



AGRICULTURAL.

A REVIEW OF FRUIT CULTURE IN UTAH.

APPROVED BY THE DOMESTIC GARDENERS' CLUB.

For some three years past many of the inhabitants of these valleys have been growing fruit trees to some extent, and the results of their labors are various: with some their exertions have been crowned in a great measure with success, while others have not realized their expectation, and the outlay and labor has been nearly or quite lost.

That the apple, pear, peach, apricot, plum, cherry, grape, and many small fruits may be successfully cultivated here, is evident to the intelligent observer. It may be asked, why then has not the cultivation of fruit been more successful? In answer, I will say that it is, in a great measure for the want of proper management in cultivation. There are about as many opinions on the subject as there are cultivators, and in this peculiar climate, under such varied treatment, the results are, in many instances, discouraging. The query may arise, what has the culture to do with the damage done by frost in our severe winters? In most cases it is the result of improper treatment. The intense cold of the winter of '59 and '60, and the severe frost of the following May, were exceptions to the former seasons, as far as my knowledge extends, and it may not be expected that like weather will often occur. Under proper culture, the wood of the peach tree, and fruit buds, may be considered safe from injury any winter that the thermometer does not range more than 10 degrees below zero. The gathering of ice or sleet on trees might destroy the fruit buds, but that has not occurred here to my knowledge. The heavy coating of frost that gathers on the trees in winter, is not injurious to the fruit buds.

The injury that the wood of fruit trees received in the winter of '59 and '60, would not have been serious, if severe frosts had not followed, the next May, after the rising of the sap. The former injury discolored the wood, but the inner bark was unhurt, in most cases.

The last frost injured the inner bark to a great extent, and thereby the tops of many trees perished. On examining the trees that survived, it was ascertained, that the new wood did not adhere to the old and could be freely peeled from it; proving that wood may be considerably injured, and if the bark remains unhurt, the tree stands a fair chance to recover, and should not be hacked and the bark peeled off because it is loose on the trunk, as was done by some to the injury of the tree. There may be much knowledge gained by carefully observing the different treatments which fruit trees receive. The health, thrift, and hardiness of the tree, is the evidence of the correctness of the culture.

This climate is unnatural to trees, which is evident from the valleys being destitute of them, excepting on some favored spots on streams of water. The Cedar may be an exception, as it is found growing on the benches, but it may be considered in a dormant state, nine or ten months in the year. Where the climate is unnatural the cultivator must supply what is wanting by art, so that the natural wants of the tree may be furnished.

There has been considerable written here on the preparation of the ground for the transplanting of trees, and it cannot be too strongly enforced on the minds of the inexperienced that the ground should be dug at least eighteen inches or two feet deep, as far in extent as the roots will naturally spread; indeed, the whole plot should be well dug to the above depth and have a good dressing of manure. The roots will be better protected from the influence of the sun, and the soil in a better condition to retain moisture. One tree properly transplanted and cultivated, is worth ten that are badly planted and neglected. Manure should not be put in the hole so as to come in contact with the roots, but may be applied as mulching; indeed, every tree should be well mulched when transplanted, and manure mixed with straw, cornstalks, or any litter about the stack yard, spread around the trees in a proper manner will repay the labor by making double the growth that they would without, and in some cases save them from perishing by drought or sun-scald. It frequently occurs here that newly planted trees do not take a vigorous start, and there being a deficiency of circulating sap, the stock becomes sun-scalded in July or August. In such instances the tree seldom recovers, except it is cut down below the injury and a new stock grown from a sprout at the root. It would be a good plan to protect the stock the first season from the influence of the sun, by winding it with rags or straw, from the ground to the limbs; but not so tight as to interfere with the growth of the tree. There has been many trees transplanted here, on ground with an uneven surface and in irrigating, the water has been unequally distributed; some parts of the soil becoming flooded. The effect in such cases, is to settle or pack the soil; and when the water dries off, the ground becomes hard, and does not admit of a proper circulation of air in it; the soil heats by the sun to that degree, that small roots or spongioles become scalded. The leaves of the tree turns yellow; often nearly white, shrivel up and frequently perish; the growth of the tree is checked and it often becomes worthless. The surface of

of the ground, should, in the first instance, be made uniform, so that the water may run freely in the irrigating channels to every tree, without flowing over the whole of the soil.

