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OFFICE.—Empire Block, Main St., in the rooms occupied for the office of the Janesville Gazette.

Potato Rot,

IN CONNECTION WITH THE LAWS OF VEGETABLE GROWTH AND DECAY.

Many theories, and not a few of them quite plausible and consistent, have been started within the few years past, in regard to the Potato Rot—the cause of the disease, its remedy, &c. But despite these theories, and the thousand-and-one remedies that have been resorted to, and the infallible specifics that have been administered, the rot has abated not the least in its ravages, and has outlived all carefully and perseveringly applied tests to which it has been subjected, and even increased in malignity. And yet new theories continue to be presented—new experiments to be devised—new specifics to be recommended.—What the end will be we can by no means determine—we will not venture even a Yankee "guess." The true remedy will, peradventure, yet be "hit on," and the potato saved from being "clean gone forever." This is a matter in which all, save a very few, are greatly interested; and he shall be written down among the greatest of public benefactors, who shall develop the remedy.

To our mind no sounder theory, or more accordant with the laws of nature, has been started, than that of Prof. Hoyt in a communication to the N. E. Farmer, for January. We regard it as eminently sound and sensible—and we say so, not to praise the author, but because we think so, and because we are of the opinion that it will be found of practical advantage.

He starts with the assertion, that, "The rot is not the result of occasional causes, but is a disease, partly epidemic and partly hereditary"—that it may be likened unto *dropsy*—that its modus operandi is simply this: "First, the leaves are from some cause blighted.—Secondly, the sap, excessive from want of transpiration through the leaf and uncarbonated from want of contact with the air, becomes diseased, and finally settles down by its own weight into the tuber. Under this pressure of circumstances, the tuber, surcharged and bloated with the corrupt and fetid juices of the decaying plant, rots as in duty bound."—The leaves are the lungs of the plant—the organs of *respiration* and *perspiration*; *in* them the sap or blood undergoes chemical changes requisite to healthy growth and maturity, and *through* them "the watery parts of the sap are thrown off, just as the watery parts of the blood are thrown off by the lungs. If these functions are disturbed, so that the regular and natural processes pertaining thereto do not go forward, disease and death is the inevitable consequence.—The sap would be left to stagnate in the stalks, and this diseased *blood* finding its way to the tubers would infect and destroy them also.

We have by no means done justice to this portion of the article, and have only aimed to impart to our readers the general idea; we pass to the query: "What is the cause of the blight in the leaves and stalks of the potato?" The writer answers this generally by saying, that, it "results from one of two causes—either from the ravages of minute insects or from some peculiar atmospheric influence.—By the result of observation and the occurrence of certain phenomena, he is determined

to the latter, and holds that the atmosphere contains "the noxious cause of the disease." There can be little doubt of this, if we observe, examine and keep watch. Many have come to the same conclusion who have given attention to the matter. What this noxious cause may be, is to all intents and purposes a mystery—it is yet to be learned. But ignorant as we are, "the experience of practical agriculturists and the experiments of scientific men, warrant us in the belief that the disease may be alleviated and counteracted to a very great extent." As a means to this, and means that have been employed with great success, it is recommended :

1. To plant early—the blight making its appearance generally in the month of August.

2. "Plant on light soils," and avoid putting rich fermented manures in the hill.

3. When the blight makes its appearance, sprinkle the tops with plaster, to counteract any excess of carbonate of ammonia in the atmosphere.

4. Lime may also be applied, by way of neutralizing any excess of carbonic acid, to which some have imputed the disease.

5. Select seed from a field that has been exempt from the rot.

6. Mowing off the tops close to the ground, should be resorted to, if the foregoing precautions do not avail, and as soon as the blight appears.

7. Dry the potatoes when dug, put them in dry bins in a dry cellar, and sprinkle with powdered charcoal.—Try it!

For the Wisconsin & Iowa Farmer.

Agricultural Education.

BY JAMES L. ENOS.

Agriculture is an art upon which all other arts depend—a profession in which so large a majority of our race are engaged, it becomes a subject of vital importance, as upon its improvement and prosperity so largely depends the happiness of the race.

Notwithstanding the immense claims of agriculture, very little comparatively has yet been done to secure it a place among the sciences, to be taught in our institutions of learning or even read at the home fireside. Wherever we turn our attention we discover the defects of our system of instruction in this department. Time has been spent and money expended in building up institutions for teaching nearly every other art and profession, but schools for the purpose of imparting a thorough knowledge of the theory and practice of agriculture, have never had a being except in a very few instances and we may say none have been established and conducted so as to effectually establish their practicability. Money is freely expended for almost any other purpose than that of teaching the true philosophy of progressive life. The life of any state rests in agriculturists. And in proportion as they prosper, and become earnestly alive to their true interests—the state bears the unmistakable evidences of prosperity. Farms become thoroughly subdued—neat and convenient cottages arise on every hand—taste and elegance, combine with stern utility and make the country a paradise—admired and praised by every passer-by.

Let our youth be taught the pleasures that may be made to cluster around a rural home in the country ; how honor may be joined with happiness; how merit and true manhood may be made to exhibit itself in the tasteful farm house, and we would see more intelligent young men seeking to become thus established, than rushing to posts of fifth rate lawyers—quacks and dandies.

Agriculture is a science and as such should be taught in all our advanced schools. In thus recommending the teaching of this branch in the schools, I do not consider it essential that model farms should be connected with all such schools ; but I *do* say that every school should have an enclosure where certain branches of agriculture and horticulture could be familiarly instructed. The young misses could learn to cultivate and analyze flowers, and thus, with no special effort, in a few seasons become good practical botanists. The young men could learn the nature of soils and the manner of planting and rearing all kinds of garden luxuries, which instruction could easily be blended by the ingenious instructor, with the sports of boyhood. Lessons thus taught would remain and do vast good by engaging the attention of the young of both sexes, and leading out their minds in a course of pleasing and highly valuable inquiry. In a future number I propose to point out the peculiar kind of instruction which I deem essential for an agricultural people.

Madison, Feb., 1852.

A ploughman on his legs is higher than a gentleman on his knees.

☞ The pigeon flies fifty miles in anhour

The Prospect Ahead!

There never was an hour since our first parents were expelled from Paradise, when the cultivation of the earth had a prospect ahead, like the present.

The governments of Europe have discovered that bread is necessary to quiet rule—hungry men being much like hungry wolves a dangerous and destructive race of animals. And in order to have food for their overgoverned millions, from their own overworn soil, they have found that a better and more rational process of cultivation is indispensable.

Agricultural schools and experimental farms have, therefore, been established, over most of Europe, to educate the few who direct the labor of the many. The eye of science now guides the LIVING MACHINE—the mere animal labor—instead of old tradition, in which the servant was often as learned as the master.—The consequences are seen. In Great Britain, two bushels of wheat are harvested now, where but one grew a few years ago ; and old Europe is fast becoming independent of agricultural America, in the way of bread-stuffs.

But, we are opening up a nobler prospect. We are about to educate the many — and in agriculture, as in the arts, to give scientific "eyes" to every pair of hands, with plenty of "machines" of wood and iron, but no *living ones*—with less than four legs.

Young men remember the first step taken in this country for the advancement of agriculture. Our first agricultural paper saw the light in 1819—our oldest Agricultural Society, can not, we should think, count twenty years of uninterrupted existence—and but three Horticultural associations can count more. And now, we have an agricultural press ; more important and more efficient, than that of the entire Union, not far from the time when our first paper was published ; and our active societies are counted by hundreds, and almost thousands.

But there is more prospect ahead—agricultural colleges and experimental farms are the next steps—and an agricultural bureau is but a preliminary measure.

Massachusetts and New York have moved, legislatively ; but their efforts have been abortions. Illinois—or the people thereof—are acting, with the purpose of creating an "Industrial University" and an experimental farm, also, other states are still more awake ; and Wisconsin is not far behind the foremost—and she has yet a very good chance of being *the very first* to legalize agricultural education. Let her stand first on the list, and shame her elder sisters!

DOWNING, WILDER WARDER, LEE NORTON, and a brave list of able men, and good friends of the poor farmer, have battled long and nobly, since a BUEL first tried to legislate for agricultural education—and we now see the prospect ahead.

Little has been said on the subject of an Agricultural Bureau at Washington—partly on account of its political bearing—but principally because we have had little confidence in the immediate action of Congress on this question—this being the era of *talk* and not *action*, in that quarter—and the business of congress seeming more like "President-making" than legislation.

But, it NOW appears, that we were mistaken. Gov. DOTY writes us, that he has actually introduced a bill for a Bureau—that it has been referred to a committee, of which he is a member—that a majority of the committee is favorable, and will report it to the House, and perhaps recommend other liberal measures for the benefit of agriculture generally—and he adds, that the bill will pass, if our press and our societies sustain our friends in Congress.

Here is another glorious prospect ahead.—Let us fix it now, lest it pass from before us, like the shadow of a cloud when the earth is thirsty for rain.

An Agricultural Bureau may do to begin with ; but we cannot stop there. We deem such a department the mere central office, or acting agency for A SYSTEM of schools, experimental farms, and model plantations.

Mount Vernon, and a school, (every way as efficient for agriculture, as West Point is for war,) will do for a commencement, with a liberal bureau ; such as would not shame the far-

mer at Washington, when compared with other "Departments," and measured by the extent of the interests it should subserve. These we must have, and these we shall have, soon we trust; and these will beget others. But we have done for the present. *

Germination of Seeds.

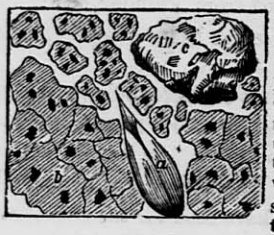
The healthy seed of a plant is a living object.—Though apparently lifeless to the sight and the touch, it has life, and its vitality is capable of exerting great power when excited into action. What the agent is, and how it acts, which excites the vitality of seeds, we do not know, and perhaps never shall know—it may be one of the secrets which nature will keep to herself; but we do know the circumstances in which, when seeds are placed, vitality is invariably excited, and the proof of this excitement is furnished by their germination, which is the first movement towards the production of a plant.

Now the circumstances which excite germination are a combination of air, heat, and moisture.—These must be afforded in the most favorable conditions, before the plant will grow. They may all be supplied to the seed, and its germination secured in the air as certainly as in the ground; but on the development of the radicle, the province of which it is to penetrate into the soil, the young germ, instead of growing upwards, would die, were it kept constantly in the air. The earth supplies all the requisites of air, heat, and moisture to the plant, in a much better state than the air can itself, and the soil continues to supply them, not only at the period of its germination, but during its after life. A vital seed placed in the ground must be affected by three agencies, one physical, another chemical, and a third physiological, before it can produc a plant.

Physical—When a vital seed is placed in pulverised ground it is surrounded with air; for although the particles of soil may seem to the eye to be close together, on examination it is found that the interstices between the particles occupy one-fourth of a given quantity of soil. Hence, 100 cubic inches of pulverised soil contain no less than 25 cubic inches of air. Therefore, in a field, the soil of which has been ploughed and pulverised to the depth of 8 inches, every acre of it will contain 12,545,280 cubic inches of air; and hence also, as every additional inch of depth pulverised, calls into activity 259 tons 5 cwt. 32 lb. of soil, at 1.48 of specific gravity, so the plowing of the soil deeper every inch introduces into it an additional 1,568,160 cubic inches of air. Thus, by increasing the depth of pulverised soil, we can provide a depot of air to any extent for the use of seeds. Suppose that as much as 3 bushels of wheat are sown on the acre, 2,104,704 seeds will be sown, so that each grain will have about 6 cubic inches of air in a soil 8 inches deep.

