

# THE PRAIRIE FARMER

## A WEEKLY JOURNAL

### Farm, Orchard and Fireside.

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#### AGRICULTURAL.

##### CONSERVATIVE FARMING.

About the year 1100, King William Rufus, of England, was shot while hunting in the New Forest, by an unfortunate arrow sent from the bow of Walter Tirel. There was a good deal of gossip and scandal about the affair, as there is now when a man in authority gets killed. Some thought it was a judgment on the red-headed, self-willed king for having destroyed a great number of fine farms, and turned a good many quiet people out of doors for no better reason than that he wanted to have an immense forest, well-stocked with game, in which to hunt with his nobles. Some said that this man, Walter Tirel, who, by the way, was a great lord, and a great favorite of the king, had killed his master by accident, and was sorely sorry for it; but others, who were less charitable, by far, held that a quarrel had arisen between them, and that the arrow was purposely aimed at him. And what tended to make this theory seem probable was the circumstance that the slayer, as soon as the deed was done, put spurs to his horse, galloped to the sea coast and embarked on board a vessel bound for the continent.

The dead king, however, did not lie long neglected; for a poor charcoal burner, who lived in a hut in the edge of the forest, and who plied his art there, found his monarch weltering in his blood, the arrow still sticking in him, placed him on his one-horse coal-cart, and in this manner took him to the palace. Probably for this mark of devotion to his sovereign, his successor permitted him to live in the same New Forest, rent free, to the end of his days.

Now, the strangest part of this story is to come. A recent American traveler in England, states that the direct descendant of this charcoal burner still lives just where his old ancestor did over seven hundred years ago. Still plies his sooty art; and, what is stranger than all, still hauls the product of his kiln to market in a one-horse, two-wheeled cart.

Here is conservatism with a vengeance; the best example, perhaps, that we have on record. But we have examples of conservatism, or rather old foginess, nearer home than this, and in other pursuits than charcoal burning. We have farmers in the West to-day who manifest no more of the spirit of progress than is exhibited by this charcoal burner in the New Forest, that has now become a very old forest. We have farmers who respect customs and practices in their vocations just in proportion as they are antiquated, and who deprecate all methods of agriculture in the exact ratio of their recency.

Their fathers permitted the manure to accumulate about the barn and stable till it ingrossed to them: was well nigh impossible, when they removed the buildings to another place. Why should they introduce an innovation on this time-honored practice? Their fathers, wise and observing men in their "day and generation," planted potatoes in the dark of the moon and got good crops; nor were they troubled with potato rot or the potato bug. Why should they "transgress the traditions of the elders," and run the foolhardy risk of putting potatoes in the ground at any other time? Their food was "hog and hominy," the whole year round, and they lived to a good old age; why should they show disrespect to the teachings of their ancestors, shorten their lives and waste sugar by raising and eating peaches, currants and pie-plants? Their fathers were not heretics and unbelievers, as men are now; which can be easily accounted for, from the fact that their reading matter consisted, if we except the Bible, of "Poor Richard's Almanac" or, in later times, of "Jackson's Veto Messages." Book farming they knew not of; nor was their equanimity ever disturbed by the weekly visit of an agricultural paper.

We have a profound respect for a consistent, rational conservatism, which holds on to the good of the past and lets fall the evil; which wisely discriminates between those things that have been tried and found excellent, and those that have been "tried and found wanting." But, on the other hand, we hold in contempt and abhorrence that disposition which approves of everything that comes down to us from former days, and which rejects everything of modern origin.

As in the mechanic arts, there are some operations that have been brought well nigh to perfection, and which we shall probably look in vain to see superseded by anything better; so in agriculture there are certain crops that we have learned to cultivate so well that we are well satisfied with the results, and are content with the returns which we derive from our fields.

But the number of such instances is small, and bears an exceedingly insignificant proportion to those which may be reckoned as well nigh failures. But, even if the number was large, it would not then show that we could long continue to practice for any considerable time the methods which are now approved. The soil is constantly deteriorating; the climate is changing; our insect foes are increasing, both in numbers and varieties. All these things will require new methods in agriculture, and will demand constant investigation and experiment.

##### FARMERS' GRANARIES.

Sacred history tells us how not only ancient Egypt, but a portion of Judea was preserved from famine through the instrumentality of Joseph, who instructed the king to erect storehouses wherein could be kept the abundance of the years of plenteousness, to supply the people during the seasons of famine that ensued. In our favored region we have little to fear from the advent of a famine, since our years of scarcity are very few, as compared with those of plenteousness; and, at worst, they seldom occur consecutively. But, after all, there is a seeming probability in disposing of an entire crop of the bread

producing grains, or in only retaining enough to supply the family till another crop is raised.

