The Vermont Farmer.

AN AGRICULTURAL AND FAMILY NEWSPAPER FOR THE RURALISTS OF THE GREEN MOUNTAIN STATE.

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Vermont Farmer

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Communications for the Agricultural Department should be addressed to the Agricultural Editor at Springfield, Vt.

Capt L. K. Fuller, Fuller battery, national guard of Vermont, sends complimentary tickets to the camp during muster 1st regiment at Brattleboro, August 24-28.

We have from J. H. Stufflebean, secretary, complimentary tickets to the tenth annual fair of the Franklin County Agricultural and Mechanical Society, to be held at Sheldon, September 8-10.

The readers of the FARMER are informed that we—that pronoun is used in its best sense, as is usual in these columns—are as well as could be expected. Those who are interested, will be glad to know that "Bessie" tips the beam at seven pounds eight, and is smart as a kitten.

We have received from Messrs Samuel Slater & Sons, Webster, Mass., a catalogue of the entire herd of thoroughbred and grade Short-Horn cattle and Sussex-Down sheep, to be sold at public auction on the grounds of the Worcester agricultural society, September 3d. Of the thoroughbred Short-Horns there are 27 females and three bulls, 21 of the former being of the Yaries family, so long celebrated as choice dairy cows and noted as heifer breeders. There are also 95 grade Short-Horns and 31 sheep.

This sale affords a fine opportunity to obtain really useful and valuable cattle.

The use of some absorbent in the stables, pig-pens, privys, sink-drains, etc, is of the utmost importance to the farmer, both in saving valuable fertilizing materials and as a sanitary measure.

It is the opinion of many good judges that if every source of enriching material on every farm was saved, protected from the elements and composted with such substances as are available, and applied to the soil, the produce of the land under cultivation in the state would be doubled in a few years. If this was accomplished, we should hear no more of the poor return from farming. Farmers would enjoy an abundance, such as they have not dreamed of. Farming lands would be in good demand. Farming would be attractive. The boys and girls would be willing to stay on the farm. Farmers would be respected and honored. Are these things worth striving for?

The Brighton fertilizer, advertised in another column, has already gained the reputation of being one of the most reliable fertilizers in the market. The materials used and the skill and integrity applied in the manufacture have heretofore afforded a fertilizer which has given satisfaction to those who have used it. For an application in fall seeding to grass, where there is an insufficiency of manure, it is well recommended. We have repeatedly advised the plowing of old mowings and re-stocking with grass without grain. This fall is a very favorable one for such work. We are devoting all our spare time to an old mowing on our farm so inaccessible from the buildings that it has always been poorly manured. After exhausting the barn-yard manure on hand we shall use the Brighton fertilizer and probably some other concentrated manures, and shall expect to be paid in hay for the outlay.

Hon Lewis F. Allen, Buffalo, N. Y., editor of the American Short-Horn Herd Book, announces that he is now ready to receive pedigrees for record in the 15th volume. It is intended to close the entries of bulls by October 1st, and those who delay forwarding until the eleventh hour may be obliged to allow their pedigrees to go into the supplement. Cow pedigrees may be received as late as November 1st, soon after which the book must go to press. Price of recording pedigrees one dollar each.

The produce of cows purchased will be recorded free when the cow is recorded as the purchaser's property. The death of recorded animals will be recorded free. The death and produce of recorded cows will be recorded in mortuary record for 50 cents.

A circular with full particulars and directions will be forwarded on application to Mr Allen, or Mr W. T. Bailey, assistant editor, Buffalo, N. Y.

Dairy farmers whose cows do not lie in the pasture nights find it necessary to sustain the fertility of the soil of the pastures by the application of fertilizers. There is nothing better than well rotted, fine, barnyard manure, spread evenly on the surface. The weather this season is favorable for any surface application. If no barn-yard manure is available, some concentrated fertilizer will answer the purpose; what shall be used depending in each case upon the nature of the soil, the means of purchasing and other circumstances. No fertilizer is more certain, or lasting, than wood ashes. None is cheaper. There is no cheating in the manufacture. We have had the best success with ashes on dry land. Bone dust is a valuable fertilizer. Burned bones, ground as fine as possible in a common mill and composted with ashes make a fertilizer of great value. They are more readily available if made into superphosphates. But superphosphates sometimes contain a great deal of matter of no value, and very little bone. The Brighton fertilizer is highly commended by those who have used it. Plaster, ashes and salt on some soils have a surprising effect. A simple dressing of muck, or even soil of the same field, will often cause a rank growth of grass.

Farmers can tell best what is the most valuable and economical fertilizer on their soil by testing.

The Fairs.

The agricultural fairs come to the front in September, the New England and New Hampshire state fair September 7, at Manchester, Vermont state at Rutland and Connecticut valley at Claremont, September 14, and county and local fairs at various dates.

There is no way in which a farmer can spend a few days and a small sum of money to better advantage than in visiting a good agricultural fair.

