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BY
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J. E. BRUNN, Jr., Assistant Editor.

WESTERN N. CAROLINA RAIL ROAD.

Mr. Editor:—Since my communication of 8th ult., the indications adverse to the interests of the State in this Road, are becoming more manifest.

Leading citizens in the interests of the Wilmington and Charlotte Extension (via Lincolnton) to Rutherford, are using their influence verbally, and through the press, to break down this great work; in order that the extensive and beautiful country North-west of the Catawba River, embracing the counties of Iredell, Alexander, Caldwell, Wilkes, and Watauga, may be a tributary to that Road.

Attempts are even made to buy off the noble counties of Burke, McDowell, and Yancey, by a new project; an extension from Lincolnton, through those counties to Jonesboro, by a new gap of the Blue Ridge, only "a few hundred feet through!" Wonderful indeed! But I suppose Maj. Gwynn, Turner, or Kuper's leveling instruments, would level the hopes of these new projectors, about as effectually as they did those of some others, who had their hopes and fortunes fixed in Watauga! Any route it seems however, will do better than the direct one, through Iredell, Alexander and Caldwell.

The Editor of the *Star City* and the *Blue Ocean*, in his zeal, publishes a private letter from the town of Lincolnton, from which I make the following extracts:

"The prospects of the Central Road is laid. I saw one interested in it to-day, who seems to have given it up! Should it fall through, our road will be the greatest in this State by far! Surprising! Now, I do wonder, who that poor soul was, who gave up our Road? He would be somewhat of a curiosity up this way!"

Again, he says, "should the Central Road fail, we will send you from the counties of Yancey and McDowell, the finest turf and lumber, anywhere to be found!" Oh, how delicious these good things! The finest beef, and lamb, fruits, vegetables, tons of hay and Irish potatoes, and better still, rye-chek lasses and lasses candy! made in abundance from the noble sugar-tree! collected in boxes made of the Linden and Cherry! Have you any thought, Mr. Editor, that you and the people along the line of the Central Road, would like to have any of these good things that grow in the counties of McDowell, Yancey and Watauga? If you have, I invite you in the language of this Lincolnton writer, (addressed to Wilmington) come up some of you this summer and look; do you best!

I am truly sorry that "A Catawban" (who I incline to think is a friendly acquaintance of mine) should be so mistaken in the appearance about Fort Defiance, which his imagination has colored, "almost impregnable" (sounding like Subtopos) "formidable missiles," with equal facility, "in different directions" first at Salisbury and Swannanoah; then at Watauga, and lastly at him and the good people of Catawba! Fort Defiance in the "Happy Valley!" Why, my dear sir, there is scarcely a spot on earth, so peaceful, serene, and lovely. Clad, too, by the quiet shades of the Revolutionary Patriot and Statesman, so long resident there. Who, though he received homage but honorable scars in defense of his country; were not the frown of the aggressor upon his brow. In whose eye the "soldier's tear" did not often bear testimony to the sufferings of the widow and orphan; and impressed upon our hearts his lessons on the value of our happy Union, and its cherished and free institutions, as well as the deference due to other sections and interests.

Breathing, as I do, the free and hospitable atmosphere of the "Old Fort," how could I mean to hurt the good people of Watauga, Salisbury, or Catawba; or the friends of the *Wilmington and Charlotte Road*; for whom my feeble voice has been raised; and who think that a young friend of mine, (a man of the Old Fort) has done them some service. I cannot believe there are many in that quarter, who would break down our Road, for no higher purpose than to make them "the greatest road in the State!" and the Mountain Boys tributary to their interests forever!

My friend from Catawba, may well feel safe now; and surely when the light of scientific instrumental examination, seconded, (as all know it would be), by an Act of the Legislature killing off, for the present at least, the Watauga route, and with it our first and fondest hope; does my friend still think it strange, that I cannot go over to the other extreme, and advocate his route! which he says he knows is out of the way! I do not think I ought, for the sake of some 200 acres of land, which I hold at "Point Union," 9 miles West of Newton, a depot point between the South fork and Main Catawba, on the Newton route; and perhaps the junction city point! Does he think for such reasons, I ought to abandon, in some degree at least, even his Catawba Valley, on the line as reported by Maj. Gwynn, and go for the town of Newton, which is further from the Catawba river than the town of Lenoir is; and which, was reported objectionable in grade by Maj. Gwynn; but which he said might be examined in connection with a route five miles South of Statesville. And does he not know that the Statesville point, which he does not now object to, is about in the same line with the survey in the Catawba Valley, except where we wish to straighten it, by running within 4 or 5 miles of Lenoir; and as suggested by the gentleman who made the survey; who also examined the river below; and

