

“The Plant Materials Program and its cooperators have contributed the bulk of the material and technology now used in ecosystem restoration and are our foundation for meeting conservation challenges of the future.”

-- D.T. Booth and T.A. Jones, *Native Plants Journal*

Legumes for Resource Conservation Programs

Legumes play a major role in production agriculture and resource conservation. Legumes can serve to enhance conservation tillage systems, improve soil quality, reduce nitrogen requirements on row crop and pasture land, enhance wildlife habitat, enhance pasture and hay land quality and reduce soil erosion in cropland and critical areas.

Conservation tillage and nitrogen management have enormous implications for farm energy conservation. Recent increases in fuel prices have not only increased the cost of tillage, but also the price of fertilizers, especially nitrogen fertilizers. Legumes can provide part of the nitrogen needs for row crops as well as pasture and hay land. In the United States, nitrogen fertilizer accounts for nearly 25% of a farm energy budget.

In parts of the United States, legumes are planted with grasses to improve livestock performance and extend the grazing season.



The Elsberry Missouri Plant Materials Center is developing technology to increase the diversity of legumes and forbs in native grass mixtures.

Perennial native legumes are included in native mixtures to increase species diversity, restore range condition and enhance wildlife habitat. In a perennial grass and legume mixture, legumes not only supply their own nitrogen, but they also

supply approximately one third of the nitrogen needs of the grasses growing with them. Other herbaceous legumes are used in critical area planting mixtures to revegetate disturbed sites such as roadsides and surface mined lands.

The USDA Natural Resources Conservation Service Plant Materials Program and cooperating agencies are major contributors of many legume selections that are planted on private and public lands for the conservation of natural resources. Of the 73 legumes cooperatively released through the Plant Materials Program, 44% are plants native to North America and 56% are from introduced and naturalized sources.



Cover crop planting of 'AU Sunrise' crimson clover in a future no-till cotton field in Mississippi.

In addition to conservation plant releases, the Plant Materials Program has active legume studies underway that focus on developing the cultural techniques necessary to ensure successful establishment of the legume species we are working with.

Legumes released by the plant materials program can be categorized under four major uses: conservation tillage; wildlife habitat; pasture, hay and rangeland; and disturbed site rehabilitation.



'Quail haven' reseeded soybean is a vining legume that produces abundant seed for northern bobwhite quail and turkey.



'Kaneb' purple prairie clover is included in range mixtures with other legumes and forbs in the central plains states.

Legumes to address resource conservation concerns:

Conservation Tillage, Green Manure and Cover Crops

- 'Americus' hairy vetch
- 'AU Ground Cover' caley pea
- 'AU Sunrise' crimson clover
- 'AU' Early Cover' Hairy vetch

Wildlife Habitat

- 'Quail haven' reseeded soybean
- 'Kanoka' roundhead lespedeza
- Alexander germplasm showy ticktrefoil
- 'Timp' Utah sweetvetch

Pasture, Hay and Rangeland

- 'Meechee' arrowleaf clover
- 'Overton R18' rose clover
- 'Kaneb' purple prairie clover
- Antelope Germplasm white prairie clover
- 'Lutana' cicer milkvetch
- sainfoin
- alfalfa

Critical Area Planting

- 'Crockett' herbaceous mimosa
- Hondo Germplasm velvet bundleflower
- 'Comanche' partridge pea
- 'Sabine' Illinois bundleflower

About Us

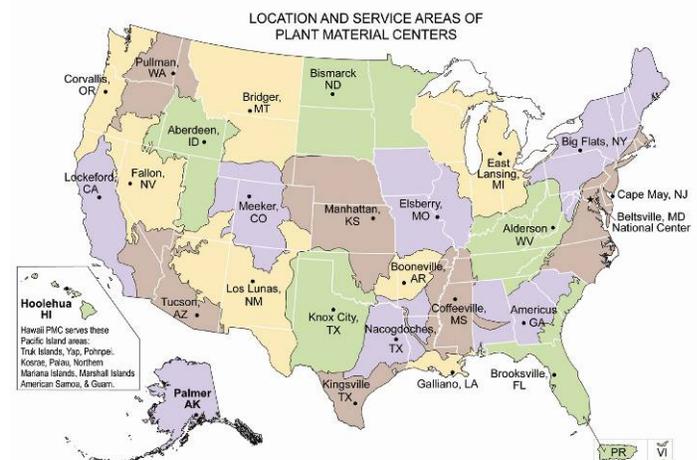
The USDA NRCS Plant Materials Program consists of a network of 27 Plant Materials Centers (PMCs) and Plant Materials Specialists located throughout the United States. For over 70 years, PMCs and Specialists have provided essential and effective plant solutions for critical habitats, environmental concerns, management practices, and key farm and ranch programs.

For more information, visit:

<http://Plant-Materials.nrcs.usda.gov>

<http://www.nrcs.usda.gov>

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