

Table 2. Herbicide Comparison Table 2003 Wisconsin DNR, Forest Health Protection

PRODUCT NAME & ACTIVE INGREDIENT	FORMULATION	FORESTRY USE	APPLICATION	ENTERS WEED THROUGH	TIMING	AMOUNT	COMMENTS
Transline Clopyralid 40.9%	Water soluble liquid	Post emergent control of broadleaf weeds.	Ground broadcast and spot spray	Foliage and stems	When weeds are actively growing	1/3 to 1 1/3 pints per acre	Supplemental labeling for forestry application with endangered species restriction.
Vanquish Dicamba 56.8%	Water soluble liquid	Nonselective forest brush control; select tree removal; forest site preparation.	Aerial, ground, broadcast, direct spray, cut surface.	Foliage, stem or sapwood.	Full leaf to 2 weeks before frost	2 qts. product per acre maximum.	Ground and basal spray OK for multiflora rose. Endangered species caution.
Veteran CST Dicamba 13.3%	Ready to use liquid.	Cut surface treatment of undesirable trees.	Injection; cut surface.	Roots and sapwood.	Fresh cut stump any time except active sap flow.	1 ml/cut with edges 1-2 inches apart.	Backflash possible.
Glyphosate 41.5% to 53.8% Accord, Glypro, GlyFlo, Glyphosate and others	Water soluble liquid	Post emergent control of grass and broadleaf weeds and brush. Conifer release, site prep.	Aerial or ground, broadcast or directed spray; cut surface.	Foliage or cut surface.	After full leaf expansion; woody plants late summer. Release of pine and spruce allowed at end of first growing season.	1 ½ -10 pts. product per acre. Tank mixtures.	Wetland label for products without surfactant. Surfactant required for many uses. Endangered species caution.
Pronone 10G Hexazinone 10%	Granules	Conifer release; site prep.	Broadcast or spot apply by aerial or ground equipment.	Roots	In spring during active weed growth. At least 2 months after tree planting.	10-40 lbs product per acre depending on soil texture	Rates vary with soil texture and soil organic matter. Endangered species caution.
Velpar DF Hexazinone 75%	Water dispersible granules	Site prep, conifer release, grid and single stem control.	Aerial or ground; broadcast or directed spray; grid or single stem soil application; injection.	Roots and foliage	Early spring to early summer.	Site prep 2 2/3 to 6 2/3 lb per acre. Release 1 1/3 – 5 1/3 lb per acre. Varies with soil texture	Release trees 2 to 4 years after planting depending on soil and tree species. Tank mix with Tordon, Garlon. See label. Endangered species caution.
Velpar L Hexazinone 25%	Water dispersible liquid	Site prep, conifer release, grid and single stem control; brush control.	Aerial (helicopter only) or ground; broadcast or directed spray; grid or single stem soil application; injection.	Roots and foliage	Early spring to early summer; see label.	Site prep 4-10 qt./acre; release 2-8qt/acre; varies with soil texture organic matter, tree species.	Release trees 2 to 4 years after planting depending on soil and tree species. Tank mix with Tordon, Garlon 4. See label. Endangered species caution.
Arsenal AC imazapyr 53.1%	Soluble liquid	Conifer site prep and release (supplemental labeling for red pine site prep)	Helicopter, ground spray; cut surface	Foliage or cut surface	After full leaf development; Cut surface any time except sap flow	¼-2½ pt. per acre; see label	Do not apply with fixed wing aircraft. Endangered species caution.
Chopper Imazapyr 27.6%	Emulsifiable concentrate to be mixed with water or oil	Site prep, brush control.	Ground, helicopter, broadcast and directed spray; paint onto cut surface.	Foliage, bark, cut surface	Foliage: after full leaf expansion; Cut surface any time except sap flow.	Conifer site prep: 24-32 oz/A. See label.	Do not apply with fixed wing aircraft. Endangered species caution.
Linex 4L Linuron 40.6%	Flowable to be mixed with water	Pre and early post emergent weed control in hybrid poplar plantings	Broadcast or band overtop applications	Roots and foliage	In spring before or shortly after weeds germinate	2-4 pt per acre. Use lower rates on lighter soils.	
Lorox DF Linuron 50%	Dispersible granule; mix with water	Pre and early post emergent weed control in hybrid poplar plantings	Broadcast or directed spray	Roots and foliage	In spring before or shortly after weeds germinate	2-4 lbs product per acre. Use lower rates on lighter soils.	Overtop application OK before bud break, Directed spray after budbreak
Escort Metsulfuron methyl 60%	Dry flowable	Red pine site preparation the season before planting	Aerial or ground broadcast	Mainly foliage; some uptake by roots.	When weeds are actively growing.	1 – 2 oz per acre depending on weed species and timing.	Agitate in spray tank. See label for tank mixes. Endangered species caution
Pendulum WDG Pendimethalin 60%	Water dispersible granule	Pre-emergent control of annual grass and broadleaf weeds.	Broadcast, overtop or directed spray	Roots	Apply to soil before annual weeds germinate.	3.3 – 6.6 lbs/acre.	Tank mix with glyphosate ok; see label.
