

South Dakota State University

## Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange

---

SDSU Extension Leaflets

SDSU Extension

---

5-1-1947

### Fabrics : What's New?

Pauline DeHass

Follow this and additional works at: [https://openprairie.sdstate.edu/extension\\_leaflets](https://openprairie.sdstate.edu/extension_leaflets)

---

#### Recommended Citation

DeHass, Pauline, "Fabrics : What's New?" (1947). *SDSU Extension Leaflets*. 103.  
[https://openprairie.sdstate.edu/extension\\_leaflets/103](https://openprairie.sdstate.edu/extension_leaflets/103)

This Pamphlet is brought to you for free and open access by the SDSU Extension at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in SDSU Extension Leaflets by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact [michael.biondo@sdstate.edu](mailto:michael.biondo@sdstate.edu).



3 1574 50153 4991

# Fabrics WHAT'S New?



MAY 1947

LEAFLET 103

## AGRICULTURAL EXTENSION

### SOUTH DAKOTA STATE COLLEGE

U. S. DEPT. OF AGRICULTURE COOPERATING

630.732

5087

No. 103

C.2

# FABRICS—*What's New?*

By PAULINE DEHASS\*

When you go to buy piece goods and new garments for your family, you are going to find some strange labels. You will find new fibers, improvements on old fibers, new finishes for old fibers.

You will find in finishes, materials which are crease resistant, flame resistant, water repellent and with a host of other desirable properties. Some of the finishes will give you good service, others will have to be replaced after laundering or dry cleaning. Some of the newest fibers and finishes you will have to try for yourself, details are lacking on how well they work.

To give you a complete picture of all that is new in the fabric picture would be a nearly impossible job. On the inside of this leaflet you will find a chart where the more important new finishes are listed with brief statements concerning what is known about how they work.

How many of these fabrics you will be able to buy is difficult to predict. Some of them are available in South Dakota stores. All garments pictured in the leaflet were bought in the state or the material was purchased at local stores.

Labels and tags will have to be your guides. Some tell the whole story, others you will have to ask about. They are all part of the new fabric picture which is being painted to provide you with better looking, better wearing, more satisfactory clothing, upholstery and household fabrics.

You will find a rapid review of fabrics and fibers a good basis for looking at the new picture.

Fabrics can be classified into two general groups—natural and man-made.

Natural fibers include wool, cotton, linen and silk, plus newer fibers from fur and feathers. Minor fibers in this group include jute, hemp, kapok, ramie, sisal, and asbestos. Man-made fibers include rayon, nylon, vinyon, velon. They are suitable for particular purposes and vary as to washability, wearing qualities, and desirability. Most man-made fibers have cellulose, protein, mineral, or synthetic resin as a base.

---

\*Clothing Specialist



# Natural Fibers

## Animal Fibers

**Silk**—During the war when it was impossible to get silk fibers, silk lost much of its popularity to nylon and other synthetic fibers, especially in the hosiery field. Doubtless silk will be in demand again, but it will take time for production to reach an important commercial state.

**Wool**—Good quality wool makes a very satisfactory and satisfying suit, skirt, dress, jumper or coat. It not only protects from heat and cold, but it is absorbent, resists crushing and creasing, and makes a strong fabric.

Good wool is resilient and elastic. The softness will depend on the kind of wool.

Wool has two general classifications—worsted and woolen. Worsted fabrics are made from strong highly twisted fibers. Woolen fabrics are made of softly twisted shorter yarns. Wool may come from the fleece of the sheep or lamb, angora goat, camel, llama, cashmere, goat or vicuna. The fibers may range from fine to coarse and from less than one inch to over a foot in length.

Novelty effects can be obtained by combining silk and rayon with wool. A wool and cotton mixture will shrink less than all wool. Wool fabrics vary in quality as much as in content and combinations.

Wool fibers are classified as wool, reprocessed wool and re-used wool. The wool classification is limited to wool fibers used in manufacturing for the first time. Reprocessed wool includes wool made from wool scraps which have never been used or worn, but are made into fabrics again. Re-used wool is wool fabric made partially from rags and old clothing which is processed.

Best results are obtained from wool with dry cleaning, and when laundered, mild soap, lukewarm water and gentle handling are essential. Wool scorches easily and must be pressed with a cloth and moderately hot iron.

