

of winter wheat in that province. H. C. M. has probably read this correspondence. Take one result with another we do not think that the attempt thus far to grow winter wheat in Saskatchewan has been any too successful. Sometimes a crop will come through the winter all right and receive such a grilling in the spring, either from frosts or drying winds, that it never makes headway any more. If we could depend upon a regular winter snow covering there is no doubt but that winter wheat could be grown as well here as in any other part of the country. Spring frosts injure the crop to some extent but no more so than in Eastern Canada. In the fall wheat country, in Ontario for example, where in the "sugar-making season," with sharp night frosts and bright, warm, drying days, the wheat plant has as hard a struggle to keep the spark of life aflame as it has in this country during the same season, but if it has had any kind of protection during winter, and gets through to spring with a fair top, it will survive this period all right. This seems to be the experience of winter wheat growers in your province. If the soil in which it is sown in August contains a good supply of moisture, if good headway is made before growth is checked in the fall, and snow keeps it from having the life frozen or dried out of it in winter, a good return may be looked for. But we cannot say that a full crop can be relied on regularly.

A correspondent in our issue of Oct. 7th, sums up briefly the experience of most winter wheat growers when he states that in districts where early summer frosts are unlikely to injure the spring sown wheat there is little use experimenting with winter varieties. The advantages of growing winter wheat are that the farm work of seeding and harvesting are better distributed, but in districts where favorable climatic

The heating system in a good many houses lends itself admirably for the ventilation of the building. An ordinary hot air system of heating, with the furnace in the basement and pipes leading from it to convey the heated air to the various rooms, becomes, if provision has been made for bringing in fresh air, a highly efficient means of ventilation of the building as well. But there are a lot of hot air heating systems in farm houses that are not properly installed. In the first attempts made to heat dwelling houses with hot air furnaces, the attempt was made to keep the air in circulation in the house by introducing air from without, but no provision was made to remove the air that was inside the building. The consequence was the heating system did not work very well. So people went to the other extreme and ceased bringing air from the outside at all. Pipes to convey the cool air to the bottom of the furnace, were placed in various parts of the dwelling, and warm air, once it had become cooled and settled to the floors of the rooms, was carried back over the heater again, carried round and round like this all winter. The result was a heating system that was decidedly economical so far as the cost for fuel was concerned but not by any means entirely satisfactory with regard to the health of the inmates of dwellings so heated. The air at all times was too "dry," and while provision exists in most hot air furnaces for the incorporation of moisture into the air passing over the heating apparatus, the average householder neglects most of the time to keep the water pan filled.

The type of hot air heater installed nowadays is a modification of both these original types. Fresh air from the outside is piped into the furnace space, heated and carried to the rooms above, while provision is made for the removal of a portion, at least, of the

The Basis of National Prosperity

Prosperity is a sort of endless chain. The dollar goes round on a debt-paying tour and everybody is happy. If the dollar stops somewhere along the line then everybody is gloomy.

If you set out to explain this, and devise a chain for the dollar to follow in its rounds, you will invariably include the farmer somewhere in the circle. If you begin with the grocer then you will go on to the miller or the baker or the packer, and soon back to the farmer. You may begin with the lawyer and his fee in court, or the minister and the contribution box, or start down in the "pit" of the stock exchange where gambling goes on daily—but you will always follow back to the farmer if you go on long enough.

The farmer himself is a consumer as well as a producer. The farmer is always buying something. He seldom hoards up the money he gets from his sales of grain or steers. The farmer is a consumer of manufactured goods, and when he has money in abundance he buys freely of the things which are made in factories. Finally the circle is completed, and the money comes back to him in purchase of more of the farm products.

If the farmer is prosperous, then he is a buyer. But the farmer more than any other person on earth can get along fairly well for a time without any general buying if he is compelled to do so. He can and does economize more than others when his bank account is low. And so when conditions are such that men begin to retrench in expenses the farmer is one of the first to do so, and soon the chain of prosperity is broken at a vital spot. In like manner, it is certain that as long as the farmer is spending money freely, then others will have something with which to buy things or pay debts. The farmer's good times mean good times for everybody.

Now the farmer is prosperous just as he has abundance of crops of all kinds. It matters not that the gold production is becoming greater each year and prices are advancing steadily, unless we are to have good results from agricultural operations. Nobody cares about high prices unless there is something to sell. We have had here in America an era of great prosperity simply because there has been for a number of years a steady increase in farm production, not a spurt of one year and a failure the next, but continuing good crops over large areas of the country.

It used to be said, and with much truth, that the great safety valve for the whole economic system of the United States was the free homes of the West. Whenever industrial conditions become unsatisfactory in the manufacturing centers the surplus labor was shunted off to the free or cheap lands of the West. Now, that this practically free land is no longer obtainable, the same effect comes through increase in the producing power of the farms already occupied. The farmer cannot cure his dissatisfaction by turning quickly to unoccupied land; he can increase his product and output by applying better methods to his farming operations.

Few people realize how the process of getting more out of the soil by means of scientific farming has been developed in recent years; much less do they realize what an important factor this has been in furthering the immense expansion of business in our history.

