

FOR FARMERS AND GARDENERS.

Farm Operations in Season.

The American *Agriculturist* in its "Calendar of Operations" for this month, says, "April is no leisure month for the farmer. The plows and harrows are at work, manure is wanted in the fields, fences are not yet cattle proof. Early crops require putting in, and the farm stock need much care at this their season of increase." It urges prompt and timely attention to every department of the spring farm work; for, "if not promptly and closely pursued now, the work of the whole season will be delayed, and there will be the unpleasant necessity of being driven by work, rather than the pleasure of driving it."

The evils of slovenly cultivation cannot be too much deprecated. The *Agriculturist* says, "It is important that work be well done. If a piece of land is half plowed, no after labor can fully atone for it, although even in hoed crops, while nothing can be done for the grain. Undertake to cultivate no more than can be well put in and thoroughly tilled. If the farm contains more land than can be properly managed, turn out a portion to pasture, and till the rest"—or, what would be more proper, in most of the farming districts of Utah, let a portion rest and cultivate every alternate year. For instance, a man has a farm of fifty acres. Now, twenty acres of that, if thoroughly cultivated, will yield him more produce than the fifty, half-cultivated. If, therefore, he is determined to hang on to the fifty, or the hundred acres, and will not divide with the industrious man who has no farm, but would purchase, if he could—why, let him lay it off in divisions of from ten to twenty or twenty five acres and cultivate a different division each year. This would be more profitable for the farmer and better for the soil.

We are satisfied that, as a general thing, our farmers run over (not cultivate) too much ground. At Cedar city, Iron county, a field nearly three and a half miles long and about one mile wide, containing some two thousand acres, was inclosed with a strong picket fence of cedar posts, at a cost of about fifteen thousand dollars; which was allotted among the inhabitants of that settlement, where there were about one hundred agriculturists. What was the result? The average yield per acre was from five to ten bushels, and the people of Cedar have been more than once compelled to buy their breadstuffs from the settlement of Parowan and, when it could not be obtained there, to purchase and haul it from Beaver, a distance of nearly 60 miles.

At Parowan, a field of some five or six hundred acres was inclosed, which, being divided into small patches, gave the farmers opportunity to cultivate their land, and the consequence was that the crops were generally remunerative, and there was no scarcity of grain.

We have not particularized Cedar because it is the only settlement where farms are not sufficiently cultivated to make them pay well, and where almost every man has by one half more land than he can cultivate with profit. It is so, also, to a greater or less extent, in most of the farming localities of the Territory.

We reiterate the assertion—and practice will demonstrate its truth—that twenty acres of land properly and skillfully tilled will yield larger profits to the farmer than fifty acres hastily prepared and half cultivated.

If retrenchment should be urged upon the farmers of the East, there are double incentives for it here. Besides the argument of greater crops from a smaller quantity of land, when thoroughly cultivated, we have the additional incentives of greatly diminished labor in irrigation, the more economical use of water, and, consequently, a larger number of farms, an augmentation of the population of settlements—and what is a desideratum of paramount importance—a vast increase in the quantity of produce raised in the Territory.

Manure for Potatoes.—Though it has been shown that half the ash of the potatoe consists of potash, yet the application of ashes adds but little to the yield per acre. Experiments last year by the proprietors of the *Genesee Farmer* go to show that, while four hundred bushels of unbleached wood ashes gave an increase of only five bushels per acre, "150lbs of sulphate of ammonia gave an increase of 45 bushels per acre, and 150lbs of sulphate of ammonia and 300lbs of superphosphate of lime gave an increase of 84 bushels per acre." Peruvian guano contains about 10 per cent. of ammonia and 25 per cent. of phosphates; it is therefore the best manure that can be applied to land set apart for potatoes. In the absence of guano, the droppings of hen roosts are a good substitute—in fact, the far-

famed Peruvian guano is nothing more nor less than the droppings of sea-fowl, gathered on the Peruvian islands in the Pacific.

It will be found of much pecuniary advantage to farmers to inclose a yard for their poultry and have the hen roosts securely sheltered, so that all the home-made guano may be gathered up, from time to time, and kept dry, in boxes or barrels, till required for use.

To still further attest the utility of this manure for potatoes and, if possible, induce some of our wide-awake and thrifty farmers to adopt our suggestion, we make the following additional extract from the same article on "Manures for Potatoes," in the *Genesee Farmer*:—

"In the same field on which the above experiments were made, two acres were planted with potatoes, in 1852, without any manure, and two acres with 300lbs of Peruvian guano per acre, sown broadcast. The two acres without manure produced 233 bushels, and the two acres dressed with guano produced 410 bushels, or an increase of eighty six bushels per acre."

