

TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

WYOMING

SOIL CONSERVATION SERVICE

Biology No. 116

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Subject: RED FOX*

General

The red fox (Vulpes vulpes) is an adaptable species that can utilize a wide variety of habitats. Areas with abundant rodent populations are preferred by this predator.

Food Requirements

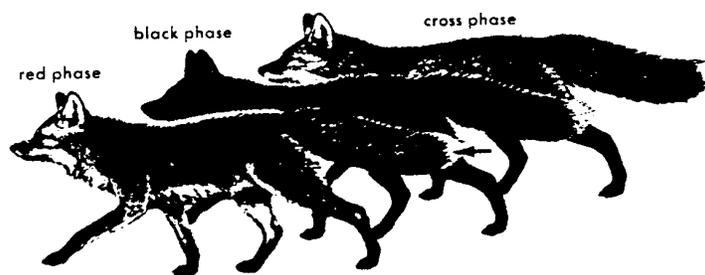
The red fox is an opportunistic feeder; the availability of prey was found to be the major factor determining its food habits in Kansas. This species is omnivorous and feeds on a wide variety of plants and animals such as small mammals (especially rodents and rabbits), birds, insects, berries, and plants. Foxes in northeastern Kansas are usually hunted in timbered areas or along the edges of fields.

Water Requirements

An accessible source of free water was important to satisfy the drinking needs of the red fox in northeastern Kansas. Permanent water was required within its home range (1 mi² or 2.6 km²) and was preferred within 200 yd (181.8 m) of denning sites.

Cover Requirements

In North Dakota, preferred habitat contained scattered brushy patches. Escape cover and hiding cover was usually provided by timbered or brushy areas in northeastern Kansas. Red foxes rarely crossed open fields.



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*Information taken from Ecoregion M3113 Handbook and Habitat Suitability Index Models, Wildlife Species Narratives (literature searches), U.S. Fish and Wildlife Service, various dates between 1978-1984.

Reproductive Requirements

In Michigan, the young of the red fox were born in underground dens that were frequently located at a high point on a sandy, gravelly ridge. Dens extended back 30 ft (9.1 m) or more into the ground. One study found four important factors affecting the selection of den sites in northeastern Kansas. These factors were: 1) soil type, 2) presence of water, 3) presence of cleared areas, and 4) human disturbance. Sandy soil is preferred for denning sites. In northeastern Kansas, 71 percent of fox denning sites were within 50 yards (45.5 m) of water with only three denning sites over 200 yards (181.8 m) from water. The majority of den sites in forested areas occurred within 15 yards (13.6 m) of cleared land with 40 yards (36.4 m) as the upper limit. Cleared areas included grasslands, cultivated lands, or farmland. Another study found the majority of fox dens in the midwest on open agricultural land, although some dens were located in wooded areas. Dens are frequently over 200 yards (181.8 m) from human habitations. The absence of disturbance by man is an important factor in the selection of den sites.

Special Habitat Requirements

No information was found regarding special habitat requirements for the red fox.

Interspersion Requirements

The presence of farmland or cultivated land increased the suitability of an area for red foxes. Woodlands, grasslands, shrub-pasture, and upland edge habitats were especially attractive to foxes in Indiana. Rolling farmlands mixed with sparsely wooded areas, marshes, and streams were preferred by foxes in Delaware. One study found that the red fox in eastern Kansas frequents agricultural areas along wooded streams and rivers and seems to prefer areas where patches of timber alternate with pastures and cultivated fields.

The red fox in New York state was found to be non-migratory with an attachment for a particular territory or home range. Home range for the red fox has been estimated at 1 mi (1.6 km) in diameter in New York and Kansas. The diameter of the home range may be 5 miles (8 km) or more across when food availability is low. Another study stated the home range of red foxes in the midwest at 2.5 miles (4 km) by 1.5 miles (2.4 km) or 2400 acres (971.7 ha).

Movements to denning areas occurred in the spring. The young foxes dispersed to new areas in October. Juvenile and subadult males traveled an average of 19.4 miles (31 km) and females, an average of 6.7 miles (10.7 km), from their natal areas during their first year.

Special Considerations

Human habitations near fox denning sites decreased the suitability of these areas. On the other hand, the presence of farmland or cultivated land appeared to increase the suitability of areas utilized by the red fox.

