

**Key Words: Low Risk, Mediterranean climate, Ornamental Grass, Clump-forming, Deer Resistant**

**Family:** *Poaceae*

**Taxon:** *Helictotrichon sempervirens*

**Synonym:** *Avena notarisii* Parl.

**Common Name:** Blue Oat Grass

*Avena sempervirens* Vill. (basionym)

Questionnaire : Status:	current 20090513 Assessor Approved	Assessor: Data Entry Person:	Chuck Chimera Chuck Chimera	Designation: L WRA Score 1
101	Is the species highly domesticated?	y=-3, n=0	n	
102	Has the species become naturalized where grown?	y=1, n=-1		
103	Does the species have weedy races?	y=1, n=-1		
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	(0-low; 1-intermediate; 2-high) (See Appendix 2)	Intermediate	
202	Quality of climate match data	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High	
203	Broad climate suitability (environmental versatility)	y=1, n=0	y	
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	n	
205	Does the species have a history of repeated introductions outside its natural range?	y=-2, ?=-1, n=0	y	
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n= question 205	n	
302	Garden/amenity/disturbance weed	n=0, y = 1*multiplier (see Appendix 2)	n	
303	Agricultural/forestry/horticultural weed	n=0, y = 2*multiplier (see Appendix 2)	n	
304	Environmental weed	n=0, y = 2*multiplier (see Appendix 2)	n	
305	Congeneric weed	n=0, y = 1*multiplier (see Appendix 2)	y	
401	Produces spines, thorns or burrs	y=1, n=0	n	
402	Allelopathic	y=1, n=0		
403	Parasitic	y=1, n=0	n	
404	Unpalatable to grazing animals	y=1, n=-1	y	
405	Toxic to animals	y=1, n=0	n	
406	Host for recognized pests and pathogens	y=1, n=0	n	
407	Causes allergies or is otherwise toxic to humans	y=1, n=0		
408	Creates a fire hazard in natural ecosystems	y=1, n=0	n	
409	Is a shade tolerant plant at some stage of its life cycle	y=1, n=0		
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0	y	
411	Climbing or smothering growth habit	y=1, n=0	n	

412	Forms dense thickets	y=1, n=0	n
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	y
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally	y=1, n=-1	
604	Self-compatible or apomictic	y=1, n=-1	
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	n
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	y
705	Propagules water dispersed	y=1, n=-1	n
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	
708	Propagules survive passage through the gut	y=1, n=-1	
801	Prolific seed production (>1000/m <sup>2</sup> )	y=1, n=-1	
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	
803	Well controlled by herbicides	y=-1, n=1	
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	n
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: L

WRA Score **1**

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**Supporting Data:**

101	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Is the species highly domesticated? No] No evidence
102	2012. WRA Specialist. Personal Communication.	NA
103	2012. WRA Specialist. Personal Communication.	NA
201	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Species suited to tropical or subtropical climate(s) 1-Intermediate] "DISTRIBUTION Europe: southwestern and southeastern."
202	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Quality of climate match data 2-High]
203	1994. Nash, L.J./Witt, M.L./Tapp, L./Powell Jr., A.J.. Ornamental Grasses for Kentucky Landscapes. HO-79. Cooperative Extension Service, University of Kentucky College of Agriculture, Lexington, KY	[Broad climate suitability? Yes] "Hardiness: Zones 4-8"
203	2001. Ellis, B.W.. Taylor's Guide to Perennials: More Than 600 Flowering and Foliage Plants, Including Ferns and Ornamental Grasses. Houghton Mifflin Harcourt, 222 Berkeley St. Boston, MA	[Broad climate suitability? Yes] "Zones 4 to 9"
204	2012. Janick, J.. Horticultural Reviews. Volume 39. John Wiley and Sons, New York, NY	[Native or naturalized in regions with tropical or subtropical climates? No] "Native to dry sunny Mediterranean climates..."
204	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Native or naturalized in regions with tropical or subtropical climates? No evidence] "Native: EUROPE - Southeastern Europe: Italy [n.w.] Southwestern Europe: France [s.e.] Cultivated: NORTHERN AMERICA - United States"
205	2012. Dave's Garden. PlantFiles: Blue Oat Grass - <i>Helictotrichon sempervirens</i> . <a href="http://davesgarden.com/guides/pf/go/1597/">http://davesgarden.com/guides/pf/go/1597/</a>	[Does the species have a history of repeated introductions outside its natural range? Yes] "El Sobrante, California Groveland-big Oak Flat, California Martinez, California Salinas, California Denver, Colorado Edgewater, Colorado Evanston, Illinois South Bend, Indiana Louisville, Kentucky Bowleys Quarters, Maryland Quincy, Massachusetts Mason, Michigan Whitehall, Montana Haddonfield, New Jersey Enid, Oklahoma Harrah, Oklahoma Altamont, Oregon Rockcreek, Oregon Rowlett, Texas Bluffdale, Utah Cedar Hills, Utah Elwood, Utah Genola, Utah Essex Junction, Vermont Keller, Virginia Bellingham, Washington East Port Orchard, Washington Valleyford, Washington White Center, Washington Beverly, West Virginia Bessemer Bend, Wyoming"
301	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Naturalized beyond native range? No evidence]
302	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Garden/amenity/disturbance weed? No] No evidence
302	2009. Weedbusters. Plant Me Instead! Bay of Plenty Region. <a href="http://www.bayofplenty.nz/info/media/43897/plantmeinstead.pdf">www.bayofplenty.nz/info/media/43897/plantmeinstead.pdf</a>	[Garden/amenity/disturbance weed? No evidence] Recommended as a non-invasive alternative to <i>Miscanthus nepalensis</i> , which is listed as a garden escape
303	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Agricultural/forestry/horticultural weed? No] No evidence
304	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Environmental weed? No] No evidence
304	2009. Cal-IPC. The California Invasive Plant Council Student Chapter recommends that you Don't Plant Pampas Grass. <a href="http://www.calipcsc.org/files/pampasgrass.pdf">www.calipcsc.org/files/pampasgrass.pdf</a>	[Environmental weed? No evidence] Recommended as a non-invasive alternative to Pampas grass ( <i>Cortaderia jubata</i> )

