In an earlier paper (3) the writers presented the results of an experiment to determine the effect of applying irrigation water at different stages in the growth of the wheat plant. During the course of these investigations it was soon noticed that crops grown the following year behaved differently after each of the several treatments. Accordingly, a definite set of experiments was planned to measure the effect of the several treatments upon succeeding crops. For lack of a better name, these have been called “residual effects.” Four years “residual” results are reported in this paper.

EXPERIMENTAL RESULTS

The experiment on residual effect of irrigation water on the succeeding crop was started in 1922. Plats which had been in the critical period experiment in 1921 (3) were sown to Marquis wheat in 1922. No irrigation water was applied during the season and the only moisture added was that which fell as rain or snow. Square yards were marked off in the center of the plats occupied by each treatment of the critical period experiment of the previous year. Fig. 1 shows the stakes marking the center of the plats of the residual experiment in 1923. At harvest time an iron frame 1 yard square (1) was placed over the stake and 1 square yard of the crop was harvested from each