

Wildlife Enterprise Opportunities on a Limited Land Base

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Economic incentives for wildlife production must certainly differ in public land states such as Utah from private land states such as Texas. Regional differences in wildlife species and their habitat requirements are obvious: different acreages, management needs, and incentives are required to produce grouse in Pennsylvania as opposed to mule deer in Colorado. There are also regional differences in the attitudes and philosophies of landowners and hunters alike, such as what constitutes a quality recreational experience and even to perceptions of wildlife, itself (Kellert 1976).

The Texas System

The leasing of land for hunting began in Texas in the early 1920's. The system began with leasing for deer hunting. A very large commercial system had developed for duck and goose hunting by the mid 60's. Leases for dove and quail hunting also gained in popularity during this time, especially in the Rio Grande Plains and the Coastal Prairie of South Texas.

The income potential provides a great incentive for producing wildlife on private lands. At one time the rancher managed domestic livestock to the detriment of game populations. Landowners sought to clear the ranges of all woody cover and destroy key habitat areas such as roost trees for turkeys (Burger and Teer 1981). Today, however, it is not unusual for wildlife to be the major income-producing enterprise on the ranch. The stocking rates of cattle, sheep, and goats and grazing systems are in many cases decided on their impact upon the wildlife resource.

Most of the income from wildlife enterprises is generated in the Edwards Plateau region of Central Texas, known as the "Hill Country", and in the Rio Grande Plains of South Texas, known as the "Brush Country" (Pope et al. 1983). Today, in the South Texas brush country, it is not uncommon for some ranchers to receive \$2,000 to \$3,500 for a chance at a trophy white-tailed deer. The average hunting lease in South Texas returns \$4 to \$5 per acre (Payne et al. 1987).

Four general types of leasing arrangements are commonly found: annual lease, day hunt lease, packaged hunt, and a secondary lease to an outfitter or middleman. Steinbach et al. (1986) conducted a survey of the lease

system in the Edwards Plateau and Rio Grande Plains to determine the associated costs of the various operations. The study included leases with the very basic elements (no frills "key to the gate") to ranches with luxury lodges offered as facilities. The break-even costs of operating these leases ranged from \$0.67 to \$4.25 per acre.

Ranch Size and Habitat Requirements

Some examples to be considered in the marketing of hunting recreation are lease type, location, and the extent of human, physical, and biological resources. One of the most important is the availability of game species in adequate numbers to support a program. The habitat requirements and behavioral characteristics of some game species can dictate whether or not a particular ranch is of adequate size to support a hunting program. Where the available land on the lease is not adequate to accommodate the management system, cooperative arrangements between landowners have been formed to facilitate proper biological control (Steinbach and Ramsey 1988).

White-tailed Deer

The white-tailed deer is the major species for which hunters lease land in Texas. Due to various ecological conditions around the state, deer densities are extremely variable, ranging from 1 deer to 2-3 acres in the Edwards Plateau to 1 deer to 30-50 acres in portions of South Texas and the Trans Pecos. Successful managers determine the density of the deer herd on their property and develop harvest systems and habitat management plans to meet their goals.

Small landholdings in areas of high deer densities can be somewhat successful in the marketing of day leasing for does and small-antlered bucks. It is next to impossible for a single landowner to improve the quality of the deer herd on small acreages because of the lack of control that the landowner has over the entire deer herd, due to deer movements and home range. The small landowner cannot control the deer harvest of neighboring ranches, which can impact on the sex and age ratios of the herd.

Quality deer management implies that the manager can control the sex and age structure of the harvest and provide all habitat requirements for the herd. One method of improving deer quality on small acreages is through the use of deer-proof fencing. This solves the movement of animals on and off the ranch. It can be extremely expensive and competition for limited resources can become severe. Deer herds on small acreages under game fences are usually given supplemental feed, which adds to the overall expense. Marketing of hunting under these circumstances is sometimes difficult due to the loss of esthetic appeal and lack of challenge to the hunter (Shult

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1984).

The cooperative management program has been the most successful technique for smaller landowners who want to improve the quality of a regional deer herd. One of the first cooperatives to form in Texas is the Cave Creek Deer Cooperative in Gillespie County. The organization has 80 members and controls 35,000 acres. The average hunting operation consists of 400 acres. The co-op gives the landowners a chance to discuss and make management decisions relating to the area's deer herd.

Several changes have resulted in the 6 years of the co-op's existence. The buck:doe ratio has been reduced from 1:6.6 to 1:4.6. A second is the splitting of season-long leases into shorter term leases, thus accommodating more hunters. No attempt at uniformity in price is made because of the variety of services some landowners offer. These extra services increase hunting costs. In the Cave Creek area, leases range from \$2 to \$30 per acre. The ultimate goal of the Cave Creek Cooperative is to produce bucks with excellent body and antler size, along with a high fawn survival rate and a low buck to doe ratio.

