alternately with the one pumping apparatus. By this arrangement of pipe lines it is only necessary to turn in the proper direction the two three-way cocks indicated in the diagram.

In Fig. 3 is shown a duplicate water system for hard and soft water operated by a small gasolene engine connected by a pump to an ordinary hand-force pump, which may be manually operated should necessity at any time require it.

This outfit, together with that shown in Fig. 4, which is an electrically operated plant, has proven very popular because of the comparatively low price and their high efficiency. In the latter case the motor may be connected at a very moderate cost with an automatic controller which will start and stop the pump as the pressure in the tank fluctuates so that a constant pressure is maintained without any attention on the part of the owner, except to occasionally oil the apparatus.

Aside from the economical features of the arrangement briefly described in this article, the simplicity of such a system and the many other features in its favor, including that vitally important one in country districts, viz., fire protection, should commend it to every comfort-loving and up-to-date country resident.

Topics for Discussion

To afford an opportunity for the interchange of ideas, and to provide a place where information may be given and received, we will publish each week at the head of this department a list of topics, which our readers are invited to discuss Opposite each topic is the date of publication of contributions on it and readers are reminded that articles contributed on any of the subjects given, must be in our hands at least ten days earlier than the subject is scheduled for discussion in our columns.

Readers will understand that this department of the paper is entirely and altogether their own. They are invited at all times to write the editor fully and freely expressing their opinion of the manner in which it is conducted. They are invited to suggest topics to be discussed. If any reader has in mind any question which he or she may think could be profitably discussed, it will be given a place in the order of subjects, if brought to the notice of the editor, and is of sufficient general interest. Because this notice runs weekly at the head of the Farm Department does not mean that farm questions, only, may be discussed. The discussions will be spread over every department of the paper.

For the best article received on each topic, we will award a first prize of Three Dollars and for the second best Two Dollars, paying the latter sum for other contributions on the subject received and published in the same issue

Article should not exceed 500 words in length.

June 9—*What is the best way to clean up a poultry house to rid it of vermin and make the surroundings healthful. How do you make and apply the wash.*

June 16.—*Should cream be sent to a creamery either local or distant, or kept on the farm and be made into butter to be marketed wherever the price is best? Tell of a plan that is working satisfactorily.*

June 23. *Would you advise a man under all circumstances to insure his grain crop against hail? If not, what would be the exceptions?*

June 30th.—*Taking everything into consideration is it advisable to seed to Brome grass. A recital of experiences with this grass will be valuable as opinions upon it are quite contradictory.*

Employing Time in the Fields

Whether or not farmers, their men and teams are engaged to the best advantage or not, the fact is forced upon us that they are all busy as each letter upon the subject emphasises it.

Probably there is nothing upon which the success or failure of farming depends as upon the manner in which the men and teams are employed. Many a man has been a surprise to his neighbors on account of the success he has made despite his lack of experience and other handicaps, simply because he has had the instinct for handling men and for getting all possible out of the teams, while other men have been as great surprises by reason of their failures though they have had experience, energy and other advantages, but had not the knack of getting work done at the best time.

The study of the soil, of varieties of grain, of different systems of farming and problems of such a nature are important, but if there is one thing more than another that the average man should cogitate upon it is his method of utilizing the time of his men and teams. By this we do not mean that a man should study how he can squeeze the last ounce of energy out of his help, but he might take a lesson from that field of sport that has become such a craze of late. The marathon runner calculates his distance and his powers, and endeavors to spread the latter over the former. So a farmer might calculate his work and try to arrange it so that the men and teams will have steady going, but with as few spurts as possible.

Of the letters of discussion upon this subject we especially commend that by Mr. A. E. Wilson, a practical and successful farmer who mixes a continuous flow of mental energy with the physical commodity supplied by men and horses. The second choice is given to Mr. A. J. Quigley, another thoroughly practical and successful farmer.

Believes in System and Proper Supervision

EDITOR FARMER'S ADVOCATE:

At the present rate of expenditure on our Western farms, especially in the matter of teams and wages, the question of economy in this direction, is one which will well repay the farmer to give a little more thought and attention to than is usually given. In these provinces as in the older ones, the stage is approaching when the farmer's margin of profit will depend more and more on the prevention of waste in time, labor and materials.

The most economic way of employing the time of men and horses in the fields, according to my experience, is best obtained by regular hours, by systematic preparation each evening for the succeeding day's work, and by personal inspection of equipment each evening to insure that everything is ready to "hitch on and go" the following morning. Of course the number of hours daily, that men and teams can reasonably be expected to put in, must to some extent be determined by the season, the weather and the class of work.

The first leakage of time usually occurs in failing to get a good morning start. A good commencement right at the scene of operations in the field has a decided effect on the day's work. Besides as heavy work it allows breathing spaces for the horses, and gives the man time to attend to any little alteration or re-adjustment of his machinery, and yet get his allotted number of rounds in without undue haste. After all the time of men and horses is only a means to an end. What is required is good work. Now a good start is not simply obtained by getting up early, especially if it is so excessively early, that men and horses are deprived of a fair amount of rest. That would be false economy. What frequently discounts the good start, in spite of early rising, is the condition of the machinery or harness, or missing tools and nuts. Supervision the previous evening avoids these little delays, which eventually total up by compound interest at the end of the season to a summer fallow insufficiently prepared. Chores form another cause of delay and a reasonable adjustment of these is particularly necessary. To rush a man out into the field, feeling that he has a grievance is a great mistake. He may feel like getting even with you, and, if so disposed, there are opportunities in the field of doing so without immediate detection. Here I may remark that it will pay every master to learn the temperament of each man in his employ, in the same way he knows the temperament of each horse in his stable. A little knowledge of human nature is of value to all men who have the management of men.

