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AN  
INQUIRY  
INTO  
THE IMPOLICY  
OF THE  
CONTINUANCE  
OF THE  
PROHIBITION OF DISTILLATION  
FROM  
GRAIN,  
IN GREAT-BRITAIN;  
IN WHICH  
ITS INJURIOUS EFFECTS ON AGRICULTURE, AND ITS  
TENDENCY TO PRODUCE  
A DEFICIENCY OF NATIONAL SUBSISTENCE,  
ARE PARTICULARLY CONSIDERED.

BY WILLIAM DIXON, JUN.

*"I consider the stopping of the Distillery, economically, financially, commercially, medicinally, and in some degree morally too, as a measure rather well meant, than well considered.—It is too precious a sacrifice to prejudice."*

Mr. Burke's Thoughts and Details on Scarcity.

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In p. 16, l. 4, for Grain, read Gain.  
 27, l. 15, for 4s 2d, read 4s.

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## PREFACE.

*THE question, on which I have presumed to communicate my sentiments to the public, is universally acknowledged to be of great national importance; it has been the frequent subject of long and serious deliberation in Parliament; it embraces many curious and difficult investigations; and it has engaged the attention of writers distinguished for the most splendid talents.*

*Forcibly impressed with these considerations, I submit the following Inquiry to the public with undissembled diffidence.*

*The reasons which I shall proceed to state for this obtrusion of my opinions on the notice of*

*the public will, I trust be admitted by the candid as a sufficient apology, and will in some degree mitigate the severity of criticism.*

*Previously to the late Parliamentary discussion of the expediency of continuing the Prohibition of Distillation from Grain, I was impelled by various considerations to a careful examination of the question; and the result of my investigations was communicated in circular letters to my commercial correspondents, in the hope, that it might be useful in assisting their judgment on so important a subject. In the opinion of many sensible and unprejudiced persons, the facts, information, and reasoning contained in those letters, possessed considerable weight. I have been induced, therefore, to give them a more extensive circulation, and to illustrate and confirm them by many additional observations, from a deep conviction, that the best interests of the country are involved in this inquiry.*

*It appeared also to me, that although the impolicy of excluding grain from the distilleries has been proved by many eminent writers,*

*with great ingenuity, ability, and clearness; yet a further elucidation of the subject was desirable at the present moment.*

*As a Committee of the House of Peers has lately been for some time engaged in receiving evidence relative to distillation from corn, it is by no means improbable, that notwithstanding the recent decision of the Legislature, the question will shortly be re-considered in Parliament: a publication, therefore, containing within a narrow compass the principal arguments for the permission of distillation from grain, with a particular application of them to the present situation of the country, cannot be deemed unseasonable, or, whatever may be its execution, altogether unprofitable.*

*This explanation of my motives for publishing the following work, will I trust, induce the reader to view with indulgence its numerous imperfections.*

*If he should receive from these pages any useful information, candour will dispose him to overlook the want of that elegance of com-*



*position, which is usually expected in inquiries connected with political economy, when he considers the peculiar disadvantages under which, in a literary undertaking, a commercial person unavoidably labors.*

*I dismiss this work with the most earnest solicitude for the accomplishment of the measure, the necessity of which it has been my object to establish, and on which I conceive the prosperity of the country materially to depend.*

WILLIAM DIXON, JUN.

LIVERPOOL, 1ST MAY, 1810.

## INQUIRY,

*&c. &c.*

A Statement of the EVILS of which the prohibition of distillation from grain is productive, and an examination of the alleged NECESSITY of the measure, are requisite to a satisfactory proof of its impolicy.

Of all the evils resulting from the exclusion of grain from the distilleries, the most serious is its fatal influence on agricultural prosperity. The direct tendency of the measure is to discourage the cultivation of grain: it excites amongst the farmers dissatisfaction, perplexity and alarm, and consequently paralyzes their exertions. To the landed interest it is highly detri-

mental: it has occasioned in various places a considerable decline in the value of arable land, and many farms of this description have remained for some time unoccupied. There are in this country extensive tracts of ground, capable of producing only barley, or inferior grain, the value of which is greatly injured by the prohibition of corn distillation. The consumption of the English distilleries is estimated at one-sixteenth of the barley grown in England; and in the report from the committee of the House of Commons on the distillation of sugar it is expressly stated, that the "withdrawing even this small proportion from the market, would prove injurious to the grower of barley," security in his market being the great stimulus to the farmer's exertions. We are moreover assured, that "in the event of a superabundant harvest, the restriction would be found very hurtful to the agricultural interests of the country," and "would prove peculiarly hard upon the farmer, and arrest him in every exertion of his

"industry;" for, as it is shewn in the report alluded to, "the farmers conceive the distilleries to be a source of greater influence on the market than they really are," and therefore the suspension operates as a greater discouragement than it ought upon the farmer in sowing his usual quantity of barley. The whole quantity of grain used in the distilleries, in Great Britain, amounts to about 500,000 quarters\*. The prohibition therefore will occasion, in the annual produce of the country, a diminution of at least that quantity, and probably of a much larger quantity, on account of the erroneous ideas which prevail amongst the farmers respecting the actual consumption of the distilleries.

