



THE COMMONWEALTH OF MASSACHUSETTS
 EXECUTIVE OFFICE OF ENERGY AND
 ENVIRONMENTAL AFFAIRS
Department of Agricultural Resources
 251 Causeway Street, Suite 500, Boston, MA 02114
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DEPARTMENT OF AGRICULTURAL RESOURCES APPROVED IPM PROGRAM
 FOR USE OF CHLOROTHALONIL ON GOLF PUTTING GREENS ONLY)

- 1) **Name of Applicator:** _____
- Pesticide License Number: _____
 - Property where application was made: _____
 - Primary Recharge Area _____
Zone II / IWPA and Municipality _____

2) **Diagnosis:** Anthracnose is not always easy to diagnose. You must obtain **at least one diagnosis** from an appropriately qualified plant disease diagnostician for your property [e.g. UMass Turf Disease Diagnostic Lab (http://www.umassturf.org/services/turf_diagnostics.html) and retain the diagnostic report in your records. It is sometimes possible to diagnose anthracnose with careful observation, but you should obtain a new diagnosis whenever you are unsure if anthracnose is the cause of a future turf problem.

Date of diagnosis: _____ Lab name: _____

3) **Preventive cultural practices:** The following preventive measures will help minimize anthracnose. Check those that you perform and provide details of **methods** and **dates** when practices were implemented.

<input type="checkbox"/> aeration at least once a year . Details:
<input type="checkbox"/> improve drainage in disease-prone greens. Details:
<input type="checkbox"/> improve air movement (e.g. tree pruning) in disease-prone greens. Details:

___ skip clean-up pass when possible in stressful weather. Details:

___ maintain sufficient nitrogen and water for healthy growth. Details:

___ syringe greens to reduce stress and continue into the late afternoon when windy. Details:

___ temporarily increase mowing height during stressful weather. Details:

___ move cup more frequently and/or divert traffic in disease-prone greens. Details:

___ maintain thatch at ½" or less. Details:

___ other practices used. Details:

4) **Curative cultural practices:** During disease outbreaks, some additional practices will help minimize disease. Check those that you perform and provide details:

wash mowers when moving from greens with anthracnose to reduce spread of spores. Details

hydroject or spike compacted areas where disease is active Details:

avoid sand top-dressing until disease is checked. Details:

temporarily skip clean-up pass. Details:

spoon-feed quick release nitrogen fertilizer to enhance recovery. Details:

5) Fungicides: The University of Massachusetts Extension Turf Program has determined that there is “no viable alternative” to the use of chlorothalonil as part of a fungicide management program for anthracnose on golf course putting greens. Chlorothalonil is available for turfgrass use under numerous trade names. Examples include Andersons 5% Daconil, ChloroStar, Concorde SST, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Echo, Lebanon Daconil, Thalonil, and Ultrex. It is also present in several combination products such as Consyst, Lescro TwoSome, Spectro.

Dates and sites of pesticide applications	Rate	Product Name and EPA #

Note: Chlorothalonil is a contact/protectant fungicide. It is not effective when watered-in. A combination of chlorothalonil with a systemic/penetrant fungicide is most effective for foliar anthracnose. If you have basal rot/crown rot anthracnose, water-in the systemic/penetrant fungicide while it is still wet on the leaves to the crown area. Apply chlorothalonil in a separate application and allow it to dry. Preventive applications to disease-prone areas where anthracnose has been previously diagnosed can be very effective.

6) Sprayer calibration: You must calibrate your sprayer each year.

Date of calibration _____ Method used to calibrate _____

7) Notification form: You must notify the Department of Agricultural Resources Pesticide Bureau **after** you apply a pesticide product which is listed on the groundwater protection list. Notifications must be made to the Department **within ten days of the end of the month in which applications are made**. One form can be used for all of the month’s applications. For example:

If three applications are made in May, then you must notify the Department by June 10th that the applications have been made. If you make another three applications in June, then you would also have to notify the Department by July 10th.

Electronic notification forms can be accessed through the Department website at:
http://www.mass.gov/agr/pesticides/water/groundwater_report.htm

Groundwater Protection Program,
 Department of Agricultural Resources,
 251 Causeway Street,
 Boston, MA 02114

Date Notification
 Form sent to DFA

This information must be maintained with your pesticide records.