Grain speculators are by no means the only persons who "sell short," and who suffer the penalty for it. It is no uncommon thing, the year after an abundant harvest, to see a vast amount of flour transported from our large cities, back to the districts where the grain was raised. This, of course, requires the payment of a large amount of freight, but even this involves but a small part of the expense which attends this procedure. The grain passed through two or three hands before it came to the mill, and is sold as many times in the form of flour, ere it reaches the consumer. All these men have made their profits on it, besides realizing a very considerable amount on the various advances which grain has undergone. These things tell heavily against the farmer, and interfere seriously with his prosperity for some time to come.

Now the great cause of this loss to the farmer is, in the great majority of cases, due to the fact that he has no suitable place for storing his grain. It remains in the stack till the price justifies its being sold, when it is threshed and sent to market. A somewhat close estimate is made of the amount that will suffice the family till another harvest; and this and the necessary seed are all that are kept back.

Now, farmers should not thus stint themselves. A much safer rule would be to retain sufficient grain to bread the family, and to seed the fields anew, in case there should be a total or partial failure of the grain crop, the coming year. There is a seeming independence about this course, which savors of security; but in order to carry out this plan, it is necessary that there is a suitable building, or, at least, an apartment of a building, where grain can be safely kept from the falling rain, the prowling vermin, and "where thieves do not break through and steal." Such a granary is the best saving bank a farmer can deposit in, since the directors are not likely to prove defaulters. In truth, such an investment is equivalent to a life insurance policy for yourself and family.

#### INDUSTRIAL UNIVERSITY LECTURES.

Dr. John A. Warder's Introductory Address.

In standing before you here to-day, I feel that we are stepping upon the threshold of a new era, toward which some of us have been looking most anxiously for nearly a quarter of a century.

Several of the noble citizens who first moved in this matter of Industrial Education are still among us. The influence of their generous efforts has been felt by thousands, of whom many are here present, to witness the result of their efforts in the establishment of this Industrial School.

To them, to these, and to the great public, a few words may be addressed by one who has long been deeply interested in the subject, and who, as a father, has again and again dwelt upon the important question—How shall we best educate our sons and daughters for the great business of life?

Practical education seems to be a very simple expression, and yet how few of us will agree as to what it shall mean! One says, it is that which comes through the fingers, rather than by way of the other senses—it is that which we learn by absolute practice in our daily work. That surely is practical enough. But it is not enough to satisfy some of us who desire to cultivate all the senses, as well as that of touch, and the contact of our voluntary muscles. Others may claim for practical education that it shall consist only in the introduction of the pupils in that kind of knowledge which will be of every day use, and condemn everything beyond this! This is too limited a view to take of this great question.

Some would teach mathematics only, and others the languages, as best fitted to develop the man. But our wisest men have taught us that it is necessary to educate the whole man in all his faculties, in order to produce the desired and perfect result. To this proposition we must all agree.

Still we demand practical education, and properly so, for few can ever have time, patience or opportunity to become perfectly educated. If asked to answer this question, and to indicate the course which should be pursued, I should with diffidence suggest, that the end might be attained best by securing sensible and practical men—men well posted in their special calling—to instruct the classes, or pupils who may enter the school, of whatever age or sex, in just that department of knowledge where they most desire to see light.

The Institution when they enter should be made a university in fact, with its school of chemistry, of physics, of mathematics, of botany, of geology, of zoology, and especially of mechanics and agriculture.

The author of the Act of Congress by which this noble grant has been provided, seems to have this view: Mr. Morrill appears to have caught the true spirit of our prairie call for industrial education, and to have fully appreciated the desire for the establishing of institutions for practical instruction, which should supply the want not met in the classical colleges of the country. Mr. Morrill assured me that if the States which accepted his grant made a mis-application of the endowment, they would be held responsible for the result.

In his bill it is decreed that the Tuition Fund, derived from the sale of the land, shall forever be appropriated to the support of schools for instruction in agriculture and the mechanic arts—not excluding the languages—and that military tactics shall be taught.

One after the other, all the natural sciences—chemistry, physics, and especially mathematics, will each claim a prominent place in a course of study that may be devised, to carry out the spirit of the enactment of Congress. But the truth

must be admitted, as yet none of us know exactly what we want, or what we need—we do not even know what we cannot do. We are upon a great experiment.