about Buffalo Shoals, but did not think proper to run the line lower down! Does he not know that the line reported, in that section, is located mainly on the river and on the best possible grade! and by the slight alteration recommended, will cross the river but once, and where comparatively small! Will pass too, near some five mineral Waters, in Catawba, Alexander and Caldwell. And more directly through that really superior district of water power, as he very justly says, sufficient to turn every cotton Mill in North Carolina, and I would say five times as many more!—A line which many of the citizens of Catawba county prefer, as I have heard them say; and will subscribe to, I believe, when the books are opened without that condition of running within one mile of Newton. What interest have the Catawba Valley farmers in moving the line from their midst and placing it 12 miles South of the town of Newton! and what sort of "true patriotism" would it be to sacrifice important advantages to the community, and make a deflection in the line, merely to accommodate its interests and mine, by running a crooked line via Newton and Point Union; or to get within one mile of the town of Newton, Lenoir or any other town! This pity that the line scenery of Market Ridge in Caldwell, and Pine Ridge in Catawba, on the proximate line North of Newton and Point Union, which line I suggested merely to get the sentiments of "A Catawban," was all lost upon him, and was deemed "a mere idiosyncrasy." For why do our people spend so much money abroad for the like! Now, with the aid of the Western North Carolina Rail Road, they could fine much better scenery in their own State, spend their time and money, with more congenial spirits.

He should remember too, that the very first blessing upon our own race in the garden of Eden was connected with the injunction, "Replenish the Earth and subdue it," which I construe, to make still more fruitful and beautiful.

"K" of Iredell, thinks that Mesopotamia, or the "Eden" of that section, will be greatly improved by the Rail Road, and that Iredell expects the Road to be built, and to do her part in the good work; and I really believe that "A Catawban," could do some service to the State, by advocating a line higher up the country and nearer the centre of territory, "wealth and population," which lies above, and North of that already embraced by the Charlotte extension; for he cannot think that a margin of 14 miles South of Newton is equal to 60 miles on the North. Now, I have not criticised his style, for I suppose some of the blunders were made by the printer's "little devil," who so often plays pranks with what I publish; and if I have not converted "A Catawban" yet, I must take a friendly leave of him, with the assurance that the guns of the Old Fort, long since dismantled, "will not be pointed at him. Let him still think however, that what I have said of the beauties of our scenery, and more especially of the advantages of the shortest line; is "all mere Identity!" I will now refer him, and all others, North and South, to that very judicious article on the value of one mile saved in a rail road, found in the Raleigh Register of the 9th inst., from the Cincinnati Rail Road Journal; and also to an able letter from the President of the Spartanburg and Union Railroad Company, to some enterprising gentlemen of Asheville; who deem their interest to build up a competitor to the Western N. C. R. Road, through S. Carolina.

The first article after showing by a fair course of reasoning, an almost incredible amount saved to the Stockholders, and the business community, by shortening a road 1 mile, both in time and money; closes by speaking of deflections from the shortest line, as follows:—"It is a waste of energy and means, sinful in the extreme and which will unquestionably open the door, at some future day to successful and economical competition."

From the letter referred to, I make the following extracts:—"While looking to the rail road connection with the Valley of the Mississippi, you are moved by considerations perhaps stronger still; to desire a connection, by the same means with the Atlantic seaboard; by the shortest possible line." Experience has, I think, abundantly proved, that a rail road line should be laid down, not with a view to a succession of curves and deflections; to accommodate a section of country first on one side of the road, and then upon the other; not upon the periphery of a circle, but up its radius; in a word—upon the direct line which connects its termini, or at least as near this as possible!"

"In entering upon a new enterprise of the magnitude and importance of that before us, we should begin to profit at the outset by our past experience; we should commence alike in time, in distance, in money, credit and labour; and seek to make the whole far whose aid we invoke, available; that human society may derive the greatest benefit from the means at our command."

"To deflect a rail road from the right line which connects its termini, to subvert particular interests, or in obedience to local influence; adds to the cost of construction, increases the distance; and consequently, the time and expenses of freight and travel, and entail each one of these evils upon the company and as a perpetuity."

