

and soil, were planted some five or six years ago, one with about 1,200 trees, embracing 118 varieties of the hardiest apples to be found in America, including the Duchess of Oldenburgh (originally from Russia); the other with about 1,000 trees, consisting entirely of Russian sorts. The winter of last year was very severe in Iowa and the result was that fully three-fourths of the trees composing the orchard of American selection were killed. Chief among the survivors was the Duchess of Oldenburgh, with a few others, while in the adjoining orchard, composed entirely of Russian sorts, consisting of over 100 varieties, not a single dead tree could be found.

Since their introduction, Prof. Budd has propagated these trees with great industry and has succeeded in establishing among the farmers and fruit growers throughout Iowa no less than 800 sub-stations where these fruits are being tested. 15,000 apple trees were distributed in this way last year. Many of the apples are said to be of very good quality. Six varieties of the Duchess family have been fruited, which will extend the time of the Duchess period fully two months. The best sorts of Russian apples are said to improve in quality when grown in America. The Duchess of Oldenburgh is believed to be a finer apple here than it is in Russia; this idea is quite consistent with what we know of English apples cultivated in Canada. There are conditions in our climate or soil which develop in many English and other fruits a high flavour and quality unattained in their native home.

Forestry.

Forest clumps and shelter belts have been successfully established at several points on the college farm, and the trees are growing thriftily. All that portion of Iowa through which I passed bore evidence of the interest taken by the people generally in forest planting. On a large proportion of the farms more or less land is devoted to that purpose, and clumps of young forest trees, varying in magnitude from one to ten acres, are constantly to be seen, beautifying a landscape once so monotonous, and providing shelter for man and beast.

Botany.

In this department of work, carried on until recently by Prof. Bessey, much has been effected in investigating the various species of smut injuring grain, and their effects on stock and horses in causing disease when eaten. The flora of the State has also been thoroughly worked up.

Entomology.

Prof. Osborn, who has this branch in charge, has been very assiduous in working out the life history and habits of the many species of external parasites which affect cattle. He has also specially studied the Phytomyiidae, a group of insects the individuals of which are so small as scarcely to be visible to the naked eye, which, never-