

A Science Service Feature

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? WHY THE WEATHER ?

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CLIMATE AND SOUTHERN SOILS

Soil fertility is usually inversely proportional to the summer rainfall, Dr. Roland M. Harper has shown that the general expenditure for fertilizer bears a close relation to the average rainfall of the warm half year. The southeastern states have to spend the most for the chemical replenishment of the soil, apparently because the superabundant warm rains too readily leach the soil of the soluble mineral matter that is essential for crops. Even before the boll weevil became a dominant factor in cotton yields in much of the South the yield of cotton per acre was generally greater west than east of the Mississippi. While this may have been due partly to different methods of farming or to the direct effects of the weather, the contrast is in accord with what would be expected as a result of increasing soil fertility with decreasing rainfall westward.

It is proverbial in the South that certain weather, most damaging while it lasts, may, in the long run, be more beneficial than it was harmful. Severe cold spells in winter are commonly referred to in these terms, not only because of the destruction of insect life, but also because of the heaving and pulverization of the soil by the expansive effect of freezing. Since the heavy rainfall of summer appears to be largely responsible for the leached condition of the southeastern soils, the occurrence of a drought may be expected to increase the fertility, by allowing mineral decay to get ahead of the leaching. Such appears to be an aftermath of the severe drought of last summer. In northern Florida Dr. Harper has remarked on the extraordinarily rank growth of weeds this spring, apparently attributable to last summer's accumulation of soluble salts under the exceptionally hot and dry conditions.

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