He then proceeds to show by facts and figures, that a rail road of 150 miles in length, increased by deflection 20 miles, will "at \$15,000 per mile increase the original cost \$300,000!" It then sums up the increased annual cost at \$40,000; to say nothing of the wear and tear of passenger and freight cars, which exceed the rate at which the locomotive deteriorates; and

all these items of expense become perpetual; besides the periodical necessity of purchasing extra locomotives, freight and passenger cars! In addition to this each passenger each trip on the road, "going and returning," must travel and pay the expense of 40 additional miles and each pound and foot of freight must be taxed for an additional 20 miles, upon freight, and so in a corresponding degree, according to quantity, for down freight; and be subject at the same time to consequent risk, delay and loss of time!

If the above data be modified, so as to apply to the true condition of any given road; the large item of annual expenses in repairing them; and the beggarly show of empty cars, in regard to annual dividends, which we sometimes see exhibited in annual reports; will be no longer a mystery.

He estimates also that four trains each way "on the 20 miles" daily, would make an amount of extra and unnecessary travel only; more than equal to seven trips around the earth! Now suppose Newton to be five miles out of the way, then by the above estimates, the extra travel, via Newton and Union point; would be about 14,000 miles annually, at an extra annual expense of \$10,000!

Now, Mr. Editor, what sort of service do you think this would be doing for the State and the Central road! How would you like thus to be taxed in the county of Catawba, on your nice beef and lamb! and all the good things of the Mississippi Valley; and likewise upon the "celestial nick-nacks" that lie beyond our "sun-set shores!"

But I say, Mr. Editor, you need not be alarmed; we have a host of hardy Mountain boys, ready, and waiting to pitch into the work, and a lot of sick well-fed, large and little—"Devils" in the State have been turned loose to "tear up the gravel with their long spades and shovels."

But to be more serious in conclusion, let me say; that our laboring or industrial population, "the bone and sinew of our land," are waking from their depressing discouragements, so clearly attributable to the want of rail road facilities; they see in the approaching iron rail and steam engine, the harbinger of better days; and of redemption from the bondage of unrequited labor. When they look upon their wives and daughters; too often, with weary step and pale face—returning after a fruitless attempt, to obtain some of the ordinary comforts of life in exchange for the fruits of their labor; while the daughters of more favored sections, with bright eyes, light hearts, and quicker steps; go, not to solicit, but to choose what they will have in exchange, and who they will favor with their hardy work! Then see them neatly clad, with book and pencil in hand; and receiving that care and culture, which every child ought to have in a christian land! And then, sir—when our honest laborers the fathers and brothers, take their little ones on their knee, to look into their pleading faces, and kiss their innocent lips, regardless of a little dirt on their noisy cheeks, "as I have often done when among them," thinking all the while what they might be, with like advantages! I ask sir, does any one suppose, that these men, of warm, stout hearts, from the same valley and mountains that furnished the gallant band at Kings Mountain; will do less than "for whole duty!" Ah, my dear sir, come up to the 4th of July gathering at Statesville! The mountain boys will be there; and when met like we are sure to be Roman and Iredell; you may then hear the welkin ring, as in days of yore; with the echoes of 20th May and 4th July.

WM. A. LENOIR
Fort Defiance, May 28th, 1855.

THE HAUNTED ROOM. A VERITABLE GHOST STORY.

BY
HENRY HERBERT.

Years ago, in the town of W—, stood an old dwelling house occupied by a Mr. C., and family. It was then used for a tavern or boarding house. A low shed or addition on the back made a dining and bed-room; the bed-room was the one occupied by travellers.

One evening a stranger alighted and at bed-time was shown to the room to pass the night.

Early next morning he arose and ordered his horse; and as he had expressed his intention of remaining a few days, it surprised Mr. C., and he asked his reason for departing so soon.

"Well sir, to tell you the truth, I believe this house is haunted."

"Why?" asked the host.

"I was awakened several times last night by three distinct raps on the house, outside, which I must attribute to an invisible agency."

"Was the noise distinct?" queried Mr. C., thinking that he must have been dreaming.

"Quite," he answered.

"Was at any time the number of raps more or less?" asked Mr. C.

"No. Three was the number repeated each successive time."

Unable to unravel the mystery in any way, the stranger rode off, and Mr. C. forgot the occurrence.

