

the province in chess and smut alone, equals yearly the sum of some hundreds of thousands of pounds. We now come to a more interesting, and at the same time intricate as well as important branch of the science of wheat-growing, viz:—

Rust.

We have long entertained the opinion, that in a great majority of cases, rust might nearly, if not altogether, be prevented; this opinion has not been hastily formed, but has become more deeply established in ratio with our increased experience. Every observing person must have noticed that rust is less frequent on some soils than others—those which most usually escape, being denominated lean soils, and those which most promoted the disease, of the opposite quality, or such as contain a large share of decomposed vegetable matter. It is now generally supposed that rust is occasioned by the overflowing or bursting of the sap-vessels, produced by too luxuriant a growth of the plant. Some attribute it to other causes, but this appears to us the most feasible. Some seasons encourage the disease more than others; for instance, the summer of 1839 was so well calculated to produce a pretty general rusty crop of wheat, that a person acquainted with its cause and operations could have foretold the result some months before the calamity happened. The present season has been one of the opposite character. No one scarcely calculated on rust the present harvest, and few have suffered to any considerable extent. The weather has a powerful influence in promoting or allaying this direful foe to the wheat-grower; but, on the other hand, the cultivator has nearly as much.

1839, the year of general rust in North America, there were scores of fields which escaped, although being immediately in the vicinity of some fields which were totally destroyed; and the present season, which will be long noted for the absence of the disease, there can be found in almost every section of the country, some fields or patches so seriously injured, that they have not paid the expense of harvesting. The soils which produced wheat free from rust in 1839, was either a calcareous clay, limestone-gravel, stiff sandy loam, or all of the other description of soils which are noted for their comparative barrenness in vegetable matter; and those upon which the wheat crop have failed the present year, are of a deep rich vegetable quality, which are better calculated to produce straw than wheat.

The skilful cultivator will avoid, if possible, making his land so rich that his wheat-plants will be in danger of becoming surfeited with vegetable food,—the means of doing this will be found in manuring the land for the crops which will precede or follow the wheat crop, and by deep ploughing and liming or marling the land for this crop in all cases where the soil is deficient in calcareous substance. Much of the land in Canada is too rich for fall wheat, and on all soils that would be likely to produce a great bulk of straw, it would be advisable to reserve such for spring wheat. We feel a certain degree of delicacy in extending our remarks upon rust, because we are confident that our readers are not prepared to agree with the deductions we have made. At another time we may have greater confidence in going more into the details of this highly interesting, and to some most intricate subject; for the present, however, we shall conclude

As proof of this bold assertion, we would instance the fact, that in the year