Guano not only gives the greatest increase without admixture, but there is no manure that can be applied with greater benefit to the potatoe crop, when mixed with common farm manures.

Carrots and Sugar Beets are excellent winter feed for milk cows, as well as other stock—but for them especially. To make your cows give good milk and a plenty of it, a sufficiency of good feed is the first requisite. If you have a patch of deep, mellow soil, plant carrot or beet seed or both, and raise some winter feed for your cow. Then, with a comfortable shelter from the chilling winds and deep snows of winter, you may reasonably expect to have butter for your table and milk for the little ones.

Sown in drills fifteen or twenty inches apart, about two pounds of carrot seed is enough for an acre. As soon as the plants are well out of the ground they should be carefully hoed and cleaned from all weeds; after which, hoe and weed often enough to keep clean. The long orange is said to be the most prolific in yield and therefore best for field culture. If preferred, a small patch of the scarlet can be planted for table use.

Carrots are good feed for horses. A correspondent in the *Agriculturist* says that "every man who keeps a horse should feed some, as I am told by those who ought to know, that they assist in the digestion of the other feed of the horse, thus giving him more nourishment from that, besides what he gets from the carrots."

The American *Agriculturist* for April is before us. The table of contents embraces a large and attractive variety of subjects. The "suggestions for the month" are full and pointed. Bees, bread, butter, culture of carrots, cranberries, currants and dealing with cows, the dairy, the farm, fencing, flowers, fruits, kitchen garden, grafting, grapes, grass, house cleaning, insects, lark and pluck, manures, nuts, onion culture, orchard and nursery calendar, plowing, potatoes, puzzles and problems, recipes, seeds, sheep, stables, strawberries, sugar cane, trees—varieties of and how to plant, &c., &c., are matters that receive due notice and information imparted in a single number may, in many cases, prove more than an equivalent for the cost of a volume.

This is one of the best agricultural journals published in the world. It is printed in New York city, by Orange Judd, A. M., editor and proprietor, at \$1 per annum, invariably in advance. An English and a German edition is printed, each of the same size and containing the same articles and illustrations, as nearly as possible. The copyright of each number is secured—entered according to act of Congress, &c.

The *Genesee Farmer* for January and February, 1859, comes to us laden with an unusual variety of interesting, practical and scientific articles on matters pertinent to the farmer, gardener, dairyman, stock-raiser, fruit grower, housewife, &c., &c. These numbers came to hand late, the mail sacks containing them having been delayed some weeks in the mountains.

The *Genesee Farmer* is printed in Rochester, New York, by Joseph Harris, at the low price of 50 cents a year, in advance. Clubs furnished at reduced prices.

An Exchange says—"Plants breathe. The respiratory organs are in the leaves—the upper sides inhaling and the under sides exhaling. This can be seen by applying a cabbage leaf to a blister; place the upper side next to the blister, and it will draw; place the under side next to it and no effect is produced."

Potatoes are planted in hills and in rows; but we prefer planting in rows, not because there is any material difference in the yield, but because a given quantity of land, planted in rows, may be cultivated with less labor, than if planted in hills—each cut about a foot apart—the rows two or two and a half feet apart.

[From the American *Agriculturist*.]

Breeding In-and-In—Cattle Breeder's Reply to Cassius M. Clay.

No. II.

Mr. Cassius M. Clay, in the February number, rejoins to my article in the January *Agriculturist*. After saying what I did then, I intended to follow with some remarks on the Collings system of breeding Short-Horn cattle; also on the practice of various eminent breeders since, as Bates, the Booths, and others. I shall come to them before I get through; but as Mr. Clay has classified his arguments in condemnation of this system, for convenience I will follow him in answer. I wish, however, to make this saving remark: I do not advocate the breeding in-and-in in all cases, and do not recommend others to do so at all, except under circumstances of perfect health and condition of the animals proposed to be so bred; and in observance of such principles, I quoted the examples of the celebrated breeders I named. Let us look at Mr. Clay's line of argument against close or in-and-in breeding. He condemns it

1st, from 'analogy.' The Divine law, as expounded by Moses, forbade the Jews from intermarrying within certain degrees of blood relation. Why, we are not altogether given to understand, but we may presume one of the principal reasons was to preserve and promote the decencies and proprieties of life. Physical considerations no doubt influenced the restrictions laid down by Moses, to some extent: for it is well known by every physiologist, that diseases run in certain families from one generation to another, arising, perhaps, from accident at first, but becoming chronic in the system, they were susceptible of perpetuation through a similarity of blood, of constitution, sympathy, and bodily habit, nervous sensibilities, and other subtle influences not always visible to the eye or understanding.

