

Hungarian Grass.

Hungarian grass is a warm-weather crop. Sixty days will usually see it seeded, grown and harvested, provided there be rains to start it quickly. It can easily be followed by winter wheat, if got in say two weeks after corn planting, but never sow until the ground becomes warm. On good rich land three large loads to the acre can be grown, and it makes good cow hay, much better than timothy, and more than twice as valuable as cornstalks. A ton of Hungarian hay contains about 90 pounds of protein, timothy 56, and corn stover 34 pounds, and protein is the main nutrient in feed.

The ground should be plowed early, and worked frequently until seeding time. Endeavor to have a fine, mellow, firm seed-bed. Sow three pecks to the acre, and sow evenly, for Hungarian grass makes a heavy, thick growth on good soil. Cover with a light harrow, and roll if dry, and there is no danger of a crust forming. Clay lands might better be rolled after the plants are two or three inches high, principally to make good mowing.

To make good, safe hay, cut as soon as it is fully headed out, while in bloom before the seeds have filled. You can see the blossom best in the early morning, when the dew is on. It will not bleach and damage in the dew as will timothy, and needs only about the same time to cure. Use a tedder if the crop is very heavy, and cure in much the same way as clover, though it will not injure so much as clover by lying flat.

Out in Maine it is regarded as almost as valuable as the corn crop. It can be sown after the spring rush is over, needs no cultivation, is easier cut and quicker cured, needs no husking and shredding, and can be put into less space in the barn. More than that, it can be followed by winter grain, and no danger of early frosts is encountered, as is the case with corn in some northern districts.

Lincoln Co., Ont.

Silo Filling.

I would like to offer a few hints as to filling the silo. I have tried several experiments, and will give you a sketch of the best one. I got five yards of sail-cloth, fifty-six inches wide, and ran a flat seam, double stitched, up the side, then cut it in two, and folded up the ends about three inches. We then worked lace holes about three inches apart to match to lace together. When commencing to fill the silo, attach a cord to the lower end, and one man in the silo can distribute the silage just where he wants it. The light and the heavy all goes together, and there are no corn-cobs flying all over. This leaves it nice and clean to work in the silo. When it fills up about half way, take off the lower length and attach cord to the upper one, which is tacked to the hopper. I made my hopper of half-inch lumber, two feet six inches high, and two feet six inches wide, and two feet in depth, and tapering down to eighteen inches by ten inches wide at the bottom. Pull the bag or sail-cloth up over the bottom, and tack fast. The back and ends should be about twenty or twenty-four inches higher than the front, to allow for the carrier or blower, and the back and ends prevent any blowing over in the silo. My experience is that if the light and heavy parts are equally distributed it settles evenly, and comes out in better condition. By placing a couple of planks across top of silo this hopper can be placed between them, or it can be strung up to a couple of collar beams in the barn.

Welland Co., Ont.

JOHN McLEOD.

Potatoes Should be Sprayed Now.

Farmers continue to lose hundreds of bushels of potatoes every year from blight and rot, which might be saved by spraying the vines with Bordeaux mixture. The results obtained at the Central Experimental Farm and elsewhere have proved over and over again how well it pays to spray, but comparatively few farmers spray their potatoes for the prevention of rot even yet. At Ottawa, one variety that was sprayed yielded at the rate of 201 bushels more per acre than the same variety unsprayed, and taking the average of 11 varieties there was an increase of 120 bushels per acre. The formula used is 6 lbs. bluestone, 4 lbs. lime, and 40 gallons water. If the potato beetle is still active, 8 ozs. Paris green may be added to this. If fresh lime cannot be obtained, 7½ lbs. washing soda will take its place. There should be about four sprayings, the first about the middle of July; the second from ten days to two weeks later; the third and fourth at about the same intervals, the object being to keep the vines covered with the mixture until September.

It has been proven by experiment that over half the crop of potatoes will be produced after August 22nd, if the vines are kept green, and this is what spraying will do as, at the Experimental Farm the vines have been kept green from 18 to 20 days longer than where left unsprayed. The cost of four sprayings is about \$7.00.

