## By M. MACLEAN.

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## AGREOULTURAL.

RECENT AND EXTENSIVE MARLING IN SOUTH CAROLINA.

Communicated for the Farmers' Register.

Columbia, S. C., Nov. 30, 1842. DEAR SIR :- It affords me great pleasure to comply with your request, to furnish you with a statement of my marking result of them so far as it has been ascertained.

I commenced in November last to mark

nah river. There is no marl on the place. er 13 hands and 2 mules lost to the crop. Ing, viz. My boat, which is a common pole boat, was built chiefly by my own people, and cost me about \$500, meluding their labor. There have been incidental expenses to the amount of about \$209 this year. Daring the year ending on the 8th of November, there were 85 trips made and about 93,000 bushels brought up. I think I can safely calculate on bringing up 100,000 bushels per annum hereafter, with the same force. I men. tion these facts that every one may form his own estimate of the cost of procuring set down all over that quantity to the mail under similar circumstances. M. calculation is that it costs me about two cents a bashel delivered on my bluff .-To one having marl on his own premises nearly the whole of this expense would be saved. I am enabled, by omitting to marked the corners of each acre. From of acres planted per hand. In hauling season advanced, the difference became from that period, which is at least a as they do in Virginia. Mr. Rudio, the author of the maring system, hauled 24 folder was palled on the 34 August, and loads of 51 bushels with each cart per after hanging two days and a half on the day a distance of \$47 yards; I have done but little over half as well. I use males however, and land being level carried 61 bushels at a load. I found the mules could not stand trotting back with the empty cart. The marl weigns about 105 Ibs. per bushel. My land was laid off in squares, so many to an acre, and a load dropped in each square. It was spread by hand; each negro taking his square, and carrying his marl on a board or in a small tray. A prime fellow can spread an acre in a day. But it is a hard task, and counting the gang round I have not averaged over half an acre for each work. er. The marl spreads best when damp. It will then yield to the hand, and lumps are in general easily crushed.

Shell Bluff is a bold chiff on Savannah river, over 200 feet high and in some places more than 100 feet perpendicular. Professor Vanuxem, who examined it some years ag , (see Farmers' Register, vol. vo. p. 70, and also vol. x. p. 487,) discovered 14 varieties of mark varying in quality from 37.2 to 93.4 per cent. of carbonate of time. In using the mart I have excluded the inferior as much a possible, and have not found the very best in any great quantity. I tested the quantity of carbonate of time in one speeimen taken at random from each boat load brought up this summer, and found the average of 34 hads to be 62 8 per cent, varying from 51 to 77. In every specimen there was a small proportion of of oxide of iron, and clay and sand, usually in about equal quantities. There were, no doubt, other component parts which I did not ascertain; but I satisfied myself that there was neither gypsum nor magnesia. The marl presents various appearances, being in color white, brown, olive, yellow, and violet, and in consist ence from sand to soft stone. The party

had been marled. At every working it ner as the experimental acres were, the 1833 av'gep acre in seed 505 lbs. manured. and until then the full effect of this marl | year, no account of it was preserved, and | 1812 " " cannot be known. A difference was ap. I do not know what it produced. parent in this crop between the effects of that spread early in February and that acres of cotton along the turn-row of the spread in the latter part of April.