The Jews, also, had a 'mission' before them—being a warlike people, and demanding great bodily health and energy in action. Yet I deny the similarity of the premises which Mr. Clay institutes between the breeding of men and the breeding of brutes; the 'analogy' is widely different in the two subjects. Man has an organization of brain, reasoning faculties, sensibilities, sympathies, nervous temperament, and other affections, added to the animal instincts and passions, all of which more or less affect the procreative and gestative functions and powers, and exert a wide influence on his progeny. It is unnecessary to go into this further, as physiologists and medical men have taught it all from time immemorial.

Brutes have instincts and passions alone, without the human attributes which I have named. Their physical organization is ruder and coarser, less complex and intricate. They subsist on simpler foods, fewer in number, and prepared only as nature produces them. Therefore 'analogy' to the human race in close breeding bears little or no relation to that of the brute creation.

Let us, however, look even at the human family, divested of our prejudices, education, and refinements. Let us take the Bible for authority, as it is quite evident we have none better at hand. Out of Adam's side, Eve was formed, and she bore children to Adam. 'In-and-in breeding,' that was, to a certainty. They had sons and daughters, who must have intermarried; and in process of time a very considerable territory became peopled by their issue. We hear of no 'claws' against close intermarriages in those days, nor of idiots or imbeciles arising from relationship in parents.

When Noah, his sons, and their wives, went out of the ark—the only living humanities on the face of the earth—close alliances must of necessity have been practiced for some generations at least, and from them strong physical families, tribes, and nations sprung. From an incest sprang Moab and Ammon, strong men. They resulted also from a drunken revel—the worst possible condition according to our modern theories. From them sprung the Moabites and Ammonites, who grew to be powerful people. We hear of no adverse physical results from these descents.

Leaving the Bible, let us consult the comparatively more modern, but still to us ancient nations. In Greece and in Rome it was common for men, even in the highest walks of life, to commingle with their own offspring, and the children of the same parents often intermarried—revolting indeed and abominable in our eyes. Yet in many of the qualities of learning, law, and civilization, those nations were exalted beyond all others contemporary with them. There may have been fools and imbeciles also, though we do not hear of them—but great men sprung from those close relationships, and such practices were not considered by the people of those nations at all as we consider them. I speak only of fact, not propriety, morality, or right, in the matter.

In the present day, suppose, for example, that two children of a family, born of healthy, robust parents, should be separated from their birth, never knowing each other as relatives, and that by accident in after life, at proper age, they should intermarry. Does any one suppose that their children would be less endowed with sound faculties of body or mind than the children of others, having no known relationship? Or, nearer, if you please, suppose the same thing should happen between parents and their own offspring. Such things have been, in the annals of history, without remark of either idiosyncrasy or imbecility. Education, and reasoning, and the laws of society, as well as Divine instruction have taught us, that all such practice is wrong, and we condemn it. But aside from the mental and nervous affections of humanity, we have no proof that the simply animal functions of man would be deranged by the practice.

Brains are the chief desirable endowment, and the results of brain activity and creation are considered the great objects of human life. Physical strength and health are also important; but who thinks of rearing up man for obesity, to take on fat, like oxen, or swine? The legislature of Georgia, in their new found wisdom may, as Mr. Clay remarks, enact laws against the intermarriage of cousins, with the result, in all probability, that when cousins wish to intermarry, they will quietly pass over the state line of Georgia, and do their marrying, instead of at home; and that is all there will be of it. By what statistical tables do the Solons of Georgia know that more imbeciles are produced from cousins than from those who are not cousins. There is no well authenticated proof from public or private lunatic, deaf and dumb, idiot, or other asylums for unfortunates, that the children of

cousins contribute larger numbers, in proportion, than others, to fill those institutions. Understand, I still speak of facts, not as advocating the practice of such close connections in marriage. But enough on this head, my readers will get at the drift of my meaning.

In all of this previous remark it is to be understood that the parties in this close breeding, whether man or brute, have been free from constitutional diseases, or sympathetic ailments, acting on a common organization, and free from mental or bodily infirmity. Yet infirmities, mental or physical, in close blood relations, or in strangers as well, will descend in the offspring with more or less certainty, as circumstances may determine; or, if healthy, they may exist in their offspring, produced by accidental influences, beyond the control of the parents, or at the time even beyond their knowledge in themselves, perhaps. Yet, Mr. Clay says, 'that man, outside of mental and sentimental phenomena is governed by the same physical laws as other animals;' or, in other (and my own) words: make men savages, and they are like other brutes. That I grant; and for the animal development, simply, I will yield him more than he claims.

