further protection which the snowfall affords, until spring weather revives them as well as the overwintered plants.

(e) **Burning of Ground Cover as a Possible means of Destroying the Weevils:** Two nearby fields of sweet clover south of Chaffee, one of which had been burned over during the fall of 1943, and the other allowed to remain unburned, were examined in May and again in June of 1944 to determine what possible effect the burning might have had on the weevil population. There was no significant difference in the weevil damage of either of these fields, being unusually light in both fields. While it is highly probable that the burning of the sweet clover in late fall may have destroyed the weevils in the one field, there was no way of measuring the possible effectiveness of it; because flight dispersal probably brought about a redistribution of the weevils from the untreated area into the burned area and might have masked whatever degree of control was accomplished.

(f) **Effect of Shading:** Mr. John C. Thysell, Associate Agronomist, U. S. Great Plains Field Station Bureau Plant Industry, at Mandan, called attention to the more extensive sweet clover growth along the east, south and west margins of the plots. A careful check indicated that there was little difference in uniformity in the stand of plants. The difference noted was due largely to the great amount of sunlight along the margin stimulating the development of these plants as compared with the weaker plants located a distance in from the margin and more densely shaded by the cereal nurse crop. That dense shade contributes at times to sweet clover damage was evidenced by this occurrence.

SWEET CLOVER Diseases

All agricultural crops are subject to injury by plant diseases and insect pests. From the time of its general introduction into the State about 25 years ago, the sweet clover crop has been relatively free from diseases. In Bulletin 166, published in May, 1923, Wanda Weniger, then Plant Pathologist, described a root rot of sweet clover apparently caused by a **Fusarium** species. She also called attention to a stem canker disease caused by **Ascochyta caulicola.**

In 1932, W. E. Brentzel, Plant Pathologist, in Bulletin 255 of this Station (a revision of Bulletin 166) called attention to the "mosaic" disease of sweet clover and noted that it was fairly abundant on plants found growing wild, and he indicated that the disease might be identical with the mosaic diseases on beans and red clover.

During 1944 Mr. Brentzel has re-examined the whole situation with respect to sweet clover diseases with the assistance of the cooperation of the Emergency Plant Disease Prevention Program of the United States Department of Agriculture and of Dr. F. Gray Butcher, Extension Pathologist of this institution. No seedling blight was observed in 1944. A black stem disease whose symptoms resemble those caused by **Ascochyta** species, as described by Johnson and Valleau, was noted. Seed collected from such infected plants were grown to normal healthy maturity under greenhouse conditions with no appearance of the disease throughout the life of the plant.