We have set out to build up, from nothing, these great schools of "applied science." We have no well considered or well digested plan. We have neither the well drilled classes, nor the well qualified teachers for these schools of applied science. The very absence of such schools has made two classes in society, those who know only in the way of theory, and those who know only in practice. We are forced, under the present circumstances, to select our teachers from either the one or the other class. Eventually, we hope to find the "right men for the right place." In the meantime, my friends, your patience is craved in behalf of the devoted men who act as Trustees for this Institution, and next in behalf of us, their agents, who have the honor of being their appointees in the important position of teachers. Be gentle in your criticisms, and be just in your decisions. Remember that our cause is an experiment, and that, if it fails to meet the wants of the people, your excellent Board of Trustees have it in their power to introduce such modification as may appear to be necessary.

In regard to myself, I may say, I accepted with diffidence the appointment of Lecturer in this Institution. If nothing new is advanced in what I may say, certainly nothing but well established truths will be taught. It is safest for a teacher to suppose his class to be absolutely ignorant than otherwise. This will require him to descend to the most trivial minutiae, which may weary the adept, but are all important to the novice.

With this introduction the lecturer proceeded to discuss the question, "Why do not all our farmers have plenty of fruit?" The short answer to the question is, they don't try to have it. And why don't they try to have it? It is more than anything else the result of ignorance. They do not seem to know how to proceed in order to secure an abundance of fruit.

This led the Doctor directly upon his subject proper, viz: To show what fruits to grow, and how to grow them. And for three weeks he continued to give daily lectures upon this subject, in which were embodied the results of his long experience and extended observation.

#### HEADING MACHINES.

In answer to J. D. Johnson county Mo., I would say that I have had considerable experience in the harvesting of grain, and would advise small farmers to purchase a machine called a cradle, as being the most economical and labor saving. You can cut and put into the stack as cheap by hand, or cheaper than you can with a harvester, taking into the account the cost of the help which you cannot use when you use the cradle. I have used the header for a number of years, the interest and repairs, the horse hire, the waiters and runners which you must have to wait on a set of hands, and it will cost more than it would to cut in the old fashioned way, provided you could get the necessary hands, which you cannot do. Therefore you must call to your aid your money, your horses, and other help which you cannot use when you use the cradle. I have used the header for a number of years, and know whereof I speak; and that is this—that the header is the only machine that saves cost and labor, that has ever been used in this neighborhood.

Still, the rigging out of three wagons (which is necessary to haul the grain to the stack, which should be handy by) is an expensive job; but when you have your stack bottoms made and elevated so as to let the air circulate under, and a good pole elevated about three feet above the platform, with sticks set up slanting, so as to leave a free circulation through the base of the stack, and all things ready and in the field, your harvest is one-half over; at least I find it so. With a good header, you can cut and put about as much grain in the stack as the same number of hands will haul from the shock, and put in the stack; and at night you can top out your stack, so as to have it all secure.

A few words more, and I have done. They will tell you that the "grain has all spoiled, and that people have abandoned the header all over the country, and that, in fact, the grain is either injured or spoiled, if cut by any machine except the one I am agent for." Believe them not, for I know it is false; your grain will keep well if put up well.

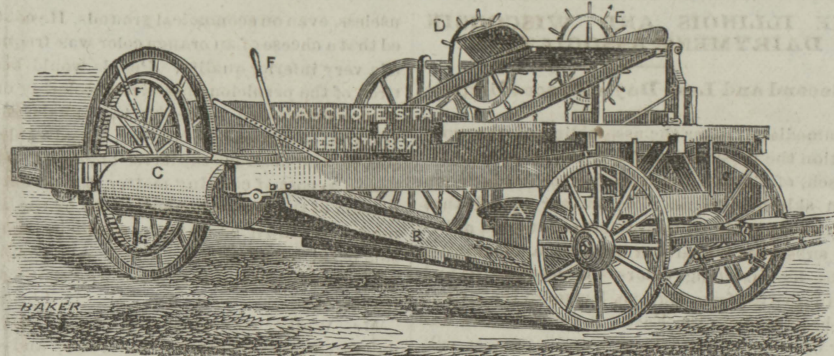
SALEM, ILL.

