United States Department of Agriculture

NRCS Natural Resources Conservation Service

FACT SHEET

Skamania Germplasm Sitka alder

Scientific Name:	*Alnus viridus* (Vill.) Lam.&D.C. spp. *sinuata* (Regel) A.&D. Love
Common Name:	Sitka alder, wavy-leaf alder
Release Name:	Skamania Germplasm Sitka alder
Selected by:	Corvallis PMC, NRCS, USDA
Origin:	122°01'West, 45°38'North. Township 2N, Range 6E, Section 25, Skamania County, Washington Elevation 200 ft. Precipitation 60-70 in.
Release Cooperators:	OR and WA Ag. Experiment Stations

Description: Skamania germplasm is a selected class release of Sitka alder that originates from a natural stand growing above the north shore of the Columbia River, in the vicinity of Beacon Rock in Skamania County, Washington. While this species of alder is more common at mid to sub-alpine elevations, Skamania germplasm represents a high quality seed source from, and for use at, lower elevation.

Like the species in general, this selection is an open, rounded, deciduous shrub that forms a symbiotic association with nitrogen fixing bacteria. Nitrogen fixation makes it a valuable species for reclamation of eroded, infertile sites. Plants are typically multi-stemmed and bushy, up to 20 ft (6 meters) tall. The bark is thin, smooth, and reddish brown or gray. The leaves are alternate, ovate, 0.8 to 2.5 inches (3-10 cm) long, shiny green, with doubly serrate margins. The root system is shallow. Male and female flowers (catkins) appear in early spring while the cone-like fruits containing winged nutlets (seeds) mature in late fall or early winter.

In its native habitat, Sitka alder is often one of the first species to appear following fire, landslides, forest clear cutting, or other disturbances. Resilient branches are seldom damaged by snow creep or avalanches, allowing dense thickets to form on steep slopes subject to these events. Spreading primarily by seed, dense stands can also form in moist areas, particularly along streams, seeps, and lakes as well talus slopes.

Method of Selection: Skamania germplasm was not bred or hybridized. However, it was selected as the best performer in a common garden seed source study of 64 alder populations established and evaluated at the Corvallis Plant Materials Center from 1983 to 1990. It was chosen for its rapid growth rate, early bud break, vigor, stem density, size, foliage appearance, and abundant fruit/seed production. While the species in general can be host to a number of insect and disease pests, none were considered a limiting factor for this selection during the study period.

Propagation: Sitka alder propagates best from fresh seed or dry seed that is cold moist stratified for 2 months. Hardwood cuttings have not been successful. The species is suitable to both containerized and bareroot production. Inoculation of seedlings with suitable N-fixing bacteria and ectomychorrhizal fungi should be considered in conjunction with a matching fertilization regime.

Suggested Area (see map on reverse): Western Columbia Gorge, Willamette Valley, Cascade and Olympic Mountains, Coast Range, and Puget lowland Ecoregions (<1500 ft), including the Umqua Valley of Oregon (<1500 ft). This is roughly equivalent to the lower elevations of USDA Major Land Resources Areas 1, 2 and 3. Adaptation may extend to MLRA's 4 and 5 in southwestern Oregon and northwestern California, but more testing would be needed.

Site adaptation: Sitka alder prefers somewhat poorly-drained to well drained mineral soils, regular water supply, and full sunlight. It is best adapted to medium to coarse textured soils found along riparian zones and talus slopes. Soil pH can range from 3.8 to 7.5.

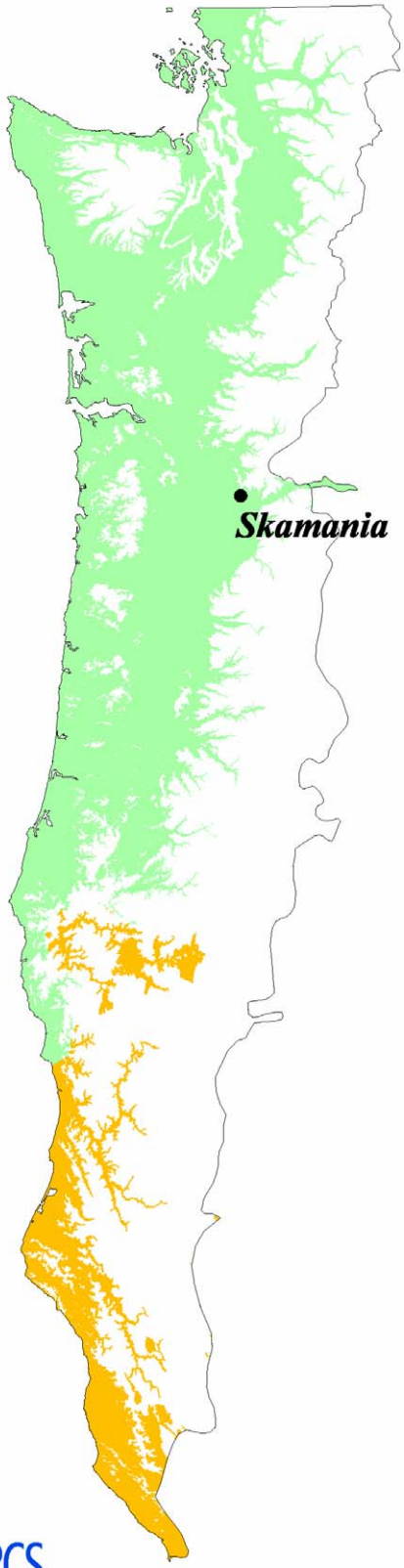
Anticipated Conservation Uses: Skamania germplasm should prove beneficial in stream corridor management and bank erosion control along low velocity streams and rivers. It will also improve wildlife habitat in riparian areas and has potential for reclamation of eroded, low-fertility sites or as a companion or nurse tree in conifer reforestation plantations. Sitka alder can enhance site productivity through nitrogen fixation and the buildup of soil organic matter from leaf litter accumulation.

Seed Source Availability: Certified G1 and G2 seed orchards will be maintained by the NRCS Corvallis Plant Materials Center (541-757-4812). Seed is available to growers for certified seedling production. For more information on how to grow or use Skamania Germplasm, contact the PMC or Plant Resource Specialist in OR and WA.

Caution: Skamania Germplasm is not necessarily intended to replace "local" or on-site sources of native Sitka alder for ecological restoration plantings. NRCS makes no claims concerning the suitability of this selection for native plant restoration efforts. Individuals with such concerns for a particular environment or ecosystem should make their decisions on a case by case basis.

For more information on the Plant Materials Program, visit our website: http://Plant.Materials.nrcs.usda.gov

Dale Darris, Rob Tracey, and Scott Lambert, Aug. 2002. USDA-NRCS, Plant Materials Center, Corvallis, OR



Sitka Alder

Suggested Area of Use:

"Skamania Germplasm"

Recommended
(0-1500' zone)

Not recommended
(above 1500')

Unknown
(0-1500' zone)

Origin (nearest town or city)

Corvallis PMC Service Area

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