It is needful for persons in every kind of business to keep themselves informed what others in the same line are doing in order that they may keep pace with current improvements. A man may be a good farmer and raise good stock and grain and never cross the line of his farm; but he can do better if he will make use of the faculties God has given him to learn from others, and there is no way to do this so effectually as by going to fairs.

The attendance upon the fair also tends to stimulate the ambition of the farmer to equal or excel the farm products and stock there exhibited. If our system of fairs accomplishes only this one thing, it will be of immense value to the cause of agriculture.

The most valid objection urged against the modern fair, is the prominence given to trotting, and the disproportionate amount of premiums for races compared with other premiums. It is a problem which every well-wisher of agriculture who is connected with the management of a fair will have to meet. A few years' experience in the management of fairs and responsibilty for expenses, sometimes modifies extreme views on this question. It is certain that liberal premiums tend greatly to the success of a fair. The wherewith to meet these is best secured by the gate fees of the crowd who come merely to see the trotting. If the entries are kept secret there can be no pool selling, and will be little betting.

It is the duty of managers who feel that they must tolerate trials of speed, to give to other classes a fair proportion of the money and to confine the trotting to limited hours, that people may have full opportunity to give attention to all departments.

The Cheese Question.

The New York Times discusses the cheese question, and asks some questions which it answers to its own satisfaction.

To give every person of our population one ounce of cheese per day would require 800,000,000 pounds yearly. Yet this small allowance might well be doubled and not be too abundant. When mingled with its due proportion of cream it furnishes to the digestive system every element needed to sustain life, and is readily digestible, etc. Still we do not eat it, and the reason why is very interesting to dairymen. Dairymen may discover the reason in part by simply asking themselves why they do not eat it themselves, and why it does not form a portion of the daily furnishing of their own tables. The simple reason is, our cheese is not of sufficiently good quality to create a large and growing demand for it. There is not sufficient variety either to meet the demands of a cultivated and fastidious taste. Those refuse to eat it who would purchase it as a matter of economy, for a pound of cheese at 20 cents contains twice the nutriment of a pound of beef at same price. The wretchedly poor quality of the lower grades of cheese which are met with at the groceries where the poorer classes are in the habit of obtaining their supplies, is a sufficient excuse for this neglect. View this matter from the standpoint of the consumers, then one cannot be surprised that cheese as an article of diet is not popular and is not likely to be at present.

Taking a view from the standpoint of the dairymen, too, one cannot be surprised at this. We have heard a prominent dairyman, whose speeches have been listened to by hundreds of dairymen with the greatest interest and without question, remark that he has witnessed extreme filthiness in the manner of milking cows on the part of some of those who furnish milk to the factories. Upon one occasion he has stated that he remarked to a factoryman whose cheese he examined that there was too much filth in it to make good cheese and not enough to make good manure, or something to that effect. The same speaker has stated at a dairymen's convention that he had remonstrated with a factoryman because the space underneath the floor of his factory was so full of filth that the maggots oozed up between the cracks as he walked over it. Hundreds of dairymen heard these statements made without remark. If these things are only of common occurrence there can be but little wonder that cheese sells slowly or enters into consumption sparingly.

After reasoning substantially as above—we have not copied in full—the Times proceeds to consider the oleomargarine question, and discusses it from the same standpoint, but not with the same apparent spirit, as that taken by the American Grocer, and continues thus:

It can hardly be expected that the dairy business can stand on the basis that it ought to do under these circumstances, or that dairy products (for butter is also subject to the same processes of adulteration) can become as popular as they might do. The business has doubtless already received a serious blow, from which it can only recover in time. Confidence cannot fail to have departed from the consumers of dairy products, and this once lost is hardly regained. The market price of cheese is rapidly declining; from five cents to 14 cents per pound in September, 1874, it has fallen to two cents to eleven and one-half cents in August, 1875. How much of this loss of value is owing to the discredit which has come upon its character, some reasons for which we have here set forth, it is difficult to estimate, but that some of it is thus owing we cannot doubt.

Now we beg leave to submit that the Times is entirely wrong in the reasons it gives for the small consumption of butter by Americans.

Of the economical value of cheese as an article of food when compared with meat or bread there is no doubt. The estimate made by the Times does not begin to state the relative value of cheese compared to lean beef. This matter has not until within a very few years been brought to the notice of the people, and perhaps is not now generally understood. But that cheese is not commonly used because of its poor quality or because of the filthy habits of those who care for the cows and make the cheese, is simply a libel on the dairymen and factorymen of the country. That there are dairymen who are anything but tidy in the care of cows whose milk is used for cheese, and that cheese of poor quality is put upon the market, cannot be denied, but that the habits of butter dairymen as a class are any better or that the average quality of butter in the market is any better than that of cheese, is not a fact.

