

## Study on the Dynamics of Dry Matter Accumulation of Different Part of Boll in Cotton of CCRI 29

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**Abstract:** The study was conducted on experiment farm of Hebei Agricultural University from 2001-2002, which was with CCRI 29, a variety of hybrid cotton with Bt-gene, as material and 33B as control. The CCRI 29 and 33B were sowed in three different dates (4/15, 4/21 and 4/29) and the dynamics of dry matter accumulation of boll shell and seed cotton with different parts of the cotton plant (upper, middle,

lower) were examined, respectively. The lower is the first or second boll of 1~3 branches, the middle is the first or second boll of 6~8 branches, and the upper boll is above 11 branches. The result suggested that CCRI 29 had expressed significant heterosis in nutrition matter redistribution of boll shell and dry matter accumulation of seed cotton. Suitable early sowing is favorable for the dry matter in boll shell to be transported to seed cotton, which could improve the seed cotton weight per boll increasingly. The dry matter transportation ratio of shell and dry matter accumulation rate of seed cotton of the middle boll were much higher than upper boll and lower boll, which may offer a theory basis for establishing a favorable boll setting model of hybrid cotton CCRI 29.

**Key words:** Bt-transgenic hybrid cotton; boll; sowing time; dry matter accumulation