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**Keys to Buymanship: Fabrics**

Cooperative Extension South Dakota State University

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keys to buymanship

FABRICS

Cooperative Extension Service
South Dakota State University
United State Department of Agriculture
Today's fabrics almost dare one to guess what they are and how they will perform. Like the motorist who is dependent on road signs and highway maps, the consumer must rely on labels to guide her in buying fabrics for the family. Examine fabric carefully before buying. Study the labels.

Informative fabric labels tell the following facts.
1. What the fabric is made of (fiber content).
3. How the fabric will perform (finish).
4. Care required.
5. Manufacturer’s name and address.

Identification of the fiber is of first importance. When you know the properties of the fiber family you have a clue to how the fabric will perform and the care that will be required. Fibers are hard to identify because fabrics made of synthetic fibers often feel and look like fabric made from natural fibers, but they perform differently.

Natural fibers from which fabrics are made include cotton, wool, silk and linen. Synthetic or other manufactured fibers include rayon, nylon, polyester, acetate, acrylic, and spandex.

Knowing the fiber content of a fabric does not necessarily assure fabric quality. This depends on the raw fiber, the type of yarn, the kind of weave or construction, and the finish used.

Fibers differ in their natural characteristics. They may be weak or strong, short or long, flammable or non-flammable. Some are moth resistant, others are heat sensitive.

Yarns differ. Tightly twisted yarns give a crepe-like look with good wrinkle resistance. Loosely twisted yarns produce smooth, soft, napped or textured fabrics.

Weaves vary. The most durable weaves are composed of yarns of even size closely woven. Loosely woven fabrics snag, pull, or stretch. Weaves with about the same number of crosswise and lengthwise threads per inch are a balanced weave. Durable yarns of fairly uniform size produce the most durable fabrics.

No fiber, yarn, weave, or finish is perfect for all purposes. However, textile engineers and chemists can produce yarns almost perfect for specific uses by blending particular ingredients in the proper proportions and applying the right finish. The aim of the manufacturer is to eliminate the undesirable qualities of each fiber without losing any of its good features.

Fabrics made from two or more fibers are called blends, mixtures, or combinations. In a true blend, two or more fibers are spun together to make a yarn. A combination is composed of yarns of different fibers which are woven into one fabric. True blends are the most common. Examples of successful blends are these:

- 65% Dacron polyester/35% cotton
- 70% Orlon acrylic/30% Avril rayon

Fabrics made of two or more fibers require the care recommended for the predominant fiber. When percentages are almost equal, handle according to the requirements of the most sensitive fiber. Pattern and color are the only factors that are affected by a fiber when it makes up 10 percent or less of the total fiber content.

There is no simple rule by which satisfactory fabrics can be selected. In general, firm, closely woven or knit materials keep their shape better, hold a press better, and are more durable than fabrics of loose construction. When buying garments or yardage, look for fabric characteristics that meet your needs in terms of performance, appearance, durability, ease of care.

FABRIC FINISHES

Fabrics are enhanced by special finishes applied to the fiber or fabric. A single finish may impart more than one property to a fabric. Some finishes require
special care and should be noted at the time of purchase. Finishes are applied to:

- Improve or change the appearance of a fabric by adding body, luster or crispness.
- Increase durability and wearability by making fabrics moth, water, shrink, soil, stain, wrinkle and crease resistant.
- Provide easier care with little or no ironing.

You cannot recognize fabric finishes by looking or feeling. Only the label can tell you what finishes have been applied, what they do, how long they will last, and how they should be maintained.

Finishing processes that concern the consumer are the following (a few selected tradenames have been listed to aid you):

<table>
<thead>
<tr>
<th>Finish</th>
<th>Trade Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent or Durable Press</td>
<td>Vanopress</td>
</tr>
<tr>
<td>Stain and Spot resistance</td>
<td>Zepel</td>
</tr>
<tr>
<td>Waterproof</td>
<td>Reevair</td>
</tr>
<tr>
<td>Shrinkage control</td>
<td>Pak nit</td>
</tr>
<tr>
<td>Moth resistance</td>
<td>Dieldrin</td>
</tr>
<tr>
<td>Crease resistance</td>
<td>Everglaze</td>
</tr>
</tbody>
</table>

### FABRIC CONSTRUCTION

Fabrics are woven, knit, felted, and bonded. There are many variations in all these processes, some of which are not seen easily, but which have a definite influence on the fabric.

