

NORTHERN WEED CONTROL

combines cultural/chemical tools

Once you understand your most serious weed problems you can develop a multi-pronged program, using your experience, to control them.

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Most weeds with similar growth habits can be managed with a single strategy.

Integrated Pest Management (IPM) combines sound cultural practices with occasional application of herbicides to manage weeds. Cultural practices include mowing, irrigation, fertilization, cultivation, mechanical control, and sanitation.

Mowing

Depending on the weed species, mowing can affect the development of its population. A limited number of species are generally found in turfs, particularly well established turfs, because mowing pressures reduce weeds' recuperative potential. Some weeds, such as annual grasses, adapt to low mowing heights and frequent mowing. They can often be managed by raising the cutting when possible. Timely mowing can reduce the production of weed seeds. This can also be accomplished using plant growth regulators or collecting clippings when seedheads are present.

Irrigation

High soil moisture favors nutsedges, annual bluegrass,

crabgrass, goosegrass and many other weeds. Drying out the turf or irrigating less frequently will give the turf a competitive edge over these water-loving weeds. Carpetweed and sand-burr compete well in dry open soils. If these weeds are a problem, increase irrigation.

Fertilization

Accurate, timely fertilizations make turf a good competitor. Excess fertilization can promote weed growth. High levels of nitrogen cause annual bluegrass, crabgrass, and many other species to grow rapidly. Excessive fertilizations, particularly with soluble sources, can potentially injure turf foliage allowing weed invasion.

Cultivation/sanitation

Core aeration, vertical mowing, spiking, or slicing—is generally beneficial for turf growth. But the practices can also move buried weed seeds to the surface allowing them to germinate. Topdressing might bring in foreign seed.

Herbicides

Herbicides, particularly postemergent herbicides, is one tool any turf manager needs. Most postemergent herbicides have been developed to target either of these two large groups.

Broadleaf weeds

Most broadleaf weeds can be controlled with one of a large group of broad spectrum postemergent herbicides. Some narrowly focused or single species postemergent herbicides are available for difficult to control or unusual weed species. Spot control is available with a non-selective herbicide. Check the turf tolerance of any selective herbicide. Some of the postemergent herbicides have a narrow range of tolerant turf species.

2-4, D, similar compounds

One of the original selective postemergent herbicides was 2-4, D. This and other similar compounds such as mecoprop, dichlorprop, and dicamba all control a wide spectrum of broadleaf weeds. Each material has particular strengths in controlling a select group of species. Often times they are used in combination allowing



White clover can be controlled by most broadleaf herbicides



Wood sorrel with yellow flowers

TABLE 1 HERBICIDES FOR BROADLEAF WEED CONTROL IN TURF

COMMON NAME	TRADE NAMES (PRODUCERS)	USES
2,4-D	AM-40, 2,4-D Granules, 2,4-D L. V. Ester, Solution ; (Riverdale) 2,4-D Amine 4, 2,4-D LV4, SEE 2, 4-D LV4 (Riverside/Terra International) Weedone LV4 (Rhone Poulenc)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
2,4-D + dicamba	81 Selective Weedkiller (Riverdale) Four Power Plus (Turfgo/United Horticultural Supply) Lawn Weed Killer (Bonide) Triple D Lawn Weed Killer (Rockland)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
2,4-D + dichlorprop	2D + 2DP Amine, Turf D + DP (Riverdale) Fluid Broadleaf Weed Control (The Scotts Co.) Weedone DPC Ester, Weedone Amine (Rhone Poulenc)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
2,4-D + dichlorprop +dicamba	Strike 3 (Riverside/Terra International) Super Trimec (PBI/Gordon)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
2,4-D + mecoprop	2D Amine + 2 MCPP (Riverdale) 2 Plus 2 (ISK Biosciences) MCPP-2-4D (Cleary)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
2,4-D + MCPP + dicamba	Bentgrass Selective Weed Killer (LESCO) Brushfire, Brush-out, Brush-Whacker, HS-130, SNS-2000 (NCH) Granular Broadleaf Weed Killer (Lebanon) Mec-Amine-D (Turfgo/United Horticultural Supply) Three-Way Lawn Weed Killer (Rockland) Three-Way Selective, Three-Way DG (LESCO) Trimec Bentgrass Formula, Trimec Classic, Trimec Southern (PBI/Gordon) Triplet Selective, Triplet Water Soluble (Riverdale)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
2,4-D + MCPP + dichlorprop	Dissolve, Triamine, Triamine Granular, Triamine Jet-Spray, Tri-Ester (Riverdale) Jet-Spray 3-Way Weed Control (The ScottsCo.) Three-Way Ester (LESCO)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
2,4-D + MCPP + MSMA + dicamba	Trimec Plus (PBI/Gordon)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
2,4-D + triclopyr	Chaser (Turfgo/United Horticultural Supply) Turflon II, Turflon II Amine (LESCO)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
DCPA	Dacthal (ISK Biosciences) Garden, Turf & Ornamental Herbicide 5G, Turf & Ornamental Herbicide (Bonide) HS-110 (NCH) Super Dacthal 686 (Rockland)	Selective, post-emergence control of creeping speedwell and preemergence control of selected broadleaf species.
Dicamba	Vanquish (Sandoz) K-O-G Weed Control (The Scotts Co.)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
Isoxaben	Gallery (DowElanco)	Selective, preemergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
Triclopyr	Turflon Ester (DowElanco, Monterey)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
Triclopyr + clopyralid	Confront (DowElanco)	Selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.

for the reduction of their individual single use rates through a synergistic action. Double and triple combinations of these materials provide effective control for almost any broadleaf species in turf. They are formulated as ester- or amine-based compounds to provide greater control or more turf safety, respectively.

Non-phenoxy broad spectrum herbicides

Triclopyr and Clopyralid, are broad spectrum postemergent herbicides that can be targeted towards a wide range of weeds in many turfs. Triclopyr is often found in formulations by itself or in combinations with 2,4, D to broaden its effectiveness across a wider group of weeds. Confront is a combination of both Triclopyr and Clopyralid which is effective with many tough broadleaf weeds such as wild violets and creeping charlie.

Other postemergent broadleaf herbicides

Several materials are available for a smaller group of weeds or for special uses. Bromoxynil will not injure seedling turfgrasses and is often used as the initial material for cleaning up newly seeded turfs. Several materials such as Basagran, Vantage, and DCPA are targeted towards a small group of species. Manage and Basagran can be used for controlling yellow and purple nutsedge. **LM**

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