304	2010. Plant Right. Common Name: Blue Oat Grass. California Horticultural Invasives Prevention (Cal-HIP), <a href="http://www.plantright.org/species/helictotrichon-sempervirens">http://www.plantright.org/species/helictotrichon-sempervirens</a>	[Environmental weed? No evidence] "This grass has very much the same habit and appearance as invasive green fountain grass but without the heavy self-sowing tendency that leads to invasiveness"
305	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Congeneric weed? Yes] Ten Helictotrichon species are listed as naturalized or weeds
401	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Produces spines, thorns or burrs? No] "Perennial; caespitose. Basal innovations intravaginal. Culms 40–100 cm long. Ligule a ciliolate membrane; 0.5–1.5 mm long; truncate. Leaf-blades deciduous at the ligule; flat, or convolute; 15–60 cm long; 0.9–4 mm wide; stiff; glaucous; without exudate, or pruinose. Leaf-blade venation with continuous uniform subepidermal sclerenchyma layer on the underside. Leaf-blade surface ribbed; scaberulous."
402	2012. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Parasitic? No] Poaceae
404	2012. Missouri Botanical Garden. Helictotrichon sempervirens 'Saphirsprudel'. <a href="http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/x720/helictotrichon-sempervirens-saphirsprudel.aspx">http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/x720/helictotrichon-sempervirens-saphirsprudel.aspx</a>	[Unpalatable to grazing animals? Probably Yes] "Tolerates: Air Pollution, Black Walnuts, Deer"
404	2012. Monrovia. Blue Oat Grass - Helictotrichon sempervirens. <a href="http://www.monrovia.com/plant-catalog/plants/1380/blue-oat-grass.php">http://www.monrovia.com/plant-catalog/plants/1380/blue-oat-grass.php</a>	[Unpalatable to grazing animals? Yes] "Deer Resistant"
404	2012. Shooting Star Nursery. Deer Resistant Plant List for the Rogue Valley. <a href="http://roguevalleynursery.com/deer-resistant-plants.html">http://roguevalleynursery.com/deer-resistant-plants.html</a>	[Unpalatable to grazing animals? Yes] Helictotrichon sempervirens listed as "Very Deer Resistant"
405	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Toxic to animals? No] No evidence
405	2012. Robins, S.. Pet Health Central - Giving Your Kitty Salad Bar to Nibble On. <a href="http://blog.sergeants.com/2012/05/11/giving-your-kitty-salad-bar-to-nibble-on-2/">http://blog.sergeants.com/2012/05/11/giving-your-kitty-salad-bar-to-nibble-on-2/</a>	[Toxic to animals? No evidence] "Four very common grasses that are cat friendly are Pennisetum 'Eaton Canyon'; Scirpus Cennuus, better known by its common name of 'Fiber Optic Grass'; Carex Evergold and Helictotrichon sempervirens, commonly known as Blue Oat Grass."
406	1999. Gilman, E.F.. Helictotrichon sempervirens. Fact Sheet FPS-251. University of Florida IFAS Extension, Gainesville, FL <a href="http://www.growingforyou.com/images/Helictotrichon%20sempervirens.pdf">www.growingforyou.com/images/Helictotrichon%20sempervirens.pdf</a>	[Host for recognized pests and pathogens? No] "Pest resistance: no serious pests are normally seen on the plant"
406	2012. Fine Gardening. Helictotrichon sempervirens (Blue oat grass). The Taunton Press, Inc., Newtown, CT <a href="http://www.finegardening.com/plantguide/helictotrichon-sempervirens-blue-oat-grass.aspx">http://www.finegardening.com/plantguide/helictotrichon-sempervirens-blue-oat-grass.aspx</a>	[Host for recognized pests and pathogens?] "Problems: Rust."
407	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Causes allergies or is otherwise toxic to humans? No evidence of toxicity]
407	2012. University of British Columbia Botanical Garden & Centre for Plant Research. UBC Botanical Garden Forums - Ornamental grasses and allergies. <a href="http://www.botanicalgarden.ubc.ca/forums/showthread.php?p=102717">http://www.botanicalgarden.ubc.ca/forums/showthread.php?p=102717</a>	[Causes allergies or is otherwise toxic to humans? Possibly] "I cannot work among Helictotrichon sempervirens in flower without wearing a mask. " [Possibly allergenic to susceptible individuals]
408	2010. Lorenson, L./Callahan, K.. Firewise Pants for Western Nevada County. Fire Safe Council of Nevada County, Grass Valley, CA	[Creates a fire hazard in natural ecosystems? No evidence] Helictotrichon sempervirens is recommended as a firewise landscaping plant
408	2012. Monrovia. Blue Oat Grass - Helictotrichon sempervirens. <a href="http://www.monrovia.com/plant-catalog/plants/1380/blue-oat-grass.php">http://www.monrovia.com/plant-catalog/plants/1380/blue-oat-grass.php</a>	[Creates a fire hazard in natural ecosystems? No evidence] "Landscape uses: Border, Firescaping/Fire Wise" [Recommended to fire proof landscapes]

