



Ratings of Plants in Pine Plantations as White-tailed Deer Food

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Note:

The deer populations in the study areas were healthy, hunted heavily and below carrying capacity, with an estimated density of one deer per 38 acres.

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Southern forests are expected to produce a large portion of the Nation's wood and fiber needs and to support an abundance of wildlife. Pine production can be increased greatly by intensive plantation management, and pine plantations can be good white-tailed deer habitat (Hurst and Warren, 1980).

The quantity and quality of deer food in pine plantations has been documented (Mawk, 1976; Hurst and Warren, 1981). Deer eat many plant species (Warren, 1980), but are known to prefer some species.

Organizations and individuals with responsibility for improving deer habitat need to know what species of plants produce the more

desirable deer forage. Therefore, this study was conducted with the objective of documenting the plant species available to deer and determining their desirability as deer food.

Study Area and Procedure

The nine-year study (1973-81) was conducted in loblolly pine plantations in the Interior Flatwoods and Upper Coastal Plain soil resource areas of Kemper and Webster Counties, Mississippi. The pine plantations had been site prepared by bedding, by tree-crushing and burning or by mist-blowing and injection and ranged up to 14 years of age during the

study period. Cultural practices applied to the plantations included fertilizing, control burning, spraying with herbicides, precommercial thinning, commercial thinning or combinations of some of these.

Field crews inventoried the deer forage species present in the study area in spring, summer, fall and winter, and deer foraging sign on plants was observed. Seasonal use of each plant species by deer was

recorded and ranked on a scale of L = low use, M = moderate use and H = high use, and the annual use of each species was established, using a scale of 1 = seldom eaten, 2 = low use, 3 = moderate use and 4 = high use. The value of fruit (mast) was not used in establishing the use ratings, and the annual use of each species was based on the average of all foraging observations made during the study.

Table 1. Annual ratings of deer use of plants in pine plantations, by plant life form, Kemper and Webster Counties, Mississippi, 1973-81.

Plant Life Form	Number of Species	Percent of Total	Annual Rating			
			3 and 4		1 and 2	
			No.	%	No.	%
Grasses	66	12.7	20	30	46	70
Forbs	238	45.7	147	62	91	38
Legumes	42	8.0	28	67	14	33
Vines	33	6.3	13	39	20	61
Woody	103	19.8	57	55	46	45
Sedges	28	5.4	2	7	26	93
Rushes	8	1.5	0	0	8	100
Ferns	3	0.6	0	0	3	100
Total	521	100.0	267		254	

4 = high use, 3 = moderate use, 2 = low use, 1 = seldom eaten

Results

The 66 grass species inventoried accounted for 12.7% of the 521 species found, but the use of only 20 (30%) of the grasses by deer was rated as moderate and high (Table

1). More than one half of the 521 plant species were forbs (including legumes), and use of 63% of these by deer was rated moderate and high. Seasonal and annual use of plants by deer are listed by species

in Table 2. Many fungi were found in the study area, and most are considered good deer food. However, fungi ratings are not included in this report.

Table 2. Seasonal and annual ratings of deer use of plants in pine plantations, by plant species, Kemper and Webster Counties, Mississippi, 1973-81.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
GRASSES						
<i>Agrostis hyemalis</i>	hairgrass	L ^{3/}	L	L	NA	1
<i>Andropogon gerardii</i>	turkeyfoot	L	L	L	L	1
<i>A. glomeratus</i>	bushy broomsedge	L	L	L	L	1
<i>A. scoparius</i>	little bluestem	M	L	L	L	2
<i>A. virginicus</i>	Virginia broomsedge	L	L	L	L	1
<i>Aristida purpurascens</i>	three awn grass	L	L	L	NA	1
<i>Arundinaria gigantea</i>	giant cane	M	L	L	L	1
<i>Axonopus affinis</i>	common carpet grass	M	M	M	NA	3
<i>A. furcatus</i>	carpet grass	M	M	M	NA	3
<i>Brachyelytrum erectum</i>	bearded short-husk	L	L	L	NA	1
<i>Bromus catharticus</i>	brome grass	L	L	L	NA	1
<i>Cynodon dactylon</i>	Bermuda grass	M	L	L	NA	1
<i>Dactyloctenium aegyptium</i>	crowfoot grass	L	M	L	NA	2
<i>Digitaria tiliformis</i>	slender crab-grass	L	M	M	NA	3
<i>D. sanguinalis</i>	large crab-grass	L	H	M	NA	3
<i>Echinochloa colonum</i>	jungle rice	L	M	L	NA	2
<i>E. crusgalli</i>	barnyard grass	L	L	L	NA	1
<i>Elymus canadensis</i>	Canada wild-rye	L	L	L	NA	1
<i>E. virginicus</i>	Virginia wild-rye	L	M	L	NA	2
<i>Eragrostis spectabilis</i>	purple lovegrass	L	M	L	NA	2
<i>Erianthus contortus</i>	bent-awn plumegrass	M	M	L	NA	3
<i>E. giganteus</i>	giant plumegrass	L	M	L	NA	2
<i>E. strictus</i>	narrow plumegrass	L	M	L	NA	2
<i>Festuca elatior</i>	tall fescue	H	L	NA	H	3
<i>F. obtusa</i>	nodding fescue	L	L	NA	L	1
<i>F. octoflora</i>	slender fescue	L	L	NA	L	1
<i>Gymnopogon ambiguus</i>	broad-leaved beard-grass	M	M	L	NA	3
<i>G. brevifolius</i>	short-leaved beard-grass	M	M	L	NA	3
<i>Leersia lenticularis</i>	cut grass	L	L	L	NA	1
<i>L. oryzoides</i>	rice cut grass	L	M	L	NA	1
<i>L. virginica</i>	cut grass	L	L	L	NA	2
<i>Lolium multiflorum</i>	Italian rye grass	M	L	NA	H	3
<i>Muhlenbergia schreberi</i>	nimble will	H	H	M	NA	4
<i>Panicum aciculare</i>	Grisebach's panic grass	L	L	L	NA	1
<i>P. agrostoides</i>	red-top panic grass	L	M	M	NA	3

^{1/}Sp = spring (Mar.-May), Su = summer (Jun.-Aug.), F1 = fall (Sep.-Nov.), Wn = winter (Dec.-Feb.).

