linings of cotton. The lowest use of cotton among manufacturers of regular shoes was recorded by companies whose major line consisted of women's shoes. Only 54 percent of the shoes produced by such manufacturers in 1958 contained vamp linings of cotton, cotton mixtures, or coated cotton.

In the case of women's shoes, more extensive use of leather vamp linings accounted for relatively lower cotton usage. According to the survey, some 15 percent of the women's shoes contained leather vamp linings; about 23 percent were unlined.

Cotton and rayon mixtures were reported used in 7 percent of women's shoes; their use in other types of shoes was negligible. Shoes containing rayon as a vamp lining material accounted for between 3 and 7 percent of the production of shoes.

For quarter linings, both cotton and leather were used extensively. According to the judgment of executives interviewed, about one-third of the shoes produced in 1958 had leather quarter linings; a similar proportion contained some cotton(including vinyl-coated and vinyl-impregnated cottons). Almost 20 percent of the shoes were produced without quarter linings. No other material was of any appreciable importance as a quarter lining (table 4).

Materials used in quarter linings varied somewhat with the major type of shoe produced. Thus, four-fifths of the men's and boys' shoes contained leather quarter linings; only 7 percent had quarter linings of cotton or

coated cotton (almost all a cotton-coated vinyl). In the women's shoe line, leather's share of the quarter lining market fell to 31 percent as cotton's share rose to almost 40 percent. Finally, among companies whose major production line included misses', children's, infants', and babies', the proportion with leather quarter linings dropped to about one-tenth, whereas cotton held two-thirds of the market.

In the "slipper and specialty shoe" line, cotton was the most important quarter lining material, followed by leather and rayon.

Table 3.--Materials used for vamp linings in the production of footwear, by major type of production

Materials used	Percentage of companies		Weighted percentage of total shoe production				
	All companies 1/	Largest companies 2/	Total	Men's, youths', and boys'	Women's	Misses', children's, infants', babies'	Slippers and miscellaneous footwear
	Percent 3/		Percent	Percent	Percent	Percent	Percent
Cotton and cotton mixtures	71	89	62	73	54	78	44
Cotton	61	82	53	72	37	72	44
Cotton and rayon	4	7	3	1	7	--	4/ *
Other cotton mixtures	9	18	6	*	10	6	*
Leather	29	46	8	1	15	1	8
Rayon	7	25	5	4	7	3	5
Other fibers and mixtures	2	14	1	*	1	--	5
Not ascertained	--	--	--	--	--	1	2
Vamp linings used	92	96	76	77	77	84	64
Vamp linings not used	9	4	24	23	23	16	36

1/ Represents the approximately 1,100 companies in the industry.
2/ Represents the 28 largest shoe manufacturers in the U. S.
3/ Percentages add to more than subtotal because some respondents mentioned more than 1 material.
4/ Asterisk denotes less than 1 percent.

Table 4.--Materials used for quarter linings in the production of footwear, by major type of production

Materials used	Percentage of companies		Weighted percentage of total shoe production				
	All companies	Largest companies	Total	Men's, youths', and boys'	Women's	Misses', children's, infants', babies'	Slippers and miscellaneous footwear
	Percent 1/		Percent	Percent	Percent	Percent	Percent
Cotton and cotton mixtures	52	56	36	7	37	68	45
Cotton	13	32	17	--	19	7	44
Cotton and vinyl	26	21	11	6	2	55	--
Cotton and rayon	4	11	2	1	5	--	2/ *
Other cotton mixtures	11	7	6	--	11	6	*
Leather	50	64	36	80	31	9	10
Rayon	4	11	1	--	--	3	5
Other fibers and mixtures	4	21	4	5	3	--	6
Not ascertained	*	7	4	1	8	6	--
Quarter linings used	96	96	81	93	77	86	65
Quarter linings not used	4	4	19	7	23	14	35

1/ Percentages add to more than subtotal because some respondents mentioned more than 1 material.
2/ Asterisk denotes less than 1 percent.

What the shoe industry thought about cotton linings.--The single most important attribute of cotton linings would seem to be their low cost, according to comments of the various shoe executives interviewed during the survey. As many as 90 percent of the companies volunteered that "pricewise it's an advantage -- it's cheap" when asked to cite cotton's advantages as a lining material. Next, in order of importance, were comfort and the ease of working with cotton. Around half of the companies considered cotton a desirable lining material because it adds comfort -- "it absorbs perspiration, dries out soft; not stiff and boardy like some materials." A similar proportion were impressed by the ease with which it could be worked. Of less importance, apparently, were appearance and durability, each mentioned by fewer than 2 companies in 10 (table 5).

Table 5.--Advantages of cotton when used as a lining material

Advantage	All companies	Largest companies
	Percent 1/	Percent 1/
Inexpensive	88	78
Comfortable, cooler, softer, absorbent	53	48
Durable, takes friction, abrasion	11	39
Attractive, can be printed	15	30
Can be produced more easily, easier to sew	59	13
Can be made resistant to rot, mildew	16	17
Habit, always reliable, traditional	24	4
Other	2	--
Not ascertained	--	4

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.

The larger companies appeared to place more emphasis on durability and appearance than the smaller companies. Between 3 and 4 in 10 of the large concerns felt that both of these characteristics were important advantages of cotton. On the other hand, they were less concerned with cotton's production attributes.

The extent to which cotton's virtues are known is illustrated in the following inclusive comments from respondents:

> "Cotton is a little cheaper, it'll wear well and give a shoe sturdiness, durability, and shape. (Cotton) absorbs perspiration, doesn't crack and get hard. It's a known quantity, not like the synthetics. You know what will happen to it in 6 months."

> "Why do we use cotton linings? Lower cost, adds breathability to the vamp, workability--it lasts, forms and shapes well; it gives foot comfort."

"First off, cotton is cheaper than other (lining) materials. It has flex and stretch that makes it easy to sew...has a warm feel to it."

When the discussion turned to the disadvantages of using cotton linings, the differences between the large firm and the medium-size or small ones were equally clear. The major complaint of 44 percent of the users of cotton linings centered on production aspects--cotton is difficult to handle in production, it needs extra handling to prevent fraying and raveling at the edges. This was not a highly significant factor among the largest companies, however, which complained first of the lack of durability and secondly of poor appearance. To cotton's credit is the fact that 40 percent of all companies indicated no disfavor with the use of cotton linings (table 6).

What the shoe industry wants in a lining material.--In order, durability ("...serviceability -- long wearing qualities"), appearance ("eye appeal"), and comfort ("Breathe -- allow air circulation"), were the features of most importance to shoe manufacturers in evaluating a lining material. Between 4 and 5 shoe companies out of every 10 mentioned these 3 characteristics as necessary for a "good"lining material (table 7).

"It should resist moisture, provide decent abrasive wear, not be too bulky, must be flexible and cool to the foot."

"Has to have a certain amount of strength to add body -- be comfortable against the foot, look good, nice appearance, must be workable but strong so it won't tear in sewing."

The material nearest the ideal was leather, according to 4 companies out of 10, while around 3 in 10 preferred cotton and an additional 3 in 10 mentioned a cotton mixture or a coated cotton. Comfort was overwhelmingly the key feature of those who leaned toward the use of leather linings, whereas a number of attributes were mentioned equally by those favoring cotton (tables 7 and 8).

The relative importance of optimum physical characteristics against cost considerations is shown when companies were asked for the drawbacks to the use of leather. Almost every company preferring but expressing reservations about use of leather as a lining material said it was "too expensive," and explained their predicament in these words: "Leather is more expensive than any cloth we could put in but, like I say, it's what's expected of us," and "The retail buyer wants as much leather as possible in the linings" (table 9).

Table 6.--Disadvantages of cotton when used as a lining material

Disadvantages	All companies	Largest companies
	Percent 1/	Percent 1/
Not durable, not resistant to abrasion	14	39
Not attractive, doesn't have quality appeal	4	22
Difficult to handle in production, needs extra handling	44	6
Not resistant to perspiration and bacteria	2	9
Not stiff enough, no body	3	4
Miscellaneous	4	2/ *
Not ascertained	*	4
No disadvantages	40	39

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

Table 7.--Characteristics considered most important for lining materials, by preferred material 1/

Characteristics	All companies	Largest companies	Preferred material			
			Leather		Cotton	
			All companies	Largest companies	All companies	Largest companies
	Percent	Percent	Percent	Percent	Percent	Percent
Durable, resistant to abrasion	48	61	19	60	31	50
Comfortable, cool, dries quickly	37	43	60	53	28	37
Appearance, colorful	42	39	13	47	27	37
Inexpensive, low cost	5	21	1	13	14	50
Resistant to rot, mildew	10	14	2	20	30	13
Easy to work with	7	18	9	7	11	25
Has body, will keep shoes in shape	3	4	8	--	12	--
Washable, easily cleaned	2/ *	*	--	--	1	--
Other	3	4	7	--	--	--
Not ascertained	6	11	13	13	--	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 desirable characteristic.
2/ Asterisk denotes less than 1 percent.

Table 8.--Materials preferred for use in linings

Materials	All companies	Largest companies
	Percent 1/	Percent 1/
Uses linings	99	96
Does not use linings	1	4
Leather	41	57
Cotton	29	25
Cotton mixtures	29	7
Rayon	5	11
Other	3	--
No preference	2/*	11
Not ascertained	*	--

1/ Percentages add to more than subtotal because some respondents mentioned more than 1 material.
2/ Asterisk denotes less than 1 percent.

Table 9.--Disadvantages of preferred materials for linings

Disadvantages	Leather		Cotton	
	All companies	Largest companies	All companies	Largest companies
	Percent 1/		Percent 1/	
Too expensive	83	40	3	--
Waste in cutting	1	13	--	--
Not durable, doesn't wear well	2	7	2	13
More difficult to handle in production	3	7	--	--
Not resistant to mildew	1	--	11	--
Not comfortable, too hot	2/*	2	--	--
Quality not uniform	1	--	--	--
Not attractive, no eye appeal	--	--	1	13
No disadvantages	15	33	83	75

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

Materials for Uppers

Leather is the most-used and most popular shoe upper material. As many as 99 percent of the manufacturers said they used leather uppers in producing 85 percent of the shoes and slippers made in 1958. Leather use was the most pronounced among manufacturers of men's, youths', and boys' shoes. Almost every pair of shoes produced by such manufacturers in 1958 was made with leather uppers. The women's shoe industry used leather uppers in approximately 80 percent of their 1958 production (table 10).

