

### Ventilation of Houses.

The proper ventilation of buildings of all kinds seems to be receiving more attention than formerly, but anyone contemplating making provision for it would be very much puzzled after reading the various conflicting plans and theories presented through your columns.

The governing principles of ventilation appear to be very little understood, and yet so great is the necessity for it, that pure air is of greater importance than pure food. That being the case, and I propose to show that it is, would it not seem desirable that a little space be allotted to this subject, and a little knowledge sought after. I do not claim to be able to impart this knowledge, as I am but a student of it, but possibly opening the question up may give scope to others better able to give instruction.

The late Sheriff Rutten, of Cobourg, Ont., was probably the best authority on ventilation of his century, and his system was in successful operation during the wood-for-fuel era in quite a few public buildings, and notably on the cars of the New York Central Railway, but modern heating engineers seem to entirely ignore the necessity for ventilation. I repeat that pure air is of more importance than pure food. A human being can exist on poor food, or food in limited supply, but with an insufficient supply of air, or a sufficient supply of poor quality, life either lingers or ceases altogether. This has been proved time and again—the Black Hole of Calcutta, for instance—the excessive death rate in that case being caused wholly by lack of pure air; that is, lack of ventilation. True, there was overcrowding, but even so, if there had been sufficient change of air—i.e., ventilation—life would have been sustained.

There are three things essential to sustain life—food, air and sleep—the latter being a condition depending on the other two. Stint of food, or food of poor quality, does not necessarily imply poor health, or inability to sleep, provided the air be pure, and possibly one-half of the human race would come under the above category; but, mark you, limit the amount of air we breathe, or let the supply be impure, and ill health and inability to sleep refreshingly is inevitable. We have only to contrast the appearance of the man living an outdoor life with that of the man continually housed up; or the still greater contrast between the sturdy, healthy, vigorous shantyman and the wan, sickly, cadaverous factory operative. The first, it is true, has plenty to eat, but it is generally not of a very appetizing kind, but he breathes the pure air of the woods; the other eats better fare—in fact, it has been said that our factory hands live too well—but the air he breathes is foul, and no amount of food can make him as fit for hard wear and tear as his brother the shantyman.

Does the average man know that four people cannot live in an unventilated room 16x16x9 feet for one hour, without breathing into their lungs air that has already been taken into their own, or one of the other's lungs, and thereby robbed of a large portion of its life-giving and life-sustaining properties; or, worse still, that has done scavenger duty in carrying from the body decayed tissue and possibly disease.

Most people are fastidious, and rightly so, in the matter of using common drinking cups, for instance. How much more careful should they be in regard to taking air into their lungs—that in the case of large assemblages of people in public halls, that is the common property of the healthy and unhealthy, the clean and the unclean, the pure and the foul, the whiskey or tobacco soak, etc. It is somewhat startling, is it not, but that undesirable state of affairs is going on all around us every day, with man and the domestic animals.

Haven't I said enough to show the very great importance of pure air, and the necessity of thoroughly understanding the principles of ventilation? The next question is how to have it, and just here is the problem we have to solve. I do not pretend to be able to do it. Perhaps you or some of your readers have mastered the subject; if so, it is manifestly up to those who have to enlighten the public, and I respectfully submit that your valuable pages could not be put to better use. I have given the subject some study, and while painfully aware of the crudity of my ideas and manner of presenting them, I am willing, in the public interest, to present my views, but in the meanwhile, perhaps, some of your readers better qualified than I, might think it well to favor us with their plans.

Simcoe Co., Ont.

### A Public Benefactor.

We consider your publication well worth the support of the farming community, and have no intention of discontinuing it. Our sons get much to interest them and are always pleased when it comes.

JAMES R. CAMPBELL.

Cornwall, Ont.

### Managing the Hired Man.

To the Editor "Farmer's Advocate":

Having seen your article in May 12th number on "Managing Hired Men," I thought it would be well to offer a few practical suggestions, which I think will help to enable many farmers to manage their hired man.

1. Give him a good comfortable home (this is the most important).
2. Give him all the wages he is worth.
3. Do unto him as you would have him do to you.
4. Give him good tools, implements and horses to work with.
5. Do not work him more than twelve hours per day on an average.
6. If he is a greenhorn, do not laugh at him because he does not know how to do certain jobs, for this will tend to dishearten him, but show him in a friendly way how to do these things.
7. If he is an experienced man, do not try to make out that he knows nothing and that you know all.
8. If he knows of a better way of doing certain jobs than you do, adopt his plans. This will encourage him to take an interest in his work.
9. Do not do those jobs your own way just because you are "boss," or that your father, grandfather or great-grandfather used to do them that way, when his is a better and more up-to-date method. The hired man has the advantage of learning and knowing the best methods of doing most jobs, through working at different places and seeing various ways of working.
10. If you would have him use you as a brother, use him as one first, then if he is any



A Well-equipped Workshop.

good at all, he will return the compliment and treat you as a brother.