^{2/}Not an average of seasonal ratings. 1 = seldom eaten, 2 = low use, 3 = moderate use, and 4 = high use.

^{3/}L = low use, M = moderate use, H = high use, NA = not available.

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
GRASSES (cont.)						
<i>P. anceps</i>	beaked panic grass	M	H	M	L	4
<i>P. angustifolium</i>	narrow-leaved panic grass	L	L	L	NA	1
<i>P. boscii</i>	Bosc's panic grass	M	M	L	NA	3
<i>P. capillare</i>	old-witch grass	L	L	L	NA	2
<i>P. commutatum</i>	variable panic grass	L	L	L	L	2
<i>P. depauperatum</i>	starved panic grass	L	L	L	L	1
<i>P. dichotomiflorum</i>	fall panic grass	M	M	L	NA	3
<i>P. dichotomum</i>	forked panic grass	M	M	L	NA	3
<i>P. gymnocarpon</i>	Savannah panic grass	L	L	L	NA	1
<i>P. hians</i>	gaping panic grass	M	L	L	NA	2
<i>P. lanuginosum</i>	woolly panic grass	L	L	L	L	1
<i>P. laxiflorum</i>	lax-flowered panic grass	H	H	L	M	4
<i>P. lindheimeri</i>	Lindheimer's panic grass	H	M	L	NA	3
<i>P. microcarpon</i>	barbed panic grass	M	M	L	NA	3
<i>P. polyanthes</i>	small-fruited panic grass	L	L	L	M	2
<i>P. ramosum</i>	brown-top millet	NA	M	L	NA	2
<i>P. scoparium</i>	velvety panic grass	M	M	L	L	3
<i>P. sphaerocarpon</i>	round-fruited panic grass	L	L	L	M	2
<i>P. virgatum</i>	switchgrass	L	M	L	NA	2
<i>Paspalum boscianum</i>	bull paspalum	L	M	L	NA	2
<i>P. dilatatum</i>	dallis grass	M	M	L	NA	2
<i>P. floridanum</i>	Florida paspalum	L	L	L	NA	1
<i>P. setaceum</i>	slender paspalum	M	L	L	NA	2
<i>P. urvillei</i>	vasey grass	L	L	L	NA	1
<i>Setaria geniculata</i>	foxtail	L	L	L	NA	1
<i>Sorghum halepense</i>	Johnson grass	L	L	L	NA	1
<i>Sporobolus poiretii</i>	smut grass	M	L	L	NA	2
<i>Tridens flavus</i>	grease grass	M	L	L	NA	2
<i>Tripsacum dactyloides</i>	eastern gamagrass	L	L	L	NA	1
<i>Uniola latifolia</i>	broad-leaved spike grass	L	M	L	NA	2
<i>U. sessiliflora</i>	spikegrass	H	H	M	NA	3
FORBS						
<i>Acalypha gracilens</i>	slender three-seeded mercury	M	H	M	NA	4
<i>A. rhomboidea</i>	copperleaf	M	H	H	NA	4
<i>A. virginica</i>	Virginia three-seeded mercury	M	H	M	NA	4
<i>Agalinis fasciculata</i>	gerardia	M	M	L	NA	3
<i>A. purpurea</i>	large purple agalinis	H	H	H	NA	4
<i>A. tenuifolia</i>	slender agalinis	M	H	H	NA	4
<i>Allium bivalve</i>	false garlic	L	L	L	NA	1
<i>A. canadense</i>	wild onion	L	L	L	NA	1
<i>Amaranthus spinosus</i>	spiny amaranth	NA	H	M	NA	3
<i>Ambrosia artemisiifolia</i>	common ragweed	H	H	M	NA	4
<i>A. trifida</i>	great ragweed	M	L	L	NA	2
<i>Amsonia tabernaemontana</i>	blue star	H	M	L	NA	3

