

FARM and GARDEN.

STACKING STRAW.

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I fancy that you had a bank account of five thousand dollars you would draw from it only when needed, be careful how the money was spent, and add to it all that you could that it might be as great at the end of the year as it was at the beginning. If you draw from it freely and never restored any, your neighbors would call you foolish. If you complained that it had grown less and yielded diminished interest.

The fertility of your farm is your bank account, and the best you can have, for the soil is a bank that never fails, whose president never speculates, and whose cashier never embezzles, and which will always honor your paper when legally drawn and presented. Should you not be as careful of the fertility of the land as of the money in the bank? And when you draw from it should you not put back what you can. If you take from it in corn, wheat, and grass, and make no return, should you complain that it has diminished and yields a less interest.

The farm is your capital. The produce you gather from it is not the income from your labor alone; it is that plus part of the capital, and that you should return. You have harvested bountiful crops of oats and wheat. You have taken so much fertility from the soil, and should of it all you can. The straw, at least, you can return this you can do by allowing it to rot and then applying it to the land, or by feeding it to stock and giving their manure to the land. The last method returns only about ninety per cent. of it when all the solid and liquid manure is saved, but it is to you the most profitable plan.

Very likely you are one of those men who, at the time of threshing, haul out the straw and make a bonfire of it. I hardly think you are. The man who reads the *Farm and Garden* is not likely to do such a thing. But I am inclined to think that I would be at least half right if I were to say that when you have put straw in a shapeless mass that invites decomposition and annihilation, you call that stacking it. You are sure you are not to blame, it was those "ornery" hands that did it, you told them to stack it well, but they were lazy and did not do it. Do you think it hardly fair to put the blame on their shoulders. You had the stack put on the side of the hill; you put it there because you stacked the grain on the top of the hill, where it would be dry, and the threshers wanted the straw-carrier down the hill. As it made no difference where the stack was, you had it so. Is it true that it makes no difference where the stack is? You will turn the cattle in to it to eat it down. You will throw some straw under their feet, tramp it down to rot, and deposit their liquid and solid manure upon it. This, of itself, is all right. Straw is a good absorbent, but when there is a rain the water will rush down the hillside and, leaching out the best part of the manure and rotting straw, take it down to the creek, and from there to—where? You cannot afford to fertilize the ocean. This year put the stack on level ground, and thus leaching and water transportation will not occur.

Are you quite sure you are not responsible for poor hands being on that stack? They were all boys, were they not? It has become a "fine scheme" to let the boys stack the straw. On the

straw stack is the hottest, dirtiest, and hardest place about the machine, therefore, the strong, able-bodied men give themselves the other positions, and the boys are compelled to mount straw stacks. Having threshed a good many dozens of days when I was a boy, I know how it is myself. Boys will be boys, they need some one to direct them, and on the stack there is no one to do this. The work is too hard for them. Put so many boys on the stack that they would be in each other's way, and the work would still be too hard for them, they lack the strength and endurance to keep the straw moving along properly. But the help on the stack is always short. Threshing help is so hard to get that there are never any too many men, and there will always be an abundance of hands for every position except the straw stack; if there is any lack, you can rest assured it will be found there.

Now this year assign the men and boys to their places, and put the strongest men on the stack. We tried this last year, and two of the strongest hands refused to work on the stack. They said the dust hurt them. They got their walking papers mighty quick, and others were found to take their place. The boys were put to pitching in the field and upon the wagons (we threshed from the field), and we had our straw rightly stacked for once. When you have put the men on the stack, appoint two of the best for stackers. If possible, be one of these two yourself, show that you mean business, and the straw will be stacked, not piled up in a shapeless mass to be ruined and lost for feed.

A few hints about stacking may not be amiss. I would not insist upon a foundation of rails or poles for the stack, though it will pay to make such foundation when it is desired to economize; than ten feet wide, if oats straw, eight feet is better. The reason is the straw will gradually slip out, widening the stack, and if it is started wider than I have indicated the stack will get so wide that it cannot be topped properly. This is the most common fault about stacking straw, the stack is made as wide as it should be to start with, and then it spreads till, to get it topped, no bulge can be made, or else the stack is drawn in so fast that it takes water. Oats straw slips more than wheat straw, and for this reason the stack should be made narrower, and if the endeavor is to build up the stack straight, it will bulge enough of itself.

The two important points in the building of a stack of straw is to keep the middle well and tramped solid. Unless this is done the settling of the stack will make the middle, which bears the greater weight, so low that the outside straw will slant downwards towards the center of the stack, which will spoil, and with poor hands it is next to impossible to have the middle of the stack rightly treated, they will stand and allow the outside of the stack to be built up around them and loose straw to accumulate, until they are in a hole up to their waists, then they will put a few forkfuls of straw in this hole to stand upon and go to work again. Those whose work is to move the straw back to the stackers should stack the middle also; and to do this properly they must keep moving back and forth over it. These men should change positions every half-hour, the one farthest from the machine taking the place of the one at the straw carrier, allowing all to move back one position. As the nearer the machine a position is the harder it is,

unless the men change positions some will have to work much harder than others.

For feed the most valuable part is the chaff, and a large accumulation of this will be found under the straw carrier; it will pay to make a pen of fence rails, put the chaff in the pen, and cover it with a roof of boards or straw; if left at the end of the stack it is the first thing to spoil.