But this does not prevent or interfere with an enormous consumption of butter by people of all classes in this country. It is quite within the truth to assert that since the enormous increase in the production of cheese resulting from the introduction of the factory system, there has been a marked improvement in the matter of cleanliness in the production of milk and the manufacture of cheese (and butter also); and the cheese put upon the market is more uniform and of a higher order in quality, flavor and texture, and these improvements are in a large measure due to the efforts of the gentlemen who are now reviled for "indorsing the oleomargarine fraud," a thing they have not done.

There are, in point of fact, two reasons why our people do not use more cheese. The first is a mistaken notion, arising from their ignorance of how to use it, that it is not an economical article of food. They do not use cheese because it is no saving of other food, as they believe. Just as much other food is consumed by a family when they use cheese as when they do not. We have seen many people in good circumstances, who make a fine article of cheese, and use scarcely any, for the above reason, as they do not hesitate to admit. Their cheese commands the highest price, often fancy prices and is a material addition to the meagre revenue of the farm. If the "poorer classes" as well as others, would buy a good sound article of cheese and let it take the place, to some extent, of the beef steak they buy at 100 per cent advance on the price the farmer gets for it, they would consult true economy.

The other reason why people do not use cheese more generally is from force of habit. They have always got along well enough without cheese as their fathers did before them, and they are likely to continue in the same way to the end. It does not even occur to them that it would be a good thing to use cheese.

It may be that in some localities the demand for cheese is so slight that the grocers do not feel called upon to buy a good article. But that they could and would supply good cheese if their customers called for it, is too evident to require any proof.

The idea that dairymen themselves do not use cheese, because of its poor quality and their filthy habits in treating the cows and handling milk is too preposterous. Do not these same dairymen use butter prodigiously made from milk handled in the same way and manufactured with no more skill than cheese?

Then the information that people do not use cheese and the price is rapidly declining because a little oleomargarine cheese is made, is something for which dairymen will be grateful. Perhaps the decline in the price of wool and other merchandise and the general prostration of buisness is all due to this oleomargarine fraud.

Any information which will help consumers to detect the adulteration of butter and cheese as well as almost every other article of food with deleterious and worthless substances, and the exposure of the parties who resort to this nefarious system for making money, will be gratefully received by the people, and the individuals or the journals aiding in this good work will deserve and receive hearty approval. But all this public discussion and wholesale denunciation of the use of oleomargarine and the possible adulteration of that article is, in the opinion of many, calculated to do more harm to the market at home and abroad than the simple use of oleomargarine which the American Grocer says can be detected in cheese.

For the VERMONT FARMER.

Large Pans.

In the FARMER of July 30th, was an article on pans by a Franklin county farmer. The gentleman's arguments are of a pecuniary character and savor strongly of mercenary motives. If he believes in converting woman into a drudge for the mere purpose of hoarding money, if work and the almighty dollar are his highest conception of life, if the ease and comfort of his wife are to be ignored, then I advise him to cling to his ten-quart system. It would not be best for a man whose soul is measured by the dollars he possesses to be to the expense of procuring large pans.

It would not be advisable for them to diverge from the ancestral path, though it be in a circle worn smooth by the travel of deluded farmers. Customs, old and tried, that require only physical, not mental, exertion, are considered good enough by too large a percentage of our farmers. They treat new-fangled inventions with scorn and contempt and regard those engaged in their use as lunatics.

But I fail to comprehend how any rational being can for one moment doubt the superiority of the large over the small pans. It is an undeniable fact that they are a saving of one-quarter of the time and work required with small pans.

We are using the Jewett pan for the third season without any of the drawbacks mentioned by the Franklin farmer, excepting occasionally a damp floor preceding a rain, and if compelled to purchase new each season we should consider the money well expended.

F. EUGENE RICHARD.

St Johnsbury, Aug 5.

For the VERMONT FARMER.

Cutting Oats Green.—Feeding Grain to Cows and Horses.

Given a piece of long-strawed oats, will they not be worth more to cut green and cure for winter feed than they will to thresh? Would it not give the grass a better chance and leave the ground in better condition?

Is it good economy to feed grain to cows and keep horses exclusively upon hay?

A. D. MARCKRES.

East Craftsbury, Vt.

[Those who have cut oats in the milk, while the straw is quite green, and fed them without threshing, speak in the highest terms of their value as winter food, especially for dairy cows. When the cost of threshing is taken into account, we are quite inclined to the opinion that it is the best economy to cut the oats in the milk if they are to be fed on the farm.

Whether it would be better for the grass to cut the oats in the milk would depend to some extent on the season. Usually grain is cut at the very worst time for the young grass, letting the scorching sun down upon the tender plants which have grown in the shade. Ordinarily we should say that it is quite as well for the grass to cut the grain early. It is a great saving of the elements of fertility in the soil to cut the grain before the seed forms.