409	1994. Nash, L.J./Witt, M.L./Tapp, L./Powell Jr., A.J.. Ornamental Grasses for Kentucky Landscapes. HO-79. Cooperative Extension Service, University of Kentucky College of Agriculture, Lexington, KY	[Is a shade tolerant plant at some stage of its life cycle? Possibly] "Light: Full sun, part shade"
409	2001. Ellis, B.W.. Taylor's Guide to Perennials: More Than 600 Flowering and Foliage Plants, Including Ferns and Ornamental Grasses. Houghton Mifflin Harcourt, 222 Berkeley St. Boston, MA	[Is a shade tolerant plant at some stage of its life cycle? Possibly] "Full sun to light shade."
410	1999. Gilman, E.F.. Helictotrichon sempervirens. Fact Sheet FPS-251. University of Florida IFAS Extension, Gainesville, FL <a href="http://www.growingforyou.com/images/Helictotrichon%20sempervirens.pdf">www.growingforyou.com/images/Helictotrichon%20sempervirens.pdf</a>	[Tolerates a wide range of soil conditions? Yes] "Soil tolerances: acidic; slightly alkaline; sand; loam; clay"
410	2001. Ellis, B.W.. Taylor's Guide to Perennials: More Than 600 Flowering and Foliage Plants, Including Ferns and Ornamental Grasses. Houghton Mifflin Harcourt, 222 Berkeley St. Boston, MA	[Tolerates a wide range of soil conditions? Yes] "Poor to average, well-drained soil."
410	2002. Boland, T./Hair, M./Coit, L.. Michigan Gardener's Guide. Cool Springs Press, Minneapolis, MN	[Tolerates a wide range of soil conditions? Yes] "It tolerates a range of soils but not heavy, wet conditions, and will tolerate light shade for part of the day."
411	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Climbing or smothering growth habit? No] "Perennial; caespitose."
412	2009. Cal-IPC. The California Invasive Plant Council Student Chapter recommends that you Don't Plant Pampas Grass. <a href="http://www.calipcsc.org/files/pampasgrass.pdf">www.calipcsc.org/files/pampasgrass.pdf</a>	[Forms dense thickets? No evidence] Recommended as a non-invasive alternative to Cortaderia jubata
412	2009. Weedbusters. Plant Me Instead! Bay of Plenty Region. <a href="http://www.bayofplenty.nz/info/media/43897/plantmeinstead.pdf">www.bayofplenty.nz/info/media/43897/plantmeinstead.pdf</a>	[Forms dense thickets? No evidence] Recommended as a non-invasive alternative
501	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Aquatic? No] Terrestrial
502	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Grass? Yes] Poaceae
503	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Nitrogen fixing woody plant? No] Poaceae
504	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Perennial; caespitose. Basal innovations intravaginal. Culms 40–100 cm long. Ligule a ciliolate membrane; 0.5–1.5 mm long; truncate. Leaf-blades deciduous at the ligule; flat, or convolute; 15–60 cm long; 0.9–4 mm wide; stiff; glaucous; without exudate, or pruinose. Leaf blade venation with continuous uniform subepidermal sclerenchyma layer on the underside. Leaf-blade surface ribbed; scaberulous."
601	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Evidence of substantial reproductive failure in native habitat? No] No evidence
602	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Produces viable seed? Yes] "FRUIT Caryopsis with adherent pericarp; hairy at apex. Hilum linear."

