

Biological Synthesis of Cellulose during Cotton Fiber Thickening Process

BIAN Hai-yun, ZHOU Zhi-guo* , CHEN Bing-lin, JIANG Guang-hua

(Nanjing Agricultural University, Key Laboratory of Crop Growth Regulation, Ministry of Agriculture, Nanjing 210095 ,China)

Abstract: Cellulose depositing in the period of cotton fiber thickening development affects the forming of fiber strength. This article summarizes substantial changes, enzyme effects and some affecting factors for cellulose biologic synthesis in the period of cotton fiber thickening de-

velopment. We research physiological basis in cellulose biologic synthesis and the character of genic expression at its enzyme activity adjusting level to open out the forming system of high strong fiber using physiological and molecular means. On this way, we can provide studying basis for the ways of physiological adjusting to improve fiber strength and cultivating of new excellent breeds using molecular means.

Key words: cotton fiber; thickening development; cellulose; biological synthesis; fiber strength