

THAT the well for family use may not become a cess-pool, do not allow the drainage from the stable, piggery, and outhouses in general, nor from the sink, to flow into it, since it is well known that there are not many of the wells about the farm—aside from care—the water of which is really pure and fit for family use. It is always safe, also, to look after the cellar, and all places where milk and moist foods are kept, to prevent the absorption of foul gases, since water, in all of its forms, is a good purifier of the air, absorbing filth with great promptness. Ventilate such cellars, clean them in part by allowing the air and sunlight free access wherever possible, the gases passing out through open windows and doors. These are wonderful purifiers and are cheap.

How many farmers keep farm accounts? This question was asked at a Farmers' Institute meeting last winter, and not a hand was raised in response. A year ago we urged upon farmers the necessity of keeping a careful account of their expenditure and income, and hope that some, at least, have followed our advice. There is nothing that leads to system more than the strict keeping of accounts. When the farmer begins to keep accounts, the profit and loss is not only plainly shown, but he learns where to correct mistakes and to avoid errors. This will call for careful and judicious management, which means system in every department. If the usual business methods demand system for successful operation, it is much more necessary on a farm where the labor is diversified and spread over a large area.

### The Stock.

Hogs will relish clover hay during the winter when it is impossible to secure plenty of grass.

SHEAF OATS, cut short, and made into a "cut feed" with one quart of rye meal and two quarts of bran, will, it is said, make a splendid feed for the average farm horse.

WINTERING a flock of ewes so as to grow early lambs for market is profitable, if rightly managed; but it requires extra warm quarters and plenty of roots or other succulent feed.

It may sometimes pay better to purchase feeding stuff rather than to be obliged to dispose of desirable animals for the farm, and which it would be possible to keep after being wintered through.

THE proper way to salt horses is to place a big lump of rock salt, within their reach, and this need not be done oftener than once every month or two. Rock salt is the cheapest as well as the best for horses and all kinds of stock.

A SHEEP farmer says:—I have seen a field which had been used as a pasture for colts and calves till about one-third of it was covered with golden-rod and blackberry vines, changed to a fine grassy sward in three years, by putting in a few more sheep than it would keep in good condition, giving them extra food to make up the deficiency.

FARMERS are apt to use too little care in selecting cows for the dairy. Some seem to think a cow is a cow whether she will make one hundred or two hundred pounds of butter in a year. But it costs just as much to keep a cow that will make only one hundred pounds as one that will make twice as much. Invest in good cows, give them plenty to eat, with good care, and they will doubly repay for the labor of selecting and keeping.

To have healthy swine carefully abstain from giving any medicine whatever. Keep large and small separate, and not more than ten in a lot. Feed regularly and liberally a variety of wholesome food, always some bulky food, and let each feed be taken up clean before more is given. Provide ventilated shelters from wind, rain, and snow, but no litter; hogs with litter get too warm. If you wish disease among your hogs, put them to the straw pile.

HORSES should have exercise during the winter. A mistaken kindness often keeps them close in their stables. They shiver yet they are not turned out because it is thought they would get colder. A lot three or four acres in extent with an open shed in one corner, is what is wanted for an exercise ground. A hearty play, running and kicking up their heels, will quicken the circulation and warm them up; and if permitted, they will take this exercise gladly. Not only their comfort, but also their health, demands this frolic. Accustomed to steady work for months, they are suddenly deprived of exercise. Being shut up until they are enervated, their muscles made soft and flabby, they are unfitted for spring work. When unemployed, a horse should be given its liberty at least two hours every day that is not very stormy.

CHEMISTRY as applied to agriculture is showing many curious facts which have a bearing on the farmer's work. For instance, experiments have shown that more than half the solid portions of food of cattle is taken into the general circulation and is converted into flesh or milk, but there is a great variation in the capacity of animals to digest food, and a variation also in the tendency to appropriate it to flesh or deliver it in milk. One cow may digest much less of her food than another, or if digesting it, may convert it into flesh instead of milk. Careful experiment with any herd will show the capacity of individuals, and will enable the owner to select those which make out of the food the kind of material he is after. He will soon learn the capacity of each to digest food, and can cull out and dispose of those which make the poorest return for food and care.

