FARM.

A Talk About Farm Life.

To the Editor "Farmer's Advocate":

While the farmer lives in peace and prosperity tilling his land and reaping the reward of his labor, he sometimes stops to think what it all amounts to in the end; for life on the farm is full of hard work and self-denial, but has compensations that make the balance even. Besides making a living and laying by something for the proverbial "rainy day," he has many luxuries and privileges that cannot be bought with money. So far as work goes labor is life, and a farmer who hopes for success will not have a daily habit of saying " to one, go, and he goeth," but "come boys," and lead the way.

If a farmer invariably sends his men to work that he does not assist in, it shows a lack of enthusiasm that is soon felt, and the men conclude sooner or later that he feels above his business, even though he may he working hard on some other part of the farm.

There is a wonderful charm in owning a bit of land, and making it yield its increase; in adding to the beauty of tree and flower; in making the fields smooth and productive. It is a magic, however, that is only accomplished by somebody's hard work, and the intelligence that can forecast the best methods of accomplishing it.

There is, however, a danger in attempting too much acreage, and becoming land poor, while nothing is more ouraging than the sight of "a little farm well "Virgil," even in those times wrote, " Praise tilled." hig farms, stick by little ones," and "Cato" tells us that, "a man should farm no more than he can farm well, and a farmer should be a seller rather than a huper "; then he added a bit of simple advice that if followed would at any time ensure good results, "Choose good seed, sow thickly, and pull all the Weeda." The latter part of the advice sounds rather ironical, but is certainly to be desired. But in this up-to-date age the rattle of machinery is heard over the land, so that pulling weeds in our fields has become almost obsolete without the help of steel. Whether the acres be few or many, the best land near the house should be devoted to growing the most luscious fruits and tender, crisp vegetables that the climate will produce, to supply the family table the year round.

The mistaken policy of some farmers in thinking that a bank account is better than the simple luxuries that make home attractive, is too often seen in the ead results. The sons are clerks and agents, the daughters learn stenography, and so they leave the healthy, invigorating country life in favor of pale faces and a third-rate boarding house. Seldom advancing either in position or money, they do not seem to realize that—

"There's wealth on the farm, boys,

If only you'll shovel it out."

Manual training is considered the proper thing, but manual labor is something to shun. So farm life becomes a paradox in up-to-date teaching.

The agricultural papers and magazines of to-day are alive to the importance of heralding the latest improvement in stock or implements, and no farmer who can read need be ignorant of the advance made in his occupation by science and ingenuity.

With these for a guide the farmer's family have the

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should be saved in some dry place where there is no fear of leaching, and should never be mixed with farmyard manure in the yard or stable, as loss of ammonia is sure to follow. The caustic lime and potash of the ashes acts on the ammonium compounds formed in the manure, breaking them up and liberating nitrogen in the form of ammonia. As very little, potash is washed out of the soil, the ashes are best applied some time before the crop is sown, in order that the potash may be diffused thoroughly through the soil. They should also be used as a top dressing, and cultivated into the ground. R. HARCOURT.

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Heating and Ventilation of Farmhouses. By J. B. Reynolds.

Most farmhouses in Ontario are still heated by stoves. In the matter of up-keep, whatever advantages other methods of heating may have, heating with stoves costs less than any other method known to the writer. The reasons for this are obvious : with the furnace in the cellar, a certain amount of heat is radiated there, and fails to reach the rooms above. Besides this, furnace heating is usually contrived to serve the whole house, more or less, and, on the whole, the furnace does heat a much larger proportion of the house than stoves do. So that the advantages of more modern systems of heating must be sought in other particulars than in economy.

These advantages, however, are not far to seek, and consist chiefly in a more uniform distribution of the heat, and a more comfortable atmosphere through the house, the disappearance of somewhat unsightly stoves and pipes, an economy of space in the habitable parts of the house, and less labor and trouble. Among the systems of heating by furnace, the

HOT-AIR SYSTEM is the least expensive in first cost, and is equally economical with others in the consumption of fuel. By this method a house can be heated quickly, but it also cools quickly when the fire goes down. Hot-air circulation necessarily involves a constant change of air in the rooms, and besides this circulation, a means is afforded for ventilation. With a suitable system of inlets for fresh air from the outside into the furnace, and of foul-air outlets in flues, a thorough ventilation may be provided with very little extra cost.