the acre. Of these I planted 50 acres in was left unmarled, and 1, 2, and 300 bucorn on the 17th March, 50 acres in cot. | shels of marl spread upon the other turce. operations during the first year, and the ton on the 10th April, and 75 acres in It turned out however that the acre with cotton on the 22d April. These three | 100 bushels was inferior to the average of cuts are in the same field, and adjoining, the cut, while the other two were far subeing separated only by turn rows, yet the perior. I was deceived by the stalks vanced cotton was most affected, and the my plantation at Saver Bluff, on Savan. soils vary considerably. In the corn, I grown the year before. The two first laid off four separate acres along the turn. named acres being somewhat rolling, and fluence one way or the other. It is wor-I procured it from Shell Bluff on the same row, as nearly equal in quality as possible. the year a wet one, they produced as they of remark, that while all my other river, and had to boat it 12 miles up the | The one supposed to be the best was left | good cotton as the other two which were stream. It requires eleven prome hands without mark. The others were marked that. The unmarked acre was not much to man the boat I use, and when the river with one, two, and three hundred bushels of any superior to the one maried with is not too ligh they make two trips a respectively. It was all of the same 3.33 busiels, save that there was a spot week, loading and unloading themselves, boat load, and contained 51 per cent, of where folder stacks had stood in 1535-They bring about 1100 busnels at a load, carbonate of lime. This land has been 9, which produced nearly double the con-The marl is landed at a spot below high in cultivation more than one hundred ton of any other spot of the same size in water mark, and during the whole crop years. There planted it myself 11 of the either acre, and added probably 30 bs. to season two other hands and two carts are last 12 years, and sowed it in outs the the amount gathered from that acre .constantly engaged in hauling it to a place other year. I have given it three light The mart on these acres contained, like the particulars. From the facts I have proved Short Horn, as a specimen of the of security on the top of the blad. At coats of manare, the last in 1839. It is that on the corn cut, an average of 54 other times it is hauled directly from the la light, gray, sandy soil, of which the landing to the ficials. There are howev. following was the analysis before mar. find is of the kind commonly known as I can only add that my expectations for

Water le	st at	300	degrees	2 p	er c
Vegetab	ie ma	tter		3	
Silica	100	10	-	SU	
Alumina	ko			11	
Oxide of	iron			2	
Loss				2	
			-	-10	):)

This cut was in cotton last year, and my expectation was that with common seasons it would produce 12 bushels of corn per acre. And had I not kept the unmaried acre as a test, I should have credit or the marl. The corn came up badly, and suffered by the birds. The four experimental acres were cultivated precisely as the rest of the cut, and were distinguished only by the posts which green as swamp corn usually is. The stalk in dry and rather windy weather, weighed as follows:

À						I	crea	se.	Per cent.
	Unmail	ed	acre		250	lis.			
ĺ	Marled,	at	100	bushela	285	**	35	lbs.	14
į	••	••	210	**	314	**	61	••	25 6
١		••	31)	***	251	**	11	**	4.4
ï	220								

The corn was gathered on the 24th of October, being hooughly dry and having first. The following was the production shrunk as much as it would in the field. Toere appeared to be little or no difference in point of soun lness. It was shucked clean and measured in a barrel. The unmarled corn shelled out 2 quarts 1-ss to the barrel than the murled. The following was the result : Increase. Per cent

Unmarled acre	17	bush.		
Marled, at 100 bus	hels 21	**	4	23.5
2))	. 21	**	4	23.3
300	15		14	8.8
From this is	t would	app	ear the	it 100
bushels of mark	was as	effici	ic ous	is 200.
and perhaps in s	such lan	das	this sur	in mar
be the fact. It	appears	also	probab	do that
300 bushels to	the ner		lan min	at I
ought however				
had a slight sin	K in the	cen	tre, an	d that
the slopes arou	ina it i	re i	manit	ninuer
than the averag				
about one-fifth				
dently injured				
bad selection fe				
but at the time	it wa	s m	ade I d	id not
suppose, judgar	g by th	ie r	ites at	which
they marled in	Virgini	, the	1 300 1	nishels
would injure as				
that 200 bushel				
soil like this;				
determined to				
the acre bereaf				
effects. This				
productive seas	on for o	orn.	1 (11)	nk tue
unmarled acro	in this	cut	made a	t least
5 bustiel more	than it	wou	ild hav	e done
an Mage y	enr. I	pres	ume th	e mari.
liavo	done :	so 1	kewise	. But
U	ld be fa	ir to	attrib	ite any

