

Sources of Profit in Farming.

As any part of the country becomes thickly settled the rate of advance in price of farm lands will be less and less until it finally ceases. Lands purchased of the Government may quadruple their selling price in five years. Farms worth \$10 per acre may sell for \$20 in less than ten years, but no ordinary farm lands now worth \$100 an acre will soon double in value. There is a limit to the sum which can be paid for lands which are to be used for farming purposes alone, and as that limit is approached the rate of increase in price must fall.

The almost absolute certainty, in the general part of our country, that lands would advance in price has had a marked effect on our farmers in many ways. Farmers have, properly enough, desired to hold large farms. The tendency to sell farms when they had reached a fair value, and to invest the proceeds in lower-priced lands has been too strong to be resisted in very many cases. What, under other circumstances, would have been poor and careless farming has been almost inevitable. With low-priced land and high-priced labor, careful, painstaking farming was not to have been expected. With land worth ten or twenty dollars per acre better profits come from cultivating 50 acres in the ordinary modes than from receiving the largest possible crops from 40 acres by a large increase of labor and abundant manuring. The more land one had the better, so long as it doubled in value in ten years. A good investment had been made, even if the annual profits gave no direct profit.

In the future, however, in all the older-settled portions of the country the chief reliance must be on the farm crops. Lands now worth \$75 or \$100 per acre will not, as a rule, advance rapidly in price. On all such lands only good, careful, intelligent work will pay. The capital invested is too large to make it safe to run any avoidable risks. The tendency will be in the direction of better farming. This better farming will have as a prominent feature the adoption of a system by which the whole capital invested may be kept active during the greater part of the time. A lack of sufficient money-capital is probably the one great defect of farming; but coupled with this is often found a system of farming by which a large part of the capital employed is unproductive during much of the year. Whenever a field is allowed to lie idle, or to produce but half a crop, it is capital lying idle or only half employed. Whenever men and teams and tools are employed but a part of the year, there is a lack of full use of an important part of the farmer's capital. Small-grain growing, as a specialty, is almost certainly accompanied by loss from inability to make the best use of the capital. During two or three months of the year there is need of much labor, and during the rest of the year very little. During more than half of the year, in the case of spring-sown grains, neither is the land producing anything nor the crop becoming more valuable.

It is one of the great advantages of stock-raising that, when it is made a prominent feature of the farming, nearly or quite all the land may be made useful, and the stock may be so kept as to increase in intrinsic value each day.

Another feature of the farming on high-priced lands should always be that a system is adopted by which the tendency to the exhaustion of the soil is reduced to a minimum. Hence, growing grain or hay for sale is not a suitable system in such case unless in comparatively exceptional cases. Stock-growing, with its necessary consumption of most or all of the plant-crops produced on the farm, with its adaptation to good rotations of crops and to the use of the so-called renovating crops, makes a strong appeal in this direction.

The farmer who must make his profits from his crops, if at all, will do well to remember that the selling price of farm products, as of other articles, depends very largely on the money, time, labor and skill necessary to produce or reproduce them, and that there will pretty certainly be a full supply, one year with another, of those products which can be produced with a slight money investment in a short time and with comparatively little skill. And on this point, again, he will find stock-raising, especially of good stock, offering better prospects than grain-growing as a specialty. And as to that very important point for all farmers whose final markets are not near at hand—the reduction of bulk and weight in proportion to the value—stock-rearing, especially when the products of the animals (in wool, butter or cheese) are sold rather than the animals themselves, is much in advance of grain growing. —[Ex.]

Fertility from Clover and Thistles.

A correspondent wishes some information on the subject of green manuring, saying that he has a peach orchard that he wishes to enrich. Theoretically we might say green manuring, as it is termed (that is, to grow a crop from the soil, then while in a green state, turn it in with the plough), adds nothing to the plant-food contained in the soil, but practically it is an effective means of fertilizing and enriching land. Exhausted soils are not easily thus enriched, for there must be sufficient fertility in them to produce a fair growth of vegetation, otherwise there is but little chance for vegetable growth to return to the soil. Green manuring is beneficial in two ways: First, it improves the mechanical condition, at least of heavy soil, by enlivening and loosening it, rendering it more susceptible to atmospheric influence, whereby the organic elements of plant-food are more readily obtained; and second, by the action of the carbonic acid produced by the decay of the vegetable matter on the mineral elements in the soil, which without this acid are insolvent and not available as plant-food. A soil may contain all the inorganic elements necessary to a state of fertility, and yet be in an insoluble and unavailable condition. Vegetable matter contains in itself but a small percentage of inorganic plant-food, and yet it is of great value in rendering a soil productive.

Any crop that grows luxuriantly may be used for green manuring, but the plant that strikes deep into the earth and penetrates the subsoil is most valuable, for it draws its nutriment mainly from below the surface soil, and when ploughed in is made available to enrich the surface. Thus clover is more valuable than any annual crop, for it receives its chief support from the subsoil, and in its decomposition it produces the carbonic acid so useful as a solvent of mineral matter, and it also brings a new element of plant-food to renew the surface soil. Of annual crops for ploughing in buckwheat is, perhaps, as available as any; it grows rapidly, and may be sown at any time during summer, with a prospect of full growth, and two crops may be grown and ploughed in the same season. Other crops may be grown, but some require a longer season of growth. Indian corn on certain mellow soils will produce a large growth; peas do well, but need early sowing; Hungarian grass or German millet will bear later sowing and produce large growth. A few years ago I visited an extensive orchardist, and found his orchards grown over with Canada thistles, which were then ploughed in; he said he depended on the thistle growth to enrich his orchard land, and thought there was nothing better as a green manure; he ploughed them in twice during the season, and his orchards were very thrifty. —[P. P. Root, in N. Y. Tribune.]

