

## Plant Data Sheet

Species: *Ceanothus sanguineus*

Commonly called: Redstem Ceanothus, Soap bush, and Oregon Tea Tree



Range:

Redstem is found on both sides of the Cascades, from British Columbia to California, east to Idaho and western Montana.

Climate, elevation:

Redstem can be found from low to moderate elevations

It is reported at 2,400 feet (732 m) in western Montana as well as at 4,000 feet (1200 m) in northern California

Local occurrence:

Redstem is usually found in disturbed areas particularly in soils are often low in organics. They play a prominent role in dense brushfields that develop throughout its range after fire or timber harvest and subsequent burns and disappears as tree canopy cover increases.

Habitat preferences:

Dry rocky crests, bluffs, borders of woods, clear cuts, logging roads.

Plant strategy:

Redstem is associated with early- or mid-seral stages of forest succession. It remains vigorous when burned at 10- to 15-year intervals. This shrub may be best adapted to summer wildfires that provide heat scarification followed by cold, moist stratification over winter. Redstem cover was positively correlated with years since disturbance. As tree canopy cover reached 56 to 100%, the shrub disappeared. In the absence of subsequent disturbances, redstem may be replaced by oceanspray and chokecherry

Associated species:

Redstem is found in several ecosystems that include; Douglas-fir, Ponderosa pine, Western white pine, Fir-spruce, and Hemlock-Sitka spruce.

May be collected as:

Redstem is typically collected as seed. Bags are placed over the un-ripe fruit and are left on the plant until the seeds are ripe and the plant ejects them into the bags. Cutting are possible as well.

#### Collection restrictions or guidelines:

Do not cut branches with unripe seeds because the seeds will not ripen correctly once removed from the mother plant.

#### Seed germination:

Seeds can be scarified by hot water at temperatures of 80 to 90° C (176 to 194° F). Seeds are added to the boiling water for only 5 to 10 seconds and then immediately transferred to a vat of cold water so that they cool quickly and avoid killing the embryo. The seeds remain in, and imbibe, water for 1 day.

Following scarification, seeds are cold stratified for 90 days.

#### Seed life:

Seeds have the ability to stay in dormancy for decades. Seed banks is a prominent strategy used by redstem.

#### Recommended seed storage conditions:

Seeds stored for 15 years in an air-tight dry container at 1 - 5°c have shown little deterioration in viability.

#### Propagation recommendations:

Easiest and cheapest method is to scarify and sow seeds directly in the fall to self stratify. Next they can be container grown in the nursery from seeds or cuttings to be planted out at 1yr old. It is not recommended to leave in containers past the first year as the redstem doesn't respond well to root disturbance.

#### Soil or medium requirements:

The plant prefers light (sandy) and medium (loamy) soils and requires well-drained soil. The plant requires soil pH between 6.5 – 8.0. It can grow in semi-shade (light woodland) or no shade. It requires dry or moist soil. Redstem forms a symbiotic relationship with nitrogen fixing bacteria. Inoculate seeds with Frankia bacteria at time of sowing.

#### Installation form:

One site stated that the roots do not like transplanting while another site stated that they were suitable for bare root. Most recommend heat treating the seeds to scarify them planting out in the fall to naturally stratify.

#### Recommended planting density:

Minimum and maximum density 100 plants per acre.

#### Care requirements after installed:

No special care is required after installation. It is noted the mortality is highest during dry periods in August so a water regime in late summer may improve survival.

#### Normal rate of growth or spread:

Most seedling losses occur the 1st year after emergence, with many succumbing to August droughts. Those that are still alive by the 2nd growing season generally survive. Early growth of redstem is often rapid. Twigs have reportedly grown as much as 48 inches (122 cm) in a single growing season. Growth slows as plants age, with annual twig growth of older stands (32-36 years) averaging 9.3 to 12 inches (23.6-30.5 cm). Height of a mature redstem is between 3 to 10 ft.

## Sources cited:

Plants for a future

[http://www.ibiblio.org/pfaf/cgi-bin/arr\\_html?Ceanothus+sanguineus](http://www.ibiblio.org/pfaf/cgi-bin/arr_html?Ceanothus+sanguineus)

Central Washington Native Plants

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USDA Forest Service

<http://www.fs.fed.us/database/feis/plants/shrub/ceasan/all.html#GENERAL%20DISTRIBUTION>

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