

bran, add six pounds of arsenic, and mix it thoroughly with the bran; put about four pounds of coarse brown sugar in a pail, fill the pail with water, and stir until the greater part of the sugar is dissolved. Then pour this water into the bran and arsenic, and again fill the pail with water and proceed as before until all the sugar in the pail has been dissolved and added to the bran. Now, stir the latter thoroughly, and add as much water as is necessary to thoroughly saturate the mixture, and it is ready for use. Throw about a tablespoonful of this mixture under each vine infested with grasshoppers; and in a short time the latter will leave the vine and collect upon the bran and soon commence feeding upon it. Those which are upon the ground six or eight feet from the bran will soon find their way to it, apparently guided by their sense of smell, as those to the leeward of the bran have been observed to come to it from a greater distance than those which were on the side of the bran from which the wind was blowing. After eating as much of the bran as they desire, the grasshoppers usually crawl off, and many hide themselves beneath weeds, clods of earth, etc., and in a few hours will be found to be dead. This mixture costs from 35 to 40 cents per acre of vineyard, including labor of mixing and applying it. In orchards the cost will be considerably less than this. One man can apply it to eight or ten acres of vineyard in a day."

Spring Wheat Rust.

We have recently received several communications from subscribers, with specimens of rusty spring wheat, and our opinion is asked as to how it should be disposed of. The samples of wheat are much shrunken, and the rusted straw presents a dry, wilted appearance. One correspondent in Huron County states that the spring wheat in his locality (Constance), promised 25 to 30 bushels per acre, but the sudden breaking out of the hot sun after the showers, while the grain was still in a moist condition, changed the whole aspect of the crop.

It must not be supposed, as some of our correspondents assert, that the state of the weather caused the rust, but the heat and moisture have been favorable to its development. Rust is a parasitic plant, the seeds or spores of which must be in the soil before they can affect the growth of the crop. Rust spores, like weed seeds, may possibly be found in all soils, but certain seasons are not favorable to their development. Their dissemination may also be prevented like that of weed seeds. The question arises, Does the rust injure the straw for food, or the stock which consumes it? This question is not so easily answered, and we don't know that it has been taken up by professional investigators. Some farmers assert that straw is improved for food by being rusted. Let us glance at the theory of the thing: The rust feeds on the straw by absorbing its juices. The straw must be therefore less nutritious; but if the nutrition remains in the rust in a digestible and harmless form, no loss may be sustained, and part of the juices which may have been intended for the grain may also have been absorbed by the rust. But this is a weak argument, when it is well-known that all parasites weaken the vitality of the plant on which they feed, thereby checking its growth.

Besides, a large majority of practical farmers have found by experience that stock do not thrive so well on rusted straw, and veterinary authorities assert that rust produces indigestion in farm animals, if taken in any considerable quantities.

With regard to the question as to the disposal of the wheat and straw, every farmer must do his own figuring. The first question is, Will the yield pay for the threshing? In most sections, where steam-power is used, the thrasher's price is \$10 per day, and the other expenses will be \$14 at the very lowest estimate. Calculating good wheat at 80 cts. per bushel, we get $2400 \div 80 = 30$, meaning that 30 bushels must be set aside to pay the cost of each day's threshing; or, if the shrunken wheat is only worth 40 cts. per bushel, then it will take 60 bushels to pay for a day's threshing. But shrunken wheat at 50 to 60 cts. in the market is more profitable for feeding than for selling. In fact, its feeding properties never deteriorate near so much as the market price does. It is not the plumpest grain that has the highest feeding value, for it contains more starch and less albuminoids than grain of medium plumpness.