But here the advantages cease, and against these there are two rather serious objections. It too often happens that the furnace supplied for a house is barely large enough to perform the maximum amount of work Consequently, in extreme weather, the required of it. furnace is forced, the metal becomes highly heated, and the air passing over the hot metal is vitiated. Air that has thus been intensely heated has a characteristic odor that is easily detected. The second objection lies in the failure of the furnace to force the warm air along horizontal pipes to distant parts of the house, or against the wind. It thus happens that the windward side of a house, the part that needs heat most, is robbed, and the excess heat is driven to the sheltered side.

There is a remedy for the first of these defects. The owner in purchasing a furnace should select one a size larger than is considered by the agent or manufacturer sufficient for the purpose. With a large furnace it will be unnecessary to force it, and the air rising from the furnace will always be of a mild and temperate heat. For the second defect there is no remedy, unless it be an air-tight house. [Note .-- It is recommended by some authorities that the furnace be situated and that the pipes enter the rooms on the side from which the most prevailing winds come, and we think this should modify the disadvantages mentioned.-Ed.] The requisite appointments for hot-air heating are First, a double casing about the furnace, to lessen radiation of heat into the cellar; the space between the two casings will furnish a considerable volume of slightly-warmed air to mix with the hotter air from the interior of the furnace, and will thus temper the whole supply. Secondly, besides hot-air pipes from the top of the furnace to the various rooms, there should be from the ground floor return pipes, carrying the cold air from the floors back to the bottom of the furnace. The neglect to provide this return is a frequent cause of unsatisfactory heating, the warm air in the furnace being unable to rise freely. STEAM HEATING is not extensively used in private houses operating their own plant, but is, nevertheless, quite practicable. The heat is supplied by radiators, situated in the rooms to be heated. The steam is forced under a low pressure from the boiler through pipes to the radiators, there condenses, and returns as water to the boiler to be used over again. Steam heating has the advantage over hot-air in furnishing a milder and more pleasant heat, since, no matter how hot the furnace, the temperature of the steam depends only on the pressure at which it works, and if this is constant, the steam temperature is constant. Like hot-air, steam requires a constant fire to maintain it in circulation, and the instant the water in the boiler cools below the boiling point, then the steam ceases to circulate, and the radiators quickly cool. Steam is not to any extent subject to the wind, since it is distributed in pipes to which the air of the room has but slight access. The cost of the outfit in steam heating is considerably greater than for air heating. Besides the furnace and boiler there are required iron pipes leading to and from the radiators, each of which items

costs more then the corresponding item for hot-air; in addition, there is the cost of the radiators. For an eight-roomed house, a hot-air system would cost from \$110 to \$150, while a steam or hot-water system would cost \$300 or more.

HOT-WATER HEATING is generally pronounced a very satisfactory system for private houses. It is steady and uniform, and gives a mild and agreeable heat, never in any case heating the air to that excessive temperature sometimes reached in hot-air systems. The appointments for hot water and the cost of installing are approximately the same as for steam. A hot-water system of heating is distinguished by the mildness and steadiness of its heat. With steam, the radiators cannot be lower in temperature than 212° F. and hot-air registers are often hotter than this; in water-heating the water in the boiler never exceeds 212°, while that in the pipes and radiators usually stands between 150° and 200°. Besides, the temperature of the water in the radiators is under control, and may be increased and diminished within certain limits, by opening or closing the valve that governs the circulation. In steadiness of heating, the temperature in water pipes is maintained six or eight times longer than steam pipes after the fire is extinguished; and in water heating, as well as in air heating, a low fire in mild weather will maintain a slow circulation, sufficient for the purpose, while in steam heating, to accomplish anything, the fire must be sufficient to boil the water and to keep it boiling.

With the pipes full of water, in severe weather some circulation must be maintained through all the pipes and radiators, whether in rooms used or not, to prevent freezing. This in point of economy is a disadvantage in the water system, but in other respects it is really an advantage, since it compels the maintenance of heat in all parts of the house, and thereby increases the comfort.