hard limestone, and it is doubtful wheth of the four bushels increased to the pecu- after all of them except the 75 acre cut, is "native stock?" Here is the grand try, and crossing them with males of an It fails down sometimes in fine grains, ducting 5 bushels from the produce of and by the 20th of that month it had the It fails down sometimes to not good acree there will be 33; per cent. in appearance of a field after rest. Forms, sometimes in masses. At every handle cach acree there will be 33; per cent. in appearance of a field after rest. Forms, ing it breaks up finer, and exposure to favor of the ten best mirled acres. This small bolls, and even the leaves dropped. This is obviously his intention.) to take such animals as Mr. Rust's fat ox as specially acreed in the small bolls. however, would not notice that the land whole been measured in the same manis more and more mixed with the soil. produce would have appeared greater. I But I imagine it will be several years have had this cut planted in corn once [181] " " before it is completely combined with it, before, but having been absent the whole 1811 " " "

I selected also and laid off separately 4 75 acre cut of cotton. At the time I By the 22d of April last, I had marled | thought them nearly equal in quality, and the kindness of Prof. Ellet:

> Sinca Ox.de of iron . This cut was not planted until the 224 April, because it could not be marled be. fore. A dry spell occurring immediately after, at the end of two weeks very little acre in which there was about half a stand. My overseer becoming alarmed month later than I should have preferred. For my experience is that early cotton, like early corn, ss almost always the best. I consider the two weeks s art which one half the unmarled acre obtained in this instance as of considerable consequence to it. These early staiks could be distorguished until the bolls began to open. The difference between the maried and unmaried cotton was as obvious as it was in the corn. The leaf too appeared broader and the stalk stouter from the of thes: four acres, I state the ploduction of all, though that of the 1 and 200 bushels acres ought not to be compared with that of the other two, on account of

Water at 300 degrees

Vegetable matter .

the relative inferiority of the soil. The unmarked acre 1111 lbs. in the seed. M wled do at 100 bu. 846 " " at 200 " 1003 " " at 300 " 1315 "

The difference between the unmaried acre and that with 300 bushels of mari, was 17.7 percent, in favor of the latter. It would have been greater perhaps any other year than this, which has been almost as favorable for cotton as corn. The average production of the whole 75 acres was 966 lbs. per acre. I have had this cut in cet on 10 of the last 12 years; in corn 1, and in oats 1, and the following is a statement of its production of cotton for 6 of the 10 years; that of the other years not having been preserved.

1833 av'ge p. acre in seed 731 lbs. manured lightly. 1831 " 784 " 1835 " " " 951 " manured light(y. 1735 " .. 451 .. 181) " " " 497 " 500 " manured. 1842 " " " 966 " marled.

The other 50 acre cut of marled land was planted in cotton on the 10th April It came up in good time and was a fine stand. This is also a light gray soil, with less clay than the mulatto land, and less sand than the corn cut. It is probably as old as either, and has been cultivated in much the same way. Although planted

435 " 338 " 336 " manured lightly. 840 " murled.

I think the injury from the rust nearly cut than on any other, because the earli- 3,700 pounds; and it had been ascer-175 acres at the rate of 200 bushels to the one supposed to be the best of these est marled and most seasonably planted. | tained by repeated weighing, that his gain I am inclined to think that the most adyoungest least; and that murl had no incotton suffered from lice and the worm the marled land.

I have troubled you with this length.