PROF. ROBERTS states in the *Breeder's Gazette* that water should be hot—not less than 90 degrees—in order that it may be palatable to animals. His sheep took it without injury and with apparent relish at 105 degrees. In order to induce animals to drink water enough in cold weather to furnish a solvent or disintegrant for the large amount of dry matter consumed, especially by dairy cows, the animal should be kept warm. Some experiments with pigs last winter at the Cornell Experiment Station, seemed to show that those kept in cold quarters were unable to consume as much food as those kept in warm quarters, simply because they could not be induced to drink a sufficient amount of cold water to make assimilable their food. Prof. Roberts heats the water for all the domestic animals, the station horses included, and he is quite certain that it gives a saving either in food or in increased production of not less than ten per cent.

### The Poultry Yard.

FOR winter use as litter, cut straw is excellent, being clean, and if food is thrown in the hens will scratch vigorously for it.

DIARRHŒA and cholera in fowls will be prevented by giving occasionally—once or twice a week—carbolic acid in their drinking water.

No fowl, large or small, can long escape vermin if they roost in an unclean place, for there the vermin are to be found. They increase and find congenial places where filth abounds.

SAVE all the bones from the table, put them in an old sheet-iron pan kept for the purpose, and brown them slightly. Then pound them on a rock with a hand axe; or, if you can afford it, buy a bone crusher or mill.

CROSS-BRED fowls are often the best for market when raised for this special purpose, but it is rarely the case that it will be found profitable to use them for breeding and if they are raised they should all be fattened and marketed before spring.

During winter, bestow comfort, proper care and food on your stock. Many a poultryman has quit the business in disgust because he did not realize expectations after a pampered course of feeding or from not properly attending to the wants of his fowls. Comfortable shelter, variety of food, cleanliness, pure air, light, agreeable exercise, and regularity of feeding and watering go a great way towards inducing fowls to lay, even in winter, while they are the main essentials which beautify, develop and perfect the organism of all animal life.

A PROMINENT poultryman says that the cheapest egg food in winter, and the most complete in the proportions of nitrogen, carbon, and mineral matter, is a mixture of clover (chopped into half-inch lengths and scalded), corn-meal and bran. This ration supplies bulky food (or an equivalent of green food), promotes digestion, and costs less than any other food. It affords a variety, and corn may be given also. Experiments show that as long as the hens are kept in exercise, corn may be fed liberally; but though one may attribute all the beneficial effects to corn, yet the amount of food of a various kind picked up by the hens in winter, is greater than may be supposed, especially if they have access to the barnyard, as they will pick up clover heads, leaves, the blades of corn-fodder, and other food required.

### Pithily Put Pickings.

MANY a man may double his physical capacity by strengthening his mind somewhat. . . . Generally, he who sells hay from his farm pays a high rate of interest for the money he gets.—*American Agriculturist*.

FARMING needs the whole man.—*Vermont Watchman*.

A FARMERS' club is the proper weapon with which to stir up agricultural interests.—*Philadelphia Press*.

CHARGES of plagiarism still continue. It is now hinted that successful and hitherto unsuccessful farmers crib the stores of their corn magazines from Nature's cereals.—*Baltimore American*.

A HEN that will not scratch and a cow that is not greedy for her food are the animals that are better dead than alive.—*Rural New Yorker*.

A poor farmer cannot conceal the fact that he is a poor farmer. . . . No thoroughgoing business man in any department of industry can be successful unless he has plans made in advance.—*Agricultural Epitomist*.

Nobody should know all that takes place in your home; nonsense is often a rich source of pleasure there, but whether serious or jolly it is nobody's business but your own. . . . Evenings on the farm should be made the happiest part of your life.—*Maryland Farmer*.

WE never thoroughly know a man until we hear him laugh.—*American Farmer*.

PROSPERITY unwisely used often results in adversity. . . . When we hear a man say, "I have no time to read," we wonder how he finds time to live.—*Farm, Stock and Home*.

It's all humbug to attempt to glorify farming because some great men have been farmers; farming like any other business, is ennobling only as the qualities that make nobility are in the man. Whatever may be the work "the man's the gowd for a' that."—*Western Plowman*.

THE winter evening fireside of our rural homes may be made a place of pleasure and instruction if only the habit of reading aloud is introduced.—*Rocky Mountain Husbandman*.

PIN up two facts to be considered when you are discouraged. There are fewer business failures among farmers than among any other class, more men begin without capital and become owners of good business in farming than in any other vocation.—*American Agriculturist*.