

# FARMERS' GAZETTE

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EDITOR AND PROPRIETOR

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From the Southern Cabinet.

Notes on European Agriculture, by a Charlestonian.

### NUMBER TWO.

I stated in a former number, that in my opinion, England was in a higher state of cultivation than any other country in Europe. This is in part owing to the industry of its inhabitants—to the intelligence of those under whose direction the lands are cultivated—and not a little to the climate itself. The persons connected with agriculture in England may be divided into three classes. First—The owners of the soil.—These are, in the majority of instances, composed of the wealthy nobility. The property is usually entailed, and the laws of primogeniture assign it to the eldest son. He seldom cultivates his lands, but hires them out in large tracts to the second class—the farmer. This individual leases the land commonly for a term of seven years. He is usually well educated and intelligent, and is able to introduce those improvements in agriculture which the lights of science, and the experience of others encourage him to adopt. The manual labour is performed by the third class—the peasantry. These are usually poor and ignorant, and have scarcely any hope of rising beyond the condition of serfs. They are the cultivators of the soil from generation to generation, and the sons and daughters, in nearly all instances, follow the condition of their parents. This is the class, which, above all others, is most benefited by a removal to America. In England, provisions are high, and the price of labour cheap—in America, it is in general the reverse. Here, the industrious husbandman is soon rescued from a state of dependence and poverty. Lands in our new settlements can be purchased at a less cost than the taxes would amount to in England. Hence the difficulty of obtaining labourers on our American farms, will, for a long time, present a serious obstacle to our improvements in agriculture. Man every where struggles for independence, and he will not labour for others when he has so fair a prospect of becoming the owner of a farm. But the strange and wayward climate of England, unpleasant and uncomfortable, as it may be in many respects—may give us a clue to the secret of its fertility.—With the latitude of Labrador, its winters are less severe than those of Maryland.—Surrounded on all sides by contending oceans and currents, it partakes of their variable climate—it is land possessing the atmosphere of the sea. The Gull and Tern fly over it as if it were a part of their possessions, and the Solan goose and other seabirds not only nestle among the beetling rocks, but their notes are heard in every part of the island. Within three days sail of England, the fogs and drizzling rains commenced. My journal tells me there was but one day out of forty in which it did not rain during some portion of the day. I heard no thunder—nor did the rain fall in torrents as is often the case with us, but light showers were continually sprinkling the earth like heavy dew—then the sun would shine for half an hour, throwing its rays in fitful streams through the passing clouds, giving slight indications of fair weather, which soon ended in disappointment.—There is no calculating on a dry day in England. An umbrella is almost as necessary an appendage to an Englishman as a hat. It is no wonder that he is enraptured with the bright clear sky of Italy, for he was born among fogs, and has all his life time been looking through a haze. He judges by contrast. Others have told the tale of the azure skies and balmy air of Rome and Venice, and his imagination has been fired by the theme, hence he conceives no sun so bright, no air so soft. Had Carolina been as accessible and could he as easily have made the contrast, he would, if not blinded by prejudice, have admitted that no Italian sky exceeded that of our own Southern land. Men may boast of having climbed the Alps to see the sun rise from the mountain of Riga, or set in the Adriatic, yet I am either so prejudiced or old-fashioned as to believe that the poet or the painter may go to the ends of the world and find no fairer sky for the embellishment of a picture than that presented during summer, along our Southern Atlantic coast.

But to return to the foggy climate of England. It has appeared to me that these incessant slight showers in a high Northern latitude, (where the nights are so short, and the continuance of twilight so long, that I find it noted in my journal that I was reading by day-light at half past ten in the evening, and resumed my book at half past two—leaving but four hours of night)—contrib-

ute, in a considerable degree, to the abundant productions of the soil. The sun, during the long days of summer, imparts sufficient warmth to the nourishment of the plants, and these are continually kept fresh and green by nature's watering pot. It is true, the early part of the summer of my visit (1838), was characterised as rainy in every part of Europe, still it was not regarded in England as a very striking exception to their ordinary seasons. To the fogs and drizzling rains, together with the absence of too bright a light, I ascribed that rich dark green of the fields which I have never witnessed in any other country—the scent of the flowers was, for the same reason, stronger and longer retained—the groves were full of melody—the goldfinch and the thrush seemed to sing sweeter after every passing shower, and the skylark carolled high in the air, in spite of the drizzling mist.

