trays a perfectly developed tooth — But before the tooth is fully formed the ring of worn structure is incomplete, there being a portion not in wear behind the mark, giving the tooth a shell like appearance. After the tooth is perfectly developed and the table surface begins to wear down, it will be observed that the ring around the mark becomes thicker in front and thinner behind ; or in other words, that the mark becomes closer to the posterior than the anterior edge.

The Farm.

THE many kind words of encouragement we are continually receiving from our readers and patrons have been an incentive to us, to not only uphold the past reputation of the JOURNAL, but to keep ever progressing with the age. While others in the same field have suffered reverses, the influence of the JOURNAL has widened, and its power increased through the warm sympathy and hearty co-operation of our friends. A proper spirit of emulation spurs us on, and we feel sure, relying on our past experience, that we may look for every encouragement and material aid from our readers.

A 600b aftermath comes in well for the cows. There is a limit, however, in pasturing on it, beyond which it is not advisable to go, considering the effect on the crop of hay of the next year. The general practice appears to sanction the heavy pasturing of the aftermath until the cows go into winter quarters. The resultant effect of this is to expose the roots of the grasses, and this lessens their vitality so that they are not prepared to withstand the severe test of winter. Sufficient time should be allowed before the cold comes on to permit the grasses to form a mulcl or covering for its own roots and thus materially lessen the dangers of winter killing. A good top dressing of well rotted manure will also tend to decrease the chances of this occurring, and should not be neglected. A number have the idea that pasturing is a rest for land. It is a rest in so far as the cultivation is concerned, but as to its being a resting period in respect to the nutriment of the soil, nothing could be more far from the facts. A milking cow, a maturing steer, or a growing colt materially depletes the pasture soil for the time being, and every precaution should be taken to restore the materials abstracted through well rotted farm man ure, bone-dust, superphosphate or wood ashes.

The English Sparrow.

(PASSER DOMESTICUS.)

This bird, once the subject of misplaced kindness and care, has spread with such rapidity and has wrought such damage to garden and field products that now even those who were once its firmest friends are thoughtfully considering the question of its extermination. Even in its native home it finds but few friend's among those that have given the matter study, for there as shown by Mr. Omerod, it is fully as much a nuisance as with us. The wonderful fecundity of this bird and its ability to accommodate itself to surrounding conditions has given it a foothold in our land that will require united and persistent effort to overthrow. The first sparrows to be introduced to this country consisted of an importation of eight pairs to Brooklyn in 1850. Many others were brought over in the following years, and now we learn from a report of four hundred and five pages recently issued by the Washington Department of Agriculture that in 1886, when they were established, they occupied in

the United States and in Canada an area of 1,033,006 square miles — It is not necessary, however, to quote figures to emphasize this feature of the question, for the rapidity with which they increase and widen their territory is well known.

Of the damage done by these marauders, direct and indirect, the report to hand gives evidence enough from all parts of the continent of America to lead to their complete destruction. The grain crops, perhaps, suffer more severely from their depredations than any other product of the farm. During the winter months they live in the city, in many cases fed and cared for by mistaken philanthropists, and as soon as spring returns they leave the city in bands for the fields, and when the harvests are ripening the city is almost forsaken. Wheat is a favorite grain with them, and the damage they do this crop is enormous. With us the oat field suffers almost as severely from their attacks, while tye, barley, corn, and millet are by no means exempt. In the garden they injure fruit buds, blossoms, etc., and the collector of the facts given in the Washington report makes the statement that there is not a shadow of evidence for claiming that they only eat buds and blossoms containing insects. They make severe attacks in this way on the peach, pear, grape, plum, cherry and apple ; and even fruits are not excepted; and green vegetables, garden seeds, etc., come in for their attention. About 2,500 stomachs were examined and of these only about 14 per cent. contained insect remains. It is a fact that the sparrow does make away with injurious insects, but they only do so as a rule when other food is scarce; and further, they do not kill any but what our insectivorous birds would destroy, nor would they kill as many as the latter. Being courageous, cunning and good fighters, they soon displace many of our prettiest and useful feathered friends. The accusation of filthiness about buildings is a strong one against the sparrow, and on this score alone they have enemies.

