

# WILDLIFE AND FISHERIES

## Wildlife and Fish in a Drought

Fluctuations in rainfall are common phenomenon with which most Texans are familiar. Variation between months, seasons or years may be as much as 400 percent with more years being below "average" than above average. This varying rainfall is responsible for much of the ups and downs of wildlife food production in West Texas and this year it has extended into East Texas.

Game management during a drought is generally an extension of what should be practiced during wetter years. With grazing animals -- such as deer, pronghorns and exotic big game species--balancing the total stocking rate with the forage produced is the primary goal. Game species are seldom the only grazing animals present, so domestic livestock must also be considered in game management.

Keeping the numbers of breeding animals below the average carrying capacity of the range gives flexibility for dry years. Livestock numbers are more easily adjusted when needed than wild species. Reductions and additions in the game herds generally are limited to one time during the year, the hunting season and fawning period.

A night counting of deer using a spotlight, or an aerial count with helicopter will give information on deer numbers and herd condition for planning this fall's harvest. Young animals are the most sensitive to nutritional conditions. Therefore, a low observed ratio of fawns to does during September will indicate poor food conditions. To be prepared for low forage growth each hunting season must be managed as though it is the one immediately preceding a drought.

Practicing some type of deferred rotation grazing system not only benefits livestock but also reduces competition for food since big game tend to move away from livestock into rested pastures. Rested pastures also benefit quail and turkey by providing nesting cover and allowing food plants to produce seeds.

Poisonous plant problems are more likely to develop during or immediately following drought periods. Some unpalatable plants may be consumed due to starvation conditions, and some toxic plants become abundant following rain showers. The fresh growth is attractive and animals may consume a lethal amount before learning to avoid the plant. Animals in confinement or new to the area are particularly vulnerable, such as exotic species.

Supplemental feed may be appropriate to carry valuable animals to harvest or sale, but supplying enough supplements adequate for antler growth in young animals will be costly. Without significant reduction in animal numbers there will be continued grazing pressure

on preferred plants with little opportunity for their recovery.

Indicators of poor forage conditions for big game will be the presence of pronounced "browse line" on major browse species, the absence of palatable forbs, and evidence of use on unpalatable species such as juniper or pine. Not all plants represent food, so recognition of important species is a key skill needed by game managers.

Drought conditions or at least shortage of water for fish production are common in much of Texas annually. The extent of this shortage determines the extent of activities necessary to counteract the effects. Evaporation remains nearly constant from year to year. Without rainfall to replenish water in a pond, pumping will become necessary for survival of the fish population.

When water levels begin to recede fish become progressively more stressed. If the fish are large enough to be harvested, this should be done. Normally the fish population should be reduced to not more than 500 pounds per acre in the receding pond. Remove the largest fish first since they are the most susceptible to low oxygen levels. If the pond continues to recede, all fish should be removed when the water level drops below two feet.

Reduced water levels may have consequences in addition to the direct loss of fish. Warm or hot water tends to add stress to the fish, reduce oxygen levels in the water and increase the incidence of disease and parasites due to crowding of the fish into smaller areas.

Methods to alleviate the stressful conditions include (1) reducing the feeding rate to not more than 1 percent of body weight daily, (2) adding well aerated fresh water to the tank or pond from wells or other water sources, and (3) increasing the oxygen levels in the water by spraying water over the pond surface.

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