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
FORBS (cont.)						
<i>Antennaria plantaginifolia</i>	pussy-toes	H	M	L	NA	3
<i>Apocynum cannabinum</i>	indian hemp	H	H	M	NA	4
<i>Asarum canadense</i>	wild ginger	L	L	L	NA	1
<i>Asclepias tuberosa</i>	butterflyweed	M	M	L	NA	3
<i>A. variegata</i>	white milkweed	H	H	M	NA	4
<i>A. verticillata</i>	whorled milkweed	M	H	M	NA	3
<i>Aster dumosus</i>	bushy aster	H	H	M	NA	4
<i>A. exilis</i>	slim aster	H	H	M	NA	4
<i>A. hemisphericus</i>	aster	H	H	M	NA	4
<i>A. laevis</i>	smooth aster	M	H	H	NA	3
<i>A. linariifolius</i>	stiff-leaved aster	L	M	L	NA	2
<i>A. novae-angliae</i>	New England aster	H	H	M	NA	4
<i>A. patens</i>	late purple aster	H	H	H	NA	4
<i>A. pilosus</i>	frost aster	H	H	M	NA	4
<i>A. sagittifolius</i>	arrow-leaved aster	H	M	H	NA	4
<i>A. simplex</i>	aster	M	H	L	NA	3
<i>A. solidagineus</i>	white-topped aster	H	M	L	NA	3
<i>Aureolaria flava</i>	false foxglove	M	H	H	NA	4
<i>A. pectinata</i>	hairy false foxglove	M	H	M	NA	3
<i>Bidens aristosa</i>	stick-tight	H	H	M	NA	4
<i>Boehmeria cylindrica</i>	false nettle	L	M	M	NA	3
<i>Boltonia diffusa</i>	panicled boltonia	H	M	H	NA	4
<i>Buchnera floridana</i>	blue-hearts	L	L	L	NA	1
<i>Cardamine hirsuta</i>	hairy bitter-cress	L	L	L	NA	1
<i>Carduus altissimus</i>	late thistle	L	L	L	NA	1
<i>C. spinosissimus</i>	yellow thistle	L	L	L	NA	1
<i>Chaerophyllum tainturieri</i>	wild chervil	M	M	L	NA	2
<i>Cicuta maculata</i>	water hemlock	L	L	L	NA	1
<i>Commelina caroliniana</i>	creeping day flower	H	H	M	NA	4
<i>C. virginica</i>	Virginia day flower	H	H	H	NA	4
<i>Coreopsis auriculata</i>	lobed tickseed	M	M	L	NA	3
<i>C. major</i>	wood tickseed	H	H	L	NA	4
<i>C. tripteris</i>	tall tickseed	M	H	L	NA	3
<i>Croton capitatus</i>	woolly croton	L	M	L	NA	2
<i>C. monanthogynus</i>	single-fruited croton	M	L	L	NA	2
<i>Daucus carota</i>	Queen Anne's lace	M	L	L	NA	2
<i>Diodia teres</i>	poorjoe	M	M	L	NA	3
<i>D. virginiana</i>	poorjoe	H	H	M	NA	4
<i>Dracocephalum virginianum</i>	false dragonhead	M	H	L	NA	3
<i>Echinacea purpurea</i>	purple cone-flower	L	M	H	NA	3
<i>Eclipta prostrata</i>	tago weed	H	H	M	NA	4
<i>Elephantopus carolinianus</i>	Carolina elephant's foot	L	M	M	NA	3
<i>E. tomentosus</i>	woolly elephant's-foot	L	H	M	NA	4
<i>Erechtites hieracifolia</i>	fireweed	L	M	M	NA	3
<i>Erigeron annuus</i>	daisy fleabane	M	M	L	NA	3
<i>E. canadensis</i>	horseweed	M	H	M	NA	4
<i>E. philadelphicus</i>	Philadelphia fleabane	M	H	L	NA	3

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
FORBS (cont.)						
<i>E. strigosus</i>	prairie fleabane	H	H	M	L	4
<i>Eryngium yuccifolium</i>	rattlesnake master	M	M	L	NA	2
<i>Eupatorium aromaticum</i>	thoroughwort	M	H	M	NA	4
<i>E. capillifolium</i>	dog fennel	L	M	L	NA	2
<i>E. capillifolium</i> x <i>serotinum</i>	boneset	M	H	M	NA	4
<i>E. coelestinum</i>	mistflower	M	H	M	NA	4
<i>E. incarnatum</i>	pink thoroughwort	M	H	M	NA	3
<i>E. leucolepis</i>	white-bracted thoroughwort	L	M	L	NA	2
<i>E. maculatum</i>	joe-pye-weed	L	M	L	NA	2
<i>E. perfoliatum</i>	common thoroughwort	M	H	L	NA	3
<i>E. rotundifolium</i>	round-leaved thoroughwort	M	H	M	NA	4
<i>E. semiserratum</i>	small-flowered thoroughwort	L	M	L	NA	2
<i>E. serotinum</i>	late-flowering thoroughwort	H	H	M	NA	4
<i>Euphorbia commutatus</i>	wood spurge	M	M	L	NA	2
<i>E. corollata</i>	flowering spurge	H	H	M	NA	4
<i>Galium aparine</i>	bedstraw	H	M	L	NA	4
<i>G. circaezans</i>	bedstraw	H	H	L	NA	4
<i>Gaura biennis</i>	biennial gaura	M	H	M	NA	4
<i>Gentiana villosa</i>	gentian	L	L	M	NA	2
<i>Geranium carolinianum</i>	wild geranium	M	L	L	NA	2
<i>G. dissectum</i>	cut-leaved cranesbill	M	L	L	NA	2
<i>Gnaphalium obtusifolium</i>	rabbit tobacco	L	L	M	NA	2
<i>G. purpureum</i>	purplish cudweed	M	L	L	NA	2
<i>Habenaria ciliaris</i>	yellow-fringed orchid	H	H	M	NA	4
<i>Happlopappus divaricatus</i>	burrow-weed	L	H	M	NA	4
<i>Helenium autumnale</i>	sneezeweed	L	M	H	NA	3
<i>H. nudiflorum</i>	purple-head sneezeweed	M	M	L	NA	3
<i>Helianthus angustifolius</i>	narrow-leaved sunflower	H	H	H	NA	4
<i>H. hirsutus</i>	stiff-haired sunflower	H	H	H	NA	4
<i>H. silphioides</i>	sunflower	H	H	M	NA	4
<i>Heliotropium indicum</i>	Indian heliotrope	L	M	M	NA	3
<i>Heterotheca graminifolia</i>	silkgrass	M	M	L	NA	2
<i>H. mariana</i>	Maryland golden aster	H	H	M	NA	4
<i>Hibiscus militaris</i>	halberd-leaved rose mallow	M	M	L	NA	3
<i>H. moscheutos</i>	swamp rose mallow	L	M	L	NA	2
<i>Hieracium gronovii</i>	hairy hawkweed	H	H	M	NA	4
<i>Houstonia purpurea</i>	large houstonia	H	H	L	NA	4
<i>H. pusilla</i>	small bluets	L	L	L	NA	1
<i>Hyopsis hirsuta</i>	yellow star grass	H	M	L	NA	3
<i>Iva annua</i>	sumpweed	M	H	H	NA	4
<i>Justicia americana</i>	water willow	H	H	L	NA	4
<i>Kuhnia eupatorioides</i>	false boneset	M	H	M	NA	3
<i>Lactuca canadensis</i>	wild lettuce	H	H	H	NA	4
<i>L. floridana</i>	Florida lettuce	H	H	M	NA	4
<i>Lepidium virginicum</i>	wild pepper grass	M	L	L	NA	2
<i>Liatris aspera</i>	blazing star	L	M	H	NA	3
<i>L. spicata</i>	gay feather	L	M	L	NA	2