But this air must be above a certain temperature ere the seed will germinate—it must be above the freezing point, else the vitality of the seed will remain dormant. A pulverised state of the soil affords great protection to the seed from a considerable depression of temperature, and the more finely it is pulverised, the more it will resist the induction of cold from without, and the less will it radiate the heat from within. The less finely the soil is pulverised, such as in fig 1, where a seed *a* is placed among hard clods *b*, on the one side, and near a stone *c*, on the other; with a few particles of fine earth hard by, neither the clods nor the stone can afford the seed any air, which can only be supplied through the few particles of pulverised soil; but cold is easily transmitted by stone from the atmosphere, with which it communicates by its upper surface, and by which also the internal heat is easily radiated into the air. It is clear then, that, in such circumstances, seed is not placed in favorable circumstances for its germination. The advantages of pulverised soil are evident from this figure.

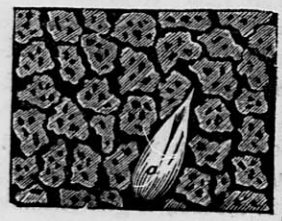
Fig. 1.



CLODY AND STONY SOIL.

Besides by clods and stones, the air may be excluded by water. Fig. 2 represents the seed *a* placed in a pulverised soil, the interstices of which are entirely occupied by water, instead of air, as well as the interior of all the pulverised particles of it. It is also clear that, in this case too, the seed, being deprived of air, is not placed in the most favourable circumstances for germination. Besides the direct exclusion of the air, the water, on evaporation, renders the earth around each seed much colder than it would otherwise be. The evils of the excess of moisture are evident from this figure.

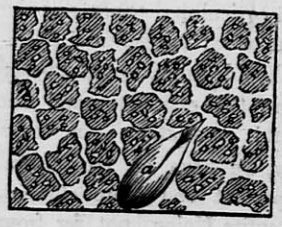
Fig. 2.



SOIL WITH WATER AND WITHOUT AIR.

But total want of moisture prevents germination as much as excess. Fig. 3, shows the seed *a*, placed in pulverised soil, and the interstices filled with air, but no moisture is visible between and in the particles of soil.—In such a state of soil, heat will find an easy access to the seed, and as easy an escape from it. The evils of the want of moisture, and of excess of heat are evident from this figure.

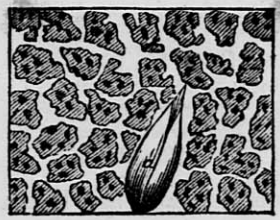
Fig. 3.



SOIL WITH AIR AND WITHOUT WATER.

Fig. 4 represents the seed *a* in soil completely pulverised; between every particle of the soil the air finds easy access to the seed; and in the heart of every particle of soil moisture is lodged. All that is here required in addition is a favourable

Fig. 4.



SOIL WITH WATER AND AIR.

temperature, which the season supplies and germination proceeds. [Farmer's Guide.

Agriculture—No. 2.

Of the importance of Agriculture—of its weighty bearing on other pursuits—its close and inseparable connection with the greatest good of a state or nation—identified with all that can impart true glory to an age or people—it is not necessary that we speak further. The observation and experience of every intelligent mind, will have demonstrated, that it underlies all the great secular interests of a people, and is in very truth the foundation of every species of business and trade, and a living element in manufacturing and commercial prosperity.

And why should it be thought less honorable, or reputable, than other pursuits? How much suffering might be avoided—how would the amount of poverty, wretchedness, and woe, be lessened—were it not for that most pernicious idea; that labor is disgraceful, and that to till the ground, is a low and mean employment! Because of it, thousands—miserable thousands—are kept from following the plow, or wielding the axe, the hoe, the spade, thus developing the hidden wealth of the soil, and securing health, wealth and happiness.

This idea has had an influence upon even agriculturists themselves. They have looked upon their calling, as hard and degrading—many have loathed it, as though it were drudgery only; and thus they have sought for no improvement—for none of the means and requisites of progress.

But we rejoice that, far more than formerly, there is now a spirit of improvement abroad, with reference to this high, but neglected calling; and not a few who are engaged in it, have already learned to their great advantage, that improvements may be made in this as well as in others, and that the discoveries of the age and the developements of science, are but furnishing agencies, for the promotion of the interests of Agriculture.

Agricultural Exhibitions and Fairs—County and State—have, perhaps, as much tended to awaken, and increase this spirit of improvement as almost any means and agencies that might be named. They have begotten a healthful, earnest competition; and the farmer has been led to study, investigate, experiment, labor, tax his enterprise, and all his available resources, that to him might be awarded the palm of superiority, over his competitors, or at least, that he might not fall very far in the rear of his neighbor in all real improvement.

These exhibitions, although but recently introduced into our state, have already exercised no small degree of interest, and awakened a lively spirit of improvement that can only be regarded as an earnest of great good to come. They will assist materially, we are confident, in developing a better state of things, and in relieving, through a healthful and permanent progress, the agricultural branch of industry, from present and great embarrassments.

It has been, and still is the case here, to a considerable extent, that only a part of a small portion of the science, or even of the common practical details of agriculture was, and is known; and men who had entered upon its labors, disregarded what, elsewhere, and under other circumstances would have been deemed important and essential to success. And it will be found now, quite too generally, that there is a slowness in the application of new truths to a new condition of things, and in the use of new and wisely adapted means, in the cultivation of the soil. Now the improved practice of a few farmers of the right sort, through exhibitions and fairs, will tell wonderfully in this direction—awaken interest, call up slumbering energies, and crown all true effort with abundant prosperity.

He that has a trade hath an estate; and he that hath a calling hath a place of profit and honor.

For the Wisconsin & Iowa Farmer.

FRIEND MILLER :

I have often seen set forth in papers, the necessity of farmers underdraining their wet lands, but I do not recollect having seen how the work is to be performed so as to be permanent and useful. Being well acquainted with the way it is done in Europe, it may not be out of place to inform the readers of your valuable Cultivator. As there are many acres of land in Wisconsin and in other states, that are so flat, and others, with a kind of springy bottom, that retains so much wet, that the grass is thin, rank and sour ; in fact such lands are next to useless. Those lands unless their surface is a dead level, can be brought into a state fit for cultivation or for good pastures, by the following described way of draining:

Lands having a certain declivity, or moderate descent, so as to afford an outlet, by beginning to cut a ditch at the outlet, of twelve or fifteen inches wide in the bottom, as deep as the outlet will allow, and continue this drain in the lowest part of the land ; then, if the bottom is hard, put two rows of stones one on each side in the bottom and cover with large stones, and chink with small ones, then a little straw or hay on the stones and fill up with the earth, sow grass seed, &c. The drain is to be dug deep so as the water will follow the workmen. If the bottom is springy, so that the stones would sink, I would put two rails on the bottom, and a wide one on the top, or slabs or lumber, or even brush. If such a drain can be two feet deep, it will draw the water from one and a half to two rods on each side ; the deeper the drain the further it will draw. Four feet is deep enough for any land, as it will stop the small springs from assending to the top. The side stones and covering may be twelve to fifteen inches from the bottom and will let out a quantity of water. Then if more drains are required I would recommend to make them obliquely as at at an angle of forty-five degrees and to empty into the first or main drain, and so on, till the whole land is properly reclaimed. I have near half a mile of such drains on my farm—some with stones and some with timber, and they all answer well ; much better than open ditches, for the plow or waggon can go over them without hindrance.

N. LE PREVOST.

Oakland Farm, Mt. Pleasant, }
Racine Feb. 12, 1852. }

For the Wisconsin & Iowa Farmer.

The Onion.

FRIEND MILLER—I have been requested to lay before your readers my method of cultivating the *Onion ;* and with your permission will do so as briefly as possible:

1st. *Preparation of Ground.*—The first essential in the cultivation of this vegetable, like that of every other, is to have the ground thoroughly prepared for the seed. The ground for this crop, however, must not be broken too deeply. In no case should it exceed 1½ inches, and it makes very little difference what kind of soil is below this, if the surface is well subdued.

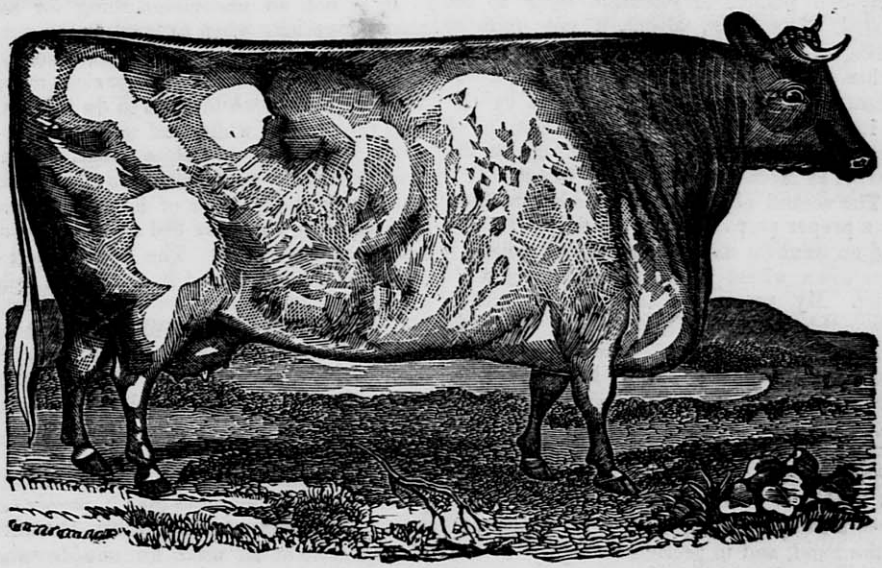
2d. *Seed.*—By putting the seed in a dish of cold water, the good will sink to the bottom and that remaining at the surface should be removed as useless. The good seed may be left for two or three hours in the water previous to being sown, with some advantage to it.

3d. *Time and Manner of Sowing.*—I have usually had the best crop of onions from beds sown about the first of May, though any time will do after the ground becomes warm. If the ground is free from weeds an abundant crop may be raised by sowing broad-cast ; it is, however, best to sow in drills about five inches apart. Like other vegetables onions should be kept free from weeds, and the ground frequently moved about them. The seed should be covered very lightly. As soon as the plant has become well rooted the tops should be carefully bent over, to prevent too luxuriant a growth of tops. This process will have to be repeated three or four times.

By pursuing the above course, I seldom, indeed, have never failed of having an abundant harvest.

J. L. ENOS.

POPULATION OF BALTIMORE.—Baltimore contains a population, according to the new census, of 169,812. Of the whole number, only 3,134 are slaves. In 1840, the number of slaves was 3,199.



Short Horn Cow, Cambridge.

"This cow was bred by Thomas Bates, Esq., Kirklevington, Yorkshire, England, by whom she was exhibited, at the meeting of the Royal Agricultural Society, in 1840, when eight years old, where she won the first prize for the best cow of any age.

"The Short Horned, or Durham breed of cattle hold a high rank in England, particularly for beef; and in some of the large milk establishments, this breed is preferred. In this country, particularly in the west, the introduction and general diffusion of this breed has made a vast improvement in stock, not only where this race is kept pure, but there has been great advantage in crossing it with the common breeds of the country, as blood stock generally stamps its peculiar characteristics upon the cross. The great gain by the use of the Short Horns is in their early maturity, by which they are as well ripened for beef at three years of age, as the common stock at four. Every farmer is aware that this is an important consideration."[N. E. Farmer.

Spring Wheat.