\* It is stated, that the quantity of corn used for distillation in Ireland is - - 333,333 quarters.  
 The quantity used in Scotland - 155,555 ditto.  
 And in England, including the importation from Scotland and Ireland, - } 291,166 ditto.  
 780,054 quarters,  
 for the use of the distilleries of the United Empire.

The exclusion of grain from the distilleries, whilst it is thus attended with a great public evil, by reducing the means of national subsistence, at the same time injures considerably the profits of the farmers; it deprives them also of the opportunity of selling their damaged corn, which is useless as an article of food, but is applicable to purposes of distillation. This hardship is severely felt at the present moment, as it is ascertained that the accumulation of inferior grain in the country is, at this time, to an extent beyond all precedent.

From the minutes of evidence taken on the third reading of the bill (5th March last) in the House of Peers, it was clearly and satisfactorily ascertained by the united testimony of respectable and intelligent farmers and corn-factors, who were examined upon oath before their Lordships, that in those counties where *barley* is most extensively cultivated, and respecting which their immediate situation enabled them to give a distinct opinion, a very great proportion of the large *barley* crops of last

year was damaged by the wet weather; and in the fens of Norfolk and Cambridge-shire an inundation took place at that time to a very great extent, 70 to 100 thousand acres having been under water.

In these counties it was declared, that 3-4ths of the *barley* were so much damaged, as to be rendered unfit for malting or human sustenance.

The only purposes to which this very considerable quantity of inferior and damaged *barley* could be applied, whilst its use in the distilleries was prohibited, were in feeding horses, hogs, and beasts fattening in the yard; some of it being ground and given to beasts in the shape of flour and meal.

Such application of this grain was, however, stated to be very expensive and unprofitable; it took off a very trifling quantity; and in a few weeks, when the grass appeared, this mode of employing it would not be adopted.

With respect also to its consumption by horses, it was observed, that *barley* not being their natural food, nor considered

suitable or good for them, its application in this way was very sparingly and reluctantly resorted to.

It has however been objected, that such injured grain is never employed by distillers, being unfit for the purposes of distillation.

With a view to establish the fact, whether this description of grain was eligible to distillation or not, the witnesses were very particularly examined by their Lordships upon this point, and from their evidence it appears, that this damaged barley is eligible to the purposes of distillation, to which *alone* the farmers can look for any adequate relief under their present heavy stocks; and it is to be considered, that there never was a season when there was so much grain in the county of Norfolk adapted particularly for the purposes of distillation.

The obvious and natural consequence of having no market for his barley, must be, that the farmer will discontinue the cultivation of that grain to the same extent

\* See Note (A.)

as formerly. This change would be attended with considerable inconvenience, and general loss in our domestic produce of corn; for, from the peculiar nature of the land (it has been clearly shewn, that great part of the county of Norfolk\* could be tilled in no other way than by the turnip and barley husbandry: this is also declared to be the only good system of cultivation which could be practised, where the land is light in any part of the kingdom. Oats being an exhausting crop, if they were substituted in the place of barley, when the light lands came to be sowed again with wheat, under the general system of the Norfolk culture; they would not be in the state to produce the crop, that they would, if laid down with barley.

\* Mr. Coke, member for Norfolk, stated in the House of Commons in the debate which took place 13th April, 1808, on the distillery bill, that he esteemed the cultivation of barley as almost necessary to the existence of Norfolk, which might be considered the granary of England for barley, and could not be injured without material injury to the whole kingdom. (A.)

The very large quantity of barley produced last year has been imputed, in a material degree, to the confident hope that the Legislature would recompense the exertions of the husbandmen, and they have been under that presumption more than ordinarily industrious: there is therefore great reason to apprehend, that the measures of the Legislature so contrary to these expectations, will repress, to an alarming extent, the exertions of the farmers in the cultivation of grain.

That the farmers of this empire should receive, from legislative consideration, that encouragement which gives zeal and alacrity to the pursuits of agriculture, is at all times to be very sincerely wished. It is by holding out adequate inducements to the cultivation of grain, that Great Britain secures to herself, against every contingency, an abundant supply of the staff of life. To disappoint then, at a season of plenty, the reasonable and just expectation of a British farmer, is ever to be deeply regretted.

The farmers are perhaps, of all classes of society, least able to bear even the tem-

porary pressure of serious losses and privations: farming is by no means a profitable occupation. Mr. Burke, in his admirable tract, entitled, "Thoughts and Details on Scarcity," which was written in the year 1795, has shewn that the profits of the farmer are precarious and inconsiderable; and his observations on that subject apply with equal force to the present period.

From the evidence lately delivered to the committee of the House of Peers, it is incontestably proved, that the farmer receives a very inadequate remuneration for the capital which he must employ, the risks to which he is exposed, and the labour which he undergoes.

