

the pockets of the farmers. In this connection I will quote no less an authority than R. Harcourt, Professor of Chemistry, at the Ontario Agricultural College, Guelph.

In bulletin 153, page 13, he says on Home Mixing of Fertilizers, "Reference to the bulletins of the Dominion Inland Revenue Department shows that there are a great number of brands of fertilizers on the market which are specially recommended for certain crops. These mixtures may or may not suit the conditions of the soil and the needs of the crop. Un-

fortunately the tendency is for the farmer to buy these mixtures, but, as they understand the true principles of fertilization, the tendency will be to buy the simple substance as nitrate of soda, muriate of potash, and superphosphate or basic slag, which are not so hard to understand, to make up the deficiency of the soil or to supply the needs of the crop. Or they may buy these high-grade materials of known quality and prepare their own mixtures. It may often occur that home mixtures of fertilizers can be made which will better meet the requirements of the

particular soils and crops under cultivation than any mixture that can be procured on the market. Reliable authorities have estimated that the charge of the manufacturers and dealers for mixing and bagging are on the average \$8.50 per ton. It is evident that this, together with the extra freight on and cost of handling the make-weight substances commonly added would leave a fair margin to pay for labor involved in making the mixtures at home."

Lambton Co., Ont.

A. E. WARK.

How Do You Make Good Hay?

CUT EARLY.

All things considered the hay crop is one of the most important crops on the farm, and should be handled just as carefully with a view to producing the very highest quality as the fruit grower handles the tenderest of his fruits. Haymaking is not the heavy job it once was, and with modern implements, machines and hay tools there is no reason why the greater portion of the hay crop, provided the weather is not too catchy should not be harvested in prime condition. Through late cutting, careless handling and the allowing of meadows to be seeded down for too long a time, much of the hay which goes on the market, or which is fed to the farm stock grades far below number one. Cutting at the proper time and curing well before placing in the mow means a good deal in an average season in Ontario. Clover cutting is usually commenced somewhere around the 20th of June, but the time must be fixed by the condition in which the hay is, and red clover should be cut about the time it is all pretty well in bloom, or if a large area of it is to be harvested perhaps cutting should be started a little previous to this. Early cutting, provided good weather is had for housing the crop, almost invariably results in far better hay than where the bloom on the clover is allowed to brown before the mower is put to work. Alfalfa, of course, should be cut as the first flowers begin to open. Timothy comes on later, but should not be left to anything like the degree of ripeness in which it is often found when being harvested. Some very successful growers like to cut their timothy just after the first bloom, as it is known to farmers, falls from the grass. If cut earlier than this many of the weaker plants will not be developed sufficiently, if cut very much later or a considerable time after the second bloom has fallen the hardier, more forward portion of the timothy will have gone to seed and become dry, coarse and unpalatable.

The importance of early cutting cannot be too thoroughly impressed upon farmers generally. It is one of the mainstays of first-class hay. We have seen many a fine crop greatly deteriorated in feeding value by being allowed to stand on into July in dry, hot weather and ripening up considerably before being cut.

Haying is not the strenuous work it was a few years ago. With the loader and hay forks or slings much of the heavy pitching has been taken off the shoulders of the man on the farm considerably to his advantage, as the new process is besides being much more easily done, considerably quicker and saves time and labor, which is so scarce at the present stage of the country's development.

THE TEDDER USEFUL.

An implement which is not in general use but one which the farmer can scarcely afford to dispense with, especially where heavy crops of alfalfa, red clover or even timothy cut in the early stages are grown; is the tedder. This is one of the greatest aids to curing hay cut fairly green. Many successful growers start the tedder going in the morning after cutting a strip of hay, follow this with another tedding in the afternoon, after which if the weather is good raking may be done. The stirring up of the new-mown grass gives the air a chance to circulate through it and hastens curing. It is a great help in many cases where the hay is cut green and would not be ready to rake by evening, and if left in the swath a heavy dew might bleach the top of the swath which had been made, by receiving the direct rays of the sun. Allowing hay to remain in the swath over night should be avoided as much as possible, and here is where the tedder may be worked to good advantage.

This implement is also valuable in shaking out hay after a rain. If some of the cutting chances to get wet in the swath, windrow, or even in the coil, keep the tedder going almost continuously after the sun comes out. This soon dries the hay and prevents it bleaching to the same extent which would be the case if it were left undisturbed a sufficient time to get dry and cured enough to place in the mow or stack. The tedder is, we believe, very valuable, and many farmers who shake the hay out with forks in the old way could profitably make use of this implement.

THE LOADER.

