

Jeff Kollenkark has just completed a M.S. thesis testing Roundup in numerous experiments. The attached information is extracted from his thesis.

W. H. Daniel  
Turf Specialist

**PLEASE NOTE:**  
**MIDWEST TURF FIELD DAY**

26 SEPT. 77

PURDUE UNIVERSITY  
LAFAYETTE, IN 47907

W. H. DANIEL & R. P. FREEBORG

**ROUNDUP - NEW AID FOR GOLF COURSE CARE**

Roundup may be the new tool you have been waiting for. Its slow "kill all" action, along with its short activity span after application make it desirable.

Roundup® (glyphosate) is a new non-selective herbicide released by Monsanto Company. Work done at Purdue University by W. H. Daniel and Jeff Kollenkark demonstrated its value in turf renovation. Once in the soil it is inactivated and so has no effect on germination of newly seeded grasses. It can also be used in hydroseeding operations with the chemical mixed in the spray tank with the new seed. Though Roundup may have a high cost per gallon, the effectiveness of relatively low rates make it economical to use. One gallon, for example, could be used to kill the vegetation in up to four acres, depending on the weed species to be controlled.

Sites infested with either hard to kill perennial weeds or grass species that are quite disease susceptible could be readily renovated with Roundup. Those sites may include small areas, entire fairways, or just areas to be cleared off for a nursery. This herbicide could be the answer to annual and perennial weed control in those problem areas. Daniel and Kollenkark found that with the recommended rate of 1-2# ai/A glyphosate, complete kill could be expected in approximately ten days.

Heavy thatch was found to be a barrier to the establishment of new seedlings. Therefore, before seeding, removal of enough thatch to allow soil-seed contact is suggested. In order to allow time for translocation to all parts of the existing vegetation, seeding should not be done for three to five days after application with Roundup. Seeding with a desired blend of grasses can be done any time after this waiting period. Incorporation of the seed with a vertical rake or Jacobsen seeder is suggested. From here, you water and watch it grow.

There are some things to be aware of. This is not a preemergence chemical since it has no soil activity, so new weeds may germinate and infest the site. Because of the potential weed problem, renovation in early fall is recommended. The early fall seeding will give adequate time for the grass to reach mowing height before snowfall. Also, because either soil or iron in water can inactivate the glyphosate, one should avoid using 'dirty' or 'rusty' looking water. Hard water with high amounts of calcium does not affect Roundup's performance.

There are many practical uses for this herbicide, especially where a complete kill is desired. Roundup can be used as a directed spray to edge traps, spray around drains, trees, walks, paths, etc. This may save the cost of hours of hand labor, certainly a desirable feature in this day of rapidly increasing costs.

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