THE SLANDERER.

From heaven's four winds collect in one
All things most hateful 'neath the sun,
All things that blast, and sting, and kill,
All things that do, or emblem ill,
The frost that nips the opening bloom,
The blight that seals the flow'ret's doom,
The famine's hungry, spectre form,
The spotted plague and sweeping storm,
The quicksand's deep, engulphing snare,
The sunken rock that baffles care,
The adder's foul and fatal sting,
The panther's sudden, deadly spring,
The robber's grasp and rifling hand,
The cloak'ed assassin's ruthless brand.
These fearful things collect in one,
And yet you'll find them all outdone—
Not by a flood's wide-sweeping tide,
Or fields where death and carnage ride;
Not by the lightning's scathing flash,
Or by the earthquake's whelming crash,
But by the sland'rer's pest like breath,
That smites your name with worse than death;
That, charged with poison straight from hell,
Besets all things, than plagues more fell;
That often dims young Genius' eyes,
That severs Friendship's fondest ties;
And often too has darkly spread
A cloud around fair Virtue's head.
Go, then, and search the world all round,
And naught so deadly can be found,
As that vile, creeping, hateful thing,
Whose heart is false—his tongue a sting.

ESSAY ON AGRICULTURE

BY

George Calder,

Mill Creek Ward, Salt Lake Co., U. T. October, 4, 1873.

[Awarded the First Prize at the late Fair of the Deseret Agricultural and Manufacturing Society.]

AGRICULTURE

has always occupied an important position in human transactions. In the history of Utah its operations are very conspicuous, for through the blessings of God in tempering the elements, it has quietly wrought a mighty change upon the alkaline deserts of this Territory.

Gentlemen of experience in these matters, on visiting these valleys have often expressed themselves as being "agreeably surprised" with the success of our farmers and the condition of our country; and more especially so when they have become acquainted with the fact that some who have been thus successful have come from the workshops of the old world, with no experience whatever in connection with agriculture. There still remains, however, sufficient room for improvement, and to this end should our energies be directed.

WHEAT

is our staple crop, and is raised in all parts of the Territory. Our average yield, which is about thirty bushels per acre, would be considered a very large crop in some parts of the States. Fall or winter wheat should be sown in September, that it may be well rooted, and cover the ground so as to form a protection against the repeated frosts and thaws of early spring. Wheat should never be sown in soil where alkali abounds, in the fall of the year, for it will surely be a failure.

It is a better practice on such land to plow in the fall, turning up the roots of perennial weeds to the action of the frost; and again plow or thoroughly cultivate in the spring, and sow *clean seed* of a good variety, at the rate of about two bushels per acre, about the beginning of April.

It is also a good practice to plow the table-land in the fall, and give it a thorough going-over with the cultivator in the spring. This makes as good a seed-bed for small grain as can be got on our heavy clay uplands. Wheat sowed on land prepared in this manner as early as the ground can be worked, will only be four or five days later than when sowed in the usual manner in the fall of the year, and will be a much surer crop.

SELECTING SEED

should be performed with the greatest care, and where the farmer wishes to improve a good variety, it should be done by selecting the largest and most perfect heads before harvesting. If he has to purchase he should be careful to do so from a reliable man.

It would be a hard matter for any one to tell how many varieties of wheat are raised here, or in what proportions they are mixed with each other, as farmers have generally been very careless in selecting their seed. The three best varieties, taking milling into consideration, are the White Taos, the Excelsior, and the Chili. But whichever variety may be selected, no matter how clean it may appear, it should be vitiroled before sowing. By way of experiment I sowed one bushel of clean seed wheat, in which there was not one kernel of smut. It was sowed in the spring, without any smutting preventive. The crop from it, though a very heavy yield, was about one-sixth smut. This, however, is not the case in every instance, as other experiments have proved

The most simple, expeditiou sand effective way of applying vitriol to seed wheat is as follows—pulverize one pound of blue vitriol and dissolve it in one gallon of hot water, add sufficient cold water to reduce it to a temperature of about seventy degrees. On a clean, tight floor empty seven bushels of clean seed wheat, and with an old broom sprinkle the wheat with the liquid; mix the grain thoroughly with a shovel or grain scoop, and continue to sprinkle and mix until the liquid is all mixed with the wheat. The seed will be ready to sow in two hours, or it may stand for a week without injury.