it may be interesting to those who have animal which should show all the princistated, each one can form his opinion on per cent, of carbonate of lime. This hearly as good data as I can my own .-mulatto soil, and was clearly at least as the first year have been fully answered. cent. early as the corn cut. It was certainly I did not calculate on any of these magiplanted by the Indians in 1740. The cal results which agricultural experimentfollowing was the analysis of it before ers so often look for, and so seldom real. on Mr. Sotham's expression, given above, marling, for which, as well as for the an- ize to the full extent. I regard an in- says Mr. Bakewell made a similar experialysis of the corn cut, I am indebted to crease of 20 per cent, as a very handsome ment in England to that proposed by Mr. rearn, and if it only does as well another Randall, "and it is presumable with no year, I shall at all events be repaid for my better cattle to begin with than Mr. Ran- ferring this, I presume, to the somewhat 4.5 labor even if the beneficial effect of the dall might probably find among what is 74 marl ceases then. But the experience 14.5 of all who have used it is, that it continnes to improve the soil every year, until thoroughly disintegrated and combined with it; and that with proper culture it never declines from its maximum. Uncotton had come up except in the marled hopes, I shall continue myself to prose, only very good in themselves, but belonged cate the business vigorously during the to a race whose saperior excellence had summer. I have hauled mar! over 109 been long acknowledged. That under open new land, to hand out and spread the first however the marked corn exhibit. threw out the whole seed wherever it had to cover 300 acres more. My great regret improvement, is neither denied nor doubtin my absence replanted the whole, and acres, and have now at my landing enough his master mind they attained still higher Raffia's successful introduction of marl into the culture of Virginia. But I had not read his . E-say on Calcareous Manures,' nor examined Shell Bluff, until the summer of 1841. The idea of obtaining mar! from that spot was first suggested to me by my friend Mr. Dickenson, of Georgia; and after a carcini perusal of Mr. Ruilia's Essay, and an analysis of periodeat. I have, during the coarse of gunds of our common cattle have been it, received much encouragement and val. brought from almost every country and uable practical information from Mr. Ruffin houself, to whom, in common with all other beneficiaries of this inestimable cannot be easily cancelled.

I am, my dear sir, With great regard and esteem, Your chedient servant. J. H. HAMMOND HON, WHITEMARSH B. SEABROOK, Pres't of the State Agr. Soc.

" NATIVE," AND OTHER CATTLE. Messes. Gaylord & Tucker,--1 have read, with great interest, the first volume of the Transactions of the New York Agricultural Society; and with none of the more pleased, than with the one on " Neat Cattle," by Henry S. Randall, in which our climate and purposes.

prone to underrate our native stock," hair, man, and my word for it, he will never condescend to put his hand upon.'

er any of the marl here will make lime, harity of the season operating on the marl it soon appeared to be the oldest cotton, point; and they may as well dispute alien breed. Mr. Bakewell's good sense of that which I have used has been cut the increase from the season to be the same | Lamediately after the cold weather, about other species of animal which embraces

burn or pound it, or use any preparation per acre of this whole cut was Is bushels. been cut off one half. I think myself it comens of the scrub or "native" breed, it whatever, but spread it as I get it .- The measurement of all but the experi- suffered to the extent of one fourth at appears to me he would be under no ne-Where it was spread last winter, an ob- mental acres was made however by wag- least. But I have made on this cut this cessity of breeding till he is three score as large as an egg, and occasionally much thon estimate, in which there is a liberal nearly 50 per cent, more than I ever had an animal that a good judge would condelarger are to be seen. A mere passer by, allowance for shrinking, &c. Had the made on it before. The following is the seend to put his hand upon." While on average of its projuction for 4 other years. my late trip to the East, I saw this ox of Mr. Rust's. He is truly a most superb their size," animal. He has, both in shape and color, all the leading characteristics of a Hereford; his shoulders are well set, his chime full, back short, loin and hips very wide, rump long, legs clean and sinewy, and he or quite equal to the benefit derived from animal I ever saw of so little bone and the favorable season. And that the in- offal. At the time I saw him, Mr. Rust crease from the marl was greater on this thought his weight could not be less than The rust here was more injurious than was at least three pounds per day. Not in any other field, and I might have at withstanling his immense weight, he was, tributed it to the mark but that the 75 from the justness of his proportions, very acre cut also marked suffered least of all. When lying down, he would get up as quick as a sucking calf. I saw the man who said he raised this

ox; and the history which he gave of him, was that the bull which sired him was part Hereford." In this, both he and Mr. Rust agreed. I cannot see why this statement need be doubted; for accordboth, neither made their appearance on ing to an account which Mr. Bement has published, some Herefords were introduced into this part of the country several ened detail of my operations, because this years ago. But history and tradition out being the first serious experiment with of the question, it appears to me there marl in South Carolina (that I know of), would be as much propriety in taking an " native stock," us there is in taking this ox as such. An example of this kind would probably be regarded by the advocates of the Short Horns as not altogether