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
FORBS (cont.)						
<i>L. squarrosa</i>	scaly blazing star	M	L	L	NA	2
<i>Linaria canadensis</i>	blue toadflax	H	H	M	NA	4
<i>Linum medium</i>	small stiff yellow flax	M	H	L	NA	3
<i>L. striatum</i>	flax	M	H	M	NA	3
<i>Lobelia cardinalis</i>	cardinal flower	H	H	M	NA	4
<i>L. puberula</i>	downey lobelia	H	H	L	NA	4
<i>L. spicata</i>	pale-spike lobelia	H	M	L	NA	3
<i>Ludwigia alternifolia</i>	seedbox	H	H	L	NA	4
<i>L. decurrens</i>	upright primrose willow	H	M	L	NA	3
<i>L. glandulosa</i>	cylindric-fruited ludwigia	H	H	L	NA	4
<i>L. hirtella</i>	hairy ludwigia	H	H	L	NA	4
<i>L. leptocarpa</i>	water primrose	M	M	L	NA	2
<i>L. palustris</i>	water purslane	L	L	L	NA	2
<i>L. peploides</i>	creeping primrose willow			Never Seen Eaten		1
<i>Lycopus americanus</i>	cut-leaved water hoarhound	L	L	L	NA	1
<i>L. rubellus</i>	stalked water hoarhound	L	M	L	NA	2
<i>L. virginicus</i>	bugle-wort	L	L	L	NA	1
<i>Lysimachia lanceolata</i>	fringed loostripe	M	H	M	NA	4
<i>Mercardonia acuminata</i>	purple hedge hyssop	L	M	L	NA	2
<i>Mimulus alatus</i>	sharp-winged monkey flower	L	H	H	NA	4
<i>Monarda fistulosa</i>	wild bergamot	H	M	L	NA	3
<i>Montropa uniflora</i>	Indian pipe			Never Seen Eaten		1
<i>Oenothera biennis</i>	small-flowered evening primrose	L	H	M	NA	3
<i>O. laciniata</i>	cut-leaved evening primrose	H	M	L	NA	3
<i>O. tetragona</i>	sundrops	M	L	L	NA	2
<i>Oxalis dillenii</i>	woodsorrel	M	M	L	NA	3
<i>O. stricta</i>	yellow woodsorrel	M	L	L	NA	2
<i>O. violacea</i>	violet woodsorrel	M	L	L	NA	2
<i>Pedicularis canadensis</i>	common lousewort	M	M	L	NA	2
<i>Penstemon digitalis</i>	beard-tongue	M	M	L	NA	2
<i>P. laevigatus</i>	smooth beard-tongue	M	M	L	NA	2
<i>P. laxiflorus</i>	beard-tongue	H	M	L	NA	3
<i>P. tubaeiflorus</i>	funnel-form beard-tongue	L	M	L	NA	2
<i>Phlox carolina</i>	Carolina phlox	H	H	M	NA	4
<i>P. divaricata</i>	wild blue phlox	M	M	L	NA	3
<i>P. pilosa</i>	downy phlox	H	M	L	NA	3
<i>Phyllanthus caroliniensis</i>	Carolina phyllanthus	L	L	L	NA	1
<i>Physalis angulata</i>	cut-leaved ground cherry	M	H	H	NA	4
<i>P. virginiana</i>	Virginia ground cherry	L	M	L	NA	2
<i>Phytolacca americana</i>	pokeweed	H	M	L	NA	4
<i>Plantago aristata</i>	large-bracted plaintain	L	L	L	NA	1
<i>P. virginica</i>	white dwarf plaintain	L	M	L	NA	2
<i>Pluchea camphorata</i>	camphorweed	M	M	L	NA	2
<i>Podophyllum peltatum</i>	May apple	L	L	L	NA	1
<i>Polygala incarnatum</i>	pink milkwort	M	L	L	NA	2
<i>P. mariana</i>	Maryland milkwort	H	M	L	NA	3

