SB 191

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A SMALL TRACT
ENTITLED A
CANDID AND IMPARTIAL EXPOSITION
OF THE
*Various Opinions on the subject of the Com-
parative quality of the*
WHEAT AND FLOUR
IN THE
NORTHERN AND SOUTHERN SECTIONS
OF THE
UNITED STATES,
WITH A VIEW TO DEVELOPE THE TRUE CAUSE
OF THE DIFFERENCE.

TO WHICH ARE ADDED

Instructions showing how to improve the character of the
NORTHERN Flour to an equality with that of the South;
and preserve the latter from that depreciation which, in some
places, it is of late so evidently undergoing;

IN A LETTER FROM

JOHN C. BRUSH, OF WASHINGTON, DISTRICT OF COLUMBIA,

TO

SAMUEL LATHAM MITCHILL, L. L. D. OF NEW-YORK.

“There is no need to fetch from Mythology and uncertain Histories, the
“origin of a thing which may be found in nature; and the most learned writers
“who have looked for it out of nature have not been satisfied with their inquiries.”

WASHINGTON CITY:

PRINTED BY JACOB GIDEON, JUNIOR.

1820.

DISTRICT OF COLUMBIA, to wit

L. S. *****
BE IT REMEMBERED, That on the twenty-fourth day of November, in the forty-fifth year of the Independence of the United States of America, A. D. 1820, John C. Brush, of the said District, hath deposited in this office the title of a Book, the right whereof he claims as author and proprietor, in the words following, to wit :

" A Small Tract entitled a Candid and Impartial Exposition of the various opinions on the subject of the comparative quality of the Wheat and Flour in the Northern and Southern Sections of the United States, with a view to develop the true cause of the difference ; to which are added, Instructions showing how to improve the character of the Northern Flour to an equality with that of the South ; and preserve the latter from that depreciation which in some places it is of late so evidently undergoing ; in a Letter from John C. Brush, of Washington, District of Columbia, to Samuel Latham Mitchill, L. L. D. of New York."

" There is no need to fetch from Mythology and uncertain histories, the origin of a thing which may be found in nature ; and the most learned writers who have looked for it out of nature have not been satisfied with their inquiries."

In conformity to the act of the Congress of the United States, entitled " An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies during the times therein mentioned ;" and also to the act, entitled " An act supplementary to an act, entitled 'An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies during the times therein mentioned,' and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints."

In testimony whereof, I have hereunto set my hand, and affixed my seal of office, the day and year above written.

EDM. I. LEE,

Clerk of the District Court of the District of Columbia.

The following alterations have been made by the Author since these pages were printed : two or three, however, are errors of the Printer.

Page 2, *circumstances* for "circumstance." Page 9, *tires* for "ties." In the same page, a *comma* after the word "pass." Page 10, *ply* for "fly." In the same page *scene* for "scenes." In the same page, *the* for *tho'*, and *due* for "dew." In the same page, a *capital* for a small letter to the name of "Young." Page 11, the word *it* to be inserted between the words "that and is." Page 13, *obviously* for "obvious." Page 14, the word *from* to be inserted before the words "the kindly snows." Page 15, *least* for "last." Page 20, *careful* for "useful." Page 32, the word *then* to be erased. In the same page, *former* for "farmer." Page 33, *cul* for "but." In the same page, *beasts* for "beast." Page 34, a *comma* for a period after the word "maturity." Page 42, the words *was manufactured* to be inserted after the words "now spoken of." Page 44, *chimneys* for "chimney."

ADDRESS.

*Respected and much beloved
fellow-citizens of my native state;*

AS you had the services of my *early*, so now I tender you those of my *latter* years. And as, from the very low and exhausted state of my body and mind, produced principally by the circumstance of extreme suffering under which I prepared this work, as you will find stated in my letter to my friend, Dr. Mitchill, I have too much reason to conclude, it will be among the last of my labors in the cause of the public, I am the more anxious to get it before them as soon as possible, in the best manner I can in my present situation.

As to the importance of the subject of this *little humble* essay, particularly to the great interests of our native state, you all must be too well satisfied. It cannot be better set forth, than it is in the late very learned and able *Memoir* of Benjamin U. Coles, Esquire ; a highly respectable member of one of your principal Agricultural Societies, on the same long agitated question. He states, in the following language, that, "Calculations might easily be made to

“ show, that if our wheat should improve so as to be
 “ equal in quality to Virginia wheat, or worth two
 “ shillings per bushel more than it now is, our state
 “ would receive an increase of income of at least five
 “ hundred thousand dollars per annum, besides
 “ bringing back to the city of New York, the wheat
 “ and flour from the Southern states, and the pur-
 “ chasers and sellers, with their concomitant advan-
 “ tages, which she has lost or driven away, by the
 “ miserable short-sighted policy, pursued for a num-
 “ ber of years past.”

Again, he says, “ Wheat is the most nutritious,
 “ the most salubrious, the cheapest, and most eco-
 “ nomical of all the food consumed by man, whether
 “ animal or vegetable ; and the more delicate it is,
 “ the more is its use economical and wholesome.”

To show still further the great importance of which
 this subject is considered, I will add a brief obser-
 vation from an address delivered by the honorable
 William Tilghman, L. L. D. Chief Justice of Penn-
 sylvania, to the Agricultural Society of Philadelphia,
 in January last. He says—“ Perhaps some fortu-
 “ nate observer may let us into the nature of that
 “ scourge of agriculture, known by the name of the
 “ *Hessian fly*, so that we may get rid of it, as we did
 “ of the Weavel fly, some forty years ago. Such a
 “ man would deserve a statue of gold, and I think
 “ the farmers would gladly erect it.”

Respecting the merits of this performance, I can
 only say, that whatever may be thought by the *criti-
 cal* and *fastidious* reader of the style and manner of
 it, I am conscious of its being honest and faithful ;

and am perfectly satisfied in believing that it discloses the only real cause of what has been so long, and so universally a source of mortification and complaint among the inhabitants of the North ; namely, the inferiority of your flour, when compared with that of the South. Otherwise, be assured, I should never have thought of risking my reputation, humble as it is, in appearing before the world on a subject which has not ceased, for so many years, to excite the most lively interest, and to engage the attention of the ablest; the most laborious investigators.

Nor should I, even now, merely on the strength of my own private opinion, confident as I am of its soundness, have ventured a publication of it, had I not for my support of this opinion the strong corroboration of that of men, on whose correct judgment and acknowledged candor, the world will always rely.

I have, therefore, wishing to afford the public mind the fullest satisfaction, given, as you will see subjoined to this address, the high sanction to my attempt of two characters of the first respectability in your state, or of the present age, not only for their extensive acquaintance with the various arts, sciences, and improvements ; but more particularly for their practical observations, and long and strict attention to rural pursuits and domestic economy.

Many others, *farmers, millers, flour-merchants, and literary gentlemen*, of high reputation, to whom it has been submitted, have given it their decided approbation.

As it is, then, this performance is dedicated to the virtuous, intelligent, industrious, and enterprizing

yeomanry of the state of New York, with all those fond recollections—all those pure and ardent sentiments of pride, love, and devotion for his fellow citizens of his native soil, which inspired the breast of the author from his earliest days, and which no change of time, place, nor circumstances will ever have the power to vary—No ;

Though more than twenty years *twice* told had pass'd
 Ere he his native spot to see was bless'd :
 Though *far* and long from it compell'd to roam,
 He owns, he knows on earth like *it* no home.

JOHN C. BRUSH.

WASHINGTON, *November*, 1820.

NEW YORK, 24th April, 1820.

John C. Brush, Esquire.

DEAR SIR,

In the memoir you read to me a few days ago, on the subject of wheat, and of the flour manufactured from it, I thought that you had contemplated the grain of that species, as produced on the lands watered by the Hudson, and those bordering on the Potomac, in an interesting manner, and different from any thing I had heard before.