The petitions lately presented to Parliament contain very forcible representations of the distresses of the farmers, in consequence of the present suspension of corn distillation, which unquestionably call for the immediate consideration of Government. A continuance of the measure will, it is apprehended, deprive many of them of the ability of paying either the taxes or their rent; and thus a description of men,

perhaps the most deserving of the attentive regard of the Legislature, will be doomed to labour under much greater disadvantages and hardships than any other class of the community.

The injurious and embarrassing restraints imposed on farmers, in the disposal of their grain, have induced many persons to convert arable land into pasturage; and the continuance of these restraints will probably render this practice very general, the consequences of which would be of a most injurious nature, as the means of national subsistence would thus be alarmingly diminished; and the operations of farming would, in this case, require the employment of a much smaller number of the peasantry.

A further prolongation of the period of the prohibition will operate also as a serious discouragement to perseverance in those agricultural improvements which have lately been prosecuted with most patriotic ardour and eminent success, and which have conferred very important benefits on the country.

It is impossible to calculate all the evils which will flow from a continuance of this impolitic measure: only a few effects of its pernicious tendency have been yet exhibited. The situation indeed of the farmers is at present highly distressing, and agriculture is seriously discouraged; but the effects of a long protracted suspension of corn distillation will, in all probability, be most calamitous.

The farmers have hitherto cherished the hope, that the measure would be of very short duration; that it was merely a temporary expedient; that when the alarm of approaching scarcity had subsided, their claims on the protection of the Legislature would readily be acknowledged. But should it be persisted in at the present moment, when there is no rational ground for the apprehension of scarcity, (as will afterwards be proved by indisputable facts,) that hope, it is to be feared, will vanish: they will be led to believe that the measure will now become permanent; and the dangerous consequences of such an idea, to



agricultural industry and prosperity, are most fervently to be deprecated.

It will scarcely be controverted, that AGRICULTURE is entitled to the uniform and zealous encouragement of the Legislature: its importance to the stability and happiness of a state, has been acknowledged by every wise Government. From the earliest to the present age of society, the agricultural have been accounted the principal interests of every country; and in consequence *their* encouragement, extension and improvement, were always held in that high and superior estimation, which they so justly merited. Every other pursuit might occasionally conduce to the amelioration of human life, in relieving or removing its inherent or accidental inconveniences, and in supplying the various luxuries, which from habit became necessary to the happy existence of man: but the support of that existence in the cultivation of the soil, and the increase of its produce, were always objects of primary consideration, as most essential to the well-being of the community.

On agriculture depend the real wealth

and strength of a country: It furnishes an internal, secure, and permanent source of revenue. It is the foundation of national prosperity, which, amidst the storms of war, remains unshaken. Affording an easy and regular provision for the wants of men, it contributes more than any other cause to an increase of population, which it has been the unceasing care of enlightened Legislators to encourage. It strengthens, in a very powerful degree, local attachment; and hence, in every country, patriotism has been observed to flourish nearly in an equal proportion to the encouragement which agriculture received.

The industrious habits and hardy frame of those who are employed in the cultivation of the ground, well qualify them to endure the toils and fatigue of war; and their loyal and courageous spirit is the surest safeguard of their country in the hour of danger.

It was the observation of a Roman writer\* on agriculture, the truth of which the ex-

\* Ex Agriculis et viri fortissimi et milites strenuissimi gignuntur.

perience of all ages has confirmed, that the bravest men, and the best soldiers, are produced from the peasantry.

Without indulging any visionary and romantic ideas of rural innocence and simplicity, it may be asserted, without the hazard of contradiction, that agricultural occupations are calculated to promote purity of manners, and to invigorate religious dispositions; and it will readily be admitted, that, with the moral character of a people, the prosperity of a country is intimately connected.

It was the wise policy of the ROMAN GOVERNMENT to give the strongest encouragement to agriculture; its dignity, utility, and charms, were the favorite theme of their philosophers and poets; and writers, distinguished for laborious and successful investigations in political science, have agreed, in representing the flourishing state of agriculture, as one of the principal causes of the greatness of the Roman Empire, and of the warlike spirit which animated its people.

In modern times, AMERICA, by its zealous

prosecution of agricultural improvements, has risen to a high degree of splendor and prosperity, with a rapidity almost unparalleled in the history of the world.

The necessary conclusion from what has been stated is, that it is the sacred duty of every Government to guard and promote the interests of agriculture.

The solicitous attention of the Legislature of this country to the inclosure and cultivation of our extensive waste lands, thus providing for the future support of an increasing population by a more abundant supply of grain, is a manifest proof, that it is by no means unimpressed with a conviction of the high importance of agriculture; but it is obvious, from the faithful and unexaggerated account which has been given of the fatal consequences to agriculture, arising from the prohibition of distillation from grain, that perseverance in that measure is altogether irreconcilable with the same enlightened policy.

The consequences arising to the REVENUE from the substitution of sugar for grain in the distilleries, are of a very serious na-



ture. The annual loss has been stated at £400,000, viz.—

Defalcation to the revenue	£500,000
Grain, on the augmented duties	100,000
on foreign spirits	400,000

This loss however is comparatively trivial, when we consider the incalculable injury which the revenue sustains from illicit distillation.

