

DISEASES OF THE WHEAT PLANT.

A correspondent writes on this important subject as follows:

RUST.

"I have heard many causes assigned for rust that is such a source of loss to us farmers, but none I think nearer right than the one given by a writer in the 'Advocate' last summer. I believe with him that it is caused by a too rapid growth at night and drying up in the heat of the day; the stalks crack allowing the sap to exude from these cracks, forming what is generally called rust. A careful examination of the wheat soon after the rust makes its appearance will tend to strengthen this opinion. But the question arises is there no way to prevent it, and the only way we can arrive at a preventive is to fully comprehend the cause. If the cause assigned above is correct, I think thorough drainage an important thing as it would tend to produce a slower, and at the same time a harder growth of stem removing all superfluous dampness from the soil. Again, I would not apply any manure unless it was well rotted. Early sowing has its advantages as the wheat is more advanced when the rust strikes it, but I think there is more depending on the situation and the state of the soil than on the time of sowing. A high place is more likely to escape than a low one. I think the soil should also be loosened to a considerable depth in order that the wheat may take a deep root, and it will be less dependant upon the surface moisture, thereby being better able to supply the loss by evaporation during the heat of the day.

SMUT.

I have endeavored to find some cause for it but am not perfectly satisfied. As a preventive I would prefer to have my seed fully ripe, and in all cases the soil should be in good condition. I wash it in blue vitriol and am convinced that this, to a certain extent, is beneficial. I have sown some dry and some washed, and the latter was full of smut while the former had very little. I consider one pound of vitriol sufficient for eight bushels of seed—though practice differs.

CHES.

This is undoubtedly a production of partly killed wheat, but it will also come from oats. If you do not cover your wheat well you may rest assured of plenty of chess. My experience has taught me that if I sow good clean seed and have the ground in good order and drained so that no water can remain on the surface and cover the grain well that in ordinary seasons I have not much to fear from chess. Will some of your correspondents express themselves on this subject?

RUSTIC.

CHANGE YOUR WHEAT.

Humphrey Hughes, Esquire, of Treadwell Post office, writes a highly commendatory letter accompanying his subscription for the current year. In conclusion he says:—"I would be happy to get a small quantity of your best seed wheat and oats for spring sowing, but I am at a loss to give such directions as will enable it to reach me, for I live some forty miles from Ottawa. I know you are right in advocating the urgent necessity for a change of seed. That is a benefit.

I have demonstrated by actual experiment. Three years ago my own seed wheat threshed from nine to ten bushels per acre, while seed I procured some twenty miles distant, yielded seventeen and a half bushels per acre. It grew on dry gravel land, but I sowed it on loamy land. I believe the change of soil does a great deal, but the change of climate does more in my opinion. Our seeds degenerate every year, so that if we do not get fresh seed we are losing all the time."

[Let us hear from you again.—Ed.]

COUNTY COUNCILS.

The criticisms on the nameless scribbler who attempted to impeach the honesty of our Councillors, has called forth a varied expression of feeling. Two have written denouncing us, and concluded their letters by asking us to erase their names from our list. The only answer we have to make is brief. We did what we considered a duty, and nothing that we have heard since our last issue, causes us to regret the course pursued. If the reputations of individuals are to be left to the mercy of anonymous writers who would be safe? If a public abuse is to be reformed, or if persons are untrue to their duties, why need a man shrink to proclaim his intention or his name? In a country like ours, where freedom of speech has such latitude, no one need fear personal violence for outspoken criticism. We did not attempt to answer in detail, the remarks of "Rate payer," from the fact that it was merely a bundle of absurdities, such as characterize the general tone of those who have no objection to use the slanderers weapon, if they can do so in the dark. It was written no doubt, to serve a political purpose, and perhaps performed its mission. With this view of the production we will not meddle, but we wish our subscribers to understand, that while we are always willing to assail that which we deem to be public evils, we have no sympathy with those who claim to be working for the public good, and are too modest, or if you please, too cowardly, to give their names. Proof, not assertion, is what we ask, and without it, we are slow to believe that men of the social and moral position of our councillors, are, according to "Ratepayer," mere pilferers of the public funds.

