A Science Service Feature

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? WHY THE WEATHER ? Mailed October 16, 1933

THE ENERGY OF WEATHER

By Charles Fitzhugh Talman,
Authority on Meteorology.

The common mistake of those who believe it possible for mankind to break droughts, dissipate hurricanes and otherwise regulate the weather on a large scale is the failure to realize the enormous amount of energy involved in normal atmospheric processes as compared with the insignificant amount that humanity is able to employ for the purpose of modifying them. J. Patterson, director of the Canadian meteorological service, has lately published some figures that bear upon this subject. He has calculated the amount of air passing through a cross-section of a square mile -- a mile along the surface and a mile high -- for a wind of 20 miles an hour flowing at right angles to it. The result works out a hundred million tons an hour, and if the energy contained in it could all be converted into power, it would be the equivalent of a million-horsepower engine.

Again, he says, Canadians take pride in the feat of the two great railroads that in the course of a single season transport Canada's crop of between four and five hundred million bushels of wheat. But consider the work performed by nature in providing water for this crop. She has to evaporate the water, raise it to the level of the clouds, transport it thousands of miles and deposit it as rain. In this operation she moves from twelve to fifteen thousand million tons of water merely during the growing season, or thirty to forty thousand million tons during the year, on the assumption that the wheat averages twenty bushels to the acre.

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