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
FORBS (cont.)						
<i>P. nana</i>	bachelor's-button	L	L	L	NA	1
<i>P. nuttallii</i>	Nuttall's milkwort	L	L	L	NA	1
<i>Polygonatum biflorum</i>	hairy Solomon's seal	M	L	L	NA	2
<i>P. hydropiperoides</i>	swamp smartweed	L	M	M	NA	2
<i>P. pensylvanicum</i>	Pennsylvania smartweed	L	L	L	NA	1
<i>Polymnia uvedalia</i>	bearsfoot	H	H	L	NA	4
<i>Polypremum procumbens</i>	polypremum	M	M	L	NA	3
<i>Potentilla simplex</i>	five-fingers	M	M	L	NA	3
<i>Prenanthes autumnalis</i>	slender rattlesnake-root	M	M	H	NA	3
<i>Prunella vulgaris</i>	heal-all, self-heal	H	M	L	NA	4
<i>Ptilimnium capillaceum</i>	mock bishop's-weed	M	H	L	NA	3
<i>Pycnanthemum albescens</i>	white horse mint	M	H	M	NA	3
<i>P. flexuosum</i>	narrow-leaved mountain mint	M	L	L	NA	3
<i>Pyrrhopappus carolinianus</i>	false dandelion	H	M	L	NA	4
<i>Ranunculus carolinianus</i>	Carolina buttercup	M	L	L	NA	2
<i>R. fascicularis</i>	early buttercup	M	M	L	NA	3
<i>R. muricatus</i>	spiny-fruited buttercup	L	L	L	NA	1
<i>R. sardous</i>	buttercup	M	M	L	NA	2
<i>Rhexia mariana</i>	Maryland meadow-beauty	H	M	L	NA	3
<i>Rudbeckia hirta</i>	black-eyed susan	H	H	M	NA	4
<i>Ruellia caroliniensis</i>	wild petunia	H	M	L	NA	4
<i>Rumex hastatulus</i>	wild sorrel	L	L	L	NA	1
<i>R. pulcher</i>	fiddle dock	L	L	L	NA	1
<i>R. verticillatus</i>	swamp dock	M	L	L	NA	2
<i>Sabatia angularis</i>	rose pine	H	H	L	NA	4
<i>Salvia azurea</i>	blue sage	H	H	M	NA	3
<i>S. lyrata</i>	wild sage	M	M	L	NA	2
<i>Sanicula canadensis</i>	short-styled snakeroot	M	M	H	NA	3
<i>Saururus cernuus</i>	lizard's tail	L	M	M	NA	2
<i>Scutellaria intergrifolia</i>	larger skullcap	H	M	L	NA	4
<i>S. lateriflora</i>	blue skullcap	L	H	L	NA	3
<i>Senecio glabellus</i>	butterweed	L	L	L	NA	1
<i>Sherardia arvensis</i>	blue field madder	L	L	L	NA	1
<i>Sida rhombifolia</i>	rhombic-leaved sida	L	M	L	NA	2
<i>S. spinosa</i>	prickly sida	M	M	L	NA	2
<i>Silphium asteriscus</i>	starry rosinweed	M	M	H	NA	3
<i>S. integrifolium</i>	entire-leaved rosinweed	L	L	L	NA	1
<i>S. integrifolium</i> x <i>laevigatum</i>	rosinweed	L	L	L	NA	1
<i>S. laevigatum</i>	rosinweed	L	M	M	NA	2
<i>S. perfoliatum</i>	cup-plant	M	L	L	NA	2
<i>Smilacina racemosa</i>	false solomon's-seal	H	M	L	NA	3
<i>Solanum americanum</i>	black nightshade	H	H	M	NA	4
<i>S. carolinense</i>	horsenettle	H	M	L	NA	3
<i>Solidago altissima</i>	common goldenrod	H	H	M	NA	4
<i>S. discoidea</i>	goldenrod	L	M	H	NA	3

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	Fl	Wn	
FORBS (cont.)						
<i>S. gigantea</i>	giant goldenrod	H	H	H	NA	4
<i>S. graminifolia</i>	grass-leaved goldenrod	M	M	L	NA	3
<i>S. juncea</i>	rock goldenrod	H	H	M	NA	3
<i>S. odora</i>	sweet goldenrod	H	H	H	NA	4
<i>S. patula</i>	rough-leaved goldenrod	L	M	L	NA	2
<i>S. puberula</i>	downy goldenrod	L	H	L	NA	2
<i>S. rugosa</i>	wrinkled-leaved goldenrod	H	H	M	NA	4
<i>S. speciosa</i>	snowy goldenrod	M	H	M	NA	3
<i>S. ulmifolia</i>	elm-leaved goldenrod	L	M	L	NA	2
<i>Sonchus arvensis</i>	corn sow-thistle	H	M	L	NA	3
<i>S. oleraceus</i>	common sow-thistle	H	H	L	NA	4
<i>Specularia biflora</i>	small venus' looking-glass	H	M	L	NA	3
<i>Spigelia marilandica</i>	Indian pink	H	H	M	NA	4
<i>Spiranthes cernua</i>	fragrant ladies' tresses	H	M	L	NA	3
<i>S. odorata</i>	marsh ladies' tresses	M	M	L	NA	3
<i>Stellaria media</i>	common chickweed	M	M	L	NA	2
<i>Thalictrum thalictroides</i>	windflower	L	L	L	NA	1
<i>Thaspium trifoliatum</i>	purple meadow-parsnip	M	L	L	NA	2
<i>Tovara virginiana</i>	jumpseed	H	H	M	NA	4
<i>Tradescantia ohiensis</i>	spiderwort	H	H	M	NA	4
<i>Tragia urticifolia</i>	catnip tragia	M	M	M	NA	3
<i>Trepocarpus aethusae</i>	trepocarpus	M	M	L	NA	2
<i>Trichostema dichotomum</i>	blue curls	L	H	H	NA	4
<i>Trillium stamineum</i>	twisted trillium	L	L	L	NA	1
<i>Valerianella radiata</i>	corn salad	H	M	L	NA	3
<i>Verbena bonariensis</i>	blue vervain	M	H	L	NA	4
<i>V. brasiliensis</i>	Brazilian verbena	M	M	L	NA	3
<i>V. urticifolia</i>	nettle-leaved vervain	H	M	L	NA	3
<i>Verbesina helianthoides</i>	sunflower crownhead	M	M	L	NA	3
<i>V. virginica</i>	Virginia crownhead	L	L	L	NA	1
<i>Vernonia altissima</i>	tall ironweed	M	M	L	NA	3
<i>Viola affinis</i>	Le Conte's violet	H	M	L	NA	3
<i>V. palmata</i>	early blue violet	M	M	L	NA	2
<i>V. papilionacea</i>	meadowblue violet	L	L	L	NA	1
<i>V. pedata</i>	bird's-foot violet	M	L	L	NA	2
<i>V. rafinesquii</i>	field pansy	L	L	L	NA	1
<i>V. sagittata</i>	arrow-leaved violet	H	M	L	NA	3
<i>V. striata</i>	pale violet	L	L	L	NA	1
<i>V. triloba</i>	three-lobed violet	L	L	L	NA	1
<i>V. walteri</i>	postrate blue violet	L	L	L	NA	1
LEGUMES						
<i>Amphicarpa bracteata</i>	hog peanut	M	L	L	NA	2
<i>Cassia fasciculata</i>	partridge pea	M	H	L	NA	3
<i>C. hebecarpa</i>	wild senna	L	M	M	NA	2
<i>C. marilandica</i>	American senna	L	L	L	NA	1
<i>C. nictitans</i>	wild sensitive plant	M	H	M	NA	3