The following considerations must now be weighed: If the farmer has plenty of good straw for feeding and bedding purposes; if he has plenty of other profitable work to perform, and if the wheat is badly rusted, and the grain much shrunken, let him burn it on the field without cutting, first running the roller over it and plowing around the field to keep the fire from spreading. In such cases, we regard the straw as having no profitable feeding virtue, and only 60 per cent. of its manurial value will be lost; indeed, if the soil is rich in vegetable matter no loss may be said to accrue, for it is only the organic matter of the straw that is burnt and wasted in smoke—a substance that is not required in soils rich in humus. On the other hand, if the grain will pay for the threshing, he should feed the wheat to his stock, mixed with other grains, providing the market price does not exceed 60 cts. per bushel. Another good plan would be to feed without threshing, first putting the sheaves through a cutter, and using the chopped stuff in small quantities with other foods. The whole sheaf need not be run through, if the straw is badly rusted. But in this way of disposing of the crop, some precautions are necessary. The refuse must be thoroughly fermented in the manure heap, or left over a season before spreading on the fields, so as to prevent the rust from being propagated in future crops. The smut pores are not even destroyed by passing through the bowels of animals, so that the droppings should also be heated in the manure heap, which causes the spores to germinate and perish.

A good lawn grass mixture is made as follows: Red Top, 14 lbs.; Blue Grass, 14 lbs.; Rhode Island Bent, $5\frac{1}{2}$ lbs.; Sweet Vernal, 5 lbs.; White Clover, 5 lbs., this mixture being the quantity to be sown per acre. But an excellent lawn grass may be made with white clover and Blue grass in the proportion of one pound of the former to seven of the latter, and 40 lbs. of the mixture will be sufficient for an acre.

PRIZE ESSAY.

How Should Farmers Spend their Evenings?

BY MISS JESSIE ROBERTSON, STRABANE, ONT.

A wide field lies before me—wide, not only because of the many whom it concerns, but also because of the question having a direct bearing on the private weal and public good of all our farmers. I use the word "farmers" in its broadest sense, taking it to mean "farmer folk" in general, that is, farmers, their wives, sons and daughters.

It is admitted by all that, taking the annual average, farmers have more leisure than those in other occupations. It is indeed true that farmers' hours, during the harvest season, are very long, and necessarily so. He is an unwise husbandman who leaves his valuable hay and golden sheaves to the caprice of the weather, and thus the intense physical exertion demanded during the day renders farmers incapable of any mental exertion during the short evenings; early retiring in the summer months, I do not think, could be materially improved upon so long as the present state of things exists. About eight or nine months out of the twelve, however, farmers should have considerable leisure in the evenings. I have no sympathy with that class of farmers, and the class is not small, who, summer and winter, daylight and dark, never find leisure. Bent only upon the accumulation of acres or dollars, they always find work to do, wholly neglectful of social or mental development. Who can blame a boy for disliking his father's profession if to him it means only unending toil? Can a workman be blamed if he seeks an employer in whose service he may have his evening hours to himself? In not a few farmers' homes is the following routine to be found: Rising early—early enough to feed the cattle by lantern-light; breakfasting; working with teams all day; after supper, feeding the cattle again, with other "chores" to be attended to, after which it is time to go to bed. The mother is always wearied; the girls long for something, they "know not what"; the boys rebel, and the father wonders why his children take no interest in the farm. Who can tell him? With this class, however, I have not to deal, unless, indeed, I can lead them into other and higher paths. Hoping they will come with me, I will venture to suggest how farmers should spend their evenings.

Before doing so, however, I will take the liberty of peeping into a farmer's kitchen, which, I am sorry to say, in many homes, is the sitting-room as well. Through a sort of haze I see the good man, at ease with himself and all around him, seated at one side of the stove. He lazily puffs tobacco "reek," not always pleasing to the other inmates. On a lounge a sturdy youth is stretched; alternate yawns and nods bespeak listlessness, while at the other side of the stove, another olive branch, wholly indifferent to gracefulness of posture, reverses himself on a chair, and, with head resting on the back, indulges in alternate nods and yawns. The merry, mischievous face of a schoolboy is seen at the table. The frank, intelligent, expressive and bright eyes, indicate "hidden treasures" in that yet undeveloped mind. The mother, of course, is knitting or