

THE WHEAT MIDGE.

The Rev. C. J. S. Bethune, in a most interesting and valuable article on "Insects Affecting the Wheat Crops," having spoken of the introduction into this country of the midge and its destructive power, speaks of the remedies:—

1. *The Natural Remedies.*—There are three parasites which seem to have been ordained by the Author of the universe to limit the depredations of the wheat midge, and they so effectually execute their mission, that it has often happened, a year or two after the midges were in excess, not a specimen could be found. * * * The only other natural remedy for this pernicious insect, that we are aware of, is the beautiful yellowbird, or goldfinch, that is so common throughout this province. We have long regarded this sprightly creature as a special friend of the farmer from its habit of devouring the seeds of thistles, and other annoying weeds; but we learn from Dr. Fitch that it deserves additional commendation from its being also a destroyer of the wheat midge. * * *

2. *Artificial Remedies.*—Though we are so deficient in natural remedies for the devastation of the wheat midge, there is no doubt that much can be and has been done by the farmers themselves. These methods of reducing the insects' ravages are now so familiar to all our intelligent agriculturists, and are so simple in themselves, that we may be excused for dwelling but briefly on them. (1) Be careful to burn all the screenings of the wheat after it has passed through the fanning mill; these, when the midge is prevalent, often contain thousands of the yellow larvae, which will live through the winter, and produce flies for another crop, if not then destroyed. (2) Plough deeply in the fall any field that has been attacked by the midge during the previous summer, and take care to occupy it with some totally different crop during the following year. (3) When the midge is in the neighborhood, sow only the improved "midge proof" varieties of wheat. (4) If spring wheat, sow as late as is consistent with safety, in order that the plant may not come into blossom until after the midge's period of active operation is over. (5) If fall wheat, sow early, in order to anticipate the appearance of the midge. (6) Avoid sowing upon low, damp ground, as it especially favors the midge. (7) Thoroughly prepare and cultivate the ground, in order that you may obtain as strong and healthy a growth as possible. After all this has been done, we add (8) put your trust in Providence. As we may be at any time afflicted with another visitation of this scourge, though probably not for some few years now, remember—when it does threaten—that there is much truth in the old adage, "An ounce of prevention is better than a pound of cure."

MIXED HUSBANDRY.

We have heretofore frequently urged the importance of mixed farming, as being more profitable and better adapted to most men than running any specialty upon the farm. Every day convinces us more and more that this is the only prudent course to follow.

Medina county, Ohio, furnishes a good example of the unprofitableness of special farming. In 1866, this county had 17,130 head of cattle, and 261,616 head of sheep; now it has 28,373 cattle, and only 51,757 sheep. In 1866, and for some years previously, wool commanded good prices, and too many farmers rushed into the sheep business. After that date wool declined in price, and farmers turned their attention to cattle, as offering better inducements than sheep. Now wool has advanced materially, and cattle have declined; and to the extent that the farmers of Medina exchanged sheep for cattle, to that extent are they losers.

We do not urge that sheep are more profitable than cattle, but believe rather the contrary, if either of them is kept as a specialty. What we do believe is that the farmers of that or any other county should so divide their stock and products as to be ready to receive the benefit of a rise in the market; and it rarely or never happens that all kinds of stock and crops will be below a certain price at the same time.

HOW TO MAKE HAY-CAPS.

Hay-caps consist of firm cotton-cloth or sheeting, about six feet square, having the raw edges hemmed and an eyelet hole near each corner, through which wooden pins are thrust into the hay to hold the cap in its place on the hay-cock during stormy weather. The most economical way of making a number of them is to procure sheeting about two yards in width, and hem the edges with a sewing machine, after which turn over each corner about three inches, and sew the edges down tightly with strong thread. Near each corner make a circular seam or two, about three-fourths of an inch in diameter, for the pin poles. If the sewing is done with a machine, it will be well to make two seams close together, after which thrust a boltkin through and make half an inch in diameter for the pins. To render the cloth impervious to water let it soak in warm coal tar for a few minutes, after which wring it as nearly dry as may be practicable. The caps will then be fit for use. Coal tar is preferable to paint or oil, as a coat of paint will render the cloth heavy and stiff, and oil would damage the strength, and will not render the caps so durable as coal tar. More than this, oil or paint will be found much more expensive than tar. If the tar be applied as directed, it will dry readily, and will not leave the cloth so stiff as paint. Four wooden pins will be required for each cap. Each pin should have a head about one inch long. If the pins be soaked in oil it will render them durable.