Certain fabrics like cotton, cotton mixtures and coated cottons, rayon, and nylon were also used in uppers, although to a limited extent. In some cases, and especially among men's and youths' shoes, the fabrics were used as plugs or inserts in combination with leather. Their greatest use, however, was in the women's line, where 16 percent of the shoes were produced with some cotton in the uppers.

The largest companies were more likely to use a wide variety of materials in producing uppers. In addition to leather, these concerns also used cotton and coated cottons, as well as nylon, rayon, plastics and vinyls, silk, and straw. The use of these last materials by the remainder of the industry, on the other hand, was quite restricted.

What the industry thought about cotton uppers.--Although uppers of cotton or part cotton materials were found on a comparatively small proportion of the shoes (around 10 percent), their use by almost a fourth of the entire industry (and by half of the largest concerns) indicates the extent of experience (and possibly, potential) which exists for cotton in this end use. Among those who had used cotton materials, a number of attributes stood out, including the relative ease of production, low cost, attractiveness, washability, and comfort. Although no single attribute received overwhelming approval, the range of favorable responses mentioned by a fourth or more of the executives indicates the apparent versatility of cotton in this use, a factor which perhaps has not been emphasized adequately.

The picture was different for the larger concerns in that they were more nearly unanimous in their evaluation of cotton uppers. Some 7 out of 10 in this group mentioned the low cost of cotton as a major advantage, and a similar proportion commented on the attractive colors available, the ease with which cotton can be decorated, and the infinite variety of styles that can be obtained (table 11).

On the negative side, lack of durability was considered a major disadvantage by about half of the users of cotton uppers, irrespective of size of operation. Complaints about attractiveness were mentioned by 2 in 10 (table 12).

Table 10.--Materials used for uppers in footwear, by major type of production

Materials used	Percentage of companies		Weighted percentage of total shoe production				
	All companies	Largest companies	Total	Men's, youths', and boys'	Women's	Misses', children's, infants', babies'	Slippers and miscellaneous footwear
	Percent 1/		Percent	Percent	Percent	Percent	Percent
Cotton and cotton mixtures	23	50	10	2	16	2/ *	16
Cotton	18	46	7	2	11	*	14
Cotton mixtures	10	32	3	--	5	--	2
Leather	99	93	85	97	81	92	71
Nylon	4	54	1	1	1	--	--
Rayon	9	29	1	--	*	--	6
Other fibers and mixtures 3/	--	--	2	1	*	--	7
Plastic vinyls and other synthetics	7	29	--	--	--	--	--
Silk	7	25	--	--	--	--	--
Straw	1	18	--	--	--	--	--
Linen	3	4	--	--	--	--	--
Wool	1	4	--	--	--	--	--
Other natural materials	1	4	--	--	--	--	--
Not ascertained	4	--	1	--	--	7	--

1/ Percentages add to more than subtotals because some respondents mentioned more than 1 material.
2/ Asterisk denotes less than 1 percent.
3/ The detail is not shown for the weighted percentage because of the small proportion of shoes utilizing each material.

Table 11.--Advantages of cotton when used in uppers

Advantages	All companies	Largest companies
	Percent 1/	Percent 1/
Attractive, easily decorated, stylish	28	64
Inexpensive	31	71
Washable	26	14
Comfortable, light weight, cool	23	14
Can be produced more easily	35	7
Habit, traditional	1	14
Durable, wears well	19	--
Miscellaneous	1	--
No advantages	2/ *	7

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

Table 12.--Disadvantages of cotton when used in uppers

Disadvantages	All companies	Largest companies
	Percent 1/	Percent 1/
Not durable, not strong	53	43
Not attractive, dressy	23	14
Not water resistant	2/ *	7
No body, needs a backing	*	7
Not comfortable, hot, doesn't breathe	*	7
Miscellaneous	15	14
Not ascertained	1	7
No disadvantages	38	21

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

What the shoe industry wants in an upper material.--The attribute considered most important for shoe and slipper uppers included, in order, comfort ("soft on foot," "light-weight"), mentioned by 7 companies in 10; and appearance, durability, and ease of working, all of which came up in about half of the companies. One-third of the industry also made mention of "good quality" and "low cost" as features wanted in a shoe upper material. The importance of the upper in the success of the shoe is suggested here by the relatively high proportion mentioning more than one characteristic, by the unanimity of choice of characteristics and, finally, by the relative emphasis on comfort and quality as opposed to lack of emphasis on low cost. This was particularly true of the larger companies (table 13).

> "The material used for uppers must give maximum cutting, be the least damaged in 'lasting', provide the best 'trimming up', take the best finish, and look good to the customer."

Table 13.--Characteristics considered most important for materials used in uppers, by preferred material

Characteristics	All companies	Largest companies	Preferred leather	
			All companies	Largest companies
	Percent 1/	Percent 1/	Percent 1/	
Comfortable, soft on foot	68	61	83	61
Appearance, dyes well, has style	51	71	85	71
Durable, retains shape	46	64	46	64
Easy to work with	47	54	81	54
Good quality	28	32	48	32
Inexpensive, low cost	32	11	54	11
Takes a good finish, polish	8	7	14	7
Washable, easily cleaned	8	--	13	--
Waterproof, will not run or fade	7	11	12	11
Other	2/*	--	--	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

Leather was mentioned almost exclusively as the material which came closest to possessing these desirable characteristics (table 14). Leather is, in the estimation of shoe manufacturers, the material for shoe uppers. Officials in 95 percent of the shoe companies said that they favored leather in this end-use. Most of them were also of the opinion that the customer shared their view on leather. As one executive put it, "You can't sell expensive cotton street shoes because the public wants leather. Leather is for mass markets."

Table 14.--Materials preferred for use in uppers

Materials	All companies	Largest companies
	Percent 1/	Percent 1/
Leather	95	100
Cotton	1	4
Wool	1	4
No preference	2/ *	--
Not ascertained	4	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 material.
2/ Asterisk denotes less than 1 percent.

Some 40 percent of the shoe companies found no fault with leather in this use. However, an almost ideal material, even one in as strong a position as leather obviously is as a shoe upper, is not without its drawbacks. Just under one-fourth of the industry complained that leather lacked uniformity of quality and a third considered it difficult to handle in production (table 15). Their discontent with these factors is revealed by the following comments:

> "It's uneven in dimension and varies in quality. Some areas of hide are unfavorable for cutting so there's a lot of scrap. Branded part of the hide is useless."
>
> "Leather is subject to inconsistencies because it is an animal hide--has a lack of uniformity both from skin to skin and on the same skin."
>
> "Leather may be imperfect. It's hard to work with because of its variations. It lacks uniformity -- cutting must be skilled, therefore it requires special attention, so labor is more expensive."

Another tenth of the industry pointed up the high cost of leather as its major shortcoming:

> "...high cost due to short supply and inflationary trend."
>
> "Cost is the only thing -- high cost."
>
> "Too expensive -- lots of waste in cutting the hide."
>
> "Not enough of it. In short supply now."
>
> "Low cost, mellow and soft leathers hard to get."

Table 15.--Disadvantages of leather for uppers

Disadvantages	All companies	Largest companies
	Percent 1/	
Quality isn't uniform	21	39
Too expensive	10	25
Difficult to handle in production	31	11
Not durable, scuff, crack	4	4
Not attractive, can't make attractive	1	4
Not resistant to rot, water	1	--
Not comfortable, not cool, flexible	2/ *	--
Waste in cutting	*	4
Other	*	4
No disadvantages	40	29

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

A word about leather prices.--Complaints about the high cost of leather, especially calfskin, which arose during several parts of the interview, were numerous and logical from the shoe manufacturers' point of view. First of all, increases in the price of tanned leather became pronounced in the fall of 1958, when the data for this study were being collected. These increases came after a 3-year period during which hide and leather prices varied within a narrow range. When prices on calfskins (packers) reached their high point for the year in December 1958, for example, they were about 47 percent higher than in January 1958. As a result of the increased average cost of hides and skins, leather shoe prices for 1959 apparently were higher on the average than for most comparable periods in 1958. Packer calfhide prices for the month of April 1959, stood at about 80 cents per pound compared with 62 cents in April 1958, and many manufacturers then announced the first of a possible series of shoe price boosts.

The following discussion provides, in limited detail, some explanation of the factors affecting the price of leather. Many of the shoe executives possessed partial knowledge of the overall price situation; others, however, simply knew "the price of leather was too high!"

The Wholesale Price Index of The Bureau of Labor Statistics presents a revealing picture of the increasing hide and leather price relationship (fig. 1).

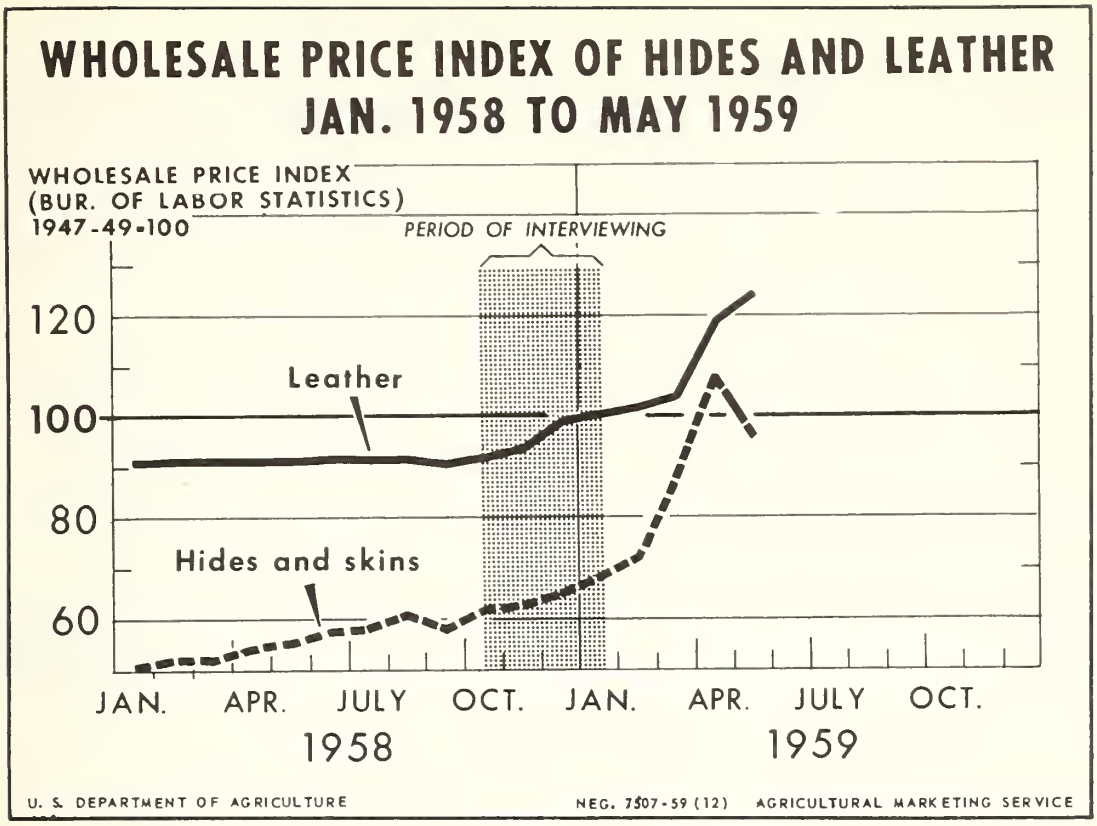

Figure 1

Any explanation of hide supply must necessarily begin by considering cattle slaughter. Beginning in 1957, large supplies of feed crops and the resultant low cost of feeds, along with rising prices for cattle, led farmers to begin holding on to cattle and calves to build up herds. The fewer animals being sold for slaughter caused a rise in retail prices of beef and veal and in prices of hides and leather. Because slaughter had been cut back more for calves than cattle, the supply of calfskins was especially reduced. Consequently, price increases were greater for calfskins than for cattle hides. By April 1959, packer hide prices for calfskin were at their highest level since 1948 -- at that time 90 cents per pound, as compared with 42-1/2 cents, nominal, a year earlier. 5/