FRANG'S CHROMOS.—The New York Herald in an animated description of an Art Exhibition in that city, speaks in the following high terms of these beautiful pictures:

Side by side with the original of Bierstadt's "Sunset in California" was exhibited a chromo copy by Prang, and so faithful is the reproduction that at first glance it is impossible to distinguish between them. Equally faithful chromos of Johnson's "Boyhood of Lincoln" and Coreggio's "Magdalena" were also on view.

In England the average yield of wheat per acre is twenty four bushels; in the United States, twelve bushels; in California, forty-five bushels; and in Santa Clara valley, ninety bushels.

ORIGIN OF FRUITS.—Prof. Karl Koch, of Berlin, in a recent paper before the Norwich meeting for the advancement of Science, has proved that the almond is the parent of the peach, as has long been supposed. He did not believe the Green Gage Plum was derived from the same parent as the Damson and ordinary plums, he thought it came from a distinct species. He thought all the cultivated cherries came from one species.

The total quantity of milk delivered in London by railway last year, was 6,309,446 gallons, or above 120 gallons per week.

It is thought the California wheat surplus for export this season will reach 350,000 tons.

FREEZING FOR CROPS.—Mr. Samuel Westlake, of Knoxville, who has farmed in Iowa for twenty years, says he has never known it to fail, that a winter which froze the ground very hard was followed by excellent crops the next summer. All will remember that last winter and summer were a notable example of this rule.

DOES IT PAY TO DRAIN.—Every day we receive testimony that money expended in reclaiming swampland is not lost. Near our large cities land is valuable owing to market facilities, and many tracts hitherto deemed worthless are being brought under the plough. Mr. Pike, the New York opera house proprietor, recently purchased 4,000 acres of Jersey salt marsh meadows, at a cost of about \$16 an acre. After draining and reclaiming it at an average outlay of \$83 an acre, he is now offered \$900 per acre for the entire property, thus yielding him a profit of millions, if he chooses to close the bargain.

The Galveston Civilian says that cattle over a year old, which have not been marked or branded, are everybody's property in Texas, and may be killed by any one who meets them.

IMMIGRATION.—We have a communication from Mr. John A. Donaldson, giving a statement of the arrival of immigrants at this point, showing a marked improvement in the numbers that remained in Canada this year over last. In 1867 only 2,105 remained with us at this agency out of a total of 16,288, the balance, 14,092, passed through to the Western States, while this season, out of 23,505, 4,671 remained in this country, the balance 19,734 passing through.—[Globe. 16th.]

Cincinnati brewers are importing barley from Germany. They say it weighs eight pounds more to the bushel than the American grain.

At the Mount Forest Castle Fair, on the 16th ult., the average prices were—for oxen, \$60 to \$75; steers, \$35 to \$45; cows, \$16 to \$20, and heifers \$10 to \$14.

HOGS IN ORCHARDS.—A correspondent of the Missouri Republican adds his testimony to the good influence executed by hogs when pastured in the apple orchard. After trying all the reputed preventatives of insect ravages he came to the conclusion to give up fruit growing, when he was advised to make a hog pasture of his orchard, which he did, and the result was the insect enemies rapidly disappeared and his fruit trees commenced to give their customary yield—the trees seeming to have new life imparted to them.

THE FATTING HOGS.—Should now have every care, if they are not already in the pork barrel. Keep their pens warm, fat is fuel which will be used to keep its wearer comfortable unless other means of warming are provided. Feed often and a little at a time. Cooked meal or pudding, a little warm, is the best. If you have no convenience for cooking, a barrel in the corner of the kitchen, or in the cellar, can be used in an emergency. Put meal enough for a feeding in it, turn on boiling water sufficient to make it moderately thin when stirred up, throw a blanket over it and let it stand until cool enough to feed. A little charcoal, a very few wood ashes, or a chunk of rotten wood should be given them occasionally.

HARROWING.—In harrowing it is best to pass over the ground lengthwise the first time, then diagonally, and lastly across the furrows. Always roll the land in the first place—this will press down the furrow slices and give greater efficiency to the action of the harrow by obviating the tearing up and displacement of the sods by the teeth. Harrows of different sizes and different degrees of fineness should be used, especially where fine tilth is desirable, and this is always the case when grain or small seeds are to be sown. Where but one harrow is employed, much of the strength of the team as well as a large portion of the time and labor expended in the operation, is unavoidably lost.—Fx.