As your observations were practical, and calculated to improve the quality of a great article of domestic produce, I was serious in my request that a performance which seemed so excellent, should be published in Mr. Southwick's widely circulating journal of husbandry and rural affairs, the *Plough Boy*. I presumed that such a disquisition printed at Albany, the centre of the wheat country, would be generally read by the farmers, for whose information it was written.

Your experience as a cultivator, at one time of your life, near the Mohawk, and at another, in the vicinity of Duck Creek, (now Smyrna) has enabled you to know the management of wheat both in New York and in Delaware; and if you can induce the rural economists of the North to imitate the method of reaping and harvesting adopted in the South, I am satisfied the grain raised and prepared by the *former* will be in all respects as good as that produced by the *latter*.

Let me request you to revise your manuscript, and prepare it for the public eye as soon as you can. It will form a very useful sequel to the pamphlet of Benjamin U. Coles, Esq.; and more, it will be in season for full consideration before the present crop shall be ready for the sickle.

Truly yours,

SAMUEL L. MITCHILL.

Having perused the essay referred to in the above, I coincide fully in the opinion expressed by Dr. Mitchill, as to its general merits. I think the author deserves great credit for his originality and ability—and have no hesitation in saying, that, in my opinion, if the suggestions of Mr. Brush should be put in practice, they would tend greatly to improve the quality and raise the character of our Northern wheat.

THEODORUS BAILEY.

NEW YORK, *April 25th*, 1820.

ALBANY, *September 11th*, 1820.

DEAR SIR,

Will you do me the favor to furnish for the *Plough Boy*, a copy of your essay on wheat? Dr. Mitchill has spoken to me very highly of it; and I am very anxious to present it to my readers.

With high respect, sir, yours,

S. SOUTHWICK.

John C. Brush, Esquire.

HARVEST SCENE OF THE SOUTH.

Ask ye when harvest comes? go *nature* ask,
Your mighty doubts to solve, be her's the task.
'Tis her's alone of times the signs to give,
When we her choicer bounties may receive. (*a*)
Her course *unchanged* pursue, she'll tell you *when*:
Break, then the trammels of *inthraling* men.
For what, I ask, would prejudice not do,
'Twould damn our *souls, estates* and *bodies* too.
To nature, then, once more I say, her plan
Should ever be the guide of erring man.
Impatient for relief, midst her last throes, }
By indications strong she ever shows }
A *lingering, tedious* death she disavows. }
In man, in beast, in plant, alike confess'd,
When life once ties, in death alone she's bless'd.
Her strong desires, hence tend, and then ye'll prove
The fix'd, the eternal pleasures of her love.
But, once her times, her seasons *pass* no more,
Ye hail again the promised, favour'd hour.
No more her joys she yields;—she's none to give.
Can she, I ask, the "*death of deaths*" survive?
Her calls, then, hear, nor heedless of her moan,
Let all unite her last fond wish to crown.
What time the head inclined, not *fall'n*, ye see,
All other cares dismiss'd from all set free;
With *man*, with *woman*, *child*, the field then take,
Nor want of gen'rous cheer through avarice lack:
The sacred rights of *Ceres* first perform'd,
And every breast by Heav'n all bounteous warm'd.

With gentle stroke the yielding grain then fly,
 Ah! leave it not "a thousand deaths to die."
 The hour thus given then seize the scenes to close,
 Nor nature cause her choicer powers to lose.
 Do we, when sunk in years, for death intreat?
 So do our *fruits, grass, pulse, our corn, our wheat.*
 For nature, to her works for ever true
 From all demands tho' tribute to her dew.
 Her laws, her works throughout all parts pervade,
 Nor less for *insect, plant, than man* were made:
 'Tis one *Great Soul* the universe inspires!
 From that spring, all those native, lasting fires,
 Which warm and animate the *greatest, least*
 Of all the works that God has made and blest;
 And, when no longer here they live and burn.
 To their Great Parent all again return,
 No more diversified, estranged and spread,
 To live and love, in one eternal head.
Pythagoras thus taught—so *young* believed,
 The thought how *great, divine, how well conceived!* (b)

NEW-YORK, *April 19th, 1820.*

Samuel L. Mitchill, Esq. L. L. D.

DEAR SIR,

In the above rude and hasty lines will be found the
 substance of the following communication. There is
 nothing in it of art and speculation. It is purely
 the work of nature; plain, simple, and unadorned;
 and permit me to say, springs intirely from an act of
 your own good will. For, I declare with a sincerity

in which it is impossible for me to mistake, that is induced solely by the very kind and respectful manner in which you were pleased to receive, and honor the few brief remarks I took the freedom incidentally to make to you, on what I supposed to be the cause of the inferiority of Northern flour in the United States, in one of our usual, free and extended conversations, with which I was lately favored with Mrs. Mitchill and yourself at your friendly, hospitable fireside.

This opportunity, so politely afforded, is the more grateful, as it at once favors a more full and unre-served expression of the opinions I then suggested, than probably I otherwise should ever have made. For, who, I would ask, as tired of preaching, as I by this time may well be supposed to be, would so easily consent to croak out his few remaining days to those, who either *cannot*, or *will not* hear, read or understand?

It is, then, no slight relief to my mind, so long fatigued and vexed in this way, to be assured, as I am, that I now communicate with one, who, while he has patience to hear, and intelligence to discern and judge, possesses at the same time candor to spare, and friendship and patriotism to cherish the feeblest, humblest effort in aid of the great cause of community, to the best and highest interests of which he himself with all his talents and zeal, has been so long, and so usefully devoted.

Impressed then, as I am, and as you declared yourself to be on that occasion with the high importance of the subject to the public generally, and

more particularly to our fellow citizens of this our native state, I beg leave respectfully to state for your further consideration, and more at large than the limits of an evening's conversation, interspersed with other topics, would allow, the facts, observations and reasonings on which the opinions I then advanced to you have long since been fully and decidedly founded.

In treating this question, observing very much the order pursued in our late conversation, I shall :

I. Briefly animadvert on the several causes alledged for the inferiority of the Northern flour in the United States, and endeavor to show their utter incompetency to produce the effect required, to be accounted for : and that it is of no small importance to arrest the progress of all those loose, vague and unfounded notions on this subject, which, instead of enlightening and satisfying the inquiring mind, can only serve to bewilder, confound and distract it in a vain pursuit and thereby unfit it for an understanding and acknowledgment of the true cause.

II. I shall respectfully submit what I have long conceived to be the only true and satisfactory cause, of the inferiority of Northern flour : namely, the damaged state of the wheat, sustained in consequence of suffering it to remain too long on the ground before it is cut, after it has arrived to a full and perfect state of maturity—that is, until, according to the strange language of the North, it is “dead ripe,” which, to be sure, can mean nothing less than that it is ripe *even unto death*.

III. Give those sure and infallible indications of nature, by which she points out that precise stage of

full and perfect maturity in the wheat crop, when, as she does in others, according to her fixed and universal laws which govern all annual vegetables, it is not only *safe* to cut it, but when it ought to be harvested, and taken from its parent earth, in order to preserve it from that waste of its richer, finer, more sprightly, generous and nutritious substances which must be the inevitable consequence of its standing on the ground through a long and tedious decay after the season of entire ripeness.

IV. Innumerate the many advantages obvious, arising from the practice here recommended of harvesting the wheat crop in due time, independently of the superior quality of the flour, here principally urged.

I. The causes alleged for the inferiority of Northern flour, so far as they have come to my knowledge, are the following, viz :

1. An absolute inferiority in the intrinsic quality of the Northern wheat.

2. The greater quantity of filth it contains.

3. The less perfect manner of manufacturing at the North, from defects in the machinery, and apparatus of the mills in that quarter, and a want of sufficient knowledge and experience of the business in the owners and millers.

These causes, in their turn, have been assigned with much confidence, as sufficient to account for the evil in question. But, with what satisfaction to the public mind, I shall now proceed to show.