**Fur and Hair**—Beaver, muskrat, rabbit, racoon, and squirrel fibers are being woven into fabrics in combination with wool or alone. Little is known about these fabrics except rabbit fur, which is about as satisfactory as an all wool cloth.



Bathing suit of permanent-finish glazed chintz. One of the cellulose-finished chintzes which holds the finish after several launderings. Has been found very satisfactory by clothing specialist.

**Feathers**—Feathers, especially of chicken and ostrich, are used alone as artificial fabric or in combination with wool. They are weak when wet. Little is known about their value.

### Vegetable

**Cotton**—Cotton is usually finished to give body, softness, and smoothness to the fabric. Varying the size of the yarn, the twist of the thread, or the weave changes the character of the cotton fabric. There are many grades of cotton, depending on the twisting of the filling threads, count of threads, and weave.

Types of popular cotton fabrics are muslin, percales, batiste, nainsook, gingham, broadcloth, and cotton flannel. Denims, baby flannel, and whipcord are twill weave fabrics. In selection of cottons, quality yarns with long fibers, closely woven fabrics, suitable weight and strength and even yarns are important.

Cotton, as a rule, launders nicely in hot water and plenty of soap suds.

**Linen**—Strong lustrous yarns or fabric of smooth-surfaced flax fiber. Used for wearing apparel, household articles, and fancywork.

**Ramie**—A fiber similar to flax obtained from plant stalk. Sold on the market as China Grass. New improved type now coming out, which seems to be satisfactory.

---

No statement in this leaflet should be construed as meaning endorsement of any particular products by the Extension Service.



