

## FOR FARMERS AND GARDENERS.

## THE HEROES OF INDUSTRY.

BY G. P. R.

Let others write of those who fought  
On many a bloody field—  
Of those whose daring deeds were wrought  
With sword, and spear, and shield;  
But I will write of heroes bold,  
The bravest of the brave,  
Who fought for neither fame nor gold—  
Who fill an unmarked grave.

Heroes who conquered many a field  
Of hard and sterile soil—  
Who made the sturdy forest yield  
To unremitting toil;  
Heroes who did not idly stand,  
But dealt such fearful blows  
That acres, broad, of worthless land  
Now blossom like the rose.

The heroes of the plow and loom,  
The anvil and the forge;  
The delvers down among the gloom  
Of yonder rocky gorge;  
Heroes who built yon lofty tower,  
And forged its heavy bell,  
Which faithfully proclaims the hour,  
And marks its flight so well.

Heroes who brought from every clime  
Rich argosies of wealth;  
Heroes of thoughts and deeds sublime,  
Who spurned what came by stealth;  
Who won a guerdon fair and bright  
And left no bloody stain—  
No hearth profaned—no deadly blight—  
Upon God's wide domain.

These world-wide common workers crave  
No laurel wreath of fame—  
No monument above their grave;  
They toiled but for a name  
Among the lowly ones who plod  
Their weary way along,  
With faith and confidence that God  
Corrected every wrong!

## IMPROVEMENT OF FARMING LAND.

Frederick Holbrook in the New England Farmer, gives his views relative to the most sure and direct way of improving land, which, in short, is to feed out its products, returning the manure to the soil and to "let the income of the farm be derived mainly from stock," which is a far more excellent policy than that pursued by some farmers in Utah—namely, selling off their grain to merchants, army sutlers and employees, rather than to exert themselves as they should to live wholly or comparatively independent of foreign importations.

The present state of affairs, so far as the permanent inhabitants are concerned, is by no means so desirable as to require no effort at amelioration. It is a condition of things that every reflecting individual must earnestly deprecate. It is neither more nor less than a condition of political vassalage—a pecuniary monopoly, and that, too, by a class who, without hesitancy acknowledge that they have no common interest with us—that they only seek our gold and for which some of them have not faltered at the shrine of their shining god, even when our blood was at stake.

So long as our farmers will willingly bow themselves under the yoke and submit to become the pliant instruments for amassing the wealth of merchants and speculators, to their own injury, so long will there be hordes of unprincipled adventurers and greedy traders to swallow up their hard earnings—leaving them, as an equivalent, what they have hitherto left—a scanty supply of inferior goods, mainly unsuited to their wants—while, at the same time, the people are distracted in their efforts, feeble tho' they were, to bring forth, from the elements around them, so far as possible, whatever their immediate necessities required, till some favorable change should take place that would give a more reasonable access to those things which, at present, on account of their enormous cost and the extreme difficulty frequently experienced in obtaining them, are esteemed as luxuries.

When it is known that the Government has awarded to a gentleman having no permanent interest in Utah, the contract for supplying the "Utah Expedition" with flour, at the rate of twenty eight dollars per hundred pounds, how many of our farmers will be willing to supply that staple article of breadstuffs, at the nominal price of five or six dollars per hundred weight—receiving in pay those goods which, while, in too many cases, are such as only tend to pamper an extravagant taste without intrinsically contributing to personal comfort or convenience—do not add or return one ingredient of fertility to the soil, exhausting itself, year after year, by continued cropping without receiving a due resuscitation from a judiciously-applied manures?

Mr. Holbrook says:

"It appears to me that, generally speaking, the great aim in farming, should be, to devise and perfect ways for expending the various products of the soil upon the farm, so as to get about as much for them in the growth of stock, the meats, dairy products, or wool, etc., into which they have been converted, as though they had been sold off for money; thus giving back to the land the manures the crops may make, increased in quantity, of course, by all judicious modes of composting with them the various unemployed or waste vegetables and other substances of the farm which contain the elements of fertility.