#### From Another Correspondent.

We have used a header, more or less, for six harvests, and feel confident in saying that if the weather be dry, and wheat clean of weeds, it is the most economical and greatest labor-saving machine that can be used in the harvest field. But the winds and the clouds are uncertain, especially in harvest, and of course it will not do to depend upon the header alone. The great difficulty in heading is to secure the grain in the stack. The grain must be ripe, dry and free from weeds or green substances of any kind, when stacked, and must be protected from rains by some sort of covering, afterwards, or it will be more or less damaged, as almost every man who has ever used a header, too well knows.

During the last two seasons, we used it in harvesting eighty acres each season, to our entire satisfaction, by using it part of the time as a reaper—into which it can be converted at a cost of less than five dollars—and as such it works well. Last season we began reaping when ripe enough. Cut thirty acres, then put on the heading attachment, and cut the remaining fifty, requiring about the same time—three days—and the same number of hands—six—to put the reaped wheat in the shock, and the headed grain in the stack, although the latter was more than one-half heavier.

Then to complete the work, we top the headed shocks with sheaves which, if well done, gives ample protection.



WAUCHOP'S GRADING AND DITCHING MACHINE.

The above engraving illustrates a machine for grading roads and making open ditches. In grading roads the operation of the machine will be apparent from examining the engraving. Driving along one side of the road the plow A, loosens the earth, throwing it upon the carrier or endless apron C, which is supported on a frame work B. The carrier is operated by gearing G, on one of the main wheels. As the machine advances the loosened earth is delivered at any desirable part of the grade. D—wheel for

raising and lowering the end of the carrier. E, wheel for raising and lowering the plow. F, F, levers to tighten and adjust the carrier.

The machine was exhibited at the last State Fair and attracted considerable attention. It seemed to us to be a very practical machine, and worthy the attention of highway commissioners and others interested in better roads in the country. W. J. Edwards of Clifton Ill, will give any further information desired concerning the machine.

#### DRAINAGE.

The late article in the PRAIRIE FARMER on drainage, from the pen of our old friend A. A. Hilliard, is suggestive of much thought, and I doubt not will be well considered by your numerous readers.

A progressive agriculture looks to drainage as one of its surest means for success, but like every outlay made on the farm, should be governed by skill and a wise economy. Any system of drainage, if not too expensive, is a step in the right direction. Surface drainage is good to the extent of the means employed, but can at any time be but partial in its success. Open drains may remove the surface water, but they cannot reach the cold and stagnating repositories found beneath the soil. This can only be accomplished by the deeply laid underdrain. It is this that can soon change the order of vegetable life, and where the rush and reed only grew before, the cultivated grapes and grains spring into life.

But even this is not the whole mission of a complete system of drainage, and the future blessings which it has in store for those that cultivate the soil. And I am glad this question was so fully and ably discussed at the Bunker Hill Convention. To save the large amount of fertilizing matter carried down by every rain-fall, and save from being washed from the soil its most valuable parts, by heavy and long continued rains, is a part of this mission or system of drainage which an advanced step in our agriculture will not fail to secure. To do this most effectually will be the work of careful experiment and scientific investigation.

The underdrains put down on my own farm are much larger than those ordinarily used, so large, that so far they have been able to carry off the most of a heavy rain-fall in twenty-four hours. When the water runs down a narrow ravine or confined space it is more difficult to prevent the wash and secure the deposit, but when you can spread the water on a large surface the most of it can be made to percolate through the soil and enter the drains. To arrest the wash and secure the deposit, I have generally used straw embankments. The size of my main drains are on an average of 12 to 14 inches in capacity, and the lateral or side drains with a capacity of from 6 to 8 inches. These experiments were made on land previous to being drained, which was mostly a bog, slough and lake. Have used stone in preference to tile. Having the rock on my own farm it is cheaper than tile for the large or main drains. For small drains there is but little difference, for me, in the cost. Which is to be preferred experiment must determine. It has been said by some, that stone drains are more likely to be closed by silt, if this should prove an objection (which to me has not yet occurred,) they have the advantage of receiving far more readily the water by percolation than tile drains.

We have stored in our soil the fertilizing matter of centuries. It comes to us as a legacy of more value than mines of silver or of gold. An enlightened agriculture demands of us its preservation, that Illinois may remain as it now is, the garden spot of the West.

The rapid increase of our population—as a sanitary measure—and as a means to multiply our agricultural resources, this subject claims both public and individual attention.

WHITEHIDE CO. ILL.

