## FARM AND FIELD.

## FARMERS' SONS.

One of the very first things we farmers (indeed all fathers) should toach our sons is the real ralue of money. The inordinate love of money-greed for gain-may be the "root of all evil." I do T do not propose to question Scripture on this point. But money itself is good and necessary, and I am sure that one of the most essential things for a boy is a knowledge of the uses and real value of money as representing wealth. I think we should teach our sons how to carn money fairly and skilfully, and how to spend it wisely or lay it up, or invest it wisely by present self denial, that it may increase and become capital for future operations. Self-denial, I say; for capital always represents somebody's labour and self-denial. Our boys should have some chance to earn money fairly, at the fair price for the labour or skill involved; the same price a man would receive for the same toil of muscle, guided by the same skill of brain, or eye, or hand. In this way they learn to measure the money, and know what it costs; and when they have thus earned it they should be left free to use their judgment in its expenditure. It will develop and strengthen their judgment. We may and should advise, but not control. The moncy should be absolutely theirs even to spend foolishly-at least for a few times. A dollar thus spent in childhood and bitterly regretted may save our children the foolish waste of hundreds when they are grown. If they are kept in intellectual baby chairs and leading-strings in youth, how shall they walk when they are men? If they are never allowed freedom of choice in childhood, how shall they choose wisely in manhood? If they never exercise independent judgment in youth, how shall they judge wisely when they are grown? My mother used often to tell of a rich farmer's son she knew in Massachusetts in her youth, who lacked this kind of training. He needn't work-oh no! his father was rich. He could have spending money, and the only limit he could see was "the old man's" stinginess. He knew absolutely nothing of the cost and value of money, and of wise judgment in spending it. At about twenty-one he succeeded to his father's entire property by his father's sudden death. At a picnic he thought to impress his young friends with his wealth and independence by spreading a hundred-dollar bill on a piece of bread and butter, and eating it as a sandwich with great apparent relish! And she said he lived to see the day when he was glad to get the bread and butter, without the hundred-dollar bill for a relish. He died poor, because he had not been taught the value and proper use of money.

Now, I think we farmers should be more careful to give our children a share in the plans, responsibilities, pleasures and profits of the farm, and not simply or chiefly in its uninteresting drudgery. It was doubtless foreordained of heaven that boys should "turn grindstones for all the axes and scythes and mowing-machine knives." But an exclusive grindstone diet (or medicine) has disgusted more than one wide-awake, active farmer's boy with the whole business of farming. It isn't the muscular effort. Boys like that if there is any fun or sense in it. It is the monotony and lack of call for intelligence, the ceaseless round and round of the same thing. "Oh, dear 1 arn't you almost done?" Suppose that instead of grindstones and the like all the time, we give our boys a chance to work and talk with us at interesting work; and let them help us rear the blooded calves and colts, and have one as their "really, traly own," when it grows up. I think the meanest thing a man can do is to give his son a colt,

years old, and then when he gets hard up or in dobt, sell the boy's colt to pay the man's debt! The boy's share in the partnership is the loss and bitter disappointment when the colt is gold.

Some farmers seem to regard their boys ac they do their colts and steers-as containing, or capable of, just so much labour, and they work them while younger and less developed than they do their colts. They " use them where they will do the most good " till they are twenty-one, and then turn them loose in the world with a suit of clothes and fifty dollars. I don't blame the sons of such fathers for wanting to get into other business. I believe in giving the boys and the girls, too, some independent chance to earn money ; the eggs and chickens, or the bees, or the garden, with fair pay for what they raise or make. If we even buy vegetables of them, and let them buy their " Sunday elothes," and get their spending money thus, it will give an interest in work, develop their judgment, and make men of them. Instead of keeping them at dull work, simply driving cows, carrying water, running errands and the like for no pay, and then giving them an occasional dime, or nickel, or quarter of our money, isn't it better to establish with them early a prospective or actual partnership ; to explain to them the wonders and mysteries of breeding, budding, grafting, pruning, cultivating, selecting seed ; to help us plant the orchards or vineyards while we teach them to think : "These little trees that I can lift with my little hand, shall grow as I grow, and one day wave their branches over my head, and yield their golden fruitage to fill my cellar and my purse, when this farm, enriched and beautified by my own labours and my father's, shall be my own farm, and my father (far distant be the day !) shall have been gathered in peace to his fathers?"