The mistake has been, and still is, too common, of selling off a considerable proportion of the grain crops especially, and converting them into money. If any surplus were left after paying debts and expenses, that has generally been invested either in the purchase of more land, or at interest, or in stocks and other property outside of farming. The farm thus not receiving back a sufficient compensation for the products it has borne, has been undergoing a gradual waste of fertility, and generally has not been as profitable to the owner as it would have been under a more generous cultivation. Indeed, his income, from all sources, is perhaps less than if he had invested more from year to year in the improvement of the soil, looking to a highly cultivated farm for dividends, and less in merely added acres, or in stocks and other outside property.

Cases are not rare of men who have worked hard during the best working period of their life, to get enough income from their farms, over and above expenses, to make an annual investment of money at interest, or in some kinds of stock, so as to have something, as they term it, laid up for a wet day, or for old age. But the difficulty is, they have been exhausting the farm by so doing, and as life advances and they find themselves less able to labor on the land, the farm is less productive than when they were young, will not reward labor as formerly, and much hard and discouraging work must really be done to get a tolerable return from the investment. They are not so well situated to live easily and pleasantly in old age, and, perhaps, their income or resources, all told, are not as good as though larger investments had from time to time been made in the improvement of the soil, the farm growing more and more productive, and requiring less hard labor than formerly, in proportion to the income derived from it.

There may be instances where it is best to sell off the products of the farm to a considerable extent, and purchase town manures; and this course will do, provided enough manure is bought to compensate the land for bearing those products. But in by far the generality of cases the farmer must mostly rely upon the manure made on his own farm.

The hay and coarse fodder are generally mostly fed out on the farm, but often the principal part of the grain is sold off directly for cash. Now I have the impression that in the long run, all things considered, it might be better to feed out the greater part of the grain along with the hay and other forage, and let the income of the farm be derived mainly from the stock. The grain fed with the forage adds a peculiar essence, or strength and activity to the manure heap, is emphatically "the leaven which leavens the whole lump," and has a very marked influence in increasing the products of the farm generally. The land will be more productive in every kind of crop than if the grain were sold off, and it only got back the colder and less fertilising manure made simply from hay and coarse forage.

After a few years of this kind of feeding, the products of the farm will be so much increased that considerable more stock can be kept on it, which will, in turn, make more manure for the land. These influences will work back and forth one upon the other, so that in fact the business will grow more and more profitable, and the income will increase more in proportion than it will be necessary to increase the investment. There are hardly any limits to the productive capacity of our farms, if we will only study out ways of expending our crops judiciously, and making the most of the manures they will return to the soil. Sections of country may be pointed out in Europe, not naturally more favored for soil and climate than our own, where the land has been cultivated for hundreds of years, and is now more productive than at any former period, and far more so, acre for acre, than the very best virgin soils and lands of our own country.

Another thing deserving particular consideration, land that is in high cultivation, and is judiciously cropped, can be kept at a high mark of fertility with ease, as compared with making exhausted land fertile. The very luxuriance of the crops gives back a large mass of roots and stems to the soil. Especially is this the case when a grass sward has been allowed to form; so that in breaking the sod for a new rotation of crops, we can turn under many tons per acre of matter fertilising to the land, contained in the roots and stems of the sward. Then, too, land in high condition is much less injuriously affected by unfavorable peculiarities of the season, as to drouth or moisture, cold or heat, than if it were in poor tilth, and indeed is in a good degree independent of these peculiarities. In any season, it will pay a larger profit in proportion to what has been expended to obtain the crop, than can be derived from exhausted land.

In feeding out the grain crops pretty freely on the farm, there will be some years when the growth of stock, the meats, the wool, the dairy products, etc., into which the grain has been converted, will sell high enough to pay considerably more per bushel for the grain than it would have brought had it been sold off the farm; other years the grain may perhaps bring

a greater immediate income if sold off; but taking one year with another, and considering the steady improvement of the farm, where the crops are expended upon it, there will be more profit in feeding out the grain than in selling it off. In a period, say of twelve or twenty years, I am inclined to think that seventy five cents per bushel realized for corn, for instance, fed out on the farm, and the manure returned to the land, is as good as one dollar per bushel, realised by sending it off to market for cash, and the farm robbed of an equivalent in manure for the corn thus sold off.