The label needs to indicate that a warp-knit fabric will not lose its shape and that a stretch fabric will “give” crosswise only.

The label should tell the amount of shrinkage to expect in a fabric. Less than 2.5 in woven and less than 3.5 in knit means the garment will not shrink out of fit.

The label should tell whether the fabrics are colorfast to light, laundering, bleach, drycleaning, perspiration, fumes, crocking, or rubbing.

### Woven Fabrics

Woven fabrics consist of three basic weaves with many variations and combinations:

1. **Plain weave**—at least 2 sets of threads (warp and filling) interlaced at right angles.
2. **Twill weave**—filling yarns interlaced with warp to form diagonal lines across the fabric. Twill is very durable.
3. **Satin weave**—the result of interlacing two sets of yarns so that more warp than filling is exposed on the right side. If more filling than warp is exposed it is called sateen.

Quality of woven fabrics is determined in part by grainline and thread count.

**Grainline** refers to direction of yarns in fabric. Fabric is printed on grain when the lengthwise direction of the design follows the warp (lengthwise) yarn of the fabric and the crosswise direction follows the filling yarn.

**Thread count** refers to the closeness or looseness of the weave and is determined by the number of warp and filling yarns per square inch. Greater strength is needed in the warp direction and in a plain weave, there are generally more yarns in the warp direction than in the filling direction.

### Knitted Fabrics

Knitted fabrics are the result of a continuous yarn or set of yarns interlooped to form rows of loops. This makes an elastic, porous fabric that shapes itself to the body. There are two major methods of knitting: **weft or filling knit** with crosswise loops as in hand knitting, and **warp knits** in which two or more yarns form loops in both directions.

Knitted fabrics can be flat or tubular. In a **tubular knit** the needles on the machine are arranged in a circle, and the loops make a circular fabric. In **flat knitting** the loops are formed across the fabric.

Flat knitted fabrics can be shaped during the process by adding or decreasing stitches. This is called fashioning. Flat knits are more shape-retaining and better fitting than tubular knits.

Tubular knits also can be shaped. Those knit from synthetic yarns which are thermoplastic may be heat set for permanent shape retention.

**Double knitting** is made with two sets of needles to give a fine, ribbed appearance with the reverse side forming a tiny diamond pattern. Double knits have more body than single knits. They are durable and do not require lining.

### Stretch Fabrics

Stretch fabrics provide fit and comfort. Depending upon the type of stretch and the method of construction, fabrics stretch in one or both directions. **Knitted stretch** fabrics give a two-way stretch and are form fitting. **Power stretch** has snap, extensibility, and the quick recovery needed for foundation garments. **Woven stretch** normally stretches only one way; it does not cling but “gives” for comfort and ease. **Action stretch** is designed for sportswear and comfort stretch for everyday wear. Read labels for type of stretch and care required.

### Bonded Fabrics

Bonded fabrics are the result of two unlike fabrics of different fiber content being fused together
with some type of adhesive. This gives greater stability to loosely constructed fabrics and makes fabric acceptable in appearance and weight available at a relatively low cost. Bonded fabrics combine two knits, two woven fabrics or a woven-face fabric bonded to a tricot knit backing. Knits or woven fabrics also may be bonded to a foam back.

**NON-TEXTILE PRODUCTS**

The consumer may choose from a long list of non-woven textiles, laces, embroideries, and furs, in addition to the wide choices of knitted or woven textiles. Keep in mind cost, serviceability, attractiveness, and use in relation to other fabrics in the wardrobe.

Urethane foams, derived from thermoplastic resins, are used for interlinings. They are warm and lightweight. They withstand washing and drycleaning.

Expanded vinyls resemble leather. They are made from plastic resins and are comfortable to wear. They can be sponged to remove spots; ball point pens, however, cause permanent damage.

**KEYS TO GOOD SHOPPING**

If you sew, decide whether you can save money by purchasing ready-to-wear or buying yardage. Ask yourself if you have the time and skill required to make the quality of garment you desire.

Plan before you shop.

Shop in stores having a reputation for quality merchandise and fairness to customers.

Look for these signs of quality:
- firm weave
- smooth yarns
- even color
- true grain in relation to design

Study the label for fiber content and care required.

Avoid buying on impulse or spending more than you have budgeted or can afford.

Plan your accessories when purchasing fabric.

Consider what is already in the wardrobe that can be worn with the new garment.

Buy the best quality you can afford.

Buy the right amount.

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**FOR FURTHER INFORMATION—FS 473 Fabric Facts**