

## Dissipation Rates of Common Turfgrass Pesticides

How long does it take for pesticides applied to turfgrass to dissipate? A recent review of several studies addressing this question indicates that the standard practice of lawn care professionals of posting “keep off” signs or flags for a fairly short period following chemical treatments might not accurately reflect the time needed for at least some chemicals to break down to low levels. The table below gives half-life (the time required for half of the initial amount to dissipate) estimates from a variety of sources: the first column’s figures are averages from papers in scientific journals for dissipation (in almost all cases) on turfgrass foliage and/or thatch; the second column’s figures are from the U.S.D.A.’s Agricultural Research Service Pesticide Properties Database at [www.ars.usda.gov](http://www.ars.usda.gov) for dissipation in aerobic soil; the third column’s figures are from *The Pesticide Manual: A World Compendium*, 13th edition, 2003, edited by C. Tomlin, for dissipation in aerobic soil; and the fourth column’s figures are averages from the U.S.D.A.’s ARS PPD, for overall dissipation on turfgrass foliage and thatch, and in soil. H = herbicide, F = fungicide, and I = insecticide.

Pesticide	Turfgrass pesticide dissipation half-life estimates (days)			overall
	on turfgrass foliage	in aerobic soil		
		ARS	Tomlin	
2,4-D (H)	16.2	5.5	7.0	14.0
Benefin (H)	61.6	51.0	35.8	80.0
Clorothalonil (F)	4.2	-	14.2	48.0
Chlorpyrifos (I)	19.3	30.5	40.2	43.0
Diazinon (I)	3.4	39.0	16.0	7.0
Dicamba (H)	8.7	18.0	14.0	16.0
Dithiopyr (H)	6.7	-	39.0	-
Ethofumesate (H)	3.0	143.0	155.8	80.0
Halofenozide (I)	64.0	-	426.8	-
Iprodione (F)	3.6	50.0	70.0	7.0
Mecoprop (H)	3.0	-	10.0	21.0
Mefenoxam (F)	5.5	-	21.0	-
Metalaxyl (F)	16.7	40.0	29.0	77.0
Pendimethalin (H)	7.9	1,300.0	105.0	174.0
Propiconazole (F)	13.5	53.0	49.5	115.0
Triadimefon (F)	5.5	6.0	12.0	54.0
Trichlorfon (I)	3.1	6.4	-	1.5
Vinclozolin (F)	7.4	-	-	14.0

Reference: Antoni Magri and Douglas A. Haith, “Pesticide Decay in Turf: A Review of Processes and Experimental Data,” *Journal of Environmental Quality* 38(1), January-February 2009, 4-12. (American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America, 677 S. Segoe Rd., Madison, WI 53711.)

## A New Red Raspberry Adapted to Southern Appalachia

‘Nantahala’, a primocane-fruiting (fruiting on current-season canes) red raspberry, was recently released by North Carolina State University. This cultivar has quite large fruits, averaging about 20% heavier than ‘Heritage’ fruits, but with considerably smaller seeds. Fruit ripening is late. In sensory evaluation trials, ‘Nantahala’ fruits were ranked higher overall than fruits of ‘Heritage’ and ‘Caroline’. In a “minimal spray program of dormant fungicides,” there was no “significant” infection by late leaf rust (due to *Pucciniastrum americanum*) or leaf spot (due to *Spaerulina rubi*), both of which were endemic in the trial plots.

This cultivar is particularly suggested for growing in mountain areas of North Carolina and nearby states; late harvests will allow production of “high-quality fruit later in the fall than current primocane red raspberry cultivars.”

A U.S. patent is being sought for ‘Nantahala’. For additional information on availability of the cultivar, contact Gina E. Fernandez, North Carolina State University, Dept. of Horticulture, 170 Kilgore Hall, Box 7609, Raleigh, NC 27965.

Reference: Gina E. Fernandez, James R. Ballington, and Susan J. Bryson, “‘Nantahala’ Red Raspberry,” *HortScience* 44(1), February 2009, 25-26. (American Society for Horticultural Science, 113 S. West St., Suite 200, Alexandria, VA 22314-2851.)

## Bird Feeders Can Spread Noxious Weeds

The following is excerpted from a news release provided by the Weed Science Society of America ([www.wssa.net](http://www.wssa.net)).

Are weeds sprouting beneath your backyard bird feeder? If so, researchers say the type of feed you use might be to blame.

In studies at Oregon State University, scientists examined 10 brands of wild bird seed commonly sold in retail stores. The samples contained seeds from more than 50 weed species—including 10 ranked among Oregon’s most noxious weeds. Each brand tested contained weed seeds, with six different weed species found in half or more of the samples.

“Once a weed seed drops from the feeder to the ground and sprouts, it has the potential to flower and spread,” said Dr. Jed Colquhoun, associate professor at the University of Wisconsin-Madison, formerly with Oregon State University. “In fact, when we informally questioned landowners and farmers to investigate the spread of a relatively new weed in the Pacific Northwest—velvetleaf (*Abutilon theophrasti*)—we found it is growing in the soil beneath backyard bird feeders.”

In a short-term study of what happens when stray bird feed drops to the soil, about 30 weed species sprouted in just 28 days. Between three and 17 weed species grew from each of the 10 brands of feed tested.

So how can you minimize the spread of new or invasive weeds that originate in bird feed? There are several simple strategies to consider:

- Use a tray attachment under your feeder to keep seeds off the ground.
- Select foods that won’t sprout, such as sunflower hearts, peanuts, peanut butter, raisins, mealworms, and plain suet cakes.
- Look for treated wild bird food mixtures. Many manufacturers are now baking their products to kill weed seeds, using guidelines established by the U.S. Department of Agriculture. So read product labels carefully to make certain you buy a treated brand.
- Keep an eye out for weeds under your feeder and pull them before they can flower and spread.
- If you use a wild bird food blend that contains a variety of seeds, contact the producer or talk to your local retailer to discuss what measures are taken to ensure the product is free of invasive weed seeds....

*10 noxious weeds found in the bird seed evaluated in the Oregon study:*  
 buffalobur (*Solanum rostratum*)  
 bull thistle (*Cirsium vulgare*)  
 Canada thistle (*C. arvense*)  
 common ragweed (*Ambrosia artemisiifolia*)  
 dodders (*Cuscuta* species)  
 field bindweed (*Convolvulus arvensis*)  
 jointed goatgrass (*Aegilops cylindrica*)  
 kochia (*Kochia scoparia*)  
 puncturevine (*Tribulus terrestris*)  
 velvetleaf (*Abutilon theophrasti*)