Bumper feed grain crops in 1958 and 1959 added to the already abundant supply. Pasture was unusually good in 1958 and generally above average in early 1959. Cattle herds continued to be expanded during 1958 and 1959, thereby holding down slaughter rates.

5/ Source: National Provisioner (Chicago Market). April 25, 1959, Vol. 140, No. 17.

Materials for Outer Soles

Rubber (both natural and synthetic) was the most popular soling material in 1958, finding its way into almost half of all the shoes produced that year. Leather soles held second place, accounting for a third. Composition soles appeared to hold much of the remainder of the market -- about one-tenth of shoe production. 6/ Cotton and cotton-backed or coated materials also entered the outer sole picture to a small extent but mainly in the case of slippers (table 16).

Variations in the use of leather for outer soles were most pronounced between what might be called the "older" and "younger." About 37 percent of both men's and women's shoes were produced with leather soles; only 17 percent of the misses' and children's group contained leather soles. Rubber soles were strongest in the men's grouping; least popular in the misses' and children's line, whereas composition soles were most widely used for children's shoes.

What the shoe industry wants in outer soles.--The major attributes which manufacturers looked for in shoe and slipper soles were durability, mentioned by more than 7 companies out of 10, and comfort, considered important by half the industry. In the words of the industry,

> "A sole should protect you from the elements, yet wear well; it should have flexibility -- go back into position, and, finally, it should breathe."

Less emphasized were appearance, price, quality, and resistance to water and chemicals (table 17).

6/ The proper classification of selected soling materials as either composition, rubber, or plastic provided a major difficulty because of lack of knowledge on the part of respondents. For purposes of this study, Neolite (TM) was considered as composition; Neoprene as rubber.

Table 16.--Materials used for outer soles of footwear, by major type of production

Materials used	Percentage of companies		Weighted percentage of total shoe production				
	All companies	Largest companies	Total	Men's, youths', and boys'	Women's	Misses' and children's	Slippers and miscellaneous footwear
	Percent 1/		Percent	Percent	Percent	Percent	Percent
Cotton	2/ *	--	1	--	--	--	3
Coated cotton	2	4	1	--	--	--	6
Leather	64	79	32	31	36	17	39
Rubber	59	82	48	61	46	35	46
Composition	37	25	12	8	6	41	2
Other fibers and mixtures	3/ 10	--	5	*	12	--	4
Not ascertained	--	--	1	--	--	7	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 material.
2/ Asterisk denotes less than 1 percent.
3/ Includes 6 percent who mentioned plastic.

Table 17.--Characteristics considered most important for materials used in soles, by preferred material

Characteristics	All companies	Largest companies	Preferred material			
			Leather		Rubber	
			All companies	Largest companies	All companies	Largest companies
	Percent 1/	Percent 1/	Percent 1/		Percent 1/	
Durable, retains shape	75	89	93	86	50	86
Comfortable, flexible, porous	49	79	76	71	50	100
Appearance	33	32	19	29	16	43
Inexpensive, low cost	25	21	5	19	46	29
Good quality	23	21	5	19	43	14
Easy to work with	2	11	3	10	2	14
Resists chemicals, water	24	14	16	5	43	29
Must take a good finish	4	--	14	--	6	--
Must be washable	2/ *	--	--	--	6	--
Other	*	--	1	--	*	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

On a total industry basis, rubber was the choice of 45 percent of the executives, followed by leather and composition (around 29 percent in each case). Among executives of the largest companies, however, leather was a three to one favorite over any and all competition. The emphasis on desired characteristics was much the same irrespective of the preferred material, with durability and comfort way at the top of the list (tables 17 and 18).

Table 18.--Materials preferred for use in soles

Materials	All companies	Largest companies
	Percent 1/	Percent 1/
Leather	29	75
Rubber	45	25
Composition	26	7
Plastic	4	--
Cotton	1	--
Other	2/ *	4
No preference	1	4
Not ascertained	1	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 material.
2/ Asterisk denotes less than 1 percent.

Among disadvantages cited, leather drew a range of criticisms, but no one was overwhelmingly repeated. As in the case of uppers, the high cost of leather, its lack of durability ("scuffs and cracks"), and the difficulty of handling and cutting leather were predominant problems. Typical comments ran the gamut from "too expensive" to "waste in cutting."

Half of those who preferred rubber for a soling material said its cost was a major disadvantage. An additional 2 in 10 considered rubber less comfortable and not so flexible as leather, and 1 in 10 found rubber less attractive to the customer. Large manufacturers were particularly concerned over the lack of comfort and an unattractive appearance of rubber soles. As one executive phrased it, "It's not leather, it just doesn't have the basic image of quality" (table 19).

Table 19.--Disadvantages of materials preferred for soles

Disadvantages	Preferred material			
	Leather		Rubber	
	All companies	Largest companies	All companies	Largest companies
	Percent 1/		Percent 1/	
Too expensive	26	24	51	--
Not durable, scuffs, cracks	25	38	2/ *	14
Difficult to handle in production	29	5	--	--
Quality isn't uniform	5	10	--	--
Not resistant to oil, chemicals, water	10	14	--	--
Not comfortable, not flexible	7	5	20	43
Waste in cutting	12	5	--	--
Not as attractive	--	--	8	29
Leaves marks on the floor	--	--	*	29
Other	--	--	*	14
No disadvantages	8	29	21	14

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

Materials for Threads

Cotton continues to hold a good portion of the thread market although nylon is finding increasing use in shoe stitching, acccording to reports from shoe company executives. Among the firms in the United States, 96 percent used cotton threads at some stage of the manufacture of 83 percent of the shoes produced in 1958. Nylon thread was employed by 65 percent of the industry in 37 percent of the year's production (table 20).

Table 20.--Materials used for threads in footwear, by major type of production

Materials	Percentage of companies[1]		Weighted percentage of total shoe production[1]				
	All companies	Largest companies	Total	Men's youths', and boys'	Women's	Misses' and children's	Slippers and miscellaneous footwear
	Percent		Percent	Percent	Percent	Percent	Percent
Cotton	96	100	83	82	78	89	93
Nylon	65	93	37	53	35	29	26
Silk	8	21	2	2	4	--	[2] *
Linen	10	36	6	15	2	3	4
Dacron	17	32	3	9	2	--	1
Rayon	*	4	--	*	--	--	--

[1] Percentages add to more than 100 because some respondents used more than 1 kind of thread.
[2] Asterisk denotes less than 1 percent.

As these figures indicate, both cotton and nylon, or other thread materials, may be used in the same shoe for the same or different purposes. Nylon appears to be preferred for use in functional stitching (e.g. the welt and backseam, both of which require a strong thread to withstand strain and wear), while cotton, which is considered less costly but at the same time somewhat less strong, is more often the choice for upper and decorative stitching.

> "Different thread materials are used for different parts of the shoe depending on the strain. In some cases, one stitch may contain two threads -- the bobbin thread will be nylon for strength, and the top thread will be cotton for color."

The use of different thread materials varied slightly among types of shoes produced. The proportion of shoes containing cotton threads ranged from around 80 percent for those whose major line was in women's shoes to 89 percent for the misses' and children's market. At the extreme, 93 percent of the slipper and miscellaneous footwear output was held together by cotton thread. The strongest area for nylon thread was in men's shoes, in which 53 percent of the year's production contained some or all nylon thread. Nylon was used least for misses' and children's shoes and slippers -- slightly less than a third of the production in each line was made with some nylon thread.

Silk, Dacron, and linen threads were also used in shoe manufacturing. Taken together, they were estimated to have been used in approximately 10 percent of the total 1958 production.

What the shoe industry thought about cotton thread.--The relatively low price of cotton thread was considered its outstanding characteristic by three shoe executives out of every five. Explanation or comment was restrained. "It's cheap" "It's still cheaper than nylon" were the extent of any explanations. Subsequent discussion suggested that cotton threads had virtues other than price, but that price, at the moment, was an important factor, particularly so among the largest companies. About half of the executives also referred to the ease of handling and working with cotton. As few as 1 in 10 mentioned important aspects such as durability or appearance. Tradition or habit, in fact, was more important than the use or wear characteristics. In the words of one executive, "Cotton threads are a staple product; they've been established as an honest product!" (table 21).

On the negative side, cotton's lack of sufficient durability was noted by as many as 7 companies in 10, and, on an industry-wide basis, that was the only disadvantage. Among the larger companies, however, its lack of resistance to perspiration, water, and mildew, as well as some sewing difficulties, were mentioned by an additional 2 in 10. In approximately one-third of the companies using cotton thread, no unfavorable comments were forthcoming (table 22).

Table 21.--Advantages of cotton thread

Advantages	All companies	Largest companies
	Percent 1/	Percent 1/
Inexpensive	60	86
Easy to sew with, fits machine well, doesn't get heated	52	50
Durable, strong, resists abrasion	7	11
Attractive, takes stain, dyes well	1	18
Habit, always available	27	11
Resists shrinkage, stretching	1	4
Miscellaneous	2/ *	4
Not ascertained	2	--
No advantages	*	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

Table 22.--Disadvantages of cotton thread

Disadvantages	All companies	Largest companies
	Percent 1/	Percent 1/
Not durable, not strong, not resistant to abrasion	69	82
Not resistant to rot, mildew, or water; brittle	2	18
Difficult to sew with, heats up	3	14
Not attractive, does not dye well	1	7
Miscellaneous	2/ *	--
No disadvantages	29	14

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

What the shoe industry wants in a thread.--The most important characteristic for thread was durability or tensile strength, according to three-fourths of the executives. About a fifth of the respondents felt that a "good" thread had to be easy to work with -- "it has to fit the sewing machine properly." Only 1 executive in 10 mentioned appearance and even fewer referred to cost, mildew, or rot resistance (table 23).

