

MAMMOTH CLOVER AND ITS ADULTERANTS.

This fine clover is not so well known in Kentucky as it should be, and genuine seeds are not often seen in our market. It is adapted to rather wet soils, and may prove hardy where the common clover fails. The plant is larger, more hairy, and the flowers appear a little later. In general the two plants are so much alike that the differences would be passed unnoticed. The seeds resemble each other so closely that good characters for their recognition cannot be given. In colors, shapes and sizes they agree very closely, and the only direction in which fraud is likely to be practiced is in substituting the seeds of the ordinary red clover for those of this rarer species. Seed decidedly wider at one end, indentation decided; scar nearly median. Size, 0.08 by 0.06 by 0.04 inch. Colors like those of red clover seed. Even the purple line from the scar toward the small end, is present. Fig. 8, B.

ALFALFA AND ITS ADULTERANTS.

This plant has become popular of late because of a general recognition of its many good qualities, and also because red clover, dear to every farmer, has not recently grown as well in some parts of Kentucky as it did formerly. The difficulties with clover are of several different sorts. I find, (1), that some seed produces plants that are little more than annuals and when allowed to grow at will and bloom, these varieties are likely to show a decided falling off the second year if they do not fail entirely. (2) A small beetle (*Systema blanda*) has been found to attack very young plants, and sometimes destroys whole plantings before the owner becomes aware that mischief is going on. (3) Some of our soils have been so completely exhausted of humus that clover will not grow in them unless they are fertilized with manure. (4) Finally, it seems probable that acidity of the soil is in some cases responsible for failures, a trouble which might easily be remedied by applications of lime. This is not the place to discuss these matters at length, and further reference to them must be left for a later publication.

Alfalfa, too, has its difficulties, but through ill-considered assertions appearing in newspapers and magazines, farmers gener-