602	2012. Dave's Gardern. PlantFiles: Blue Oat Grass - Helictotrichon sempervirens. <a href="http://davesgarden.com/guides/pf/go/1597/">http://davesgarden.com/guides/pf/go/1597/</a>	[Produces viable seed? Yes] "Seed Collecting: Allow seedheads to dry on plants; remove and collect seeds" ... "It does not spread aggressively throughout the garden. It will, however, self sow, and you may find seedlings coming up elsewhere if the conditions are favorable."
602	2012. Fine Gardening. Helictotrichon sempervirens (Blue oat grass). The Taunton Press, Inc., Newtown, CT <a href="http://www.finegardening.com/plantguide/helictotrichon-sempervirens-blue-oat-grass.aspx">http://www.finegardening.com/plantguide/helictotrichon-sempervirens-blue-oat-grass.aspx</a>	[Produces viable seed? Yes] "Propagation: Sow seed in spring, or divide clumps in spring."
602	2012. Kinsley, C.G.. Plant of the Month: Blue Oat Grass. <a href="http://whatcom.wsu.edu/ag/homehort/plant/Oatgrass.htm">http://whatcom.wsu.edu/ag/homehort/plant/Oatgrass.htm</a>	[Produces viable seed? Yes] "For while Helictotrichon sempervirens doesn't spread through stolons, it will self-sow freely if you leave on the glorious "flowers" that appear each spring. These inflorescences float above the foliage on pinkish-brown rounded stems and are truly lovely to behold. The little baby grasses that sprout can be moved to other open spots in your garden, or potted up for the annual Master Gardener plant sale."
603	2004. Heuchert, B./Roser, M.. The Carinthean grass hybrid Helictotrichon x krischae (Poaceae tribe Aveneae) - epitome of a hybrid zone. Schlechtendalia. 12: 69-83.	[Hybridizes naturally] Unknown for H. sempervirens, but hybridization documented in genus
604	1979. Connor, H.E.. Breeding systems in the grasses: a survey. New Zealand Journal of Botany. 17(4): 547-574.	[Self-compatible or apomictic? Possibly Yes] "Genera where cleistogamy is reported" [Includes Helictotrichon, but unknown for H. sempervirens]
605	1994. Zomlefer, W.B.. Guide to Flowering Plant Families. The University of North Carolina Press, Chapel Hill & London	[Requires specialist pollinators? No] "The reduced flowers are anemophilous..."
606	2012. Dave's Gardern. PlantFiles: Blue Oat Grass - Helictotrichon sempervirens. <a href="http://davesgarden.com/guides/pf/go/1597/">http://davesgarden.com/guides/pf/go/1597/</a>	[Reproduction by vegetative fragmentation? No] "Helictotrichon sempervirens (blue oat grass) is strictly clump-forming. That means it does not grow by underground runners, or rhizomes. The plant forms a neat clump. It does not spread aggressively throughout the garden. "
606	2012. Kinsley, C.G.. Plant of the Month: Blue Oat Grass. <a href="http://whatcom.wsu.edu/ag/homehort/plant/Oatgrass.htm">http://whatcom.wsu.edu/ag/homehort/plant/Oatgrass.htm</a>	[Reproduction by vegetative fragmentation? No] "Helictotrichon sempervirens is a clumping grass, true-blue to its name, that grows to a height of two feet and spreads as wide. Unlike many of its grassy cousins, it does not creep by rhizomes or stolons and is therefore non invasive. It stays where it's put and goes happily about its beautiful business without encroaching on the territory of its neighbors."
607	1999. Gilman, E.F.. Helictotrichon sempervirens. Fact Sheet FPS-251. University of Florida IFAS Extension, Gainesville, FL <a href="http://www.growingforyou.com/images/Helictotrichon%20sempervirens.pdf">www.growingforyou.com/images/Helictotrichon%20sempervirens.pdf</a>	[Minimum generative time (years)? Unknown] "Growth rate: slow"
701	2012. Dave's Gardern. PlantFiles: Blue Oat Grass - Helictotrichon sempervirens. <a href="http://davesgarden.com/guides/pf/go/1597/">http://davesgarden.com/guides/pf/go/1597/</a>	[Propagules likely to be dispersed unintentionally? Possibly] "It does not spread aggressively throughout the garden. It will, however, self sow, and you may find seedlings coming up elsewhere if the conditions are favorable."
702	2001. Ellis, B.W.. Taylor's Guide to Perennials: More Than 600 Flowering and Foliage Plants, Including Ferns and Ornamental Grasses. Houghton Mifflin Harcourt, 222 Berkeley St. Boston, MA	[Propagules dispersed intentionally by people? Yes] Ornamental
703	2012. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No evidence]
704	2012. Dave's Gardern. PlantFiles: Blue Oat Grass - Helictotrichon sempervirens. <a href="http://davesgarden.com/guides/pf/go/1597/">http://davesgarden.com/guides/pf/go/1597/</a>	[Propagules adapted to wind dispersal? Probably for short distances] "It does not spread aggressively throughout the garden. It will, however, self sow, and you may find seedlings coming up elsewhere if the conditions are favorable."
705	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Propagules likely to disperse as a produce contaminant? No] Morphology and distribution suggests seeds are not adapted for water dispersal
706	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Propagules bird dispersed? No] No evidence, and not fleshy-fruited