There is no animal that makes a better return for food consumed than a good cow. We think it pays to feed grain to cows. We are not in the habit of feeding grain to horses when idle or doing easy work, unless we have to buy both hay and grain, then it is cheapest to buy corn. There is a great difference in horses as to food.]

For the VERMONT FARMER.

Crop Reports.—Preparing Rope for Halters.

EDITOR FARMER:—Thinking perhaps that a short report of crop prospects, &c, from this section might be of interest to some of your readers, I will jot them down. Our hay crop I think has been more than an average one in quantity, as it certainly has in quality, and it has been mostly secured in excellent order, many having got their whole crop without getting a load wet to its injury, thanks to the mowing machine, hay tedder and horse rake, with fair to good weather. The wheat crop is excellent for this section, but not a large acreage sown. Oats are heavy, and there were large quantities sown. Potatoes must be very light, owing mainly to what is termed the rust; grubs and earth worms having also made sad havoc in many fields. Onions, for which this town is so famous, will not be an average crop, as the maggot in early season nearly ruined many fields; but where they were not thus disturbed, they look well. Corn, of which but little was planted, is of very uneven growth, and will be late. There will be a fair yield of fruit. Feed in old pastures is very good, and mown lands look splendid, owing to the many fine rains of late.

A good way to prepare rope for halters and other farm purposes is to put your new rope into a kettle, along with plenty of cold water, according to amount of rope; bring the water to a boil; let them boil smartly for about five or ten minutes, then turn out into an old pail or tub, and to every pail of water add one teacup of tar. This stir thoroughly; let stand until cool, then stretch to dry, and you will have a rope that will outwear, and out-pull, two or three as commonly used, and one that will stand rain or shine, and will tie or untie as you like.

VERD.

West Cornwall, August 16.

Butter Making.

[Essays read at the last Orleans county council meeting, at Glover, by Mrs Amanda M. Oliver, of Charleston, and Mrs D. A. Locke.]

This is a trade. Unless it is nicely done, the product is almost worthless. In the first place, you must have a neat, tidy man, in order that the milk may come clean from the barn or yard; and then the pails, pans and churn must be kept clean, and not only clean, as some call it, but very clean.

Most of the time I let the milk stand 48 hours, but in hot weather not so long. The milk should be set in a cool place, and in good air, but not where the wind will blow upon it. As soon as it is sour I skim it, and then the sooner it is churned, the better. When the butter comes, wash it until the water is clear from milk, and then salt it. If it is to be forwarded immediately to market, I salt it three-fourths of an ounce to a pound of butter, using Ashton salt. Work it thoroughly, and then pack it. But if I wish to keep it through the season, I put in an ounce of salt to the pound.

May 29, 1875.

To make the best of butter it is essential to have the very best of dairy cows; they must have good care, be kept clean, and fed with the best of feed. That will produce good butter. Great care must be taken to keep the stables and barns as neat as possible, and free from all impure odors.

A dairyman should have a separate building for young calves and pigs. I speak of this because it is so difficult, especially in the winter season, to produce milk that will taste as pure as it does when the cow stays in the pasture night and day. One-half of our success in butter making depends upon the quality and cleanliness of the milk: it takes but very little dust from the barn to spoil a tub of butter.

The next step is to have the milk room far enough from the kitchen to be entirely shut away from the fumes there. I think deep setting produces the nicest cream, because there is less surface to dry, and the cream is very smooth and even; but it is not as convenient for us, so we take the next best—the Jewett pan. A thermometer should hang in the room, and be kept as near 60 degrees as possible, in winter; and from 56 to 58 in summer. The milk room must be kept perfectly clean and sweet; a circulation of fresh air is necessary, and plenty of light. Do not let the wind blow directly upon the milk, as it will dry the surface of the cream.

After the milk has stood 36 hours, remove the cream into cans, and cover, but not so tightly as to exclude the air. A pan turned over the can is better than to have the cover shut down tight. Give the cream a thorough stirring twice a day, and let it stand from 24 to 36 hours before churning. We use the Blanchard churn, but I think no churn can make nicer butter, or bring it in better shape for washing, than the dash churn. When the cream is churned, its temperature should not be above 60 in winter, and 56 or 58 in summer. The butter should not be gathered in a solid mass, but left in small lumps, so as to cleanse it from the buttermilk with as little working as possible.

If necessary to color the butter, use the juice of carrots; but a better way is to have the cows do their own coloring, by high feeding, and add a new-milch cow to your number every four or five days. This can be easily managed in a dairy of 40 or 50 cows, when you wish to make butter through the winter. Wash the butter with as little working as possible in a butter worker until the water looks quite clear; then with paddle and butter-pestle work the butter quite dry before salting. A linen cloth slightly wet will aid very much in sponging the water from the butter. I cannot tell what kind of salt is the best. I have never had sufficient experience with the different kinds to decide, have never had any Ashton salt that was quite satisfactory; presume it is counterfeited some. We use three-fourths ounce of salt to one pound of butter and work it in as evenly as possible, but great care must be taken not to work the butter too much.