Fuller particulars will be furnished on application to the Central Experimental Farm, Ottawa.

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Summer Forage Crops.

The pasture on many farms is beginning to give out at this season of the year, and some sort of green food must be provided for the cattle. Pastures should be given a rest during late summer and fall months, in order to recuperate, and entire or partial soiling resorted to. Oftentimes on small farms, where a relatively large number of cattle are kept, the pasture has to be supplemented by forage crops all summer through. A desirable spring fodder is obtained by sowing wheat and hairy vetches together, one and a half bushels of wheat and one bushel of vetches. Cut just before the wheat begins to head. Wheat alone makes a good green feed. Following the wheat, have clover coming on. Clover when cut in full bloom contains fully as much protein as pasture herbage. Protein, in a relatively larger proportion to the carbohydrates in pasture grasses than in cereal fodders, is what makes a good pasture the most suitable feed for a dairy cow. The young cereals, wheat, rye, oats, corn and millet, are just as rich in protein when young, but as they grow taller the carbohydrates increase in proportion, and a leguminous plant, such as vetches, peas, beans or clover, is needed in addition to balance the ration.

Canada peas and oats are the best crops to follow the clover. Sow one and a half bushels each of peas and oats. Make three sowings, preferably middle to end of April, middle of May and first of June. The first sowing will be ready about the first of July. Oats and spring vetches yield about the same as oats and peas. Millet or barnyard grass makes a good feed during August, but it will not stand dry weather. Corn of a medium early variety comes in for the latter half of August and September. Soy beans mixed with the corn, in proportion of 10 quarts of corn to 7 of beans, are said to prove a good mixture. Hungarian grass sown in July will be ready to cut in September. Barley and peas furnish good green fodder for October. Corn silage is sometimes used instead of green forage, where long droughts are frequent, but the acidity is objectionable. Summer forage crops require rich soil and lots of manure. They cannot be grown with success on poor land.

Lincoln Co., Ont.

Straw or Manure as a Fertilizer.

A correspondent asks us to settle an argument as to whether dry straw applied to the land or the same fed to cattle, and the product returned to the soil, is the better for manure.

In considering a question of this kind, we must remember the dual effect of manure upon soils, viz., as a plant food, and as an improver of the mechanical condition of the soil. The value of the straw in this case will depend upon the amounts of three elements which it is capable of supplying to the soil, namely, nitrogen, phosphoric acid and potash. In the average straw, these amounts are not very large, and are not available until the straw decomposes, but the straw itself, that is, the fiber, has a most beneficial effect upon the mechanical condition of the soil, making it more friable and more capable of retaining moisture.

The value of the manure from cattle fed upon straw may be quite variable, depending upon the class of cattle to which it is fed. If fed to matured stock not giving milk, practically all the fertilizing ingredients fed in the straw will be returned in the liquid and solid excrement, for the elements that go to maintain heat and force are of no value as fertilizers, while those that go to renew the blood and tissues have an equivalent amount of fertilizing ingredients voided in the liquid excrement. If fed to young growing stock or cows giving milk, the three fertilizing elements will be utilized for the production of bone, flesh, milk, etc., so that comparatively little plant food will be found in the manure, and the bulk of the original pile of straw will be very much reduced, so that it cannot so beneficially effect so large a plot of land; hence, there may be a loss of plant food in feeding straw to young stock or milch cows. But straw is seldom fed to such stock alone, although there is no doubt but what it would sustain life. Straw is usually fed in conjunction with grain, hay, roots, silage, etc., and it is probable that in most cases the manure from stock fed on a mixed diet is much richer in plant-food than an equal weight of straw, and to such an extent that it would more than counterbalance the possible better effect of straw upon the mechanical condition of the soil.

To make a profitable disposition of straw one must further consider the processes in the animal economy. Although the food constituents of straw may be comparatively inconsiderable, yet stock, and especially cattle, require a certain amount of vegetable matter to satisfy the demands of their digestive organs, even though they may previously have received enough food in a concentrated form to more than sustain life. And so the feeding of straw, if hay or ensilage is not plentiful, is imperative. On the other hand, it must not be forgotten that all the nitrogen, a valuable fertilizer, voided by animals is found in the liquid excrement, and if this element of plant food is to be utilized, absorbent, in the form of

straw or other vegetable substance, should be provided.