In the first place, then, that the wheat of the state of New-York, under the same mode of management,

is not inferior to that of Virginia, is well known to all competent judges, who have for many years made a full and fair comparison. And why I would ask, should it be? Both at the North and the South, it is of the same kinds. Even the early Virginia *white* wheat which is unquestionably the best in the world, in respect to its finer qualities, and many other advantages, may be produced in the state of New-York, and even in Canada, as well as in Virginia. The wheat both at the North and the South is raised on the same variety of soils. And, as to the climate of New-York and Virginia, the difference is not so great as to be a consideration. And what little there is in this respect is evidently in favor of the wheat crop in New-York, both in winter and summer, both seasons being more uniform there, than at the South. The kindly snows in winter which shield the crop from destructive frosts; and the more intense heat at the season of its ripening, on account of the greater length of the days at the North, it comes to maturity more rapidly, and is far less liable to mildew, rust, scab and smut, which so much affect it at the South, from the greater descent of vapor during their longer, and of course, more chilly nights.

After all; perhaps no two portions of the globe, of equal extent with the states of New-York and Virginia, could be named which are more alike, as to the fitness of their respective soils, for the production of the wheat crop. Both contain, in about an equal quantity and distribution, all the variety of soil from the richer, the more kindly *mould* down to the stubborn *clay, sand and gravel.* (c)

It cannot be otherwise from the almost perfect similarity in their natural situations as to mountains, rivers, and their Atlantic borders. Hence we find in both, nearly the same diversity of surface as to mountainous, hilly and champaign, or flat country. The only very marked difference is in the interior of those two great *rival*, sister states, *New-York* being bounded back in part by the great lakes; while *Virginia* has not a single lake in it, or on its boundaries.

In the second place; that the wheat of the North contains a greater quantity of filth, than that of the South is not less inadmissible. It must be equally infested with it in both quarters, according to the care, or negligence, and inattention of the cultivator and manufacturer. And certainly it would be no compliment to the *Northern* farmers and millers to say, that at last, they are not more careless and slovenly than the *Southern*.

In the third place; not less improbable is it, that the cause of the inferiority of Northern flour is to be found in the less perfect manner of manufacturing it, from defects in the machinery and apparatus of the mills; and a want of sufficient knowledge and experience in the owners and millers, or those who superintend them. For certainly the mills of the North, in their construction and various appurtenances, are by no means inferior to those of the South; but in all respects better. And, as to the owners, they may claim, I think, without any violation of modesty, equal intelligence with their professional brethren of the South, or any part of the world. Nor can the cause, with the least color of propriety, be attributed

to the millers, as many of them have served in their line of business at the *South* as well as the *North* ; and by this interchange must be supposed to have communicated mutually the skill or knowledge they have attained both in the *North* and the *South*.

I have been the more particular in my exposition of these supposed causes, from the importance of *divorcing* from *error*, before we can *wed* mankind to the truth.

From all these facts, then it must be naturally, and even necessarily inferred, that if there be any material difference in the quality of the Southern and Northern flour, as there confessedly is, some other cause besides those which have now been considered must be sought out before we can satisfactorily account for the inferiority of Northern flour.

What that cause is I shall now attempt to show.

Since writing the foregoing, I have had the pleasure, for the first time, of perusing a small tract on this subject, written by Benjamin U. Coles, Esq. In this work I find that I am sustained in my opinion as to the insufficiency of the three causes I have already considered. The writer does not make the inferiority of Northern flour to consist in either of them ; and denies that it can be in the quality of the wheat ; and maintains, with myself, that it is not inferior to that of the South. But, he assigns a cause entirely new ; namely, a defect in the inspection laws. He urges, and with no small degree of plausibility, that, while the inspectors' fees are to accrue from the *quality* instead of the *quantity*, the desire of increasing the profits of their business, will

too often present the inducement to pass off under their *brand*, or *stamp*, a great quantity of flour of an *inferior* quality for *superfine*. And, that it is by this abuse of the office of inspector, the Northern flour has lost its character, and been reduced to its present state of degradation ; and warmly advocates an amendment of the law which shall fix the inspection on the *quantity* and not the *quality*. This reform, for any thing I know, may be loudly called for among the inspectors of New York. But, I must candidly confess, that I find insuperable difficulties in admitting this to be the real cause of the inferiority of Northern flour, notwithstanding the very able manner in which it is supported by the learned author of the “Memoir on the subject of the wheat and flour of the state of New York.” My reasons I will briefly and candidly give. The admission of this cause would be such a plain and direct impeachment of the common honesty of the citizens of my native state, that it would by no means accord with my long and fixed opinion of them, that they are about as upright, *class for class*, as those of *Virginia*. Besides, how can the belief of this cause be reconciled to the acknowledged principles of philosophy and nature, “That like causes, all circumstances being equal, produce like effects.” “That the effect cannot extend beyond the operation of the cause.” And, “that the effect cannot precede the cause.” Now, I think we may ask, without any violation of courtesy, as the same inspection laws obtain in *Virginia*, as in *New York*, how can we account for the superiority of the flour of the former

over that of the latter, on the cause assigned by the writer of the Memoir. To relieve himself from this dilemma with which he finds himself so obviously pressed, he states, that the same abuse of the inspection laws is beginning to prevail at the South, and that it only requires time to render the effect as universal there as at the North. All this, we admit, is very possible. The flour of Virginia *may* in time, be brought down to the low standard of New York, by the inspectors there, who, to increase their emoluments, may pass off all as *superfine*, and thereby leave no inducement to the manufacturer to prepare any of the first quality for market. But certainly, it does not follow from all this, that because by the abuse of the inspectors, *good* Virginia flour may, some centuries to come, become *bad*, that *bad* New York flour can, in the same time, be made *good*. In other words, can the real, intrinsic quality of the article, good or bad, be changed by an inspector? To come still more to the point, was the flour of New York, independently of the inspection laws, and even before they ever existed, known to be, for some twenty-five or thirty years past, of as good a quality as that of Virginia? or is any flour of New York, at this present time, which has not undergone inspection, equal to that from Virginia which has not undergone inspection? For a great quantity in both states is used which has never been inspected. All these things are required to be made to appear, before the cause assigned by the author of the Memoir, can be admitted as satisfactory or even rational.

It does most forcibly strike my mind, that the whole error here lies in placing the *effect* for the *cause* ; or making the effect precede the cause. And, that instead of the inspectors of New York spoiling or debasing the *flour*, the flour has spoiled or debased *them*. Inspecting, as they do, on the quality, and finding none superfine, compared to that of the South, they find themselves obliged, in order to live by their fees, to use their *creative* powers, and make a due proportion of it so. On the contrary, the inspectors of the South, finding a sufficient quantity of a superior quality to afford them their expected profits, are not under the same temptation to go into this abuse. To resist these conclusions, we shall be obliged, without alternative, to admit that the inspectors of the South are not yet quite so far gone in the vice and corruption of avarice as those of the North. This is not the first instance in affairs of very great importance in which the effect has been mistaken for the cause, among the learned and philosophical. Almost the whole body of the Christian world for many years thought, as many of them still think, and some of them, no doubt, will for ever think, that the flood of irreligion, which broke out and overwhelmed the French nation upon their late revolution, was the effect of that revolution ; whereas, in reality, it was the great cause, which had been gathering strength for many years from the well known scepticism of that devoted people ; and waiting only for that favorable opportunity, when it burst forth with all its powerful and baleful effects in that most memorable event. So true is this, that as early as the year '74,

fourteen years before that revolution, there was among all the men of eminence in France, but one, and that was the celebrated Neckar, who had not totally abandoned the Christian religion, termed by Voltaire, the great father of that infidel age, "The Infamous Fanaticism," and taken up with the impious philosophy of the times.

Hence, I cannot think, that the cause assigned by the author of the Memoir, for the inferiority of Northern flour, can be sustained. Yet, the public are certainly much indebted to him for his able, learned, and well written performance. Its value must be acknowledged by all. And no one, he may be assured, can concur with him more cordially than myself, in recommending the most useful and strict attention to the purity of seed, cleanliness from filth, and good condition of soil, in order to improve the quality of wheat.