But, in addition to a favorable climate, the soil of England has the benefit of a judicious tillage. I was particularly struck with the system, almost universally adopted in regard to the rotation of crops. It should be remarked that they never cultivate two successive crops of grain on the same field. Although physiologists have not been fully able to account for the fact, that the successive cultivation of grain or vegetables exhausts the soil, whilst a change to a different product does not impoverish the land to any considerable extent, yet it is now universally admitted, by all good husbandmen, that this is the case. Some have ascribed this to the exhaustion of the proper food of the plant in consequence of its cultivation during successive years, while DeCandolle, M. Caire and others have accounted for it to the doctrine that plants exude from their roots certain substances poisonous to plants of the same variety, which in time renders the earth unfit for their cultivation. (See January number of the Southern Cabinet, p. 17.) As *lupinus perdis* cloyed on the appearance of the Frenchman, so the treading earth longs for a change of food, and withholds her fecundity unless she be indulged. It has often been inquired why is it that a forest which has long been covered with a growth of pine, when cut down does not spring up again in pine, but in oak, gum, and hickory, and *vice versa*. The facts, in a majority of instances, are so. All plants spring from seed—there can be no spontaneous production. *Omnia ab ova* is a doctrine as old as the days of Linnæus, and nature has never departed from it. May it not then be that nature, after having for ages nourished one kind of tree, has exhausted the properties of the soil adapted to that kind of production, and when a new forest is to be created, imparts its influence to trees of a different kind, better suited to its present state, and withholding its fertility from that to which it is no longer adapted. Be this as it may, the English farmer acts on the principle of the necessity of a rotation of crops. The result from this and other judicious modes of culture has been an increase of three fold. In Carolina, we have adopted the opposite course. Many fields have been planted in Indian corn since the days of the revolution, and the result has been that we have retrograded from forty bushels per acre to eight and often less. I will now give the method of English culture in regard to the

### Rotation of Crops.

1st year. Fallow crop. Irish potatoes—beans or turneps. The potatoes, as is the case in high Northern latitudes, produce small stalks, and are consequently planted much nearer in the rows than with us.—Endless varieties have been produced from seed.

The beans, adapted to field culture, are the kinds usually called horse bean, (*Faba vulgaris*). Hundreds of acres are cultivated with this bean, and its numerous varieties, and the product is immense. It is used as food for cattle. I have never known it to thrive equally well in any part of America, probably owing to our warm summers. In our Southern States especially, the pods in general do not fill well, and I doubt whether it is calculated to be a productive crop. There is, however, one variety from the South of France, called the Winter Bean, (*La Feverole d'hiver*) which is remarkably hardy and prolific. It is planted late in autumn, and stands the winters of France and England, and might be experimented on, as a winter crop, when nothing else can be cultivated with us, and it would not interfere with the crop of the following spring. The Hungarian bean—Purple Field bean—and Alexandria Field bean, are also varieties which the agriculturists of England and France recommended to me as probably well adapted to winter culture in our Southern climate.

The turnip crop is considered as the most valuable in England for feeding cattle.—These different productions, however, require to be noticed under separate heads. I will endeavor to return to the subject in a future number.

2d year. Wheat—the varieties are yearly increasing. At present the kinds cultivated almost universally in the higher grounds and lighter soils of Scotland, are the Golden Drop and Blood Red. The skins are thicker in most other varieties, and they yield more bran. These varieties would, I think, answer well on our elevated mountainous regions. The average crop is said to be about fifty bushels to the acre. In the Lothians—the Carse of Sterling, and in the low rich soils of England—in Denmark—and the alluvial soils of Germany, I remarked that the varieties called Uxbridge and Hunter's wheat, were most cultivated, and considered most productive. The yield

is from fifty to sixty bushels per English acre—the average weight per bushel is from 62 to 73 lbs.—the finest, 65 lbs. The Mengoswell's wheat is a variety of Hunter's and is cultivated on the Carse of Gowrie as a superior grain. Three new varieties have been very recently introduced: The Wintoning wheat from the South of England—the Chavelier wheat from France—and the Hackings—the latter is white in straw, but yellow in sample. Rye is not cultivated. Grass seeds are sown in the fields of wheat in the month of April.—These are red clover (*Trifolium pratense*) and Rye grass (*Lolium perenne*) and *Itahqua*. Calves and sheep are allowed, in autumn and winter, to feed on the young grass.