THE IRRIGATION

of wheat is by no means a small item, as from four to six bushels per acre is often lost through neglect or inexperience in this matter. All ditches should be in good order before watering time, and the land should be so laid off that it will not wash into gutters and holes, which would make it uneven and rough for the reaper, besides destroying a portion of the crop.

Wheat should never be watered in cold weather when very young, as it chills it and causes it to have a yellow cast, after which it seldom forms a perfect ear, that is, the ear is small as well as the kernel. Wheat should be watered from one to four times, according to the season and the quality of land for holding moisture; but in all cases where it can be allowed to cover the ground before the first watering, it is better to do so.

Avoid all quarrels about water; and if you are deprived of your rights, take the quiet way to recover them. It is better to lose a little water than to get into worse trouble.

HARVEST TIME

is a time that is always wished for, although somewhat dreaded as being a time of hard and hurried work where help is scarce. Sometimes for want of help, and sometimes for want of thought, wheat is allowed to stand uncut until "dead ripe," which causes it to have a flinty appearance, and deteriorates the quality of its flour. Wheat should always be cut while the kernel is soft or doughy.

That time and grain may not be wasted, preparations should be made some time previous. Such extras as may be needed for the reaper should be procured, as sometimes the lack of a small bolt or even a nut for one, will cause half a dozen men to be thrown idle until one can be had. The reaper should be carefully examined and all the nuts tightened. Keep your machine well oiled and see that every part is perfectly true. And if you have not got experience to handle your machine yourself, you had better get some one who understands it until you learn.

In some parts of the western States where help is scarce, farmers sometimes haul their grain without binding it. This is a practice which cannot be recommended where help can be procured on reasonable terms.

Great care should be taken in the binding of the grain, as loose bundles cause great trouble, and waste in hauling, stacking and thrashing; and it should not be allowed to stand in the field any longer than to get thoroughly dried and the ends of the bundles in a good shape for stacking. It is very seldom that we see a good shaped grain-stack in this country; the Indian name, "heap-of-grain," would be more appropriate. We must improve in this branch of farm work.

THRASHING

should never be done until the grain has gone through the sweat, which in ordinary stacks is from four to five weeks.

It is aggravating, sometimes, to see the amount of carelessness exhibited in the thrashing of grain. Thrashing machines too often get into the hands of men who know but little about machinery, and who care less for the quality of work they do. And the main point is, "get up here." "Hurrah! we want to thrash out five hundred bushels to-day."

It would be well for those who own thrashing machines to remember that there is considerable competition, or likely to be, in this branch of farm work; and if they wish to have sufficient employment, they should be particular in making the grain marketable. It would also be well for the farmers to remember, that it is to their own interest, to employ and support men who will clean their grain well. If we export grain, let it compare favorably with grain from other places in the market to which it is shipped.

To do clean and good work, the farmer should have plenty of help, so that each man can perform his part without too much exertion, and do it well; stacking the straw neatly, and stowing the chaff in a convenient shape for winter use. And the machine should be run at a regular speed; when run too high it cracks the grain, and the farmer has to sustain loss by a large amount of screenings at the mill, and his wheat is injured for seed or market.

MILLING.

It will always pay the farmer to drive a little farther to secure a good article of flour, whether for home use or for market. If he wishes to sell his flour, although he may not get a higher price for it, people will patronize him—this is the case with all farm produce—and if he wishes it for home use, the good bread at each meal will remind him that he went to the right mill. Millers are generally taking more care to supply a good article of flour; but after giving every mill, within a reasonable distance, a fair trial, the preference must be given to the best and most reliable mill.

OATS AND BARLEY

in past years have been profitable crops to many of the farmers of Utah, and have, perhaps, brought more "cash down" than any other cereal crop. They are the surest crops of small grain that can be used in the reclaiming of alkaline lands, although grass in many instances would be a more profitable crop.