Table 23.--Characteristics considered most important for threads, by preferred material 1/

Characteristics	All companies	Largest companies	Preferred material			
			Nylon		Cotton	
			All companies	Largest companies	All companies	Largest companies
	Percent	Percent	Percent		Percent	
Durable, strong ---	73	75	97	76	87	82
Easy to work with, fits machine properly ----------	18	46	10	29	61	45
Appearance, gives clean finished job	9	29	8	18	12	45
Inexpensive, low cost ----------	3	11	3	6	12	18
Resists rot, mildew, colorfast --------	2	18	2	12	5	--
Not ascertained	24	4	1	6	1	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.

A comparison of the views of the entire industry with those of the larger companies suggests that a number of characteristics are of much greater importance to the large firm than to the small one. For example, production problems related to using a thread material, its appearance, its cost, and its resistance to rot and mildew were all substantially more important to the large manufacturer.

Some typical comments on the requirements for threads are as follows:

"Must be strong, uniform, elastic. They must have tensile strength to work through the automatic stitching machines. And it must hold up against known use of shoes."

"Should not break; should give a clean finished job."

Nylon was the thread material considered to have most of the necessary attributes, according to 56 percent of the company executives. Linen, mentioned by 24 percent, was next. Cotton was a much weaker third choice as the optimum thread material, selected by only 15 percent of the companies. In classifying the important characteristics by the preferred thread material (cotton or nylon), both groups placed similar emphasis on one characteristic--durability. However, those preferring cotton were some six times as likely to mention that "cotton threads are easy to work with and fit the machines properly"(tables 23 and 24).

Table 24.--Materials preferred for use as threads

Materials	All companies	Largest companies
	Percent 1/	Percent 1/
Nylon	56	61
Cotton	15	39
Silk	7	18
Dacron	6	11
Linen	24	--
No preference	2/ *	4
Not ascertained	1	4

1/ Percentages add to more than 100 because some respondents mentioned more than 1 material.
2/ Asterisk denotes less than 1 percent.

On the negative side, however, differences between the two were sharp and clear cut. Some 50 percent of those preferring nylon threads said they were too expensive; about 43 percent were of the opinion that nylon threads "are hard to work with, they burn on the machine." These comments were not made of cotton. Instead, cotton again, "just isn't strong enough, it can't stand stress, and breaks too easily" (table 25).

Table 25.--Disadvantages of materials preferred for threads

Disadvantages	Preferred materials			
	Nylon		Cotton	
	All companies	Largest companies	All companies	Largest companies
	Percent 1/		Percent 1/	
Too expensive	48	53	--	--
Hard to work with, burns on machine	43	24	--	--
Not strong, can't stand stress, breaks easily	--	--	26	55
Not attractive, can't take stain or dye	4	12	3	--
No disadvantages	11	29	74	45

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.

Incidentally, the loyalty which cotton appears to have built up in the shoe industry over the years is clearly indicated by the 74 percent of those preferring cotton thread who said it has no drawbacks; only 11 percent of those selecting nylon failed to mention any complaints. Less favorable, however, is the fact that the extent of nylon's disadvantages shrink appreciably in the eyes of the largest producers whereas cotton's grow twice as important.

The conflict between cotton and nylon threads is perhaps best illustrated by some actual comments:

> "We use nylon in uppers for strength. We don't use it in soles because it's too expensive. Cotton just doesn't have the strength to be used at stress points."

> "We use the right thread for the right place. You determine which to use by working with them. Nylon for functional sewing because it's strong, although expensive--we use cotton for decoration."

Materials for Shoe Laces

The only part of the shoe market to which cotton has almost unchallenged possession is laces. Approximately four-fifths of the companies reported using cotton laces, and, among all the lace-style shoes produced in 1958, 80 percent contained cotton laces (table 26). The misses' and children's and men's and youths' lines accounted for the greatest use of cotton laces (84 and 67 percent, respectively, of all of the shoes produced in each group contained cotton laces), while women's footwear showed the lowest use rate (about 12 percent). Overall, no other laces were used to any appreciable extent, although rayon laces were found in 10 percent of the men's shoe production.

On a total basis, shoe executives estimated that, in 1958, laced styles constituted only 47 percent of shoe and slipper production.

Table 26.--Materials used for laces in the production of footwear, by major type of production

Materials used	Percentage of companies		Weighted percentage of total shoe production				
	All companies	Largest companies	Total	Men's, youths', and boys'	Women's	Misses' and children's	Slippers and miscellaneous footwear
	Percent 1/		Percent	Percent	Percent	Percent	Percent
Cotton	84	89	41	67	12	84	35
Rayon	5	36	4	10	3	2/ *	--
Leather	2	25	1	4	*	--	*
Nylon	1	14	1	2	1	--	*
Other	*	11	*	*	*	--	--
Laces used	84	93	47	83	16	84	35
Laces not used	16	7	53	17	84	16	65

1/ Percentages add to more than subtotal because some respondents mentioned more than 1 material.
2/ Asterisk denotes less than 1 percent.

What the shoe industry thought about cotton laces.--For laces, the low cost of cotton was its first and foremost advantage. The fact that cotton laces retain their shape and stay tied was a fairly close second. Other characteristics cited as advantages included its appearance and durability. And again, tradition and habit were mentioned by 1 in 10 (table 27).

Table 27.--Advantages of cotton laces

Advantages	All companies	Largest companies
	Percent 1/	Percent 1/
Inexpensive,comes in various prices	67	65
Retains shape, stays tied	49	50
Ornamental, dyeable, suits style	13	31
Habit, always available, traditional	8	12
Durable	14	8
Soft	1	4
Washable	2/ *	4
Readymade	1	--
Not ascertained	3	--
No advantages	*	8

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

Two-thirds of the users of cotton laces found no faults with them. Of the remainder, around 3 in 10 expressed dissatisfaction with the lack of durability ("cotton breaks easily and wears fast"). Among the large producers, an additional 2 in 10 remarked on the poor appearance and lack of sheen. As one executive said, "cotton laces don't measure up to the customer's image of good quality...!" (table 28).

Table 28.--Disadvantages of cotton laces

Disadvantages	All companies	Largest companies
	Percent 1/	Percent 1/
Not durable, break, wear faster	30	31
Poor appearance, no lustre, no shine	3	23
Not rot resistant	1	4
Miscellaneous	2/ *	--
Not ascertained	3	--
No disadvantages	63	42

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

What the shoe industry wants in a lace.--The industry sees the ultimate lace as one that stays tied without slipping, provides a nice appearance, mainly lustre, and will wear reasonably well. At the moment, cotton can be said "to have run away and hidden" from its competition. Among those in the shoe industry, cotton laces were preferred in the ratio of 20 to 1 (tables 29 and 30).

One small cloud to temper the enthusiasm, however. In many cases, laces were purchased readymade and just placed in the shoe; thus, relatively little direct experience was forthcoming except as it filtered back from the retailer. Secondly, laces are an admittedly minor part of the shoe, but they can influence a sale through appearance and they do cost something. The industry is willing to experiment and if someone develops a different product, or the trend toward casual laceless shoes continues, the situation may change rapidly.

Table 29.--Characteristics considered most important for laces

Characteristics	All companies	Largest companies	Prefer cotton	
			All companies	Largest companies
	Percent 1/	Percent 1/	Percent 1/	
Stay tied, do not slip	31	50	33	59
Appearance, retains lustre	48	46	49	35
Durable	43	35	43	24
Inexpensive	2	12	2	24
Resists rot	1	4	1	--
Washable	2/ *	4	--	6
Not ascertained	19	23	1	12
Companies not using laces	12	7	--	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 characteristic.
2/ Asterisk denotes less than 1 percent.

Table 30.--Materials preferred for use in laces

Materials	All companies	Largest companies
	Percent	Percent
Cotton	81	61
Nylon	1	14
Rayon	1/ *	7
Other	3	3
Did not use or no preference	12	10
Not ascertained	3	7

1/ Asterisk denotes less than 1 percent.

Materials Used in Other Parts of the Shoe

In addition to discussing the materials used in the major parts of the shoe, manufacturers were asked to indicate which materials they used for some of the less important parts, such as counter and tongue linings, innersoles, doublers, liners, bindings, and so forth. The list was not all-inclusive, and some companies volunteered information whereas others ignored selected end uses. For this reason, the results are not considered completely indicative of the use of the different minor parts but rather provide a general picture of the range of materials used by those replying. This section of the study was further restricted to obtaining information on the materials used; data on the reasons for using the indicated materials were not collected.

Bindings and tapes.--The dominant materials used in shoe bindings and tapes were cotton and cotton mixtures. Cotton was mentioned by 40 percent of the industry, followed by leather (26 percent). Vinyls and plastics were next, along with the various cotton mixtures (table 31).

Bindings and tapes: Materials used	Percent using: All companies	Largest companies
1. Cotton	40	32
2. Vinyl and other plastics	11	14
3. Cotton and rayon	5	11
4. Leather	26	21
5. Nylon	3	14
6. Rayon	3	11

Innersoles.--Innersoles made of miscellaneous synthetics and leather were reported by 6 out of 10 producers. An additional 15 percent said they used paper for this purpose. Respondents often knew only the trade names and not the content. Other materials used included treated paper, rubber, crepe, composition, and neoprene.

Innersoles: Materials used	Percent using: All companies	Largest companies
1. Paper	14	32
2. Leather	59	36
3. Synthetics	56	18
4. Treated paper	3	7
5. Rubber, crepe, composition, neoprene	3	11

Counters (counter pockets).--Counters and counter pockets contain paper, cotton-coated plastics and leather. Almost 1 company in 3 used paper for this purpose, 1 in 4 used a cotton-coated plastic mixture, and only 1 in 10 referred to leather.

Counters (counter pockets)	Percent using	
Materials used	All companies	Largest companies
1. Paper	34	18
2. Leather	12	14
3. Cotton-coated plastic	24	--
4. Cotton	2	7
5. Cotton-coated rubber	2	7
6. Vinyl and other plastics	1/ *	11

1/ Asterisk denotes less than 1 percent.