It happened that the room was unoccupied for a few weeks, till some necessary arrangements were made; making it convenient that a boarder should sleep in the room. In the night he was awakened by a noise. Three distinct raps were struck close to him, on the outside of the house. He listened a few minutes; but heard nothing more, and thinking it must have been a fancy, he turned to sleep; but scarcely had he

closed his eyes, before, tap, tap, tap, was repeated seemingly closer than ever. He started bolt upright; but all was silent as before. It was mysterious. There was nothing about the house that would make a noise like that. For a long time he listened to detect, what caused it. He heard nothing until tap, tap, tap, was repeated. He was getting superstitious. It was mysterious number. Strange that it should each successive time make no mistake. Perhaps it was an hour afterwards when it was repeated. The conviction forced itself upon his mind that the house was the abode of supernatural visitants.

He appeared pale and nervous at the breakfast table, and his friends were astonished when he said that he would change his boarding house.

"Why?" they all asked at once.

"I believe this house to be haunted," he replied.

A burst of laughter followed this disclosure; but his countenance remained as grave as ever. He told his nights experience and their salient points of wit, but when his pale countenance told that it had not shook his belief, an uneasy feeling crept over them, Mr. C. related to the travellers his story and it did not tend to enlighten the mystery.

A young man was present of a "dare-devil" character, who said he would like to sleep in the room to have the honor of a visit from his ghostship.

At bed time he retired, hoping that the noise would be repeated, that he might unravel the mystery. Everything was still in the house, until the clock struck twelve in another room.

Scarcely had the sound died away, before tap, tap, tap, was struck distinctly, just outside of the house, seemingly close to the corner.

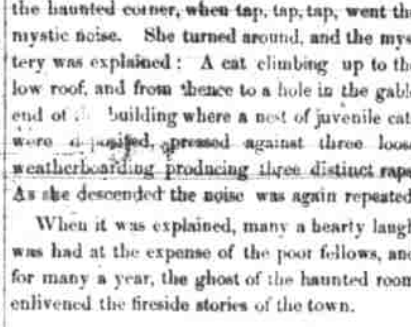
He rose and opened the window, all was dark still, out, and a slight noise like a cat moving away was the only sound he heard. He retired again. Again the mysterious noise was repeated.

He arose; but nothing was heard without. A strange feeling of dread stole over him. An hour perhaps might have passed when tap, tap, tap, was repeated. An undiminished feeling of fear kept him from arising. Vain were his efforts to sleep. Each trial was unavailing. Again was the sound repeated. At last day appeared, the lane of ghosts, and the mystery was more mysterious than ever.

His appearance told plainly that there was a mystery, and it was no delusion. The effect was contagious, and before night the major part of the boarders had engaged board elsewhere.

Although Mr. C. believed that the noise proceeded from a natural cause, he sought in vain for explanations. A few weeks had passed when one morning Mrs. C. was in the garden, close to the haunted corner, when tap, tap, tap, went the mystic noise. She turned around, and the mystery was explained: A cat climbing up to the low roof, and from thence to a hole in the gable end of the building where a nest of juvenile cats were perched, pressed against three loose weatherboarding producing three distinct raps. As she descended the noise was again repeated.

When it was explained, many a hearty laugh was had at the expense of the poor fellows, and for many a year, the ghost of the haunted room enlivened the fireside stories of the town.



AGRICULTURAL.

From the Southern Farmer.

Essays on Various Subjects of Practical Farming.

BY EDMUND RUFFIN, OF VA.

On Clover Culture and the Use and Value of the Product.

The mowing of clover for green food should be begun as soon as the growth is high enough to furnish a good swath. In Europe, (as Bousisagrunt states and seems to approve) the mowing for hay is begun before the crop is fully in flower.

In this manner, they obtain two mowings for feeding or hay, and third growth as well as vaped, for ploughing under, or leaving on the land as manure. But it is difficult and hazardous to make hay of such immature clover, and the product is small in quantity; and it is supposed, also inferior in quality as food. The best time for mowing for hay is when about one-fourth of the blossoms have begun to turn brownish.

If the crop is too large for the force, of course there must be some mowing both earlier and later than the most proper time.

Clover has been generally deemed of very inferior quality. It has even been declared by many farmers, and in some publications, to be unfit for horses, and admissible only among the coarse articles of food for wintering store cattle. For this opinion were confined to clover hay (made as has been most general) by turning and exposing to the sun, I should not care to dispute them. In that mode, the thin leaves are all crisp, and crumble to powder before the large stems have lost their water and greenness. The cocks cannot exclude rain. And when the hay is dry enough to be stacked, or housed, it often has nothing left but the stems, and they are black and brittle as ripe and dead weeds.