Experience teaches that apple trees should not set more than fourteen or sixteen feet apart; they are much benefitted by their own shade. The peach and apricot, twelve or fourteen. The plum, eight or ten feet. The peach trees that have become large and the fruit small or insipid, would be much improved by cutting them back, in April, to within four or five feet of the ground, and let them form new wood. They can be kept, by this method, in a healthy state a much longer time, and the fruit will improve. After the tree is cut back, there will be a great number of sprouts start from the stumps which should be thinned out, so as to leave only a suitable number to form the new top. It would be a good practice to adopt the shortening-in system when the trees are three years old and from six to eight feet high. It consists in cutting off about one half of the last year's growth over the whole of the outside of the head of the tree, and also upon the growth of the inner branches. This may be done any time after cold weather has set in, until the first of March. Fruit trees on dry gravelly land are often affected by too great a degree of heat in the soil, the effect is to force them to make an unnatural growth, the pores of the leaves become obstructed by an overflow of sap, hence it is not properly elaborated, the leaves turn yellow, and the tree is checked in its growth. I have seen the apple and peach on land in this city that part was in clover, the other in tillage; the trees on the former were in a healthy condition, while those on the latter were not. In the Eastern States it would have been the reverse. I have no doubt that if our orchard lands in dry locations, were put in good condition and sown to clover, the trees would become more healthy; indeed it would be better than the present mode of culture. In this case the land should receive a top dressing of manure every year or two, and the soil turned over once in four or five years and re-sown.

The apple tree may be cultivated on the low lands, that have a rich, deep, and moist soil, and may be expected to thrive with proper attention, if the water does not rise within eighteen inches of the surface. The soil should be tolerably free from alkali or salt, and drained, so as not to be flooded in the winter or spring. Apple trees in such locations would not be injured by heat as they are on dry soils. The trees would blossom later in the season and be quite as sure to produce fruit as those in higher locations. The fruit may not be so large but may generally be expected to be of better flavor and to keep longer, than that grown on uplands. There is evidently a great difference on the high land or benches, in regard to frost in the spring and fall, and the effect of the cold in winter. It appears that the difference is produced by the east wind, which sets in soon after sun set. These winds coming from the high mountain ranges, are very severe in winter, and the frost or cold is more fatal in exposed places, than in those that are sheltered from those currents of air, as may be seen in the seventeenth and nineteenth wards in this city, and in other places which are equally as well protected. These sheltered locations are very valuable for growing fruit; when the land is suitable, and there is a sufficiency of water.

From eastern reports, it appears that the peach is more hardy grafted on the native plum-stock, and putting out the blossoms late, escape the spring frosts. The native plum, thrives and bears well worked on the peach; and probably is a valuable stock to work the peach on for this climate.

The native thorn, is a good stock for the pear, which appears to be more hardy when worked on it, than upon its own stock. It is better adapted to the soil and climate, than the quince or any other stock that has been tried. The stock should be two or three years old, of thrifty growth, and grafted at the root. On dry land, fruit trees should be irrigated every six or seven days after dry weather has set in, till the first of September, and the water so applied that the subsoil will be kept suitably damp, otherwise the water is soon evaporated, and the trees receive but little benefit, and become sickly. The soil at the bottom of the irrigating furrows, should be kept suitably loose and the water should run slowly, so that it may freely penetrate. In case of a scarcity of water it is better to keep up the irrigating of fruit trees, to the damage of other crops, than to have them checked in their growth. If there has not been a suitable quantity of water applied through the summer months to keep up a suitable supply of sap, the young wood is prematurely ripened, and the tree is left nearly in a dormant state to be influenced by the rains in the fall, to make a second growth. If the rains hold off till late in the season, and be followed by a few warm days, the sap will naturally be set in motion although the tree may not make any new growth. These two results would be the same, in effect, the sap not properly elaborated, and being acted upon by frost, becomes thick and clammy, and by severe freezing the sap vessels are ruptured, and in the spring or early summer, patches of black, shriveled, dead bark appear, which will destroy a part or the top of the tree. The irrigating of fruit trees should not be altogether stopped by the first of September; but a little water should be applied occasionally to keep them from becoming too dry before the fall rains.

If the general irrigating has left the subsoil quite moist, but little will be required after, (except to mature fruit).

With proper culture, it is not necessary that

fruit trees should undergo a state of drought to cause the young wood to ripen. When cool weather comes in Autumn, the growth ceases, the sap goes down, and they are equally as well prepared for rest till another spring as they can be by art. Water should be used with caution in Autumn. A very exuberant growth is not desirable, as it seldom becomes properly matured; and liquid manure, or any other fertilizer, should not be applied in the summer as it would have a tendency to produce a late growth.