There are several hundred acres lying along the State road between Mill Creek and Cottonwood, if seeded down to grass would yield thousands of tons of hay, that do not yield enough, under the present mode of cultivation, to pay for the plowing. It is of a poor quality, and to produce the best results, it would require a top-dressing. Such land with proper treatment would rise from a state of comparative worthlessness to be valuable property. It should be remembered, however, that under-drainage and surface irrigation are highly essential. After being used as grass land for a few years, it could be broken up, and excellent crops of either grain or roots would be the result.

Oats should be sowed at the rate of from three to four bushels per acre, and barley about two and a half bushels per acre. Either, but especially oats, will stand more water, without injury, than wheat will; but too much would produce a bad result.

The Norway and Surprise oats, so highly recommended, have been introduced here, but neither of them sustains its reputation. The Surprise oats, although they yield well, are too liable to shell out; and sometimes, when they are allowed to get too ripe before being cut, the result is a little surprise.

INDIAN CORN

is a native plant of America and is extensively grown in all the warmer parts of the whole Western continent. The early settlers of America describe it as being one of the principal Indian productions, from which, no doubt, it received its name.

The amount used annually in a green state, in the United States alone, is enormous; and thousands of bushels are canned up, and preserved in other ways, for winter use.

In some parts of the States, Indian corn is the principal food for man and beast; and is raised almost to the exclusion of all other cereal crops. In those sections of the country the grain is the object, which is sometimes sold at the astonishingly low price of ten cents per bushel, and is harvested by pulling the ears from the stalks, the stalks being allowed to remain standing in the field.

The farmers of Utah, in raising corn, have three objects in view. First, the grain, which is generally used in feeding the domestic animals on the farm. Next, for the fodder, which, when properly cured, is very valuable as feed for stock. The third object is to form a rotation or rather a change of crop.

To make a correct estimate of the average yield per acre, would be a very difficult matter, as in some of the low lands it is often destroyed or injured by the early frosts. I should judge that about eighteen bushels per acre is somewhere near the average yield. It is true that sometimes forty and even fifty bushels per acre are raised on the rich bottom lands; but it is also true that ten, and even as low as eight, bushels per acre are raised on some of the poor uplands.

THE PRESERVATION OF CORN-FODDER

requires a great deal of care and prompt action. When killed by frost in the field, or allowed to heat and mould in the stack yard, it is comparatively worthless as feed for stock; it may do to "fill up," but its nutriment is gone. Where fodder is the principal object, it should be cut and put up in large shocks before it is thoroughly ripe; and the shocks bound around the top to keep the stocks erect and shed the rain. In three or four weeks it should be husked out, and the fodder tied in bundles, and the bundles should be stacked; by forming a large shock, and building on top of this, keeping the bundles perfectly erect, with the buts down and the tops well pressed together; keep building one tier around the bottom, and others above until the stack is as large as desired. It must be remembered that the wider the stack is the higher it must be, forming a perfect cone. In this way it occupies less space, and, not being so much exposed, it is better preserved. When preserved in this manner and judiciously fed, with very little grain, it will keep animals in good condition all winter.

The corn, when husked, will be found perfectly ripe (if not cut too green), and should be stored away where it will be safe from storms and vermin.

POTATOES

are extensively raised throughout the whole Territory, with the exception of a few settlements in the extreme south. There is no country, perhaps, where potatoes are a surer crop, a mild form of blight being the only disease to which, in past years, they have been subject.

A number of varieties have been introduced here from different parts of the States, but it would be a hard matter to select for general use a better potato than the Mashanic [Neshannoc?]. Of these there are two distinct varieties, although they resemble each other very much in shape, which in perfection should be long and smooth, with slight indentation about the eyes. The first and most preferable has a roughish skin, slightly purple on the seed end, but the meat is perfectly white. The other variety has a reddish appearance throughout the whole surface, and the meat is more or less streaked with blue. There are other grades, ranging between these, but they cannot be considered as distinct varieties.