Take, for instance, the whole amount or number of bushels of grain of any kind produced on an acre of land, or on the farm, and place it in a pile together. It makes only a small heap, even though the yield per acre be a very large one. Yet that heap, small as it is, contains a large per cent. of the very essence of the fertility of the soil that produced it, and has taxed the land far more than if it had only produced the stalk and leaf of the plant, or in other words, a forage crop of any kind. This grain, fed out with the hay and other crops, adds wonderfully to the activity and fertilising power of the farm-yard manure, and greatly quickens the soil to renewed efforts at production.

Then, again, by feeding out the grain with the forage crops, and thus making manure abounding in gases and salts, you may compost much larger proportions of muck, turf, the rich soils washed into hollow places, or other materials gathered up about the farm to swell the manure heap, and have them all decomposed and sweetened and prepared to become the food of plants, than you could properly use if the cattle droppings were alone composed of the more lifeless and inactive elements derived only from hay, straw and other forage.

Mr. Coke, the late Earl of Leicester, once said, "the more meat a poor land farmer sent to Smithfield, the more grain he would be enabled to sell per acre at Mark Lane. Convert plenty of corn and cake into meat; for the value of farm-yard manure is in proportion to what it is made of. If cattle eat straw alone, the manure is straw, and the farm is straw—and they are all straw together."

Not long ago, I had four cows come up to the stall in the fall, which I thought might yield a good supply of milk through the winter, if well fed. I also had four other animals, cows and heifers, which were not expected to give much milk till the following grass season. The first four were tied in the stable side by side, and received each, in addition to hay and stalks, four quarts of small potatoes each morning, and two quarts of corn and oat meal each evening, through the winter. As was expected, they gave a good mess of milk, and came out well in the spring. The manure of these four cows was thrown out of a stable window, under the cattle shed by itself. The other four animals were tied in the same stable, next to the first four, and received only hay and cornfodder. Their manure was thrown out by itself, at the next stable window, and under the same shed, so that the two heaps lay side by side. The heap made by the four cows that were daily messed with potatoes and meal, kept hot and smoking all winter, and was wholly free from frost. The heap made by the other animals that had only hay and stalks, showed no signs of fermentation, and was somewhat frozen. Observing this difference from time to time, curiosity prompted me in the spring to apply these two heaps of manure separately, but in equal quantities, side by side, on a piece of corn ground. The superiority of the corn crop, where the manure from the messed cattle was applied, over that where the other heap was spread, was quite apparent and striking; and called my attention, more particularly than it was ever before directed, to the importance of feeding out our best or richest products, if we would have the best kind of manure for our lands and large crops from them.

I might here go on to show that the hay produced by the farm, fed upon it, and say, seven to eight dollars per ton realized for the same, and the manure given back to the land, would generally, in a term of years, be as valuable thus disposed of as though it were carried off to market and sold for twelve dollars per ton, and the land not compensated by an equivalent of manure. Also, how the feeding of potatoes, carrots, and other root crops adds to the quantity and quality of the manure, and the profit of keeping stock. But these matters would form another branch of the general subject, the treatment of which would make this communication too long.

It may be proper to briefly indicate some of the ways in which the grain crops may be profitably fed out upon the farm, though I can no more than barely mention them at this time.

It is generally good farming to keep at least a few cows, for their dairy products, and in connection with them about an equal number of spring pigs of a good breed, feeding the skim milk, etc., of the dairy to the pigs, together with grain. When pork brings seven cents per pound and corn one dollar per bushel, I have found it better to feed the corn to March pigs of a good breed, slaughtering them at nine or ten months of age, than to sell the corn off for cash. By supplying the pigs with suitable materials, they will make each five or six ox-cart loads of first rate compost. The pork thus made will bring about a cent per pound more than pork of the average quality in the markets, and meat of the roasting and steak pieces will be about as tender and delicate as that of the breast of a chicken. The skim milk thus fed adds much to the growth and general thrift of the pigs, and is worth a considerable per cent. of what the new milk would bring if sold off the farm for cash. In

addition to what is realised from the pigs, there is the value of the dairy products and the manure derived from the cows.