During the prohibition in Ireland, this fraud upon the revenue had very alarmingly increased; of the extent of it, some idea may be formed, from the following statement made by Mr. Forster, the Chancellor of the Exchequer for Ireland:—he observed, that “he had a return from the officers of excise, stating the quantity of stills seized, together with their size and estimate produce; from which it appeared, that from the 10th January to the 10th December, 1808, unlicensed stills had been seized, capable of distilling 800,000 gallons of spirits per month—a quantity that would amount to half a million of gallons more

“than ever was formerly produced in Ireland within the same space of time.”

The whole loss to the revenue in Ireland during the prohibition has been represented as amounting to one million annually.

It is not by a comparative view of the respective duties payable upon sugar spirit, and upon corn spirit, that the actual loss sustained by the revenue can be determined. In estimating the whole loss, we must take into consideration the evident decrease in the consumption consequent upon the considerable augmentation of the price of a new commodity; the nature of which is of acknowledged inferiority, and more particularly the injurious effects from illicit corn distillation.

The aggregate amount of this loss may, in a financial view, be deemed of inconsiderable magnitude, but it acquires peculiar importance at the present time, when a more than ordinary economy in the management of the resources of the empire is imperiously required.

Let it also be considered, that this money may be collected with the greatest ease, and

would willingly be paid both by the distiller and the consumer.

It is universally acknowledged, that the *Distillers* of this country who employ an immense capital, and promote a very extensive foreign, as well as domestic commerce, in an article of *British* manufacture, yielding to the revenue a most considerable annual amount\* in the easiest and most prompt mode, are justly entitled to legislative consideration; and I would contend, upon this ground, that the long-established system of distillation from corn should not be interrupted, unless the necessity of the measure is proved by strong and incontrovertible facts.

That this prohibition however, if previously deemed necessary, should be continued when the causes that induced the measure have ceased to exist, cannot with

\* It has been stated, that the *corn* distillers of England paid about one million of duty annually, and that of all the millions which contributed to the public revenue, this was the one that came into the Exchequer with the least trouble or expence to the State, and on the fairest and most honourable principles.

consistency be maintained; and that there is no necessity at present for the restriction of the free use of corn in the distilleries of the United Kingdom, will, I trust, be readily ascertained.

Whilst we acknowledge sincere satisfaction, that the use of corn in distillation has been granted to *Ireland*, because to the agricultural interests of that country it would have been utter ruin to have extended the restriction with the immense stock of oats which was accumulated; it is also at the same time to be as sincerely lamented, that the intercourse in Irish and British-made spirits between Great Britain and the sister kingdom, is unhappily, but necessarily, suspended.

The suspension of this intercourse must inevitably continue until the British distilleries are restored to their wonted privileges in the use of corn, for so decided is the preference given to corn over sugar spirit, that if the former was admitted to importation from *Ireland*, under the imposition of even an increased duty, it is highly probable that the British distiller

of sugar spirit would be obliged to abandon all competition.

Whilst then the prohibition is continued in Great Britain, a renewal of the intercourse with Ireland cannot be contemplated, and this unfortunate necessity must be much regretted. The advantages that would result from a mutual interchange of this commodity, and free competition between the two countries, are of infinite importance.

The prohibition is moreover highly injurious to the general interests of trade. The uncertainty with respect to the prolongation of the period of the prohibition, occasions to the dealers in sugar, corn, and spirit, and to the distillers, considerable embarrassment in the arrangement of their future operations; it produces great fluctuations and insecurity in the market, and this state of doubt and perplexity necessarily becomes a powerful check on fair and regular trade, which must be conducted under the most disadvantageous circumstances, in a market continually

\* See Note (B.)

varying with the rumours, the conjectures, and the speculations, of each day.

I have now finished the melancholy but faithful representation of the serious evils to Agriculture, the Revenue, and Commerce, from the prohibition of corn distillation; and I shall therefore proceed to the consideration of its alleged necessity.

The necessity of a measure, pregnant with such fatal consequences, ought undoubtedly to be perfectly clear and extremely urgent. Writers on political economy whose opinions are entitled to the highest deference, have unanimously condemned the interference of the Legislature in regulations connected with national subsistence, except on occasions, which imperiously demand it. The dangers to be apprehended from injudicious interference are very forcibly pointed out in Mr. Burke's tract on Scarcity, a work which, at the present period, more particularly merits the most serious attention.

\* See Note (B.)

It is distinguished for the same inimitable energy and perspicuity of style; the same soundness of judgment—the same luminous arrangement of arguments—the same patient investigation of truth—the same irradiations of transcendent genius which mark the productions of that illustrious writer, on subjects the most humble, and the most sublime.

The probability of approaching scarcity has been urged as a strong proof of the absolute necessity of continuing the suspension of corn distillation.

It is undoubtedly the duty of a Government to endeavour by timely precautions and salutary expedients, to avert so dreadful a calamity; but few questions more importunately demand deep, comprehensive, and dispassionate investigation.