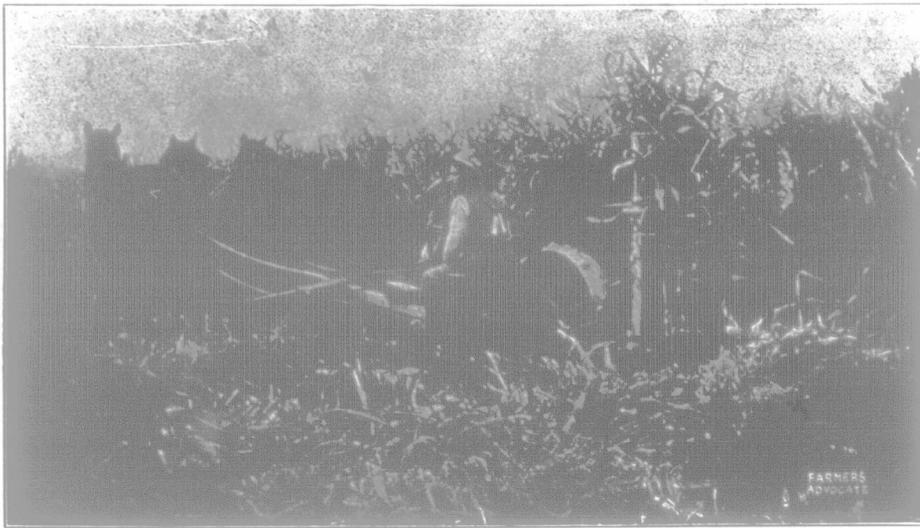
It is no small matter to effect a change so that on a million acres of farm land the yield of grain is doubled in quantity. The farmer who is contented with fifteen bushels of wheat per acre when he gets a crop, and counts on missing a few seasons because, as he thinks, the "luck of the weather" is against him, immediately becomes a man of much more importance to himself and the community when he discovers that he can get thirty to forty bushels of wheat every year on the same land by application of a little science under modern methods. This is just what has been taking place in recent years, especially in that section of our country once set down as of little value for farming.

Because of this development, because of the application of scientific farming, because of the steady increase in the output of the farms, there has come to our country unexampled prosperity in every line. The towns are growing, the cities are expanding, railroad lines are being built, the banks are busy, the merchants are doing well, the factories are running over-time, the workingmen are getting better wages, everybody is better and happier. The problem of maintaining this prosperity which so much delights us all is, therefore, not one related to the kind of currency we have, the paying of bounties to ship owners, or to the treatment of the tariff; but that of maintaining a steady average of profitable crop production.

The student of social economics must fail entirely who under-estimates the importance of scientific soil culture in the creation and maintenance of our prosperity.

PROF. H. W. CAMPBELL.

A very simple and effectual means of tightening the frame of a gate is to run double strands of soft wire both horizontally and upright, and twist each pair of strands together with an old file, or any piece of iron or steel. This has the effect of making a twisted-wire rope or cable, as soft wire so twisted will not untwist when the file or whatever it may be is removed. A couple of such wire ropes upright, and a couple more cross-wise will draw and hold the frame of a gate together in good shape.



CUTTING CORN ON A MANITOBA FARM, 1908

conditions are not certain to prevail, this advantage is more than offset by the danger of having the crop killed in winter or spring and having nothing much to harvest at all.

Experience in Saskatchewan seems to indicate that winter wheat does rather better in the northern than in southern sections of the provinces, probably because the snowfall is heavier in the north and the springs rather later.

Ventilating Farm Houses

A good many of the ailments that afflict humanity during the winter season are due to the practice so many people have of living in houses that are as close and air tight as it is possible for storm doors, double windows and the other contrivances used in keeping heat in and air out, to make them. Take the country over, there is more sickness during the winter season than any other. Pneumonia, one of the worst diseases of this country, always becomes common just about this season, when people begin to shut themselves up for the winter, living in houses that are too warm and breathing air that is impure. Vital statistics show that pneumonia is about the only one of the more serious diseases that is increasing in this country, increasing not only in the number of cases recorded annually, but also in the percentage of deaths resulting. Medical authorities attribute the alarming prevalence of the disease to the living habits of the mass of humanity, living in houses that for weeks at a time are ventilated only by what little fresh air can pass in, and foul air pass out, during the opening of the outside door to let a member of the household in or out.

There are other ailments, some of them equally as serious as the one mentioned. A cold is more easily contracted by a person who lives habitually in a close house than it is by one whose business keeps him more outside. So it is with other maladies. A very large proportion of the sickness common to the winter season would disappear if people would live in houses where they could breathe more fresh air.

air within the house. Thus pure air from without is being constantly introduced, and the foul air inside taken out. It costs a little more for heat to heat a house with a hot air heater that draws a portion of its supply of air from outside and consequently has to heat it through a wider range of temperature than would be necessary if moderately cool air from the living rooms was simply drawn on for the supply for circulation,—but it makes a much more healthful heating arrangement.

Modifications of this ventilatory system may be arranged for, where the heating system is by steam or hot water pipes. It is a trifle more difficult to introduce a satisfactory method of house ventilation where the heating is done by stoves. To some extent, the draught up the smoke flue carries out a large volume of air, and as that from the inside of the house is removed, fresh air from the outside passes in. But it does not necessarily follow that the air going out the chimney is the foulest in the building.

Where double windows are used it is a good plan to drop the upper sash of the inside window an inch or so and make a small opening in the bottom of the lower sash of the outside one. The warm air from the inside will not then pass out to any extent and little frost will form on the glass. No matter what the temperature is outside, every house should be aired out every day, once at least. It looks to some people like a useless waste of fuel to blow the warm air out from the inside of a house by opening the doors and letting fresh air in. But it isn't, and if people could be brought round to a common sense view of the necessity of an abundance of absolutely fresh air for their physical well being and the preservation of health, there would be fewer of them living in the sealed-up way they now are. There would be more fresh air in dwelling houses and less disease among the human species during the winter season.