It often proves profitable to buy up, in the fall, wethers of a good breed of mutton sheep, feeding them a portion of grain along with hay and other crops, say till into March following, and then selling them to the butchers. The grain and hay thus fed out will generally bring more money, in the improved pelt and carcass of mutton, than though they had been sold off directly for cash, and there is the manure left to give back to the farm. Then again, sheep manure is peculiarly active, and inclined to fermentation, and mixed with the other farm-yard manures, it quickens the effects of the whole upon the soil and crops. I might say more about this, but must pass on.

There is the feeding of cattle for beef, which has always been successfully practised; and every farmer knows how much more powerful is the effect upon the soil of the manure from fattening cattle, than that from cattle which only have hay and other forage.

It is generally quite profitable to rear young cattle of a good breed, for their growth and improvement, feeding them a little grain along with the forage crops. Their growth and general improvement often pays a large profit on the cost of making it.

There is the keeping of sheep, to a greater or less extent, for their wool and increase; where things are right for keeping a flock of sheep, how they will make the farm shine!

But I have not space to extend these remarks about feeding. In some of these, or other ways, the principal part, at least, of the grain and other crops of the farm may generally speaking, be more advantageously fed out, and the manure they will make given back to the land, than to sell them off so largely as is often done. And I think a farmer had generally better have his capital mostly invested and actively employed in farming highly cultivated land, and in good stock, feeding out his crops on the farm, and deriving his income through the stock, than to have it partly in a poor, run down farm, and partly, perhaps, in money at interest, or in stocks and other outside matters."

The improvement of land is in direct connection with the improvement of stock, for which, in our judgment, there is nowhere greater necessity than in Utah. How many of our farmers can boast of the possession of fine-blooded cows? Our answer to this must be, what is incessantly reiterated in our ears—our cows do not give one half as much milk as the common average of cows in the States. Now why is this? Simply because their improvement has been a matter of little or no concern to us. Turned loose upon the range when dry to shift for themselves—to increase or not, as chance may come and by aid of whatever blood, or scrubby, mongrel sire as might be encountered—so far from improving, they have, like our "big fields", been gradually suffering degeneration, until many of them are considered altogether unprofitable as milkers and only available for beef, or for propagating their own inferior species.

May not the same also, be truthfully said in reference to our horses, who, like the wild broncos of Mexico and California, roam at large upon the range, until they become almost wild and are only suitable for Spanish (or American) guerrellas to ride and of but small force in the harness. Tho' there may have been some fair-blooded horses imported here from time to time, but few have taken the pains to avail themselves of the opportunity to improve, whether by in-and-in or by cross-breeding, the stock already in our hands.

Besides all this, those animals that have been kept up for working are but indifferently cared for by many. How many, for example, in this city, who keep up a span of horses or mules, take care enough of them to keep them in good heart and proper condition? Or, how many give due attention to the best modes of feeding, thorough cleaning, &c.? To be sure, all cannot afford to hire grooms; but the question is, do not quadrupeds like ourselves, engender inferiority from neglect of these matters?

Again. It is now winter—cold, dreary and severe on man and beast. How many of those animals have comfortable stables or sheds prepared for them? And how many are left to shiver and shrivel up, unsheltered from the storms? When we have seen poor, dumb creatures, solely dependent upon the mercy or hospitality of man for their comfort, standing day after day and night after night, tied to a post or rail, belly-deep in snow and every chilling blast seeming to pass through their skeleton frames, meanwhile their humane owners being snugly ensconced by the fireside in a comfortable dwelling or warmly wrapped up in blankets and perhaps between forty or fifty pounds of feathers, straw, &c., we have been strongly tempted to intrude the suggestion, would it not at least look better and be an act of commendable charity towards your animals to either provide some shelter for them or, un-