Your reviewer. Commentator, in the Oct. No. of the Cultivator, in his remark called the 'native breed' in New York." Now it may be pretty near true that which were not better than those which some have called native in this country; but from the best evidence to be had, it

fining himself to the common cattle of the same, without admixture, as far as we learn, for ages. Hence he might calenlate on a certain transmission of the qualities possessed by those he first selected, mark there, I determined to try the ex hereditarily, to their offspring. The oridistrict from which this country has ever received emigrants. These animals, so heterogeneous in their character, have to any distinct breed.

the "Long Horns," he says: "In the district of Craven, a fertile corner of the lands, there has been from the earliest repapers therein contained have I been valuable breed of cattle." At page 159 is given a portrait of a Craven bull, "sup. posed to bear about him many of the are many useful suggestions in regard to characters of the old breed." The porproduction of a breed or breeds suited to animal; one of the best in the book; the Mr. R. fears that too many are "too strength, with a neb, mellow roat of

said to have had the best stock of eattle times. With sincere wishes for the suc-There may be a difficulty, I confess, in then known." At pages 191, 192, it is cess of your paper, deciding such a proposition. In the first said, " improvement had bitherio been place, the premises should be understood attempted to be produced by salerting fe-10 days later than some other fields, and and admitted by the parties. What, then, make from the entire procedure to the tream

though it is an excellent cement. Much I am wholly unable to decide. Supposing and certainly matured the earlest of any. about the merits of British sheep, or any led him to imagine that the object might from the face of the cliff with pick-axes. on the marled and unmarled land, and deby any mixture of foreign ones. On this new and judicious principle he started -He purchased two Long Horned heifers from Mr. Webster, and he procured a promising Long Horned ball from Westmoreland. To these and their progeny he confined himself." \* \* \* "Many server would readily discover it, and lumps gon loads according to the usual planta- year 810 lbs. of seed cotton, which is years and ten, before he could "produce unrivalled for the roundness of its form, the smallness of its bone, and its aptitude to acquire external fat, while they were small consumers of food in proportion to

The object in making these quotations is to show that the ancestors of Mr. Bakewell's stock had been considered excellent long before he began his carcer as a breed.

In what I have said, I disclaim any intention to "underrate the native stock," but have been influenced only by a wish that the public may be set right in matters

SANFORD HOWARD.

Albany Cultivator.

From the Southern Plonter. GUINEA GRASS.

Along with some grass roots, for which we are indebted to the public spirit and politeness of Mr. Garnett, we received the following note:

Messis, Botts & Burroot:

Gentlemen .- I now send you the Guinea grass roots which your North Carolina friend requested you to procure for him ; and, with your permission, I will avail myself of this occasion to publish once more what I think of this grass, as I find that some of my good friends have attribated to me opinions which I never entertained. Not that I consider these opinions at all important to any of my brother farmers; but having once published them, and perceiving that some persons have thereby been induced to make a trial of the Gumen grass, I owe it both to them and to myself to guard them, if I can. from forming an erroneous opinion on the subject.

The good friends to whom I allude,

have called it "my favorite grass," pre-

ruder term- hobby," although it means pretty much the same thing. But the truth is, that if I must have a hobby-Bakewell began to breed with cattle like most of my brethren-it shall neither be of grass nor straw; and as to the grasses I have been content to rank them as those have done who have most experience in seems to me certain, that the animals with their culture. What I formerly said of der these circumstances, and with these which Bakewell began to breed, were not the Guinea grass I still think; and it is, that it will produce a greater weight of green food-counting the four cuttings which it will certainly bear, at an average weight of between two and three feet, in this mark, without interfering with other ed a different appearance. It was stouter not come up. This was done on the 6th is that I did not engage in the business ed; but that the originals were altogether any grass of which I have any knowledge.

