



## **COTTON FACTS**

Cotton is a unique crop in that it is both food and fiber. Cottonseed is used as a supplement for dairy feed and is also processed into oil. Uses for cotton fibers range from heavy industrial to fine fabrics. California's San Joaquin Valley cotton, characterized by long, strong fibers, is among the highest quality in the world. Among U.S. grown varieties, California's Acala and Pima cottons are preferred for fine fabrics and used in high quality table linens, sheets, bath towels and dress shirts, among other fabric products.

Cotton grows best on fertile, well drained soils that have a good water holding capacity, although it can grow on a variety of soils. In California, cotton is found in the San Joaquin, the Imperial, Palo Verde and Sacramento Valleys. With their warm springs, hot summers, and dry falls, these regions give cotton the long growing season it needs.

Planted in March and April, cotton is commonly furrow irrigated, although sometimes border-strip or sprinkler methods are used with drip irrigation becoming more prevalent in recent years. The cotton plant requires about 180 – 200 days from planting to full maturity and ready for harvest. The irrigation water ceases in August and the plant is allowed to dry out. The crop is entirely mechanically harvested. Over 90% of all California cotton is exported.

Some of the fine products Californians enjoy are made with California cotton, although it is often inaccurately criticized for being a high user of water. To grow the fiber for one cotton diaper requires 105.3 gallons of water, one T-shirt needs 256.6 gallons of water, one bath towel needs 401.4 gallons of water, a man's dress shirt requires 414.5 gallons of water, and 987 gallons of water are required for one pair of jeans. Although these water figures appear high, per acre, cotton uses approximately 2.5 acre feet of water on average which is much less than the majority of the other crops grown in its growing regions.

## **FACTS ABOUT CALIFORNIA COTTON**

Cotton is grown primarily in the San Joaquin Valley, but some acreage is also grown in the Palos Verde Valley, and more recently has even made a return to the Sacramento Valley.

California's cotton production varies from year to year depending on acres planted and yields per acre. Acreage trends have been downward over the past several years for various reasons ranging from cotton prices, competing crops to water shortages. Over the last 5 years we've seen acres decline from 667,000 acres in

2005 to 190,000 acres in 2009, the lowest since the 1920's. Average acreage during this period was 428,000 acres and average production has been 1.15 million bales per year.

California produces two types or species of cottons. One is the Upland or Acala types and the other is the extra long staple or Pima type. Acreages of Upland or Acala types have ranged from 436,000 in 2005 to 72,000 in 2009. Average plantings for this period were 221,000 acres and production average per year was 602,000 bales with an average farm gate value of \$225 million. Acreages of ELS or Pima types have ranged from 231,000 in 2005 to 118,000 in 2009 with the last 5 year average of 207,200 acres and an average production of 534,900 bales with an average farm gate value of \$267 million.

The downward trend in plantings shifted in 2010 with increases in acreages up from 190,000 acres in 2009 to 305,000 acres in 2010 and that upswing continued in 2011 with total plantings in 2011 in excess of 440,000 acres. Pima acreage continues to dominate plantings with 260,000 acres in 2011 leaving 180,000 acres of uplands. Good cotton prices and improved water supplies have helped drive this rebound. With average yields in 2011, 650,000 to 700,000 bales of pima cotton can be expected with an estimated farm gate value of \$650 to \$700 million. Upland cotton production should be in the 500,000 bale range with an estimated farm gate value in the \$390 million range. California's production of ELS or Pima cotton represents over 90% of the total U.S. pima cotton production. Production of upland types represents about 4% of U.S. annual production on average.

In 1963, there were 299 active cotton gins in California, the highest ever. In 2011, there are 30 active gins. Although the numbers have declined, the capacities and efficiencies of the remaining facilities have been increased accordingly.

A full size bale of cotton lint weighs approximately 500 pounds and stands about 4 1/2 ft. high. A typical bale can produce as many as 8000 handkerchiefs, or 3400 pairs of socks, or 750 shirts, or 3000 diapers, or 325 pairs of jeans, or 200 full size bed sheets to name a few examples.

Cottonseed production is directly related to the lint production and as such varies from year to year depending on acreages and yields of lint. Production for the past 5 years has ranged from 610,000 tons in 2005 to an estimated 175,000 tons in 2009 with an average farm gate value during that period of approximately \$100 million. 2011 production is estimated in the 400,000 ton range with an estimated farm gate value of \$120 million. California's production represents approximately 7% of U.S. total annual cottonseed production on average. Over 95% is fed to dairy cattle and the balance is crushed for the oil. Cottonseed when crushed produces many byproducts, which are common in everyday use. Linters, which is the fuzz left on the seed after ginning, are used for such items as dynamite, filler in gun powder, mops, cotton balls, automotive upholstery, fine writing paper and currency.

Cellulose, which is the principal component of the cotton fiber, when extracted from the linters is used to make food casing, paint, toothpaste, and plastics for windshields, tool handles, x-ray film, just to name a few. Cottonseed hulls are mainly used for animal feed. Cottonseed Oil is used for cooking oil, salad dressing, cosmetics, soap, and as a carrier for agricultural sprays (no VOC). The cottonseed meal and cake is used for fertilizers and feed for cattle, sheep, horses, pigs, fish and shrimp. The average 725 lbs of seed realized from enough seed cotton to produce one 500# bale of cotton lint will produce enough oil to cook nearly 6,000 snack sized bags of potato chips.

The California cotton industry directly provides for over 25,000 jobs on farms, in gins, warehouses, cottonseed oil mills, and textile operations. In addition to the direct industry employment, when employment related to the value added goods and service of cotton's domestic and export trade, it is estimated that cotton accounts for an additional 137,000 jobs in California. Revenues generated in the form of products and services by this industry to California's economy are in excess of \$2.5 billion dollars annually. Over 95% of California's high quality cotton lint is exported each year. The value of California cotton exports including lint, cottonseed and other products exceeds \$1.0 billion dollars annually.

Please visit the California Cotton Ginner and Growers Association online at <http://www.ccgga.org/2013-committees-california-cotton-ginners-association/> to find additional resources and information about the cotton industry.