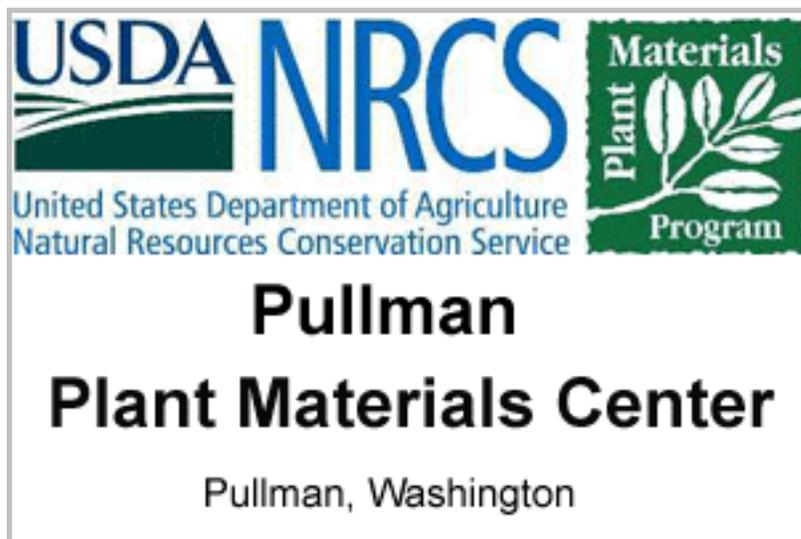


Protocol Information

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Family Scientific Name: **Caryophyllaceae**

Family Common Name: **Pink**

Scientific Name: ***Arenaria congesta* Nutt. ' '**

Common Synonym: ' '

Common Name: **capitate sandwort, ballhead sandwort, dense-flowered sandwort**

Species Code: **ARCO5**

Ecotype: **Paradise Ridge**

General Distribution: **Western US east to Montana and south to Arizona. In the Palouse region of eastern Washington and adjacent northern Idaho it is usually found on dry, open slopes especially where soils are shallow.**

Known Invasiveness:

Propagation Goal: **Plants**

Propagation Method: **Seed**

Product Type: **Container (plug)**

Stock Type: **10 cu. in.**

Time To Grow: **4 Months**

Target Specifications: **Tight root plug in container.**

Propagule Collection: **Fruit is a capsule. Seed is black in color and round in shape. Seed is collected when the capsules begin to split in late July or early August and is stored in paper bags or envelopes at room temperature until cleaned.**

Propagule Processing: **Small amounts are rubbed to free the seed, then cleaned with an air column separator. Larger amounts can be threshed with a hammermill, then cleaned with air screen equipment. Clean seed is stored in controlled conditions at 40 degrees Fahrenheit and 40% relative humidity.**

Pre-Planting Treatments: **Extended cold, moist stratification increases germination. Unpublished data from trials conducted at the Pullman Plant Materials Center revealed that 25% germination occurred without stratification. 45 days of cold, moist stratification resulted in 22.5% germination. 90 days of cold, moist stratification resulted in 60% germination. Seed sown in containers in November and left outdoors under cool, fluctuating spring temperatures began emerging in mid-March and ultimately reached 67% germination. Some seed will germinate during stratification. Seedlings which germinated in the greenhouse thrived in the constant warmth, so it is likely**

the longer stratification time and not the cool, fluctuating temperature was the factor in the increased germination.

Growing Area Preparation/
Annual Practices for Perennial Crops:

In October or early November seed is sown in 10 cu. in. Ray Leach Super cell conetainers filled with Sunshine #4 and covered lightly. A thin layer of pea gravel is applied to prevent seeds from floating. Conetainers are watered deeply and placed outside. Conetainers are moved to the greenhouse in January. Alternately, seed can be moist stratified in a refrigerator at 35-40 degrees F for 90+ days before sowing in the greenhouse.

Establishment Phase: Containers are moved to the greenhouse in early January. Emergence usually begins in 1 day and is complete in 7 days.

Length of Establishment Phase: 1 week

Active Growth Phase: Plants are watered deeply every other day and fertilized once per week with a complete, water soluble fertilizer containing micro-nutrients.

Length of Active Growth Phase: 3 months

Hardening Phase: Plants are moved to the cold frame in late March or early April, depending on weather conditions. They are watered every other day if the weather is cool, and every day during hot, dry spells.

Length of Hardening Phase: 2-4 weeks

Harvesting, Storage and Shipping:

Length of Storage:

Outplanting performance on typical sites: **Transplanting is done in early May by using an electric drill and portable generator to drill 1.5 inch diameter holes at the planting site. Survival in seed increase plantings without competing vegetation averages 95%. Transplanting into sites with existing vegetation may reduce survival and vigor depending on weather conditions following planting.**

Other Comments: **No insect or disease problems have been noted.**

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Citation:

Skinner, David M,. 2006. Propagation protocol for production of container *Arenaria congesta* Nutt. ' ' plants (10 cu. in.); Pullman Plant Materials Center, Pullman, Washington. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 8 March 2006). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.