Box-toes.--Cotton and cotton-coated plastics were each used in box-toes by between 20 and 30 percent of the industry. Plastics and leather were each mentioned by about 1 in 10.

Box-toes	Percent using	
Materials used	All companies	Largest companies
1. Impregnated cotton	3	25
2. Cotton-coated plastic	20	18
3. Vinyl and other plastics	11	4
4. Cotton	28	7
5. Synthetics - general	2	--
6. Leather	8	--

Doublers.--Cotton was the most frequently mentioned material for doublers or backings. Almost a third of the respondents reported that cotton was used for this purpose. No other material was mentioned by as many as 1 company in 10.

Doublers, backings, etc.	Percent using	
Materials used	All companies	Largest companies
1. Cotton	29	68
2. Leather	4	11
3. Paper	--	11

Sock linings.--Paper (including treated paper), plastics, leather, coated cottons, and pure cotton were all mentioned as materials used in the sock linings of shoes.

Sock linings	Percent using	
Materials used	All companies	Largest companies
1. Treated paper	5	18
2. Paper	4	7
3. Plastics	6	4
4. Leather	1	14
5. Vinyl or pyroxylin-coated cotton	2	14
6. Cotton	3	--

Cushions and paddings.--Paper was the only material mentioned to any extent for use in cushions and paddings.

Cushions, paddings, fillers	Percent using	
Materials used	All companies	Largest companies
1. Cork	1	14
2. Paper	23	--
3. Rubber, crepe, composition, neoprene	1	4
4. Jute or hemp	1	7
5. Cotton	1/ *	4

1/ Asterisk denotes less than 1 percent.

Table 31.--Materials used for selected minor parts in the manufacture of footwear 1/

Materials used	Bindings, tapes, etc.	Inner-soles	Counters, counter pocket	Box-toe	Doublers, backings, tongue linings	Sock linings	Cushions, paddings, fillers
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Cotton	40	2/*	2	28	29	3	*
Cotton and rayon	5	--	--	--	--	--	--
Cotton and plastics	4	*	24	20	*	2	--
Cotton and rubber	5	--	2	*	3	1	--
Impregnated cotton	--	--	--	3	*	--	--
Other cotton mixtures	1	3	*	5	*	3	*
Plastics, vinyl, etc.	11	--	*	11	--	6	*
Rayon	3	3	--	--	3	--	--
Nylon	3	--	--	--	--	--	--
Texon	--	56	--	--	--	--	--
Other synthetics	--	3	*	2	3	*	*
Leather	26	59	12	8	4	1	3
Rubber, crepe, composition, and other soling materials	*	3	--	--	*	--	1
Cork	--	--	--	--	--	--	1
Hemp, jute	--	--	--	--	--	--	1
Other natural materials	*	6	--	1	--	--	*
Paper	*	14	34	1	*	4	23
Treated paper	*	3	*	*	--	5	--
Other materials	--	8	--	1	--	--	--
Mentioned the use of	76	90	66	72	29	23	26
Did not mention the use of	24	10	34	28	71	77	74

1/ Percentages add to more than subtotals because some respondents mentioned more than 1 material.
2/ Asterisk denotes less than 1 percent.

How Much Material per Pair of Shoes

To provide another basis for comparison, executives were asked for estimates of the amounts of the different materials used in the following parts of shoes: The lining (vamp and quarter), the sole, and the upper (or outer surface). Obviously, certain materials are used in varying amounts depending on the type, style, and the size of the shoe under consideration. For this reason, company officials chose one type of shoe to discuss, generally their top-selling line.

The fine cooperation received throughout the study was particularly evidenced at this point when, not satisfied to rely on memory, many of the respondents took the time to refer to records or made inquiries. However, the results which follow are at best a series of estimates and should be used with extreme care. The procedures followed in arriving at these estimates are presented in the appendix (p. 65).

The amount of material used for vamp linings ranged from 0.5 square foot per pair to around 1 square foot per pair. The average amounts of the different materials used in vamp linings are shown in table 32. Again, the absence of any particular material from the list, of course, is not meant to suggest that it is not in use. As noted earlier, the materials shown here are only a small sample and represent, in most cases, those most widely used for each of the indicated purposes. Variations between the averages for any one use result from the fact that manufacturers spoke of different styles, models, and types (dress vs. casual, for example), as well as different materials. The averages, thus, provide a composite picture.

Quarter linings appeared to utilize more material in a pair of men's and youths' shoes than in women's shoes. About 1 square foot of material found its way into the average pair of men's shoes, as against three-fifths of a square foot or less for a pair of women's shoes.

The use of full linings, as opposed to separate vamp and quarter linings, seemed to be quite common among a large number of manufacturers, and particularly so outside of the men's and youths' area. There was surprising agreement between the amount of material used for a full lining and the sum of those used for vamp and quarters.

Table 32.--Average amount of material used for lining a pair of shoes, by type of lining and shoe produced, for selected materials 1/

Type of lining and type of shoe	Leather	Cotton	Cotton mixtures	Rayon
	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.
Vamp lining:				
Men's and youths'	--	.93	--	--
Women's	--	.71	1.00	.52
Misses' and children's	--	.74	--	--
Quarter lining:				
Men's and youths'	.99	--	1.00	--
Women's	.58	.50	.33	--
Misses' and children's	.41	--	.54	--
Full lining:				
Men's and youths'	1.09	.92	--	--
Women's	1.09	1.37	1.00	1.00
Misses' and children's	1.00	1.01	--	.95
Slippers	.56	1.55	.50	1.00

1/ Based on estimates obtained from companies included in the sample.

Turning to uppers, leather was the only material for which information was given for each type of shoe. Misses' and children's shoes averaged 1.1 square feet per pair of shoes. Women's shoes averaged 1.4 square feet of leather upper, while men's and youths'shoes required an average of 2.3 square feet of leather upper (table 33).

In the case of soles, the amount of leather reported per pair of shoes exceeded the amount of rubber used for each major type of shoe. The range for leather ran from one-half square foot to just under 1 square foot. The average amount of rubber soling material was reported to vary between four tenths and seven-tenths of a square foot. Since many companies purchase soles on a pre-cut basis, the results include both the estimates of those cutting their own soles and those purchasing readymade soles (table 34).

Table 33.--Average amount of material used for uppers per pair of shoes, by type of shoe produced, for selected materials

Type of shoe	Leather	Cotton	Cotton mixtures
	Sq. ft.	Sq. ft.	Sq. ft.
Men's and youths' -------	2.27	.50	--
Women's ----------	1.38	1.74	1.00
Misses' and children's --	1.08	--	--
Slippers ----------	1.57	2.26	1.30

Table 34.--Average amount of material used for soles per pair of shoes, by type of shoe produced for selected materials

Type of shoe	Leather	Rubber	Composition 1/	Cotton 2/
	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.
Men's and youths' --------	.94	.67	1.17	--
Women's ----------	.81	.46	.42	--
Misses' and children's ---	.52	.37	--	--
Slippers ----------	.79	.41	--	1.50

1/ Includes plastic.
2/ Excludes coated cotton materials, .50 sq. ft.

The consumption of cotton.--Utilizing the data on average amounts of materials used per pair of shoes, estimates of the total amount of cotton consumed in linings and uppers were developed. The procedures and the detail used in deriving these estimates are presented in the appendix (p.65). The aggregates do not provide an exact level of consumption for many reasons, among which are reliance on memory rather than reference in all cases to quantitative data, the limited number of styles and types for which data were obtained, and the exclusion from the definition of linings of such parts as binders, fillers, stiffeners, and backing materials. For this reason, the estimates differ from those available from other sources. The intent here is to provide a rough measure of the market in these end uses which might be of use to the natural fibers industry.

On an overall basis, results from the study suggest that the shoe industry consumed around 45 million square yards of cotton lining materials in 1958. Excluded from this estimate are "canvas covered - rubber bottom" shoes. The women's shoe industry consumed the most cotton lining material, approximately 17-1/4 million square yards. Producers of misses' and children's shoes were

next with 11-1/4 million yards, followed closely by the men's and youths' group with 10-1/3 million yards. At the extreme, manufacturers of slippers and miscellaneous footwear used some 6 million square yards in 1958 (table 35).

The consumption of cotton and part-cotton materials in uppers totaled almost 12 million square yards. Of this amount, about two-thirds, or approximately 8-1/2 million square yards, was used by the women's shoe industry. The growth in popularity of the cotton-covered casual would seem to be responsible for this relatively high level of use. Manufacturers of slippers and miscellaneous footwear were the only other appreciable users of cotton uppers, consuming some 3 million yards in 1958. Misses' and children's shoes as well as men's and youths' shoes used relatively little in the way of cotton uppers, less than 150,000 square yards in each case (table 35).

Table 35.--Estimated consumption of cotton and cotton mixtures in linings and uppers in 1958, by major type of production 1/

Type of shoe	Cotton consumption in --	
	Linings	Uppers
	1,000 sq. yds.	1,000 sq. yds.
Total	44,801	11,832
Men's and youths'	10,365	138
Women's	17,275	8,449
Misses' and children's	11,178	129
Slippers	5,983	3,116

1/ Does not include an allowance for doublers, backing material, bindings, tapes, sock linings, binders, fillers and stiffeners.

Style Selection

How the shoe industry and its executives decide on the selection of a new or simply different style item is probably best explained in the industry's own words --

> "This industry has a few leaders and a thousand followers. They (retailers) show us a $10 shoe and tell us to copy it at $4 ... and we do!"

> "We're the greatest copyists in the world. We copy (everybody). They get their ideas from France, Italy, and from their heads. We show our customers something proven. We get it as fast as it hits the windows in New York -- next week, we use it."

The dynamics of shoe fashion are clearly illustrated in the following reply:

> "Style begins in the 'style houses' of the industry, at the top of the price range. As a style becomes popular and catches on, it builds to a peak in sales. The time to pick up and copy it is on the upgrade side just before it hits the top. You've got to get on and off before the popularity drops."

Thus, it appears that, as with style change in almost all articles of wearing apparel, the more exclusive houses generally put the latest things on the market. The way the line moves at the retail level becomes the barometer which tells the rest of the industry whether or not a "fair weather" model is on the line. The process is not always a delayed chain reaction, however. On those occasions when a new style has immediate and overwhelming success, shoe producers from the top to the bottom of the price range board the bandwagon in a hurry.

Most of the industry travels this road as far as style innovation is concerned. But not all companies are "idea pirates"; somebody has to be the style leader. And just as the followers know their position, so the style producer is refreshingly frank in knowing his place in the industry and being very proud and sure of it.

