

MANITOBA AGRICULTURAL COLLEGE.

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## Suggestions on the Treatment of Alkali Soils

As the price of farm lands in Western Canada advances, the question of bringing small areas of alkali land into proper condition for crop production must receive more attention. An alkali spot or two of from one to five acres in extent upon a good farm will often spoil the sale of the place, the purchaser fearing that more of the land may prove alkali during unfavorable seasons. The suggestions in the following brief article are not for the large areas of alkali land but for the small spots varying in size from a few square feet to five acres in extent that are sometimes found on otherwise excellent farms.

### *Origin.*

In all parts of the world where the annual rainfall is less than twenty inches, soils so charged with soluble salts that plants cannot grow upon them are found, and these soils are known as alkali soils. They are simply the result of the conditions under which they were formed, namely: first, a light rainfall, not sufficient to wash out the soluble salts as is done in the humid districts; second, poor drainage, allowing the water to gather in low places; and third, the excessive surface evaporation that takes place in the semi-arid districts, bringing all the soluble salts to the surface in a more or less concentrated condition, where they are most injurious to crops when the plants are young and tender. It stands to reason that these soils should be as productive as the surrounding soils of the same origin if they are properly reclaimed, and in many cases this has proven to be true.

### *Two Classes of Alkali.*

There are two classes of alkali soils, "white" and "black," so named on account of the color given to the soil. The white alkali is by far the most common in occurrence in Manitoba, and is largely due to the accumulation of common salt, Glauber's salt and Epsom salt, which