To give our correspondent a specific reply, we would say that rather than put straw upon the land, we would use a reasonable amount of litter, and then try to utilize the rest in feeding with other foods, for straw, being capable of absorbing either as litter or when fed with richer foods, a certain amount of fertilizing material, is, under average conditions, improved as a fertilizer by being used in either of the above methods.

Farm Work "Lightsome."

Prof. Waugh, of the College of Agriculture, of Massachusetts, claims that farm labor is the least monotonous of any in the world. "Compare a man," says he, "who in a day milks the cows, splits the wood, drives a young colt to harness, plants potatoes, mends a drain, sells three pigs, mixes a complicated chemical fertilizer after a recent scientific formula, doctors an ailing mare, prunes his plum trees, and does twenty other odd jobs, with the man who sits all day on a stool and pastes red labels on packages of breakfast food."

DAIRY.

What E. O. D. A. Instructors Would Do.

[Address delivered by G. G. Publow, at E. O. D. A. annual meeting.]

The President of the Eastern Ontario Dairy-men's Association wants me to tell you what I am going to do this year. We hope to carry out the work this year the same as last, syndicating factories throughout Ontario. You will be offered, I expect, the same service for the same money. That is, you will get the services of the instructor for the sum of \$15. His duty will be first to visit your factory to see that the cheesemaker is serving you well; that he is making the most cheese and best cheese out of the milk you give him. If he finds he is not doing that, the instructor will be expected to instruct the cheesemaker to do better. If there is anything wrong with the milk, it will be the duty of the instructor to find out where it is, and what is the cause; and if the patron who is to blame refuses to rectify the wrong, it will be the duty of the instructor to call a meeting of the patrons and point out the difficulty.

At the present time the instructors are handicapped because they have no power to enforce any conditions. I think they should have at least the power of a Board of Health Inspectors. When they go to a cheese factory, and find an unsanitary state of affairs, they should have the power to make them improve the premises. I wish the farmers of the country would wake up, and not let those poor factories exist. They are seeding this whole country with undesirable bacteria, and that is causing trouble to everyone else in the business.

We should see that we supply the cheesemaker with good milk, and then insist upon his having the factory in proper condition, and upon his being competent to make the best product in the world.

No country in the world has a better reputation for good cheese than we have in Canada, but that does not say that we cannot do better. Some farmers think that the inspectors are going out to spy after them, and to try and do them harm. That is not the case. They are sent out to do you good, and to help you on, to help you to make more money out of the business. The inspectors, as a rule, have been kindly used; but in some cases they do not get the best treatment. We have found difficulty in getting the best men to accept the position of inspector. An instructor should be able to handle the people as well as the cheesemaker, and he should know all about the business from the ground-floor up. When we send an instructor to you, please listen to him kindly. Do not tell him to get off the farm. Do not say, "I have always had that milk setting in that place, and I am going to leave it there, and if you don't want to take it, somebody else will." We cannot do without your assistance; we want your co-operation, and we want you to see that you have a good man in your factory. You should go down to these cheese factories and look over them. They are practically yours. If the cheesemaker is not clean and tidy, tell him to tidy up, and clean himself up or get out. If the cheesemaker tells you that your milk does not smell very well, and if he has a dirty and bad-smelling factory, you can say to him, "Well, your cheese factory does not smell very well."

If you could increase the home market for cheese ten per cent. you would be doing a big thing for the cheese industry. I have had farmers ask me to pick out a good cheese for them because they would not eat cheese made in their own factory. Now, how can you expect the buyer to give you the highest price for cheese if you will not eat your own? I believe most of us will be able to accomplish a good deal this year if we will only try.

I expect the same thing will be done this year as last with regard to grouping the factories, and I hope that the factories that wish to come in will notify us in good time, so as to give us an opportunity to select good men. I do not think there is any factory in this country that can afford to do without an instructor. We find that even with the very best cheesemakers there