

What Do Deer Eat in Llano and Mason County??

Summary of Four Multi-Year Diet Studies Conducted by Llano SWCD and NRCS

Riley Mountain – Llano County; Limestone soils; 36 month study June 89 - May 92

1. Live oak* – 38% yearlong; consumed all seasons
2. Cedar – 12% yearlong; as high as 40% in winter
3. Doveweed – 9% yearlong; as high as 55% in fall
4. Orange zexmenia – 8% yearlong; as high as 50% in summer
5. Persimmon – 4% yearlong; as high as 65% in May
6. Mistletoe – 4% yearlong; as high as 40% in spring

Browse	68%
Forbs	23%
Grass	9%

These 6 plants made up 75% of the diet. The other 29% was made up of 36 plants including: sida, peavine, bladderpod, tallow weed, tansy mustard, evolvulus, ratany, bushsunflower, bur clover, ragweed, snoutbean, Roemer acacia, pricklypear, mesquite, bumelia, kidneywood, juncus, Texas wintergrass, kleingrass and muhly.

Southern Mason County; Limestone soils; 25 month study March 90 - April 92

1. Live oak* – 20% yearlong; highest in Aug – September
2. Persimmon – 20% yearlong; as high as 60% in Nov – Jan
3. Cedar – 17% yearlong; as high as 60% in fall and winter
4. Mesquite – 8% yearlong; as high as 75% in summer
5. Sida – 7% yearlong; as high as 75% in summer

Browse	71%
Forbs	20%
Grass	9%

These 5 plants made up 72% of the diet. The other 28% was made up of 33 plants including: doveweed, bladderpod, peavine, bur clover, zexmenia, mistletoe, pricklypear, yucca, ephedra, hackberry, kidneywood, dropseed, rescuegrass, Texas wintergrass, cedar sedge and kleingrass.

Pecan Creek – Llano County; Granite soils; 35 month study June 89 - May 92

1. Live oak* – 39% yearlong; consumed all seasons
2. Mistletoe – 19% yearlong; as high as 60% in fall and winter
3. Mesquite – 7% yearlong; as high as 45% Sept – Nov
4. Doveweed – 6% yearlong; as high as 45% Oct – Nov
5. Persimmon – 5% yearlong; as high as 30% Nov – Jan

Browse	75%
Forbs	20%
Grass	5%

These 5 plants made up 76% of the diet. The other 24% was made up of 33 plants including: orange zexmenia, tallow weed, sagewort, snoutbean, ragweed, peavine, ratany, evolvulus, bundleflower, catclaw acacia, bumelia, skunkbush sumac, pricklypear, yucca, cedar, algerita, kleingrass, muhly and dropseed.

Eastern Mason County; Granite soils; 26 month study March 90 - April 92

1. Live oak* – 32% yearlong; consumed all seasons
2. Mistletoe – 28% yearlong; as high as 50% in some months
3. Persimmon – 8% yearlong; as high as 30% Dec – Jan
4. Bladderpod – 5% yearlong; as high as 35% in fall and winter
5. Doveweed – 3% yearlong; as high as 20% in fall
6. Mesquite – 3% yearlong; mostly in summer

Browse	72%
Forbs	24%
Grass	4%

These 6 plants made up 79% of the diet. The other 21% was made up of 31 plants including; sida, tallow weed, primrose, evolvulus, peavine, orange zexmenia, unknown legume, hackberry, bumelia, pricklypear, cedar sedge, spikerush, Texas wintergrass, rescuegrass and dropseed.

*This includes all oak species although live oak is the major species of oak at all locations. May also include shin oak, post oak, blackjack oak and spanish oak.

Practical Application

1. The context of these study sites is a very high deer population in excess of habitat carrying capacity. Deer are not able to select those plants they prefer. Instead, they had to eat what was available. Although this is not an ideal situation, it is the common condition across the region.
2. No surprise that live oak is the No. 1 food plant, making up about 1/3 of the yearly diet. However, live oak browse is poor in nutritional quality, providing only 60% of desired protein levels and 70% of desired energy levels. Although deer can exist on a diet high in live oak if they have to, body weights, antler growth and fawn crops will be low. Acorns are highly preferred and high in energy, but are seasonal and unreliable.
3. Cedar is an important deer food where it occurs (mostly limestone soils), making up about 15% of the yearlong diet and 30 to 40% of the fall and winter diet. Cedar browse contains half or less of the desired protein, but may contain adequate energy. A scattered to moderate amount of cedar is a desirable and valuable part of deer habitat.
4. Mistletoe was the No. 2 food in the granite soils where mesquite is common. It makes up nearly 25% of the yearlong diet and as high as 50% during certain times. It is a high quality, evergreen deer food that contains 100% of the desired levels of protein and energy all year long. Retaining large areas of moderate to dense mesquite will help insure the availability of this important plant.
5. Persimmon is an important deer food, making up about 10% of the yearlong diet. It is most often eaten from Nov – Jan after the leaves have been killed by frost. Persimmon browse has about 60% of desired protein levels and 80 to 90% of desired energy levels.
6. “Brush” species (cedar; mesquite (mistletoe); persimmon) made up an average of 34% of the deer diet. These species are often considered undesirable, but for deer they are important for food as well as cover. This fact should be kept in mind when planning brush control. These brush plants have probably been under-rated as deer food.
7. Winter annual forbs (weeds) such as tallow weed, peavine, vetch, burclover, tansy mustard and bladderpod were not very important yearlong, but for brief periods they may make up 30 to 50% of the diet. These winter weeds are probably over-rated as deer food.
8. Many desirable and preferred perennial deer food plants are present at these locations, such as bushsunflower, ratany, bundleflower, snoutbean, primrose, hackberry, elm, bumelia, kidneywood, Roemer acacia. However, these plants are not abundant enough to be a significant part of the diet. These desirable plants can be favored by reducing deer and livestock numbers.
9. Plants which are very common, but which were not important as deer food include algerita, whitebrush, lotebush, pricklyash, pricklypear, tasajillo, ragweed, broomweed, lazy daisy, bluebonnet and coreopsis.
10. Ranch management often seeks to increase the economically important forage plants. At current prices, cattle forage is worth about 1 to 1.5 cents per pound, and deer forage is worth 2 to 4 cents per pound. An acre of brushy deer habitat is worth more than an acre of open grassland.
11. Ranch management often seeks to minimize risk and improve net profit. The livestock business is prone to a high amount of risk, market fluctuations and high cost of production. The hunting business has proven to be much less risky, with good demand and increasing prices without the high costs of production. Ranch management to favor deer habitat makes good long term economic sense.
12. Deer habitat is best maintained or improved by: light rotational grazing or seasonal grazing, limited and carefully planned brush control, control of excess doe numbers, and prescribed burning.