3d year. This is a Grass crop—usually a heavy one. It is sometimes cut twice, but usually only once a year, and serves as pasturage in the fall. 4th year—A crop of Barley or Oats is now raised. This is once more succeeded by a fallow crop. In this manner crops succeed each other by fours in good lands, or where the soil is inferior, another year is added for grass and pasturage—affording a wheat crop only once in our five years, but producing in the mean time other articles equally valuable to the farmer.

From the Franklin Farmer.

### VIEW OF THE PAST, AND MEANS OF IMPROVEMENT.

That farmers at the present time have within their power the means for a more rapid advance in their profession than was enjoyed by those of fifty years since, is a generally admitted fact. The object of this essay is not to establish this fact, but by the enumeration of some of the means which our reach, to enable us to decide whether we actually ourselves to the extent that we might and should, were their importance properly appreciated. The age in which we live is one of movement; and though farmers, as a class, are the last to be infected with the spirit of change and innovation, it would have been surprising indeed had this honorable employment of so large a portion of mankind, been so long to rest without availing itself of the benefits which science and experience have furnished. The grand fact that the earth, through the operations of the farmer principally, is the great source of wealth, had long been overlooked; and when, by progressive advancement in civilization this truth was understood, it was not once obvious, that to foster and encourage agriculture was a paramount interest of society. When a knowledge of the necessity of agriculture to the increase of wealth, began to assume a place in the estimation of the community, to which however justly entitled, it might formerly have looked in vain, as no such claim would for a moment have been allowed.

The application of science to agriculture, was one of the first benefits which the business of the farmer received from a proper estimate of his employment. Formerly the farmer was compelled to plod on in an unvaried routine, he being presumed to understand by nature or by instinct, all that was necessary for the cultivator of the soil to know. The reasons for the processes he employed; the cause of the various phenomena of animal and vegetable nature; the why and wherefore of the changes continually going on before him, and for the observation of which no man is more favorably situated than the farmer, were held to be beyond the acquisition of one occupier of the soil, not easily understood, and useless if known. Science placed her torch in the hands of such men as Davy and Chaptal, and its light dispelled this delusion. Chemistry, by its powers of analysis showed the nature and composition of soils; the proper kind, time and value of the several varieties of manures; the mode and means of nutrition, and with the knowledge of these came the power of supplying wants where they were found, and correcting deficiencies where they existed. We do not mean to say that manures were not applied to soils and good crops occasionally raised, before the investigation of science, and been directed to agriculture, but the whole business was one of uncertainty, and most always have remained so, had not the causes that produced these favorable results been shown, and the means of repeating them at pleasure placed in the hands of the tiller of the soil.

While the public mind was thus awakening, and science was beginning to lend her aid; men of enquiring minds, practical farmers, commenced a series of experiments, which embracing in its advance the whole circle of agriculture, and continued with increasing zeal till the present time, has afforded the greatest benefits and placed within reach of the farmer one of the surest means of unlimited improvement. Well conducted experiments that is, experiments based on a knowledge of the ends to be obtained and the surest means of arriving at them, now constitute the most effectual means of advancing agriculture; and in every country are to be found men who are engaged in carrying them forward with a success that equals every reasonable anticipation. That every man who owns, or tills the soil, should engage in what may be termed experimental farming, is not to be expected or perhaps desired, though there is no one who must not at times feel the necessity of adopting new modes of culture, or who may not have experienced the benefit of doing so. A greater degree of attention and care than can be usually bestowed by the common farmer, is required to conduct experiments to useful conclusions, though as observers of facts, they can render the most essential

aid to those who have means and leisure to attend more strict investigations. In the accumulation of recorded facts, the result of these continued and multiplied experiments, the modern farmer has a means of advance already given him of the greatest consequence.