Haycaps will be found useful and valuable for protecting all kinds of cereal grain and stocks of Indian corn in autumn, as well as for turning the rain from hay after it has been gathered in cocks. In autumn the stalks of Indian corn are bound in bundles, set in round shocks, and a cap drawn over each shock, except when the weather is fair. By employing caps the corn can be kept in shocks until the leaves and stems are thoroughly cured, and the fodder will be green and fragrant, and twice as valuable as if it had been exposed to the influence of the autumnal storms and sunshine. Very few farmers have provided haycaps, as they do not fully appreciate the value of such appliances, especially of protecting wheat from storms. Almost every farmer loses enough during haying and harvest to cancel the entire expense of a supply of caps.—*N. Y. Times.*

TEXAS FARMERS ON STRIKE.

Nearly 200 farmers and farmers' wives lately met at Clinton, Douglas county, Kansas, to discuss "the commercial element in agriculture." Thirteen resolutions were adopted, and numerous speeches made which are reported in the *Republican Journal of Lawrence*. It was contended that "the fundamental interest" now lies prostrate, contending with other labor and professions at odds of from two to ten against it; that farmers are under the humiliating necessity of submitting to the unjust terms of persons whose emoluments are found in depressing the value of articles they wish to accumulate; that if this sort of thing continues much longer, impoverishment and ruin will stare the farmers in the face; and, finally, that this "ridiculous usage" is unnecessary, and that united and harmonious effort on the part of farmers might speedily extricate them from this galling and absurd position. The suggestion was made that farmers should store grain in large warehouses of their own, instead of hastily parting with their crops to the obnoxious middleman. This would enable them to follow the wise practice of other producers, and in the event of a plentiful season, or of a decreasing demand, hold their wares until the market is restored. Thus the surplus of one year would provide for the contingencies of the next, and the results of a short crop or of a large over-crop would be neutralized. It was stated that if 2000 farmers united in a co-operative union, they could obtain the best of terms. For example, a grocery man in Lawrence had already offered, if 100,000 dollars trade were given him, to do it at a profit of only six per cent.; if 200,000 dollars, at five per cent. A firm had offered to furnish clothing at a reduction of from 40 to 50 per cent. on the present prices. "Parties had agreed to handle grain for two cents a bushel," Governor

Robinson remarked that the control of a warehouse would be of great advantage. Farmers could store grain and take receipts for it, and upon those receipts get all the money they needed for paying taxes and other bills, and thus take the advantage of any rise in the market. Another speaker pointed out the double character the farmer sustains. He is merchant as well as producer. It is as dealer for the disposal of his wares that he frequently fails. Almost any man of ordinary common sense can raise fair crops, but when he goes into market as a trader among men who make that department a special study, he operates against heavy odds. The margin of ordinary profits oftentimes lies in a cent or a half-cent in the pound, or a few cents on the bushel. The farmers by proper organization could secure great advantages to themselves. In the end the convention elected a board of ten members from among the practical farmers. To procure a charter incorporating the Douglas County Farmers' Co-operative Union, with power to do a general mercantile, for carrying and commission business, and to contract for the doing of the same with other parties in the interest of farmers."

WHY ANIMALS NEED SALT.

Prof. James H. Johnson, of Scotland, says that half the saline matter of the blood (75 per cent.) consists of common salt, and as this is partly dissolved every day through the skin and kidneys, the necessity for continued supplies of it to the healthy body is sufficiently obvious. The bile also contains soda (one of the ingredients of salt) as a special and indispensable constituent, and so do all the cartilages of the body. Stint the supply of salt, and neither will the bile be able properly to assist digestion, nor the cartilages to be built up again as fast as they naturally waste. It is better to place salt where stock can have free access to it than to give it occasionally in small quantities. They will help themselves to what they need, if allowed to do so at pleasure, otherwise when they become salt hungry, they may take more than is wholesome.

In insular countries, as the British Isles, the salt necessary for stock is, in a great measure, supplied by natural means. The great evaporation from the seas takes up with the water a saline element, and this descends upon the earth. In such places it serves as part of the food of vegetation, thus becoming imperceptibly a component part of the food of cattle, and besides, much of it is taken by them off the earth before it has time to be absorbed by the plants. Living off the western coast of Ireland there is a group of little islands, the Blaskets; they are the most westerly land of Europe, nothing living between them and the western world but the great Atlantic. They are often washed by the salt spray of the great ocean, hence the grass is continually salty. The consequence is that the mutton of the Blasket sheep, flocks of these animals being continually pastured on them, has a peculiar richness and delicacy of flavor not to be equalled by that fed in the richest pastures of any other place.]