The alarm of scarcity is too often easily excited, and rapidly disseminated; and the calm dictates of unprejudiced reason, have sometimes been overpowered by the violent torrent of popular passions, prejudices, and fears.

I trust that the following observations

will clearly prove that there is at present no just ground for the apprehension of scarcity. It may be admitted, that in the years 1795 and 1800, when corn distillation was prohibited, there was reason to expect the approach of scarcity, and that such expectation had a material influence on the decision of Parliament; but the circumstances of the present period are widely different, and the late renewal of the restrictions seems by no means to have proceeded from a dread of scarcity; for if the Legislature really entertained any apprehensions of that nature, how are we to account for the permission of corn distillation in Ireland?

The absurdity of a dread of scarcity is evinced by the present prices of grain; of the probability of such an event, the price of grain affords the only sure criterion.

That the present prices of barley and oats are considerably lower than at the several periods when the sugar distillation bill was determined upon, and extended, is clearly established by the following statement:

Statement of the highest Prices of GRAIN at Mark-Lane, London, and Corn-Exchange, Liverpool.

	LONDON.			LIVERPOOL.		
	Wheat. P. Quar.	Barley. P. Quar.	Oats. P. Quar.	Wheat. P. Bush. of 45lbs.	Barley. P. Bush. of 36yds.	Oat. P. Bush. of 45lbs.
May 7th, 1808.	80 0	59 0	41 0	1 6	6 6	1 6
July 1st, 1808.	86 0	45 0	44 0	6 6	6 6	6 6
Nov. 16th, 1808.	112 0	51 0	46 0	5 5	5 5	5 5
March 3th, 1809.	108 0	47 0	40 0	5 5	5 5	5 5
Nov. 1st, 1809.	123 0	55 0	58 0	4 4	4 4	4 4
Feb. 6th, 1810.	108 0	44 0	47 0	4 4	4 4	4 4
April 21st, 1810.	110 0	43 0	47 0	4 4	4 4	4 4

When the Bill was first read in Parliament, . . .  
 Date of the Act prohibiting Distillation from Corn . . .  
 Date of Proclamations by the King in Council to . . .  
 continue the prohibition of Corn until 40 days . . .  
 after the next Session of Parliament . . .  
 Date of 2d Act of Parliament, . . .  
 Date of 2d Proclamations by the King in Council, . . .  
 to continue the prohibition of Corn in the . . .  
 Disfranchises until 40 days after the meeting of . . .  
 Parliament . . .  
 1810.

I have annexed\* the average prices of grain in England and Wales; in the twelve maritime districts; and in Scotland, at or about the same dates: I am, however, of opinion, that such returns are, by no means so satisfactory† as the report of the exact

	Wheat	Barley	Oats	Peas	Beans	Maize
May 7th, 1808.	1 6	6 6	1 6	1 6	1 6	1 6
July 1st, 1808.	6 6	6 6	6 6	6 6	6 6	6 6
Nov. 16th, 1808.	5 5	5 5	5 5	5 5	5 5	5 5
March 3th, 1809.	5 5	5 5	5 5	5 5	5 5	5 5
Nov. 1st, 1809.	4 4	4 4	4 4	4 4	4 4	4 4
Feb. 6th, 1810.	4 4	4 4	4 4	4 4	4 4	4 4
April 21st, 1810.	4 4	4 4	4 4	4 4	4 4	4 4

† The average returns published in the Gazette cannot, I apprehend, be considered as the fair criterion of the actual state of the corn market; for, however zealous may be the exertions of those who are deputed to collect from the different markets the requisite information, I believe it will be found, and invariably acknowledged, that the difficulties under which they labor to obtain the real state of the sales, and the prices, are so numerous, and in many instances insurmountable, arising in a great measure from the reluctance of interested individuals to communicate accurate information; that, I am inclined to hazard the opinion, implicit confidence cannot with propriety or with safety, be reposed in an average estimated from such general, indeterminate and it is to be feared, in some cases, incorrect returns. Under such impression I have been induced to prefer the clear and unquestionable prices of grain in Mark-Lane and at the Corn-Exchange; nevertheless it is to be understood, that the average returns, uncertain as they are, confirm the assertion, that a material reduction has taken place in the prices



prices at Mark Lane, London, and the Corn Exchange, Liverpool.

The former market is principally resorted to by the English distillers for their supply of barley; and in its fluctuations it is more over well known to possess considerable influence over every other market throughout the kingdom.

With respect to Liverpool, the constant and extensive intercourse of that port with Ireland, affords an opportunity of ascertaining, with great accuracy, the value of oats, which grain is chiefly used in the Irish distilleries.

It is therefore, by a comparative view of the prices of *barley* and *oats* in these two leading markets, that our conclusions will be most correctly determined.

of Barley and Oats, since corn distillation was prohibited.

\* In the debate on the distillery question, which took place 4th December, 1801, Mr. Rose observed, that the distillers, who were in general great capitalists, were, for the most part, resident in the vicinity of London, and were supplied from *Mark Lane*.