Every thing relating to the successful cultivation of spring wheat, will be read by every farmer in this section of the state with interest. We would commend to the attention of our farmers, the following article, upon this subject, written by Judge Jessup of Montrose, Pa., for the Farm Journal. Very much of the spring wheat sown in this section, is put into the ground too late and without any preparation whatever of the seed. We think if farmers hereabouts, where the blight or rust have prevailed to a greater extent than elsewhere, would pay proper attention to the selection of healthy seed, its preparation as here recommended, and sow earlier, this important crop would be brought to maturity some ten or fifteen days earlier, than has usually been the case, and thus escape rust or smut. We might also add—that in preparing the ground for wheat, a little deeper plowing, than is usually practiced, would be no drawback in the growth and early maturing of the crop.—If there is any clay that can be reached by the plow, fetch it up and let it be well compounded with the surface soil. These hints heeded, less will be heard about bad wheat crops in Wisconsin.

"This grain is already very important to large farming districts in Pennsylvania, and may most profitably be cultivated in many parts of the state where winter wheat in a measure fails. The objections urged against it generally, are three.

1. That it is inferior in quality. 2. That it is liable to smut; and 3. That it is an uncertain crop, owing to its being so frequently blighted and shrunk by mildew. But from an experience and examination of seven years, I am convinced that these objections are not well grounded. As in all crops, the quality depends much upon cultivation. With good

cultivation the Italian wheat weighs sixty to sixty-two pounds of superfine flour to the bushel. The flour, although not quite so white, makes as good bread as any other wheat. It has usually a slight yellowish tinge. If wheat were not *too much* judged of by the whiteness of the flour, I doubt not that good Italian wheat would soon rank as high in the market as Mediterranean winter wheat.

The second objection is entirely obviated by a proper preparation of the seed. I have had no smut for many years except where I have sown wheat without washing and liming. My process is to wash my wheat thoroughly in strong lime, which raises to the surface, all oats and other light seeds, which are skimmed off. While wet it is thrown upon the barn floor and finely pulverised quick lime in small quantities is sifted over it. The whole is so mixed that every kernel is coated with lime. It may safely be left in this way for several days before sowing. If sown immediately, the lime is unpleasant to the hand, and to prevent its injury to the sower, a small quantity of gypsum is scattered over it. No smut is ever found in spring wheat prepared in this manner. The salt, lime and gypsum are all admirable manures.

The third objection is obviated by early sowing. In large districts in the northern part of the state it is difficult to plow early. The soil is a heavy clay and loam and retains the water very long. It is absolute ruin to the crop to plow while wet, and consequently the farmer who relies upon spring plowing for his wheat will be unable to sow before the last of April or the first of May—a month too late here. The plowing must be done in the fall and the sowing at the earliest practicable day after the frost is out of the ground. The best spring wheat in quantity and quality, which I have ever known raised was upon a green sward, which had been turned under late in Nov., and upon which the wheat was sown without farther plowing, the latter days of March. A very light dragging lengthwise of the furrow, before sowing, and the wheat was lightly dragged in so as not to raise the sod. Sown in this way it will be fit to harvest during the latter part of July. Wheat which ripens in July is seldom affected by mildew. Two bushels of seed should be sown per acre.

I have tried the Baltic wheat, which is said to be succesfully cultivated in Vermont, but it is greatly inferior in quality as well as quantity to the Italian."

The eye of a master will do more work than both his hands. Not to oversee workmen is to leave your purse open.

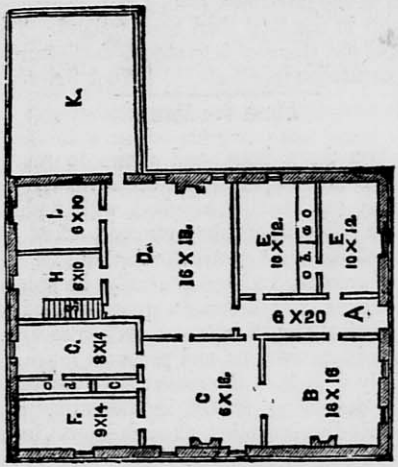
The Using of Paint.

It is not an uncommon thing for some paints, especially when exposed to the atmosphere, to rub off like whitewash, after they had been put on for about six or eight months. We have known white paint to do this, altho' both the oil and white lead were said to be good. In respect to white paint, which is most extensively used, there are three things which may be the cause of its inferiority and rubbing off. These are bad oil, bad lead, and too much turpentine. The best linseed oil only should be used, and it should be boiled, but not too long nor at too great a heat.—Linseed oil is frequently adulterated with sunflower oil, which is very inferior to that of linseed.

Sometimes white lead is sold which is very inferior to others, but painters know how to judge between the good and bad. The best can easily be ascertained by painters from the quantity of oil required to give it proper consistency. In mixing paints, there should be no turpentine at all used for outside work, (at most the smallest possible quantity) because the turpentine makes a soap of the oil, consequently, it will soon rub off or be washed away by storms, &c. The only benefit of boiling linseed oil is to drive away its moisture and ammonia, so that the glutten of the oil will form a beautiful skin of varnish, when dry, to protect the lead from the effects of the atmosphere, while turpentine forms a good varnish with resins and gums, its combination with oil is altogether different, forming a soap, hence those who know not this fact and use too much turpentine with their paints for outside work, may expect to see it disappear before it is very old. The best way to put on white lead for outside work, is to commence with a very thin coat, and let it dry perfectly. It is better to put on four thin coats, one after another than two thick ones. The labor, to be sure is more expensive, but those who buy their own paint, and use it in the country, will find out that it will be a saving in the end.

[Scientific Amer.

Guano.—It has been established beyond controversy, that guano is the best aid that can be applied to wheat and corn, but we were not aware that it was so peculiarly adapted to the growth of tobacco. A gentleman in Louisiana, who is largely engaged in the growth of the tobacco plant, made an experiment in the last season, and he has satisfied himself most thoroughly of its entire adaptation to the growth of that crop. This is a matter of very considerable importance as thousands of acres of the old tobacco lands in Virginia may be reclaimed. [Fred'k. Herald.



Plan of a Farm House.

Size 46 by 34 feet. *A.* represents the front hall, 6 by 20 feet ; *B.* the parlor, 16 by 16 ; *C.* the family room, 16 by 16 ; *D.* the kitchen, 16 by 18 , *E. E.* two bedrooms, 10 by 12 each including the clothes press, *o. o.*; *F.* the family bed-room, 14 by 9 ; *G.* the young children's bed-room, 14 by 8 ; *H.* store-room 10 by 6 ; *K.* wood house ; *c.* closet for the family room ; *o. o.*, clothes presses ; *S.* chamber stairs ; *I* pantry or milk-room, 6 by 10.

This plan combines both cheapness and convenience.

Sheep of the "New Leicester."

It is to the philanthropic and indefatigable exertions of Robert Bakewell, Esq., of England, that we are indebted for the improved Leicester. "Previous to his time," says a late writer "this animal had been bred with exclusive reference to large size, and weighty fleece, without regard to symmetry, or the quality of flesh or fleece. Aptitude to fatten, and early maturity, were also minor considerations." In the "American Shepherd," an invaluable work by Morrel, the New Leicester is thus described :

"The head should be hornless, long, tapering toward the muzzle, and projecting horizontally forward. The eyes prominent, but with a quiet expression. The ears thin, rather long, and directed backward. The neck full and broad at its base, where it proceeds from the chest, but gradually tapering toward the head, and being particularly fine at the junction of the head and neck ; the neck seeming to project straight from the chest, so that there is, with the slightest deviation possible, one continued horizontal line from the rump to the poll. The breast broad and full ; the shoulders also full and round, and no uneven or angular formation where the shoulders join within the neck or the back—particularly, no rising of the withers, or hollow behind the situation of those bones. The arm fleshy through its whole extent, and even down to the knee. The bones of the leg small, standing wide apart, no looseness of skin about them, and comparatively bare of wool."

The New Leicester has long been known in this country, and now quite generally disseminated in the British Provinces. Those who contemplate the introduction of them into their flocks should be reminded that they are well adapted to lands of tolerable fertility ; but they are injured by a too luxuriant pasturage. At least, so say those who have had much experience in their management. In this respect they differ from the Cotswold and other gigantic breeds. Hilly, or broken lands, on the contrary, are not well adapted for the pasturage of the Leicester, as they are of large size, and being heavy, should not be compelled to go far, or be much exposed, in obtaining a supply of food. If those of our friends who are in the habit of raising sheep for the market, would, instead of keeping the smaller and more diminutive breeds, introduce a few breeding Leicesters for this purpose, they would soon find the difference between small and large sheep, when the latter are of good breed, for this purpose. A kindly disposition to take on fat, with a robust development of carcass, are important points, where the meat is the object.

[N. E. Farmer.

A New Englander.

Near Claremont, N. H., Nov. 20., 1851.

Mr. Editor—I herewith communicate an item of experience in sheep husbandry, which if not new to your readers, is corroborative of experiments tried by others. A single experiment will not establish a principle ; but frequent experiments, attended by the same results, will warrant the conclusion that the relation of cause and effect exists between the efforts made and objects attained.

It is generally conceded that wet pasturages are unfavorable to the health of sheep. I have kept a flock for four years, in a pasture of that description—for the first two years with unfavorable results. My sheep were unhealthy, and many of them died. I ascribed it to the wetness of my pasture. Upon the recommend of an old farmer I fed my sheep *charcoal* mixed with salt. The beneficial effect of this mixture was soon apparent. My sheep presented a more healthful appearance. I have continued the treatment and my sheep

have continued to thrive. I suppose the medicinal qualities of this mixture consists in the *disinfecting* property of the charcoal.

I was much pleased with an article from your Texas correspondent in the October number of your valuable journal. That wool growing is profitable in such a climate, with a soil naturally rich and productive, can not be doubted. And it is far from being unprofitable, with us, in the central part of Michigan. Snow does not fall to a very great depth, and it is not uncommon for the ground to be bare half or two-thirds of the winter.—A pasture of orchard grass, (*dactylis glomerata*) not fed in the fall but reserved for winter use, will keep in good condition a flock of sheep through the winter. This grass is not as highly appreciated as it should be. It is, perhaps, owing to the fact that its merits are not generally known. I append a description of it, extracted from a favorite author :

"Orchard grass, or dactylis glomerata, is one of our most valuable grasses either for mowing or for pasture ; and particularly so for shaded grounds. Some farmers have complained of its growing too large and coarse ; and if sown thin on rich ground, such will be its character ; but when mixed with other seeds, such as timothy and clover, or rye grass, it grows thick and fine, is fed by all animals with avidity, and springs after mowing or feeding with greater quickness and rapidity than any grass with which we are acquainted. We may remark here, there are several kinds of grass known among farmers in different parts of the country, as orchard grass, but widely differing in their qualities from the dactylis, or true grass."

There are a few qualities, not enumerated above, which I will add. When horses are fed with clover they are very liable to "slobber." Sow four quarts of orchard grass seed to the acre with your clover—it is an effectual preventative to that unnatural discharge of saliva. This grass thrives the best on moist—but not wet land. It is not liable to 'run out,' but is tenacious of its rights and will not yield to the intrusions of june grass or other trespassers. Z. Z.

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Remarks.—Our correspondent writes too well to make his communication anonymous, and we hope to hear from him often. The facts he communicates are important, and should be well observed. We have never grown the rye grass but if sure that we could get the genuine seed would try it. The charcoal experiment is a very important one.—Feeding in wet pastures, sheep will necessarily become more subject to a greater quantity of gas in the intestines, from a greater amount of water in the food than upon upland. The effect of the charcoal is to absorb that gas, and thus neutralize its effects. [Wool Grower.