After salting let the butter stand until the next morning and then work again and sponge it dry as possible; pack it in a tub previously soaked four or five days in strong brine; take great care to pack solid, leaving no space for air; it will keep better and look much nicer when turned out of the tub; make the surface as smooth as possible, then spread over a cloth the size of the top of the tub, and press it down upon the butter with your hand until the print of the cloth is left upon the whole surface, sprinkle over the top a little salt; if the market is not very good, keep in a cool, dry cellar.

MRS D. A. LOCKE.

Traveling Threshing Machines.

It will be remembered that we recently suggested to farmers the good policy and economy of owning a horse power, thresher and saw; and of neighbors uniting in ownership. The American Agriculturist gives similar advice. It says:

It is a question worthy of consideration, if it is not more economical, as well as more convenient, for a farmer to own his own horse power and threshing machine, than to hire one of the large machines which go from place to place to work. The cost of threshing by one of these is, perhaps, equal to one-tenth of the crop. It is attended by considerable extra expense in providing extra hands, or extra teams, and there is some waste in doing the work in a hurry. The labor is excessive while it lasts, and there is, moreover, the cost of boarding hands and horses. For a crop of 1,000 bushels of grain, the cost will amount to over $150. With a two-horse-power machine, costing $275 to $350, this work can be done in five days, without hurry, inconvenience or loss, and often without extra help. The horse-power will also serve other purposes, which will thus reduce the cost attached to the threshing. Upon farms that have 500 or more bushels of grain to thresh each year, it would certainly seem better to have a machine of one's own than to hire a traveling machine. [Agriculturist.

Artificial Honeycomb.

Under the head of "Trade Novelties," the American Grocer says: John Long, the honey man, has given the bees a healthy lift by inventing what he calls artificial comb foundation, by putting which into a new hive, the bees will be much obliged, and take hold and build up the sides of the cells just as natural as life. It is, of course, wax, made, say six inches wide, 16 inches long, and the cells one-sixteenth of an inch deep, at one dollar a pound. When it is taken into consideration that there are 70,000 bee-keepers in the United States, and that the single county of San Diego, California, produces 600 tons, and that Liebeg says it takes 20 lbs of honey to make one pound of wax, it will be seen that this foundation start for them is a wonderfully clever idea.

Protection Wanted by Farmers.

The Bracken county (Ky.) Chronicle is speaking out in school, and says: Some of the farmers in Bracken are extremely anxious to commence raising sheep, as in former years, but fear to undertake it on account of the innumerable number of worthless curs that are running at large in and through the county. It has been frequently the experience of the sheep raisers of Bracken in former years to have their entire flock destroyed in one night by dogs. Sheep raising is profitable and beneficial, not only to the farmer, but to the consumers generally, and it is a great pity that we are to be deprived of the benefits of raising sheep on account of something that is entirely worthless. Can't this thing be remedied, and the hills of Bracken once more present the enterprising and profitable aspect of flocks of sheep feeding or resting beneath the shade of trees, unharmed and unmolested? Set your heads together, farmers, grangers and business men, and come to a conclusion as to what you will do.

The Use of Lime as a Fertilizer.

The season is fast approaching for the preparation of the soil for next year's seed. This and the selection of the kinds best adapted are of sufficient importance to occupy the mind of the farmer, and to a greater extent than is occasionally given, when it is considered that inferior or unadapted seed will produce, as a rule, an inferior crop. Thus, to sow wheat on a soil which contains no lime or marl—either naturally or artificially—is sure to bring a poor return. A remarkable instance of this took place in Ireland after the famine. It is a fact well known by the more intelligent farmers in the country that the extensive central plain which occupies the surface land at the foot of the mountains contains no lime or marl, and that dressings with these materials were at stated times applied when the culture of wheat was intended. The product from an average year was twenty barrels per acre, (Irish), or about sixty bushels to the English acre. After the famine the poverty and want of heart to do their best by the land compelled those who remained on their farms, unsubdued by the famine and pestilence, to omit the usual application of lime to the soil, and the consequence was that, instead of twenty barrels per Irish acre, the yield was from five to seven barrels, being a reduction of from two-thirds to three-fourths. Another instance occurred in the case of three farmers from Suffolk, who took a tract of land of about 600 acres near Sligo, inclosed with a wall as a park. In a letter from one of them after they had been there a few years, he stated that they were about to abandon their holdings, as the land would not grow wheat for want of lime, of which there was none to be obtained in the neighborhood, while the soil contained not a particle of that material, and there was none within reasonable reach of their farms. In such cases as this the application of lime required to be renewed frequently, because either lime or marl will sink in almost any soil, especially light, so that the process of renewing the application of these materials is very expensive.