#### GYMNASTICS FOR SHEEP.

Mr. Randall, in Moore's Rural New-Yorker, for Jan. 30, makes some sensible remarks about exercise for sheep. "The deep snow prevents their moving about much; they are not pinched by cold," they eat heartily and appear thrifty, but "this thrift may become more apparent than real. Want of exercise, though it promotes fattening, is not conducive to health. We know an admirable sheep farmer who daily drives his sheep around his range of barns, until they have traveled at least half a mile. A broad path is made through the snow for them."

Boys and girls who are kept closely confined in school without much exercise, grow up pale and puny and narrow chested. The sallowness of students becomes proverbial. Study and feeble health are supposed to go hand in hand. Teachers, clerks, printers, editors, ministers are constantly failing in health when they ought to be in the prime of life. To prevent this state of things, lectures are given, books written. Newspapers abound in articles upon the subject; and Lo! gymnastics spring up all over the land. Walking, running, lifting, rowing, base-ball, heavy apparatus and light apparatus, all have their advocates. Now, every one believes that

he is much benefited who makes a judicious use of the gymnasium.

Mr. Bonner well knows that Dexter should try his muscles every day, else he could not make his half mile in 1-4. And now the same principle is applied to sheep and with equal force it may be applied to every domestic animal. If turned into an open yard and left to themselves, they have too much of human nature in them to stir around much unless they have some object in view.

Will not the coming man (H. W. Beecher says he will most likely come on a Velocipede) have a regular daily drill for his domestic animals. Perhaps it will yet be a part of the boy's winter chores to see that the pigs, cows and sheep have walked their half mile or two miles a day, or have been a certain number of times up and down and around the straw stack. It probably seems a little visionary to say, the pig can't have his breakfast until he has jumped a certain number of times over a high bar. He must walk a log, roll over, stand on his hind feet, first one then the other, and now on his fore feet with hind legs elevated high in air. He must stretch and curl up and take a long run at double quick. He must try deep breathing and vocal gymnastics (which some of them actually now do) before he is in a fit condition to eat his allowance.

Old brindle must be daily put through a certain amount of kicking (this is not visionary always) and pawing. She must sit down, stand on her head, carry heavy weights, go through with many evolutions and convolutions of horns and caudal appendage. Who knows but the coming man will have a complicated apparatus for improving the health and strength of sheep. Perhaps a well designed gymnasium will be considered a necessary addition to every sheepshed.

#### THE TWO CRITICAL POINTS IN FARMING.

There are seed time and harvest, particularly the seed, and the getting in of the harvest.

Look abroad upon the country, and see how much seed is sown that is either bad or indifferent, or is not properly planted. Too much is put on, or too little—generally too little, especially with clover and grass seed.

Now, all our crops are depending upon this one link—the putting in of the seed. Without it there is a blank harvest; with bad or scant seed there is a lack in the harvest.

We aim at good seed, most of us; but we do not succeed. In the first place we are not sufficiently informed; the great majority are such. We sow and plant from the same family seed for generations (of men, not seed); and there must, of necessity, be deterioration.

We vary but little our practice of sowing; so that it is got in pretty even, it will do, and, as to the amount of seeds, each seems to be wedded to his own theory, and this differs—seldom the same with two neighbors. A uniform system of sowing, having reference to the different soils, etc., is one of the wants of the age.

But the most and worst of all is our harvesting. This is the final link for which the chain was made. If this fails, all fails. If this fails in part, so much loss on the whole. We buy our land at a great price, expend a good deal of labor, devote our life to it, and all for this one last link—the harvest. The importance, then, not only of growing a crop, but of securing it, is involved. Every head lost is a dead loss, on the whole, beginning with the purchase money of the land.

But how are we to harvest our grain—our various crops?

This every one seems to know; yet what loss! How much is "shelled," left on the ground from over-ripeness, and late gathering, particularly of oats, grass and clover seed! Our oat fields are often white with the shelled grain, after the straw is gathered. We have seen this in innumerable cases, and see it yet, to a great, though a less extent.

Now this can not only be avoided, but is sheer carelessness on the part of the farmer. He is to blame, not his ignorance. The remedy is the simplest in the world—the plainest—so that there is no excuse. We need not say that it is merely to cut the grain earlier, and harvest it in time after that.

This leads us directly to the point so much dwelt upon and enforced—early cutting. Cut in the dough, put in shock, cure and harvest. There is no loss, then, scarce of a grain. There is your straw, worth as much as hay—as most hay, we may say. There is your land, open to the tender seedling. The young clover or grass has a week or two more to grow in, and get out of the stub-

ble. This last is of consequence, as every farmer must know. The grain shades and chokes the young grasses, and often extinguishes them, 40 ways more or less hurting and thinning them out—in every case retarding their growth. Cleared, the sun has a chance, the air favors; and now, with this early start, there is prospect of a good growth.