This was done on the 6th is that I did not engage in the business ed; but that the originals were altogether any grass of which I have any knowledge.

This was done on the 6th is that I did not engage in the business superior to our common cattle, is plain, if I infer from this, it will yield a greater high, dry land, of ordinary quality, than plentation work, or lessening the number and of a much deeper color. As the deeper color. As the May, so that the crop of this cut dates sooner. I have long known Shell Bluff, superior to our common cattle, is plain, it is unattended and of a much deeper color. As the May, so that the crop of this cut dates control is unattended and of a much deeper color. As the dates control is unattended and dates quantity of such food, on high, dry land, The first great advantage which Mr. of any quality. I have also said, that it Bakewell possessed over any one who will stand drought better than our other might attempt a similar experiment, con- grasses, that horses and cattle eat it very freely, for I have seen them do so. How this country, was the fixed character of it would compare with other grasses in nuhis stock. Their leading points had been tritive properties I do not know, as none of them, I believe, have yet been analyzed in this country. It is certainly a coarse grass, if suffered to reach a greater height before cutting than I have mentioned, and therefore less suitable for hay than the grasses commonly used for that purpose. It is also hard to extirpate, but not more so than the red top, which is generally preferred to all others, for very wet land. From all these facts, then, which treasure, I owe a debt of gratitude which generally been bred in an indiscriminate. I have noticed for four years, I deem myhaphazard manner, until they have, in self authorized to say of the Guinea grass, most cases, lost all marked resemblance, that mail high, dry, and even sandy soils of ordinary quality, such as are unfit for Youatt, in the work on British Cattle, either clover, orehard grass, timothy, red gives a very interesting account of the top, or meadow out, it will produce a much stock from which Mr. Bakewell made his greater weight of green food than any of original selections. Under the head of them; that it will stand drought much better, and that horses and cattle cat it freely. But in all situations where the West Riding of Yorkshire, bordering on | climate and soil are well adapted to clover, Lancashire, and separated from West, orehard grass, and timothy, it might conmoreland chiefly by the western moor tent any farmer to cultivate no other kinds. Still, the knowledge of their excords of British agriculture a peculiar and cellence should not prevent small experiments with other grasses; for our maxim should be, that there is no stopping place for those who wish to acquire a thorough knowledge of husbandry in all its branches. the improvement of our cattle, and the trait conveys an idea of a most excellent Let your friend then, proceed to make a small experiment with the Guinea grass body and himbs indicating surprising roots, which I now send you for him .--They should be barried in the earth until the ground ceases to freeze in the spring. which he thinks "has produced animals. In 1720, it is stated that a blacksmith. Then cut the roots into pieces two or three that would suffer little by comparison with by the name of Wilby, commenced the inches long, and plant them in well prethose of any other breed." In some re- work of improving the Craven cattle, with pared land, between two and three inches marks on Mr. Randall's ideas, by Mr. some cows which he procured from Sir deep. Let the rows be twelve inches Wm. H. Sotham, in the Sept. No. of the | Thomas Gresley. "Soon after this," says apart, and place the cuttings in each row, Cultivator, is the following rather ultra Mr. Youatt, "Mr. Webster, of Canley, at the distance of eight or nine inches. expression: "He [Mr. R.] may select near Coventry, distinguished himself as a The plants will require working the first the best [of the native stock] if he chooses, breeder. He, too, worked upon Sir year; but after that they will occupy the and breed them until he is of the age of Thomas Gresley's stock. He was at con- ground to the exclusion of any other subtrable trouble in procuring bulls from growth, and will bear cutting at least four breed a beast that a good judge would Lancashire and Westmoreland; and he is times a year. In one season I cut it five

> I ramain, gentlemen, Your obedient servant, JAMES M. GARSETT.