It must be observed, that in the statement which I have given, I have submitted the highest prices, in order to avoid any misconception with respect to quality, which of course is considered the best; whilst, however, the adoption of this mode has been preferred, it is necessary to notice the lowest prices; since there is at present an immense quantity of inferior grain in the country, and in consequence the value of the finest qualities is rated disproportionately high.

The greatest price on the 21st April last, for the best Irish potatoe oats, in the Liverpool market, was 4s 2d per bushel of 45lb.; and for common oats (of which one-half of the crop in Ireland consists) 3s 6d to 3s 10d per 45lb. When therefore the expences incurred in the exportation to this country are deducted from these quotations, it will be found, that the Irish farmer is experiencing, in no inconsiderable degree, a positive loss.

Although distillation from grain has been permitted in Ireland, the limited extent to which it can be conducted, whilst the intercourse in Irish-made

The highest price of oats in the Liverpool market is shewn by the statement to be at present about 2s per bushel below the price when the prohibition was first proposed, and in the London market 7s per quarter. The lowest quotation in the latter is 18s per quarter. In this consideration, no allusion is made to damaged grain.

With respect to Barley, the highest quotation in Mark Lane at present is 7s per quarter below the price at the before-mentioned period, and 12s per quarter below the rate when the bill was last extended by proclamation. The lowest quotation is 18s per quarter. The prohibition of spirits is interdicted with Great Britain, affords to the farmers a very inadequate relief.

Any effectual remedy is only to be expected from the free operations of the distillers; but this intercourse between the two countries cannot be renewed until the prohibition of distillation from corn in Great Britain is repealed. In considering therefore the agricultural interests of Great Britain, I have adverted to the situation of the Irish farmer, notwithstanding the recent indulgence of the Legislature in allowing a limited corn distillation in Ireland.

(\* See Note (D).)

tion is at present only 30s per quarter in London, and 5s per bushel of 36 quarts in Liverpool; the latter market is not however deserving of notice with regard to Barley, as that description of grain, it is well known has in Liverpool a very limited sale, and no corn distilleries are in its vicinity.

Although I have given *Wheat* a place in the quotations, it is scarcely necessary to mention, that this description of grain is not used for distillation, and it would not therefore be materially, if at all affected, by the proposed measure. The present highest quotation of 110s per quarter is for the finest Dantzic Wheat, whilst the lowest price is 70s per quarter in London, and 18s 9d per bushel of 70lb in Liverpool.

The irrefragable argument for the removal of the present restrictions on distillation which this comparative view of the prices of grain furnishes, is materially strengthened by the consideration of the extraordinary depreciation of the national currency,

(\* See Note (E).)

which, during the last year, various causes have produced. It may be satisfactory to enquire into the prices of grain at former periods, when prohibitions of corn distillation have been laid on, continued, or removed. I have therefore annexed an account of the average prices of grain in England and Wales, and also in Scotland, at the several periods respectively, from the month of July 1795, inclusive, specifying at which of the said periods respectively the distillation has been prohibited or allowed; and the prices per quarter of each grain at the time when such change took place; and also specifying the present prices, according to the latest return.

It has been objected to the opening of the distilleries to corn, that the prices would instantly be advanced to an alarming height, and again call for legislative interference; but so fallacious an argument scarcely requires refutation. Whatever temporary advance might take place whilst the distillers were making their purchases, for it is highly

\* See Note (F.)

probable that the holders of grain would readily avail themselves of the momentary demand, it is proved by former experience, that such advance subsides with the impulse of the day; the market would then readily find its own level, and even should it not return to its former situation, it would at all events acquire that fair and moderate currency, which is best adapted to the interests of agriculture and commerce. That there is a very superabundant stock of oats in Ireland is evident from the considerable importations at this time from that country into the port of Liverpool, which will be particularly noticed on reference to the account given.

The arrivals of grain from abroad during the last year have been to an extent fully proportionate to our accustomed foreign supplies, and even beyond the average importations of the five years mentioned in the annexed statement †, the average calcu-

\* See note (G.)

† See Note (H.)

‡ See Note (I.)



lation of each year being about 700,000 quarters.

The foreign imports into London for the last year amount to 516,060 quarters of grain, and no abatement in the supplies is found this year, but an increased importation for, from the 5th January last to the 23d April, no less a quantity than 420,068 quarters of grain has arrived from abroad to the port of London.

It is here satisfactory to observe, that whilst we are receiving corn from the coast of France, where it is particularly abundant and cheap, an important facility is afforded through such commerce for the export in return of colonial produce, particularly dye woods and coffee, for the former of which licences are brought over. Considerable exportations to France have recently taken place, and the intercourse has been highly beneficial to the colonies.

The quantity of corn imported from the United States of America is comparatively trifling; however the material supplies from

See Note (K)

thence are received by the British market, either directly or circuitously. The quantity brought last year to the port of Liverpool, where the principal part of the British trade with that country is conducted, amounted to 102,694 quarters of grain. Looking then to the immense stocks of corn in this country, to the unprecedented importations of foreign grain, of which we are daily receiving large supplies, (not less a quantity than 420,068 quarters having arrived into London since the commencement of this year) a quantity into that part alone in scarcely four months, which is nearly two thirds of the usual annual importation into the whole empire, regarding also the very low prices of barley and oats, and more especially contemplating the distressful situation of the farmers in the great barley countries in England; I conceive it altogether impossible, that even the most credulous can be deluded by the alarm of scarcity. The plain inference from the whole of what has been stated is, that there is in the country a positive superabundance, an im-

mense disposeable surplus stock of grain; and consequently that the prohibition cannot be defended upon the ground of either real or apparent scarcity.