Flesh for Hens.

If you keep hens, and desire to render them a source of profit, as well as luxury, see that they are liberally supplied with flesh.—The fish taken in ordinary streams, afford an excellent and most grateful substitute for the flesh of animals, and can generally be obtained in almost any desirable quantity, and at comparatively small expense. When at large, the hen is carnivorous, and procures much of her daily food from the resources of the insect world, devouring almost indifferently, and with little discrimination, all such insects, bugs, flies and worms, as fall in her way. These promote fecundity, and in situations where she is deprived of the privilege of catering for herself, either these, or some adequate substitute, in the form of more solid viands, must be supplied, or she will cease to lay. Neglect of this, is the principal cause why hens, closely confined, are so generally complained of as unprofitable. [Granite Farmer.

Illinois Farming.

The experience of the present year, though somewhat dearly bought, will, in the end, prove profitable to our farmers, we have no doubt. They have learned by this time that so much uncertainty attends the cultivation of wheat that it must be abandoned as an article of export, and some other article or articles be substituted in its place.

The low price of wheat this fall would not pay for raising it, even if the crops had been good. But when we take into consideration the fact, that taking the average of the whole county, probably not more than one fourth of a crop was raised, and that not more than three shillings a bushel, on an average, can be obtained for it, the prospect of getting rich by raising wheat looks discouraging enough.

We have been convinced for years that the raising of beef and pork was the most profitable business in which Illinois farmers could engage. The present high prices of the articles, and the facilities now opening for taking cattle and hogs to the eastern market, hold out the fullest assurances that these prices will still continue.

We are aware of the difficulties in the way of bringing about the change at once. A great many of our farmers commenced poor, and having had not only to live, but their farms to pay for and improvements to make out of what they could raise on their farms,

they could not raise the means necessary to procure large stocks of cattle; and even what they have raised they have often been compelled to part with for the purpose of "making the two ends of the year meet."

Our farmers are are now getting out of debt, and will soon be able to raise stock to any extent that they may wish. But those who for want of means, are not able to turn their attention to stock raising, certainly can raise corn—a much more profitable crop than wheat. The corn crops we have never known, in an experience of 15 years in Illinois, to prove a failure. And we have been assured by farmers of much experience, that even if they could be sure of good crops of wheat, corn was the most profitable to raise.

The editor of the Prairie Farmer, who is more familiar with such things, probably, than any other man in the state, in a recent article upon the subject, says:

"Several years ago, we made the inquiry of several corn growers in Middle Illinois of the absolute cost per bushel to the producer in the crib. There was very little difference in their calculations which ranged from four to six cents! This to an eastern farmer, is both inconceivable and incredible. The truth is they know little of mode in which the crop is grown in the districts natural to it. In the first place the land, perfectly smooth of all impediments, undergoes a single plowing. The marking off is done in a comprehensive manner, and the planting if not by machinery is on such a scale as to cost but little. The hoe, in the best corn districts, is not used in keeping it clean—the cultivator, a plow of some sort, with a horse to draw it to do the work; and with rows from a half a mile to two miles, or even more in length, the surface of the ground in this crop of which one man with one horse can take the care is incredible to a novice."

If for the future, more attention shall be paid to the cultivation of corn, and to the raising of cattle, the loss of our wheat crops, for two or three years in succession, may prove a benefit to our farmers instead of an evil.

[Joilet True Dem.

Method of Keeping Store Hogs.

S. N. WATSON'S STATEMENT.

The following is my method of keeping store hogs, which I enter for the Society's premium, hoping that many others will do the same, so that if mine is not the *best*, your report will show me a *better* one.

I generally winter August pigs. The first month after weaning, I feed on skim milk and green corn—after that on boiled apples, pumpkins, potatoes, and a little barley or Indian meal, with the milk, until about the first of January, when I commenced feeding on raw ruta bagas, cut the same as for cattle, and what swill is made from the house. This I continue until June, when my ruta bagas are generally gone. I then commence cutting grass, weeds, &c.; soon as they are grown, and soon as my ruta bagas are large enough to thin out, I take such as can be spared and feed them—they will eat these as readily as green corn. Soon as my corn begins to ear I commence cutting suckers and false stalks for them and continue this until I begin to boil food for fattening.

Now for the place where I keep them.—Soon as I slaughter my old hogs, I put them under my horse stable, which is a manure cellar, where I throw my horse bedding and manure, also all such rubbish as I have that will convert into manure; this enables them to do much to pay their fare as they go along. The place is warm, which enables them to labor in winter as well as summer. From three hogs, (which is my usual number,) and three horses, I make ten cords of manure yearly, which I prefer to any other manure which I have, especially to put in the hill for corn, which I put in green and cover with earth before dropping the corn. I consider it essential that we make all the animals we keep do something towards paying for their keeping. Give the hogs a suitable place and materials, and they will do *much* towards paying their bills.

[Maine Far.

The Grase Tree.

Ar. Acton Warburton, in his account of the expedition of Bethencourt to the Canary Isles, has a note in which he gives a description of the *grase* or water-tree, which grows on the island of Hiero, one of the group. It was, he says, "an evergreen growing in the middle of the island. There was a great scarcity of spring-water, but this tree afforded abundance for all the islanders and their cattle. The water does not exude from the tree, but is produced in this manner. Every morning a mist rises from the sea, which is borne by the east winds (blowing here constantly) against the steep rock where the tree stands; there it stops, and settles upon the leaves, which are of an enormous size, whence it distils in drops during the day. The drops are received in large troughs, which are guarded by people living near the place, and whose duty it is to distribute it to all who come.—The Hierians are still supplied with water in this manner." [Boston Rambler.

HORTICULTURE.

Brief Horticultural Notes—No. 2.

BY JOHN A. KENNICOTT, M. D.

As I send off as fast as I write, and write without copying, I may sometimes repeat; but I will try to be brief and practical.

Most of our thoughtful and observing physicians, now declare, that the free use of ripe fruits not only *prevents disease*, but their regulated enjoyment often helps to remove that which already exists.

All ripe fruits are, also, more or less nutritious. Professor Salisbury has clearly demonstrated that the APPLE is superior to the POTATO, in the principles that go to increase the muscle and the *brain* of man—and in fattening properties, it is nearly equal to that plague-stricken tuber, when cooked for swine, or fed raw to other domestic animals.

I will but glance at another office of TREES—besides their protection of our dwellings from the rough winds of winter, and the blistering sun of summer—and then pass to other questions.

Trees thrive on the unwholesome exhalations of animals, and decaying organized matter—converting to their own use, what would be hurtful to man—but this is not all. A belt of trees, surrounding a dwelling, or only a partial barrier, of these leafy sentinels, on the exposed sides of the house—will arrest the silent march of the "malaria," or supposed cause of Western fevers, and make that home a healthful exception, when all around are suffering from this curse of a warm climate, a rich soil, and a new country! But let this pass for the present; while we speak of the *profits in money*, of a crop of fruit, and the expense of an orchard.

There is not the shadow of a question, that all other fruits, when successfully cultivated, pay better than the apple. We are, therefore, entirely safe, in basing our estimates on this well known and hardy fruit, which, well cared-for, seldom fails of a partial or a full average crop.

Under favorable circumstances, (which every planter can control,) about one half of the ordinary range of varieties in an orchard of 100 trees, will come into bearing in five, and the balance in ten years after planting—and after the first ten years, we can certainly count on an average of five bushels of fruit per tree, during a life time—and we can reckon on, at least, 50 cents per bushel, for the next fifty years, during the most fruitful seasons; and from that, to one dollar, in seasons of partial or general scarcity.

I cannot, therefore, put the average annual income of one hundred well selected, and carefully cultivated apple trees, at less than two hundred and fifty dollars.

And now, for the *cost* of one hundred apple trees, ten years after planting in orchard. The first cost of trees, which is the one that always governs chance planters, is the merest trifle, compared with the eventual profits.—For example: We sell one hundred *selected* apple trees, at this nursery, for $15 to $16; and those large enough, at from a dime, to one shilling each, by the thousand, or even a large fraction of a thousand—and I think other nurserymen, all circumstances considered, give equally good bargains.

We will suppose the land worth $15 per acre and about an acre is enough for 100 trees, where fruit is to be the only crop, after the trees come into bearing. The calculation will then stand, on a safe estimate about thus:

Land, ...	$15 00
Picket fence, ...	25 00
100 selected trees, ...	15 00
Average cost of transportation .	5 00
Preparing the ground, ...	5 00
Planting and Mulching, . . .	10 00
Interest account, (ten years,) .	75 00
Cultivation and manure, do. .	50 00
	$200 00

Here, on this small scale—which will cost near twice as much, in proportion, as an orchard of twenty acres—and without deducting a cent, for the vegetables and corn, you *should* raise between the trees, during the first five years, and the fruit you may gather from them, during the last five—you have only four-fifths of the estimated value of *one*

average crop of fruit—and the entire after expense of interest on outlay, manure, cultivation and gathering, and marketing the crop, will not exceed some twenty-five to thirty-five dollars per year—leaving a clear income of over two hundred dollars, from one hundred trees. And I will add, from my own experience, and a hundred recorded cases—that I have no doubt, that under favorable circumstances, the vulue of the produce of fruit, and other suitable crops, during *the first ten years*, will pay all expenses, and leave the orchard clear of cost to the proprietor.

THE GROVE, Northfield, Ill., Feb. 5.

Spring Work in Orchards and Nurseries.

The following articles, upon the various modes of grafting, we republish from former numbers of the Farmer. The information they impart, will be new to several hundreds of our new subscribers; while it will refresh the memories of our old ones, admonish them that the season for grafting is at hand and the proper time for performing the operation brief:

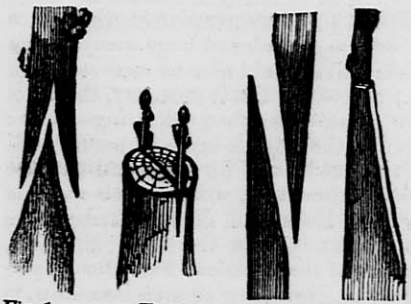

Fig. 1. *Fig.* 2. *Fig.* 3

GRAFTING.—This mode of propagation is admirably adapted to the apple, pear, plum and cherry. Cherry trees should be grafted very early, or by the 1st of this month, and plum trees during the latter part—but will take, in part, if done later and under favorable circumstances. Pear and apple trees may be grafted at any time from the first opening of spring, till the buds open, and even till the leaves expand; but when done so late it is not safe, and care must be taken not to start the bark from the stock. Pears may be grafted successfully on our wild thorn, and the apple on crab-apple, but cannot be relied on as permanent trees, as our winters destroy many of them. Were we disposed to do our utmost with them we should graft in the root, put the scion a few inches below the surface, and earth up around them, and mulch them during the summer so as to get roots from the scions. In the fall take them up and bury them, re-setting the next spring a little deeper.—The very best time to graft apples and pears is on a warm day, just as the buds begin to swell.—Stocks and scions must be in good order—*the scion healthy and the stock thrifty.* The scions are better to be cut some days or weeks previous to setting. Waxing is one of the most important parts of grafting above ground, *especially in our climate.* The wax is made by melting and stirring together four parts rosin, one of tallow, and one, or one and a half of beeswax, to be spread while warm on rags, and these stripped up and wound around the graft, or applied by the hand after working thoroughly.

There are many modes of grafting, but two of which are in common use—Cleft grafting (*Fig.* 2) and Whip or Splice grafting, (*Fig.* 3,) which is mostly used on small trees, as with us. *Fig.* 1 is a representation of what is called Saddle grafting, which, though not much used, and slower than the others, we are inclined to think favorably of, as possessing greater hardihood under unfavorable circumstances, than whip grafting. Explanation we think unnecessary, save to state, that the inner bark of the stock and scion should always meet.