We stack our oats straw well, and in winter cut it down and feed it from pole manger. We find that it pays to do so, as the cattle waste much when turned to the stack. In feeding value, three tons of bright oats straw equal two tons of hay. We consider it too valuable to be wasted.

CULTIVATION OF LATE CABBAGE.

The preparation of the ground for cabbage differs in nothing from that for all the regular market crops, requiring careful ploughing and harrowing. They are set out in July, on the ground from which early potatoes or peas have been grown. Mark off the rows about three feet apart each way with one horse ploughs; apply one shovelful of well-rotted manure to two hills, or one handful of some good fertilizer to two hills. Then take a one-horse plough and throw a good furrow on the manure so as to cover well; with a hoe give a firm pat on each hill, or, what I think is better use a light one-horse roller, and roll two rows at a time. This is very essential, as it gives us a season for planting many times, which we would not have if the ground had been left loose. Do not disturb every alternate middle; this will blot out the cross furrows and greatly impede the progress in planting. The crop is almost exclusively worked by the cultivator and double-shovel plough, one hoeing sufficing around the plants. We allude to varieties with some hesitation, as it is generally believed by every seedman that his variety is the best. My experience has led me to use varieties of flat Dutch and drum-heads. About the second week in October those that have not been marketed we secure from frost by pulling up all the solid heads and turning them down in the middle of the row, four or more rows together, a two-horse furrow on both sides of them, leaving the roots out. We secure the loose ones by bedding root down in a furrow made by a one-horse plough, filling the length of the furrow with cabbage; throw on the next furrow, covering the roots well, and so till the bed is finished. For protection against the severity of the winter, we cover the beds with leaves from the woods, about six inches thick when first put on, laying on some fine brush, or something else, to keep the wind from blowing them off.—*American Farmer*.

DEPTH FOR PLANTING WHEAT.

A Frenchman experimented on the depth for planting wheat. He made thirteen beds, and planted 150 grains in each, at depths beginning at seven inches, decreasing to the surface. In the seven-inch bed, five grains out of 150 germinated. They gave 53 heads, with 632 grains. This return kept on increasing for each bed as it decreased in depth at which the seeds were planted. At 3½ inches deep, 93 seeds sprouted, with 992 heads, yielding 18,634 grains; 142 seeds sprouted at 1½ inches, growing 1,660 heads and 35,819 grains. At the one-half inch depth, 64 grains sprouted, growing 629 heads and 15,587 grains. On the surface only 20 germinated, yielding 1,600 grains. The greatest return in grains and straw was attained by the 1½ inch bed.

As a general rule, taking all soils into consideration, a one inch covering is sufficient, more or less than that not paying so well. But the difficulty, is in securing a uniform depth of covering. It is, no doubt, better to be one inch more than a half-inch less; therefore, the sower should aim to cover no less nor more than two inches. This can be accomplished with tolerable certainty when any of the improved grain drills are used, but not in sowing broadcast.

DEEP PLOWING AND MOISTURE.

A writer in the *Kansas Farmer* says:

The question is often asked, "How does deep plowing make the soil moister? I believe it is an accepted fact that wherever warm air comes in contact with a body cooler than itself, the water in it condenses into drops. On a warm day we see it often on the outside of a pitcher of cold water. Fog and dews are made in that way, and our rain, most of it, coming up from the gulf in those heavy currents of warm air that we frequently have. When we pulverize the soil deep, the warm air which is full of moisture penetrates down and all through, and the ground being cooler than the air condenses the water into drops, which answers in place of rain; so the deeper and the more we pulverize it the more moisture it will collect from the air. Not only that, but as warm air is rich in food for plants, it serves in place of manure, too.

Thirty years ago there was a terrible drouth in the East. Prof. Mapes, a large market-gardener, had had his ground under-drained and subsoiled, and his crops, where he could, were cultivated with a subsoil plow. A committee went to see his place after nine weeks of drouth and they found everything as flourishing as if there had been plenty of rain. His corn (it was the 3rd of September) was estimated at ninety bushels to the acre, while on land cultivated in the usual way, nearby, it was all burnt up.

While I do not think deep ploughing is everything, still I think deep and thorough pulverizing of our land will lessen the effects of a drouth.

NEW INSECT PESTS.

The *Iowa Homestead* says: One of the most singular instances of the sudden appearance of a new and terrible insect pest in great numbers has occurred recently in several places in Michigan. This insect is a night feeding worm, at first velvety black in color, becoming yellow striped and at length grayish. In shape and appearance they are unlike the army worm, to which, in fact, they are nearly related. They might be called black army worms. They feed entirely at night, or somewhat on cloudy days. It is not yet known what is the parent moth of these new enemies, nor is it known that any such insects have ever before been noxious to agriculture. They feed on all sorts of vegetation with the utmost avidity. The following extract from the *Michigan Agricultural College Speculum* from the pen of Prof. A. J. Cook, will give some idea of the numbers of these suddenly-arisen pests: At midnight we were in the center of a fine garden, and found the insects banqueting on every vegetable within reach. Strawberry vines were being cut down by myriads of jaws; peas were being mown off by wholesale. A fine onion bed was being sacrificed, and the buds of the pear and apple trees, and grass and clover; and even the very weeds were being consumed by these nocturnal devourers. During the day the worms hide in immense numbers under leaves and rubbish, and in grass. The most successful remedy yet found is gas-tar water.