Texas has one of the most extensive hunting lease systems and highly developed commercial systems of harvesting game animals in North America (Burger and Teer 1981). Regulation of selling hunting lease licenses to private landowners began in 1925. Unfortunately, a statewide comprehensive examination of lease operations had never been conducted. A hunting lease is the total amount of land owned by one individual, partnership, firm or corporation in a county that is leased for hunting purposes (PWD code 43.041 as amended in HB 3085 by the 71st Texas Legislature, 1989).

Our study was conducted to obtain information on the characteristics of hunting lease license purchasers, ecological characteristics of leases, predominant land-use, wildlife management, wildlife-related recreational practices and economic returns from lease operations. A major focus of the study was whether or not economic compensation leads to wildlife management by private landowners.

Survey Methodology
A questionnaire was mailed to all 12,367 permit-holders in January 1990. Because of inaccurate addresses, 137 questionnaires were undeliverable. This adjusted the license-holders total to 12,230. Overall, 7,399 (60.5 percent) of the license-holders responded to the survey. They represent 19.8 million acres (59 percent) of 33,769,623 acres of privately owned and managed land by license-holders. Respondents who had leased and derived income during the 1989-90 season represented 15.2 million acres. These ecological regions (Figure 1) where the most leased acres were include the Edwards Plateau, South Texas Plains, Trans Pecos and Pineywoods.
Those who had purchased hunting lease licenses but did not lease or derive income during the 1989-90 hunting season totaled 2,275 (31 percent of survey respondents, 19 percent of all license-holders). They held 4.6 million acres.

Survey Results
The following results are generalized findings at the state level. Because of wide variability across Texas, it would be inappropriate to apply the statewide average to an ecological region, county or individual lease operation.

Operator characteristics
Most respondents (89 percent of 7,339) operated a hunting lease during the previous hunting season as an owner (71 percent), operator (36 percent), hunter (13 percent) or outfitter (3 percent) (Figure 2).

History and future of leasing
Among those currently operating, their land had been leased for an average of 14 years (median was 10 years with a range of 1 to 99 years). When asked whether their hunting lease would be in operation next year, 72 percent said yes, 24 percent were unsure and 4 percent said no.

Reasons for leasing
Most hunting leases exist for multiple reasons. Most respondents (68 percent) said that they leased for additional income opportunities (Figure 3). Nearly 40 percent leased to control trespassing on their land. Interestingly, only 13 percent responded that they leased as a business enterprise.

Characteristics of leased land
The dominant vegetation on Texas hunting leases is brushland (63 percent) followed by grassland (54 percent), improved pasture (20 percent), cultivated land (19 percent), hardwood forest or bottomland (15 percent), pine forest (13 percent), motts (6 percent) or desert shrub (4 percent).

Grazing is the dominant agricultural use (70 percent), followed by cropland, timber or small grains (14 percent) and then idle acres (10 percent).

Recordkeeping, liability and leasing agreements
Most keep records of numbers (77 percent) or types of game animals harvested (65 percent), but less so on operating expenses (30 percent). More respondents obtain a written lease agreement (46 percent) than liability insurance (27 percent) (Figure 4).

Activities on leased land
The predominant recreational use of leases is gun hunts (80 percent), compared to bow hunts (21 percent), fishing (18 percent), private bird hunts (13 percent),
nonhunting recreation (12 percent), trapping (7 percent) or field trials (0.5 percent) (Figure 5).

**Wildlife management practices**

Feeding wildlife (47 percent) is the wildlife management technique used most often on leases, over development of tanks/ponds or harvest control (32 percent), planted food plots (22 percent), brush control (19 percent), wildlife census (12 percent), sex/age counts (11 percent) or check stations, fallow plowing or high fences (3 percent).

**Hunters**

Nearly all hunters that used leased land were from Texas, with less than 8 percent of lease operators leasing to out-of-state hunters. Over 37 percent of lease operators allowed some free hunting on the lease, probably to friends and relatives.

**Hunter services**

Hunter services provided on Texas hunting leases include filling game feeders (23 percent), providing maps (16 percent), providing guides or delivery to stands (7 percent), providing a newsletter or food service (4 percent) or processing game (3 percent) (Figure 6). Facilities for hunters include a cabin (38 percent), hunting blinds or utilities (30 percent), game feeders or a kitchen (22 percent), bathroom/shower (20 percent), game feed (15 percent), trailer hook-ups (13 percent), shooting range (9 percent), walk-in cooler (4 percent) or landing strip (3 percent).

**Species present and/or hunted**

License-holders were asked to identify which of 16 game animals were present on their leases and to indicate whether these same animals were also hunted. The frequencies of difference between an animal being present and hunted were: white-tailed deer (86 vs 79 percent), mule deer (4 vs 3 percent), antelope (2 vs 1 percent), javelina (17 vs 12 percent), feral hog (20 vs 16 percent), doves (64 vs 37 percent), quail (57 vs 29 percent), ducks (25 vs 9 percent), geese (5 vs 3 percent), pheasant (3 vs 3 percent), turkey (52 vs 38 percent), sandhill cranes (6 vs 1 percent), squirrel (45 vs 18 percent), exotic big game (4 vs 2 percent), alligators (2 vs 0.2 percent) and predators (42 vs 23 percent).

**Size of leases**

The average size of a single lease was 2,463 acres (median 500 with a range of 7 to 235,000 acres).
Leasing income and operating expenses

Survey respondents reported a total of $33.3 million statewide from leasing. The average (mean) income per operation was $4,564 and the median was $1,100. The average lease operating expense was $1,650 and the median was $200 with a range of $0 to $400,000.

Summary

Several general attributes of lease operations were found that may be applied statewide. Overall, hunting lease operations cannot be perceived as a business enterprise in the same sense as ranching and farming. Few records are kept on operating expenses, perhaps because investments in facilities and services for hunters and wildlife management techniques are minimal. Few leases offer alternative wildlife-related activities to the public or nonresidents as a means of deriving additional income and expanding lease operations to full income-generating potential.

With a few exceptions, hunting leases in Texas are: (1) informal agreements between landowners/managers and hunters, (2) the decision to lease is influenced by multiple factors, (3) limited to state resident hunters and (4) focused on, although not limited to, white-tailed deer. Finally, many landowners/managers who sell leases also grant free access for hunting.

Reference


Acknowledgement

We convey a special thanks to the 7,399 respondents who participated in this study.

Educational programs conducted by the Texas Agricultural Extension Service serve people of all ages regardless of socioeconomic level, race, color, sex, religion, handicap or national origin.