Most of the largest hay growers make use of the loader, and with it for best results the side-delivery rake is recommended. It is possible to use the ordinary dump rake and follow with the loader, provided the man on the rake understands his business and keeps the windrows small enough for the loader to work satisfactorily. Where a very heavy crop of hay is being harvested it is sometimes difficult to regulate the size of the windrows properly, and where these

they can make better hay by coiling it than by drawing it out of the windrows as it is generally done where the loader is used, and where the weather is catchy, showers occurring frequently, there is no doubt but that coiling is the safer plan. Hay that is cut in the morning, tedded in the morning and again in the afternoon, and raked into small windrows toward evening is generally, provided it is a good hay-making day with a strong sun and a good breeze, ready to coil the last thing in the evening of that day.

If the weather is fine and the crop fairly heavy it is best to leave such hay in the coil all day, the following day, and it should be ready to haul the day after. If the hay is thin on the ground and the coils are put up small, it is very often possible by throwing the tops off of them to draw the hay on the afternoon of the next day after cutting. Where the loader is not used there is no call for a side-delivery rake. The use of the one without the other is not considered by some haymakers to be practicable, although the rake may be used to

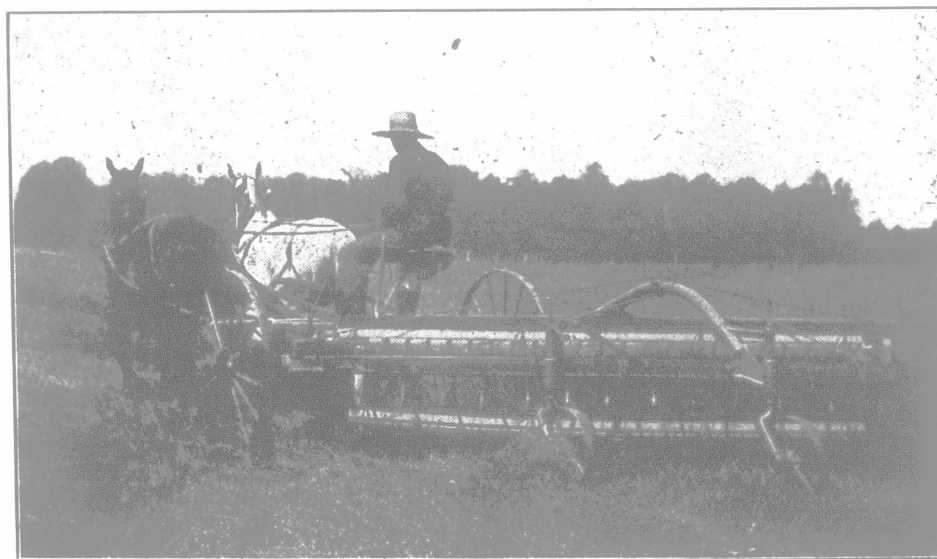


A Tedder Hastens Curing.

get too heavy the loader is somewhat over-taxed in elevating the hay, and the men on the load can scarcely handle it as fast as it comes to them. A side-delivery rake may be used to good advantage in very heavy crops of clover or other hay, making the windrows about the right size for the loader and doing good work. Some claim that it is almost as good as the tedder for loosening up the hay and allowing the air to circulate through it. It does not seem to have the same tendency to pull the hay into a tight wad as does the ordinary dump rake, especially where the latter is held down closely and the

very good advantage in heavy crops. Where the loader is used where the hay has been in coil it means considerable extra labor. The hay must be coiled and must be spread out again in order that the loader works properly. Many still hold, notwithstanding the favor in which the loader and the side-delivery rake are held, that the best clover hay cannot be made unless coiled. We agree that the very best hay is often made by coiling, but we have seen some excellent hay cured and harvested with the loader. A great deal depends upon the curing, and this depends upon the weather. If the

weather is fine and the crop just ready for cutting it is cut in the morning, tedded twice as previously mentioned, and raked that night, such hay should be in pretty good condition to go into the barn the following afternoon, and being in the windrow the dew, unless it is very heavy, has little chance to cause any considerable bleaching of the crop. Where there is only a small acreage of hay grown on the farm it would scarcely be advisable to buy a side-delivery rake and a hay loader, as haying is not generally a long job and not as costly as some people believe. With a hay fork or slings to unload two or three men can soon harvest the hay crop of the average Ontario farm. We would like, however, to see a far wider use of the tedder. It is not an expensive implement, but it is one which we do not believe that any grower of good crops of alfalfa, clover or even timothy hay can afford to do without.



The Side-delivery Rake.

Almost essential where loaders are used.

hay pulled into large rows. Accordingly where a great deal of hay is grown and time is precious, the side-delivery rake is considered by a good many growers as almost essential to greatest success.

There still exists some difference of opinion on the loader, but it has fully demonstrated that it is practicable, efficient and a great labor and time saver, and has a permanent place on the largest hay-growing farms in the country. A good many farmers, however, still believe that

HAY FORKS AND SLINGS.
Of all the labor-saving devices the hay fork