Among the processes tried by the department that of white arsenic seems to be the most preferred. It costs about 7 or 8 cents per pound, and four pounds will be sufficient for a bushel of wheat, and this amount, which is much larger than most persons will use, would kill more than twenty-five thousand. It is advised that before putting out poison for sparrows that the birds be baited to a certain locality. At the same hour each day they should be fed with the same kind of grain that subsequently is to be used as the vehicle of the poison. Extra caution is necessary to prevent poisoning of domestic animals. - Shooting them proves an effectual means for a time, but they soon become shy, and the other birds also leave the locality. If our sporting clubs, that take such delight in mercilessly shooting p geons, would substitute the sparrow, they would remove the stigma attached to such sport, and he doing good work for the country. ____

Value of Kiln-drying Seed Corn.

For some time Dr. Sturtevant, of New York Experimental Station, has been studying the influences that bear on the germination of corn, and his conclusion is that it is a mistaken idea of many that cold always kills seed corn, he believing that the case is really, that at a low temperature corn germinates very slowly, and time is given for mould to grow, which succeeds very well under such conditions; and the mould destroys the vitality of the seed before it germinates. This being so, it follows that if preventative measures against this mould be taken, the seed may be sown earlier and less danger from late frosts. This experimenter has noticed that corn thoroughly

dried at harvest rarely if ever becomes mould-infected, and trials at their station prove that drying of seed corn is promotive of vigor, and if corn in the edible stage is quickly and thoroughly dried at a temperature of 100° or even higher, the important point being to secure warmth and dryness, he claims it will germinate readily. He states it to be a fact based on personal research that seed so treated may be expected to furnish plants of greater vigor than will be produced from the same seed preserved in the ordinary manner

Value of Leather as a Fertilizer.

The question is frequently asked regarding the precise value as fertilizers of certain kinds of animal refuse, as horn, hair, leather and the like. Those who gather such substances in large quantities in certain processes of manufacture are naturally anxious to turn them to good account. This is an anxiety which the thoughtful farmer will naturally share, as, owing to the perpetual waste in one form or another of the fertilizing resources at our command, it becomes us to utilize everything that will more than repay the handling to make up for the perpetual drain on the resources of the soil.

The importance of giving due attention to the husbanding of those sources of fertility becomes more pparent when we reflect upon the little use that is made of night soil, especially in Anglo-Saxon speaking countries, where, as a rule, it is all or nearly all drained into water-courses which eventually carry it down to the sea.

It is well first to consider in the application of all artificial fertilizers whether such application will repay the outlay, and of the various substances thus applied which will give the best returns.

Tried by this test the experiments in the application of leather-meal have not been altogether satisfactory, although leather scraps contain considerable quantities of nitrogen, varying from five to eight per cent. The great obstruction to its utility lies in its resistance to decay, and this is not to be wondered at, since in its preparation the processes of manufacture all aim at giving it such powers of resistance. Because of this property powdered leather is practically of no use as a fertilizer. The same, however, cannot be said of leather when subjected to the action of hot steam in a close boiler. When thus treated it becomes dry, hard and brittle, in which condition it may be readily reduced to the form of leather-meal. It has then an appreciable value as a fertilizer, since it enters into a state of putrefaction when moistened and kept in a warm place.

A simpler way of reducing it consists of an application of ashes, though the reduction is tedious and somewhat imperfect, and the value of the product impaired by a loss of ammonia, which also results when the leather is boiled in strong potash lie.

The thoughtful farmer will therefore exercise care as to the amount paid for such preparations. So long as phosphates and super-phosphates, products of dried blood, etc., can be purchased at moderate rates and in a pure form, they are likely to give more satisfactory results.

We can hope, however, that some process will yet be discovered by which even leather scraps can be readily reduced to that condition in which they may soon become available as plant food without first losing the nitrogen they possess, which is their most valuable property.

[&]quot;Enclosed please find \$1 to renew. We like the JOI NNAL very much, in fact it is a part of our stock in trade, and we can not do without it." -James Brown, Kent Bridge, Ont.