There is, however, a drawback to this favorable account of the effects of the application of lime to the soil—namely, that it is possible to overlime; that it produces larger crops for a certain number of years, after which the return falls away, until it becomes less than before the lime was applied, so that it appears to have exhausted instead of enriching the soil. In accounting for this adverse effect of what is admitted on all hands to be a benefit, the chemists state that lime acts on all the organic parts of the soil, by which it is rendered more serviceable to the growth of plants. On the other hand, the proportion of organic matter in the soil gradually diminishes under the prolonged action of the lime, and thus tha soil becomes less rich in those substances of organic origin on which its fertility to a certain extent depends. The same effect is produced on the mineral matter in the soil, when there is abstracted from it a more abundant supply in proportion with its immediate effect *per se.* Unless, therefore, an adequate proportion of those matters are supplied in other manures, the soil will necessarily become exhausted to such an extent as to counteract or neutralize the action of the lime. The way, therefore, to prevent this effect is to manure largely with farm yard manure and saline substances, and thus return or repay to the soil whatever may have been extracted too speedily or too copiously from it.

[Mark Lane Express.

Fall Seeding.

The New England Farmer gives the following advice:

If you have plenty of good barn manure on hand or can afford to purchase commercial fertilizers, and have good tools for plowing and pulverizing the soil in a finished and workmanlike manner, and can attend to it immediately, so that the seed may be sown by the last of August (the earlier the better), you have reason to expect a full crop of grass next summer, but if you should fail in any one of these points, the experiment would be a doubtful one. Had the case been our own, we should much prefer to have had the land plowed a full month ago, or as soon as the hay crop was removed, thus giving more time for pulverizing and fining the surface soil.

Still there is time for making a good, friable seed bed if you have a plow and team with which you can turn a handsome flat furrow, wide enough to remain botton side up under the action of the harrow or cultivator, and deep enough to allow thorough pulverization to a depth of, at least, four inches, and have tools also that are suitable for doing such work. Without having made any previous preparation, one would need to work pretty lively to get much such land ready to seed as early as the last of this month.

We would certainly advise laying out no more work than could be finished by that time, although if the weather should prove unusually favorable grass might winter well sown during the first half of September. If you should find the time too short for seeding this fall you have plenty of time yet for securing a crop next season.

Plow the ground now, doing the work just as well as possible, then follow with a good pulverizing harrow, such as will find the soil without turning back the sward. Don't try to do it all in one day, but give the land time to crumble between the harrowings. You cannot work the soil too much this fall, even if harrowed once every week. Put on what barn yard manure is at your command, as soon as convenient, and let it become mingled thoroughly with the soil by the repeated harrowings and action of the elements. Next spring, as early as the ground is in suitable condition for working, harrow again and sow the seed, either with or without grain, as your experience seems to dictate, or, for experiment's sake, try a part with grain and the remainder without, and note results. If sown in the spring, you can safely put on clover seed and will get more hay the first year than other seed without clover, especially if no grain is sown with the grass seed.

On such land as you describe, you can have just as smooth and mellow a seed bed on green sward without planting it, as with, if you have suitable tools and use them faithfully. Your proposition for re-seeding without planting is a good one, but the work should have been commenced earlier.

SALT ON HAY.—At a late meeting of the Elmira farmers' club, Prof Hoffman said: I want to enter my protest against the use of salt on hay. It will prevent the barn from burning, but it damages the hay. Cattle will eat salted hay, but it is not good for them. I would rather use lime if one or the other must be used. I start with the proposition that the very best feed for cows is grass, but we cannot have grass in winter, so we make hay. The true plan is to get that as near like grass as possible. Let us combine bulk and quality as well as we can, and we shall be doing as well by ourselves and our cattle as we can.

Irrigation.

BY ALEXANDER HYDE, IN NEW YORK TIMES.

These dry summers are giving most convincing proof that irrigation, or the artificial watering of land, is the great agricultural demand of the times. We are beginning to learn that droughty is a term applicable to New England as well as Kansas. In the latter country the remedy for drought is not easy, unless the planting of trees induces a greater rainfall, which we are inclined to think will be the case, but in New England, and in all hilly countries abounding with rivers and rivulets, there is no excuse for parched slopes on the foot-hills and brown meadows in the valleys. We are confident that farmers would turn their rivulets on pastures and mowing lots if they only knew how full the waters are of rich organic and earthy matter, and how easily the brooks can in most cases be diverted from their natural channels and made to put their fertilizing materials where they would do most good. As it now is, the rivers and rivulets are carrying to the ocean immense amounts of saline substances and organic matter, thus impoverishing the uplands without benefiting the lowlands. In every freshet we see the plowed hillsides being washed off and the streams thick and turbid with the richest and finest soil of the uplands. In dry time the same waste is going on, more slowly and almost unnoticed, but surely, the waters carrying to the sea the cream of the lands through which they run. In the clear waters of the Clyde, after the mechanically suspended matters had been allowed to subside, Dr Thomson found one and one-sixth part of solid substances, composed of common salt, muriate of magnesia, sulphate of soda, carbonate of lime and silica. Even in the purest spring water various salts are found, and in all hard water sulphate of lime (gypsum) is a constant component.

