

NEW METHODS OF CULTIVATION OF COTTON VARIETIES

¹Teshaboyev Nodirbek Ikromjonovich, ²Mirzobidinova Madinakhon Dilmurod kizi,
²Avazkhonova Ozodakhon Toirkhon kizi, ²Ergasheva Asilakhon Ne'matjon kizi,
²Rahmonov Rasuljon Ismoiljon ogli, ²Rahimov Hikmatillo Rahmatali ogli, ²Tojaliyev
Abduhalim Abduhakim ogli

¹Ferghana state university, teacher

²Ferghana state university, students

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Abstract. Various organic acids are obtained from cotton leaves. Stems and pods are a source of furfural, which is widely used in the production of synthetic resins and plastics. Much work has been done in this area on the interpretation of photosynthesis, respiration, metabolism and movement of substances, nutrition through roots and leaves and other processes.

Keywords: cotton, fiber, seeds, cotton, pods, pods, roots, food, chemicals, fruits.

Cotton is one of the most important cultivated plants in our country. First of all, it produces cotton fiber, which is considered a valuable raw material for almost all branches of industry, and cottonseed oil, which is widely used in the food industry and other industries, is obtained from its seeds. The main part of vegetable oils produced in our country is cottonseed oil. Cottonseed, obtained from the seed, is a valuable protein-rich feed for livestock. Proteins and many other chemical substances are obtained from gossypol purified seed flour for technical purposes and in the food industry and medicine. Various organic acids are obtained from cotton leaves. The stems and pods are a source of furfural, which is widely used in the production of synthetic resins and plastics. The task of cotton physiology and biochemistry is to comprehensively study the life processes of the cotton plant and its interaction with the environment. Studying beauty from this point of view is not only theoretical, but also of great practical importance. This situation allows to control the growth and development of the plant in order to get the maximum yield from crops and improve the quality of soil. Physiology and biochemistry of cotton has developed very rapidly in the last thirty to forty years. In this field, a lot of work has been done in the interpretation of photosynthesis, respiration, metabolism and movement of substances, nutrition through roots and leaves, and other processes. In this brochure, the metabolism of seeds during storage and germination; carbon nutrition of the plant; to the connection between the rate of photosynthesis and the yield of cotton; the need of cotton for various mineral nutrients and the effect of clam on the physiological and biochemical processes occurring in the plant; water exchange in cotton and its water regime; cotton's resistance to soil salinity and infectious diseases; Special attention was paid to the formation and ripening of cotton fruit organs, the chemical composition of the seed, the appearance of gossypol and organic substances in cotton.

Cotton is a group of plants belonging to the family of flower lovers; a technical crop planted to obtain cotton fiber. It includes 3 subgenera (Gossipier, Karpas, Sturtia). These are annual and perennial shrubs, trees, and tropical shrubs and herbs. 50 varieties of cotton are known. Cottons are diploid ($2l = 26$) and tetraploid ($2p = 52$) chromosomes in the genus. According to the composition of their genome, they are divided into 6 groups (A, V, D, S, Ye, G). Genome AD in tetraploids. Species interbreed easily within groups, and between groups with difficulty, or complete sterility of hybrids is observed. Indo-Chinese, African-Asian, Mexican, Peruvian cotton

is grown as a fiber plant (see Wild cottons, Cultivated cottons). Cotton height in agriculture one of the crops. The use of cotton fiber began in ancient times - the Paleolithic period. His homeland is India miles in the Indus Valley. 3,000 years ago, cotton was grown and spun from it. Also in China, Iran, Peru and Mexico. It was known several centuries before BC. according to archaeological data, it was planted in Central Asia from the 6th-5th centuries BC. It spread to Spain and other European countries from the 10th century.

In the world cotton grown in more than 80 countries. The main cotton-growing countries: China (3.7 million ha, 30.6 s/ha, 11.4 million t), USA (5.4 million ha, 17.5 i/ha, 9.5 million t), India (9.0 million ha, 6.9 s/ha, 6.2 million t), Pakistan (2.9 million ha, 15.3 s/ha, 4.4 million t). It also occupies large areas in Brazil, Turkey, and Egypt. By the end of the 20th century, China produced 3.8 million tons, the USA 3.6 million tons, India 2.0 million tons, Pakistan 1.5 million tons, and Turkey 0.8 million tons, 18.2 million worldwide cotton fiber was grown (1999).

