

in the external aspect of American husbandry. In some respect the prospect is often indeed unsatisfactory to the English eye. In the new parts of the country the primitive graces of the landscape are ruthlessly violated, while the artificial trimness to which we are accustomed has not begun. We mourn over the blackened and girdled giants of the forest, each of which would be the sylvan honor of an English homestead—our fastidious taste complains that the furrow is not straight, that the wheat is not clean, that the swamp is not drained, that the sward bristles with obnoxious stumps; that there is a general absence of root or green crops, and we discover a great deficiency of sheep. In the regions which have been longest under the plough, the vital forces of the soil seem to have been frequently overtaxed; the more valuable cereals are abandoned, and here and there the wilderness resumes its sway. It requires but little reflection to show that these phenomena are the natural and transitory concomitants of the first epoch of tillage, which is hasty, pitiless, and impoverishing. On the other hand, I remark that in many portions of the Union there are extensive tracts which would be considered opulent and well ordered in any European kingdom. In the absence of turnips, potatoes, and mangold-wurtzel, the English traveller is gratified by the spectacle of Indian corn, tobacco, and the vine, and further south, by the cotton plant, the rice field, and the cane, all magnificent and lucrative productions, unknown to British husbandry. There is also a greater abundance of fruit trees; the breed of horses equals that of the mother country, except I think, for the purpose of heavy draft; and the various races of cattle replenished by importations of the best blood of England, will be propagated without degeneracy, and will be formidable rivals to the parent stock.

In a country where human labor is exorbitantly expensive, the greatest ingenuity is exerted in the improvement of tools and the invention of mechanical aids and substitutes, and in this respect the triumphs of American contrivances are not only profitable at home, but are recognized and adopted by foreign nations. Much, gentlemen, has been accomplished, and the future will furnish still higher results. If we regard the dissemination of intelligence, the diffusion of tastes for rural pursuits, the increased application of capital, the scientific inspection of soils, the discriminating use of manures, the development of the home market, and the general establishment of competitive exhibitions, we may safely affirm that American agriculture has entered upon a period which will not only be reparative where the past was exhaustive, but which will gradually carry the land in every quarter to a high pitch of productiveness and beauty.

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### RUST IN OATS—WHAT IS IT?

Under this head the *Southern Homestead* of last week makes the following remarks. The subject is one of great interest to farmers, and the investigations should be prosecuted until the cause of their new enemy is ascertained, if possible:

Throughout the whole south western portion of the Union the oat crop has suffered from a terrible blight, which from its resemblance to the fungus substance that sometimes attacks wheat, by that name, has been called *rust*. So far as we are informed, rust in oats has hitherto been unknown. We have never read of anything of the kind, in any section of the country. The fact that it is thus unusual, opens a wide and interesting field to the entomologist, as it invites investigation in a channel, so far as we can ascertain, heretofore unexplored.

While in West Tennessee, a short time since, we took occasion to examine the blade of the oat under a microscope, (kindly furnished us by the Bailey Troupe,) and were greatly surprised with the phenomena which the glass revealed. Since then, we have followed up those examinations, by the aid of more powerful instruments, at the Medical College in this city, in company with several scientific gentlemen.

The cause of all this destruction of the oat crop is a living worm, too small to be plainly seen with the naked eye. A single blade or leaf of the oat sometimes contains hundreds of them. They lie encased in the tissues of the leaf or blade where they have been germinated, beneath the epidermis, or thin pellicle over the exterior portion of the blade, and as they progress in development, the skin of the leaf is raised into curious puffy blisters. The growth of the worm subsequently ruptures these, and it escapes to feed upon the plant. When first released from their covering, they are of a beautiful