A Science Service Feature

Released on receipt
but intended for use
September 13, 1926

? WHY THE WEATHER ?

Mailed September 4, 1926

By Dr. Charles F. Brooks
of Clark University

RAINFALL ADEQUACY

How much rainfall is required for successful agriculture? Of course, different crops vary in their requirements, and special, "dry farming" methods will conserve soil moisture and make a little water go a long way, so that it is not possible to name an exact figure. Twenty inches of rainfall a year is often judged adequate. But, besides the actual amount of rain, its distribution through the year must be considered. Spring rains, such as are characteristic of the Great Plains, are worth more than a wet period in autumn. An excess one month compensates to a certain extent for deficiencies in following months, but highly variable rainfall is generally undesirable.

Temperature and wind play a large part in determining how much rain is required, for high temperatures and strong winds, by hastening evaporation, will quickly rob the soil of its moisture. In a recent study of Oklahoma rainfall, C. J. Bollinger suggests that when the mean monthly temperature is over 80 degrees, more than four inches of rain per month is needed. But when the mean temperature is between 50 and 60, somewhat over 2 inches per month will suffice. Even in well watered regions, not every month has adequate rainfall, indeed a section may be considered humid if five-eights of the frostless months have adequate rainfall. Places where the rainfall is adequate in only three-eights of these months may be rated semi-arid.

Dr. Koeppen, who has devised the most thoroughgoing classification of climates, uses a formula including temperature and seasonal distribution of rainfall to define where semiarid and desert climates begin.

(All rights reserved by Science Service, Inc.)

SCIENCE SERVICE,
21st and B Sts.,
Washington, D. C.