The re-opening of the distilleries to grain would, I am convinced, have no influence in accelerating the arrival of scarcity, even if there was any reason to apprehend it. The public alarm would have an immediate tendency to increase the price of grain; and when the price is considerably raised, then the distiller is induced, from regard to his own interest to suspend his operations in distilling from corn. Thus the high price of grain produces nearly the same effect as a prohibitory act of the legislature, only with this important difference, that it is accompanied with none of the evils of a compulsory measure. Whenever the alarming prospect of scarcity produces a

\* "A most intelligent and laborious committee of the House of Commons, had declared it inexpedient to stop the distilleries, when the price of barley was much higher than at present, viz.—48s per quarter."—*Speech of the Chancellor of the Exchequer, 14th December, 1801.*

serious rise in the price of grain, the employment of it in distillation would be detrimental to the interests of the distillers; and hence they will voluntarily exclude it, nearly at the same time when legislative interference might be expedient, and when the use of it in the distilleries would prove injurious to the public.

I contend moreover not only that an unrestrained liberty of distilling from grain cannot be instrumental in occasioning scarcity, but would tend in no inconsiderable degree to its prevention; and that a long continuance of the prohibition of corn distillation may ultimately produce actual scarcity, and alarmingly aggravate its calamities.

Scarcely any inquiry is attended with so much difficulty as that which relates to the security and augmentation of national subsistence. Various measures have, at different times, been adopted for the accomplishment of this important object; but the result has, in many instances, completely disappointed the hopes which had with some degree of reason, been

indulged. The fact appears to be, that an abundant supply of Grain is most effectually secured by granting an unlimited freedom in its disposal. As long as the corn grower is not controuled by Legislative authority, but enjoys the liberty of sending his grain to the best market, this branch of agriculture will generally flourish. Hence the permission of corn distillation contributes to the improvement of the means of national subsistence, and consequently diminishes the risk of a scarcity.

It has the same tendency also on another account; it acts as a stimulus to the exertions of the farmer. FRANCE had, at various periods, been afflicted with dearth; and the remedies, which had been resorted to, had in general been unsuccessful. Sully permitted the exportation of corn, and plenty was the almost immediate consequence of that politic measure, which removed an odious restriction on the corn trade, and afforded to the farmer a powerful incitement to the cultivation of grain. The liberty of distilling from grain is for these

reasons, calculated to produce similar advantages.

It operates moreover in another respect to prevent scarcity. Dr. Paley\* has justly remarked, that "it is a maxim, which belongs to the productions both of nature and of art, that *it is impossible to have enough without a superfluity.*" This maxim is particularly applicable to the point which we are considering.

When corn distillation is allowed, more corn is grown in the country than its population absolutely requires. The quantity then of grain intended for the distilleries is a disposeable surplus, which, on any great emergency, may supply food to a very considerable number of persons.—It is a resource against famine.

The prohibition of distillation from grain contributes to increase the danger of scarcity; because it is an experiment restraining and embarrassing the farmer; diminishing his profits; and repressing his industry.

\* See the Principles of Moral and Political Philosophy, vol. ii. page 296, 12th edition.

Dr. Adam Smith\*, whose opinions on subjects of this nature possess perhaps incomparably greater weight than those of any other writers, has made the following excellent observations:—"The unlimited unrestrained freedom of the corn trade, as it is the only effectual preventive of the miseries of famine, so it is the best palliative of the inconveniences of a dearth. Famine has never arisen from any other cause; but the violence of a government attempting, by improper means, to remedy the inconveniences of a dearth. The prohibition of corn distillation is an attempt to prevent the price of corn from exceeding a certain sum; it is an approximation to the most absurd, and the most dangerous, of all political regulations—the establishment of a maximum. The tendency of such an experiment to produce the evil, which it is intended to remedy, was lamentably exemplified in France in the years 1793 and 1794. That country was in consequence of it afflicted

\* See his Wealth of Nations, book iv, c. 5.

with all the horrors of famine; and whoever reflects on the melancholy scene of public distress, which France then exhibited, will sincerely deprecate the adoption of any measure which approaches to the most distant resemblance to that dreadful expedient.

It cannot be expected that, under the present restrictions, if continued, the farmer will sow his usual quantity of grain: the annual deficiency in the production of grain in the country, from this cause, will amount to about 500,000 quarters, the quantity used in distillation, and which would be sufficient for the subsistence of 360,000 persons. The deficiency will probably be considerably greater, since (as it has been before observed) the farmers in general entertain an idea, that the consumption of grain in the distilleries is to an amount greatly exceeding that which is actually used.

