

parative tests with different varieties of clovers. In every case the crop was sown in the spring of the year, at the rate of eighteen or twenty pounds of Alfalfa seed per acre, and usually with a grain crop, such as barley, sown at the rate of one bushel per acre.

In each of eight years, the Alfalfa gave exactly three cuttings, but in 1907 it produced only two, while in 1896 it gave four cuttings in the one season. It will be remembered that the spring of 1896 opened up very early, and that of 1907 exceptionally late. In 1896 the first cutting took place on June 1st and the second cutting on July 2nd, but in 1907 the first crop was not ready to cut until the 2nd of July.

Efforts were made to cut each crop quite soon after it had started to blossom, and always before it was one-third in bloom. The average dates of cutting were as follows: first cutting, June 21st; second cutting, August 2nd; and third cutting, September 21st.

It will be seen that the annual yield of Alfalfa per acre per annum in the average of the ten years' experiments was 21.67 tons of green crop, and 5.27 tons of hay. Hence, green Alfalfa furnishes about 24 per cent., or practically one-quarter, of its own weight in the form of hay. The first gives about double the yield of the second cutting, and the second nearly double the yield of the third cutting. It is generally more difficult to make good hay from the third than from either the first or the second cutting, owing to the unfavorable weather conditions. Within the ten years, here referred to, the Alfalfa produced more than six tons of hay per acre in each of three years, and less than four and one-half tons of hay per acre in each of two years. Since 1888, well-established Alfalfa at the College has been badly winter-killed on only one occasion and partly winter-killed on two occasions. It has usually survived the winter and the early spring in excellent condition. Unfortunately, the results for 1899 and for 1905 were not recorded sufficiently in detail to permit of their being used in the foregoing table.

VARIETIES OF ALFALFA.

There appear to be a few varieties of the wild forms of Alfalfa which are characterized by differences in the color and in the size of the flowers, in the coverings and in the structures of the pods, etc. Botanical authorities, however, have not made it clear that there are marked differences in the botanical structure of the Alfalfa which is used in cultivation. It is, nevertheless, true that the continuous growing of Alfalfa for long periods of time in different countries and under varying conditions of soil and climate, has furnished numerous strains or varieties which vary in important characteristics, when considered from a practical standpoint. Different forms or strains of Alfalfa are known principally by the country in which they have been grown for a number of years. Even this is very indefinite, as for instance, there appear to be different strains of Alfalfa produced in Turkestan, the value of which varies considerably. Much has been claimed in the United States and in Canada for the Turkestan Alfalfa. The results of experiments which have been conducted at Guelph,