

or pastures. It was well remarked, when speaking of what is being done in Normandy, that the large quantities of manure and lime applied there to the permanent artificial meadows make the soil warmer, and more able to resist the damage done by the frost. This is very probably so in that country, where the soil only freezes superficially, and that seldom and for only a short time. But make the soil here as warm as you can, by manure and 'mendments, and I defy any one to heat it up enough to foil the attacks of a frost of  $-25^{\circ}$  to  $-30^{\circ}$  that after a thaw in winter has covered the land with a layer of water that in eight or ten hours is converted into ice stuck to the surface.

171.—SEEDING DOWN PERMANENT ARTIFICIAL MEADOWS.

As a guide however to farmers who may have such exceptionally situated land as that I have just spoken of, as being suited to the establishment of permanent meadows; the following is a recipe for grass-seeds suitable for the purpose.

Orchard grass.....	4 lbs.
Meadow fescue.....	5 "
Common broad grass.....	4 "
Meadow grass.....	4 "
Timothy.....	4 "
Alsike clover.....	2 "
White clover.....	1 "
Red clover.....	4 "
Meadow foxtail.....	4 "

Total to the arpent..... 32 lbs.

The mode of preparing land for a permanent meadow is the same as that practised for a temporary one; except that the liming should be heavier as well as the dose of manure, and a greater dressing of artificials should be applied just before seeding. For, it must not be forgotten that land laid down for permanence cannot be manured for some time in any other way than by top-dressing. As soon as a permanent meadow is laid down, it is to be treated exactly like a temporary one, except as to certain top-dressings of which I shall speak when I am treating of permanent pastures.

172.—PERMANENT PASTURES.

All hilly soils, that cannot be ploughed, should be in permanent pasture; as well as rocky land, where stone-clearing is impossible or too costly, and all land that, for some reason or another, cannot be worked. The settlers in mountainous districts, such as are many townships in this province, on the slopes of the Laurentians and the Alleghanies, are the most in a position to convert all these declivities, recently cleared, into permanent pastures. For that purpose, it is only necessary to attack the soil at once, before