> "We never worry when we're being copied, only when we're not" was the comment of one style leader.

> "We're not followers, we're leaders. We make style!" was the quiet forceful way another top executive put it.

Less direct but equally clear was the following comment,

> "We run our own prints, if necessary --- we seek out foreign fabrics and try to get them here in the U. S. Mr. ---, our president, is over in Europe now looking for ideas."

And then there's always another way to come up with new styles --

> "I have a sales manager who's style minded. He may have a nightmare -- I don't know where his ideas come from, but he is exposed to style."

With the many followers and the few leaders, then, it is not surprising that in many cases a "stylist" is more an artist in variation than a style originator. For though companies may copy directly, it seems to be more the practice to add or change something -- a bow, a button, or a strip of color -- or to remove some accessory, from the original.

Supporting their statements on style selection and determination, some 60 percent of the shoe producers named the styles of higher grade shoes as the major sources of new styles, followed by the designs created by their own organizations, which was mentioned by about 40 percent. The views of the larger producers tended to agree generally with the overall picture, although the recommendations of the retailer appeared to be a more important factor in style selection among large concerns (table 36).

Table 36.--Factors considered in the selection of new styles

Factors	All companies	Largest companies
	Percent 1/	Percent 1/
Designs created by own organizations ----	42	71
Styles of higher grade shoes ----------	60	71
Recommendations of customer (retailer) --	14	39
Patterns purchased from stylist firms ---	13	14
Styles of imported shoes ----------	10	11
Other ----------	19	--
Not ascertained ----------	3	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 factor.

The story of style shows some apparent differences between those producing mostly women's shoes and those specializing in men's shoes. Producers of men's shoes, for example, appeared to lean more heavily on the designs created by their own organizations and more of them purchased patterns from style firms. On the other hand, companies specializing in women's shoes were much more likely to refer to the retailer as an important style source. Manufacturers of both types of shoes considered higher grade shoes and imported shoes as important factors in the style picture.

On an overall basis, however, the men's industry was considered much less style conscious than the women's line. A number of shoe executives reported that many of the same styles of men's shoes have been on the market, with only minor changes in construction and appearance, for 25 years or more. Many industry spokesmen consider this as an overdue area for promotion and, in fact, some companies have already made a start.

> "Men's styles don't change often, but lately we've put in 12 new numbers every 6 months. We used to wait several seasons, but now men are becoming style conscious. It's good for business. Now they buy all types of shoes."

And even in the "misses' and children's" market --

> "We used to make 2 or 3 different styles for kids and that was it. Now the young lady wants the same thing her mother has so we're making square toes, pointed toes, round toes and -- you name it. We've even lost count."

The story of the very dynamic women's footwear industry, as opposed to the other more staid fields of production, is also illustrated by a comparison of the per capita production estimates. In 1957, per capita production of women's shoes stood at 4.5 pairs; this was surpassed only by the "misses' and children's" category with about 5 pairs. At the other extreme were the infants' and babies' line at 2 pairs per person and, finally, men's per capita production at 1.73 pairs. 6/

Using New or Different Materials

Decisions as to whether to accept or reject a new or different material for use in shoes are dependent upon a variety of factors, but the most important one is the price range of the shoes being made. Approximately 78 percent of the shoe industry was of the opinion that the effect of any change in existing price levels was of paramount importance (table 37).

Price range might be considered more the problem of the manufacturer of lower cost shoes than that of the firm which makes more high-style, expensive shoes. For the most part, makers of shoes outstanding for their style, materials, and overall quality sought only the best for their products. If a new or different material would do a certain job better or offer more comfort to the wearer, it was accepted regardless of the cost (within reason, of course).

A few examples from these manufacturers would again serve to emphasize their point. Here are parts of six answers to the question, "In considering the use of a new or different material for a shoe, what factors enter into the decision to accept or reject it?"

> "Not price, certainly. If it's the best we'll use it."
>
> "Price is not a factor. Always use the best."
>
> "... must always change upward."
>
> "... must stay in price range but, more importantly, in quality range."

6/ National Shoe Manufacturers Association. Facts and Figures on Footwear, 1958. 12th Ed.

"... keep your quality up. Just recently we raised the prices in our line. Increased materials costs called for it."

"We like to put into the shoe as much (value) as we can. Always try, in our national brands to put quality in."

Nevertheless, even among these companies, costs were not overlooked; they were simply allowed a bit more latitude.

The relative freedom from limitations due to price enjoyed by the quality shoe house is in direct contrast to the care and attention devoted to cost factors on the part of the less-exclusive manufacturer. The latter must carefully weigh the advantages of the new material against those offered by the old and, should the newer one hold some promise, the producer must then ascertain whether or not its positive characteristics are in keeping with the price he must pay for the material and also what a material-cost increase is likely to do to the final product -- what it will do to the retail price of a pair of his shoes.

Next to price, the manufacturer is acutely aware of the trends of the season and his customers' demands. Basically, this factor acts in conjunction with price to tilt the scale in the direction of acceptance. If styles call for the particular material, the decision is well on the way to being a favorable one.

Beyond these two, the industry looks for those physical qualities which most of the executives spoke of earlier in the report. Such factors as strength, appearance, ease of working on machines, and adaptability to existing machinery and manufacturing techniques all need to be considered before final acceptance or rejection of a material can be accomplished.

The importance of the various factors, as well as their interrelationship is indicated in the following comments by executives:

"Suitability for the purpose. That's the No. 1 test. I test the materials myself -- try to adapt at the same cost or maintain quickly at reduced cost. Even a cost of one-tenth of one cent is important."

"The fabric people mail me a yard of new ... fabric. I'll make several styles of shoes and give them to the sales manager. If he likes it, I tell him the cost. He decides if retailers will buy it. Then we decide whether to use one variety which makes the shoe a dollar more or a cheaper variety which keeps our price where it is now."

"If the new material is cheaper, does the same work and for the same purpose, we buy it. We're all in business to make both ends meet."

"We look at the physical characteristics and the job to be done. A new material needs strength, durability, and elasticity. If it has that and can go through the mechanical procedures of making shoes, is esthetic and competitive, it gains acceptance."

Table 37.--Factors affecting the acceptance or rejection of new or different materials, by footwear manufacturers

Factors	All companies	Largest companies
	Percent 1/	Percent 1/
Price within quality range	78	89
Trends of the season	47	61
Results of laboratory tests	31	11
Attractiveness, eye appeal	4	29
Ease of handling in production	21	11
Best quality available	1	11
Durability	3	7
Washability	4	--
Other	2	--
Not ascertained	4	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 factor.

Where the Decisions are Made

Quite a number of people were found to have a voice in the decision-making process. The person mentioned most frequently was completely outside the shoe manufacturing company itself; namely, the customer (to the manufacturer this means the retailer). Approximately half of the industry executives indicated that the retailer's desires and reactions were major factors in their selection of new or different materials and styles (table 38).

The retailer, of course, is closest to the actual wearer of the shoe and his opinion obtained at style shows and direct visits logically becomes an important consideration. In a way, he is being asked to predict consumer acceptance in advance of actual marketing. The following are a few of the many comments made by shoe company officials concerning the role of the retailer.

"The customer (retailer) decides which style he wants made up."

"Sometimes we make a style just to please a customer."

"We keep in touch with the retailer who knows the ultimate customer. We cater to our buyers."

"On a new style, we wait until customers show interest, then we buy new equipment."

"We make up to 50 to 100 styles of shoes per season to show at shoe shows. Out of the 10,000 to 15,000 buyers who see or buy, we get a good idea of which to keep and which to discontinue."

The manufacturers' sales department also had an important part in the final selection. The salesman was the most important individual, according to the frequency of mention, among the sales staff. Almost 40 percent of the companies regarded him as one of those influencing selection. Generally, his role, as well as that of merchandising, is to keep top management informed of the retailers' thinking, new developments at the consumer level, and shifts in demand for the company's existing lines. Among the larger concerns having a somewhat more extensive organization, the views of both the merchandising people and the sales managers are found to come into play in the decision process.

The position of the stylist is also dependent on the size of the organization. On an industry-wide basis, for example, stylists within the firm itself were not a major force; on the other hand, some 60 percent of the largest companies indicated that the company stylist participated actively in deciding on final styles and materials. Both groups also used outside style services to assist them in this task.

In the opinion of the industry, production personnel appeared to be one of the least influential groups in making the final decision on new styles or materials, although they have specialized knowledge on problems in their own area.

And, finally, there is the major role played by management. According to the executives interviewed in this study, about half of the company presidents (including owners) and a third of the general officers were intimately involved in decisions on style and material changes. Here too, however, the pattern varied between large and small companies. Among the largest concerns, for example, only 11 percent of the company presidents were said to participate directly. Thus, differences in participation at this level of executive responsibility between smaller concerns, which make up the bulk of the industry, and the largest concerns, which account for a substantial proportion of total output, are apparent.

Many decisions, even those involving a material or style change, are made at levels far below the top executive in many large companies. In smaller companies the president or the owner is involved in all decisions, no matter how minor. In the second place, top managements' decisions are usually based on considered judgment after weighing all relevant facts. Thus, before a matter is taken to a top executive level for discussion, considerable investigation

will have been made involving the talents of many others in the company structure. "It's a group decision--general manager, sales manager, president. Our customers will take our recommendations, however; we are a barometer."

Thirdly, managements' decisions are usually not restricted to one item. Many new styles and many new materials may be considered by a diverse group of company officials before a single session solves these and related problems at the same time.

The top executive level is still the final authority. As one executive said, "When a final decision has to be made, I make it!"

The extent to which the different groups were involved in the decision process also varied considerably by the major type of shoe produced. The retailer was a major factor among producers of children's and women's shoes, less important in the men's area. The use of an outside style service was prominent only among men's producers, whereas the company stylist and pattern maker were considered important only among those producing mainly women's shoes.

The role of the salesman was particularly mentioned by the children's groups; the sales manager's participation was highest among producers of men's shoes. Production problems appeared to be most numerous or difficult in the women's area, since a higher proportion of these companies looked to various production levels for assistance and advice in deciding on styles and materials.