Below is a description of the mode of grafting the peach, from our amateur friend and correspondent, Mr. Mathews, of Burlington. Being comparatively new, and particularly applicable to the peach and cherry, we feel much indebted to him for thus presenting it.

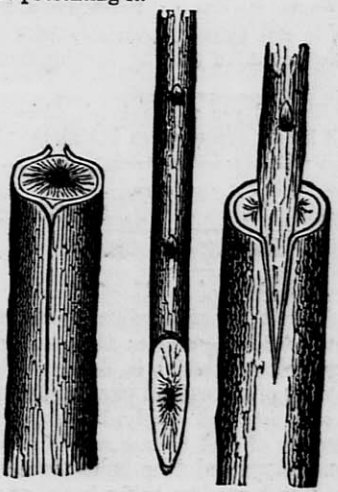

Fig. 1. *Fig.* 2. *Fig.* 3.

Figure 1, the stock prepared for inserting the graft.

Figure 2, the graft with slope in the end.

Figure 3, the work finished and ready for waxing.

MR. EDITOR.—Believing that a knowledge of the following method of grafting may be of service to

some of the readers of the Farmer, I have thought proper to offer a sketch of it for publication.

In the first place, saw the stock off at the hight you wish to graft, and pare the end smooth and even, then with a sharp, thin-edged knife, slit the bark perpendicularly down from the top about an inch, then take the graft and cut off the lower end sloping so that the slope will be of the same length as the slit in the bark of the stock, you then with your knife start the bark a little on each side at the top of the slit, and enter your graft and push it down to the bottom, wax it over and bind it up in the same manner that you would in cleft grafting.

When the stock is large enough, I always insert two grafts, on opposite sides, and when high enough to form a head, I let them both grow.

This mode of grafting is only applicable when bark will part freely from the wood, the grafts should therefore be kept in a cool moist place until they are wanted for use.

The stock should not be much less than half an inch in diameter unless the grafts are very small.

I look upon this method of grafting as being particularly valuable for the peach and cherry, which frequently fail when worked in any other way; it is also applicable to other fruits. The peach and cherry will bear to be, and should be grafted two or three weeks earlier than the apple.

I have grafted the Cherry, Peach, Plum, Pear, and apple in this manner, invariably with good success; better I think than by working them in any other way.

I herewith send you a rude sketch, although I consider it hardly necessary, as I think the above description will be found sufficiently explicit.

Yours,

D. Mathews.

Raising Quinces.

A correspondent of the Horticulturist, who raises this fruit of extraordinary excellence, pursues the following course: He selects good, deep, dry, rich soil, which is deepened by a thorough use of the subsoil plow, and manure applied copiously and deeply, by dropping it in the bottom of each furrow as the plowing proceeds. Large and deep holes are dug for the trees; each receives half a barrel of good compost; the branches are shortened onehalf, before setting, and the soil well settled among the roots by drenching with water before the hole is quite filled.

The pruning is given in autumn, and consists of cutting out, as sparingly as possible, and only old, crooked, crowded and decayed branches. Every autumn, manure is spread round each tree, and after a light plowing in spring, salt is spread broadcast at the rate of ten bushels per acre. The salt is regarded of very great consequence, but it must be applied in connexion with free manuring every year. The ground is kept mellow and clean by constant cultivation, potatoes, sugar beets, &c., being found well adapted to the purpose. The principal secret of success, it will thus be perceived, consists in cultivating and doing everything in the best manner; while others, who do not succeed, do not cultivate their trees at all.

The writer states that a good crop of quincies may be obtained three years after transplanting, and the trees will continue in a productive state thirty years.

The Proper Time for Pruning.

A correspondent makes some inquiries relative to the proper time for pruning apple trees, and remarks it has been the general practice to prune in the spring. Very small limbs may be safely cut off at any season whenever it is convenient; and when the trees have proper care and attention, it will seldom be necessary to remove any large limbs. But there are many trees which have been badly neglected, and large decaying and profitless limbs should now be removed from them; and where this is necessary, the fall is a more suitable time than the spring, for the reason that the wounds made in autumn will remain dry aud sound for years, and until the bark closes over them, while wounds made in spring turn black and decay, leaving holes which frequently ruin the tree. Mr. Cole, the anthor of the American Fruit Book, prefers October, November or even December, to the spring, which he says is the worst season. "Thirty-two years ago, in September," he remarks, "we cut a very large branch from an apple tree, on account of injury by a gale.—The tree was old, and it has never healed over; but it is now sound, and almost as hard as horn, and the tree perfectly sound around it. A few years before and after, large limbs were cut from the same tree in spring; and where they were cut off the tree has rotted, so that a quart measure may be put into the cavity. [Maine Farmer.

Low Headed Fruit Trees.

By having low headed fruit trees, the sun which is, perhaps, in our hot and dry summers, the cause of more disease and destruction in fruit trees than all other diseases together, is kept from almost scalding the sap, as it does in long, naked trunks and limbs.

The limbs and leaves of a tree should always effectually shade the trunk and keep it cool. The leaves only should have plenty of sun and light; they bear and profit by it. If trees were suffered to branch out low, say within one or two feet of the ground, we should hear very much less of "fire blight," "frozen sap blight," black spots, and the like. The ground is always looser, moister, and cooler, under a low-branching tree than under a high one. Grass and weeds do not grow a hundredth part so rank and readily, and mulching becomes unnecessary. The wind has not half the power to rack, and twist, and break the tree, and shake off the fruit—a matter of no inconsiderable consequence.—The trees will be much longer lived, and more prolific, beautiful and profitable. The trees are more easily rid of destructive insects, the fruit is much less damaged by falling, and the facilities for gathering it are much greater; there is less danger in climbing, and less of breaking limbs. The trees require less pruning, and scraping, and washing; and the roots are protected from the plow, which is too often made to tear and mutilate them.

[Exchange.

Medical Qualities of the Grape.

The New York Commercial, in an article on the grape, says this fruit is one of the best and most wholesome medicines. This affords an additional inducement for the culture of this popular fruit. The Commercial says:

"In the vineyard districts of France, Spain and other vine-growing countries, the medicinial properties of the grape are well known and highly prized. The free use of this fruit, as we are advised, has a most salutary effect upon the animal system, diluting the blood, removing obstructions in the liver, kidneys, spleen, and other important organs, giving a healthy tone and vigor to the circulation, and generally augmenting the strength of the entire animal economy. In diseases of the liver and especially in the moister compound afflictions, dyspepsia, the salutary and potent influence of a 'grape diet' is well known in France. The inhabitants of the vineyard districts are never afflicted with these diseases; which fact, however, alone would not be conclusive evidence of the medical qualities of the fruit of which they freely partake, since peasant life is rarely marred with this class of ailments; but hundreds who are thus afflicted yearly, resort to the vineyard districts for what is known as the 'grape cure,' and the result proves to be a cure, except in very long, protracted, and inveterate cases, which are beyond the reach of medical remedies. The invigorating influence of the ripe grape, freely eaten, upon the feeble and debilitated, is very apparent, supplying vigor and the rose hue of health in the stead of weakness and pallor, and this by its diluting property, which enables the blood to circulate in the remoter vessels of the skin, which before received only the serous or watery particles.

"In these remarks, however, we must be understood as speaking of the fruit when perfectly ripe. Unripe grapes, like all unripe fruits, are detrimental to health, and derange the digestive organs, and those depending upon, and sympathizing with them."

Economy of Fruit.

Every man of family who keeps a good supply of stewing and baking apples, of his own raising, saves a great many hard earned dollars yearly, otherwise to be paid to the miller or butcher. Or if he raises his own grain and meat, an equal amount is thus reserved for market. Then what a valuable addition to the comfort, variety and luxury of the table! By the first of summer, the thick trusses of strawberries begin to redden in the sun; and half a dozen quarts of this melting crimson fruit may be had each day for the table, from as many half-rod beds. Cherries, currants and raspberries, continue through the first half of summer, followed by early juicy apples, rich bloom-dusted plums, golden perfumed apricots, and buttery and melting pears.

Now, we do not say, as some mistakenly remark, that this fine and delicious supply costs nothing after the trees are planted; for good fruit cannot be relied on unless the ground is well cultivated and manured. But it does not cost half as much to cultivate an acre of fruit as an acre of potatoes or corn; while the amount obtained is greater than either; and all ready for the table without going through the process which the grain crop requires, of threshing and winnowing, and grinding, and kneading and baking.

By planting rich, high-flavored apples for stewing and for pies, instead of poor and insipid ones, each family may save from 50 to 200 pounds of sugar annually, in sweetening and spices. A friend of ours finds it cheaper to buy good fall pippins for fifty cents a bushel, than poor sorts sold as "cooking apples," for fifteen cents a bushel. He uses the Talman Sweeting largely, for baking and for puddings, and thinks that an Indian apple pudding, made by this natural sweetening, the cheapest and the best pudding in the world. He saves from $75 to $100 annually in the cost of his table by this fruit.

[Exchange.

Siberian Crab Hedges.

I saw not long ago a hedge, which was made by planting the seeds of the Siberian Crab—a small ornamental variety of the apple which is well known in the nurseries, and sought after for its little fruit. It naturally is a small one, and has not exactly thorns, but branches which become somewhat thorny and resisting. It naturally forms a thicket with a good many branches, so that it takes and keeps the hedge form very easily. He sowed the seeds of these crabs in the garden, and when the seedlings were a year old he transplanted them into a row where they were to grow as a hedge. They were set six inches apart, in a single row and the tops were cut off within three or four inches of the ground, the same spring they were planted. They made a fine growth, and the next spring were again cut down to within six inches of the ground. This made the hedge bushy and thick at the bottom.

The hedge is now five years planted. It has attained its proper size, and having been regularly trimmed every spring has become one of the thickest and most impenetrable hedges I have ever seen. It requires trimming but once a year, and seems to me well able to take care of itself the rest of the time. Besides this it has a fine appearance in the spring, when it is covered with blossoms, and in the autumn when it begins to bear considerable fruit. Would not the Siberian Crab, or its seedlings, make a good farm fence?

[Horticulturist.

Special Manures for Apple Trees.

To get a good crop every year instead of every other year most old orchards require amendments. Let us see what they are:—First, as every 1000 lbs. of apples will contain 170 lbs. of organic matter, we must supply it, and that too, in a proper state; it must not be fermentable like stable manure, but well decomposed, and cool, like woods earth, decomposed muck, river deposits or chip manure, or well rotted spent tan, and to secure its perfect decomposition may we not compost with it the very materials which are contained as inorganic constituents of the wood, bark, leaves and fruit of the trees.

We require lime, soda and chlorine to form the fruit, and probably a still larger amount of these same ingredients for forming leaves, bark and wood; a sufficient quantity of all these may be had by slacking six bushels of buick lime with two bushels of common salt, dissolved in water, which will cause the mixture to change into chloride of lime, and carbonate of soda, being just what we require; and after this mixture is one month old, and has been turned a few times, we may add it to a cord of the before named muck and and our compost, and it is partly prepared.—What else will the compost require? Among other constituents, Phosphoric and Sulphuric acids; these we may get by dissolving bones, or bone-dust, or native phosphorate of lime, in sulphuric acid, and pouring the fluid on the compost; the only constituent now necessary to be added is Potash, and this can be most cheaply supplied by wood ashes, and our compost is complete; for the iron, Magnesia and Silica, are sufficiently plentiful in all soils, and the first two may be dispensed with altogether. When these are added to the compost a small quantity of stable or barn-yard manure may be added to it, or placed under it, to assist the thorough action by its heat, and with two turnings it is ready for use.