11. If he is of an irritable disposition, do not provoke him more than is absolutely necessary, by finding little faults that are really not worth speaking about; but if he does anything that you are really pleased with, acknowledge it without flattery.

By adopting the above suggestions, farmers will have little difficulty in managing their hired men.

Perth Co., Ont.

R. S.

### Green-curing Failed.

To the Editor "Farmer's Advocate":

Last season I tried the new method, as I understood it, advocated by Mr. Glendinning at Farmers' Institute meetings, of saving clover hay. We proceeded as follows: As soon as the grass was quite dry in the morning, we started the mower, and cut until eleven o'clock. About two o'clock we commenced to turn with forks, and turned the heaviest of it; started the rake at four o'clock, and had it in cock before sunset. Next day, about two o'clock, we commenced to draw, and were done early in the evening; had six loads. Both days were ideal hay days, with hot sun and a nice breeze. We put the clover in a mow, 14x22, and tramped it well. Next day it commenced to heat, and was hot for over two weeks, and when we went to use it in winter it was not fit for anything to eat—it was quite brown, and covered with white mould, a great dust rising from it when moved. What was wrong with the management? Was it too dry, or not dry enough? I would like to hear the experience of others—those who have failed as well as those who have succeeded.

Simcoe Co., Ont.

WM. C. WILSON.

### Sugar Beets at Oxnard.

Ella H. Enderlein, in Sunset Magazine.

Throughout the west, where the land is suitable for the raising of sugar beets, the greatest interest is manifested, for beet-raising is an industry which gives the farmer a crop unattended by speculation, as he is able to contract with the factory to buy his crop when he plants his seed. From \$60 to \$200 an acre may be made in the growing of sugar beets, in the locations where factories exist, thus enhancing the value of such farming lands, and also giving abundant labor to those seeking employment. Thousands of acres of land in California are devoted to the culture of sugar beets, but in the Santa Clara valley of Ventura County, it is claimed by experts, the astonishing yield in the percentage of sugar in beets exceeds anything known in beet culture either at home or abroad.

The Santa Clara valley of Ventura has peculiar agricultural conditions. It is only a few feet above the sea level, and the soil has a quality of texture for retaining and holding intact, for a depth of three or four feet, all the natural moisture of the winter's precipitation. There is but little drainage, and lying so close to the sea, evaporation is reduced to a minimum. The frequent night fogs of the summer season also precipitate moisture, which replaces the little evaporation which does take place. The soil is also rich in sulphates, carbonates, and nitrates, so necessary to saccharine-producing plants, thus making the cost of fertilizing very small.

Such conditions guarantee the minimum cost of production with the maximum yield of sugar, greatly augmented by the plentiful supply of artesian water and the proximity of large lime kilns in the vicinity.

In the very heart of the valley, near Ventura, El Rio and Hueneme, has sprung up suddenly the thriving town of Oxnard, which owes its existence to the establishment of the Great American Sugar-beet Factory, which has made Oxnard a rapidly-increasing industrial center between the Santa Clara river and the sea. Being upon the coast line of the Southern Pacific, it is in as close touch with the world as is any town of the south, and already—though but four years old—it has become a bustling, thriving, commercial little city.

The Oxnard factory was built about four years ago at a cost of \$2,000,000, and in size and capacity it is one of the largest in the United States. Upon a tract of one hundred acres of land are the factory buildings, offices, boilers, and sugar houses, rotary lime kilns, vertical lime kilns, oil and storage tanks, etc., etc., many buildings forming almost a little village by themselves, while the twin steel smokestacks, with an elevation of one hundred and fifty-five feet, and the great vertical lime kilns, ninety-five feet high, form a landmark throughout the valley. The dumps where the raw beets are received are elevated above four bins, with a capacity of one hundred tons each. The dumps are of framed timbers, with approaches, upon which the loaded wagons are hauled to drop the contents below.

In one year recently about 12,000 acres of beets were grown, 20 tons per acre being a common yield, beets yielding as high as 25 per cent. of sugar.

The beets are delivered to the factory in wagons, holding from four to six tons each, or in railroad cars, holding twenty-five tons each, and are received by the dumps at the east end of the factory, and come out refined sugar at the west end, about fourteen hours later.

If one has leisure he may follow the sugar-making process in detail, which is full of interest. As the raw beets drop into the great storage bins already mentioned, they fall into sluices flooded with water, which carries them into the main building upon a rapid current. Two great twin screws carry them from here up to the washers, where cleansing belt conveyers take them to the top of the building, where they drop into automatic scales, each self-registering one-half ton, which gives therefore the exact tonnage worked up by the factory. From this point the beets drop into the slicers, round bins with sharp knives set in