Table 38.--Persons involved in decisions on style and material, by major production 1/

Persons	All companies	Largest companies	All companies			
			Men's	Women's	Children's	Slippers and miscellaneous footwear
	Percent		Percent	Percent	Percent	Percent
Outside of industry:						
Customer (retailer)-----	52	68	39	59	84	19
Style service ----------	19	29	62	17	4	10
Critics at style show --	4	--	--	3	--	12
Industry representative	2/ *	7	1	--	--	--
Style department:						
Stylist ----------	11	61	5	31	8	3
Designer ----------	5	14	1	3	2	12
Pattern maker ----------	2	11	--	11	*	--
Fashion coordinators ---	*	--	--	--	--	1
Sales department:						
Salesmen ----------	39	25	20	14	78	27
Merchandising and service personnel ---------	3	18	2	8	3	--
Sales manager ----------	8	21	34	5	--	*
Management:						
President ----------	47	11	59	49	78	4
Officers (general) -----	31	29	19	12	4	84
Owner ----------	4	4	--	1	11	2
General management -----	3	4	17	*	--	--
Cost department --------	3	4	16	*	--	--
Factory management -----	*	4	--	1	--	--
Treasurer ----------	1	--	--	6	--	--
Production:						
Buyer ----------	6	11	2	20	3	3
Production personnel ---	9	4	17	13	--	10
Superintendent ---------	9	11	1	23	--	12
Purchasing agent -------	*	7	--	1	--	--
Technical supervisor ---	19	4	--	--	--	67
Foreman ----------	*	--	--	2	--	--
Not ascertained -----	3	--	--	15	--	--

1/ Percentages add to more than 100 because some respondents mentioned more than 1 person as being involved.

2/ Asterisk denotes less than 1 percent.

Cotton's Recent Past

Company executives were asked to sum up their opinions on the recent trends in the use of cotton. Nearly 6 companies in 10 felt that cotton usage had increased in recent years; on the other hand, about 2 in 10 reported a decrease in cotton consumption during this same period. The remaining 2 in 10 said that cotton was holding its own (table 39).

Perhaps more important, however, are the ideas expressed to support any one of the three possibilities rather than the possibilities themselves. Those who felt that cotton usage was on the upswing mentioned the growing popularity of the canvas-covered casual and leisure shoe. In the same vein, more need and use of cotton linings and trim was the other important factor said to affect the use of cotton.

> "The method of shoe making is different now. The biggest part of the shoe is the lining and cotton is used more widely in linings."
>
> "Lighter (weight) shoes require more cotton."

And by a producer of cotton casual play shoes --

> "Publicity really works. It's the secret of getting accepted. Cotton (casual and play) shoes are accepted by consumers now."

In the case of those observing a decline, the increased use of synthetics in producing a shoe, especially nylon thread, was considered responsible. Representative comments supporting a possible decrease in cotton usage are as follows:

> "We'll start using more nylon because nylon's price is (becoming) more reasonable."
>
> "Nylon is lighter in weight, and you get more strength, more yardage to the pound, which helps to counteract price. Nylon is not as difficult now to use in machinery. If you educate your labor, (nylon) works as easily as cotton."

"In thread, cotton is all done. Everyone is using nylon."

"In women's shoes, we've stopped using cotton linings ... When a woman goes in for shoes, the salesman always tries to sell her a higher priced shoe, so he picks up a ... shoe and points to the cotton lining and says, 'it's cheap' ... but it's really just as good. During the war, people associated cotton shoes with war shoes. The cotton people should do some good publicity!"

A strong recommendation to the cotton industry to strengthen its position is found in these words:

"There's no concerted effort by the cotton grower and cotton manufacturer to educate the consumer to the advantages of cotton. All the new synthetic fibers are advertised, but I don't recall reading that cotton 'absorbs better.' Cotton doesn't advertise its good points, and it is publicity that sells new fibers. So cotton is losing. If cotton is advertised, it will be easier for the consumer to accept cotton linings."

Table 39.--Recent changes in use of cotton in the shoe industry, by reasons for change

Recent changes and reasons	All companies		Largest companies	
	Percent 1/		Percent 1/	
Use more		57		32
Increased use of canvas shoe, leisure shoe, casual shoe	25		14	
More cotton lining and trim used	24		7	
Decrease in cotton prices	1		11	
More consumer acceptance	4		--	
Prices of other materials increased	2		--	
It is stronger	2		--	
Other	5		4	
Use same		21		21
Use has been constant	15		4	
No substitute for it, must use it	1		14	
No new uses for it	4		7	
Has made no improvement	2/*		4	
Not ascertained	2		--	
Use less		21		46
Increased use of nylon thread	10		11	
Decreased use of linings in shoes	4		21	
Increased use of synthetics	9		7	
Synthetics are more durable, stronger	3		4	
Decrease in production of styles that use cotton	*		7	
Appearance not good	*		4	
Increased use of synthetic thread	*		7	
Not enough publicity	1		4	
Increased use of leather linings	1		4	
Other	1		7	
Not ascertained	3		--	
Not ascertained if any changes		1		--

1/ Percentages add to more than their subtotal because some respondents mentioned more than 1 reason.

2/ Asterisk denotes less than 1 percent.

Future Change in the Shoe Industry

Each of the executives was asked for his forecast of expected changes in materials consumption and production techniques within the following 5 years. Approximately nine-tenths of the respondents mentioned one or more areas in which differences were expected (table 40).

Turning first to expectations in materials consumption, company executives indicated that synthetics in general and plastics in particular would probably be used in increasing quantities throughout the shoe for uppers, linings, heels, and innersoles, for example. The following is a summary of the different replies relating to the future for synthetics:

Expect more use of --	Percent
Plastic (general)	4
Synthetics (general)	4
Plastic soles	2
Synthetic uppers	10
Synthetic patent leather	9
Synthetic lining materials	2
Synthetic thread	1
Vinyls (general)	3
Polyethylene parts (counters, box-toes, heel bases, top lifts)	64
Plastic heels	1
Plastic uppers	1/ *
	100

1/ Asterisk denotes less than 1 percent.

The large manufacturers also expect further increases in the use of fabric uppers (either cotton or nylon), particularly in the case of the casual shoe which was thought to be growing in popularity. Along the same line, increased use was foreseen by some of the companies for the lighter weight, softer, more flexible leathers in lighter weight leather shoes.

The change in material usage was expected to be partially at the expense of leather. One company in four expressed the opinion that less leather would be used in shoe and slipper construction. They did feel, however, that a major upheaval in the use of leather would not occur because of the prestige position held by leather and because the expected population growth would help to offset the introduction of new materials.

Possibly more important to the industry in the long run than the shift to new materials are the anticipated changes in production and processing

techniques. Vulcanization of shoes, a process by which rubber soles are "baked" to uppers through a combination of heat and pressure without the need for welt stitching, is a major variation which is under careful examination and consideration. In all, 41 percent of the industry made direct reference to this development. This subject has been given considerable attention by both the trade press and industry spokesmen.

The development of a "molded" shoe or molded parts is also under active consideration by a number of companies and is in the future thinking of some others. In all, 25 percent of the executives referred to this development. One large shoe company, in fact, is already making an all plastic molded shoe available to the buying public.

The cementing of soles onto the uppers is another process which is seen as expanding, and, finally, automation in the general sense is the fond hope of 11 percent of the larger companies.

As far as future trends are concerned, answers ranged from "it's impossible to predict" to "nothing ever changes," both of which may in fact mean the same thing.

Some typical comments in response to the request for "crystal ball gazing" are shown below:

> "Automation is the most important trend. Vulcanization of shoes will take over even in high price shoes, also extrusion -- a plastic sole onto an upper. Much of shoe making depends on craftsmanship and we can't find trained workers, so our machinery must be made over to do more of the functions."
>
> "Biggest thing will be the vulcanized shoe. We are setting up to use it because others are. We think it will be good ..."
>
> "Most dress and play shoes (women's and children's) will be made by cement in the next few years. There will not be much automation. We must always use handwork. Machines can be improved, but we'll need more intelligent manpower."
>
> "Increase in the use of plastics for linings and soles as they come to look more like leather. Advantage will include uniformity and low cost ... when automation comes, we'll have to have plastics for uniformity."

And on style --

> "We've changed toe shapes 6 times this year at a cost of about $80,000 for lasts. And I'm afraid it will change again. It's a disease!"
>
> "Everything changes from day to day. It's developing and changing -- fluid and flowing."

Table 40.--Anticipated changes in the use of materials and in shoe construction

Anticipated changes	All companies	Largest companies
	Percent 1/	Percent 1/
Style:		
More casual footwear	6	11
Change in style of toe	5	--
Increase in production of lightweight shoes	2/ *	14
Change in heel style	*	4
Decrease in production of laced style	*	4
More variety in children's shoes	*	4
Change in styles (general)	1	11
Other style factors	4	4
Increased use of materials:		
Fabric uppers (cotton, wool, nylon)	1	21
Synthetic uppers (plastic)	6	11
Synthetic linings	*	--
Synthetic soles (plastic)	1	4
Synthetic thread	*	7
Synthetic heels (plastic)	*	7
Rubber soles	4	--
Synthetics - general (plastic, vinyl, polyethylene)	23	32
Softer, lighterweight leather	2	11
Other (sailcloth, paper)	1	--
Decreased use of material:		
Leather	24	29
Cotton thread	*	4
Cotton (general)	2	--
Other	19	4
Processes or construction:		
Molded shoes and parts	25	11
Vulcanization	41	14
Cementing of soles	6	7
Decrease in nailed or stitched shoe	9	4
Welting discontinued	*	4
Automation (general)	4	11
Other processes and construction	1	--
Other (general)	*	--
Change	87	89
No change	6	4
Not ascertained, don't know	7	7

1/ Percentages add to more than subtotal because some respondents mentioned more than 1 change.

2/ Asterisk denotes less than 1 percent.

In terms of price.--Cotton's future market possibilities were explored on several specific levels. In the first, executives were asked to appraise the effect of a change in price on cotton's use. Almost a third were of the opinion that a price change would have relatively little impact on the consumption of cotton and an additional third indicated that "price is not a factor in the use of cotton." Generally speaking, any price change was considered to be within a relatively narrow range and in a downward direction. If the price were to go up substantially, industry felt that marked shifts would occur to the different synthetics. A drastic drop in price, on the other hand, would not affect the situation, since cotton "can only be used in certain parts and it's being used there" (table 41).

Only 3 percent of the companies indicated that cotton would lose some markets it now holds, irrespective of its price, because the price of the synthetics (particularly thread) was tending downward. The remaining 27 percent of the industry felt that cotton might expand its market somewhat by decreasing its price level.

In brief, the present low prices of cotton products are an important factor in maintaining a market, but future changes in price, whether up or down, will be less meaningful as the price differentials narrow between cotton and its competition. The somewhat confused image of cotton in the shoe industry is probably a more important factor than its price level.