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
LEGUMES (cont.)						
<i>C. obtusifolia</i>	sicklepod	M	M	L	NA	2
<i>Ceutorosema virginianum</i>	butterfly pea	M	M	L	NA	3
<i>Clitoria mariana</i>	butterfly pea	H	H	L	NA	4
<i>Crotalaria sagittalis</i>	rattle-box	L	M	M	NA	2
<i>Desmodium canescens</i>	hoary tick trefoil	H	M	L	NA	3
<i>D. ciliare</i>	ciliated tick trefoil	H	H	M	NA	4
<i>D. glutinosum</i>	tick trefoil	L	M	L	NA	2
<i>D. laevigatum</i>	smooth tick trefoil	H	H	M	NA	4
<i>D. marilandicum</i>	smooth-leaved tick trefoil	H	H	M	NA	4
<i>D. nudiflorum</i>	naked-flowered tick trefoil	M	M	L	NA	3
<i>D. paniculatum</i>	panicled tick trefoil	H	H	M	NA	4
<i>D. perplexum</i>	tick trefoil	M	M	L	NA	3
<i>D. rotundifolium</i>	dollarleaf	L	L	L	NA	1
<i>D. sessilifolium</i>	sessile-leaved tick trefoil	L	L	L	NA	1
<i>Dioclea multiflora</i>	dioclea	M	H	M	NA	3
<i>Galactia regularis</i>	milk pea	M	H	L	NA	3
<i>G. volubilis</i>	downey milk pea	M	M	L	NA	3
<i>Lespedeza capitata</i>	round-headed bush-clover	H	H	L	NA	3
<i>L. cuneata</i>	sericea lespedeza	L	M	L	NA	2
<i>L. hirta</i>	hairy bush-clover	H	H	M	NA	4
<i>L. intermedia</i>	wand-like bush-clover	M	L	L	NA	2
<i>L. procumbens</i>	trailing bush-clover	H	H	M	NA	4
<i>L. repens</i>	creeping bush-clover	H	H	M	NA	4
<i>L. striata</i>	common lespedeza	H	H	M	NA	4
<i>L. striata</i> var. kobe	Kobe lespedeza	H	M	L	NA	3
<i>L. stuevei</i>	Stuve's bush-clover	M	M	L	NA	3
<i>L. virginica</i>	slender bush-clover	L	M	M	NA	2
<i>Psoralea psoralioides</i>	Sampson's snakeroot	H	M	M	NA	3
<i>Rhynchosia tomentosa</i>	erect rhynchosia	H	M	L	NA	3
<i>Schrankia microphylla</i>	sensitive brier	M	L	L	NA	2
<i>Strophostyles helvola</i>	trailing wild bean	M	M	L	NA	3
<i>S. umbellata</i>	pink wild bean	M	M	L	NA	2
<i>Stylosanthes biflora</i>	pencil flower	H	H	L	NA	4
<i>Tephrosia spicata</i>	loose-flowered goat's rue	M	L	L	NA	2
<i>T. virginiana</i>	goat's rue	H	M	L	NA	3
<i>Vicia angustifolia</i>	purple vetch	M	M	L	NA	3
<i>V. caroliniana</i>	Carolina vetch	H	H	M	NA	4
VINES						
<i>Ampelopsis arborea</i>	pepper vine	L	L	L	L	1
<i>Anisostichus capreolata</i>	cross vine	M	M	L	L	2
<i>Aristolochia serpentaria</i>	dutchman's pipe			Never Seen Eaten		1
<i>Berchemia scandens</i>	Alabama supple-jack	H	H	M	M	4
<i>Brunnichia cirrhosa</i>	ladies'-eardrops	M	M	L	NA	2
<i>Calystegia sepium</i>	hedge bindweed	L	M	L	NA	2
<i>Campsis radicans</i>	trumpet creeper	H	M	L	M	4
<i>Clematis virginiana</i>	Virginia virgin's bower	M	M	L	NA	2

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
VINES (cont.)						
<i>Cocculus carolinus</i>	Carolina moonseed	L	M	L	NA	2
<i>Decumaria barbara</i>	climbing hydrangea	L	L	L	L	1
<i>Dioscorea villosa</i>	wild yam	M	M	L	NA	2
<i>Gelsemium sempervirens</i>	yellow jasmine	M	L	L	L	2
<i>Ipomoea pandurata</i>	wild potato vine	M	H	L	NA	3
<i>Lonicera japonica</i>	Japanese honeysuckle	H	M	L	L	3
<i>L. sempervirens</i>	coral honeysuckle	L	L	L	NA	1
<i>Mikania scandens</i>	climbing hempweed	L	M	M	NA	2
<i>Mitchella repens</i>	partridgeberry	L	L	L	L	1
<i>Parthenocissus quinquefolia</i>	Virginia creeper	M	L	L	L	2
<i>Passiflora incarnata</i>	maypops	L	L	L	NA	1
<i>P. lutea</i>	yellow passion flower	M	M	L	NA	2
<i>Rhus radicans</i>	poison ivy	H	H	L	M	4
<i>Rubus argutus</i>	tall blackberry	H	M	L	L	4
<i>R. trivialis</i>	southern dewberry	M	M	L	L	3
<i>Smilax bona-nox</i>	catbrier	M	M	L	M	3
<i>S. glauca</i>	sawbrier	H	H	L	H	4
<i>S. herbacea</i>	carrion flower	M	L	L	NA	2
<i>S. rotundifolia</i>	common greenbrier	H	H	L	H	4
<i>S. smallii</i>	lance leaf greenbrier	M	L	L	M	2
<i>Trachelospermum difforme</i>	climbing dogbane	H	M	L	NA	3
<i>Vitis aestivalis</i>	summer grape	M	L	L	L	2
<i>V. baileyana</i>	possum grape	M	L	L	L	2
<i>V. rotundifolia</i>	muscadine	H	H	M	NA	4
<i>Wisteria macrostachya</i>	long-clustered wisteria	M	M	L	NA	3
WOODY PLANTS						
<i>Acer rubrum</i>	red maple	H	M	L	M	3
<i>Aesculus pavia</i>	red buckeye	L	L	L	L	1
<i>Amelanchier arborea</i>	downy serviceberry	H	M	L	L	3
<i>Amorpha fruticosa</i>	false indigo	M	L	L	L	2
<i>Aralia spinosa</i>	devil's walking-stick	H	H	M	L	4
<i>Asimina parviflora</i>	dwarf pawpaw	M	L	L	L	2
<i>A. triloba</i>	pawpaw	M	L	L	L	2
<i>Baccharis halimifolia</i>	groundsel-tree	H	M	L	L	3
<i>Callicarpa americana</i>	American beautyberry	H	H	M	M	4
<i>Carpinus caroliniana</i>	American hornbeam	M	L	L	L	1
<i>Carya caroliniae-septentrionalis</i>	southern shagbark hickory	M	L	L	L	2
<i>C. cordiformis</i>	bitternut hickory	L	M	L	L	2
<i>C. glabra</i>	pignut hickory	M	L	L	L	2
<i>C. ovata</i>	common shagbark hickory	M	L	L	L	2
<i>C. pallida</i>	sand hickory	L	L	L	L	1
<i>C. tomentosa</i>	mockernut hickory	M	L	L	L	2
<i>Ceanothus americanus</i>	New Jersey tea	H	M	L	M	4
<i>Celtis laevigata</i>	sugarberry	H	M	L	L	3
<i>Cephalanthus occidentalis</i>	common buttonbush	H	H	M	L	4