On summer fallow work teams should put in nine and a half hours daily in the field leaving the stable in time to hitch on at 7 a.m. and unhitching at 11:30, and leaving again at 1 p.m. and unhitching at 6. Unhitching time should be as punctual as possible though it must depend to some extent on the end of the furrow being coincident with the clock. On those fields which lie a mile or more from home, wherever possible, and, if conditions are favorable, teams should at noon be fed on or near the field. If the situation cannot be considered favorable, a shelter for noon would repay its cost in the course of a year or two, and for water use could be made of the tank. A long tramp home and back at noon is a dead loss.

At hay and harvest time lower hours of labor may reasonably be expected, and these should be tacked on at the beginning of the day as affording more scope for regulating the periods of rest and forestalling any bad weather that may arise before night.

It is at this time that adequate preparation is the greatest economiser of time and labor. At other seasons what cannot be done today may possibly be done tomorrow. But at hay and harvest time what cannot be done today may be of less value if done tomorrow. At harvest, especially, the farmer's sheet anchor lies in his machinery. Some farmers draw their machinery out early in the summer, replace breakages, get nuts secured and everything ready with the least preparation for the cutting season. A leaf from their book may be worth copying. Threshing outfits should invariably be overhauled by a competent man before use.

From the standpoint of the men and horses, nine and a half hours work in the fields is a fair day's work. From the master's standpoint a rule that is adopted in most trades and factories must be so because it pays, and I think it pays the farmer if he is managing his farm systematically, while morally it tends to preserve a better and more contented spirit among the men and if exceptional occasions do arise for overtime the call is responded to more willingly.

Sask. A. E. WILSON.

Intelligent Men and Reasonable Hours

EDITOR FARMER'S ADVOCATE:

It seems to me that these two questions of discussion practically open up the whole question of farm help, because in adopting any method we must first consider the quality of the hired help. For instance: the man who could fill the bill as a stooker in the harvest field might be of no earthly use at plowing a fallow. To deal with the farm help question in all its different aspects would require a letter far exceeding your limit. To be as brief as possible, let me say that the use of the time of the men must be coupled with the use of the brains of the men.

Some farmers adopt the method of tieing their men down to so many rounds of the plow every day. I consider this a bad system, one not calculated to improve the quality of our hired help because it robs the man of the use of his judgment and makes him no better than the machine he is operating. Of course, a certain number of rounds per day can be taken as a basis, but after that, the man should be allowed to exercise his judgment in the working out of it. We have seen days in this country so hot that horses could scarcely work at all. Some farmers say: If I did not put my men down to rounds they would fool away too much time. Then the sooner you are rid of them the better, and, right here, let me say that the sooner farmers get to work and classify their help the better for themselves. As it is now, a good experienced man is hired in the spring at 35 or perhaps $40 per month and this establishes the wages. The fellow who can scarcely hitch up a three-horse team asks the same price—and gets it too. Then in hiring the man, wages is often made the whole consideration. This is, in my opinion, a mistake. An extra $5.00 per month is nothing if you get the right sort of a man. Every business is willing to pay for brains and farming requires as good brains as any other business and should be willing to pay for it. Some farmers will hire a green man because they get him for $10 or 15.00 per month, and the broken whiffle-trees, poles, reaches, implements, etc., makes him cost about $40 along with having a bunch of sore-shouldered horses.

I do not say that green help has no place on the farm. To keep up the supply we must get recruits, but the time of 4 or 6 horses and the preparation of a fallow is of such importance as to demand the very best kind of experienced help. This not only means the man who knows how to do his work but the man who takes an interest in it and a pride in doing it well. When you have secured this kind of help you will not have much difficulty in working out any method or in getting through a good day's work in time to have the horses in the stable by 6 o'clock. You will have a man who will hustle both himself and his team during the haying and harvest and do all the work that both should do in a day without having to keep at it until dark.

The man who could not or would not get a move on him if the house were on fire has no business on a farm. Personally, I never keep an unsatisfactory man. Just as soon as he does not fill the bill let him go. I might also say that I can always get good help.

There is one way in which the time of the men can be used after 6, a little every evening, and that is in reading a daily paper and more especially our farm papers. There is an abundance of good suggestions and systems of working contained in those papers all the time, and the hired man should have the benefit of them. The man who has to live for 7 or 8 months in a house where a newspaper never enters will get to be little better than the team he is driving. Farmers' conventions and Institute meetings discuss nearly every other subject but one never hears any discussion on the important question of our farm help and the best way to deal with it. Isn't it about time they did? The farm help question is one of the greatest importance in these provinces where large farms require so much help, and short seasons necessitate help of good quality.

Sask. A. J. QUIGLEY.