

Revitalizing Turf on Native Soil Fields this Fall

Pamela Sherratt & Dr. Dave Gardner, Dept. Hort & Crop Science

Cool-season grasses that are used in the Midwest prefer to grow in mild temperatures (60-75°F), which means they can struggle during the summer but grow fairly rapidly in the spring and fall. With that said, the fall is a great time to carry out a range of maintenance tasks. Following is a list of tasks that should guarantee healthy turf in 2017.

Mow often & mulch! Mow the lawn at 2-3" height at least 2 x week until the growth start to slow down, then mow 1 x week. It is important to mow frequently, to ensure that the clippings get mulched back onto the turf thinly and evenly. This cuts down on raking or leaf-blowing and also cuts back on city yard waste collection. During the mowing operation, return leaf clippings (do not bag off), which not only returns nitrogen to the system, but again cuts down on yard waste collection.

Apply general maintenance fertilizer in September at a rate of 1.0 lb. N/1,000 sq.ft with a fertilizer that contains 30-50% slow release (water insoluble) nitrogen. Apply a *late season fertilizer* application after the very last mow of the year when top growth has stopped. This is usually around Thanksgiving time. Apply the late season fertilizer at a rate of 0.5-1.0 lb. N/1,000 sq.ft. with a quick release (water soluble) source of nitrogen. NEVER apply fertilizer to frozen, bare or snow covered soil. If fertilizer is accidentally applied to a hard surface sweep it back onto the turf. The goal is to keep fertilizer on the turf and out of the storm drain.

Aerate! In high traffic areas, or areas with hard compacted soil, use a soil cultivator/aerator to improve gas exchange and enhance surface drainage. Lawn areas with a lot of thatch could also be aerated &/or scarified.

Establish new grass on thin turf or bare soil. Fall is the best time to establish new lawns for many reasons: (1) Soils are warm (2) Low weed pressure (especially from weeds like crabgrass and prostrate knotweed). (3) Timely rains are likely. (4) There is adequate time to establish good roots by the following spring.

The best date to establish seed in the Midwest is typically between August 15 and September 15. Sod can be used anytime, as long as the soil isn't frozen.

The key to good seed establishment is to provide the seed with moisture, so it is critical to have good seed:soil contact and if possible to cover the seed with soil, straw or a growth blanket. Another way to achieve good seed:soil contact is to slit-seed.

Weed control during seed establishment is approached in two ways; pre-emergence and post-emergence. There are three pre-emergence herbicides that are labelled for use at seeding time. These are siduron, mesotrione, and topiramazone. Most postemergence herbicides for broadleaf weed control have language on the label that states that following seeding, the lawn needs to be sufficiently established so that it has been mowed 3 times before the product can be safely used. However, there are three active ingredients/products that have label language that allows their use on turfgrass seedlings. These are SquareOne® (carfentrazone + quinclorac), carfentrazone and pyraflufen-ethyl. SquareOne® is a more recent introduction that combines carfentrazone with quinclorac. According to the label, SquareOne® can be applied as soon as 7 days following the emergence of Kentucky bluegrass, perennial ryegrass, tall fescue and fine fescue.

An ideal way to approach lawn establishment is to carry out several maintenance practices together: aerate, apply seed and fertilizer, provide weed control, irrigate it all, and then cover with something to conserve moisture. Doing these tasks together ensures greater success than doing each of them on their own.

Broadleaf weed control. The best time to control perennial broadleaf weeds like dandelion, plantain, and clover is in the fall. Control is better because of better translocation through the plant tissues, including the below ground roots and storage organs. An additional benefit is that winter annuals, such as chickweed, are germinating and the seedlings are much easier to control than the mature plants will be in the spring. Best time to control is when the grass is mowed for the last time, which is typically in the middle of November. The grass is still green but not growing and air temperatures are in the 40's and soil temperatures are in the 50's. Use the ester formulation of the herbicide as amines become not as effective in cooler weather.

The following two tables were developed by OSU's turfgrass weed scientist Dr. Dave Gardner.

