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Presenter Information

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Going native with legumes in rangeland restoration , cultivated pasture and prairies

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Introduction Commercially available ecotypic (defined as locally or at least regionally native) herbaceous and semi-woody legumes are few in sub-humid and semi-arid regions of North America . There is a growing demand for native germplasm in the region as a new generation of landowner attempts to return grasslands to a semblance of their original native species composition and diversity . Stable grasslands that incorporate at least a portion of the originally ubiquitous legumes constitute more sustainable rangeland , pasture , biofuel , right-of-way , and wildlife habitat than the currently predominant monocultures based on introduced (exotic) germplasm . The objective of this paper is to enumerate the herbaceous and semi-woody legume germplasm being developed for possible commercial use in drier climates of south-central North America .

Materials and methods Initial efforts focused on native legume germplasm collections in relic prairies , understocked grasslands , and protected woodlands . Subsequent selection screened for hardiness , herbage yields , seed production (ease of harvest) , and survival under grazing , mowing or haying .

Results The list of species being developed is growing . Few are yet commercially available , but seed companies are interested in a nascent and potentially lucrative market . Table 1 contains a partial list of species currently being developed in the south-central United States .

Table 1 Native herbaceous legumes being developed as ecotypic seed in south-central USA .

Latin binomial	Availability ¹	Environment	Use	Habit ²
<i>Acacia angustissima</i> var . <i>hirta</i>	D	Grassland	Grazing	P , U
<i>Amorpha canescens</i>	D	Grassland	Wildlife	P , U
<i>Amorpha fruticosa</i>	D	Grassland	Wildlife	P , U
<i>Cassia fasciculata</i>	C	Grassland	Wildlife	A , U
<i>Dalea aurea</i>	D	Grassland	Wildlife	P , U
<i>Dalea multiflora</i>	D	Mixed	Wildlife	P , U
<i>Dalea obovata</i>	D	Grassland	Wildlife	P , U
<i>Dalea purpurea</i> var . <i>purpurea</i>	R	Grassland	Grazing	P , U
<i>Dalea scandens</i>	D	Savannah	Wildlife	P , U
<i>Desmanthus bicornutus</i>	C	Savannah	Wildlife	P , U
<i>Desmanthus illinoensis</i>	C	Savannah	Grazing	P , U
<i>Desmanthus leptolobus</i>	D	Mixed	Wildlife	P , U
<i>Desmanthus velutinus</i>	D	Grassland	Wildlife	P , U
<i>Desmanthus virgatus</i>	D	Disturbed	Wildlife	P , L
<i>Indigofera miniata</i>	D	Disturbed	Soil Stab .	P , L
<i>Leucaena retusa</i>	R	Mixed	Browse	P , U
<i>Lespedeza stuevei</i>	D	Mixed	Wildlife	P , U
<i>Mimosa strigillosa</i>	R	Disturbed	Wildlife	P , L
<i>Rhynchosia latifolia</i>	D	Disturbed	Wildlife	P , U
<i>Strophostyles helvula</i>	D	Disturbed	Wildlife	A , V
<i>Strophostyles leiosperma</i>	D	Disturbed	Wildlife	A , V

¹ D=developing , R=released , C=commercialized

² P=perennial , A=annual , U=upright , V=viney , L=low growing