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Ten great American conservation plants are featured in this issue of *Plants: A Growing Alternative*. These plants all share a common heritage—they are native to the United States. All evolved naturally in various regions of this country and all were evaluated and selected for their conservation abilities by the Natural Resources Conservation Service (NRCS) Plant Materials Program. NRCS Plant Materials Centers and Specialists are dedicated to identifying plants whose natural traits make them superior at controlling erosion, feeding livestock and wildlife, and improving the environment.

These plants are just a few of the Program's stars and are highlighted here because of their extensive use and ecological dollar value (as determined by a 1999 economic analysis of Plant Materials Center varieties), longevity, and versatility. Details on hundreds of other conservation plants selected by Plant Materials Centers are available at <http://Plant-Materials.nrcs.usda.gov>



Improved Conservation Plants Publication

Each year, the Plant Materials Program prints information about its newly selected conservation plants in the publication *Improved Conservation Plant Materials Released by NRCS and Cooperators*. The booklet is available in paper form and on the Plant Materials Program Web site. For more information, call the National Plant Materials Center at (301) 504-8175 or visit <http://Plant-Materials.nrcs.usda.gov>



'Vaughn' sideoats grama (*Bouteloua curtipendula*)

With a distribution covering much of the U.S., sideoats grama is one of the most prolific native warm season grasses. It functions as an important range grass from the Great Plains into the Southwest. The 'Vaughn' selection of sideoats grama has long been a standard for rangeland reseeding as well as disturbed area revegetation. It was collected from native stands near Vaughn, New Mexico and released in 1940 by the Albuquerque, New Mexico Plant Materials Nursery (now known as the Los Lunas Plant Materials Center) and the New Mexico Agricultural Experiment Station. In demand for over 60 years, 'Vaughn' has been used on more than 500,000 acres for an ecological benefit of \$25 million.

'Vaughn' is typical of the species: medium stature (less than 24 inches tall), bunching, and leafy. It was selected especially for use in New Mexico and eastern Colorado because of its superior drought tolerance in comparison to other varieties. 'Vaughn' has good seedling vigor and is readily established on rocky or shallow soils.



'Blackwell' switchgrass (*Panicum virgatum*)

While many useful switchgrass varieties have appeared in recent years, 'Blackwell,' selected in 1944 by the Manhattan, Kansas Plant Materials Center and the Kansas Agricultural Experiment Station, has an enduring conservation record. Material that became 'Blackwell' was originally collected from a single plant near Blackwell, Oklahoma, and was evaluated against other switchgrass collections at the Plant Materials Center. The variety is an upland type of switchgrass, moderately tall (4 feet at maturity) and leafy, with good seedling vigor. It displays good resistance to stem rust disease. Its effectiveness is apparent in economic analysis numbers: 'Blackwell' has been used on 735,000 acres for an ecological benefit of \$29 million.

'Blackwell' is recommended for use on rangelands, pastures, waterways, and disturbed sites. It is adapted to well-drained, medium-textured soils across the eastern half of the U.S.



'Sherman' big bluegrass (*Poa secunda*)
Versatility is a characteristic of our best conservation plants, and 'Sherman' big bluestem is no exception. Collected in Sherman County, Oregon, and selected in 1945 by the Pullman, Washington Plant Materials Center and the Agricultural Experiment Stations of Washington, Oregon, and Idaho, 'Sherman' is an important variety for seeding dryland pasture and range, stabilizing soil, reseeding burned lands, and restoring natural areas. It has been established on 527,000 acres for an ecological benefit of almost \$36 million.

This plant has distinctly blue leaves and is easy to establish from seed, reaching a height of 35 to 38 inches. It matures early in the growing season and has high seed, forage, and root production. 'Sherman' is adapted to well-drained soils in the Pacific Northwest and Great Basin states, at elevations of 300 to 8,000 feet with a 10- to 20-inch average annual rainfall.



'Critana' thickspike wheatgrass (*Elymus lanceolatus* ssp. *lanceolatus*)
Planted on over 740,000 acres for an ecological benefit totaling more than \$25

million, 'Critana' thickspike wheatgrass has been an outstanding performer for 30 years. The Bridger, Montana Plant Materials Center in cooperation with the Montana Agricultural Experiment Station collected thickspike wheatgrass along roadside cuts in Hill County, Montana, and selected this variety for commercial production in 1971. The characteristics of 'Critana'—spreading and sod-forming under dryland conditions, easy to establish from seed in early spring or late fall, and requiring minimal maintenance—make it ideal for erosion control. In fact, it was selected primarily for stabilizing disturbed sites such as mined lands, roadsides, recreation areas, and construction sites. It can also be used in seed mixes to renovate range sites, revegetate land stripped by wildfire, compete with invasive plants, and provide wildlife habitat.

'Critana' is adapted to medium to coarse textured soils, in the 10- to 20-inch precipitation zone of the northern Rocky Mountains and adjacent Great Plains regions. It can grow at elevations ranging from 2,000 to 7,500 feet.



'Cape' American beachgrass (*Ammophila breviligulata*)

Many East Coast beachgoers are familiar with the sight of American beachgrass stems waving in the ocean breeze. However, they may not know that 'Cape', a Plant Materials Program variety, is often the plant holding those dunes in place. Collected on Cape Cod, Massachusetts, and released in 1972 by the Cape May, New Jersey Plant Materials Center and the New Jersey Agricultural Experiment Station, 'Cape' has been used to protect over 2,500 acres of coastal shoreline from Maine to North Carolina.