II. I shall now respectfully submit what I have long conceived to be the only true and satisfactory cause of the inferiority of Northern flour; namely, the damaged state of the wheat in consequence of suffering it to remain too long on the earth before harvesting it, after it has arrived to a state of full and perfect maturity. Until, according to the common, strange idea of the North, it is "dead ripe." That is, ripe *even unto death*.

1. In support of this opinion the following facts are offered. That, from the best accounts of travellers and writers, and from the various uses which we have seen made of the straw, it appears that in no part of this or any other country, excepting that

North of Pennsylvania, is wheat left to stand on the ground until it reaches its utmost state of decay : and that no where else has the baseness of flour been made a subject of serious and general complaint. In the Southern and Western parts of the United States, the farmers watch with great care and anxiety this period of full and perfect ripeness, and improve, to the neglect of all other concerns, the favored, the accepted time of harvest. At the North the reverse is well known to be the mode of management. Every thing else is better attended to than the harvest of their wheat crop ; which they universally leave far beyond the proper time of gathering it.

It is also known that the wheat of the South manufactured in the mills of the North, makes as good flour as when manufactured in those of the South ; but, that the wheat of the North will make no better flour when manufactured in the mills of the South. Nor will the wheat of the North command as high a price in the Southern markets as that of the South.

Of the first of these facts, there have been many proofs, the advantages and disadvantages in the inspection laws of the respective places to the contrary notwithstanding. One of the most respectable and satisfactory proofs was given me not long since by General Bailey, of this city, in a conversation with him on this subject. He told me that he once received from the mills of Messrs. Merit & Hart, between Albany and Troy, flour manufactured by them from a cargo of Southern wheat, of a quality superior to that manufactured at the South, which he had been accustomed to use.

Further, that wheat at the North harvested about the period of full ripeness, as it is at the South, will make as good flour, the following relation of facts will prove. In the year 1805, I removed from the South, (the state of Delaware) to this my native state, and recommenced my favorite agricultural pursuits on a most fertile and delightful farm belonging to George Tibbits, Esquire, of Troy, situated on Green Island, formed by the junction of the two lower mouths of the Mohawk with the Hudson.

The year following, just as I was setting in one morning, with all the force I could rally, to harvest a very large and fine crop of wheat, my brother, Gilbert Brush, then a merchant in Troy, but for many years a farmer in that neighborhood of high reputation in his business, came into the field, and with great concern for me and my interest, addressed me in the following hasty and abrupt, but kind manner: "Why really, brother, are you quite mad? It cannot be possible that you seriously intend to cut this charming field of wheat in its present green state. My word for it, you will lose it all, and thereby bring on your ruin." I smiled, and thrust in the sickle, for I knew that "the harvest had already fully come." And left him to bemoan my folly; and to go and consult with his neighbors on the signs of the time of harvest. Some said, "yet ten days; some two weeks; and some three weeks, and then cometh harvest." I heeded them not; but proceeded, and before some of them had finished their harvest, I had mine threshed out, taken to market and sold; and for a greater price than was obtained that

season. The flour of this wheat was confessed to be of a superior quality, and fully equal to that from the South.

In the spring of 1808, I resigned the lease of this favorite spot to my brother already mentioned, who has occupied it ever since, and returned with my family to the South ; nor heard, nor troubled myself more about what my brother and my old honest Dutch neighbors thought of my mode of managing the wheat crop, until last spring. When, after an absence of eleven years, I had the pleasure to see this same brother again in this city. And, after the greetings usual on such tender occasions, and a little common talk on the affairs of old times, the first set subject he introduced was, the wheat crop I cut in a "fit of madness," on Green Island. And told me, that from the time he had succeeded me on the premises, he had pursued my plan of cutting and curing his wheat in due time ; and that it was acknowledged, that it, and the flour made from it, was far superior to that of "dead ripe" wheat.

What influence this striking proof has had on the farmers of the surrounding country, he did not tell me ; but, if I were to judge from my long experience of the dispositions of men in all important concerns, I should suppose myself quite safe in concluding, that not five north of the Pennsylvania line have ever since followed the example. Such is the foolish and wicked obstinacy of some people in this world ; that, instead of profiting by the ingenuity and labors of those who make every sacrifice for their welfare : they really seem to take a pleasure in attempting to

thwart their benevolent purposes, and despising them for their good will.

Once more. If a crop of wheat at the South, of the same kind, and raised on the same soil with what is common to the country, be left, through negligence, hurry of other business, or inability to harvest it sooner, to reach the "dead ripe" state, after the manner of the North, it is well known to the farmers and millers there, that it will be no fairer, no fuller, weigh no more, nor make any better flour, than if it had been produced on the soil, in the climate, and manufactured in a mill in the state of New York, or in Upper Canada.

Let, then, these several facts be attentively and candidly weighed, and I must think, that with any mind, in a state to be impressed with evidence of so reasonable a nature, nothing more would be required to induce a conviction in favor of the opinion here contended for ; namely, that the damage the wheat must necessarily sustain from being left too long on the ground beyond the time of entire ripeness, is the real and true cause of the inferiority of Northern flour.

But, that no aid of evidence may be wanting on a subject of so much acknowledged importance to the first interest of that great section of our union, the *North*, so rapidly increasing in all the improvements in useful arts and sciences, particularly those of agriculture ;—I will offer,

2. In furtherance of this opinion the following observations :

Every one knows, or ought to know, who is the least conversant with the operations of nature in the vegetable kingdom, that all annual growths require to be taken from the earth when they no longer want nourishment from it, and it can no longer give it: and that all the time they are suffered to remain on it beyond this stage of their perfect maturity, they only waste their choicer powers in a tedious, unnatural decay. Perhaps, there are no stricter observers of the times and seasons of nature, in her regards and calls of annual vegetables, than the farmers of the North, in every crop, except that of *wheat*. Their rye, their Indian corn, and oats, they gather in before the “dead ripe” state—their timothy, clover, and all kinds of grasses, they cut; and their fruits and vegetables they preserve in due time. Every thing in this way shares their kind and seasonable attention. Let them, then, bestow the same on their wheat, and, after one year, they will have no further reason to complain of the inferiority of their flour. It will then be fully equal, if not superior, to that of the South; as their wheat is as good, I believe better, and certainly freer from filth;—their mills better, and their skill in manufacturing, at least equal. Let them treat their wheat as they do their rye, and their flour will be as much superior to what it now is, as that of early cut is to that of late cut rye. The practice here recommended is precisely that of the South. They there harvest their wheat at the same time the farmers at the North do their rye. They bind it up in small sheaves with single bands, setting them up

as they are bound, and towards evening place them in shocks of about twelve or fifteen sheaves each ; where it is left a few days to cure in the air and sun. This is a far better method than leaving it to cure in the swath : as in this way it cures more gradually, and wastes less of its substance by drying too suddenly, and shells out far less in binding. Let this mode of managing the wheat crop become uniform throughout the United States, and the flour will be perfectly, or nearly a kin. And certainly, to say nothing of the many other advantages, which we have yet to enumerate, there is a prodigious reward awaits the farmers of the North upon the adoption of any plan which would bring their flour up to the quality of that of Virginia. For the author of the Memoir says, “that this would produce an increase of income to the state of New York of at least \$500,000 per annum.” That this calculation is moderate, I am very sure : and, I think below the real amount by one-half.

I further observe, that for the same cause, namely, that of gathering in the crops *in*, or *out* of due season, the Indian corn meal of the North is as much superior to that of the South, as the wheat flour of the latter is to that of the former. At the North the earlier approach of winter, and its greater severity render it necessary that the corn crop should be gathered in as soon as it is ripe ; it would not be safe to let it remain out, like the wheat, until it is “dead ripe.” At the South, not being under the same necessity of gathering in the corn crop when it is fully ripe,

it is there suffered to remain on the ground quite too long. Yet, it is with the corn there, as it is with the wheat at the North, it is far better when gathered in due time. This is known by the frequent practice of plucking the earliest ripe ears and curing them in a proper manner. The meal will then be much richer, more palatable and nutritious. And so it will be with all kinds of pulse, as has been determined by several experimentalists.

