

If put on lightly, we presume we shall require to apply it five or six times during the season.

We have heard of an implement invented in the States that is wheeled up and down the rows, and shakes the bugs into a small box, from which they are taken and destroyed. We saw a flaming advertisement of one of these machines offering every inducement and guaranteeing satisfaction, or to return the money. We wrote to the advertiser for one but have not yet seen it.

The process of hand picking is out of the question when they are in full force; it might do with a few vines planted in a garden, but for the main crop it would cost ten times the value of the crop if they should be as thick as we have seen them.

#### State of the Crops.

The fall wheat will not be an average crop; there are some good pieces to be found in some parts of the country; in some sections the crops will be very light.

Spring wheat must be in many places a failure; insects have destroyed the plant; the average yield must be low.

The old meadows are very light; some of the new meadows will be fair, but the hay crop we do not consider, from our observations, will much exceed half a crop.

Oats, barley and peas must be light, although there are some fair pieces. There may be a medium crop, although they have been checked for the lack of rain.

The corn that grew is looking well, but great complaints are made that last year's seed did not grow well this year. From our own experience we find that ours grew well.

There has been a great demand for Hungarian Grass and Millet, because farmers saw their hay crop must be light. The pastures have been good, but the grain crops have not come in well; the dry weather set in too soon to suit them this year.

Late fruit prospects are good. Great complaints reach us of the destruction made by a green and brown grub in some of the northern counties; whole fields are being destroyed. Salt has been recommended as a remedy, but we hear of it having been tried without good results.

The root crops require rain to bring them forward in this locality.

#### Produce of Our Farms.

What the actual expenses of cultivating a farm really are is a question deserving our serious consideration, and yet it is one to which we give little thought. So much of what is consumed by the workingstaff of the farm—men and horses—is the product of the farm itself, and not purchased in the market, that we scarcely take these things into account. The provender for one horse is in itself no inconsiderable item. It has been computed by an American agricultural writer that it requires from fourteen to sixteen acres of land of average quality, and receiving average tillage, to produce hay and oats for a pair of farm horses for the year. We admit we were at first surprised at the result of his calculation, as it differed so very much from our own experience in this matter. But hear our authority for himself. He says:—"A pair of farm horses will consume in a year 6½ tons of hay and 270 bushels of oats, their daily ration being 18 pounds of hay and 12 pounds of oats for each. It will take 14 to 16 acres of average land to raise this amount of fodder." For horses, stable fed and working during the year, this allowance of fodder is not too great. But we ask farmers, is not one-fifth or one-sixth of the arable land of a farm too large a portion to be given to produce the fodder for the horses that work it. We have no doubt much heavier crops, both of hay and oats can be raised.

While admitting that, from the comparative shortness of the growing season, with the great heat of the summer, grain crops and grass are lighter in every country in America than in the British Isles. We are certain we could here, with better tillage, produce crops, if not as heavy as theirs, still not so much lighter as they are at present. We know the modes of farming, and the general produce of

large sections of the old country, and can therefore speak from our knowledge and experience on these subjects. There, 46 bushels (barrels of 196 pounds each) was under an average crop, our own average crop being nearly fifty per cent. heavier. Hay was still a heavier crop in proportion. Three Imperial tons per acre was nothing unusual on upland meadows—clover and perennial ryegrass sometimes mixed with other grasses. We mention this to stimulate you to produce heavier crops. This can only be done by deep ploughing, good tillage, heavy manuring, and sowing your grass and clover seeds while the land is in heart.

The average produce of Canada is somewhat, though not much, greater than that of the United States. Taking as our basis of calculation the Annual Report of the Commissioner of Agriculture for the Province of Ontario on agriculture for the year 1872, we find it will take more than 7 acres of oats of average yield to produce 270 bushels. The average of 1869 was 39 bushels per acre; of 1870, 29 bushels; of 1871, 37 6-8 bushels; of 1872, 33 bushels—an average for the four last crops of less than 35 bushels—seven and five-tenths acres to produce the 270 bushels oats required as above for a pair of horses. The average yield of hay is not given in the report, but from the partial report given, and from other sources, we may estimate the area required to produce the 6½ tons as not less than four acres—a total of nearly 13 acres to produce the hay and oats for a pair of horses, when stable-fed, throughout the year. Farm horses generally are not so fed for the twelve months; but the calculation is not the less accurate, as showing how much land it costs to feed a pair of horses; and it ought to urge us to enrich and thoroughly cultivate our farms as to produce a quantity of food from five acres equal to the present produce of twelve. To accomplish this, gaining a greater depth of soil by deep ploughing is the means. Other means, such as a judicious rotation of crops, and soiling our pasture, instead of having them to roam over pastures, will be found valuable aids. We will return to this important subject in a future number. —Ass't Ed.