WHAT'S NEW IN FABRIC FINISHES? As of April, 1947

| FABRIC | WHAT'S NEW?   | HOW DOES IT WORK?   |
|--------|---|---|
| Wool   | <b>Mothproofing</b> —Chemical treatment to prevent moth attack.   | Processes vary in resistance to laundering and dry cleaning. Some have lasted through 10 dry cleanings.   |
|        | <b>Shrink Resistance</b> —One process of wool shrinking is steaming and pressing. Can be done with damp sheet method at home. Another good method for shrinking wool is chlorination. Process removes fiber scales, destroying the felting property to some extent. Helps prevent matting. Used principally on underwear and hosiery. Is used on yard goods to be made into garments. | Used successfully on wool army socks. Increases wearing qualities 30 percent. The steaming and pressing method is quite satisfactory and can be done at home. Chlorination helps increase ability to take dyes. |
|        | <b>Crease Resistance</b> —Resin treatment which increases weight and provides resistance to creasing.   | Resists normal wrinkling.   |
|        | <b>Flame-proofing</b> —Fabrics can be protected by most fireproofing treatments from burning, but not from charring and disintegrating when subjected to high temperatures. One type melts to form a glaze which covers fabric. Another decomposes to give off noninflammable gases that smother flame. Home applications can be made of borax and boric acid.                        | Clog fibers, cutting circulation to a minimum, so very hot to wear. May be truly fire-proof or flame-retarding.   |
| Cotton | <b>Sag Prevention</b> —Chemical treatment under various trade names.  | Helps fabrics keep their shape.   |
|        | <b>Plastic Finish</b> —A resin-impregnation process applied to cottons (and other materials) which gives a glaze and stabilizes the fabric to shrinkage of less than 2 percent.   | Has been found very satisfactory in most cases if laundered lightly. Finish dissolved by some cleaning solutions.   |
|        | <b>Mildew Proofing</b> —Chemical treatment to resist mildew and mold damage.  | Usually washes out.   |
|        | <b>Rot Prevention</b> —A chemical treatment to prevent perspiration damage and rotting.   | Used a great deal on army tents. Quite satisfactory.  |
| Linen  | <b>Colorfastness</b> —Vat dye, a superior dye developed by oxidation. Resistant to sunlight and washing.  | Prevents fading normally caused by sunlight and washing.  |
|        | <b>Crease Resistance</b> —Chemical treatment to resist normal wrinkling.  | Helps resist and recover from normal wrinkling. Holds well in most cases.   |
|        | <b>Shrinkage Control</b> —Several processes applied to many cottons.  | Very satisfactory.  |
|        | <b>Water Repellent</b> —Water-repellent finishes do not close pores of cloth, so body can “breathe.” Water-proofing closes pores.   | Resists wetting and spotting. Unless “durable,” finish will have to be replaced.  |
| Silk   | <b>Flame Resistance</b> —A flame retarding process. Fabrics can also be treated to prevent flaming, but process does not prevent glowing.   | The flame proof materials applied to fabrics are usually entirely removed by wet cleaning, and may be partially removed by dry cleaning. Can be reapplied by some cleaners.                                     |
|        | <b>Linen Finishes</b> —A process to give cottons and rayons or a combination of the two the appearance of linen.  | Works very satisfactorily and is available in a wide variety of colors and weights. Lasts as long as the fabric.  |
|        | <b>Vat Dyed</b> —A superior dye developed by oxidation.   | Provides wide range of colors colorfast to laundry and sun.   |
|        | <b>Crease Resistance</b> —Chemical treatment to resist normal wrinkling. Helps overcome one of bad features of linen.   | Weakens with age.   |
| Rayon  | <b>Shrinkage Control</b> —Linen now shrinks very little.  | Not much shrinkage.   |
|        | <b>Various Weights</b> —Various weights obtainable from finest handkerchief to heaviest suit.   | Washes well, irons easily.  |
|        | <b>Pure Dye</b> —Silk goods which do not contain metallic weighting or finishing materials exceeding 10 percent. (15 on black). The term has nothing to do with quality of dye used.  | Provides a good wearing fabric, easily laundered. Good for undergarments.   |
|        | <b>Weighting</b> —Finishing process adding substance to woven cloth to give additional strength, stiffness, smoothness, and weight. Usually glue, casein, wax, or clay.   | Gives more body to fabric, but makes for less elasticity. Wrinkles badly. Cuts along seams and stitching lines and splits at places of wear.  |
|        | <b>Crease Resistance</b> —Chemical treatment. Has overcome wrinkling to great extent.   | Works very well. Better on some blends or combinations than on others.  |
|        | <b>Shrink Resistance</b> —Has been applied to some rayons.  | Works very well.  |
|        | <b>Gas Fading</b> —Applied to acetate rayons to prevent color change from contact with the air.   | Several processes now used. Satisfactory to date.   |
|        | <b>Colorfastness</b> —Vat dyes now used.  | Very good.  |
|        | <b>Seam Slippage</b> —A setting process now available to control pulling apart of the fibers.   | Proving a great advantage for most types.   |

Continued from page 6  
casein fiber is now used along for interlinings and light weight wraps. It is probably too soft to be durable.

Fiber Blends and Combination Yarns

Fiber blends may be of several types of wool, wool with cotton, wool and silk, protein fibers or rayon, or they may be a mixture of all of the types of rayons and all other fibers. This process is done before the yarn is spun by combining the specific amounts desired and tumbling in large machines until well mixed. Fabrics may also be made of a combination of many yarns. Yarns from the various fibers to be used are made by themselves, then they are combined when they are threaded on the loom by using one or more for each warp and woof.

Summary

In order to select materials and clothing for your family and home you need to know about both natural and man-made fibers, and you need to become acquainted with the many new fibers, the combinations in which they are found and the finishes they may be given. You will need to be label conscious. Look for, ask about, and study all the labels on garments. Then report to your club the good and bad points of a particular product. Inquire when you purchase materials or garments whether they are washable or must be dry

cleaned. Pass on to other members the facts gained after the materials or garments have been cleaned or laundered.

One of plastic finished chintzes. Proved very difficult to work with and does not hold its finish satisfactorily for garments. May be all right for household purposes.



Another cellulose-finished chintz. Dress designed so it can be worn over bathing suit shown on page 4.



Terms

**Abrasion Resistance**—The degree to which a fabric is able to withstand surface wear and rubbing.

**Bleeding**—Excess dye tends to “bleed” or run in water when fabrics are washed.

**Denier**—Term used to indicate the size or “number” of a filament or yarn or the number of 0.05 gram weights (deniers) of a standard skein of 450 meters. The higher the denier number the heavier the yarn. Applied to either vinyon, rayon, silk or nylon yarns. Rayon is made as coarse as 9,000 denier. In hosiery, 75 denier rayon is similar to 4-thread silk.

