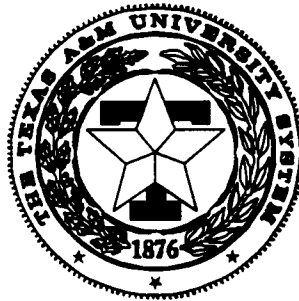


**FORAGE-LIVESTOCK
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**BODY WEIGHT GAINS OF WEANED 1/4 MESOPOTAMIAN FALLOW,
EUROPEAN FALLOW AND AXIS BUCKS IN DRYLOT, ON RYE-RYEGRASS
PASTURE OR ON COASTAL BERMUDAGRASS PASTURE**

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Background. Mesopotamian Fallow crossbred with European Fallow, European Fallow and Axis deer are being used for venison production. Mesopotamian Fallow are larger than European Fallow or Axis deer. Various management systems are used for different times of the year and as forage quality and quantity vary. The objective of this study was to compare body weight gains of 1/4 Mesopotamian Fallow, European Fallow and Axis bucks in the feedlot, grazing rye-ryegrass pasture or grazing Coastal bermudagrass pasture.

Twenty eight 1/4 Mesopotamian Fallow bucks were transported from Yancey, Texas after weaning in October, 1995. Twelve European Fallow and 6 Axis bucks produced at the Texas Agricultural Experiment Station at Overton were weaned in October, 1995 and commingled with the 1/4 Mesopotamian Fallow bucks. From October 29, 1995 through January 12, 1996 (78 days), the bucks were kept in a drylot and fed 3% of their body weight of 2:1 alfalfa pellets:ground corn and free choice Coastal bermudagrass hay, salt, minerals and water (Feedlot). From January 24, 1996 through April 3, 1996 (70 days), the bucks grazed rye-ryegrass pastures with free choice access to water, salt and minerals (Winter Pasture). From June 11, 1996 through August 6, 1996, the bucks grazed Coastal bermudagrass pastures with free choice access to water, salt and minerals (Summer Pasture). The animals were weighed at 28 day intervals throughout the October, 1995 through August, 1996 period. Body weight and average daily gains were recorded for each animal type for the Feedlot, Winter Pasture and Summer Pasture periods.

Research Findings. Average daily gains were greater ($P < 0.0001$) in the Feedlot for 1/4 Mesopotamian Fallow compared with European Fallow or Axis bucks which had similar ($P > 0.1$) average daily gains (Table 1). When grazing winter pasture a similar pattern was found with greater ($P < 0.004$) average daily gains for 1/4 Mesopotamian Fallow compared with European Fallow or Axis bucks which had similar ($P > 0.1$) average daily gains (Table 1). During the summer pasture period greater ($P < 0.02$) average daily gains were found in the Axis than in 1/4 Mesopotamian Fallow bucks with the European Fallow being intermediate and not different from any other type (Table 1).

Table 1. Comparison of average daily weight gains (mean \pm standard error) of yearling 1/4 Mesopotamian Fallow, European Fallow and Axis Bucks in feedlot and grazing either winter (rye-ryegrass) or summer (Coastal bermudagrass) pastures.

Management System	SPECIES			Probability
	1/4 Mesopotamian Fallow	European Fallow	Axis	
Feedlot	0.216 \pm 0.008 ^a	0.146 \pm 0.013 ^b	0.117 \pm 0.018 ^b	P<0.0001
Winter Pasture	0.252 \pm 0.010 ^a	0.208 \pm 0.012 ^b	0.195 \pm 0.016 ^b	P<0.004
Summer Pasture	0.024 \pm 0.012 ^a	0.060 \pm 0.018 ^{ab}	0.104 \pm 0.025 ^b	P<0.02

^{ab}Means in rows with different superscripts differ P<0.05.

Application. When higher quality and quantities of nutrients were utilized (Feedlot or Winter Pasture) the 1/4 Mesopotamian Fallow bucks were superior to either European Fallow or Axis bucks. When lower quality forage was utilized the Axis bucks were superior to 1/4 Mesopotamian Fallow but not the European Fallow bucks. The animals with the greatest potential for weight gains (1/4 Mesopotamian Fallow bucks) performed the best in the feedlot and on high quality cool season forages. The Axis bucks had the lowest ability to gain weight on high quality feedstuffs but had the highest performance on low quality forage.