

A Science Service Feature

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? WHY THE WEATHER ?

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By Charles Fitzhugh Talman,
Authority on Meteorology.

THIRSTY PLANTS

The great drought of recent memory makes timely a consideration of the enormous amounts of water that growing plants, if they are to live and thrive, must be able to obtain from the soil. This water is absorbed by the roots and drawn up to the higher parts of the plant, where all but a small fraction of it is evaporated into the air. In the case of a tall tree some of the water may be lifted three or four hundred feet, and in all plants the lifting of water and its evaporation use about 98 per cent. of the energy obtained by the leaves and other green parts from the sun's rays. Here are some figures assembled by Dr. D. T. MacDougal to show what thirsty creatures plants are:

A common sunflower with a spread of leaves having a total area of about 11 square yards will evaporate a quart of water a day. A corn plant takes up about 16 quarts of water during its lifetime; a hemp plant twice as much. An acre of cabbage plants needs over 2,000,000 quarts of water in a season. Two hundred beech trees on an acre require nearly double this amount. One of these trees loses about 80 quarts of water a day.

Over 600 pounds of water must be put into the soil to produce a pound of dry alfalfa. Half a ton of water is used by a tree in making a pound of wood.

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21st and Constitution Ave.
Washington, D. C.