So great were the supposed and ordinary difficulties of making clover hay, and so rarely was it obtained of good quality, by all the care that could be used, that the late Fielding Lewis, (then one of the best farmers in lower Virginia, and especially noted for applying abundant (if not too much) care and labor to every object,) after full trial, abandoned all attempts to make good clover hay—and resorted, instead, to a slowly made, entirely different from his general careful habits. He threw 3 or 4 swaths into a "wind-row" or light high ridge of partly withered grass, and so let it lie, until dry enough to stack—if rain did not previously destroy all its value. (Farmer's Register, Vol. 1, p. 23.)

The mode which I have adopted is upon the principle of curing the grass in the shade, and by air instead of sun—and of never moving the clover after its leaves are dry or crisp, (if they become so at all,) until it carried to the house or stack. There is less labor, less danger of damage from rain, and more value in the product, than in any other process of which I have heard the manner and results. It is proper to say that the plan is not original with me. The attempt to cure hay in cocks (and of course mostly in the shade,) has often been made—and successfully, when high winds and heavy rains did not damage the cocks. The plan of preserving their upright position by stakes or skewers was first suggested and used by the late Claiborne W. Gooch, who wrote a communication embracing the contrivance for the Farmer's Register, vol. I, p. 184.)

The plan was improved upon, and the practice reported to the same publication, (vol. 2, p. 411,) at my request, by a very young farmer, who, since, with myself and others seeing our practice, have successfully cured clover in this manner. Without further reference to other's practice, or opinions, or noting differences, I will proceed to describe my own present preferred practice, as improved by the experience of this plan, in the whole clover harvests of the last seven years.

When the clover is nearly or quite in the best state for mowing, for hay, (that is, when about one-fourth of the heads are turning brownish,) that operation is begun, after dinner, or about two o'clock, P. M. When cut so late in the day, no other labors will be necessary. The grass is left in the swath, as cut, until the next forenoon when the dew is dried off. If clear of dew when mown, there will be none except on the mere surface of the swaths. When quite free from dew, and also when some few of the upper leaves have become crisp, under the effect of sunshine, then it is time to begin to first fork.

Other hands, (if the mowers are then employed,) with iron prong forks, begin with the oldest mowing, and throw the swaths into small heaps, without any care for their shape, and each merely large enough to supply at least one good fork full. These heaps might be put immediately into cocks, if required, by approach of night, or threatening of rain, but otherwise, they will best be kept until the forks have gone over all the grass that is partly wilted by exposure in the swath. The making of these heaps is a facility for the subsequent cooking, and therefore is no addition to that labor. But after being thrown into these heaps, it is best to let the grass so lie awhile, for two reasons. First, a new surface being then exposed to the sun, most wilting of the greener cover will take place, and less such error and its injurious effect. In water (in the sap) will go into the cock, without danger of hurt by too much drying in the sun. Secondly, this heaping is a very easy and rapid operation, and serves quickly to place out of danger the grass beginning to be crisped on the surface of the swaths.

After the heaping (or an hour or two after beginning to heap, if different sets of hands are employed,) the cock-building is begun. The clover is usually is then throughout the heap more or less wilted, or "fallen," but still full of sap or juices, except the very few leaves crisped before the heaping—stakes or skewers should have been previously prepared and brought to the ground. These are either of rived timber, or otherwise cut of any tolerably straight sapling wood, though young joints of second growth, where standing thick, furnish much the best.

They may be from five to six feet long, and one and a half to two inches through at the large end, and one inch or less at the small end. Both ends should be sharpened by a hatchet. A pin, made of strong and tough wood, pointed, and rather larger than the large point of the stakes, is driven into the ground about eight inches deep, to make a note to set the stake, and which is so placed firmly and upright. The stakes are so placed in rows, and at such distances as trial will show is required for the cocks. The cock-builders now begin, by placing a heap of the grass around the bottom of each standing stake, and closely and equally around. This, and enough to make the base, should be more than fifteen or seventeen inches from the central stake to the outside. Other clover is placed on this base, either with the hands and around the stake, or with the fork, putting the clover loosely on the pointed top of the stake, and forcing it downward to its place. The thickness of the cock may be a little enlarged above the ground. But it is best not to permit any to be more than three and a half, or at most four feet across the middle.