707	2003. Melendo, M./Giménez, E./Cano, E./Gómez-Mercado, F./Valle, F.. The endemic flora in the south of the Iberian Peninsula: taxonomic composition, biological spectrum, pollination, reproductive mode and dispersal. <i>Flora</i> . 198: 260-276.	[Propagules dispersed by other animals (externally)? Unknown. Related species, <i>Helictotrichon filifolium</i> , is described as having exozoochory, or dispersal of seeds by being carried on the surface of an animal.
708	2012. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut? Unknown]
801	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Prolific seed production (>1000/m2)? Unknown] "INFLORESCENCE Inflorescence a panicle; comprising 30–55 fertile spikelets. Panicle open; linear, or oblong; 8–20 cm long. Primary panicle branches bearing 3–7 fertile spikelets on each lower branch. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled." [Unlikely that seed numbers reach such high densities, but exact numbers unknown]
802	2003. Pyle, A.R.. Key to Success for Germinating Perennial Seed. <a href="http://www.perennialguru.com/articles/germination_keys.pdf">www.perennialguru.com/articles/germination_keys.pdf</a>	[Evidence that a persistent propagule bank is formed (>1 yr)? Possibly No] "Seed of some perennials dies very quickly in storage, and shelf life may be 6 months or less. These "fresh germinator" perennials should be sown as soon as possible after harvest. Harvesting your own seed from mother plants and sowing immediately may be the easiest way to grow these perennials from seed." [Helictotrichon sempervirens included in the category of fresh germinator]
803	2012. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species.
804	2005. Holmes, R./Walheim, L.. California Home Landscaping. Creative Homeowner, Upper Saddle River, NJ	[Tolerates, or benefits from, mutilation, cultivation, or fire? No] "Do not cut back."
804	2012. Janick, J.. Horticultural Reviews. Volume 39. John Wiley and Sons, New York, NY	[Tolerates, or benefits from, mutilation, cultivation, or fire? No] ""Semievergreen, damage can result from sever cutback in spring, rake out brown foliage..."
804	2012. Kinsley, C.G.. Plant of the Month: Blue Oat Grass. <a href="http://whatcom.wsu.edu/ag/homehort/plant/Oatgrass.htm">http://whatcom.wsu.edu/ag/homehort/plant/Oatgrass.htm</a>	[Tolerates, or benefits from, mutilation, cultivation, or fire? No] "Never give <i>Helictotrichon sempervirens</i> a clipping; it's not necessary, and you'll destroy the graceful form of this grass."
805	2012. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]

## **Summary of Risk Traits**

### **High Risk / Undesirable Traits**

- Broad climate suitability
- Weedy *Helictotrichon* species reported
- Deer resistant
- Tolerates many soil conditions (and potentially able to exploit many different habitat types)
- Spreads by seed

### **Low Risk / Desirable Traits**

- No records of weediness or invasiveness reported
- Recommended as a non-invasive alternative to many invasive grasses
- Non-toxic
- Landscaping and ornamental value
- Clump-forming; does not spread aggressively