Either of these, by being stored in a cool cellar, and having the sprouts removed occasionally in hot weather, will keep until August. They are superior for winter, spring and early summer use, possessing the very highest keeping qualities.

The White Mashanic (imported) is a very saleable potato in the fall of the year, but its keeping qualities are inferior.

The Early Rose is a productive potatoe, and for summer (after it is half grown) and fall use is very good. The skin of this has a pinkish appearance. There are two varieties, both claiming to be the genuine Early Rose. One is rounder than the other, and the meat has a yellowish appearance and rank taste; while the other, under the skin, is perfectly white, and when properly cooked is mealy and pleasant. The former should be rejected as seed, as the latter is far superior.

The Early Goodrich is another variety raised here for early use, but like the Early Rose it is comparatively worthless for culinary use in the spring. In every respect the Early Rose should have the preference over this variety. The tubers are inclined to be elliptical, but when raised on very rich soil they grow larger, and often burst at one end.

The English Fluke Kidney (if the variety I received is true to name) in shape and general appearance resembles the Early Goodrich, but the meat is whiter and in every respect it is a better potato, although it ripens later.

The Harrison, Pinkeye, Smooth Blue and a few other sorts that used to be raised here, have given way to better varieties.

WHEN AND HOW TO PLANT POTATOES.

"In what sign of the moon shall I plant my potatoes?" is a question of great importance with some; to me it is the height of absurdity. My first recollection of this moonshine nonsense, was while on a visit in the country, some six miles from Cincinnati, Ohio. A pamphlet was then in circulation among the farmers, stating, very minutely, the proper sign of the moon in which to plant each variety of crop, etc. The introduction of this most ridiculous theory into America has been traced to the early Dutch settlers of Pennsylvania, whence it spread, more or less, through the whole country, taking effect, comparatively speaking, only on a few.

Astronomers tell us that the moon is some 240,000 miles from our sphere, varying more and less, and that its attraction is nearly the same through its changes. It is admitted that the moon has some mechanical effects upon our globe, but it has little, if any, effect upon vegetable matter.

There have been sufficient reliable and intelligent experiments with the different vegetable families, in connection with the signs of the moon, to prove this absurd tradition to be without merit. My own experiments, for the last thirteen years, serve to settle this question beyond all doubt with me.

Plant your potatoes on a rich saline soil, which has been properly prepared, and which has a good natural or artificial drainage, from the 10th to the middle of April; cultivate, irrigate, and attend properly; ask, *in faith*, the blessing of God upon your labors (as every good farmer should do with all his crops) and if you fail to raise a first class crop, there is something wrong which the moon cannot make right.

It is very important to have a good drainage, as surface water, or even an excess of moisture to the roots, does great damage to the crop. The land, if not naturally rich, should be manured with at least fifty tons of well rotted manure per acre, spread on the surface and plowed in. Harrow thoroughly and roll. Begin to plant by placing in the ground, on the entire left of the patch, a straight stick about the middle and another about ten feet beyond the far end in a straight line with each other. With a medium sized plow strike a furrow in a direct line with the sticks, by driving your team so that the beam of the plow will be straight with the sticks. When you reach the middle stick, remove it, and observe some object in a direct line with, and some distance beyond the other stick. This will give you a very straight furrow.

In this furrow put medium sized sets, cut from large, good shaped potatoes, with from one to three eyes in each set, in the middle of the furrow, about one foot apart; cover with the plow by driving the nigh horse back through the same furrow. Measure three feet from where the sets were dropped, place the sticks as before, and continue until the whole patch is planted. The sticks are not necessary where the team and driver are thoroughly trained. Harrow the patch level with a light harrow, and then roll it. This will leave a smooth, clean surface, and the potatoes will come up in neat, straight rows, that will be a pleasure to look upon. If the land has been cultivated for a number of years, sow from ten to twelve bushels of salt per acre, two weeks after planting.

CULTIVATING, IRRIGATING, ETC.

When the potatoes begin to break ground, run a light harrow over them, which will destroy a great many young weeds, and be beneficial in other respects to the crop. Use the cultivator twice or three times, as may be required; and hill up with a common plow passing