Farmers' sons thus trained will not rush off to the cities, nor be anxious for "the old man" to die and leave the farm for them. --- W. J. Chamberlain, in Rural New Yorker.

THE HU. ANDMAN.

Give fools their gold and knaves their power, Let fortune's bubbles rise and fall; Who sows a field or trains a flower Or plants a tree is more than all.

For he who blesses most is blest; And God and man shall own his worth, Who toils to leave as his boquest An added beauty to the earth.

And soon or late, to all that sow The time of harvest shall be given; The flower shall bloom, the fruit shall grow, If not on earth, at last in heavon. —7. G. Whittier.

## CLOVER AS A FERTILIZER.

All plants draw much of their food from the atmosphere, and of those used in agriculture none are exceeded by clover in the large proportion of nutriment thus derived. In this respect other leguminous crops are much like red clover. Here we include all the clovers—vetches, beans, peas, sainfoin, lupins, and lucerne.

To keep up the fertility of our soil, we must restore to it phosphoric acid, potash, nitrogen, and other substances which are found in farm crops. Of the three very important and valuable substances just named, nitrogen is the most precious and costly to obtain. In various places there are abundant supplies of potash and phosphoric acid.

As may be said, these are "in sight." Agricultural chemists are now studying on the problem of the future supply of nitrogen for agricultural purposes. So far, clover seems to be the important factor in this problem.

traly own," when it grows up. I think the meanest thing a man can do is to give his son a colt, to restore or keep up the fertility of the soil; but Lime is a great sweetener and purifier of all and let him call it his own till it is about three I am safe in saying it has been proven a better vegetables; if a pint or so of shaked is put on to

practice to cut off the clover, feed it, and use the manure, than to plough under the whole crop. In other words—for various reasons, all of which may not seem plain—it has been shown that ploughing under a clover-stubble is followed by about as good results (often better) as though the whole crop was turned under. Again, Vœleker shows that "land on which clover has been grown for seed in the preceding year yields a better crop of wheat than it does when the clover is mown twice for hay, or even once only, and afterward fed off by sheep."

Says Dr. Volckor, in the Journal of the Royal Agricultural Society of England:

"1. A good crop of clover removes from the soil more potash, phosphoric acid, lime, and other mineral matters which enter into the composition of the ashes of our cultivated crops, than any other crop usually grown in this country.

"2. There is fully three times as much nitrogen in a crop of clover as in the average produce of the grain and straw of wheat per acre.

"8. Clover is an excellent preparatory crop for wheat.

"4. During the growth of clover a large amount of nitrogenous matter accumulates in the soil.

"5. This accumulation, which is greatest in the surface soil, is due to decaying leaves, dropped during the growth of clover, and to an abundance of roots, containing, when dry, from one and a half to two per cent of nitrogen.

"6. The clover roots are stronger and more numerous, and more leaves fall on the ground when clover is grown for seed than when it is mown for hay. In consequence, more nitrogen is left after clover-seed than after hay.

"7. This crop causes a large accumulation of nitrogenous matters, which are gradually changed in the soil to nitrates.

"8. Clover not only provides an abundance of nitrogenous food, but delivers this food in a readily available form (as nitrates) more gradually and continuously, and with more certainty of a good result, that such food be applied to the land in the shape of nitrogenous spring top-dressings. —Prof. W. J. Beal.

## SEA-WEED FOR POTATOES.

Large quantities of this are gathered on the Atlantic coast, and especially in Maine, and used for manuring potatoes. It produces heavy crops; its most fertilizing element being potash, which is essential to a bountiful production of this most necessary and valuable of all our root crops. But there is one objection to using fresh sea-weed too abundantly, for it gives what is called a *tang* to the potato which is so strong and disagreeable at times as to make it unpelatable for the table.

To obviate this, it would be better to make a compost of the sea-weed with muck, one-fourth of the latter to three-fourths of the former, the two making a layer of seven to nine inches thick or so, and a good sprinkling of slacked lime over each layer, at the rate of a half to one bushel per waggon load of the compost, as lime may happen to be cheaper or dearer in the locality where used. If muck is not to be had, sod is the next best thing to compost with the sea-weed. If neither be available, then use lime alone.

The compost ought to lie from four to six months, so as to be well rotted before being used. If sea-weed alone, it should be limed as above, and then it had better lie six months. Such a compost may be freely used for a crop of potatoes without any danger of their becoming tangy. Lime is a great sweetener and purifier of all vegetables; if a pint or so of shocked is put on to