I have but one observation more to offer in support of this opinion; and that is the well known superiority of the Irish flax; which is owing wholly to the circumstance of its being pulled at an earlier stage than that of other countries. And yet I think it might be suffered to remain long enough to preserve the seed, and be equally good, if not better. For, as I would not suffer any annual vegetable to continue on the earth after full maturity, so neither would I like to remove it sooner. And the power of the seed or grain to germinate and reproduce should in all cases be my rule.

3. To offer reasons to enforce the opinion that the inferiority of Northern flour arises from cutting the wheat too late, would be almost superfluous, after the preceding facts and observations. For what can be more obvious, than that the substance of every thing must be better at full maturity, than when it has far declined? For this reason the Northern wheat does not grind so kindly as that of the South. The bran from the latter, in the operation of grinding, is separated in larger and more entire flakes from the

grain ; and, of course, less is left to mingle with the flour. Whereas, the bran of the “ dead ripe” wheat of the North, cannot be separated in the same desirable manner. It comes off with difficulty, is cut up in grinding into finer particles ; and consequently a greater quantity must be unavoidably suffered to pass through the bolting cloth and mix with the flour, greatly to the injury of its appearance, as well as to the greater detriment of its quality.

And how, we would ask, can it be supposed that the flour of wheat, thus wasted by long and unnatural decay, can be possessed of the same rich and generous properties, as that of wheat harvested at maturity, “ coming in,” as Job says, “ in his season ?” Surely none ought to suppose it, because it cannot be—for nature itself forbids it. It is the condition of the skin which constitutes the healthy or unhealthy state of vegetables, as well as of animals. Hence the dry, husky and stubborn coat contracted by overly ripe wheat, but too plainly indicates that its better days have gone by. This, and this alone, accounts for the greater proportion of gluten, or active substance, and bran, or inactive matter in early cut wheat. It having a good state of *skin*, its internals must also be good.

The author of the Memoir has given the average proportion of the three essential substances, viz : gluten, starch, (including mucilage) and bran, contained in New York and Virginia wheat, and I have no doubt, with perfect accuracy in the following table :

100 parts of New York winter wheat, contain

76 do. of starch,

19 do. of gluten,

5 do. of bran, or insoluble matter.

100 do. of Virginia winter wheat, contain

70 do. of starch,

24 do. of gluten,

6 do. of bran or insoluble matter.

This difference in the proportion of ingredients contained in the wheat of New York and Virginia, the writer attributes to the influence of climate, in the following words: "On the contrary, it is a remark founded on judicious experiment, that those ingredients are variously proportioned and embodied, as the plant is grown in warm or cold climates." In support of this opinion he quotes the authority of professor Davy on Agricultural Chemistry, p. 127—who says, "I have examined different specimens of North American wheat; all of them have contained rather more gluten than the British. In general the wheat of warm climates abounds more in gluten, and in insoluble parts; and it is of greater specific gravity, harder and more difficult to grind." The learned professor and the learned writer of the Memoir, both assert and establish facts in direct aid of my opinion. They both speak of the comparative excellence of the wheat of the North and the South in the United States, and give a decided preference to the latter. But professor Davy, I believe, never was in the United States; and the author of the Memoir never farmed it, and was concerned in the manufacture of

flour, I presume, both in Virginia and New York : and neither of them knowing, probably, that it was a universal practice to cut the wheat at maturity at the South, and not until the “ dead ripe ” state as at the North, would very naturally fall into the error they have done, all the indications of nature to the man of travel, experience and practical observation, to the contrary notwithstanding ; and resolve the difference wholly into the effect of climate. Whereas, had they known what they could not possibly know for want of *knowledge*, what others whose experience, as real farmers and millers both in Virginia and New York, has taught them, they would have given a different cause ; unless they could destroy the stubborn fact which is well known, and, as such, I have asserted it, that late cut wheat in Virginia becomes New York wheat perfectly ; the flour the same ; and that early cut wheat in New York, becomes Virginia wheat perfectly ; the flour the same. Pray what great difference between the climates of the counties of Dutchess, Orange, and Ulster in New York ; Lancaster, Cumberland, and Northumberland in Pennsylvania ; Washington and Allegheny in Maryland ; or Frederick, Berkley, and Shennandoah in Virginia, the best among the old counties, for wheat in these respective states ? About the same. What then becomes of the *notion* of the influence of climate on the quality of wheat and flour in the United States ? Here I should have closed this train of reasoning, and proceeded to the next branch of the subject, as proposed, had I not, in re-examining the Memoir, happened to glance my eye upon a particular quota-

tion, among the many which the author has made, from the celebrated Fourcroy's Chemistry, vol. 7, p. 410, in words as follow : " It is no less certain, " that to this property of the pulverulent particles " of the gluten to become elastic by the addition of " water, that the farina of wheat owes that of forming " a paste ; and that it is in proportion to its quantity " that the panification, more or less sensible in this " farina, varies, according to the state of *maturity*, " the nature of the corn and that of the soil, the sea- " son, and all the circumstances relative to the " vegetation of this important plant."

All the remark I shall stop to make on this quotation is, that if the author, or the writer of the Memoir, had understood and carefully attended to six words in it, viz : "*according to the state of maturity*," they might have for ever rested from their labors on this long agitated question ; and I should have been saved the painful and almost intolerable drudgery, under my present wretched circumstances, of preparing this paper. For, in this case, no one need to have written after them. Every thing would then have been explained and understood.

III. I now proceed to give those sure and infallible indications of nature, by which she points out that precise stage of full and perfect maturity in the wheat crop, when, according to her fixed and universal laws, which govern all annual vegetables, it is not only safe, but when it ought to be harvested, and taken from its parent earth, in order to preserve it from that waste of its richer, finer, more sprightly, and generous substances, which it must

lose in consequence of standing through a long and tedious decay, after the state of full and perfect ripeness.

These indications are few, simple, and easily understood. When the straw exhibits a bright golden color from the bottom nearly to the top, or head : when the head begins to incline gently, and in a small degree, be assured the time of nature has come ; life is then departing ; put in the sickle, and save the crop from that waste which it must certainly suffer from delay. But, as all parts of a crop will not be equally ripe at the same time ; go through your wheat field, when you contemplate harvesting it, and select the very greenest heads you can find, and, if by rubbing them in your hands, you can separate the kernel from the chaff, you may know that the grain is then out of its milky state, and may then be cut with safety, as it will not shrink or perish, if properly cured in the air and sun ; though the straw of such heads may be quite green some distance, if the part below, as before mentioned, is of a bright golden color from the bottom upwards. These indications show that the grain wants no further nourishment from the earth ; that the earth of course, can give no more. The sooner then the child is taken from the parent the better, particularly for the farmer. Again I say, when ye see all these things, put in your sickle.

But really I need not have been at all these pains ; and it will, no doubt, be asked, why I have, after all I have said on the subject, to teach the Northern farmers when and how to harvest their wheat. No people on earth know better when to gather in every

other crop than they. Their corn, their oats, their peas, clover and timothy are all preserved in due time—particularly their rye. Let them, then, only treat their wheat as kindly as they do their rye, and all will be well.

IV. It now only remains, that I enumerate the many advantages obviously arising from the practice here recommended of harvesting wheat in due season, independently of the superior quality of the flour, here principally urged. The first and greatest advantage is, that less of the wheat is lost in gathering it ; but at the proper season there is none worth naming lost by shelling out ; scarcely a grain being seen through the whole process of harvesting : cut at the “ dead ripe ” state, one-tenth, at least, is lost. For really in this state, every stroke, every touch, is more like threshing with the flail, than that of cutting with the cradle, sickle, or scythe. The harvesters’ pockets and bosoms are filled, and the ground strewn with a sufficient quantity of loose, scattered grain to seed it twice over. This is a great loss.