#### The Agricultural Investment Society.

The office of this institution is next door to our establishment. We are personally acquainted with the directors, and can say to our readers who wish either to borrow or loan money, that we do not think there is a safer institution in Canada to invest in, nor one where persons can borrow money on better terms.

We consider that investments are much safer in this Society than in bank stock, because no money is loaned except on real estate. Those wishing to borrow will find they can procure it at much better terms at this institution than from some other establishments where money is loaned.—We do not doubt but that the stock of this company will soon be as much above par as that of any other institution of a similar kind.

The obliging Secretary, Mr. John A. Roe, will at all times be pleased to furnish information on applying to him personally or by letter.

#### TO PREVENT RUST.

Manufacturers of farm tools usually apply varnish to prevent rusting, but the cost and difficulty of removing it makes it unsuitable for home use. Whitelead is effectual in keeping off rust, but with this the same difficulty of removing is met. The best thing we have tried—and where the recipe was first given has escaped us—is whitening thinned with kerosene to the consistency of paint, and applied with a small brush or cloth. This readily rubs off, but will prevent rust for months. We keep it ready mixed, and when hoes, spades or plows are laid aside—if only for a few days—a coat of this preparation is given. The London Lancet says the medical officers of the British navy preserve their surgical instruments from rust by a mixture of carbolic acid and olive oil, in equal parts, smeared over them.

The butter inspection system is becoming general in the County of Wellington. The merchants of Fergus last week appointed an inspector.

The Winnipeggers are putting on airs already. The local papers there speak of things happening "in this city."



#### ARDEN AND FARM.

##### OPERATIONS FOR THE MONTH.

In the flower garden, finish the planting out of all the tender annuals. They will need shading and watering for a few days, till fairly established in the ground. July is a month of long days and great heat, so all plants lately transplanted need attention and care. Trees and shrubs newly planted need frequent and copious waterings. Keep the hoe and rake stirring among the drilled crops. The frequent stirring of the soil is not only the most effectual method of keeping free from weeds, but also of fertilizing it. The fresh stirred earth inhales the ammonia from the atmosphere. Keep a sharp look out for the insects that infest almost every species of plant. It has been said that lime dusted on currant bushes will drive off the currant worm, but we have always found hellebore the most effectual remedy. Do not forget the training of ivy, Virginia creepers, woodbine, &c.; nail up their leading growths and trim where necessary. Stake and tie all plants that need support.

In the vegetable garden, as in the flower garden, keep the soil *freshened* and the weeds extirpated by the frequent use of the hoe.—No weeds can withstand the repeated assaults of the hoe and spade. In two seasons we entirely freed our garden from some Canada thistles that had established themselves in it when in other hands. As your early garden crops are removed, prepare the ground where they grew for succeeding crops. Let there be no waste places.

The orchard will repay you abundantly for your care of it this month. It will thrive the better for having the soil enjoy the benefits of a summer fallow by turning up frequently. This is especially the case with young orchards. If your trees be overlaid with fruit, thin them sufficiently. The fruit you let remain till maturity will be better and more valuable, and you may save your trees from having their branches broken by being overlaid. Grape vines may in this month be propagated by layers, and the young vines be well rooted before winter.

Bees and beekeepers rejoice in the bounty of July. This month, above all others, the bees lay in their store for the winter. Buckwheat is a valuable addition to the scene of their labors. Bees require redoubled attention now, in this their honey harvest and time of swarming.

In the farm the root crops claim special attention. In the turnip field let any blank places be filled up by stirring the soil and sowing fresh seed, or by transplanting. We have had turnips transplanted and be a heavy crop; but we would advise sowing again in preference. If too late to sow Swedes, sow Aberdeens or Globes, or still later, White Storm turnips, as all these varieties require less time than the Swedes to grow to maturity; they may be sown so much later. A greater supply of fodder for the winter stock will, in all probability, be needed than our meadows will supply. It is not yet too late to sow corn for fodder. You may sow it up to the tenth of the month, and if the soil be moderately fertile, you may thereby make a large addition to winter provender for your stock.

The value of Hungarian Grass and Millet is hardly sufficiently appreciated. They yield large crops of hay, very nutritious when cut in proper season. Every due precaution should be used to provide for the farm stock in winter. The experience of last winter was a lesson that farmers cannot soon disregard. Let plenty of provender be secured and saved for the latter days of winter and the early spring. And if you even have some laid over it will not be waste. Remember the old country proverb—"Old hay is old gold."

