Today's consumer can choose apparel made from a range of fibers and fabrics. Some are naturally produced and others are manufactured. Fibers and fabrics for apparel are both made in the United States and imported from foreign countries.

Natural fibers

Cotton. Cotton has increased in popularity in the past few years, because consumers appreciate the comfort, wearability, natural look, and machine washability that it provides. Much of the renewed use of cotton is the result of research, product development, and promotional programs by Cotton Incorporated, a trade association. They have developed such new products as no-iron all cotton, garment dyeing, and fashion fabrics with structural texture. Cotton Inc. promotes cotton by means of two trademarks, the Cotton Seal logo for 100 percent cotton and the Cotton Seal plus the words “Natural Blend” for blends of 60 percent or more cotton.

Linen. Industry reports predict that new linen blends will keep this fiber popular into the 1990s. One blend mixes linen with nylon or Lycra spandex to add stretch to linen fabrics for lingerie and other knits. Linen manufacturers now use finer yarns and new techniques to make linen softer and less prone to wrinkling and creasing.

Ramie. Pronounced ray-mee, this natural fiber comes from the stalk of a plant, just like linen. Similar to cotton and linen in its characteristics, ramie wrinkles readily and may shrink during laundering, but is stronger than cotton and slightly more lustrous.

Recently consumers saw more ramie garments in stores because of increased trade with China and a loophole in U.S. trade policy. Originally trade quotas (limits) were imposed on cotton, wool, and manufactured fibers coming into this country. However, if another fiber, such as ramie, was more than 50 percent of a blend with cotton, wool, or man-made fiber, then the item was not subject to quota limits. To evade the trade quotas for cotton, blends of ramie and cotton were imported. Changes in the 1986 Multifiber Arrangement (MFA) resulted in quotas for ramie, silk, and linen.

Silk. “Washable crushed silk” is the result of new methods of dyeing and finishing silk. Consumers need to read and follow instructions for either dry cleaning or washing “washable” silks. They should never wash colored silks with white or light items. A cool water wash is best, with a mild detergent such as liquid dishwashing detergent. Silks should not be dry cleaned. International Fabricare Institute tests have shown that most dyes bled badly in the dry cleaning solvent.

Silks which are not dyed with the new dyes permitting handwashing are labeled for dry cleaning care. It is the consumer’s responsibility to follow the instructions on the care label.

LoEma Simpson, assistant professor, textiles, Department of Apparel, Interiors, Housing, and Merchandising; and Ardis W. Koester, Extension textiles and clothing specialist, Oregon State University.

THIS PUBLICATION IS OUT OF DATE.
For most current information: http://extension.oregonstate.edu/catalog
Manufactured fibers. Changes in manufactured fibers are the result of overproduction, changes in consumer buying, competition from foreign countries, an increase in imports, and the elimination of fibers such as Arnel triacetate which was not profitable to manufacture. Most new developments are variations of existing fibers and engineering of fiber developments to meet specific uses such as breathable rainwear for sportswear.

Rayon. Two major types of rayon are produced in the U.S. — regular viscose rayon and rayon made by an improved process, called polynosic or high wet-modulus rayon. Regular rayon or viscose is a weak fiber, even when dry, and needs to be dry cleaned since it loses half its strength and can stretch or shrink when wet. Dry cleaning can cause problems with the loss of sizings (starch or resins that give firmness to rayon). Sizings are also sensitive to water and water spots. If you and your dry cleaner have problems with rayon garments, you should return them to the retailer.

Improved rayons use the trade names Avril, Avtex, Zantrel, and Prima.

Nylon. Nylon celebrated its 50th birthday in 1988. Its properties of strength, lighter weight, abrasion resistance, crush resistance, and resistance to many chemicals have given it a reputation as a "miracle fiber." Continued development of nylon fibers is an example of today's fiber development and marketing of specialized fibers.

Cordura nylon (DuPont) is especially strong and is used in soft-sided luggage.

Hydrofil (Allied) is the first water-loving nylon. It has a copolymer (two-fiber) structure of 85 percent nylon and 15 percent polyethylene oxide diamine, which makes it absorb moisture and wick it away from the body. Because this fabric dries quickly it is used for thermal underwear, lingerie fabrics, socks, and linings for shoes, gloves, and garments.