In the second place, by cutting the wheat crop in due season, the straw is not only good provender ; much better than the straw of the rye, which is so eagerly sought after in all the cities and villages at the North, in what they call *chopped stuff* ; but for various other uses, such as hats for men, bonnets for women, for bottoming chairs, for mats for our entry doors, horse collars, thatching, and for elegant toy boxes and baskets. While the straw of “ dead ripe ” wheat is fit for nothing but to be trodden under foot of beast, as no old starving cow would eat it—to be

used merely in littering barn-yards and stalls, in covering cow-hovels and hog-sties. It has neither pliability, nor nutriment in it.

Can we any longer doubt of the great advantage of cutting our wheat at an early stage, as we do our other grains, as to the value of the straw, to say nothing of its high value as provender for beasts, when we see every summer in the very city of New York, where there is such an everlasting complaint about the inferiority of Northern flour, the most elegant hats worn by the gentlemen, manufactured from the straw of early cut wheat by the Dutch women of the various parts of Pennsylvania, Maryland and Virginia? But let the most skilful woman that this world ever yet knew, even Penelope herself, try her powers to *weave* a hat or bonnet, or even a mat from the straw of the “dead ripe” wheat of the North, and she would find it would crumble and dissolve at the slightest touch of her delicate fingers. So, the straw of “dead ripe” wheat at the North is good for nothing, as I have already said, but to be cast out and trodden under foot of beasts. I would not dwell so long on the light and trifling subject of straw, were it not, that, according to the common maxim, “straws shew which way the wind blows,” so as is the straw, so is the wheat: and as I have already observed, as a proof, that, in all parts of the world, excepting North of Pennsylvania, the wheat was cut at its maturity. I have been the more particular in producing facts to support this proof from the circumstance of the straw. Another great advantage of harvesting the wheat crop in due time, is, that it produces less interference

in the various business of the season. Particularly as it gives the farmer an opportunity, before it be too late, to bestow upon his crop of Indian corn the last dressing, which is by far the most critical ; and which, if not done in due time, had much better not be done at all.

And it is well known, that generally the highest price can be obtained for wheat immediately after harvest. He then who delivers his wheat first in the market, will be in the way to receive the *gain*.

The wheat when cut early is more easily cut ; it yields more readily to the instrument, than when old and stubborn.

The remaining stubble, when the wheat is cut in proper season, before it becomes exhausted of all its substance, will return much more richness to the earth, than the stubble of “ dead ripe ” wheat.

One more great and obvious advantage of harvesting the wheat crop in due season, is, the well known impatience of that most subtle, voracious, restless, and ungovernable creature, the swine, for the stubble field at this time. It is next to impossible, by all the devices of pens, and yokes, and watchfulness of man and dog, at this season of harvest, which he knows has come as well as we do, and I really believe, much better, to restrain him from his time immemorial privilege of entering the field, as a *gleaner*. And, be assured, if this be too long denied him, he will enter it as a sturdy reaper. Let, then, the hog have his rights, by harvesting the wheat in due time, and thereby save yourselves endless vexation and loss, ye *farmers of the North* ; for never yet, I be-

lieve, was there any thing gained by defrauding and vexing a *hog*.

Lastly. All grain, fruits, and vegetables, used in distillation, will, for the reasons already given, yield a choicer and more pure spirit, when gathered at the season of full and perfect maturity. The more *gluten* or active substance, the more alcohol ; a great consideration to the makers and consumers of whiskey.

If what I have advanced, and endeavored to support by facts, observations, and reasonings, be true, namely, that the inferiority of Northern flour be wholly owing to the too late cutting of the wheat, it will, no doubt, be asked, how it has happened that the farmers and millers of the North have not discovered and attended to this fact, as well as those of the South ? The truth is, the farmers and millers of the South, in general, know about as little of the cause of the *superiority* of their flour, as those of the North do of that of the *inferiority* of theirs. The former are perfectly contented that *their* flour be *good* ; while the latter are everlastingly complaining that theirs is *bad* ; and this is all that any of them know on the subject. They are alike governed by long established habits and customs. Some person, it seems, has been wise enough to find it out for them ; and kind and patriotic enough to make it known. Yet, it will still be urged, that there must be some reason for a practice so directly at variance in a matter of such high importance. I will, then, give the best account of it I can. And having farmed it, and been concerned in mills from the 38th to the 43d

degree of north latitude, it is probable that it will not be altogether an irrational one.

To be sure, it is said, that wheat is the staple of New York, as well as of Virginia. That it is the principal and most valuable product, is certain. But, it by no means follows from this, that it is as much attended to at the most critical season. In truth, it would be difficult to tell what is the staple of the state of New York, it has so many valuable and important articles. Hence the care and attention of the cultivator are so much divided amongst his various objects, his wealth and prosperity not depending entirely on any one, that some one or more must be neglected, through his too great hurry of business. And, it unfortunately happens, that the wheat crop is one ; and, I believe, the only one that is neglected. It being a *clear gain* crop, and not a *living* one, he knows, that if it should be wholly lost, it would not much affect, far less ruin him : as he has many other valuable articles for market, on the proceeds of which he can still safely depend for subsistence, for the payment of his debts, and for the prosecution of his views of speculation. Not so with the farmer of the South. Never having been trained as a dealer in *notions*, his wheat crop is his main, and often his sole dependance. If this be lost, all is pretty much lost. Consequently this will receive his particular care and attention. It will not only be the last interest he will neglect ; but he will neglect every other interest for the sake of this. For it is, in truth, his temporal salvation.

A contrast between the harvest scene of the North and the South, would afford a most striking illustration of these facts. It really deserves a poem. Pity we have not a *Virgil*, or a *Thompson*, to set to the lay. But, as the task is upon me, I will make a humble attempt, and briefly give the description, in the best manner I can.

Harvest at the South is, what it always ought to be every where—a joyous, sacred, religious season. At its approach, (and well they know when it comes) all other cares are dismissed, every other concern laid aside. The enslaved school-boy, and the still more enslaved pedagogue, are set free for two weeks, by custom immemorial, double the time allowed them at the Christmas and New Year holy days. Each poor captive of the sable race, hails the occasion with every honest manifestation of high delight, well knowing that he is to participate as largely as the rest in the hey-day of the season; and that his generous master will not suffer his faithful services to go unrewarded at a time like this. The business of the merchant and mechanic is suspended. Not a plough is seen to move; nor a wheel, except on the public road, so that all the laboring beasts in the meantime take their rest. All now prepare to take the field, headed by the joyful owner. Least of all would the fair withhold their kindly aid. All of them who are not engaged within, in preparing the choicer refreshments of the season, old and young, matrons with their children, follow the reapers, either to collect the sheaves, or to animate, by their cheering presence, the emulous swain to greater exertion.

But, before they ever think of beginning to gather in this richer bounty of the Great Giver of all good, they first assemble themselves in holy convocation in their respective places of religious worship, to implore his blessing on their labors ; and where they receive from their pious pastors, appropriate addresses, in which they are most affectionately exhorted to the great duties of temperance, sobriety, industry, and good will towards one another ; and urged to improve with all diligence and steady labor, that particularly precious season and state of weather so favorable to the purpose, which Providence commonly in his great kindness, allots to man for gathering in the wheat harvest above all others. The work is then commenced, if that can be called a work, which partakes more of pleasure than labor.

And, when the harvest is ended, they all again, with one consent, convene in their several churches, and unite in thanksgiving and praise to their munificent Parent, who so liberally crowns the year “ with his goodness and loving kindness.”

With a people of such habits, customs, and sentiments, the wheat crop is in no danger of sustaining damage for want of being harvested in due time.