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Tordon K RESTRICTED USE Picloram 24.4%	Water soluble liquid	Conifer site prep	Aerial or ground; broadcast or directed	Foliage or stems	Full foliage development to late summer	1-2 qt per acre	Wait 8-9 months before planting conifers. Tank mix OK with Garlon 4, Accord, Oust.
Pathway Picloram 5.4% and 2,4-D amine 20.9%	Ready to use liquid	Select tree removal	Cut surface: injection, frill, girdle or cut stump.	Sapwood	Any season except sap flow.	Inject 1 ml every 3 inches of circumference	Stays phytotoxic for 1 year in soil; backflash possible. Groundwater caution.
Tordon 101 Mixture RESTRICTED USE Picloram 10.2% 2,4-D amine 39.6%	Water soluble liquid	Broadleaf weed and brush control in forest planting sites; site prep; wildlife openings.	Aerial or ground broadcast spray or directed spray	Foliage or cut surface.	Foliage application after leaf expansion; cut surface any season except heavy sap flow.	4-8 qt product per acre	Stays phytotoxic for 1 year if in soil; backflash possible from cut surface applications.
Vantage Sethoxydim 13 %	Water dispersable liquid.	Postemergent grass control	Ground, broadcast or directed spray.	Foliage	Actively growing grass, before seed head appears.	2.25 - 3.75 pt per acre	Poor control may result if grass is mowed and allowed to regrow before application. Endangered species caution.
Simazine 4L Simazine 42%	Water dispersable, liquid	Preemergent broadleaf and grass control in plantations	Broadcast, spot, band, directed or otop spray.	Roots	Before weeds emerge or after weed removal	2-4 qt product in at least 25 gal water per acre.	"Shelterbelt" wording allows use in plantations for erosion control. Endangered species caution.
Simazine 90 DF Simazine 90%	Water dispersable dry flowable	Preemergent broadleaf and grass control in plantations	Broadcast, spot, band, directed or otop spray.	Roots	Before weeds emerge or after weed removal	2.2-4.4 lb in at least 25 gal water per acre	"Shelterbelt" wording allows use in plantations for erosion control. Endangered species caution.
Oust XP Sulfometuron methyl 75%	Water dispersable granule	Pre and early post emergent grass and broadleaf control in tree plantations. Supplemental label for hybrid poplar.	Aerial (helicopter only) or ground, roadcast, band or directed spray	roots and foliage	In late fall before planting or in spring after trees are planted but before trees break dormancy.	1 - 8 oz per acre	Tank mix with simazine OK. Apply after rainfall closes planting slit. Endangered species caution.
Garlon 3A Triclopyr amine 44.4%	Water soluble liquid	Site prep, conifer release, Single tree removal	Broadcast or directed, ground or aerial spray (helicopter only).	Foliage or cut surface	Foliage application during active growth; cut surface any time except heavy sap flow.	1/4-3 gal product per acre	Tank mix with 2,4-D or picloram OK. Specimen Label Revised 12-13-02.
Garlon 4 Triclopyr ester 61.6%	Emulsifiable liquid	Brush and broadleaf control, site prep, conifer release, select tree removal	Ground or aerial spray (helicopter only), basal bark, dormant stem	Foliage, bark & cut surface	Foliage application active growth, best results late summer.	Site prep 3-6 qt/A; Conifer release 1.3 -3 qt/A.	Site prep: 1-2 month delay for conifer planting; Conifer release late summer. Endangered species caution.
Pathfinder II Triclopyr ester 13.6%	Ready to use liquid	Brush control, single tree removal	Hand directed spray	Basal bark & cut stumps	Any time except when snow or water covers base of tree or brush	Thoroughly wet bark and cut surface but with no runoff.	OK on seasonally dry wetlands.
Hi-Dep 2,4-D amine 49.5%	Water soluble liquid	High-volume brush control; site prep; single tree removal	Ground or aerial broadcast; injection	Foliage, bark, injection	Spray from full leaf to dormant; injection May 15 to Oct 15	1/2 - 2 gal per acre	Aerial application OK; thistle control
See 2,4-D LV4 2,4-D ester 67.2%	Emulsifiable concentrate	Site prep; conifer release; single tree removal	Aerial or ground spray; injection	Foliage; cut surface	After conifers harden off; at bud break; or after leaf development	1.5-2 qts product/a; see label	Aquatic label. Injection for hard to kill species.
Patron 170 2,4-D ester 32.1% 2,4-DP ester 32.2%	Emulsifiable concentrate	Brush control, site prep, pine release, and select tree removal	Aerial or ground spray basal bark; frill	Foliage, stem, cut surface	After full leaf development; pine release after August 15	Site prep: 1-2 gal/a pine release: 2-4 qt/a	To release red, jack, and white pine and white spruce.