Now the cost of this compost is not half so great as an ordinary dressing of barn-yard manure, and for an apple orchard is worth a dozen dressings of the ordinary kinds. Open the grounds fairly by plowing and the orchard is ready at the surface. Next look to trees; are they properly trimmed? Is the bark clean and free from fungi? If not, get your rules for trimming from Downing's Fruit Trees of America, and wet the surface of the trees with a solution made of one lb. of Bleacher's No. 1 soda to one gallon of water; put it on with a boat-mop or a whitewash brush, and it will decompose all mosses and dead bark, and the growth of the tree will throw off all the loose and dead bark, leaving a clean surface: neither a tree nor a man can be healthy with a dirty skin.

When your orchard is thus prepared let the soil convert the amendments into apples, and do not raise heavy crops among the trees and at the same time hope to get full crops of apples—above all, beware of buckwheat, unless you intend to plow it under; if so, go ahead—anything to induce frequent plowing in orchards so as to advantage by atmospheric influence.

[Journal of Ag.

The Use of Fruit.—Instead of standing in any fear of a generous consumption of ripe fruits, we regard them as positively conducive to health. The very maladies commonly assumed to have their origin in the free use of apples, peaches, cherries, melons and wild berries, have been quite as prevalent if not equally destructive, in seasons of scarcity.—There are so many erroneous notions entertained of the bad effects of fruit, that it is quite time a counteracting impression should

be promulgated, having its foundation in common sense and based on the common observation of the intelligent. We have no patience in reading the endless rules to be observed in this particular department of physical comfort. No one, we imagine, ever lived longer or freer from the paroxisms of disease, by discarding the delicious fruits of the land in which he finds a home. On the contrary, they are necessary to the preservation of health, and are therefore caused to make their appearance at the very time when the condition of the body, operated upon by the deteriorating causes not always understood, requires their grateful, renovating influences.

[Boston Med. and Surg. Jour.

WONDERFUL RASPBERRY BUSH.—We noticed in September last, the reception of some raspberries, from a second crop on the same bush, raised by Mr. P. B. Phillips, of Cranston. He then stated that the third crop was growing on the bush. On Saturday last, he brought to our office some of the berries which he assures us are from the *fourth set of blossoms during the present year!* The berries are not quite so large and rich flavored as those of the second crop, but they are about the average size and ripe. He says the bush stands in the open garden, but he takes considerable pains to keep it well cultivated, and the ground loose around it. It was taken wild from the woods, one year ago this month. Some parts of the bush have grown nine feet during the past season.

[Prov. Mirror, Nov. 10.

Wild Flowers.

How beautiful is the exquisite native grace of the flowers, seen in all their habits and positions! They know nothing of vanity, its trivial toils and triumphs! In unconscious, spontaneous beauty, they live their joy-giving lives, and yet how all but impossible to man to add to their perfection in a single point!—In their habits of growth, the innate grace may be particularly observed; there is a unity, a fitness, in the individual character of each plant to be traced most closely, not only in form, or leaf, and stem, but also in the position it chooses, and all the various accessaries of its brief existence. It is this that gives to the field and wood flowers a charm beyond those of the garden. Pass through the richest and most brilliant parterre in the country, with every advantage which labor, expense, science and thought can bestow, and you will find there is no one plant that is not shorn of some portion of its native grace, a penalty which it pays for the honors of culture. They are richer perhaps, more gorgeous, the effect of the whole is more striking, but singly, they are not so wholly beautiful. Go out in the months of May and June into the nearest fields and groves, and you shall see there a thousand sweet plants, sowed by the gracious hand of Providence, blooming amid the common grass, in crevices of rude rocks, beside the trickling springs, upon rough and shaggy banks, with a freedom and simple modest grace which must be the despair of gardeners, since quite inimitable by art, with all its cunning.

VEGETABLES IN CALIFORNIA.—A California letter writer says:

"A few days ago I sat down to dine with ten others, mostly adults. A large dish of potatoes graced the table, cut in pieces before boiling. Our landlady informed us that there were two potatoes in the dish, and no more. But there was enough and to spare. On another dish was one-third of a beet. Onions often exceed a pound in weight. A cabbage at the door of a resteraunt near me weighs twenty-eight pounds. These vegetables are not the result of forced culture. The soil, in many localities, cannot help producing them. Very little attention is paid to tillage, and no manure is employed. I am informed that some of the gardeners in this vicinity are applying manure, but I have not seen a load of the commodity in California.

Extract from an Address by Hon. J. R. Williams, before the St. Joseph County, (Michigan,) Agricultural Society, in October last.

"Horticulture is embraced as one of the objects of your association. It is too much neglected. While some pursue it intently as a passion, the many neglect it. Before urging this topic upon your attention, let me say, that if it will afford any encouragement, that I personally made a critical comparison of the fruits and vegetables exhibited at the recent State Fair at Rochester and Detroit and I could not avoid the conclusion, that the fruits of Michigan excelled those of New York, in beauty, health and perfection, though not perhaps in variety. The samples however in both cases were mostly exhibited by amateurs, and nursery men. They should have been poured out from every farm house. Many a man leaves a waste around his dwellings, when if he heeded the suggestions of interest, health, taste or comfort, he would surround himself with a garden or orchard. Fruit should be cultivated for profit. No expenditure will enhance the value of a farm so much in proportion to the outlay as the investment of an or-

chard. Fruit is a cheap luxury. The tree is growing while we are sleeping. Once planted, with trifling but continuous care, and the bestowal of odd hours, from time to time, the orchard rapidly increases. One prolific year pays the whole expense. I last year raised more than two hundred bushels of delicious fruit, apples, pears, plums, peaches, and grapes, in a garden of little more than an acre, which, six years before had hardly a cultivated tree of fruit upon it. You need not fear that the best of fruit will become a drug. The more abundant, the more certain the channels to market. Let me remind you that before all of our children are laid in the grave, cities which can be reached in twelve hours from any part of this country will have grown up containing half a million of inhabitants, and affording insatiable markets for fruit. We can be prepared to furnish these markets and enjoy the perpetual profit, or reject it. Fruit should be cultivated for health. Ripe fruit is nutritious, refreshing and highly conducive to health and longevity. In large cities during the prevalence of cholera, and at critical periods, fruit is forbidden, not so much because ripe fruit is deleterious, as because ship loads of fruit in great markets are gathered and transported before it is ripe. It is rendered palatable by incipient decay, and not delicious by mature ripeness. Hence there is an unpleasant acidity, a toughness and staleness in the pulp of much of the fruit sold in towns, which is not found in ripe fruit just plucked from the bough in your own garden with all the glow and flush and plumpness of life upon it.—From your own garden you can enjoy a cheap and delicious luxury, which a townsman cannot purchase at any price. The cultivation of fruit kindles a taste akin to a taste for the Fine Arts, is eminently conducive to refinement, and constantly prompts to the acquisition of varied, curious, and profoundly scientific knowledge, relative to the laws of decay, and growth, the preservation, propagation and development of vegetable life. It will render a home more beautiful, more genial, more attractive, an object I have just endeavored to enforce. What different ideas do we instinctively form of a country dotted all over with luxuriant orchards groaning under their abundance, and a country whose road sides present a dreary and sterile waste."

Age of Animals.—A bear rarely exceeds twenty years ; a dog lives twenty years ; a wolf twenty ; a fox fourteen or sixteen; lions are long lived—Pompey lived to the age of seventeen. Elephants have been known to live to the great age of 400 years. When Alexander the great had conquered Phoras, King of India he took a great elephant which had fought valiantly for the king, and named him Ajax dedicated him to the Sun, and let him go with this inscription, "Alexander the son of Jupiter, hath dedicated Ajax to the Sun." This elephant was found with this inscription 350 years afterwards. Pigs have been known to live to the age of thirty years; the rhinoceros to twenty. A horse has been known to live to the age of sixty-two, but averages twenty or thirty. Camels sometimes live to the age of one hundred. Stags are long lived. Sheep seldom exceed the age of ten. Cows live about fifteen years. Cuvier considers it probable that whales sometimes live one thousand years. Mr. Mallerton has the skeleton of a swan that attained the age of two hundred years. Pelicans are long lived. A tortoise has been known to live to the age of one hundred and seven.

Produce from a Single Grain of Wheat. —An experiment on the fertility of wheat has, during the past year, been carried out in the garden of Mr. Stowe, a surgeon at Buckingham, of which the following is a correct account. On the 13th of July, 1850, a single grain of wheat was sown in the garden ; the plant came up in ten days, and grew luxuriantly till the 24th of September ; it was then taken up and divided into slips, and replanted and suffered to remain till the 16th of April of the present year. The weather then becoming favourably wet, they were all taken up again and divided into no less than 114 plants, these being planted, were permitted to stand till the present month of August, when they were productive of the amazing number of 520 ears of wheat, many of them of full size, containing more than 50 grains of corn. The crop was gathered before it was fully ripened, as the birds attacked it in spite of revolving feathers and a protecting net.—Whether the result of this trial will strengthen the opinion of those who contend for the thin sowing of wheat in ordinary field cultivation, must be left to the judgment of more practical agriculturists, but of the amazing productiveness of the wheat plant, under such treatment, any one may easily satisfy himself by repeating the experiment.

[English Paper.

Improvement of Domestic Animals.

Few are aware how susceptible of improvement is the living machinery which elaborates *milk* for nearly every family in the union.—There is a reliable account in this report of a dairy of forty-one cows kept in the state of New York, which yields sixty-two dollars in

butter, cheese, and milk, as the product of each cow a year. From the returns of the last state census, it is safe to say that 1,100,000 cows are now milked in that state, which are supposed to yield about twenty dollars per head. To improve these up to an average annual product of thirty-one dollars each, (that is, to one half what the best large dairies in the country now yield,) would add $12,100,000 to the income of the citizens of a single state. This gain by the improvement of one kind of rural machinery would be equivalent to creating a capital of $200,000,000, and placing the money where it would yield over six per cent. interest in perpetuity. If the thirty millions of sheep in the United States gave as good returns in wool for the food consumed as the best 100,000 now do, it would add at least 60,000,000 pounds to the annual clip of this important staple.

In one of his letters to Sir John Sinclair, General Washington says, in substance, "that at the time he entered the public service in the war of the revolution, his flock (about 1000) clipped five pounds of wool per fleece. Seven years after, when he returned to his estate, his flock had so degenerated that it gave an average of only two and a half lbs. per head, which was the common yield of Virginia sheep then, as it is now."

Although the numerous importations of superior sheep, cattle, horses and swine, have greatly benefitted the country, it must be admitted that much has been lost by suffering improved animals to deteriorathe. Every wool-grower should ponder well this fact.—If two and a half pounds of wool will pay the whole cost of keeping a sheep a year, five lbs. will pay one hundred per cent. profit on that cost. Washington was eminently a "book-farmer," and was anxious to gain knowledge from the educated agriculturists of Europe and his own country. His overseer believed in keeping sheep as his father did, and was opposed to all innovation in husbandry.

There are now not far from 6,000,000 horses and mules in the United States; and it is not too much to say that, in a few generations, these animals may be improved full thirty dollars a head, on an average. If so, the gain by this increase of muscular power, and its greater durability, will be $180,000,000. If we study critically the machinery for converting grass, roots, and grain, into beef and pork, the difference is found to be more striking.—If the facts relating to this subject were spread before the people, great improvement would soon follow, and all classes share equally in the profits of more productive labor.