Quail

The quail hunter is somewhat different than the deer hunter in that he generally hunts in a group while pursuing his quarry with the use of bird dogs. The size of the property then must be adequate to provide a full day of hunting for a party of hunters, as well as adequate numbers of birds for the dogs to work coveys and singles.

Guthery (1986) states that an excellent quail year in Texas has 1 to 2 birds/acre. A good population has 1 bird/2 to 4 acres. A fair population, likely to occur on medium quality habitat in years with average rainfall, has 1 bird/5 to 6 acres. A poor population has 1 bird/7 to 9 acres. This variability in the production of quail makes it difficult for a producer to plan on a consistent supply of bobwhites for hunting unless he: 1) has a very large landholding which would allow hunters to find birds in poor years, or 2) operates a hunting preserve system where birds are provided in a put and take system.

In the case of small landholdings that are located in good quail country, cooperative management programs may work. These "co-ops", however, would have to be managed differently than the current deer cooperatives that are found in Texas. In a cooperative deer program, the deer herd is managed as one population across ranch boundaries. However, the hunters stay within lease boundaries, and usually hunt from stands. In the case of quail, where flushed birds would fly across fencelines, cooperative management would involve the right of trespass by a party of hunters in order to have a reasonable hunting experience.

Migratory Birds

Management for migratory birds differs from other game species in that the birds are produced elsewhere. With the exception of some production in the playa lakes and mottled duck production on the Coast, the vast majority of North America's ducks and geese are produced on the prairie potholes of Canada. Land size then is not a factor in production as it is with other game species

such as deer and quail. The size of the property, however, does affect the value of the waterfowl lease. Hobaugh (1987) found that there is a threshold of around 700 to 800 acres over which the so called price per acre decreases.

Day hunting operations are common for waterfowl in Coastal Texas. Controlling large acreages, several roosting areas, and mobility are the keys to their success. Currently, the standard fee for this type of hunt, which includes a guide, ranges from \$100 to \$125 per person. A minimum number of 4 hunters is usually required. For season leases, waterfowl acreage between 500 and 1,000 acres are selling for \$8 to \$10 per acre (Hobaugh 1987).

Waterfowl can provide some opportunity for leasing on small landholdings. However, once the birds have been flushed, they move on to other landholdings. Owners of single playas, individual fields or single farms that are too small to attract hunters can combine small units among the neighbors into a marketable package. A satisfactory division of income is established, usually proportional to area hunted and game harvested (Ramsey 1987).

Perhaps the best opportunity for small ownerships relative to migratory birds would be the leasing for doves. As with waterfowl the landowner is not required to provide all the habitat needs of doves, due to their migratory nature. The primary management would be in providing and enhancing attractions, such as farm ponds and agricultural fields. There are many instances in Texas where a single windmill with a holding tank has been leased to parties of dove hunters (Shult 1984).

Wild Turkey

Many of the turkeys that are harvested in the fall are taken by deer hunters. However, the recent addition of a spring turkey season in Texas has permitted hunting lease operators an opportunity to increase their income from their hunting enterprises by leasing spring turkey hunting on a day or season basis. Lease prices are variable. Day hunting fees range from \$50 to \$150. Many ranches provide a package hunt for 2.5 days at a cost ranging from \$175 to \$300. In most cases the bag limit is 1 bird, sometimes 2. Spring season leases averaged \$.50 to \$1 per acre.

Probably the most important factor to bear in mind concerning spring turkey hunting is to allow adequate acreage for each hunter. Because spring turkey hunts are calling the bird to them, it is recommended that each hunter be allowed 300 to 500 acres on which to hunt (Cook 1984).

Because of the wide-ranging nature of wild turkeys, it is not possible for a small acreage owner to manage a turkey population. In South Texas it is not unusual for a flock to roam over 20,000 acres, and for the hens to nest 10-12 miles from the roost site. Some owners of small ranches may be fortunate to have a winter roost on their land, or a roost located nearby. Unlike the eastern wild turkey, the Rio Grande subspecies has a strong fidelity to its winter roost. Although the roost must be protected for hunting and other disturbances, there will be turkeys available for hunting.

Nonconsumptive Wildlife

Traditional nonconsumptive wildlife activities, such as bird watching and wildlife photography, have not been developed in Texas to the extent that it is providing income to the landowner on any large scale. The demand for nonconsumptive wildlife activities will continue to grow and interested landowners need to consider the market potential for such activities. In states where nonconsumptive wildlife activities have been successful it is usually done in combination with other outdoor recreational activities, such as canoeing, horseback riding, and camping (Swendsen 1985).

Conclusion

Major concerns for small landowners in terms of hunting leases are an inadequate supply of harvestable game and/or enough land to accommodate a large number of hunters. If an inventory of resources discloses an adequate supply of wildlife, an individual may want to take advantage of dividing seasons among various groups, such as archers and rifle hunters, in order to accommodate more hunters. This may mean reducing the bag limit per hunter, but will result in an increase in total access fees. If the game supply is not adequate or more land is required to manage a population unit, the formation of cooperatives is a proven method and is growing in popularity in Texas.