Marrying cousins is 'in-and-in breeding,' of course; and I will take the late and present, royal families of England, as examples—the Guelphs, not the Stuarts, for they were French. The first and second Georges were intensely German. Their maternal origin, far away back, was English—Scotch, rather—but the English blood had been mostly bred out, and the third George, although fourth in direct descent, was almost wholly German, the descendant of generations of cousins, and even those cousins closely interbred. This third George married a cousin, a German, with no brains to spare on either side, but physically both well developed persons. English roast-beef and plum-pudding had done its best on George, and German sauerkraut and lager-beer on Charlotte—a pair of well fed, able bodied people. They had thirteen children, physically as fine a family, probably, as existed in England. They grew up well developed specimens of humanity, sons and daughters alike, perfect in animal faculty—their superfluity of brains interposing no bar to physical maturity. True, idleness, dissipation, and unbounded indulgence spoiled their animal faculties in time, as such influences, unchecked, would spoil any body, until by a fortunate marriage of one of the sons—the Duke of Kent—with another German cousin, the present sensible, sound and healthy queen sprung; and she, by a marriage with still another German cousin, is likely to people her various palaces with a progeny as numerous, if not as physically stalwart, as those of her domestic old grandmother Charlotte.

Mr. Clay's 'analogy' does not work well in this case, and a stronger one I can not bring to mind against myself, and in his favor, arising from the exceedingly artificial life of the examples. We both believe in good keep, and good care in animals, as well as in men and women. I now come to Mr. Clay's argument:

2d. 'Experience.' 'The in-and-in theory rejects selection.' Not at all, as I stated it; but on the other hand, as practiced by good and successful breeders, it demands the very nicest selection. Its rules are: perfect health, sound constitution, with the very best animal organization to be found. With such specimens, breed them together, let the blood relation be what it may, and perfection or as near its attainment as possible, is the result. Mr. Clay mistakes my meaning when he understands me to say that commonly, men breed indiscriminately. I only allude to those who breed 'common' stock of any kind, not 'blood' animals. I am well aware that breeders of choice animals do select, and select closely, out of the line of in-and-in breeding; yet it may oftentimes occur that they could breed still better animals, if, when possessed of superior sires and dams, they would breed them together longer and closer than they do.

For instance, when the Scioto Valley Cattle Company brought out their first importation of Short-Horns, in the year 1734, among which were four or five very fine animals, strongly in-bred with Mr. Bates' celebrated 'Dutchess' blood, would not that company have done much better to have bred that blood closely in-and-in for a while—the bulls and cows together—instead of crossing their cows, which possessed it with the coarser and less highly bred bulls they bought of Whitaker and others? I have no doubt of it; for so strong was that 'Dutchess' blood, and so tenaciously did its appearance descend in the produce, that animals in the third and fourth generation of 'out-and-out' breeding having been readily detected by persons familiar with that blood in Mr. Bates' hands, without any knowledge of how they were bred since imported, although these descendants were from inferior crosses of other bulls, in every instance, and not equal in quality to the originals. The very beauty of the system of in-and-in breeding, when strictly followed, is the compactness and point in which the good blood is concentrated in the beast, giving him, or her, the power to impart it strongly into their offspring. I admit, with Mr. Clay, that people commonly think they select the best calf, pig, or colt for breeding; according to their own rule of judgment; but in 'nine cases out of ten' what is that judgment good for? We shall not differ in this conclusion, I fancy.

3d. 'Special proof.' When Mr. Clay tells us 'the Campbells are coming' with their enormous hogs to the Cincinnati markets, 'which have never been beaten,' the assertion is too vague. I want to know what beats; whether it be size alone, quality of meat, and cheapness in producing it, or what standard of excellence predominates. The position is not sufficiently defined to need further remark from me, and unexplained, it must go for nothing.

4th. 'False proof.' I will explain to Mr. Clay that, by 'a late day,' I mean yesterday, or last year, if he pleases. I do not admit that the 'studbook' breeders 'have changed their practice.' If he is 'not familiar' with those volumes, as he says, I commend him to their study, and he will see how many of the celebrated English blood horses have been bred. As to the Kentucky horses, I will not dispute him; for I am willing to admit, with the old Kentucky field preacher, when at a camp meeting, and exhorting his audience to a better life, he told them that their reward would be in a future world 'which in beauty and luxuriance approached nearer to 'Old Kentucky,' than any other illustration of bliss he could give!' In that unsurpassed valley of some sixty by forty miles in area, of which Lexington is near the geographical centre, where, on its luxuriant soil, blue-grass pastures, race-horses, and short-horn cattle are permanent institutions,