**Fadeometer**—An electrically operated instrument which approximates the effect of sunlight, and tests the amount of fading in a dye after exposure.

**Hand**—Refers to the feel of a fabric, involving such physical properties as flexibility, compressibility, resilience, etc.

**Resiliency**—A natural property of wool and silk which causes them to spring back when crushed in the hand. This helps prevent wrinkling of the cloth. Linen, cotton, rayon are not inherently resilient, but can be treated chemically to help them resist creasing and crushing.

**Seam Slippage**—The amount a fabric pulls away at the seams. There are laboratory tests to determine.





Both the snowsuit and the raincoat modeled by the girl on the cover are water repellent fabrics. The raincoat with the satin finish out; the snowsuit with the dull side out. Is also excellent as a windbreak. Has proved very satisfactory.

**Jute**—A coarse brown fiber from the stalk of a plant grown in India. Used mainly for burlap.

## Man-Made Fibers

**Rayon**—Rayon is the first man-made fiber. It has been improved constantly since its first appearance in 1920. Rayon is made from wood pulp and cotton linters. There are three main types manufactured today: acetate, cuprammonium and viscose. Rayon yarn is produced in the form of a continuous thread called filament rayon. Spun rayon is made or cut in short lengths and spun into yarn. Spun rayon is generally spongier and more absorbent than filament rayon fabrics.

Most rayons wash, but all need careful attention while ironing. Acetate rayon especially tends to melt or fuse when the iron is too hot.

Desirable in rayon are a firm weave, colorfast dye, and crease resistance. Creped fabrics tend to shrink easily.

**Nylon**—A fabric with extreme toughness and strength, and great elasticity when knitted. Used alone or blended with other fibers. It washes well, with some color fading. Dries almost instantly. Needs no ironing. If pressed, a slightly warm iron is used. It will not mildew and moths do not attack it. It does not rot.

This leaflet will fit in the drawer of your sewing machine. Why not keep it there for handy reference?

**Fortisan**—A strong cellulose yarn. It will be used for girdles, foundations, and other garments needing strength and light weight. It dries rapidly and requires no ironing. Satisfactory to date.

**Vinyon**—A yarn spun from vinyl resin. It has no affinity for moisture and does not support bacteria. It is not subject to damp rot, mold, or mildew. It has high insulating power and will not burn. It is not affected by acids or alkalies.

**Velon**—A fiber made from crude oil and salt water, a thermoplastic resin. Fabrics for home and upholstery use.

**Glass Fiber**—A fabric woven from fine filament glass fibers. It is suitable for curtains and some types of formals. Qualities are similar to nylon. It frays badly, and care must be used when working with it, but wears well.

**Metallic**—Continuous strands of thin aluminum foil can be woven, braided, and knitted into fabrics. It will not tarnish and can be cleaned and laundered.

**Synthetic Rubber**—Synthetic rubber has been perfected to such a degree that yarns made from it are odorless and have 100 percent recovery after stretching. The effect of acids, alkalies and other chemicals and organic solvents varies with the type of synthetic rubber used, but it is highly resistant to heat and little affected by age and sunlight.

**Plastics**—Plastics are not suitable for garments, are not especially successful at present time.

**Protein Fibers**—Several types of protein fibers are of growing importance in the textiles industry. Some are from animal proteins, others from vegetable proteins. Casein fibers are animal protein fibers produced from casein of skim milk, made to resemble wools. The fibers may be blended with wool, mohair, cotton or rayon to be woven or knitted into fabrics. They are sold as aralac.

Vegetable proteins include ardil, produced from peanuts; a soybean fiber which can be used for blends with cotton or rayon to improve the draping quality; zein, made from a protein base of cornmeal.

All protein fibers are blended with other fibers, but

*Continued on Inside Page*

---

Extension Service, South Dakota State College of Agriculture and Mechanic Arts, Brookings, South Dakota—Published and distributed under Acts of Congress, May 8 and June 30, 1914, by the Agricultural Extension Service of the South Dakota State College of Agriculture and Mechanic Arts, Brookings, George I. Gilbertson, Director; U. S. Department of Agriculture cooperating.