A better understanding of the laws that regulate the improvement in the breeds of animals, and the increased productiveness of plants have furnished one of the most efficient means of advance as well as of profit. It has been stated as the result of this attention to breeding animals, that the average weight of the cattle slaughtered in London, or sold at the Smithfield market, has increased full one-third in fifty years, and that the difference in the mutton is not less than that of beef. A house in Boston, that has for a number of years slaughtered the number of five or six thousand head of cattle annually, state that the increase in weight for the last twelve years, has amounted to ten or twelve per cent; and as the average weight of the animals is about 900 pounds, there has been of course an average gain of about 100 pounds on each animal within the time stated. These facts are sufficient to prove the immense importance to the farmer of improvement in stock, and show him the way in which still further advances may be made. Nor has the improved state of quality and quantity of the grain grown at the present day been scarcely less decided than that which we have noticed in beef. Forty bushels of wheat, and one hundred bushels of corn, to the acre, are common now in thirty of the first or eighty of the last years, but a few years since; and the fact of such crops not being often produced, does not militate against the theory of improvement; it only establishes the truth that the farmer is too slow in seeking the means of advance in agriculture, or negligent in availing himself of them when pointed out.

The great advances in the mechanical arts, by producing more perfect implements of agriculture, and enabling men of genius to carry out their plans in constructing new machines, have added further facilities to improvement, and means, which fifty years since, could not have been found, are now every where at command. Thus we have only to look at our light, beautiful, easy working east iron plough, and compare them with the heavy, unwieldy, ill looking and worse working ploughs of our predecessors, to realize in part the difference that exists between the former and the present times in this important implement.—The superiority of the hoe-fork in all its varieties, scythe, cradle and rake, is not less manifest. The horse rake, by which one man performs the work of a dozen, the drill, so indispensable in the cultivation of roots; the reaping machine, by which the grain is cut, threshed, cleaned, and delivered in the field fit for the miller; the cultivator, by which the labor of hoeing and dressing corn and root crops is reduced at least one half; the roller, so necessary to good husbandry, and in short the multitude of improved implements now in use, but which a short time since were unknown, furnish undeniable proof of the increased means of progress the farmer at the present time possesses.

Agricultural societies have been found among the most efficient agents in promoting agriculture, and at the present day there are constantly increasing in number, activity and constant usefulness. The grand principle of association for the accomplishment of great objects, have received no better proof of its potency than is given by the history of most of the oldest of these societies. Agricultural societies bring farmers into a beneficial acquaintance with each other; they teach the best methods of accomplishing the several processes of farming; they bring to the knowledge of the many, the most valuable plants, the choicest animals, and the most approved implements. They stimulate inquiry, they invite discussion they reward care and research; and at the meeting of these societies, the hands of brotherhood, and a strong feeling of attachment to the pursuits of the farmer, naturally arising out of a congeniality of interest, are created or materially strengthened. From these associations arise the undispersed benefits, and interchanges of opinion, in regard to agriculture may be said to have originated another and most important auxiliary in the cause of the farmer, which, as a means of improvement, is second to no other; one which may be said to belong almost exclusively to the present age; one which already exercises, and which must continue to exercise, a boundless influence on the cause of agriculture. We allude of course to the Agricultural Press.

Other classes of men had long employed the press to advance their claims, promote their rights, disseminate a knowledge of their principles, promulgate their views, diffuse necessary information, and serve as a kind of chain to bind the scattered members of the pursuit or profession into a community of interest and feeling. The agriculturist long neglected this obvious means of improvement and his case, as in many others, who he cared not for himself no one cared for him. There existed a tacit understanding among most of those in other pursuits and professions, that knowledge was not necessary to a farmer—(but all information he requires comes by instinct)—that science could do nothing in aid of the tiller of the soil; and in this disposition of matters the farmer for a long while seemed patiently to acquiesce. At last came inquiry, and with it the desire for information; the experience of others was sought, and when obtained there was no rest till the

