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Summer Drought Ravages Crops in Middle China*

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Drought affected China's agricultural production in spring, summer, and fall 1994. The summer drought was very severe in the middle part of China, especially in Anhui and Jiansu provinces.

The 1994 drought emerged in spring, early summer, and fall in some areas of China while flooding losses reached record levels in southern China. Spring (April) drought occurred principally in northern China, lasting for several weeks with moderate intensity. In early summer (May 20 to June 20), flooding occurred in the south and drought in the north, but the drought subsided with the onset of the rainy season in the north, which was about one month earlier than normal. Fall drought (September) hindered seeding of over-winter crops in some areas of northern China. In mid- and late summer (June 21 to August 20), two rain belts were sustained across northern and southern China, and an unusual drought developed along with high temperature and sparse rainfall in middle China (reaches of the Huaihe and Hanshui rivers and the middle and lower reaches of the Yangtze River). For most of the regions, total precipitation during this period was less than 100 mm, about 40%–50% less than normal, and some areas received even less than 50 mm, about 60%–90% below the normal. Summer drought ravaged crop growth and yield formation in most parts of middle China, such as Anhui, Jiangsu, Zhejiang, Jiangxi, Shanxi, and Sichuan provinces. The drought developed rapidly in August, and the area of rainfall below 50% of normal increased from July to August 20. Two distinct areas of severe drought emerged. The drought subsided in most areas when a rainfall spell occurred in late August, but drought persisted in Jiangsu and Anhui provinces.

Generally, summer droughts of varying severity occur in most areas of middle China, and their impacts on agricultural production are not always disastrous. But the drought in 1994 was unusually severe, coupled with sustained high temperature. Monthly mean temperature departure was 2–3° C above normal, and in some areas 2–4° C above normal. Daily maximum temperature was above 35° C for about 20–40 days (50 days in some areas). High temperatures coupled with sparse rainfall accelerated the development of drought and the emergence, growth, and yield formation of crops such as rice, maize, cotton, and soybean. This is a critical time period because yield is very sensitive to water deficit. Pollination and grain filling were hindered for most crops, especially in mountainous areas. Water storage was insufficient, and this will affect 1995 crop production as well.

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