But, do we see any thing which compares with this in all the movements, operations, and proceedings in the harvest scene of the North ? Oh ! no ; far from it. Every thing is totally different. So much so, that the farmers of the North, many of them, really seem hardly to know when harvest comes. And when they do finally conclude that it has arrived, they undertake it more like a piece of drudgery than

a pleasure : particularly if they happen to have any other business on hand. Instead of putting every thing in requisition, like the farmers of the South, one hand, perhaps, will be engaged in hauling cord-wood ; another hoeing in a squash and pumpkin patch ; a third mending a fish net, while the two remaining male hands are in the field of harvesting. And, as to the *women*, saving among the *High Dutch*, or Germans, my word for it, you see no “ lovely, young “ and charming *Lavinias*” among the reapers, binders, sheaff-carriers, or gleaners. In the mean while the harvesting progresses but dully. The wheat “ dead ripe” too when they began. What, then, must it be before they are done ? It will by that time, to say nothing of other disadvantages and losses, be more like threshing than cutting the wheat, so much of it must be shelled out by this most injudicious, most untoward mode of management. Is it any wonder, then, that they have inferior flour ? Nor do I think, unless they alter their conduct in this respect, that they would ever deserve any better.

From all these circumstances I think it highly probable, if not quite certain, that, wherever the wheat crop is made nearly the whole dependence of the farmer, it would be cut in due season, and saved in a proper manner. Which is very much the case in the more infant settlements in the state of New York ; and I think very much so throughout the state, before the attention of the cultivator became divided among so many branches of business, that he could not bestow sufficient care in due time on his wheat crop. And of the truth of this opinion, the

writer of the Memoir has, I think, furnished very strong, if not full and satisfactory proof. His words are : “ From the earliest agricultural notices of “ our individual states, it seems reasonable to “ infer that it was once a generally received opinion, “ that the wheat produced in our own state was superior in quality to that produced in Virginia, where “ unquestionably the best wheat is now prepared for “ market.” This opinion he supports by a quotation from Strickland’s observations on the United States of America. “ The wheat of New York is esteemed “ the best of any in the United States, and that “ grown on the banks and branches of the Mohawk, “ the best in the state.” In perfect accordance with my own opinion, as above expressed, the writer says, that the best wheat in the state of New York is raised among the settlements on the Mohawk river : and, no doubt, for the reason I have given, viz : ‘The settlements being new, their principal attention is bestowed on the wheat crop, which, on this account, is harvested at maturity.

But the most striking proof I have had of this opinion, that, in all new settlements, the wheat will be superior to that of the old, has been from certain flour merchants of this city, who inform me, that they have received flour from New Orleans of a quality superior to any they have ever had from Virginia. Now, this flour from New Orleans must have come down the western waters quite from the interior of the states of Pennsylvania, Ohio, Kentucky, and Tennessee, and altogether from settlements more recently formed, where the wheat crop, being their

principal if not sole dependance, they are compelled by the necessity of their circumstances, to make it the great, and almost only object of their care and attention, and consequently will harvest and save it in due time. Many parts of those states abovementioned, where the wheat must have grown from which this superior flour from New Orleans, now spoken of, are as far North as those parts in the state of New York, from which, by the acknowledgment of the author of the Memoir, the very best wheat in the state is brought to market. Why, then, talk any more about the influence of climate on the quality of wheat, where the climate is about the same ; or where the difference is so trifling, that it never ought to be taken into the account by any accurate investigator ; and which never could be thought of, but for the purpose of relieving a difficult case ? But, once for all, if climate have this wonderful effect on the quality of wheat, as is so strenuously contended for ; we may all cease to talk and write, for who, I would ask, will have the hardiness to think he can ever alter the climate ? Certainly, no alteration in the inspection laws can ever effect it.

This propensity in all of us, to assign any cause rather than none ; and to seize on any thing for a support or an apology for our opinions when once formed, cannot be better expressed, than by the writer of the Memoir. I will take the liberty to cite it, as it is so directly to my purpose on this branch of the subject. “ And I cannot here refrain from remarking, how, in this instance, is exhibited the proneness of the human mind, to cover voluntary

“ evils under the plea of physical necessity, rather
 “ than wait the result of cool and deliberate exami-
 “ nation, which would satisfactorily have shown their
 “ artificial origin.”

If the cause which I have here assigned for the inferiority of Northern flour, be the true and only one, of which I cannot doubt, the desired effect will follow immediately upon the application of it, even from the present crop of wheat now growing on the earth, if it be but harvested in proper season, which I presume, every farmer who sees or hears of the facts, observations, and reasonings, which I have now the pleasure of addressing to yourself, will have good sense enough to do. For, to say nothing of the more important consideration of the superior quality of the flour, I have enumerated other advantages, certainly sufficient to induce a universal adoption of the practice here recommended.

I need not tell you, my dear sir, for you cannot but perceive it, that I have prepared this communication under very great disadvantages. Great, indeed, I can assure you. Difficulties, such as I have never yet had to encounter on such an occasion. My health unusually low ; my spirits dreadfully depressed, from my late disappointments and misfortunes ; and writing without the comfort of fire, or even the accommodation of a table or chair. But, encouraged by your favorable notices, I have persevered, endured the labor, and am now happy, imperfect, as I am but too sensible this performance is, to commit it to one, as I have already observed, in whose good sense, candor and friendship I can confide.

I shall only further add, that should it meet your approbation, and you should think it worthy of public notice, I will, as the weather has now become milder, and my health somewhat improved, immediately set about it, and furnish this work for you in a much better manner. And, if sufficiently patronised by the public, I will also prepare small tracts on the following subjects:—1. The best mode of tillage for flat or champaign lands, particularly the Hempstead plains on Long Island; and embanked meadows of the Messrs. Swarthouts' on the marshes of the Hackensack and Passaic rivers; with the most proper culture of corn on such lands. 2. The most proper course to be pursued with all laboring men and animals as to the times of taking their food and rest. 3. The cheapest food on which to raise and fatten swine. 4. The only principles on which to construct chimney and fire places, so as to render houses free from smoke, secure against accidents by fire, and to produce the greatest degree of warmth with the smallest quantity of fuel.

Be pleased to accept,

Dear sir, the assurances

Of my high respects and sincere regards.

JOHN C. BRUSH.

NOTES AND ILLUSTRATIONS.

NOTE (a.)

Among all the stupid and accountable attachments of agriculturalists, to the slavery of custom or ancient practice, is that of binding themselves down, almost by the religious solemnity of an *oath*, that they will neither spade, plough, sow, reap, nor gather in the various fruits of the earth, nor shear their sheep, mark their lambs, calves, pigs, &c. but on such a particular day of the year, month and week. This is a most serious, injurious absurdity. Why, they might, with as much reason and propriety, say they would not *eat, drink, sleep, take medicine*, nor perform any of the necessary functions of nature, excepting at a given, precise hour and moment of a moonlight night, no matter how great her calls.

Now, an *Indian*, or an old squaw, would reprove their folly and teach them better. These children of nature would instruct them to conform strictly to her various operations in her earlier and later progress of vegetation, and not to regard any particular day ; as nothing, especially in new countries, like this, where the soil and surface of the earth, and consequently the climate, are undergoing continual vicissitudes, can be more variable than the seasons. Hence, it would be wise in us to be governed in our agricultural movements by these changes.

Forty years ago, in the states of Delaware and Maryland, if a farmer did not plant his Indian corn by the 20th of March, and crib it by about the 1st of October, he would have been charged with negli-

gence and inattention. But, now were he to do this, he would most assuredly lose his crop. For, if it did not perish in the ground in the spring, for want of sufficient genial warmth in the bosom of the earth to cause it to germinate, it would most certainly rot in the crib at so early a period of the fall.

