The hay obtained is the main winter feed on the farms, and although in one or two cases it is sold for local consumption the quantity available is rarely sufficient for the adequate feeding of the stock on the holdings, particularly on the larger runs. One of the most valuable uses of lucerne hay in Vincent County should be for the feeding of ewes during winter, and were sufficient lucerne grown for this purpose many of the holdings could turn off large numbers of fat lambs. Only on a few of the holdings are large flocks of sheep systematically fed with lucerne hay during the winter, but where this practice has been adopted it has given excellent results. In one instance the hay from an area of 50 acres supports approximately 2,500 ewes in lamb for a little over two months, representing a consumption of about 3 lb. of lucerne hay per day during that period when feed is scarcest. In this particular instance 50 acres of lucerne support the sheep for two months of the year, while 11,000 acres are used to support them for the remaining ten months. Can there be any more striking example of the value of lucerne in increasing the meat and wool production of the country?

Most of the crops are used solely for hay-production, but many growers, including those who sow a lucerne and grass mixture, either use the fields for grazing alone or for a spring hay-cut followed by either continuous or periodical grazing. The latter system of treatment—one hay crop followed by grazing—is the common manner of dealing with the non-irrigated areas of lucerne, which, though not so productive as the irrigated crops, could be grown much more extensively and with profitable results on the low river-banks and much of the lower slopes of mountain-ranges. The lucerne-grass paddocks suit admirably for both grazing and hay purposes, but if continuously grazed the lucerne is gradually killed out and the paddocks require renewing every eight or nine years. On the other hand, when spring growth is not stocked up to the time of the first hay-cut—and this applies to all lucerne areas in Vincent County—the lucerne remains permanent and dominant. As these grazed lucerne-paddocks are used in conjunction with grass pastures, no reliable figures of carrying-capacity are obtainable.

For the most part the lucerne stands are not cultivated, and are comparatively free from weeds, but the more common growths in the irrigated crops are Poa pratensis, rye-grass, white clover, red clover, mouse-eared chickweed, cocksfoot, dock, rib-grass; and in the non-irrigated areas storksbill, chickweed, goose-grass, barley-grass, sterile brome, and rye-grass. These are found in all crops in varying amounts, but only where either grazing methods or over-irrigation have been practised are they at all dominant. Where the weed plants have become aggressive a few growers have resorted to winter and "between cuts" cultivations with spring-tooth cultivators and toothed disk harrows, and under the ordinary conditions of haying, moderate irrigation, and reasonable stocking, successful results have been obtained. On the other hand, fields which have been spring-stocked instead of being hayed, or over-irrigated, do not respond to cultivation, but are apt to become badly infested with Poa pratensis.

CONDITIONS LEADING TO DETERIORATION

The conditions which lead to deterioration of the stands can be briefly summarized as follows:—