The main object of the stake is to prevent the cock falling or being blown over by high winds. With this support, the cocks may be raised at first to 6 or 7 feet high. They will afterwards settle considerably—and the more in proportion to the succulence of the clover, and the lightness with which it was laid on in the cocks. Moderately pressing down the grass when building the cock is proper, to avoid too much settling. But the cock should not be made too compact at first, so as to exclude the entrance of air, and so prevent the proper curing of the grass. A little experience will show the improper extremes to be avoided.

As the cock settles, the grass holds more or less to the stake, and especially to the rough bark of pine. This causes almost every stem to droop from the centre to the circumference of the cock—and so to shed rain which would otherwise penetrate the very open texture of clover cocks. This manner of settling gives a pointed top to the cock, even if made broad-topped at first. The pointed upper end of the stake usually permits the top of the clover to settle below the point. But sometimes the upper clover is held up by the stake, like a hood over the lower and main part. The outside of the cock shelters all the interior from the sun, entirely, and more or less from the rain. Of course the mere outside is spoilt by over-drying in the sun—or is like ordinary sunned and turned clover hay. But all the interior usually cures perfectly, the leaves remaining on the stems, and mostly preserving their green color, and many of the flowers their red tints.

Very heavy rains during the curing, will not prevent this result, or to but small extent. Very heavy rains driven by strong winds, or long continued spells of rain, certainly will be injurious; but to much less extent than even moderate and transient rains with any other mode of curing. I have had very bad weather in some of my clover hay harvests; but though labor was thereby increased, and hay somewhat damaged, I have never lost by bad weather, altogether, a ton of hay, in this mode of curing.

According to the weather, and condition of the grass, the cocks will usually have to stand from four to seven days. I have in one case housed the hay (avoiding close packing) on the second day; and once, when the clover was cut too green, and the cocks built too compactly, and too large, they stood eight days, and then had to be opened, to remove some internal dampness, which had caused mouldiness in the middle. This was the only case of such error and its injurious effect. In ordinary cases, and with only ordinary rains, nothing is required after cooking, until the hay is fit to be housed.

When the first cured hay is fit to be housed, or stacked, the removal of the cocks ought to be begun early in the morning, while the hay is pliant, (or "gives," or is "in case") from the effect of the damp night air. A moderate dew still remaining on the cocks, is no objection to proceeding.

But any greater degree of wetness, from recent rain, I would not risk, if the hay had to be immediately packed closely, and in large bulks. After beginning, the carting in of the cured hay, and storing it, should proceed as fast as possible, while the hay continues pliant. But as soon as it begins to be rigid and crumbly from increased drying by the sun and dry air, the hauling should be suspended, until the next morning.

Preceding the loading of the carts, for half an hour or an hour, (according to the weather,) the loaders pull out the stacks, and then turn over the cocks, nearly upside down, but leaving the old bottom somewhat facing the sun. This part will usually be a little damp, from contact with the ground—(though not always, if cocked on dry ground,) and this, or any other remaining dampness, will be speedily removed by this little exposure to sun and air. The cocks must not be so exposed longer than necessary, before being carted in, and should be housed or stacked as soon as possible afterwards. Hay so cured will be inviting in color and odor, will be eagerly preferred by horses and mules to the best corn-fodder, or other hay cured in the ordinary manner. And if it is in any respect less valuable as food, no evidence of the fact has come under my observation. Green clover, or clover hay, is my only long forage for some months of every year, and is used without stint as long as it lasts.

For fear of rain, the hay ought not to remain in the cocks longer than it is cured enough for housing. But on more than one occasion, part of my hay was still in cocks, and not cured enough to house, when wheat harvest was begun, and which occupied all the force for more than two weeks. After this long exposure the cocks were hauled in; and though there was more depth of sunburning and injury than there by usual, the interior hay was still excellent—and the whole together, averaged, was tolerably good hay—and preferable to most of the meadow hay sold in the towns.

Stacks or ricks of clover hay are troublesome to build and to secure from rain. They should be well trodden, while building, for compression, and to prevent more than the unavoidable settling; and should be topped with straw, to keep out rain. Putting clover in houses is very far the cheaper and safer plan.

The stacks should be brought to the barn yard with the loads of hay, and placed under shelter.

