

# DROUGHT

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*As U.S. long range forecasters promise us dry weather in June, we reprint one of their experts' advice on how to deal with it, with grateful acknowledgments to The Golf Course Reporter (First appeared in 'The Greenkeeper', July 1960)*

**D**URING drought, water may be absent or limited. It may be limited in the amount available or by the expense.

Some general principles apply to management actions during water stress.

1. The plant which withstands stress with the least damage is the plant "hardened off" by gradual exposure to stress conditions.
2. The practices should be followed which make most efficient use of the water available.

## Irrigation.

Don't waste water.

- (A) Evaporation loss is least during the night, in still air, and when water is applied as a single deep irrigation rather than as several light irrigations.
- (B) Loss by runoff may require special effort, i.e.:
1. using smaller nozzle to apply water more slowly.
  2. a short pre-sprinkle to wet up the thatch layer so water can sink in better.
  3. several off-on cycles of the sprinklers. Water held by the "turf and thatch sponge" sinks in, then the "sponge" is rewet.
- (C) References to the tables (1 and 2) will enable you to calculate your water loss. If you are applying considerably more than needed, there is probably percolation waste or run through.

## Deep vs. Light Irrigation.

### Light Irrigations (frequent).

Advantages:

1. Necessary to keep shallow rooted turf alive.
2. May make more total growth.

Disadvantages:

1. Promotes salt accumulation—salt toxicity — physiological drought.
2. Encourages shallow rooting.
3. Very high water loss by evaporation.

### Deep Irrigations (infrequent).

Advantages:

1. If plant is deep rooted, water stress is increased gradually to "harden off" the turf.
2. Salt accumulation is immunised.

Disadvantages:

1. Sprinkler must stand a long time in one spot.
2. Works only with deep roots and deep soil, and on heavier textured soils.

## Fertilisation.

1. Nitrogen makes softer plants—less drought resistant.
2. Adequate K promotes hardening of plants.
3. Fertilisers increase soluble salts
4. A starved turf has poor survival.
5. After water stress has begun, it is too late to fertilise.

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### **Pest Control.**

Many pest control chemicals (weed—disease—insect) are somewhat injurious to turf. Unnecessary applications during stress may reduce survival.

### **Mowing.**

1. Sharp mowers reduce damage.
2. Grass under stress makes less growth—needs less frequent mowing.
3. Higher cuts may help conserve water. (The more heat energy lost by convection, the less lost by evaporation.)

### **Competition.**

Root pruning reserves water for turf rather than trees.

### **Aerification.**

Infiltration promoted.

If grass is already under stress, it causes injury.

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*To complete the picture, we shall be reprinting "Water and Turf Diseases" by Holman M. Griffin next month. Sample saying: "Watering is too often a routine rather than an effort to supply the needs of grass. By watering on schedule rather than according to need we invite trouble from many sources"*

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