[Patent Office Report for 1849.

The First Ear of Corn.

You are probably aware that CORN, (Indian corn) is unknown in Paris. It is neither known as green corn, nor as sweet corn, nor as pop corn; as corn in the kearnel, or corn on the ear. It is rarely seen, even when ground into Indian meal. I speak of Paris and the neighborhood only; for I believe that it is cultivated in the South of France, to a limited extent, under the name of *mais*. I was, some weeks ago, at a dinner party, given by an American gentleman, at his chateau, in a suburb of Paris. Upon the table were green corn and sweet potatoes, results of perhaps the only efforts ever made to acclimate them here. As the corn was passed around, you might have distinguished the Americans from the French, by noting who accepted and who declined. The former were eager to renew an acquaintance long since interrupted, while the latter fought shy and kept the waiters at bay. It fell to my lot, however, to initiate into the mysteries of this novel vegetable a young French lady at my right hand. To her, the ear upon her plate was a revelation. Its shape was anomalous, its odor singular, and, moreover, the manner of eating it was barbarous.—Before attempting its demolition, many an unanswered inquiry passed through her bewildered little brain. Was the outside a mere rind, inclosing the pulp in the interior? Or was it nutriment to the core, and succulence to the center? Would the juice start forth, as from a ripe tomato, at the first immersion of the teeth? Might it not be poisonous, like the nightshade or the toadstool? By this time, her ear was ready, buttered, salted, and each row slit through the center. I flatter myself that the utter failure of the experiment can in no way be attributed to want of skill here. My pupil ate about half a double row, and then retired from the field, content with the laurels she had won, but perplexed by the cob, and sorely teased by the tissue-like-skin in which kernels were involved. The next day she was taken sick, and was compelled to keep her room. Anxious to prove to her that however lightly she might treat the offending vegetable, it was made, in former times the subject of thanksgiving to whole races and nations, I sent her an engraving from Mr. Catlin's frightful picture of a 'Chippewa Dance to thank the Great Spirit for Green Corn.'—She thought that to a spirit- that favored the growth and presided over the harvesting of such a product, just such a demonstration would be acceptable. The demoniacal orgies in which those Chippewas were indulging, could not be more fittingly introduced than at a Green Corn Festival." [Paris Cor.N.Y.Trib

AGRICULTURAL MEETING.

At a meeting of the citizens of Jefferson and Dodge counties, held at the Planter's Hotel, in the village of Watertown, Feb. 18th, 1852, for the purpose of taking into consideration the propriety of forming an agricultural society, WALDO LYON, of Dodge county, was called to the chair, and J. A HADLEY, of Jefferson county, appointed secretary.

After a free interchange of sentiment by gentlemen present, it was, on motion of L. A. Cole,

Resolved, That we proceed to form a society to be known and designated as "The Jefferson and Dodge County Agricultural Society."

On motion of A. H. Atwater,

Resolved, That a committee of three be appointed by the chair to submit to this meeting a constitution for the government of said society.

The chair appointed as such committee, A. H. Atwater, W. M. Dennis and L. R. Cady.

The committee reported the following constitution, which was adopted:

CONSTITUTION OF THE JEFFERSON AND DODGE CO. AGRICULTURAL SOCIETY.

Section 1. The name of this society shall be "The Jefferson and Dodge County Agricultural Society."

Sec. 2. This society shall consist of such persons as shall subscribe to this constitution and pay on subscribing. one dollar, and one dollar annually thereafter; and the payment of ten dollars shall constitute a member for life, and shall exempt such member from annual contribution; and such honorary members as the society shall elect at its annual meetings. Each bona fide member to receive at the expence of the society an agricultural paper published in this state, subject only to postage.

Sec. 3. The officers of this society shall consist of a president, and as many vice presidents as there are organized towns within the counties, one to be located in each of the said towns; a secretary, a treasurer and an executive committee, to consist of the president, the secretary, the treasurer, and four additional members, a majority of whom shall constitute a quorum for the transaction of business.

Sec. 4. The president shall preside at all meetings of the society, unless necessarily prevented, in which case the vice presidents shall appoint one of their numbers for that purpose. The vice presidents are charged with the general interests of the society in the towns and wards in which they may respectively reside, to procure subscribers and donations; immediately remitting any funds which they may receive to the treasurer; and generally to act as agents of the society, and to constitute a medium of communication between the different members of the same. The secretary shall, when necessary for the interests, carry on a correspondence with other societies, with individuals, and with the vice presidents; shall keep a true record of all letters written by him, and a regular file of all communications received by him as secretary, and lay the same before the society at their annual meeting. The treasurer shall receive and keep the funds of the society, and disburse them on the order of the president, countersigned by the secretary; and shall make a report of the receipts and expenditures, at the annual meeting. The executive committee shall take charge of, and distribute or preserve (as they may think proper, all seeds, plants, books, models, &c., which may be transmitted to the society; and shall also have charge of all communications, reports, and other documents designed or calculated for publication, and so far as they may deem expedient, shall correct, arrange and publish the same in such manner as they shall think best calculated to promote the objects of the society. A majority of the executive committee shall have power to call extra meetings of the society, also to call meetings of their own body whenever the interests of the society require—shall make out the list of premiums which may be offered, and transact all business which may be committed to them by the by-laws or resolutions of the society.

Sec. 5. There shall be an annual meeting of the society on the 2d Wednesday of January in each year, at such place as the executive committee shall appoint—at which meeting all officers shall be elected, except the vice presidents; they shall be appointed by the executive committee.

Sec. 6. The society shall hold an annual cattle show and fair, alternately in Jefferson and Dodge counties, at such time and place as shall be designated by the executive committee, at which it shall be the duty of all the officers of the society to be present.

Sec. 7. The executive committee are authorised, if they deem it expedient, to cause this society to be made auxiliary to the State Agricultural Society, and also to apply to the legislature of the state for an act of incorporation.

Sec. 8. This constitution may be amended by a vote of two thirds of the members attending any annual meeting.

The meeting then proceeded to the election of officers of the society for the ensuing year, with the following result:

President—A. H. Atwater, Dodge co.
Secretary—J. A. Hadley, Jefferson co.
Treasurer—L. A. Cole, Jefferson co
Executive Committee—Wm. M. Dennis, and Benj. Fuller, of Dodge county, and Linus R. Cady and John Richards, of Jefferson county.

The executive committee appointed the following named persons as vice presidents:

JEFFERSON CO.

Aztalan—Albert Knight.
Concord—William Sacia.
Cold Spring—Jarvis K. Pike.
Farmington—D. M. Aspinwall.
Hebron—Jonas Folts.
Ixonia—Elisha R. Adams.
Jefferson—William Sanborn.
Lake Mills—Royal Tyler.
Milford—Mr. Clapp.
Oakland—Norman Horton.
Palmyra—Justus Carpenter.
Sullivan—Myron Smith.
Watertown—Daniel Janes.
Waterloo—Abram Vanderpoel.

DODGE COUNTY.

Ashipun—Francis McCormick.
Beaver Dam—S. L. Rose.
Burnett—Durkee Lyon.
Chester—D. L. Bancroft.
Clyman—Jacob Webber, 2d.
Calamus—Mr. Chapman.
Elba—Dudley Little.
Emmet—Henry Visger.
Fairfield—John W. Gray.
Hubbard—William H. Sullivan.

Herman—George Fox.
Hustisford—Ira Jones.
Le Roy—
Lomira—
Lowell—William H. Green.
Lebanon—Barnabas Nicholson.
Portland—Kendall P. Clark.
Rubicon—Prof. Leyman.
Shields—John Griffin.
Trenton—Mr. Hewett.
Theresa—Solomon Juneau.
Waushara—Benjamin Ferguson.
Williamstown—Alvin Foster.

The names of ten members were then enrolled.

On motion.

Resolved, That the proceedings of this meeting be published in the papers of Watertown, and the agricultural papers of the state.

On motion, the meeting adjourned.

WALDO LYON, Ch'n.

J. A. HADLEY, Sec'y.

SYRIAN PLOW—*A Curiosity.*—One of the greatest curiosities at the State Fair, was a plow, yoke and ox-goad, sent to this country from Mount Lebanon, sixty miles from Jerusalem, in the land of Syria, by the Rev. Daniel M. Wilson, one of the American board, and well known in Cincinnati. The implements are simple and rough, reminding one of the primitive ages, and were in striking contrast with the finished American specimens on exhibition. The Syrian plow-beam is composed of two round, crooked sticks, lapped and pinned together in the center with wooden pins. On one end is a straight, single handle, the lower end is round and brought to a point and widened out towards the top to eight or ten inches. The top of the handle has a short cross-piece. The yoke is made fast to the other end of the beam by a wooden ring, is nearly straight, and the bows are straight wooden pins a foot or so in length, which are tied together by a primitive looking cord pased under the neck of the ox. The whole establishment so rickety and weak that a Buckeye ox would rip it all to flinders at a jerk. The ox-goad is a stick like a short fish-pole, tipped with iron, chisel-shaped. [Indiana Farmer.

FORESTS AND STREAMS.—The remarkable man Humboldt has reduced it almost to a demonstration, that the streams of a country fail in proportion to the destruction of its timber. And, of course, if the streams fail our season will be worse; it must get drier in proportion. Every body knows, who can number twenty years back, that the watercourses have failed considerably, and that the seasons have been getting drier every year. Humboldt, speaking of the valley of Argua, Venzuela, says, the lake recedes as agriculture advances, until large plantations of sugar-cane, banana, and cotton-trees were established on its banks, which (banks,) year after year, were farther from them. After the separation of that province from Spain, and the decline of agriculture, amid the desolating wars which swept over this beautiful region, the process of clearing was arrested, the old lands grew up in trees with a rapidity common in the tropics, and in a few years the inhabitants were alarmed by a rise of the water, and the inundation of their plantations.

For the Wisconsin & Iowa Farmer.

MR. EDITOR.—In complying with your request of the 16th, I propose furnishing for the Farmer a series of brief *familiar* articles on those points of Natural History, particularly interesting to farmers and their families.

Natural History, (at least a part) is an important branch of *agricultural science* which has been hitherto grossly neglected. How often does the farmer, after all his toils and labor find his brightest hopes blasted by the insidious attacts of *insects*, the habits of which he is totally unacquainted, and consequently unable to suggest or apply successfully the proper remedy: And from this same *ignorance* springs that system of exterminating warfare waged against the feathered tribe; a warfare not only cruel in the extreme, but waged too often against his best friends—friends that spend their whole lives in one continual labor for his good, destroying countless myriads of insects and their larva, which, if left unmolested to multiply, would soon blast the entire vegetable kingdom.

The AUTHOR OF NATURE has established a beautiful and harmonious law, by which all animal creation is retained within due bounds. The principal active agent employed to keep the insect family in check, is the insectivorous tribe of birds. These gay, sprightly creatures ask nothing in return for their valuable services, but simply to be *left alone*—unmolested to follow the happy path marked out by the wonderful instinct of provident nature.

It will be a special object of these articles to instill into the young, a love for the beautiful objects of nature—to excite their sympathies in behalf of those sylvan jewels, that enliven our broad prairies, and shady groves, with sprightly motions, gay colors, and most melodious music.

P. R. HOY.

Racine, Feb. 13, 1852.

My first article will be on the HAWK FAMILY.

Fifty thousand dollars' worth of sponge has been gathered the past season at Key West and the greater part of it sent to France to be mixed with the finest Saxony wool in the manufacture of broadcloth. The lustre of the cloth thus made is said to be unsurpassed—and it has the strength of linen.

EDUCATIONAL.