On account of the injured condition of fruit trees, there cannot be a correct judgment formed on the merits of imported or native fruit which came into bearing the past year; indeed it will take two or three years for the trees to recover so as to produce true types of their fruit. Those varieties that received the least injury should be selected from for cultivation, as far as their merits will warrant.

L. S. HEMENWAY.

How to Prevent Smut in Wheat.

TO THE EDITOR OF THE DESERET NEWS:

Sir:—None will contravene the axiom, that he who produces two blades of grass, where but one had grown, is a benefactor to his species; if this is correct in regard to grasses, it is yet more beneficial in connection with the increase of cereals, particularly those which forms the staple of man's consumption.

It is well known that in this Territory, each year bears witness to a great diminution in the anticipated yield of wheat, consequent on the prevalence of smut. It will be unnecessary to enter into all the theories which have been formed with regard to the causes of this diseased development of grain culture, but we can understand a few facts in connection with the subject. Whenever smut is produced instead of wheat, it is a public sacrifice of labor, and consequent wealth, there is the same trouble in sowing, irrigating, reaping and thrashing, but in the results, many hundreds of dollars, annually, in the accumulated industry of our commonwealth.

Ever anxious to fill the responsibility demanded by their election, the board of the "Deseret Agricultural and Manufacturing Society" have sought by debate and experience, to provide a remedy for this evil. At the last weekly meeting of the board, a very interesting, and animating discussion, elicited from two members, very positive testimony as to their experience, with a nearly similar process.

Mr. Levi E. Riter said: "On the 16th March 1860, I purchased from Mr. Thomas Turbet, eleven bushels of wheat, as perfect in appearance, as any I ever saw. Seven bushels I sowed, upon a five acre lot, following barley, it made a beautiful growth, but on heading I discovered, that my crop was one half smut. I submitted the remaining four bushels to the following process: In a strong salt brine, I stirred the whole four bushels, carefully skimming whatever floated. I drew off the brine for future use, then poured on the grain two large buckets full of hot white wash, made from fresh burnt lime, stirred the whole till each grain was coated with the mixture. I covered with boards for twenty-four hours, and then sowed where wheat had been grown for four years in succession. The result was a perfect success; scarcely an ear of smut was produced. I also applied the same process to some of my own wheat, which had become very foul and degenerate, the lime was so strong as to perfectly skin the grain. I sowed a similar piece of land after four years wheat cropping, and with the same results. I had tried many experiments, washing in water lye, lime, etc., but to the use of lime I owe my immunity from the evil of smut.

Exchanging wheat for seed will not accomplish the object as I, in common with others, have often proved. It would be advisable to purchase lime in the fall and cover it up that it may not become air-slacked. Every farmer should purchase from one to five bushels, as his necessities might require, and, by using as I have suggested, we can banish the appearance of smut from our Territory.

Mr. Nebeker said the following remedy was suggested to him by Mr. Ethan Pettit, myself and others have tested, and proved its value:

Cleanse the wheat by washing, slake too quarts of good lime to each bushel, add water sufficient to cover the grain, allowing it time to soak from twenty-four to thirty-six hours, then sow. The best of lime should be had, or an increased quantity used.

The board earnestly recommends a trial of the above practice, in the hope that a general good will be secured, and would be pleased to receive communications as to the individual results, not only so, but from men of experience in each settlement, we solicit communications on any improvements in agriculture, horticulture, floriculture, and kindred sciences, that when new our corresponding Secretary may prepare them for publication.

We have a great work before us, the development of our home resources. We invite your co-operation as brothers, as a labor of love, and for our common weal, till Zion shall become fair as the sun, clear as the moon; beautiful for situation on the sides of the North.

By order of the President and Directors.

HENRY W. NAISBITT,

Corresponding Secretary, D. A. & M. S.

G. S. L. CITY, March 11, 1861.

Artificial Manures.—In a late lecture, Dr. Anderson, chemist to the Highland and Agricultural Society of Scotland, stated that the farmers of Great Britain expend twenty millions of dollars annually in artificial manures

D. A. & M. Society

G. S. L. CITY, March 9, 1861. 7 p.m.
The board of the Deseret Agricultural and Manufacturing Society met at the house of President Edward Hunter.

Present: John R. Winder, John Nebeker, William Wagstaff, Albert P. Rockwood, N. H. Felt, Levi E. Riter, Directors. Jesse C. Little, Treasurer. Thomas Bullock, Secretary. On motion, Mr. Winder was elected President pro tem.

Prayer by Mr. Rockwood.

