

RELEASE NOTICE
OF
"MAYBELL SOURCE" ANTELOPE BITTERBRUSH, PURSHIA TRIDENTATA
AS

Unique low-growing ecotype
for Wildlife and Rangeland Use

by the
UPPER COLORADO ENVIRONMENTAL PLANT CENTER (UCEPC)
and the
USDA - NATURAL RESOURCES CONSERVATION SERVICE
and the
USDA - FOREST SERVICE, INTERMOUNTAIN RESEARCH STATION
and the
USDI - BUREAU OF LAND MANAGEMENT
and the
UTAH DIVISION OF WILDLIFE RESOURCES
and the
COLORADO STATE AGRICULTURAL EXPERIMENT STATION

This announces the release of The "Maybell Source" antelope bitterbrush as a "SELECT CLASS" for identification of commercial collections, seed orchards, and the marketing of seeds and plants.

Antelope bitterbrush (Purshia tridentata (Pursh) DC.) is one of the most important native browse shrubs in the western United States. It is also known by quininebrush, buckbrush, and antelopebrush. Antelope bitterbrush has a wide ecotypic variation and hybridizes with Desert bitterbrush (Purshia glandulosa), and Stansbury cliffrose (Cowania mexicana var. stansburiana).

Antelope bitterbrush contains resins and maintains a heavy canopy that burns readily and may contribute to range fires. Much (30,000 acres) of the original stand of 'Maybell' (estimated roughly at 40,000 acres) has been destroyed by a series of range fires. This emphasizes the need to maintain seed supplies of this low-growing, layering accession. It is also important to maintain commercial and agency documentation of seed collections, so long-term results of range seedings can be followed. In a bitterbrush comparison project at the Plant Center, 'Maybell' tublings had a survival of 47% with good vigor after 11 years. However, in this study 'Maybell' exhibited almost no ability to sprout after fire. (The data for Project 08A073J is presented in Appendix I.)

ORIGIN:

'Maybell' is found in Northwest portion of Moffat County, Colorado. The area is 40 miles west of Craig, Colorado in Major Land Resources Area 34B. The collection site is located on both public and private land. Seed collection on private land will require permission, while public land will require a permit. It is found on deep Maybell sand soils at 6,000 to 7,000 feet elevation. The moderately coarse textured soils are associated with the Sandhills range site. It is found on nearly all aspects and is associated with basin big sagebrush, silver sagebrush, rubber rabbitbrush, pricklypear cactus, Louisiana sage, silver lupine, western wheatgrass, indian ricegrass, and needle-and-thread.

'Maybell' has been evaluated at the UCEPC using accession numbers 9024373 and EPC - 1395.

DESCRIPTION:

The "Maybell Source" is a creeping or decumbent ecotype having propensity for layering; that is, a decumbent branch may root from adventitious buds where it contacts the ground. Low-growing, layering ecotypes are common on sandy loam soils in southeastern Idaho, and in silt and clay soils in central Utah.

The "Maybell Source" is 24 to 40 inches in height and generally 36 to 52 inches wide. Leaves are persistent with the small, young, winter leaves turning purplish red but remaining over winter. The leaves are small (6 to 19mm), wedge shaped, and three-lobed. Leaves vary in color from gray green to bright green. It flowers profusely with mostly yellow blossoms.

DEVELOPMENT:

Early trials by the U. S. Forest Service Shrub Sciences Laboratory utilized seed collected from the Maybell population by commercial collectors. Materials tested by the UCEPC were collected primarily from a key site north of Cedar Springs in Moffat County, Colorado. Seed collected August 5, 1982 was used to establish three projects on the UCEPC and one at the Colowyo Coal Company site north of Meeker, Colorado. Survival has generally ranged from 83 to over 95 per cent. (The data for Project O8S077Z is presented in Appendix II.)

The "Maybell Source" was direct seeded on two sites in the Colony Shale Oil Project in 1989. The mine site is located north of Parachute, Colorado. In 1993 The "Maybell Source" plants had good vigor and ranged from 0.7 to 1.4 plants per foot of row on the two sites. (The data for the Colony Shale Oil project is presented in Appendix III.)

In a planting near Pinedale, Wyoming, The "Maybell Source" performance ranged from slightly better to slightly worse than other accessions. The "Maybell Source" performance in a planting in Western Duchesne County, Utah was equal to or slightly poorer than Fountain Green. (The data for the Pinedale, Wyoming planting is presented in Appendix IV.) (The data for the Utah planting is presented in Appendix V.)

Nine shrub species were seeded at Colowyo Coal Company and The "Maybell Source" was one of the most successful shrubs. In a UCEPC project transplanted tubling plants expressed the layering trait in the second year. (The data for the Colowyo planting is presented in Appendix VI.)

The "Maybell Source" in UCEPC orchards, produced about 0.5 pounds of clean seed per plant. The Maybell, Colorado area has been the site for commercial collections in past years. However, UCEPC orchards have been used for additional collections.

The "Maybell Source" antelope bitterbrush has approximately 13,900 seeds per pound. Average seed weight is 3.62 grams per 100 seeds.

COMMERCIAL SOURCES:

Contact the Upper Colorado Environmental Plant Center, Meeker, Colorado; Colorado Seed Growers Association, Fort Collins, Colorado; or Little Snake River, Bureau of Land Management Office in Craig, Colorado for information about seed collection and available planting stock.

Plant materials for commercial "Select Seed" class orchards can be purchased from the Upper Colorado Environmental Plant Center.