This is the simplicity of the thing, and is more or less known, yet is neglected.

We can cut all grains and grasses in this way. We need but distribute our work as to time. The oat, the pea and the barley should be grown as early as possible. Sown at the same time, the barley and the pea will come first, and may each be cut early—early in the ripening. We have cut barley when green (in spots on a sward turned down), when more ripe, and when ripe, all in the same field, and the same sowing. It was well and carefully cured, and sold for the best price. Here and there a shrunken berry was found, yet the bulk, considering the inequality of ripening, was quite uniform. The middle course, which this lot exhibited, is the best; and that is when the stand is yet somewhat green in appearance, before the berry is hard, when just well out the milk.

The oat follows barley and peas in good time.

Grass may be begun quite early, and so clover. June and orchard grass, and the small clover, may come well forward in June, and be out of the way at the beginning of July, the weather favorable, and even if not so favorable, with the aid of hay-caps, it may be secured about that time, or at least a week later. Timothy and the large clover may follow and close the season, that is the first cutting. Every well regulated farm should cut two crops of hay, each crop better than one crop that is usually grown. It is tenderer, more nutritious and healthful, and hurts the land less. The second crop is of course cut when there is no crowd. The day is not absolutely important as in the first case, in which the beginning of blossoming should be the beginning of cutting, or thereabout.

Wheat (spring) is somewhat movable, and may be sown early or late.

Corn has a fall harvest, and potatoes still later than corn, save the early sorts.

We can readily distribute our work so as to do it all in good time, and without hurry. But we must have forethought; the thing must be all arranged previously. It is, however, not done save in a few instances.

Can we be too careful to secure our grain properly?—sow early, and reap early? We cannot. It would be almost a revolution if we used method here.

HERKIMER CO., N. Y.

#### RIDGING LAND.

We noticed lately an item on ridging lands for grain, by J. H. C. He seems to think that it don't pay. After experimenting four or five years, we are satisfied that it does pay, sometimes. We have tried ridging on cold, wet clay soil, the crops of which, under ordinary cultivation for several years did not compensate for the labor, making the soil as productive as the average of the dry land surrounding. If the farm of J. H. C. is dry and rolling, or has a very porous subsoil, he had better "level the land down again" as soon as possible—so we think; but if situated that water is likely to remain long any time on the surface, better be contented with "three or four very well eared rows of corn" on each ridge, and furrows "much given to nubbins," than most probably nubbins all over; or if too many furrows, widen the ridges, or still better, thoroughly underdrain.

Our experience convinces us that this system of surface-drainage if practiced, would increase, with but little cost, the productivity of many parts of our prairies, where tile draining is too expensive, especially where land is flat and soil too compact. Ridges should be not less than fifteen or twenty yards in width, and our way of making is, first plowing have the "back furrow" in the middle; next plowing lay out the back furrow a little to one side, and third time to the other side the middle of the ridge. In this way a smooth, round surface is formed, sufficiently elevated to drain off all surface water. If from successive drainings, furrows become too deep for crossing with machinery, they can be easily leveled sufficiently by cross-plowing. When putting in winter wheat, we invariably run the drill lengthwise of the ridges, whether plowed that way or not. We tried it across one season, but the drill furrows served as gutters for the rain-water; and found in the spring the wheat mostly washed out, and crop a failure.

LA FAYETTE, IND.

B. BROS.

#### TUBE OR "DRIVE" WELLS.

In reply to the inquiry of "W. D. M. Ocone, Ill.," in your issue of the 6th instant, I would say that I have during the past eighteen months been using a "Tube or Drive Well" and that it furnishes an abundant supply of good water. Probably our soil, which is an alluvial, underlaid with coarse sand and gravel, has much to do with their success in this section where they are in very general use and much liked. Ordinarily the water producing strata of sand or gravel is reached from twenty to thirty feet, and there have been few failures upon the bottom lands to get good wells by driving. On the uplands they have not been so generally brought in to use, as it is often necessary to go ten to twenty feet deeper for water, and rock frequently precludes their use. Our own well is driven twenty-five feet—three feet into the sand—and furnishes a never failing supply of water. Last summer was the driest, and streams and springs the lowest that have ever been known since this county was settled, yet there was no perceptible diminution in the supply afforded by this well.

SALINE CO., ILL. Feb. 12th 1869. C. M. D.