Mr. Winder reported what the committee had done in selecting Books and Periodicals for premiums to stimulate the people and interest the public.

Mr. Bullock read the list of agricultural books and publications with the prices.

Mr. Rockwood moved that the committee continue their labors, and obtain funds to pay for the books and periodicals; carried.

The board then took into consideration the propriety of buying or renting a piece of ground on which to sow seeds and plant roots and cuttings that may be forwarded to this Territory.

Messrs. Rockwood, Wagstaff, Riter and Nebeker were appointed a committee to examine and select a suitable piece of land for that purpose.

The Treasurer was requested to report the state of the treasury at the next meeting.

On motion, Henry W. Naisbitt was unanimously elected to be the corresponding secretary for the ensuing year.

Messrs. Nebeker and Riter gave their experience on the prevention of smut in wheat and were requested to write out the same for publication.

Mr. Riter then gave his views on sowing red top grass, and which, he declared, will run out all the wild grasses.

Minutes read and accepted.

Adjourned to next Saturday at 7 p.m.

THOMAS BULLOCK, Secretary.

The Spoils of Office.

The New York correspondent of the Boston Post thus enumerates the federal offices in that city, with the corresponding salaries:

First in importance and revenue is the collectorship, with its fixed salary of \$6,340, and some \$2,000 more in the form of pickings and fees. In the Custom House, as subordinate to the Great Tycoon above referred to, are an auditor at \$4,000; an assistant auditor, \$3,000; cashier, \$3,000; assistant cashier, \$2,500; seven deputy collectors, \$2,500 each; general appraiser \$2,500; three appraisers, \$2,500; six assistant appraisers, \$2,000; chief entry clerk, \$2,000; warehouse superintendent, \$2,000; drug examiner, 2,000; thirty-three clerks at \$1,000; thirty-three weighers, gaugers and measurers at \$1,485; twenty-six clerks at \$1,400; one liquidating clerk at \$1,600; ten clerkships at \$1,300; thirty-one at \$1,200; fifty-eight at \$1,100; two hundred and sixty-one inspectors at \$1,095; thirty-four clerks at \$1,000; and one hundred and twenty-two regularly salaried clerks etc., whose pay varies from \$400 to \$800 per annum. I need not enlarge upon the suggestive items of extra service, fees and the long detail of similar methods of increasing both the number and pay of officials in this department of Uncle Samuel's household; nor need I refer to the local light house service, with its immense patronage—say \$30,000.

Then as a sort of corollary, must be named the naval office, with its chief officer, at \$4,950; and the indefinite (or rather infinite) fees; three deputies, \$2,600; two subordinates, at \$1,500; seven at \$1,400; two at \$1,200; five at \$1,050; twenty-five at \$1,000; and thirteen at from \$500 to \$800. Let me not omit mention of the Surveyor's office, which furnishes easy chairs for the following officials:—Surveyor, \$4,900; two deputies at \$2,000; one clerk at 1,200; four at \$1,100; five at \$1,000; and several "subs" at from \$500 to \$700 each.

The post office is always vastly over-estimated as a source of income to its incumbent, albeit the late lamented Mr. Fowler found it a profitable Placer.

The actual salary is only \$2,000, with a commission upon the rent of the boxes, and sundry fees and grubblings, which united, make the place worth from 5,000 to 8,000 honest dollars per annum. The patronage, however, is quite extensive, as will be seen from the fact that there are some 265 employees connected with our dirty, dilapidated Dutch church in Nassau Street. Of these, six get \$2,000, thirty-six from \$1,000 to \$1,500, and more than two hundred subsist on yearly stipends varying from \$250 to \$900.

The District-Attorneyship and the Marshalship are put down in the appropriation at \$2,000 and fees. This last item is of a varying magnitude, but is most remunerative in the case of the Marshal, whose office is worth probably \$10,000 honestly, and can be made to pay twice as much by such as cannot afford to keep a conscience.

The Assistant Treasurer gets \$4,000, his chief clerk \$2,160, and nine clerks, messengers and watchmen, divide among them some \$12,000 annually. The Superintendent of the Assay office, receives \$3,500, and the Assayer and Refiner, each \$3,000; then there are eight assistants and clerks who receive from \$1,500 to \$2,500 each.

Steamboat hulls and boilers have to be inspected by two officials, who pocket \$2,000 for this service. A Supervisory Inspector gets \$1,000. Of course there is a long list of non-descript public officers, whose emoluments avail to keep from starving, hundreds if not thousands of our citizens. The above, however, are such as will first be exhausted in the impending struggle.