In what the magical effects of irrigation consist the doctors do not agree. The old Greeks taught that water contained all the elements of vegetable life, and, foolish as this may seem, Van Helmont and his disciples thought they had proved the truth of this theory when they planted a willow-tree weighing five pounds in an earthen pot containing 200 pounds of dried earth, and, after furnishing it no other nourishment than rain or distilled water, the tree weighed at the end of five years 164 pounds, while the earth had only diminished two ounces. The fallacy of the conclusion from this experiment is easily seen when it is known that every pint of rainwater contains in solution at least one grain of earthy matter. Besides, Van Helmot's pot was sunk in the earth, and of course much water, impregnated with the various saline substances necessary for the growth of the willow, found its way through the pores of the earthen vessel. Various experiments have conclusively proved that pure water will not support vegetable life so far as to perfect seeds. The ash, or inorganic part of the plant, must come from the soil, though it may be, and doubtless is, furnished to the vegetable solved in water. This water may look perfectly pure and still contain much saline matter, as is manifest from the springs at Saratoga and other places, which are very clear but abound with mineral substances. As a general rule the water which is most impregnated with earthy and organic matter in a state of solution will give the most vigorous growth to plants. Equal quantities of plants, fed by distilled water furnished only three and nine-tenths parts of ash, while those fed by rainwater furnished seven and five-tenths per cent of ash, and those grown in soil gave 12 parts ash.

We are inclined, therefore, to believe that the main effects of irrigation are to be attributed to the substances which the water holds in solution. It does not follow that the water must contain a great, or even any apparent, amount of sediment. This sediment may be in such excess as to damage for a time the growth of grass and other crops, and irrigators will find that, for immediate effect, the purest looking water is often the most efficient. We once heard an agricultural lecturer affirm that spring water was worthless for irrigation, as it contained no fertilizing properties; but we have seen an astonishing growth of grass produced by spring water which looked as clear as crystal. The grass started early in the spring, grew all summer, and hardly stopped in winter. Part of the effect doubtless was attributable to the warmth of the spring water, but this alone would not produce such results. All spring water contains a greater or less proportion of earthy matter in solution, and, besides, its presence in the soil is necessary to act as a solvent and as a medium of conveying food to the mouths of the rootlets. It is just as foolish to suppose that plants can suck in and assimilate soda, potash, and lime in a solid state as it would be to undertake to feed an infant with, thin, dry substances instead of milk, in which they are found diluted with water. Utilize the water, therefore, whether it comes from the barnyard and road, saturated with fertilizing substances, or from the sky, brook, or spring, looking as pure as purity can be.

What one Farmer has Done.

A correspondent of the Mirror and Farmer writes of Hon Warren Brown, of Hampton Falls, N. H.:

A few years since the high portion of his farm cut about half a ton of hay per acre, and the lower ground was covered with marsh hay which they frequently carried off on hay poles. Now, on his 60 acres of mowing land, he will cut, I judge, over 100 tons of the best of English hay. Tiles, muscles, manure and brains have wrought the change. His grass is worth, I judge, over $25 per acre as it stands. He sells much hay, and yet makes so much manure that he hardly knows what to do with it. A new barn has a ventilated cellar and a smooth, four-inch, concrete floor. What a shame and untold loss to the state for our farming population to diminish yearly and the young men to leave the farms. Put a good paper in every farmer's family; let farming be studied the same as any other pursuit. Let the farmers have no unjust burdens; let them be honored and respected; let there be a rival in farming for the sake, not only of the agriculturist's interest, but for the good of all other useful industries, and last, but not least, as the birth-place of those men and women who are alone reared upon the farms.

SAVE YOUR SOAPSUDS.—A person who would throw away a barrel of soft soap, or a boxful of hard soap, would be called wasteful, as such material will operate like an excellent fertilizer when spread around fruit-trees of any sort, or berry-bushes. After a barrel of soap has been diluted, and has passed through the washtub, the elements of fertility in the mass will be even more valuable to growing trees and plants than if applied in any other manner.

At Abilene, Kansas, is a wheat field of 1,300 acres, the yield of which is expected to sell for $20,000.

Ashes for Fruit Trees.

Mr C. M. Weston of Belgrade, the enterprising orchardist, whose successes and persistent labors in this line of farming we have before chronicled, has realized good results from applying a top dressing of unleached ashes about his young trees, previous to mulching them in spring. Trees from one inch to three inches in diameter, receive from little less than a peck to a half a bushel, scattered about under the trees away from the trunk, and the mulch—consisting of meadow hay—then put on. Some might say it was the mulch which did all the good, but Mr Weston has been trying some little experiments in the matter of mulching, top-dressing, not mulching and other things—about trees and their ways—asking questions of them and carefully noting the results—and he is satisfied that ashes form a most valuable fertilizer for apple trees, applied in the manner suggested and recommends their use in this way by all who would have a thrifty young orchard, and who would see their trees laugh and grow fat, and bear heavy crops of fruit. [Maine Farmer.

