



# TURF IRRIGATION: Minimising Drought Stress and Conserving Water

This leaflet was produced in conjunction with the British Turf & Landscape Irrigation Association (BTLIA) to provide guidance during periods of drought.

## GENERAL

Good maintenance practices will encourage the development of a vigorous healthy sward with a deep root system, which will be able to withstand the effects of drought better than a weak sward with shallow rooting.

It is essential that irrigation systems are properly maintained. Servicing and repairs should be carried out during the winter months so that the system is working efficiently on starting up in spring. Check for leaks. Ensure that efficient use is made of all available water sources on the course.

## LIMITED WATER STILL AVAILABLE

1. Make sure your watering system is working efficiently. Check sprinkler arcs, nozzles, etc. Water only the essential areas.
2. Do not water during the day.
3. Reduce the frequency of watering and water more thoroughly each time, to get moisture well into the soil.
4. Do not allow puddles to form or surface run-off to occur.
5. Improve infiltration of water by spiking (not slitting) and use of wetting agents, particularly where thatch is serious and on high spots. (High spots may require a hand-held hose with attachment for wetting agent.) Wetting agents are usually most effective if first applied in late spring with additional applications through the growing season, according to the severity of the problem and water availability. Water in after application to avoid scorch.
6. Raise the height of cut. Where appropriate, return clippings (cuttings) to help to act as a mulch. Mow fine turf with pedestrian machines and reduce the frequency of mowing as growth slows down.
7. Spread light applications of compost top dressing on golf greens and similar fine turf areas, and work in gently with a mat.
8. Keep pin positions to the margins of golf greens.
9. Reduce wear on turf by varying the position of pathways and closing off sensitive areas.



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## **NO WATER AVAILABLE**

When all watering is banned continue with points 6-9 as conditions dictate. In addition:

10. Do not apply pesticide or fertiliser.
11. Stop verticutting or grooming on golf greens and similar fine turf areas.
12. Do not carry out any aeration work.
13. On small areas of newly established seed or turf, use perforated plastic sheet or netting to conserve moisture (but beware heat stress under covers).
14. Be prepared to close golf greens or similar areas to avoid long-term damage which will require costly reinstatement.

## **AFTER THE DROUGHT**

15. Reinstate any severely damaged areas as soon as conditions and water availability will allow.
16. Wetting agents can be used to help with rewetting of drought-damaged or water-repellent turf.
17. After the immediate problems have been dealt with it may be necessary to revise the management strategy to minimise future problems. The following points should be considered:
  - ■ Alleviate compaction and eliminate excessive thatch to encourage deeper rooting and water infiltration.
  - ■ If possible, manage turf to favour drought-tolerant species and to develop deep root systems.
  - ■ Update the irrigation system to improve efficiency.
  - ■ Investigate alternative water sources; it may be possible to intercept and store surface water to boost reserves.
  - ■ Increase the water storage capacity.

This information sheet is of a general nature and is intended only to outline the basic information. Such information is not intended to constitute a specification or comprehensive guidance in relation to any project/subject which should only be undertaken after consultation with those holding appropriate qualifications. The STRI employs persons so qualified who can provide advice and/or relevant specifications. The STRI accept no responsibility or liability for any claims arising from work carried out pursuant to this leaflet.

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