CONDUCTED BY JAMES L. ENOS.

The important interests of the Free Schools of our commonwealth require some *advocate* to awaken the people to energetic and united action.—The active interest in the subject being as yet insufficient to warrant the publication of a journal devoted wholly to the cause; it has been thought best to devote a few pages of the Farmer each month to a brief elucidation of the most important topics pertaining to our school system; different modes of teaching—original plans for school houses to accommodate schools of all grades, &c.

In the course of the year a state convention of teachers will be held and the general subject of education will be affected by its acts. Various important reports will be had which should be preserved in a substantial form in the libraries of the various school districts, as an important part of the educational history of our state.—Teachers' Institutes, Normal Schools, and conventions in the various counties will form a basis for a vast amount of matter, too valuable to be lost.

District clerks are authorised to subscribe for periodicals for the district libraries, and have them bound at the end of the volume and placed as permanent volumes in their respective libraries.—This point we trust will not be forgotten by those officers.

We shall devote from four to five pages monthly to this department, and cordially invite teachers and all interested to aid in giving this paper a circulation among the friends of the cause. We promise our best efforts to make this branch of the Farmer what it ought to be, and refer you all, most respectfully, to the future numbers for evidence.

Permanence of Teachers.

From the almost universal practice of changing teachers at the end of every school term, we infer that the patrons of schools do not usually understand the many advantages to be derived from a long continuance of the same teacher in a school. We propose, from among others that might be named the following:

1st. The teacher and pupils become acquainted—the one with the wants of the scholar, the other with a peculiar manner of communicating knowledge.

2d. It enables teachers to adopt and pursue a systematic course of instruction, and thus keep the pupils in a continual line of progress.

3d. Uniformity of discipline and arrangement of study. No child can be well disciplined by being changed from one set of instructions to an other every three or six months.

A new instructor cannot know the state of a pupils mind nor his capacity to enter a particular study, and as he wishes to exhibit wonderful proofs of progress, he introduces his pupils into new studies, and new modes of study, and *pushes* them forward as fast as possible. He succeeds, however, only in getting them fairly under way, before his term expires and another comes in and takes his place with a new set of books—modes of imparting instruction, &c. The direct result of this course is to produce superficial scholars. Go into our schools and question a boy or girl of 12 as to his studies, "Have you studied Geography?"—"Yes, four years." "How far have you learned it?" "Only to South America." "Why have you been no farther?" Because every teacher puts me to the beginning."

"Have you studied Arithmetic?" "Yes, three winters." Question him, and very likely he can not explain a single general principle of numbers And so on in each of the other studies pursued in the schools.

Our Free Schools should have as regular a system of studies as they have in colleges or Normal schools; and when a pupil has mastered one subject he should be placed on the one next in order, and so on. This course can be pursued only with permanent teachers—and very little comparatively will ever be accomplished in our schools until such a course is adopted.

It is true some few in the district will be displeased with *any* teacher that does his duty, in a short time, and they will seek a change, which, when effected, satisfies only for a brief period—so that nothing is gained on this score. No teacher is perfect in all things, and parents should take hold and co-operate and endeavor to build up and perfect a good school, rather than tear down what they cannot build better.

School Houses.—In our next our readers may look for a model design of a school house to accommodate eighty pupils. The plans we shall present will be designed by *practical teachers* and may be relied upon as combining utility and convenience

☞ A Teacher's Normal institute for eastern Wisconsin, will be held in the village of Genesee Waukesha co., commencing on Monday, March 22nd, and continue in session two weeks in charge of James L. Enos, Graduate N. Y. State Normal School, as principal, assisted by a number of competent instructors. This is the third session and we predict a very large attendance of teachers. This is the only institution of the kind in the state, that has been so conducted as to become permanent, and demonstrate the usefulness of such institutions.

EDITOR'S TABLE.

ERRATA.—Feb. No, page 29, third paragraph and fourth line, read pap for pass.

The Wisconsin State Agricultural Fair is to be held at Milwaukee on the 6th, 7th and 8th days of October.

We are indebted to the Hon. JAMES D. DOTY for sundry public documents.

THE WORKING FARMER.—A monthly periodical, devoted to Agriculture, Horticulture, Floriculture, Kitchen Gardening, management of Hot Houses, Green Houses, etc., embracing Agricultural Chemistry, preparation of manures, &c., &c. Edited by Prof. James J. Mapes, and published by F. McCready at 25 Cliff St., New York.

Single copies, $1,00, 6 copies. 5,00; 25 copies, 20,00. Back volumes, in covers, at subscription prices.

The 4th volume will commence March 1st, 1852.

FRUIT TREES.—We would invite the attention of all who are in want of fruit trees for transplanting this spring, to the advertisement of Mr. BELL, found in another column. Mr. BELL commenced his nursery on Gardner's Prairie some fifteen years ago and we believe is one, if not *the*, oldest nurserymen in the state. Give him a call. It is of the utmost importance to the purchaser, planting out an orchard to obtain fruit trees, that will not belie their labels when they arrive at a fruiting age. We say to all, who would obtain reliable trees, go to well established nurseries, conducted by men who understand their profession and have a reputation at stake.

We protest against patronizing itinerant tree pedlers. Numerous instances have come under our observation, where purchasers of trees from pedlers, have been grossly imposed upon; and who, after waiting from three to five years, only were able to detect the fraud. We have nurseries enough in Wisconsin and Illinois, to supply the demand for these states. At Gardner's Prairie, Delevan, Racine, Aztalan and Wyocena may be found large and well conducted establishments. At Northfield in Northern Illinois, are the extensive nurseries of Dr. J. A. KENNICOTT, who is now disposing of a large stock of trees, shrubs, plants, &c., at very low prices. No man understands the business better than Dr. KENNICOTT, or has done more to encourage the cultivation of fruit in the west. Give him a call!

AGRICULTURAL INSTRUCTION.—We are gratified to learn that an agricultural department has been established in the Western Reserve College, located at Hudson, Ohio. A course of instruction in agriculture adapted to the practical wants of farmers, was commenced on the 5th of February, consisting of recitations and lectures on agricultural Chemistry, Geology, and the natural history of plants and of insects destructive to vegetation. Instruction will be given to a class in the practical analysis of soils and of plants.

With the exception of Yale College, this is the only practical movement, within our knowledge, that has ever been made in any college in this country, to give instruction in agriculture. This is a subject of vast importance, to three-fourths of the entire population of the U. States, and we hope the day is not far distant, when not only in every college, but in every other institution of learning, of every grade, from the first class academy down to the primary school, instruction in agriculture will stand pre-eminent.

We have received the Feb. No, of the Am. Veterinary Journal, a monthly, published in octavo form, containing thirty-two pages and edited by George H. Dadd, M. D., No. 1 and 2. Haymarket Square, Boston, Mass., to whom all orders must be addressed. We judge by the No. before us that it is an admirable work and one which should be in the hands of every farmer. We trust it will receive the liberal patronage it so richly deserves. Its subscription price is $1,00 only, and a single No. is worth that sum to any owner of a horse.

It will be observed that this number of the Farmer contains the first, of a series of articles on Natural History by Dr. HOY of Racine. And as this is a subject of great importance to agriculturists, and the Doctor one who is amply qualified to throw light upon it, inasmuch as he has given it much attention, for several years past, we bespeak for the series, a careful perusal by our readers.—The subjects will be illustrated with engravings. In the first volume of the Farmer, our old subscribers will remember the articles on the "Analysis of Soils" by the same author, as containing much practical instruction in a small compass.

We commence with this number an "Educational Department," under the editorial charge of James L. Enos, Esq., of Madison, which we think will add much to the usefulness of our paper.—But in making this *addition*, we do not propose to curtail the usual amount of agricultural matter, as we shall use a much smaller sized type, for the principal portion of our paper; consequently we shall be able to get more reading matter on a page.

NEW ENGLAND FARMER.—This valuable agricultural paper has been enlarged to 48 pages and is now published monthly instead of semi-monthly as heretofore. To our agricultural brethren in the west, who wish an eastern paper adapted to their calling, we say you cannot do better than to subscribe for the N. E. Farmer. By REYNOLDS & NOURSE, Boston; SIMEON BROWN, Editor. $1 00 a year.

For the Wisconsin & Iowa Farmer.

Letter from a Farmer's Wife.

MR. EDITOR.—Will you permit a farmer's wife to suggest what she thinks would be an *improvement* in the Wisconsin Farmer, inasmuch as it would render it an *assistant* to a greater number of its readers than it now is?

I, for one, have been a constant reader of your excellent journal, and one of its well-wishers from the first; but I must candidly say, that I have been somewhat disappointed in not finding more matters relating to *house-hold affairs*. Now, Mr. Editor, it does seem to me that it is *not* quite right, that this branch of the farming interest should be so much neglected by an agricultural paper.—True, you have occasionally given some good "recipes, &c., &c.," for which I would be duly grateful but these little items alone are *not enough* for those who have limited experience in house-hold management, and especially in the peculiar duties which devolve upon the farmer's wife. It seems to me, that a journal which comes into our families for the express purpose of elevating, and instructing the members of the family, should be so adapted in its "subject matter" as to reach the wants of all; and consequently I have waited patiently for the appearance of something applicable to my peculiar wants. And I did hope that with the new volume, now just commenced and its proposed improvements, I should see a *corner* devoted to the *house-hold*. The first number has arrived with its beautiful new dress and elegant title-page, still I have searched in vain for something to assist me, in my humble art of house-keeping. And so much disappointed do I feel, that I have concluded to run the risk of speaking to you about this matter. Perhaps you have never thought of the wants of this class of your readers or thought how much valuable instruction and material aid, you might convey to them, if you would open your columns to a discussion of those subjects, which relate to a skillful management of house-hold affairs. And, by the way, allow me to suggest the example of some agricultural papers in the older states, which have an ably conducted department under the charge of some competent female. Why can't you do as much for the benefit of Wisconsin? Have you not a wife, who might assist you in this matter as well as the wives of some other editors? If so, I beg you to enlist her services in the good cause of female elevation and improvement. I hope you will not think I wish to dictate, but it seems to me that with the facilities for information in the shape of a large list of exchanges and a good library, it would not be a great task for a woman of discernment to prepare matter for a monthly journal of this character. And moreover, I should hope that the whole labor of preparing artiles, would not fall upon the editress, but that some of the skillful and experienced house-keepers in our state, would lend their aid to enrich the columns of the "Ladie's Department" with an occasional chapter of their experience and success in some particular branch of domestic economy or comfort. Also those who are inexperienced or unsuccessful in their labors might by stating plainly the mode of procedure and the result of the same, suggest such subjects as will be useful and important to discuss in this department. Also, do not forget the "recipes," for some that you have given us have proved very useful. But I have already written twice as much as I intended when I commenced. After commending my subject to your favorable consideration I will close.

H. K.

Milwaukee Co., Wis, Jan. 25, 1852.

We accept the suggestion of our fair friend, and assure her and others, who have proposed a similar feature in the Farmr, that we are willing to open our columns for their *especial* benefit, at any time, when they will pledge their individual efforts to support the "department." And we have no doubt that our "better half" would consent to render some assistance in this branch, provided the ladies would co-operate with her. At any rate we "will try" the experiment in a future number. Meanwhile, we hope our correspondent will continue her favors; for one who wields the pen so well, should not allow her intellect to rest; for she has the *power* of doing much, to advance her sex in general intelligence, as well as in a knowledge of the house-hold arts.

COVERS.—For the want of suitable paper we are obliged to send out a part of our March no. without covers.

☞ We have not had time, as yet, to complete the reprinting of the January number.

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