Liquid Manure.

It is generally believed that no system of enriching land for small gardens, with a view to perfection of crops, is so truly economical and so easily available as that of liquid manure. We occasionally hear of a gardener or an amateur fruit grower who has practiced enriching the crop by use of liquid manure, but it is not a common practice so to enrich our gardens and lawns, however often the advocacy of the practice has been written. The writer practiced the sprinkling of a lawn, in a dry season, with weak liquid manure water, and in the greatest heat and drought has kept it fresh and green. In the management of pot plants no course of supplying food equals that of a judicious use of liquid manure. There are in almost every family waste liquids which usually go into a sewer or drain, or possibly upon the road, where they are of no avail; but if saved by being conducted to a tank along with the wash waters of the house, would enrich a whole garden for vegetables and fruits, flower-borders, etc., and the whole, if the wash be applied regularly, and at night, after sunset in moderate quantities, would prevent the driest weather of summer from checking vegetation. If an unpleasant odor comes from the tank, a little plaster (gypsum) sprinkled in and around the tank would keep it sweet and clean. Again, the use of liquid manure need never delay planting because of manure not being on hand, but planting could proceed, and the application of manure be made at leisure. —[American Rural Home.]

A few years since some grains of wheat, taken from an Egyptian sarcophagus at Cairo, and which was of the time of Sesostris, more than a thousand years before the days of Christ, were planted in France and produced 2,000 fold.

Summer Culture of Hops.

Judgment and care are required in poling the hops, since the effect of using too long poles is soon manifest by a weakness of the vine, from being drawn up beyond its strength, and causing it to bear a diminished crop, while through the use of too short poles the runners entangle when they get beyond their poles and cause confusion in packing.

After poling, in dry weather, the ground should be thoroughly cultivated to free it from weeds. As soon as the vines will reach the poles they should be tied, as they become much injured by lying upon the ground and twisting together. Three of the most even vines should be selected for each pole; the very strong, rank or hollow ones being rejected, if there are enough without them; many growers also destroy the most forward vines, as the branches from these early shoots produce but little fruit, and the latter shoots are more vigorous as well as more likely to avoid insect enemies.

In lands of great fertility in English hop yards, two vines to the pole will sometimes produce a larger crop than three, and it is claimed the hops are of a better quality and come earlier to maturity. While there is too much risk in depending upon only two vines, yet more than three is decidedly objectionable.

Some growers have all superfluous vines pulled out from the hill by the tyers, yet the most approved method seems to allow the surplus vines to remain until well into June, then cut them off close to the stock of the plant, and finish by earthing up the hill. The earthing up process should be done immediately after the plantation has been carefully looked over, and all poles removed that are untimely with vines, and also smaller ones substituted in place of long poles, where the vines look weakly and not likely to run up. The large poles thus removed can be put again to the strongest neighbouring hills and furnished with two vines, one being taken from each of the two nearest poles. European cultivators earth up fully eighteen inches high, not only to preserve the crown of the hill in a growing state, but to keep back the young shoots, which would otherwise sprout out from the hill; as soon as the hops are hilled all weak plants receive an extra manuring or stimulant, generally nitrate of potash mixed with superphosphate of lime, or good guano, or some good liquid manure.

After the hilling is completed, horse or hand cultivating must commence and continue vigorously, for the ground must be kept clean of weeds; the suckers from the hills must be pulled off, since by remaining they have a tendency to produce mould; the surface of the ground must not be allowed to become crusted and should be preserved in fine deep tilth. During July some of the thrifty varieties will very often require the lower branches to be cut off three to four feet from the ground to insure a more perfect circulation of air and light, and as a precautionary measure against mould. Poles that are blown down during high winds should be resharpended and reset, or broken down poles may be tied up by rope-yarn to adjoining hills, after horse cultivation is suspended. This matter requires immediate attention, since if hops are allowed to remain upon the ground, for a few days only, they will be spoiled. —[Boston Cultivator.]

Making Hens Eat Potato Bugs.

If we succeed in inducing our fowls to pick the bugs off the stalks we may hope to raise as good potato crops as ever. J. C. Bates has, he says in his letter to the N. E. Homestead, succeeded in the undertaking. He says: Our first experiment was to offer both larvae and beetles to the fowls, but they refused to touch them, and acted as if somewhat afraid. Next we mixed the insects with the corn and other food that was given them, but they refused even to eat the corn for a time; by-and-bye, however, they began to eat the corn, and soon lost all fear of the insects, although they still refused to eat any. After a few days, by keeping the insects in their food all the time, some of the bravest of the hens began to eat a few insects, and it was not long before the rest joined them, and in a few days more they appeared to relish the beetles about as well as the corn. Up to this time I did not observe any of the fowls eat a beetle from the potato vines, but they now began to do so, and we were obliged to put them in their food no longer. After this the beetles were so reduced in number in this garden that they did no material damage. It would seem from the above that although the beetles were naturally repugnant to the domestic fowl, yet an appetite for them may be acquired.