In a survey of Texas hunters, 70 percent of them listed recreation as the major reason why they participate in hunting (Thomas and Adams 1985). Although there needs to be a certain threshold of game present to satisfy the hunter, there is an elasticity in what the hunter will pay for what is available. A good part of what determines the cost of a lease is dependent on the marketing skills of the landowner. Also, the addition of activities and amenities that further the recreational experience can in many ways

make up for the limitations imposed by a limited land base.

Literature Cited

- Burger, G.V., and J.G. Teer. 1981.** Economic and socioeconomic issues influencing wildlife management on private lands. P. 252-278. *In*: R.T. Dumke, G.V. Berger and J.R. March, eds. *Proc. Wildl. Manage. on Private Lands*. Wisc. Chap., The Wildl. Soc. Madison.
- Cook, R.L. 1984.** Spring turkey hunting—good or bad. P. 381-384. *In*: L.D. White and D.E. Guynn, eds. *Proc. Int. Ranchers Roundup*. Texas Agr. Ext. Ser., College Station.
- Guthery, F. 1986.** Beef, Brush and Bobwhites, Quail Management in Cattle Country. Caesar Kleberg Wildl. Res. Inst., Kingsville, Texas. 182 pp.
- Hobaugh, W.C. 1987.** Waterfowl hunting leases: resources, economics, and benefits. *In*: J. Payne, ed. *Proc. Waterfowl Hunting Business Conference*. Texas Agr. Ext. Ser., College Station, Texas.
- Kellert, S.R. 1976.** Perceptions of animals in American society. *Trans. North Amer. Wildl. Nat. Resour. Conf.* 41:533-544.
- Payne, J.M., R.D. Brown, and F.S. Guthery. 1987.** Wild game in Texas. *Rangelands* 9:207-211.
- Pope, C.A., C.E. Adams, and J.K. Thomas. 1983.** The economic value of wildlife resources in Texas. Texas Agr. Exp. Sta. Staff Pap. SP-2, Dir. 83-1, Texas A&M Univ., College Station.
- Ramsey, C.W. 1987.** Managing playa wetlands for waterfowl hunting. Pub. B-1562, Texas Agr. Ext. Ser., College Station, 16 pp.
- Shult, M.J. 1984.** Wildlife management alternatives for large and small ranches. P. 347-352. *In*: L.D. White and D.E. Guynn (eds.) *Proc. Int. Ranchers Roundup*. Texas Agr. Ext. Ser. College Station.
- Steinbach, D.E., M.K. Glover, J.R. Conner, J.M. Inglis. 1986.** Economic and operational characteristics of recreational leasing in the Edwards Plateau and Rio Grande Plains of Texas. P. 269-294. *In*: D.E. Guynn and T.R. Troxel, eds. *Proc. Int. Rancher's Roundup*. Texas Agr. Ext. Serv., College Station.
- Steinbach, D.E., and C.E. Ramsey. 1988.** The Texas "lease system": history and future. P. 54-68 *In*: D. Rollins, ed. *Proc. Rec. Rangelands: Promise, Problems, Projections*. Texas Agr. Ext. Ser., College Station.
- Swendsen, B. 1985.** Nonconsumptive wildlife uses—money in the bank. P. 470-473. *In*: L.D. White, D.E. Guynn and T.R. Troxel, eds. *Proc. Int. Ranchers Roundup*, Texas Agr. Ext. Ser., College Station.
- Thomas, J.K., and C.E. Adams. 1985.** Socioeconomic factors affecting land access to hunt white-tailed deer. *Wildl. Soc. Bull.* 13(4):388-394.

Frasier's Philosophy

There is an increased amount of evidence that the Society for Range Management is becoming known for its collective expertise in the proper management of our natural resources. It is becoming quite common to attend some meeting such as a national conference on noxious weeds or a civil engineering society watershed symposium and see that the Society is listed as one of the sponsoring groups. This type of recognition represents a maturing of our Society, but it also is a two-edged sword: various people and groups are looking toward us as the knowledge base required for maintaining the renewable natural resource process.

At the same time we can not sit on our laurels. We live in a changing world. The public's value base of the needs and uses of these resources today is quite different from what it was 20 to 50 years ago. There is every reason to expect that these desired uses will be different 20 to 50 years into the future. It should be our goal to be able to

provide the guidance for the proper management of our resources to meet these changing values, whatever they may be.

We have the necessary framework to maintain this expertise in our membership base and are able to communicate this knowledge and information to others through our journals. One of our main strengths lies in our diversity of interests and backgrounds. This diversity with a common goal is unique. It is a strength that is lacking in many groups. Let it not be said that we became so narrow minded that we could not see the forest for the trees or the prairie for the dust. Open minds, communications, and cooperation will keep us in the forefront of the proper use of our natural resources for all times.

When you are making a success of something, it's not work. It's a way of life. You enjoy yourself because you are making a contribution to the world.—Andy Granatelli