NOTE
EFFECT OF OVER-GRAZING ON KENTUCKY BLUEGRASS
UNDER CONDITIONS OF EXTREME DROUTH

In a survey taken in October 1934 by H. D. Hughes, H. L. Eichling, and F. S. Wilkins of Iowa State College in the severe drouth area of southwestern Iowa, it was found that about 90% of the Kentucky bluegrass was killed by the combination of drouth and heat during the summer of 1934. The rainfall was only about 50% of normal during June, July, and August and temperatures were over 100° for 30 days or more during the summer. In most of the pastures of this section 90 to 95% of the Kentucky bluegrass, which comprised nearly all of the cover, was found to be dead. Scattered, small, weakened, live Kentucky bluegrass plants, however, remained.

Throughout the survey, which was made about 3 weeks after fall rains began, it was observed that the pastures which had been the most closely grazed suffered the worst, and three pastures within 2 miles of each other near Clarinda, showing remarkable contrast in condition, gave mute evidence of the disastrous effect of over-grazing. In the most heavily grazed pasture spindly bluegrass plants, 1 to 3 feet apart, were being kept eaten off at ground level by many hogs. Over 99% of the Kentucky bluegrass in this pasture was dead and practically no live cover remained. Across the fence about 75% of the bluegrass had been killed and vegetation consisting of Kentucky bluegrass and foxtail was being given considerable opportunity to develop. This pasture gave the appearance of having been moderately to heavily grazed during the drouth period and before.

Within 2 miles a pasture was found on the same soil type and of similar topography where the turf and cover of Kentucky bluegrass were excellent, with practically no dead plants. The operator stated that this pasture had been grazed moderately to lightly in 1933 and 1934 while he had charge of the farm. He said also that during the drouth period of 1934 the top growth gave every appearance of being dead.

Evidence that over-grazing aggravated effects of drouth and heat and was the indirect cause of the death of about 90 per cent of the Kentucky bluegrass was so convincing that there is little doubt that discontinued or intermittent grazing will be the most effective means of restoring such pastures. Reseeding with legumes, and in some cases grasses as well, and soil treatments will be helpful, but each farm operator even of limited means can give his pasture needed rest by providing small grain and other emergency pastures. The Iowa workers would like to have the ideas of other agronomists concerning this important problem.—F. S. Wilkins, Iowa State College, Ames, Iowa.