It is sometimes claimed that steam and hot water keep the air moist, while the hot-air system dries the air excessively. There is little, if any, truth in this claim. In this climate, the air in our houses is bound to be dry in winter time. The necessary consequences of heating air is to increase its capacity for moisture, and hence seemingly to dry it. Any system of heating will do that, and all systems will do it equally at equal temperatures. The only way by which hot water or steam heating can keep the air moist, is by actually supplying moisture to the air. Steam heating is more likely to do it than water, since a small continual escape of steam from the radiators is quite probable. But in the water system, the mere presence of the water inside the radiator cannot affect the humidity of the air outside, and it may be assumed that very little water escapes from the system. This impression of greater moisture is due to the greater mildness of the heat from these two systems. Of course, to any one standing immediately over a hot-air register, the air must seem drier, as it really is, since it is hotter. But when this hot air becomes mixed with the cooler air of the room, say to a temperature of 65°, the humidity is the same as though the room had been heated to a temperature of 65° by either of the other systems.

To sum up: It is the fashion to decry hot-air heating, and yet a great many good houses are being heated by this method. With a large furnace, well and tightly constructed, the air supplied will be of a moderate temperature, and pure. If the cellar ceiling is low, the furnace should be sunk below the floor, so as to give plenty of rise to the pipes. Long pipes. pipes that require to run horizontally, should be larger, proportionately to the space to be heated, than short or vertical pipes. Returns for cold air, leading from each room on the ground floor to the bottom of the furnace, will complete a set of arrangements that, with good draft in the chimney, and a fresh-air inlet for ventilation, will make a satisfactory system of heating at moderate cost. The intending builder, if he chooses to pay the price, may have systems somewhat superior by adopting steam or hot-water heating. VENTILATION .- The problems of ventilation for the dwelling house, unlike those for schools, halls, and other crowded places, are comparatively simple. In summer time houses can be sufficiently ventilated without special means-by doors and windows. The important thing here is to realize the necessity of ventilation, and to take the trouble to open windows for the purpose. To lower the top sash and to raise the lower sash an inch or two will generally give a change of air sufficiently rapid. With two windows in a room, on opposite sides, the lower sash on the windward side, and the upper sash on the other side, may be opened. If the wind is strong, a direct draft may be broken by inserting under the lower sash a board about three inches wide and the full length of the sash. The latter device is an excellent one for a sitting-room or a sleeping room in summer or in winter. Special aids to ventilation are more necessary in the winter time, when it is frequently undesirable to admit directly into the room a draft of cold air. Chief among these aids is the chimney flue for withdrawing foul air. In the building of a chimney, it adds but little to the cost to build two or three flues instead of one. The one may be used for smoke, the others for ventilation. For this purpose, an opening at the side of the fine and in the wall of a room through which it passes, the opening to be faced by a grating or a register, will draw off the air from the room. This foul-air opening should be situated at the floor line or the ceiling line. It is quite possible to ventilate a room distant from the flue, if the joists run the right way, by making use of a pair of joists as

latest culinary and fashion departments, and the Institutes are doing a valuable work in demonstrating best methods in all the routines of work. Think of a travelling dairy, and of the demonstrations given at meetings and fairs in approved plans. It is calculated to keep from rusting the most dormant mind, for much thought is given to the effort to improve farm life and labor by thorough and labor-saving devices. Nor is there reason for discouragement in the outlook for the future, for in spite of many drawbacks and disadvantages the farmer of the twentieth century is given a happy, peaceful life, and able to hold his own amid the occupations of the world. ANNA L. JACK.

Application of Ashes.

To the Editor "Farmer's Advocate":

Sir,-In the November 3rd issue of the "Farmer's Advocate," page 1486, there are some answers given to "Farmer," on questions relating to the use of wood ashes, which I do not agree with. Your correspondent asks, "Which would be the most profitable place to use wood ashes, on land sown to mangolds, turnips, corn, peas, or oats?" Fruits and legumes are the two classes of farm crops which stand in greatest need of the potash supplied in wood ashes. Mangolds also feed heavily on potash, and ashes may be applied for this crop with good results, especially if used in conjunction with farmyard manure. Therefore, in answer to the question asked, I would recommend that the ashes be applied to the land sown with peas or mangolds.

Regarding the quantity to apply per acre, 50 to 75 pounds of actual potash (K2O) per acre is a fair application. Ashes vary widely in composition. Partiallyleached ashes may not contain more than three or four per cent. of potash, while the dry article may contain as high as nine or ten per cent., depending upon the mature of the wood they were prepared from. If we assume five as an average percentage, then it would take 1,000 to 1,500 pounds of ashes to supply the smount of actual potash mentioned above. The ashes one time Ag

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