"whys and because" were also given. Books could not circulate extensively or rapidly enough to meet demand for agricultural knowledge; the sower, once so powerful against book farming, was disregarded; facts demonstrated the utility of science in farming as well as in other pursuits; the necessity of mediums of communication between farmers became apparent, and the periodical agricultural press had its origin. That well conducted agricultural publications are the most efficient means of promoting good husbandry in a country, will scarcely be questioned by one who has watched their operation, or noticed the change in the agricultural state of the country that has taken place since their introduction. To be without the receipt of one or more periodicals of this kind, is a practical admission by the farmer that he is behind the age, and that his system of culture is of an old fashioned and inferior kind, and an examination of his farm and its products, will be found usually to confirm the impression. A paper which gives monthly a history of the opinions, or details the results of the experience of hundreds of the ablest, best informed, and most successful farmers of the country, cannot fail to interest and instruct. Where is the agriculturist that would not esteem it a privilege to spend an evening with any half dozen of these, and listen to their opinions or their facts; and this privilege a well conducted and well supported paper will give him monthly, and allow him at the same time to change the conversation and the speakers as it were, at his own pleasure. Of all the means which the intelligence, experience and genius of the age has invented or introduced for the aid of agriculture, there is none more effectual, less expensive or more decided, than agricultural journals.

Agricultural schools deserve, and would have received a prominent place in this notice of the means within the reach of the farmer to advance his interests, but the subject has been so ably treated in a late number of this paper, that further remark would seem to be superfluous. The experience of France, Russia, England and Ireland, demonstrate their utility; the testimony of Follenberg, Von Thuer, Dombasle, Youatt, Faraday, and a host of other distinguished men, is decisive in their favor; and we shall hail it as a proud day for the agriculture of our country, when such schools, either by public or private magnificence, shall be established among us.

### From the New-England Farmer, GROWING INDIAN CORN.

As this is one of the principal staple products of the agriculturist of New-England, I believe the result of my crop of corn, together with the method adopted for its production, will interest many of your readers. The piece of land upon which my corn was raised, has been accurately surveyed by Mr. L. Ammidown, and was found to contain one acre, one rood, and four rods. [See certificate.] I may be proper to state that this survey includes only the land which the growth of corn occupied, and was not measured from wall to wall but the lines were run upon the outside rows of corn.

The corn in the ear which grew upon this lot, has been accurately measured in the presence of the Hon. Linus Child and Moses Plimpton Esq. whose certificates are subjoined. The quantity thus measured amounted to two hundred and fifty-eight bushels. I have since caused one and a half bushels of these ears of corn to be shelled, agreeable to the above measure, and find that a bushel and a half of ears yields seven half pecks of corn, which would make in the whole 150 1/2 bushels of shelled corn. But a deduction should be made for the greenness of the corn, it not being yet sufficiently dry to be called marketable; how much it will shrink I am not sufficiently experienced to form a correct estimate.

The soil which I cultivate is what geologists call *Gneiss*; it contains a small trace of clay, and abounds in iron: no lime can be detected; it has more than the usual attraction for moisture, and in its natural state, was called by farmers cold, moist land—the produce of which ten years ago, was not worth twentyfive cents to the acre. It was subdued and brought into mowing by myself, about eight years ago, in which condition it has remained—a mowing lot, without manure or cultivation, until about a year ago, when it was simply ploughed. About the first week in May it was harrowed, and twentyfive loads of long or green horse manure spread over it. It was then ploughed as it could conveniently be done; then harrowed again with a horse harrow, and seven loads to the acre of fine fermented manure which had lain in a heap during the winter, spread over it and ploughed in lightly with a horse. The land was then furrowed one way only, with a space of three feet and ten inches between the furrows; seven loads of fine manure to the acre was put in the hill, at about the distance of two and a half feet. The corn was planted upon this small quantity of manure on the hill, on the tenth of May—five or six kernels to the hill.