Sheerweave 289 (DuPont) is a fine denier (small diameter) hosiery yarn designed to be used with high-speed knitting equipment.

Supertec 90 (DuPont) is a high denier hosiery yarn which can be textured on high-speed equipment, then knitted and finished to the hosiery maker's specifications.

Supplex nylon (DuPont) has been introduced for active sportswear for its softness, flexibility, and lighter weight. It is used in windbreakers that don't make crisp, crackly sounds.

Polyester. Polyester also is available in many specialized variations. Some of the polyesters include:

Ceylon (Hoechst Celanese) has a silk-like luster and softness.

Comfort Fiber (Hoechst Celanese) has absorbency and comfort similar to cotton.

Coolmax (Type 729W by DuPont) is for cooler, drier athletic wear, with a four-channeled cross section that wicks perspiration away from the skin and helps it evaporate at more than twice the rate of polypropylene.

ESP (Hoechst Celanese) is used in denim to give it stretchiness.

Great Feelings Knitwear (Type 740W by DuPont) is used for soft, breathable knit fabrics. It has a dual-denier design where filaments are different thicknesses in the same yarn structure.
Light Spirit Blend (Type 720W by DuPont) is specially designed to blend with cotton for cool, airy, comfortable sportswear.

Thermax (Type 727W by DuPont) is a cold-weather thermal wear fabric made from a hollow-core fiber that holds air, providing thermal insulation for warmth while transporting moisture away to keep the body dry.

Thermolite and Thermoloft (DuPont) are sheath-core fibers within a fiber. The outer sheath melts during processing to interlock the core fibers together in insulation batting. The battings do not shift or become compact during wear and use. Thermolite is for less bulky insulation batting and Thermoloft is more bulky.

Trevira Linenesque (Hoechst Celanese) has the look of natural linen, but out-performs linen in wrinkle resistance and easy care.

Acrylic Ultratech Orion acrylic is DuPont's newest acrylic fiber. It has a channel-T-shaped cross section that wicks moisture away three times more rapidly than cotton. It is designed for athletic wear.

AccuColor Orion acrylic is one of the recent DuPont developments. It is a solution-dyed fiber, where the dye is added to the liquid polymer fiber before formation into a fiber. This means the accuracy of the color is guaranteed from lot to lot. AccuColor Orion is used in sweaters, socks, woven fabrics, and other apparel.

Spandex Lycra spandex is DuPont's stretch fiber, which finds wide use in sportswear fabrics, exercise wear, and hosiery. The newest Lycra spandex is a specialized fiber that is flattened to be thinner and sheerer, while still providing silk-like luster, stretch, and support to hosiery. Hosiery with this Lycra spandex is identified by the brand name Silken Sheers.

Triacetate: A new triacetate fiber, made by Celanese is no longer made in the U.S. because it is not profitable; however, it is still made in Europe. The U.S. manufacturing plant has been converted to make relatively new flame-resistant fibers for fire fighters and others.

Note: No endorsement of names products is intended, nor is criticism implied of similar products that are not mentioned.

For more information
"Washable silk. Is it or isn’t it?” (1988, January) IFI Clothes Care Gazette, p. 1.

Oregon State University Extension Service publications. In July 1992 the OSU Extension Service publications warehouse was destroyed by fire. We are replacing our supplies. The publications listed below may be available in the office of the OSU Extension Service that serves your county. Check with that office for current prices.

You also may call Agricultural Communications at Oregon State University, (503) 737-2513, to learn the availability and current price of the publications.

EC 1279, Garment Labels: The Consumer's Information Source. $1.00
EC 1280, Dyeing and Colorfastness in Fabrics. $1.00
EC 1282, Professional Clothing Care Services. 75¢
EC 1283, Laundry Detergents and Soaps. $1.00
EC 1284, Selecting and Using Laundry Aids. 75¢
PNW 284, International Clothing Care Symbols. 25¢
THIS PUBLICATION IS OUT OF DATE.
For most current information:
http://extension.oregonstate.edu/catalog