Broadleaf Herbicides and Combination Products

Products	2,4-D	2,4-DP	MCPA	MCPP	Dicamba	Clopyralid	Fluroxypyr	Quinclorac	Triclopyr	Carfentrazone	Sulfentrazone	Pyraflufen	Fenoxaprop ¹
Formula 40, Dymec, Weedone LV4, Weedar 64, LESCO A-4D, Weedestroy AM-40, Opti-Amine, Hardball, Barrage HF													
MCPP 4-Amine, Turfgro MCPP 4K, Mecomec 2.5, Mecomec 4 2 Plus 2													
Banvel, Diablo, Vanquish													
Four-Power Plus, Super D Weedone													
Trimec Classic, Trimec 899, Trimec 992, Trimec LAF-637, Strike 3, Three Way Selective, Trimec Bent, Bent Selective, Triplet WS, Triplet SF, Trexsan, Mec-Amine-D, Mec Amine-BG, Trimec Plus, 3-D													
MCPA 4-Amine													
Tri-Power, Trimec Encore													
Weedone DPC, Turf D-DP													
Trimec Turf Ester, Super Trimec, Brushmaster													
Three Way Ester, Tri-ester, Tri-amine, Dissolve, Spoiler													
Tri-ester II, Tri-amine II													
Turflon Ester Ultra, Triclopyr 4													
Chaser, Chaser 2, Turflon II amine													
Cool Power, Horsepower, Three-Way Ester II, Eliminate													
Lontrel													
Chaser Ultra													
Confront, 2-D													
Momentum													
Battleship													
Millenium Ultra 2, Millenium Ultra Plus													
Spotlight													
Chaser Ultra 2													
Tailspin													
Battleship III													
Change Up													
Last Call													
Momentum FX, Momentum FX2													
Escalade 2													
Strike Three Ultra 3													
Drive, Drive XLR8, Quinclorac 75 DF, QuinPro, Eject 75DF													
Onetime													
Quincept, 2DQ													
Quicksilver, Quicksilver T & O													
Shutout													
Speedzone													
Powerzone													
Dismiss													
Surge, SureZone													
Q4, Q4 Plus													
Octane													
Solitare													
4 Speed, Redzone 2													
4 Speed XT													
T-Zone													

Note: Not all products mentioned are still currently for sale. Mention of trade name is for example only and does not constitute endorsement over other products which may be similar. ¹fenoxaprop included in combination products but is a grassy herbicide

Recommended Herbicides¹ for Broadleaf Weed Control

Weed Species	Preemergence								Postemergence													
	Bensulide	Ethofumesate	Benfenin	Pendimethalin	Prodiamine	Dithiopyr	Siduron	Oxadiazon	Isoxaben	Mesotrione ²	2,4-D	2,4-DP	MCPA	MCPP	Dicamba	Clopyralid	Fluroxypyr	Triclopyr	Quinclorac	Carfentrazone	Sulfentrazone	Pyraflufen
Summer Annual Broadleaf Weeds																						
Black Medic					✓									✓	✓	✓	✓		✓			
Carpetweed				✓	✓					✓				✓	✓							
Common Mallow														✓	✓	✓						
Corn Speedwell			✓	✓		✓		✓							✓							
Knotweed				✓	✓	✓		✓						✓	✓							
Lambsquarters	✓				✓			✓														
Oxalis (Yellow Woodsorrel)				✓	✓	✓		✓	✓	a	a				b		b					
Pigweed					✓	✓		✓	✓	✓				✓								
Pineappleweed						✓									✓							
Prostrate Spurge				✓	✓	✓		✓	✓	✓	✓	✓		✓	✓							
Purslane		✓		✓	✓	✓		✓	✓	✓					✓							
Virginia Pepperweed										a				a	a							
Winter Annual Broadleaf Weeds																						
Common Chickweed		✓	✓	✓		✓		✓						✓	✓							
Common Groundsel							✓			a				a	a							
Henbit	✓		✓	✓	✓	✓		✓							✓			✓				
Prickly Lettuce										a				a	a							
Shepard's Purse	✓				✓	✓		✓														
Sowthistle (Annual)									✓						✓							
Biennial and Perennial Broadleaf Weeds																						
Birdsfoot trefoil														✓		✓	✓					
Blackseed Plantain										✓				✓		✓		✓				
Buckhorn Plantain										✓				✓		✓		✓				
Bull Thistle															✓	✓						
Canada Thistle										✓					✓	✓						
Chicory															✓							
Creeping Speedwell (Veronica)										✓				✓					✓			
Curly Dock										✓				✓	✓							
Dandelion									✓	✓		✓		✓			✓	✓	✓			
Field Bindweed																			✓			
Ground Ivy (Creeping Charlie)																		✓				✓
Indian Mock Strawberry										a				a	a							
Mouse-ear Chickweed														✓	✓	✓						
Red Clover														✓	✓	✓	✓					
White Clover									✓					✓	✓	✓	✓		✓			
Wild Carrot										a				a	a							
Wild Violet															✓	✓		✓				
Yarrow															✓							

¹ Where the recommendation is denoted by a letter, the combination of herbicides with the same letter is recommended.

² Mesotrione can be used pre- or post-emergence against annual and perennial broadleaves.