Uzbekistan ranks 4th in the world in terms of cotton fiber production (1440.8 thousand ha of cotton cultivation area, 24.5 s/ha, gross yield 3537.1 thousand tons; 2004).

Botanical description. The root system is strongly developed, has a taproot, widely branches, penetrates 2.4-2.6 m into the earth's crust, the main part of the root is located in the arable layer of the soil. The stem grows upright, branches, 70-150 cm tall. From the axils of the lower leaves, straight, long-growing (monopodial) branches develop, which emerge from the main stem at an acute angle. In terms of structure, it is similar to the main stem, if for some reason the main stem is damaged and dies, it can replace it. The leaves are alternate, thin or thick, often green, with 3-7 lobes. The first true leaf appears 7-10 days after sprouting, and the second 4-5 days after germination. With the opening of cotton, the emergence of new leaves slows down, and the shedding of old leaves accelerates. 20-25 or more leaves are formed on the main stem until the end of vegetation. Flower bisexual, large; consists of corolla, sepals, calyx, corolla, stamen and pistil- flowering plant; Aphid glands are inside the flower and outside the flower. The knot has 4-5 cells in medium fibers, 3-4 cells in thin fibers. Each nest contains 5-9 or more seeds. The fruit consists of a 3-5-chambered pod, calyx, fruit band, sepals, calyx, fruit layer, central seed, seed and fibers. In some types of cotton, the boll does not open at all, and in some types, the bolls open so wide that even the cotton spills on the ground. The seed is egg-shaped or pear-shaped. It reaches 0.6-1.5 cm, the diameter of the thickest part is 0.5-0.8 cm. Covered with long, mostly white fibers and often short hairs. Cultivated cotton 25-55 mm, easily spun, easily separated from the seed coat, hairs are short (4-6 mm), thick, rough, difficult to separate from the seed. The husk of the ripe seed is dark brown. In the initial period of development, the seed contains a lot of carbohydrates, as it ripens, high-molecular nitrogen compounds and oils accumulate.

The mass of 1000 seeds is around 80-160 g.

Biological properties. The minimum temperature for the beginning of the life activity of the seed is 10-12°. When there is sufficient humidity, aeration, and light, the temperature starts at 13-14°; 5-7-15 days after sowing the seeds, sprouts almost fully germinate. Approximately one month after sprouting, the first pod is formed, after another 25-30 days, the flower appears. A self-pollinated plant (cross-pollination is rarely observed). Depending on the biological characteristics of the variety, the first bud ripens and opens 50-60 days after flowering. The vegetation period lasts on average 110-145 days. During the growing season, (depending on the cotton variety and growing region) needs a total of 3100°-4900° active (1700-2200° effective) temperature. Seedlings die at -1-2°. Average daily temperature of 25-30° is optimal for growth, development

and harvesting. Cotton is a short-day plant, but it grows and develops normally even with 13-15 hours of daylight. Requires maximum water during flowering and harvest. The total demand for water is 8-10 thousand m³ per hectare. It can grow in all kinds of soils, such as peat, loam and grassland, but it does not like shade, humidity, strong wind, especially wind in Uzbekistan Region. It does not grow in saline soils.

Economic importance. Cotton high-tech plants, products obtained from cotton are widely used in textile, tailoring, chemical, aviation, automotive, food and other industries. Cotton fiber is used to make clothes and equipment. Cotton are obtained from its seeds. Cottonseed oil (seed contains 22-29%) is a valuable food product, rich in glycerides, E, vitamins A and D, and linoleic acid. Cotton leaves and meal are high-quality nutritious feed for livestock. Protein feed extracted from cottonseed meal is given to young animals instead of milk. Cotton leaves is used in the production of cellulose, paper, cardboard, and board materials for furniture.

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