Thrush.

The present stoppage of thrush is seldom difficult, but to prevent its recurrence is not so easy always; for the part, having once taken on this action, easily falls into it again. Almost any astringent substance will check the suppurative action of the vascular frog, as solutions of white, green or blue vitriol, alum, common salt, etc. Half an ounce of finely powdered white vitriol, mixed with four ounces of common tar, is an excellent application. Before the introduction of this, the frog should be carefully inspected, and all decaying parts removed, so that the introduction of the mixture may be facilitated and the disposition to harbor filth and moisture prevented, the whole frog may then be smeared over with the mixture, but more particularly a small piece of tow should be charged with it, and, by means of a small wooden spatula, pressed to the bottom of the cleft of the frog, and also into every other fissure that may exist. The dressing should be repeated about twice a week. [Spirit of the Times.

Curing Fodder Corn.

The Ohio Farmer gives the following account of a novel method of raising and curing fodder corn. It occurs to us that fodder corn cut in that way must be ugly stuff to handle:

A farmer in Ontario county, N. Y., sowed oats broadcast, in the usual amount and then drilled in corn, using three bushels of corn to one of oats. When the oats were ripe, the whole crop was cut like grass, and the dry oat straw, absorbing the moisture of the stalks, rendered the whole easily cured. One of our correspondents, last year stated that he cured his fodder by placing it in the mow between alternate layers of dry straw, and that his cattle and horses devoured the straw with as much relish as the fodder. As corn fodder is a difficult thing to cure when cut green, these suggestions should be acted upon, when fodder is put in the barn.

The Value of our Fruit Culture.

F. R. Elliott, a writer on horticulture, has been collecting certain data in regard to fruit culture, and gives the total market value of the crop of the entire country at $57,000,000. New York leads all the states in amount with $7,000,000. California's figures are largest in proportion to population, being $6,000,000, this sum probably including the yield from vineyards. The total sum for the New England states is put at $6,000,000, the individual states not being itemized. In commenting on these figures the San Francisco Bulletin, which already claims that California is the leading wheat growing state, thinks that it will speedily stand in the front as the greatest producer of fruit, and holds that so far from being overdone there, the fruit business is but in its infancy.

BREVITIES.

The farmers at Ticonderoga, N. Y., have converted their church into a cheese factory, and their race course into a cow pasture. [If material prosperity does not attend that God-forsaken people it's because of oleomargarine.]

There is an unusual demand for old-fashioned grain-cradles in Iowa, this year, the copious rains have made the ground too soft for the reaping machines.

English gardeners now gladly pay four shillings each for toads. They find them the best and cheapest destroyers of insects which infest their plants.

The shad fisheries on the Hudson this year are an unprecedented success. At one point, the other day, the fishermen took 6,000 in twelve hours, where a few years ago 600 was considered a large haul.

The Morgan horse, purchased thirty-one years ago by the late Cyrus Reed, of Lexington, died February 19th, at the great age of 43 years.

Recently a band of sheep were running along the edge of a precipice back of Mission, San Jose, Cal., when the leader by some means lost his footing and was hurled down the steep declivity. The rest of the flock followed to the number of 800, or, as estimated by others, 1,200 to 1,500 head. All that fell were instantly killed. [Just the way farmers sometimes do. All rush for one thing.]

There is an unusually fine run of fish in the upper Connecticut, this season, black bass, with which the river has been stocked, of four and five pounds weight, being quite plentiful; several muskalonge having been lately taken, one weighing fifteen pounds.

We have grown wheat the past few years from seed soaked in brine and rolled in ashes, or slaked lime, and with a decrease of smut each year, the present year's crop being almost absolutely free from it. If grain growers had no worse enemy to contend with than smut they might be happy. [N. E. Farmer.

The Gardener states that bran and buckwheat flour will destroy cabbage worms more effectually than hellebore, lime, salt or any of the substances generally used. The bran is simply dusted over the infested cabbages as soon as the worms make their appearance. If the worms are thick a handful of bran is required for each head. It must be applied when the worms are young. The buckwheat flour should be sifted on from a sieve when the dew is on. It is probable that wheat flour, fine Indian meal or any other pulverulent, farinaceous substance would have the same effect.

It is now certain that the reported damage by the recent western storms has been greatly over-estimated. Reports from over 150 points show that in Illinois, Iowa, Indiana, Michigan, Wisconsin, Minnesota, Nebraska, Kansas, Missouri, Ohio and Dakota the wheat crop of 1875 will be in the aggregate 65 per cent, oats 79 per cent, and corn 91 per cent of an average crop.