If so taken care of, they will serve for many years. It should have been stated earlier that clover ought not to be cut for hay while any dew remains on it—though a very little remaining will dry off the clover after being cut, and as lying in the swath. This rule will delay the mowing generally to from 9 to 11 o'clock, A. M. All the clover cut each day before about 2 P. M. may be cocked that evening. All cut after that time may remain in the swath until next day. If the grass is wetted thoroughly by rain in the swath, and before being wilted, there will be no loss, except of labor, in opening and stirring the grass, which will then be required to "dry it." As soon as this accidental moisture is entirely removed, the heaping and cocking should proceed, as in other cases.

The slight moisture from dew just before and to twilight, need not suspend either the mowing, or the putting of grass before heaped into cocks. But I would prefer not to make heaps from the swath after dew was perceptible on the clover.

The clover, after being cut, usually lies in the swath, under from three to five hours of sunshine, and in the heaps, an hour or two longer. And all cut after 2 P. M. usually lies in the swath until next morning, and until the dew has dried off. But when there has been danger of a spell of rain, or on the evening preceding a Sunday, I have cocked, (and cured safely) all the clover cut before 4 P. M., and within two hours after the mowing. In such cases, the cocks should be smaller than usual, and the fresh-mown clover laid on more lightly than directed above for the ordinary procedure.

The great value and most important use of clover is as a green manure, and especially for wheat. For this purpose, the land on which the clover grows, should be ploughed as deeply and as well as the soil and its then condition permits, and as early as may be after the end of July.

If done much earlier, the second crop of clover will not have reached its full value as manure; and also the early ploughing will become very foul with grass. If the ploughing is much later, the crop of wheat will usually be lessened in proportion to the delay. This, however, is not always the result.

It is the general usage of those who proceed with clover to plough under the clover in its first year of full growth—that is, the second year after sowing the seed. Such was my own entire practice until recently, induced by the common belief that clover will generally die after attaining its full growth—and that, if left longer, weeds will be almost the only growth of the field in the next year. This is, indeed, the case where the soil is unfavorable to the growth of clover. But I have found lately, that parts of my clover fields left unploughed through the second summer after full growth, (or third summer after the sowing,) are equally as well, and in some cases better covered by clover, than in the previous summer. The second year's growth is lower, but a thicker cover than that of the previous year.

Many new plants spring in the before unoccupied spaces. And though clover is deemed a biennial plant, and as such, should die after its second year from the germinating, still many plants live longer than this term. More especially, is this protraction of life induced by the mowing or grazing of clover just before it forms its seed.

If the continuance of the clover crop for two years can be relied on, (from previous trial and observations,) it is surely a great loss to plough it under a year earlier. If the usual one year's product is of great value as manure, two years' product should give twice as much manure. And as great difficulty is to obtain a good "stand" of plants, it would seem the more required to maintain the continued manuring of a good stand already existing, rather than to try the risk of obtaining another from the seed, on other land.

Besides the manuring value of the clover above the ground, there is another large proportion in the roots. These are large, and penetrate the soil deeply, and all remain to manure the soil. Bousisagrunt found, by careful trial of a certain space, (120 square yards) of an inferior growth of clover, that the roots alone made 1118 lbs. to the acre, when all the hay (two cuttings, as I infer from the context,) of that year made but 1810 lbs.—both products being dried completely. The quantity of clover roots contained 26 lbs. of an azote; or about one-seventh of the quantity of azote in the ordinary heavy manuring (27 four horse wagon loads to the acre,) given to the field from stables and barn-yard; and after fermentation, which was 180 pounds of azote. An average year's product of hay, of his farm, Bousisagrunt found to produce 78 lbs. of azote. Then the roots, in the above proportion, would have yielded 60 lbs. of azote—and the whole growth of clover, for one year, would yield 138 lbs.—or about three-fourths as much as the above named heavy cover of well fermented barn and stable manure.

The roots of plants cannot grow more than in proportion to the states of the plants above ground. Of course the roots of clover will not reach their full size and manuring value, if the crop is taken off, either by mowing or grazing, before being fully grown. From this, it may be inferred, that if clover is early and constantly grazed, so as never to attain much size, the roots will be as much dwarfed, and can give but little manure to the ground. But if the crop is allowed to reach full size, and is then mowed, or close and speedily grazed off, the roots will have also reached full growth, and are competent both to furnish forth another good crop speedily, and to manure well the ground by their subsequent death and decay.

"Bousisagrunt's" *Rural Economy*, &c. Am. Ed. p. 335 and 362-63.