'Cape' was selected for its vigorous growth, numerous thick stems, broad leaves, and rapid rate of spread. These characteristics enable the plant to effectively trap blowing sand. In addition, the large stems promote easier transplanting and greater transplant survival on sand dunes. While 'Cape' has primarily been used on dunes, it has also been planted to stabilize sandy areas inland, such as roadbanks and abandoned gravel pits.



'Nezpar' Indian ricegrass (*Achnatherum hymenoides*)

Plants selected for their valuable conservation properties may also be unexpectedly ornamental. This is true of 'Nezpar' Indian ricegrass, a 1978 release from the Aberdeen, Idaho Plant Materials Center and the Idaho Agricultural Experiment Station. The plant's beauty lies in its distinctive seedheads and thin, graceful stems. Underneath 'Nezpar's' elegant exterior, however, is a tough, drought tolerant grass excellent for seeding rangeland, stabilizing critical areas, revegetating surface mining land, and providing winter forage for wildlife and livestock. 'Nezpar' has been used on 71,000 acres and has yielded an ecological benefit of \$1.5 million.

Collected south of White Bird, Idaho, 'Nezpar' was named in honor of the Nez Perce Indians—Indian ricegrass seeds were once a food staple of many western tribes. The variety is a cool season perennial bunchgrass whose seed germinates well (usually a problem with Indian ricegrass). 'Nezpar' performs best on coarse, sandy soils in the West (Idaho, Utah, Nevada); it prefers dry southerly exposures, but at least 9 inches of annual precipitation.



'Vermilion' smooth cordgrass (*Spartina alterniflora*)

Smooth cordgrass is one of the dominant grasses found in many coastal salt marshes in the U.S, and it has great value as a stabilization and restoration plant. It is a coarse-leaved perennial grass that spreads primarily by rhizomes (underground stems). In order to perform under tough coastal conditions, smooth cordgrass must be resilient. 'Vermilion,' a selection made in 1989 by the Golden Meadows (Galliano, Louisiana) Plant Materials Center and Louisiana State University, is just that. It was originally collected in Vermilion Parish, Louisiana, and was chosen from many collections at the Plant Materials Center for its impressive ability to survive transplanting, resist disease, and produce a large number of stems at a rapid rate.

It is adapted to the Gulf of Mexico coastal region, in plant hardiness zones 8-10. Over the years, 'Vermilion' has been planted on over 325 acres of coastal marshland, for an ecological benefit totaling \$1 million.



'Sabine' Illinois bundleflower (*Desmanthus illinoensis*)

With its exotic-looking dark green feathery leaves and its fragile white puffball

flowers, it may seem hard to believe that 'Sabine' Illinois bundleflower is a rugged plant, but it is. In fact, 'Sabine' provides excellent cover on reclaimed minelands. It also works well for rangeland and pasture seedings, wildlife food plantings, revegetation, and critical area plantings. The plant was originally collected in Crystal Beach, Texas on Sabine-type soil. It was selected from among many collections in an evaluation block at the Knox City, Texas Plant Materials Center for its forage abundance, seed production, and ability to take up nitrogen. While its full range of adaptability has not been tested, the plant is hardy from southern Texas to northern Oklahoma on many soil types with at least 15 inches of annual precipitation. Since its selection in 1983 by the Plant Materials Center, the USDA Agricultural Research Service, Texas Agricultural Experiment Station, and Texas Parks and Wildlife Department, 'Sabine' has been planted on 13,000 acres for an ecological benefit of almost \$225,000.



'Indigo' silky dogwood (*Cornus amomum*)

Many of the Plant Materials Program's best known plants are grasses; however, the program has selected several outstanding woody plants over the years. 'Indigo' silky dogwood is a top shrub performer from an original collection made in Clinton County, Michigan. The plant was selected for its utility in farmstead windbreaks, particularly single row windbreaks in fields with center pivot irrigation systems because it is low enough not to interfere with the irrigation spray bar that passes overhead. Its dense branches block blowing snow during the winter months. The stems, leaves, and blue fruit of 'Indigo' are good food for wildlife (deer, game birds, and

songbirds). 'Indigo' is also versatile enough to work in streambank stabilization and ornamental landscape plantings. Made available in 1982 by the Rose Lake, Michigan Plant Materials Center and the Michigan Department of Natural Resources, 'Indigo' is adapted to moist, organic soil throughout much of the eastern US. It has been used on 960 conservation acres for a total ecological benefit of \$4.7 million.



'Ruby' redosier dogwood (*Cornus sericea* ssp. *sericea*)

With its vivid red branches, clusters of white flowers, and creamy white fruit, 'Ruby' redosier dogwood is one of the more photogenic conservation plants. 'Ruby' was selected not for its ornamental qualities, but for its ability to form roots along its branches where they touch the ground. This characteristic makes 'Ruby' an excellent choice for planting on streambanks and slopes to control erosion. Thickets created by the shrub's rooting stems provide wildlife cover, and its fruits are eaten by a variety of birds. 'Ruby' is also appropriate for use in windbreaks, shrub borders, and landscape plantings.

The plant grows on soils that are moist and moderately fertile, and it is somewhat shade tolerate. 'Ruby' is adapted to the Northeast, from Maine to northern Virginia and west to Ohio. Since its release in 1988 by the Big Flats, New York Plant Materials Center and the New York Department of Environmental Conservation, 'Ruby' has been planted on over 400 acres.

Plants – A Growing Alternative



The Mission of the NRCS Plant Materials Program:

Our mission is to develop, test, and transfer effective state-of-the-art plant science technology to meet customer and resource needs. Our activities are consistent with the objectives of the current United States Department of Agriculture and Natural Resources Conservation Service Strategic Plans, namely to provide timely and effective vegetative solutions for identified resource needs.

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Great American Conservation Plants

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Special Issue



redosier dogwood
(*Cornus sericea* L.)