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
WOODY PLANTS (cont.)						
<i>Cercis canadensis</i>	eastern redbud	M	M	L	L	2
<i>Chionanthus virginicus</i>	fringe tree	H	H	M	M	4
<i>Cornus drummondii</i>	roughleaf dogwood	H	M	L	M	3
<i>C. florida</i>	flowering dogwood	H	H	L	H	4
<i>C. stricta</i>	swamp dogwood	H	H	L	M	4
<i>Crataegus alma</i>	hawthorn	L	L	L	L	2
<i>C. crus-galli</i>	cock-spur hawthorn	L	L	L	L	2
<i>C. engelmannii</i>	red haw	L	L	L	L	1
<i>C. marshallii</i>	parsley hawthorn	M	M	L	L	3
<i>C. uniflora</i>	dwarf hawthorn	L	L	L	L	2
<i>C. viridis</i>	river haw	M	L	L	M	3
<i>Diospyros virginiana</i>	persimmon	H	L	L	L	2
<i>Euonymus americanus</i>	strawberry bush	H	H	M	L	4
<i>Fagus grandifolia</i>	American beech	H	M	L	M	4
<i>Fraxinus americana</i>	white ash	H	H	M	M	4
<i>F. pennsylvanica</i>	green ash	H	M	L	M	3
<i>Gleditsia triacanthos</i>	honey locust	H	M	L	L	3
<i>Hamamelis virginiana</i>	common witch-hazel	M	L	L	L	2
<i>Hydrangea arborescens</i>	common hydrangea	H	M	L	L	3
<i>H. quercifolia</i>	oakleaf hydrangea	H	M	L	M	3
<i>Hypericum denticulatum</i>	coppery St. John's-wort	L	M	L	L	2
<i>H. drummondii</i>	Drummond's St. John's-wort	M	H	L	L	3
<i>H. gentianoides</i>	pinweed	H	H	M	L	4
<i>H. hypericoides</i>	St. Andrew's cross	H	H	M	L	4
<i>H. lobocarpum</i>	St. John's wort	M	M	L	L	2
<i>H. maculatum</i>	spotted St. John's wort	M	M	L	L	2
<i>H. mutilum</i>	dwarf small-flowered St. John's wort	H	H	H	L	4
<i>H. stans</i>	St. Peter's-wort	M	H	M	L	3
<i>H. tubulosum</i>	marsh St. John's-wort	M	H	M	L	3
<i>Ilex decidua</i>	deciduous holly	H	H	M	M	4
<i>I. opaca</i>	American holly	M	L	L	L	2
<i>I. vomitoria</i>	yaupon holly	H	H	L	M	4
<i>Juniperus virginiana</i>	eastern red cedar	M	L	M	H	3
<i>Liquidambar styraciflua</i>	sweetgum	M	L	L	L	1
<i>Liriodendron tulipifera</i>	yellow poplar	H	M	M	M	4
<i>Maclura pomifera</i>	osage-orange	H	M	L	L	4
<i>Morus rubra</i>	red mulberry	H	M	L	M	3
<i>Myrica cerifera</i>	southern bayberry	L	L	L	L	1
<i>Nyssa sylvatica</i>	blackgum	H	H	M	M	4
<i>Ostrya virginiana</i>	eastern hophornbeam	L	M	L	M	2
<i>Oxydendrum arboreum</i>	sourwood	H	M	L	M	4
<i>Padus virginiana</i>	choke cherry	H	H	M	L	4
<i>Pinus echinata</i>	shortleaf pine	L	L	L	L	1
<i>P. taeda</i>	loblolly pine	L	L	L	L	1
<i>Platanus occidentalis</i>	American sycamore	M	L	L	L	1
<i>Populus deltoides</i>	cottonwood	H	M	L	M	4

