

to the presence of different salts or to the fact that barley requires a shorter season, hence allowing cultivation to be done two or three weeks later in the spring. After such treatment the land can usually be handled the same as the rest of the field, keeping in mind that *deep preparation* and *thorough cultivation* are essential in keeping alkali soils in a productive condition. Out of the fifty students that have reported on alkali soils in the past two years, about 75 per cent. have mentioned some such treatment as outlined above, and in 85 per cent. of the cases favorable results were obtained.

The following method of treatment has given good success in several parts of Manitoba. The straw is threshed upon the small alkali spots, and the stock allowed to feed around the straw stacks. Then the bottoms of the stacks are scattered and plowed under or all the straw that will is burned and the rest plowed under. The straw acts the same as the manure, and the spots are cropped as mentioned above. Mangels may be used in the place of sugar beets, giving almost as good results.

Summary.

1. Alkali soils are due to an excess of soluble salts in the soil.
2. Caused by lack of rainfall, poor drainage and surface evaporation.
3. Two classes, "black" and "white."
4. There is as yet no economical chemical means of treating white alkali.
5. Provide the best possible drainage.
6. Make heavy application of horse manure.
7. Plow deep and cultivate thoroughly.
8. Crop with sugar beets or mangels one or two years.

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