The corn was hoed (ploughed but one way) three times, in the old fashioned way, by hilling up, on the tenth and twentieth of June and first week in July. The sex monthly production is to be accounted for partly by the manner of cultivation and partly by the kind of corn that was planted. In the first place, it is necessary from the shortness of our seasons, to select a kind of corn that most prolific and which will ripen in the shortest space of

time. Again, the land and manure should be adapted to the immediate wants of this tender plant from its first germination. It is well known to agricultural chemists, that the best and only proper nutrient for seedling plants is guano, decomposed in public matters. Now it will be seen that this method of agriculture is well adapted to the soil. The manure was put in the hill, in a soluble state, and the first wants of the tender plant. The second spreading of guano was calculated to operate in a similar manner, after the corn roots had expanded to their farthest extent and exhausted the soluble guano in the hill; the green or long manure, which was first deeply ploughed in, would become decomposed, and the guano rendered soluble and fit for assimilation by the corn at the time of its earing and filling out.

At the time of hoeing, I prefer the plough to the cultivator, for this reason—that it elevates the hill; I have observed that a hill of corn on my land that is raised above the general average height, yields the largest corn; while one below the average, generally yields small corn.

At the third hoeing the plough sinks into the subsoil and brings the guano within reach of the shorter roots of corn—while at the same time in hoeing, the subsoil completely covers the soil and manure, preventing the same from evaporating and drying during the hot weeks in July and August. Or should a superabundance of rain fall, the gutters are cut away only by the plough to carry off the water.

The kind of corn which I planted, I consider to be the best adapted to our Northern latitude, of any that can be found. It contains eight rows of kernels, is of a beautiful golden yellow color, producing occasionally three, and very frequently two ears on a stalk; the cob is comparatively small as will be seen by the average of shelled corn to the bushel of ears; the kernel is deep and large—quite heavy—fifty of the largest weighing an ounce. I have no particular name for this corn.

SAMUEL HARTWELL.

I hereby certify that I surveyed the ground for Dr. Hartwell above referred to, and found it to contain one acre, one fourth and four rods.

LUCIUS H. AMMIDOWN, Surveyor.

We certify, that we were present at the measuring of Dr. S. Hartwell's corn, above referred to, and found it to be two hundred and fifty-eight bushels of ears.

LINUS CHILD, MOSES PLIMPTON.

Southbridge Oct. 17, 1839.

### THE PRESS.

In answer to a great many enquiries from different sections of the country, in reference to Baldwin's Cotton, Hay and Tobacco Press, we are authorized to say, that they are building these presses at the "Savage Factory," near this city; the Cotton Press will be shipped to the South in a few days. Arrangements are making to exhibit the Tobacco Press at the meeting of the Tobacco Planters at the city of Washington on the 1st of they next, when and where the inventor believes the Tobacco Planters will be able to contract with his Agent J. S. Skinner, for a far better article for this purpose than was ever before offered in this city or any country. Am. Farm &c.

### TABLE FRUITS.

The neglect to cultivate and provide choice table fruits, is the scandal and sin of the Southern States.—Yet what a field it opens for wholesome and even classical entertainment and exercise of both mind and body! Can any young gentleman, bred in the country and expecting to live in it, and to cultivate the soil, pretend that he has nothing to read or to do, while yet he is ignorant of the indigenous country, the varieties and the history of all the various berries, cherries, grapes and other table fruits? Such knowledge is not only useful, but highly ornamental and praiseworthy to the professor. If any doubts a connection with classical reading, let him peruse in the old volumes of the American Farmer some series of papers on the history and culture of fruits, taken from the Albany Argus, and being the fruit of the elegant erudition of Gen. Armstrong.

We have said, writing in great haste, as we are ever forced to do, yet we believe with truth, that the scarcity of choice table fruits is scandalous to the Southern States.—Many there are who are so engrossed in the cultivation of a few staple crops for sale, that the delicacies and fruits of the garden and the table are considered as unworthy of regard. An Irish potato, a drum-head cabbage, a hard red apple, and a peach, all stone and worms, nearly makes up their collection.—There is not one farmer or farmer's son in one hundred, who leans a graft or to bud—or who can tell, one apple pear, or plum, or grape from another, when he sees them. Yet how could their leisure moments be more honorably employed than in studying the art of grafting, budding, and improving the products of the nursery and garden—studies which have engaged and immortalized the most accomplished men of antiquity. There are many of our farmers and planters, it cannot be denied, who select and order many choice fruits from the long catalogues of professional nurserymen; and these are planted