At present, such has been the changes in the seasons, that if it be planted by the 20th of May, and cribbed by the 1st or even 25th of December, it is considered quite safe. The rule with the Indians, who watch most carefully the progress of nature in the laws of her vegetable department, and who bind themselves down to the most scrupulous observance of them, is this, to sow flax (whenever they sow it at all, which is very seldom) when the leaf of the native forest poplar is as large as a squirrel's *ear*; and to plant corn when the leaf of the white oak is as large as a squirrel's *foot*. About the time when a white man can work a whole day in his corn field, bare-footed without getting the tooth ache; he may then, and not till then, conclude that the earth is prepared with a due degree of warmth to receive and nourish the seed.

The *wise* man, king Solomon says, "To every thing there is a season, and a time to every purpose under the Heaven; a time to plant, and a time to pluck up that which is planted."

If, then, we would have the full benefits of our labors from the fruits of the earth, and sometimes even preserve them from utter ruin, we must make it our great and first concern to observe most carefully the operations of nature; and to conform, without neglect or delay, to her indications as to her times and seasons; particularly those of the critical stage of her full maturity.

NOTE (b.)

It is not intended by the observations in the introductory, poetical part of this work, to advance any thing like that absurd notion of the *confusion of souls* in the universe, commonly known by the name of *transmigration*, or as it is vulgarly termed *transmogrification*; an absurdity most falsely and unjustly ascribed to that great and good man, *Pythagoras*, who certainly never did believe it, any more than did the pious and learned Dr. Edward Young, who adopted and advocated his opinions.

All that either of those great and worthy men believed on this subject, was, that there is one *Great Soul*, or *life inspiring principle* of the universe, emanating from the *Great Author* of existence, and infused into every living thing, whether *man*, *animal*, or *vegetable*; and that all depend on this one common parent of creation, “for life, and breath, “and all things;” according to the sentiments so frequently expressed by holy David the Psalmist, and others of the sacred writers; and that the perpetuity of their existence in a state beyond the *present* depends entirely on his good will. In one word, they simply believed, that as all derived their existence from this great first cause, all must return to him again in a highly improved state, after having passed through their various destinies. But that either of them ever believed that the soul of a *man* is, ever was, or ever will be, the soul of a *horse*, *dog*, or *cabage*, is most false and absurd.

This sentiment was also that of the celebrated Thomas Campbell, that first of poets; as thus ex-

pressed in the following elegant and sublime lines in his *Pleasures of Hope* :

- “ Soul of the just ! companion of the dead !
- “ Where is thy home, and whither art thou fled ?
- “ Back to its Heav’nly source thy being goes,
- “ Swift as the comet wheels to whence he rose ;
- “ Doom’d on his airy path awhile to burn,
- “ And doom’d, like thee, to travel and return.
- “ Hark ! from the world’s exploding centre driv’n,
- “ With sounds that shook the firmament of Heav’n,
- “ Careers the fiery giant, fast and far,
- “ On bick’ring wheels, and adamantine car ;
- “ From planet whirl’d to planet more remote,
- “ He visits realms beyond the reach of thought ;
- “ But wheeling homeward, when his course is run,
- “ Curbs the red yoke, and mingles with the sun !
- “ So hath the traveller of earth unfurl’d
- “ Her trembling wings, emerging from the world ;
- “ And o’er the path by mortal never trod,
- “ Sprung to her source, the bosom of her God !”

And not less evident is it that the pre-eminent *Whitefield*, that *idol* of the Christian world in his day, adopted the same doctrine, as will appear from the following pious and ardent lines of his composition :

- “ Rise, my soul ! and stretch thy wings,
- “ Thy better portion trace,
- “ Rise from transitory things
- “ T’ward *Heav’n*, thy native place :
- “ Sun, and moon and stars decay,
- “ Time will soon this earth remove ;
- “ Rise my soul and haste away
- “ To seats prepared above.

“ Rivers to the ocean run,
 “ Nor stay in all their course ;
 “ Fire ascending seeks the sun,
 “ Both speed them to their source,
 “ So a soul that’s born of God,
 “ Pants to view his glorious face,
 “ Upwards tends to his abode,
 “ To rest in his embrace.

In all this there is nothing more asserted than this, that as all created beings, rational, animate, or inanimate, have one common source or origin, so they will all, after having passed through the several stages of existence for which they were destined, return again and be absorbed in this great source of being. Certainly, then, in all this I can perceive nothing so revolting ; but, on the contrary, every thing that is sound and rational. For really there is nothing more contended for in the doctrine of transmigration, as maintained by Pythagoras, than the passage of the same individual being from one state of existence to another ; and how many will depend on the good pleasure of our Creator, and our own moral conduct.

NOTE (c.)

In *soils* it is true, there is a very great difference as to their fitness to produce the wheat crop ; as it is certain that the quality of the latter varies with that of the former. But the same variety of soils, from the richer, purer mould, and loom, down to the more stubborn clay, and sterile gravel and sand, is found

to exist in all parts of this, as well as of other countries. So that this consideration can have no possible bearing on the present question. Besides, the soil of New York is well known to be more favorable to the production of wheat, than that of Virginia, which is proved beyond all controversy, from the once superiority of this species of grain of the former state. For this fact, I need only refer to the author of the Memoir, so frequently cited. He states, and no doubt with his accustomed accuracy, as follows, viz: "From the earliest agricultural notices of our individual states, it seems reasonable to infer that it was once a generally received opinion, that the wheat produced in our own state was superior in quality to that produced in Virginia, where unquestionably the best wheat is now prepared for market." And the authority which he quotes in proof of this opinion, William Strickland, Esq. of Yorkshire, England, in his *observations on the United States of America*, in 1796, says, "The wheat of New York is esteemed the best of any in the United States, and that grown on the banks and branches of the Mohawk the best in the state. I had opportunities of examining considerable quantities of it at Albany in October, 1794, and found it in general of a very good quality, clean and well dressed: the best sample I could meet with, and which probably was as good as any which could have been produced, weighed by the bushel, which was said to accord pretty well with that of the Winchester, which is the only measure of grain known upon this continent, 64½ lbs. ; this, I was informed, was the

“utmost weight of wheat produced in any part of
“America.” Again, from the same :

Average produce of wheat per acre.

“ In the state of New York	12 bushels.
Jersey, Pennsylvania, Delaware, and Maryland	8 do.
Virginia, east of the Blue Ridge	7 do.
Do. west of the Blue Ridge	12 do.”

From all this it follows most conclusively that both from the weight and quantity of wheat raised in the state of New York, its quality of soil for the production of this article is superior to that of Virginia. It is further asserted by these learned and highly respectable authorities, that, at the period to which they allude, the *quality*, as well as the *weight* per bushel, and *quantity* per acre, of the wheat of New York, surpassed that of Virginia. From all these facts, stated and satisfactorily proved by the author of the Memoir and his authorities, a very serious and important question arises ; why was the wheat of New York, at the period they fix upon, namely, some twenty-five or thirty years ago, superior, in all respects, to that of Virginia, and inferior at the present time ? There is no other way of answering it to the satisfaction of any sober, rational enquirer, than that at that time the wheat both at the North and the South, was harvested at the same stage of its existence, namely, at the “*dead ripe state*.”

Besides the writer, from a residence of nearly forty years ago at the South, knows this to be the fact. The improvement here spoken of, as to the proper time of *harvesting*, and manner of curing the wheat crop, was purely an accidental discovery made more

than seventy years since, by a wealthy and respectable farmer of the county of Queen Ann's, on the Eastern Shore of Maryland. The accidental circumstance which led to this important discovery, it is not of consequence to mention. Otherwise, I could do it, and support the truth of the fact by the most unquestionable authorities.

But, such are the well known prejudice and obstinacy of mankind, that though the fact, with all its advantages stared them in the face on every side, it was not until about forty years, (somewhere nearly the time fixed upon by the author of the Memoir and his quoted authorities, for the inferiority of the Northern flour) that it became a general practice at the South. Is it any wonder, then, considering the *snail*-progress of all important improvements, that this practice of the South has not found its way, as yet, beyond the Delaware river, or the Northern boundary of Pennsylvania. But, as surely as reason and common sense are to be found at the North, as well as at the South, it will very shortly be adopted by the farmers of the former section.

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