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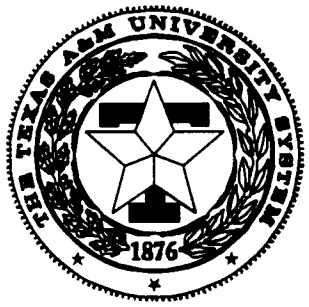

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COMPARISON OF GROWTH AND CARCASS CHARACTERISTICS OF YEARLING EUROPEAN WITH 1/4 MESOPOTAMIAN FALLOW BUCKS

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Background. Crossbreeding has become a standard production tool for animal production. The Mesopotamian Fallow is larger than the European Fallow and offers the option for crossbreeding to the Fallow deer farmer or rancher. The objective of this experiment was to evaluate growth from weaning to slaughter and carcass traits in European and 1/4 Mesopotamian Fallow bucks.

Twenty eight 1/4 Mesopotamian Fallow bucks were transported from Yancey, Texas after weaning in October, 1995. Six European Fallow bucks produced at the Texas Agricultural Experiment Station at Overton were weaned in October, 1995 and commingled with the 1/4 Mesopotamian Fallow bucks. Prior to availability of rye-ryegrass pastures the bucks were kept in drylot and received 3% of their body weight of 2:1 alfalfa pellets:ground corn and free choice Coastal bermudagrass hay, salt, minerals and water. The bucks grazed rye-ryegrass pastures from January through April and Coastal bermudagrass pastures from April through August with free choice access to water, salt and minerals. The bucks were weighed at 28 day intervals throughout the 291 day experimental period. Carcass data collected included hot carcass weight, dressing percent, carcass and leg conformation scores, leg weight (bone in), neck and shoulder weight, rib weight and boneless sirloin weight.

Research Findings. Body weight gains were greater ($P<0.002$) in 1/4 Mesopotamian Fallow bucks than in European Fallow bucks (Table 1). This greater gain in body weight resulted in greater live weight at slaughter ($P<0.002$) and hot carcass weight ($P<0.004$) in 1/4 Mesopotamian compared to European Fallow bucks (Table 2). Dressing percent was similar in both types of Fallow bucks (Table 2).

Carcass and leg conformation scores (1-12) were better ($P<0.03$) in 1/4 Mesopotamian than in European Fallow bucks (Table 2). Weight of the leg (bone in) was similar in both types of Fallow bucks (Table 2) and made up a greater percentage of hot carcass weight ($P<0.02$) in the European compared with the 1/4 Mesopotamian Fallow bucks (Table 3). Weight of the neck and shoulder (Table 2) was greater ($P<0.005$) in 1/4 Mesopotamian than in European Fallow bucks but made up a similar percentage of hot carcass weight in each type (Table 3). Weight of the rib (Table 2) was greater ($P<0.0001$) in 1/4 Mesopotamian and made up a greater ($P<0.0001$) proportion of hot carcass weight (Table 3) than in European Fallow bucks. Weight of the

Application. Crossbreeding of Mesopotamian Fallow with European Fallow results in improved average daily gains, greater slaughter and hot carcass weights and improved carcass and leg confirmation. Crossbreeding increased the proportion of hot carcass weight in the rib and sirloin and decreased the proportion in the leg without affecting the proportion of neck and shoulder. A clear economic advantage was obtained by the use of crossbreeding Mesopotamian with European Fallow for venison production.

Table 1. Body weight gains (mean ± standard error) from weaning through slaughter in yearling European Fallow bucks compared to 1/4 Mesopotamian Fallow bucks.

Parameter	Animal Type		
	European	1/4 Mesopotamian	Probability
291 day weight gain (lb)	46.8 ± 2.6	56.6± 1.2	P < 0.002
Average daily gain (lb)	0.161 ± 0.009	0.194± 0.004	P < 0.002

Table 2. Comparison of carcass characteristics (mean ± standard error) of Yearling European Fallow bucks compared to 1/4 Mesopotamian Fallow bucks.

Parameter	Animal Type		
	European	1/4 Mesopotamian	Probability
Liveweight (lb)	99.5 ± 3.1	111.5 ± 1.5	P < 0.002
Hot carcass weight (lb)	54.0 ± 1.7	60.1 ± 0.8	P < 0.004
Dressing percent	54.3 ± 0.5	53.9 ± 0.2	P > 0.1
Carcass confirmation score (1-12)[a]	3.0 ± 0.4	4.0 ± 0.2	P < 0.03
Leg confirmation score (1-12)	3.6 ± 0.5	4.9 ± 0.2	P < 0.03
Leg weight - bone in (lb)	20.2 ± 0.6	20.9 ± 0.3	P > 0.1
Neck and shoulder weight (lb)	15.8 ± 0.4	17.1 ± 0.2	P < 0.005
Rib weight (lb)	3.8 ± 0.3	6.0 ± 0.2	P < 0.0001
Sirloin - boneless (lb)	9.9 ± 0.3	11.1 ± 0.3	P < 0.03

[a]1 = poorest, 12 = best

Table 3. Proportions (%) of hot carcass weight (mean ± standard error) in various portions of the carcass in yearling European Fallow bucks compared to 1/4 Mesopotamian Fallow bucks.

Parameter	Animal Type		
	European	1/4 Mesopotamian	Probability
Leg - bone in	37.6 ± 0.9	34.8 ± 0.4	P < 0.02
Neck and shoulder	29.2 ± 0.6	30.0 ± 0.4	P > 0.1
Rib	7.0 ± 0.5	10.4 ± 0.3	P < 0.0001
Sirloin - boneless	18.0 ± 0.7	20.5 ± 0.6	P < 0.02