Colorado stock men are purchasing blooded stock in Platte County, Kan.

A lady reader observes in regard to the effect of impure air upon butter, that there is a filthy stagnant pond of water a few hundred feet from their house, from which an offensive effluvia would be borne on the breeze directly to the milk room, when the wind was in a certain direction, the result of which was that the cream and butter would taste like the disagreeable odor coming from that pond. As soon as the pond was drained we had no more damaged butter.—*Homestead.*

#### Agricultural Items

By a recent law in Massachusetts a dozen eggs must weigh one and a half pounds.

The immunity from snow of Southern Colorado is one of its chiefest advantages as a stock country.

A good agricultural paper brings fifty-two prizes a year, and each prize is worth the price of the ticket.

Winter wheat in Washington Co., Wis., is in fine condition, and all that can harm it now are the Spring frosts.

A meat company has been organized in Texas to can all the beef they raise, and raise all the beef they can.

Southwestern Virginia is rolling North 1000 barrels of eggs daily. Southern pullets have grown industrious since the war.

By unanimous vote the next Page Co., Iowa, Fair will be held in the interests of agriculturists only, and there will be no racing.

Dogs recently attacked a flock of sheep belonging to H. A. Hawley, who lives near Mason, Mich., and fifteen were so badly bitten that they had to be killed.

Pleuro-pneumonia is spreading very rapidly in the vicinity of New York. Nearly all the cattle located in the suburbs have it, and most of the milk now comes from diseased cows.

At a recent sale of an English stud of horses Blair Athol brought \$67,500, Gladiator, \$35,000, and the whole number, 273 colts, horses and mares, sold for something more than \$500,000.

The very dry and changeable weather lately has very seriously damaged the growing wheat crop in Morgan and adjoining counties, Ill.—Many fields are entirely ruined and are being plowed up and sown in other grain.

The quantity of grain used in all the Peoria, Ill., distilleries for the past year was 1,640,795 bushels, and the quantity of high wines manufactured was equal to 83,331 barrels, amounting to 5,986,440 gallons of proof spirit.

W. B. Pratt, Calistoga, it is said, has grapes which he put in wheat chaff last fall and kept dry in a cool place all winter, which are now as plump and well flavored as when plucked from the vine.—*Homestead.*

- A barrel of flour weighs 196 pounds.
- A barrel of pork, 200 pounds.
- A barrel of rice, 600 pounds.
- A keg of powder, 25 pounds.
- A firkin of butter, 56 pounds.
- A tub of butter, 84 pounds.

An Oregon paper reports that an Eastern man is now in that State who has been purchasing horses in Idaho, Nevada and Eastern Oregon for shipment to Atlantic cities, to take the place of those killed or ruined by the epizootic. He has purchased and shipped over 5,000 head since leaving the Missouri river.

The Gratiot Co., Mich., *Journal* says:—We have talked with gentlemen from various parts of the county in regard to the appearance of the wheat, and all report it looking remarkably well under the circumstances. Should the weather from this on prove favorable, the wheat crop of the county will undoubtedly be a satisfactory one.

The economy of rapid and comfortable transit for beef cattle was recently shown at a meeting held in Manchester, England. The loss attending the driving of fatted stock on foot to market was 80 pounds per head per 100 miles; now a fat bullock is taken 530 miles by rail to London with a loss of 40 pounds only.—*Toca Homestead.*

The Ft. Madison, Wis., *Plaindealer* says that winter wheat as a general thing looks poor and in many cases will be plowed up. Rye promises well. Rain is needed very much, and without everything suffers. The grass is just beginning to show itself, but as yet is rather thin. Owing to the severity of the past winter feed is scarce, especially hay, which is worth from \$10 to \$11 per ton in the stack.

Improvement by selection is, saving those seedlings that show the most marked and improved type, from the original. If this is practiced for a few generations, the improvement will have become measurably fixed. All our finest vegetable productions were originally obtained, either by artificial or natural selection, and subsequent good cultivation.

I greatly mistake the signs of the times if farmers all over the country do not make an earnest effort to curtail their labor bills the coming season. And I shall be exceedingly glad of it, provided it leads to breaking up less land and more thorough cultivation of the fewer acres under tillage. But if less hired labor means less work per acre on land under cultivation, then I think the result will be bad for farmers and bad for the country.—*American Agriculturist.*