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
WOODY PLANTS (cont.)						
<i>Prunus americana</i>	American plum	M	M	L	M	3
<i>P. angustifolia</i>	chickasaw plum	M	L	L	M	2
<i>P. mexicana</i>	Mexican plum	M	M	L	H	3
<i>P. serotina</i>	black cherry	H	H	M	H	4
<i>Quercus alba</i>	white oak	M	L	L	L	3
<i>Q. coccinea</i>	scarlet oak	L	L	L	L	1
<i>Q. durandii</i>	durand oak	L	L	L	L	1
<i>Q. falcata</i>	southern red oak	M	L	L	L	2
<i>Q. incana</i>	bluejack oak	L	L	L	L	1
<i>Q. lyrata</i>	overcup oak	L	L	L	L	1
<i>Q. marilandica</i>	blackjack oak	L	L	L	L	1
<i>Q. michauxii</i>	swamp chestnut oak	L	L	L	L	1
<i>Q. nigra</i>	water oak	M	L	L	L	3
<i>Q. pagoda</i>	cherrybark oak	M	L	L	L	2
<i>Q. phellos</i>	willow oak	L	L	L	L	2
<i>Q. rubra</i>	northern red oak	L	L	L	L	1
<i>Q. shumardii</i>	Shumard oak	L	L	L	L	1
<i>Q. stellata</i>	post oak	L	L	L	L	1
<i>Q. velutina</i>	black oak	L	L	L	L	1
<i>Rhododendron canescens</i>	bush honeysuckle	H	M	L	M	3
<i>Rhus copallina</i>	winged sumac	M	L	L	M	2
<i>R. glabra</i>	smooth sumac	H	M	L	M	3
<i>R. toxicodendron</i>	poison oak	M	L	L	H	2
<i>Robinia pseudoacacia</i>	black locust	H	M	L	L	3
<i>Rosa carolina</i>	wild rose	H	H	M	L	4
<i>Salix nigra</i>	black willow	H	H	M	M	4
<i>Sambucus canadensis</i>	elderberry	H	M	L	M	3
<i>Sassafras albidum</i>	sassafras	H	H	M	H	4
<i>Sorbus arbutifolia</i>	red chokeberry	H	M	L	L	3
<i>Styrax grandifolia</i>	bigleaf snowbell	M	L	L	L	2
<i>Ulmus alata</i>	winged elm	H	H	L	M	4
<i>U. americana</i>	American elm	M	H	L	L	3
<i>U. rubra</i>	slippery elm	M	L	L	L	2
<i>Vaccinium arboreum</i>	fall huckleberry	H	M	M	L	4
<i>V. elliotii</i>	spring huckleberry	H	H	L	H	4
<i>V. stamineum</i>	summer huckleberry	M	M	L	M	3
<i>Viburnum rufidulum</i>	rusty black-haw	H	M	M	L	3
<i>Zanthoxylum clava-herculis</i>	toothache tree	H	M	M	L	3
SEDGES						
<i>Carex bushii</i>	Bush's sedge	M	L	L	M	2
<i>C. caroliniana</i>	Carolina sedge	M	L	L	L	2
<i>C. cherokeensis</i>	cherokee sedge	L	L	L	L	1
<i>C. flaccosperma</i>	thin-fruited sedge	H	M	L	L	3
<i>C. frankii</i>	frank's sedge	M	L	L	M	3
<i>C. intumescens</i>	bladder sedge	L	L	L	L	1
<i>C. lurida</i>	sallow sedge	L	L	L	L	1
<i>C. tribuloides</i>	blunt broom sedge	L	L	L	L	1

Table 2 continued.

Plant Species	Common Name	Seasonal Rating ^{1/}				Annual Rating ^{2/}
		Sp	Su	F1	Wn	
SEDGES (cont.)						
<i>C. vulpinoidea</i>	fox sedge	L	L	L	L	1
<i>C. willdenowii</i>	Willdenow's sedge	L	L	L	L	1
<i>Cyperus erythrorhizos</i>	red-rooted sedge	L	L	L	M	2
<i>C. iria</i>	yellow sedge	L	L	L	L	1
<i>C. ovularis</i>	globose sedge	L	L	L	L	1
<i>C. plukenetii</i>	umbrella sedge	L	L	L	M	1
<i>C. pseudovegetus</i>	marsh sedge	L	L	L	L	1
<i>C. rotundus</i>	nut grass	L	L	L	L	1
<i>Eleocharis obtusa</i>	blunt spike rush	L	L	L	L	1
<i>Fimbristylis dichotoma</i>	fimbristylis	L	L	L	L	1
<i>F. miliacea</i>	fimbristylis	L	L	L	L	1
<i>Fuirena squarrosa</i>	umbrella grass	L	L	L	L	1
<i>Rhynchospora corniculata</i>	beak rush	L	L	L	M	2
<i>R. fascicularis</i>	fasciculate beaked rush	L	L	L	L	1
<i>R. inexpansa</i>	nodding beaked rush	L	L	L	L	1
<i>Scirpus atrovirens</i>	dark-green bulrush	L	L	L	M	2
<i>S. cyperinus</i>	wool grass	L	L	L	L	1
<i>Scleria ciliata</i>	hairy nut rush	L	L	L	L	1
<i>S. pauciflora</i>	papillase nut rush	M	L	L	M	2
<i>S. triglomerata</i>	tall nut rush	M	L	L	M	2
RUSHES						
<i>Juncus brachycarpus</i>	short-fruited rush	L	L	L	L	1
<i>J. coriaceus</i>	bog rush	M	L	L	L	2
<i>J. debilis</i>	weak rush	L	L	L	L	1
<i>J. dichotomus</i>	forked rush	L	L	L	L	1
<i>J. effusus</i>	common rush	M	L	L	L	2
<i>J. polycephalus</i>	many-headed rush	L	L	L	L	1
<i>J. repens</i>	creeping rush	L	L	L	M	2
<i>J. validus</i>	many-headed rush	M	L	L	L	2
FERNS						
<i>Polypodium polypodioides</i>	resurrection fern	L	L	L	L	1
<i>Polystichum acrostichoides</i>	Christmas fern	L	L	L	L	1
<i>Pteridium aquilinum</i>	bracken fern	M	L	L	NA	1

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