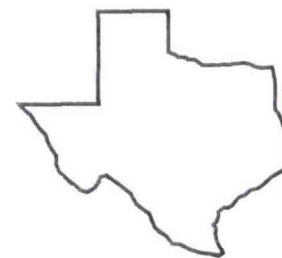
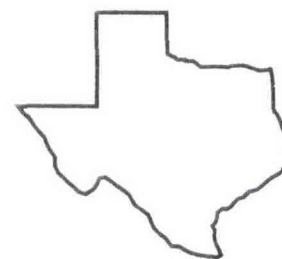
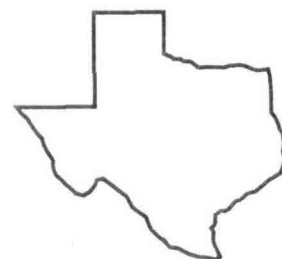
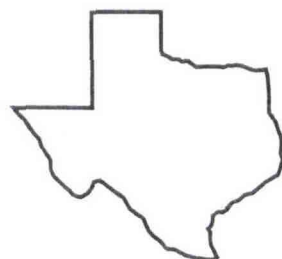
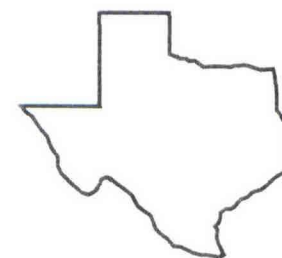




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## DEVELOPING PASTURE SYSTEMS FOR DEER FARMING IN EAST TEXAS

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**Background.** Deer farming, raising deer in confinement on improved pastures, is a new agricultural enterprise that is gaining popularity. Removal of inhibitory laws for deer farming, development of improved capture and handling techniques, and high prices for velvet antler and live animals has led to a rapid increase in exotic deer numbers in Texas (Table 1). A deer's diet consists of grass, browse, and forbs. Browse includes leaves and young, tender stem tips of shrubs and trees. Forbs are broadleaf plants (which are considered weeds in improved pastures) and legumes such as clover. If abundant amounts of all three forage groups are available, browse will constitute the highest percentage of the diet. If browse is not available, exotic deer such as axis, fallow, and sika, do well on grass and forbs. However, the native white tail deer does not do well on a total grass diet, and therefore, cannot be raised exclusively on warm-season grass pastures. Deer farming has grown in the past few years and is a potential enterprise for East Texas. Seven deer are equivalent to one cow when estimating stocking rates.

As with other livestock, good deer performance (weight gain, reproduction, etc.) is dependent on meeting the nutrient requirements of the animal. Young, growing deer have higher nutrient requirements than mature deer. A doe providing milk for a fawn has a higher nutrient requirement than a dry doe. How well forages that are adapted to East Texas meet the deer's nutrient requirements is not known. A preliminary grazing study was conducted at the Texas A&M University Agricultural Research and Extension Center at Overton to determine species preference of fallow deer for cool- and warm-season annual forages overseeded in Coastal bermudagrass. Cool-season forages, overseeded on Coastal bermudagrass on October 29, 1992 were 'Yuchi' arrowleaf clover, 'Dixie' crimson clover, 'Mt. Barker' subterranean clover, 'La. S-1' white clover, 'TAM 90' ryegrass, and 'Elbon' rye. Summer annual legumes overseeded in Coastal bermudagrass on May 20, 1993 were 'Iron and Clay' cowpeas, matt beans, aeschynomene, alyceclover, phasey bean, and 'Serala' lespedeza.

**Research Findings.** All cool-season forages were grazed by deer during the first grazing period from 25 Jan. to 9 Feb. (Table 2). There was very little clover available during this period. More clover growth was present at the beginning of the second grazing period on 18 Mar. Fallow deer had a definite preference for the clovers, followed by the ryegrass. Available ryegrass was the same before and after the grazing period but some ryegrass was consumed because of its rapid growth rate during this period. Very little, if any, rye was eaten. This may be due to its earlier

growth rate during this period. Very little, if any, rye was eaten. This may be due to its earlier maturity and corresponding drop in digestibility. Summer legume growth was poor because of competing bermudagrass. All summer legumes were consumed by the deer before grazing bermudagrass.

**Application.** Fallow deer consumed both cool-season clovers and grasses during the winter. When sufficient clover was available in spring the order of preference was clover, ryegrass, and rye. All summer legumes were consumed before Coastal bermudagrass. Fallow deer's preference for legumes may be due to their higher protein content and digestibility or the deer's preference for a browse plant in a grass pasture.

Table 1. Population of exotic deer in Texas.

Year	Axis	Fallow	Sika
1966	6,450	455	875
1974	19,518	4,483	2,800
1988	39,040	14,163	11,879

Table 2. Available forage at the beginning and end of two grazing periods and estimated utilization percentage of six cool-season annual forages.

Species	25 Jan.	9 Feb.	Utilization	18 Mar.	9 Apr.	Utilization
	-----lb/ac-----		%	-----lb/ac-----		%
Arrowleaf clover	75	28	63	883	119	87
Crimson clover	85	29	66	867	53	94
Subclover	106	26	76	399	83	79
White clover	19	12	36	295	30	90
Ryegrass	970	186	81	1058	1044	14
Rye	1104	194	82	1629	3239	0