HOW GYPSUM ACTS UPON SOILS.

The exact way in which gypsum produces its fertilizing effects is not well understood, although it is understood that the chemical changes or transformations which occur when it is brought in contact with soils are not of a uniform or fixed character. Upon the conditions which exist, as regards the presence of vegetable matter and moisture, depend the changes that take place.

We have proved by actual experiment that gypsum is capable of absorbing ammonia from the air and also from decomposing vegetable matter, being thereby changed into hydrosulphide of ammonium; and this again may be changed into carbonate of ammonium by absorption of carbonic acid and the air. These changes take place when gypsum is brought in contact with moisture and vegetable matter. Whatever other decompositions may take place under different circumstances this may be regarded as the most important, as from it plants are supplied with food of the highest value.

From these ascertained facts we should infer that plaster must prove highly serviceable to moist, mossy hills, and also to meadows not too wet, and this has proved correct so far as our observations extend. Often we have found that the north side of a hill, will be

greatly benefited by plaster, while upon the southern exposure it has no perceptible effect. This is due to the fact that the northern slope is cooler, or often in the shade, and has moisture, and a larger amount of partially decayed vegetation, to aid in the promotion of these chemical changes to which we have alluded.

It is certain that it does not matter so much what may be the nature of the soil to which we apply plaster, as external agencies are principally concerned in fitting it for plant food.

While the question as to how plaster acts in all cases as a fertilizer cannot be regarded as fixedly settled, yet we have certain facts to guide us in its application which are of the highest importance. With what we know, it would be absurd for a farmer to apply the agent to a dry, stony plain, or to a lot, improved hill; and also it would be unwise to sow upon a meadow which is covered by water six months in the year.

It must also be observed that the season has much to do with the effects of plaster.—During the past three or four seasons of extreme drought, its application has notably failed upon almost all fields, but as soon as we have continued moisture through the summer months, it will manifest its influence upon vegetation.

Plaster may be applied with confidence to pastures and fields which are strong enough and moist enough to sustain a growth of deciduous trees. Pine lands are not usually benefited by it. A hillside where mess will grow so as to crowd out grasses is usually promptly benefited by plaster, and the white clover comes in at once.

These suggestions we think may serve as an imperfect guide in applying a cheap and important fertilizing agent to our fields, also serve to show that we are not entirely in the dark respecting one of the most obscure problems connected with husbandry.—*Boston Journal of Chemistry.*

THE BEST WHEAT REGION.

We sometimes compare our farming with the English, and because we do not raise near the average per acre of what that the English do, often lament the condition of our agriculture; and it is the burthen of many a farmer whose knowledge seldom extends beyond the writing a treatise as to "what he knows" that the time is to come when Americans will so understand scientific principles as to produce wheat, acre per acre with the best English and. But every country has a peculiar climate of its own which favors certain productions, and these climatic conditions are beyond human control; no scientific principles will ever supply them, and no knowledge we may ever possess will ever enable us to raise wheat to the same weight per acre as the English can. The wheat plant, to come to its greatest perfection, requires not only a certain quantity of heat, but that heat should be extended over a certain time. Our wheat is ripe in July. The English harvest in June. Our summer heats come suddenly in May, and the plant matures before it has time to arrive at its greatest weight. The cool, gradual spring of England just suits, and these conditions we shall never possess. As to these frequent comparisons of English farming with ours on account of the wheat crop, it would be as rational to expect English farmers to decay their agriculture because they cannot grow Indian corn as well as we can. Let us look to our own advantages, and we shall see enough to be proud of without envying other countries.—*Weekly Press.*

THE HAY CROP IN THE UNITED STATES.

The American *Rural Home*, Rochester, fears for the hay crop of the United States. We make the following extract from its last issue:—"The farmers of this State, looking at their meadows either new or old, may conclude that the hay crop will be short—much below an average. The earth is dry; only a few passing showers have as yet moistened the surface during the whole Spring, and the springs, wells, and streams remain low. This state of affairs is prevalent throughout the chief hay producing regions of the country—New York, New England and large portions of the West. There is no chance for a tolerable hay crop, and coming after such a season of scarcity as that past, this prospect is somewhat alarming. It will not do for the farmer to be caught with winter