

## Working with WEATHER

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**I**N OCTOBER, 1935, GOLFDOM, on page 16, appeared: "Knowing full well fungicide effectiveness is governed largely by weather, greenkeepers here and there rejoice they have been lucky enough in guessing weather conditions to keep down fungous diseases and have begun to talk about weather instruments as greenkeeping requirements that will soon pay for themselves." I wish to substantiate this statement, as, by a conservative estimate I find that by taking advantage of predicted weather conditions, at least \$100 can be saved annually per 9 holes of golf.

Weather is an important factor in course management and planning golf playing events. On my present 27-hole job, weather instruments that I own are an invaluable aid in fertilizing, watering, brownpatch control and working schedules.

In spite of the belief of some that no one knows much about turf diseases except that they happen, it has been definitely proved that certain temperature ranges are favorable for the development of fungous diseases. With the aid of information issued by Prof. L. S. Dickinson and Dr. W. H. Davis of the State College at Amherst, Mass., and reference to the USGA Green Section Bulletin of August, 1932, recording thermometers will enable any one to forecast brownpatch attacks in time to reduce or check the blight.

The policy of reputable fungicide manufacturers is to recommend that treatments be as effective as possible and they are as anxious as the greenkeepers, that mate-

rials not be wastefully applied, nor used in times when treatment is not needed. Check and control of turf diseases are more certain than prevention.

### Weather Governs Turf

Seed germination, plant growth, and bacterial breakdown of organic fertilizers require sustained optimum temperature and moisture conditions. Should results develop slowly, the instruments will indicate the reason, and prevent the waste and probable injurious effects of an unnecessary second treatment. Frequently one is caught off guard and starts on a clear morning to fertilize with organics or topdresses with soluble fertilizers. An unexpected heavy rain will fall before materials have a chance to work in, and the fertilizer either floats out in ridges or wash into low areas, burning turf from concentrated solutions.

Very light applications of fertilizer salts will burn turf if there is no way of telling when air humidity is high, and leaf yellowing will occur from lack of sunlight due to continued cloudy skies.

Duration, velocity and direction of the wind, temperature, humidity and soil conditions are the factors to be considered for irrigation needs, according to location of areas. Watering can be withheld if

**JOHN G. JACKSON**, member for six years of the USGA executive committee, becomes the new president of the USGA at its annual meeting this month. R. Arthur Wood, former Western GA president, becomes Jackson's successor as USGA v.p.

Annual meeting of the USGA will be held at Waldorf-Astoria hotel, New York, 11 A.M., Saturday, Jan. 11. Each member club has right to be represented by one voting delegate.

The retiring president, Prescott Bush, will withdraw from the USGA executive committee, his place being taken by Jess W. Sweetser, only new board member.

Jackson, a prominent New York lawyer, has been chairman of the USGA Rules of Golf committee since 1931. He was born Feb. 12, 1880 and has weathered well. He doesn't look eligible for the US Seniors' GA to which he belongs. He was prominent in Columbia university athletics as a member of the golf and football team.

On the USGA executive committee are represented the Western and Southern golf associations and those of New England, Pacific Northwest, Minnesota, Metropolitan and California districts.

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the greenkeeper is confident that rain is due, but if he has to guess unaided by reliable instruments, the turf suffers and the greens may be too hard for play. On the other hand, rain combined with heavy watering wastes money, means sodden greens and trouble from poor drainage. Wash-outs can be reduced on newly seeded ground, if sufficient time is had to sprinkle the seed bed lightly prior to an expected rain.

In the 1934 season, with weather instruments, I have been able to save as much as \$40 per week on watering expenses, and use the money for course improvement. Fairway mowing and fertilizing can be done by working overtime if rain is expected.

#### Club Should Furnish Instruments

I do not advocate that greenkeepers pay for their weather instruments with their own money for this certainly is a club expense, but a greenkeepers' time is well spent, however, in learning the simple methods. This reduces the many costs and worries of keeping things green.

As with greenkeepers, so with weather instruments and other golf course neces-

sities, the cheapest investment is rarely the best. A set that automatically registers air pressure, temperature, humidity, rainfall, and optionally, wind currents and sunlight hours, will take little time from the greenkeeper's many other duties.

In the past, I used to have one of my greensmen buy me a paper every morning on his way to work, but the forecast could not be depended on, for it might rain in town, and be clear on the course. This is especially so in hilly country. A bulletin issued by the U.S. Weather Bureau states that for accurate rain data there should be one rain gauge for each quarter section, (4 per square mile.) At present there is only one gauge to about every 600 square miles. The daily weather map issued from Washington, D. C. forecasts for the states east of the Mississippi river, except Illinois, Wisconsin, Indiana, Michigan, Alabama, Mississippi and West-ern Florida.

Space won't permit details on climate observations, but those greenkeepers and club officials keen enough to appreciate the practical value of weather influence, will be interested in the following literature:

#### Valuable Guides Cost Little

From the Taylor Instrument Co., Rochester, N. Y.; "*Temperature*," "*Guides to Health and Comfort*," and *Catalog No. 2000*, all free. In addition, "*Weather and Weather Instruments*," 50c, and "*Tycos Key to Barometer Reading, No. 4051*," 75c.

From the Superintendent of Documents, Washington, D. C., the following literature, total cost \$1.85: *Publication No. 34*; *Bulletin No. 42*; *Bulletin No. WB956*; *Circulars A, B, C, D, E, F, G, L, and Appendix No. 2 to Circular D*; *Farmers' Bulletin No. 1588*; *Climatic Charts of the U. S., Nos. 1, 2, 3, 4 and 5*; *Frost Chart No. 5*. In ordering these it is well to mention "*As per list W.B. 12-12-34, 3000, No. 245-6.*"

From the Weather Bureau, Washington, D. C., the daily weather maps can be obtained at a cost of 30c per month, including Saturdays, Sundays and holidays, or \$3.60 per year.

From the National Carbon Co., P. O. Box, Grand Central Station, New York City, for 10c stamps or coin, a "*Weather Wheel*" which will help forecast the weather, and also a 48-page booklet "*Weather as a Hobby.*"