Here again, the words of the shoe industry speak for themselves --

> "If cotton prices go down, I won't use more than I do now. If nylon prices go down, I'd have to change a lot of machines, so that might deter me for a while."
>
> "Some say that the cost of 'findings' is unimportant. Others think cotton can't go any lower but synthetics will. This indicates that cotton can't gain new markets by a lower price and can easily lose."
>
> "The price of cotton is so low that in a $5 shoe we never use more than 10 cents worth of cotton in the whole shoe."
>
> "The same people who use it now will use it if the price goes up. Nothing is cheap."
>
> "The old cotton technology is finished. Eli Whitney finished it. Nothing new can be done with it. The synthetics are a new industry, improving constantly."

New applications and broadened market activities.--Considerable difference appeared to exist between the large and the small segments of the industry when asked about new applications or broadened market activities for cotton. Some 60 percent of all producers indicated that it was their opinion that opportunities exist for new or broadened market activities; half that many took the opposite view. In contrast, half of the largest concerns said that cotton's opportunities were limited, whereas only a third felt that new market possibilities existed (table 42).

The areas in which expansion might occur were somewhat interrelated. About 10 percent of the executives felt that increased consumer acceptance and use of casual or fabric shoes would provide a broadened opportunity for cotton. This view was particularly supported by the largest manufacturers. Along the same lines, increases were expected in the use of both coated-cotton uppers (mentioned by a third) and cotton linings (suggested by one-fifth). And a small number were relying on the expected increase in population to provide cotton with an expanded market.

Those who felt that the opportunities, in effect, were nonexistent used the same variety of explanations that can be found earlier in the report. For example, "by using manmade materials, we can control the (effect of) moisture, and heat -- also allows us to use machines in shoe construction rather than hand-labor."

An additional factor mentioned as having an effect on the market potential for cotton is the question of imports. A number of shoe manufacturers, particularly those producing lower-priced shoes, pointed out that imports had taken over a large part of their particular market.

> "From 1951 - 1956, we made fabric shoes (children's) with leather soles. Imports killed our market, so we went into the rubber soles. (They) compete, but our product is superior."

> "There are rubber composition vulcanized shoes of cotton (imported). They cut into shoe trade, but maybe they only serve as an extra shoe for girls. ... Their labor is cheap, they use cotton, materials are cheaper."

Table 41.--Manufacturers opinions on the effect of price changes on cotton's future market

Opinion	All companies	Largest companies
	Percent	Percent
Expand market with price decrease	27	14
Lose market with price increase	3	21
Remain the same	31	39
Can only be used in certain parts	23	21
Will never go low enough to affect the market	2	4
Has no competition, no substitute	4	--
Miscellaneous	1/ *	--
Not ascertained	2	14
Price is not a factor	33	25
Depend on whether price is up or down	4	--
Not ascertained	2	--

1/ Asterisk denotes less than 1 percent.

Table 42.--Opinions about new or broadened activities for cotton

Opinions	All companies	Largest companies
	Percent 1/	Percent 1/
Opportunities exist for new or broadened market activities	60	32
Uncertain of opportunities	7	11
Opportunities do not exist	30	54
Not ascertained	3	4
Reasons for expanded use of cotton:		
Increased production of casual or fabric shoes	9	18
Coated cotton will be used for uppers	31	4
Increase in use of cotton linings	20	--
Population will increase	1	4
Need of cotton backings will increase	2/ *	--
Nonwoven cotton will replace paper	*	4
Cotton can be made in many colorful prints	*	4

1/ Percentages add to more than subtotal for the groups because some respondents mentioned more than 1 reason.
2/ Asterisk denotes less than 1 percent.

A P P E N D I X

Computation of Average and Aggregate Amounts of Materials Consumed in the Production of Shoes

A. The weighted averages shown in tables 32-34 were derived in the following manner:

1. Companies were sorted into separate groups according to their major type of production.

2. The amount of material used for a specified part of the shoe by a given company was multiplied or weighted by the production of that type of shoe.

3. Weighted totals for any one material were summed for all companies and divided by total production of the companies in each class.

4. The procedure was repeated for each material and each major type of shoe.

Example:

1. Company A produced 2 million pairs of men's dress shoes. Each pair used 1 square foot of cotton lining. (2 million pairs x 1 square foot = 2 million square feet).

2. Company B produced 3 million pairs of this type containing 2 square feet of cotton lining. (3 million pair x 2 square feet = 6 million square feet).

3. Weighted average

$$= \frac{6 \text{ million sq. ft.} + 2 \text{ million sq. ft.}}{2 \text{ million} + 3 \text{ million}}$$

$$= \frac{8 \text{ million}}{5 \text{ million}} = 1.6 \text{ sq. ft. of cotton lining per pair of shoes.}$$

B. The steps involved in deriving aggregate estimates of the consumption of cotton and cotton mixtures, as shown in table 35, are as follows:

1. The total 1958 production for each of the major types of production (column 2) was adjusted to provide an estimate of the number of shoes containing cotton or cotton mixtures in the specified part through the use of the estimated proportion of production containing some or all cotton as derived from the survey (column 3).

2. The resultant number of shoes containing cotton was multiplied by the weighted average amount of cotton used (in square feet) in that part of a pair of shoes (column 4). In those instances where the average differed between all cotton and cotton mixtures, the estimate used was that shown for cotton. Where only one estimate was available, it was used. In another instance, an average for cotton was not available from the survey; the estimate used was that computed for leather.

3. As a final step, the results were converted to square yards by dividing by 9; the answers are shown in column 5.

4. In summary, the estimates shown in column 5 are the products of columns 2, 3, and 4, divided by 9 to convert to square yards.

Consumption of Cotton in Uppers 1/

(1) Type of shoe	(2) Production	(3) Shoes containing uppers of cotton or cotton mixtures	(4) Average amount of cotton uppers per pair	(5) Consumption of cotton
	1,000 pairs	Percent	Sq. ft.	1,000 sq.yds.
Men's and youths'	124,559	2	.50	138
Women's	273,129	16	1.74	8,449
Misses' and children's	107,134	2/ *	3/ 1.08	129
Slippers and miscellaneous footwear	77,564	16	2.26	3,116
				11,832

1/ U. S. Bureau of Census, Facts for Industry, Series M-31 A, Monthly.
2/ Asterisk denotes less than 1 percent.
3/ Estimate based on leather; data for cotton not available.

Consumption of Cotton in Linings 1/

(1) Type of shoe	(2) Production	(3) Shoes containing cotton		(4) Average amount of cotton per shoe		(5) Consumption of cotton
		Vamp	Quarter	Vamp	Quarter	
	1,000 pairs	Percent	Percent	Sq. ft.	Sq. ft.	1,000 sq. yds.
Men's and youths'	124,559	73	7	.93	1.00	10,365
Women's	273,129	52	40	.71	.50	17,275
Misses' and children's	107,134	78	67	.74	.54	11,178
Slippers and miscellaneous footwear	77,564	44	45	.78	.78	5,983
						44,801

1/ U. S. Bureau of Census, Facts for Industry, Series M-31 A, Monthly.

With the exception of check-box material, office-record information, and free-answer space, the questionnaire used for this study is reproduced below

U. S. Department of Agriculture
Agricultural Marketing Service

Budget Bureau No. 40-58105
Expiration Date - March 31, 1959

MANUFACTURERS' OPINIONS OF COTTON AND LEATHER USED IN SHOES

Introduction

As part of its program to increase the consumption of agricultural products, the Department of Agriculture conducts studies on the uses of these products in different industries. Today, we'd like to discuss the various raw materials which are used in the production of shoes, how satisfied you are with each of them and what changes you expect in the future.

1. First, however, I'd like to know which of the following kinds of shoes you produced this year?

	Percent
a. Men's dress or casual	
b. Men's work	
c. Youths' and boys'	
d. Women's dress and work	
e. Women's sandals and play shoes	
f. Misses'	
g. Children's	
h. Infants' and babies'	
i. Athletic shoes	
j. Slippers	
k. Any others (specify)	
	100

2. What proportion of your total 1958 production do you estimate will be accounted for by -- (Ask for each type checked above).

Turning to the materials used in producing shoes --

3. In what ways is cotton now used--that is, do you use it for linings? For threads? Laces? Any other?

4. What other materials or fibers are used in each of these parts of the shoe, starting with uppers? (Repeat for each part of the shoe).

5. What proportion of your total production contains (uppers) made of leather; what proportion contains uppers made of (cotton)? (Repeat for each fiber or material checked below and for each application).

Material	Uppers (exterior)	Pct.	Outer soles	Pct.	Linings	Pct.	Threads	Pct.	Laces	Pct.

5a. We've talked about the major parts of the shoe; now, would you tell me which materials you use for some of the minor parts, such as counter linings or reinforcings, tongue linings, innersoles and other stiffeners, liners, bindings or reinforcings?

6. What are the specific advantages of cotton when used for (linings)? -- What are its disadvantages? (Ask for each application in which cotton is used--Q. 3).

7. What characteristics do you consider as most important for (uppers)? (Repeat for each application).

8. What materials now available to you come closest to having all of these important characteristics for (uppers) -- what, if anything, do they lack? (Repeat for each application).

9. (If a material given above is not used currently for the indicated purpose -- table in Q. 5 -- ASK:)

According to your list of materials for _____, you don't use (Materials from Qs. 3 and 4) at this time. Why is that?

10a. Just how does your firm select its new styles and what factors are generally considered? (Where do the leading ideas come from?)

10b. In considering the use of a new or different material for a shoe, what factors enter into the decision to accept or reject it? (Price factors)

10c. Who are the different people involved in these decisions?

11. Overall what changes do you foresee in the next 5 years in the use of materials in producing shoes? (Probe for style and for amounts of material).

12. To sum up, what has been your experience with cotton usage in the shoe industry in recent years -- that is, in comparison to other materials, is cotton being used more widely, merely holding its own, or declining in importance? Why do you think this has been so?

13. In your opinion, are there any opportunities for expanded markets for cotton in terms of price, or is it likely to lose markets it now holds because of price? (Specify application).

Expanded markets ☐ Lose markets ☐ Same ☐ -- Why?

14. Do you foresee any new applications or broadened market activities for cotton in the shoe industry?

NO ☐ YES ☐ - (if YES, ASK) - Why?

Now, I'd like to go back for just a minute and ask you a few additional questions about the materials you use in making _____. This is your "top production" shoe, is it not? (Restrict to leather, cotton, and other textiles).

15. First, approximately how much (leather) goes into making (uppers) for an average pair of these shoes? (Ask for each material and each use).

Type of material	Amount of material used -- (specify unit of measure)				
	Uppers (exterior)	Outer soles	Linings	Threads	Laces

16. Finally, approximately how many pairs of shoes do you think you will produce in 1958?

This completes the questionnaire. Thank you very much for your cooperation.

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