It is also much to be feared, that if the period of the prohibition should still be protracted, after so long a continuance, and notwithstanding the low price, and our

abundant supplies of grain; the farmers will be induced to believe, that the permanent exclusion of grain from the distilleries is in the contemplation of government, the consequence of which belief would most probably be, that the quantity of grain usually sown would be diminished in a very alarming degree, and that the produce of the country would perhaps be inadequate to its consumption.

A considerable diminution moreover in the annual production of grain, would arise from the conversion of arable\* into grass land, which the prohibition has occasioned, and which its continuance will consequently increase.

There exist therefore reasonable grounds for apprehending, that perseverance in the present restrictions on distillation may eventually lead to a scarcity, and will dreadfully augment the miseries of that calamity if it should really occur.

These are circumstances which unquestionably deserve the most serious consi-

\* See Note (L.)

deration of those who have been the advocates for the removal of the restrictions, particularly when it is recollected, that for the alleviation of the evils of scarcity, we must be in a great measure dependant on the precarious supplies received from an enemy's country.

The prohibition of corn distillation has, in addition to these dangerous effects, a pernicious influence in increasing the price of provisions, and thus aggravating the distresses of the lower classes of the community.

In the evidence lately given in the House of Peers it was stated, that hogs were not to be procured in any quantity, and the price in the county of Norfolk was increased to the extravagant rate of 1s to 1s 3d per lb. for lean store. The increased price of pork and butcher's meat in general, since the spring and beginning of the summer of 1808, was particularly acknowledged; and it was mentioned, that since that period, there had been a continual rise. It will here be recollected, that it was on the 1st July in that year, that the act for prohibit-

ing the use of grain in the distilleries took place; and when it is considered that the number of hogs fed from the refuse grains of the English distilleries is computed at the annual amount of 41,251 head, (which being bought at 12 stone, and sold at 18, there were thus annually produced 741,816 stone of hog's meat, worth (£111,273.8s)) it may fairly be presumed, that to the want of this cheap and very applicable food, are to be ascribed the present great deficiency in the stock of live pigs, and the consequent high prices of butcher's meat in general, and pork in particular.\*

Another cause, and that not of inconsiderable operation, tended to produce a scarcity in flesh provision. It is one, that on many accounts cannot be too much regretted, and the rather, as it was the sole cause of a scarcity in that article, which arose from the proceedings of men themselves: I mean the stop put to the distillery.

The hogs (and that would be sufficient) which were fed with the waste wash of that produce, did not demand the fourth part of the corn used by farmers in fattening them. The spirit was nearly so much clear gain to the nation. It is an odd way of making flesh cheap, to stop or check the distillery.—*Burke on Scarcity.*

under the precarious hope of obtaining bread at a cheap rate, the use of corn in the distilleries is prohibited; let it at the same time be remembered, that the inevitable consequence is an augmented price of animal food. If then the very considerable quantity of ordinary and damaged barley at present in the country is unfit for human

The following statement contained in the petition to Parliament from the county of FIRE, against the present restriction on corn distillation, is deserving of particular attention.

The present very high price of butcher's meat is one of the obvious results of this measure. It is a fact that its price has increased from 9s and 10s per stone of 17½ lbs English, to 12s, 13s, and 14s per stone; and there is much reason to apprehend, that it will rise still higher, as the large quantity of cattle fed on the offals of the distilleries, not less than 11,000 in the Lowland distilleries of Scotland alone, were chiefly brought to market in that part of the season yet approaching, before the first cattle fed on grass are fit to be killed in the end of May or beginning of June.

Milk Cows, in the neighbourhood of large towns, were also in use to be fed for a considerable period, on the offals of the distilleries; and the price of milk has also risen about one seventh part during the present winter.



sustenance, and can only be confined to the purposes of feeding, what objection can reasonably be made to permit the employment of it in distillation, when by doing so, the grain is afterwards applied to the former purpose, and thereby rendered useful in both ways? It may here be mentioned, that where *illegal* distillation is conducted, the grains, after the process is over, are altogether lost, being destroyed to prevent detection. These considerations, it may be presumed, are entitled to some notice, as a further reason that the free use of corn in the distilleries should be allowed.

The increase in the value of another article of food is caused by the present mode of distillation; *sugar*, which is consumed by the poorest of the people, has, in consequence, advanced\* in price very considerably.

The advocates for the substitution of *sugar* instead of grain in the distilleries contend, that it is justified by the necessity

\* The average price of Muscovado sugar on the  
 25th May, 1808, was 38s 6½d per cwt.  
 14th February, 1810, — 52 10½ —  
 14th April, 1810, — 50 4½ —

of extending relief to the West Indian merchants, who, from the peculiar circumstances of the times, are involved in unprecedented difficulties and distress; and on this ground the measure has been strenuously defended.

In all the praises of the West Indian merchants, which their most zealous friends have expressed;—in all the representations of their services and sufferings, I most cordially concur. As far as my own observation extends, there exists not in society a more honorable description of men. No person is impressed with sentiments of higher respect for their character than myself: no one would rejoice more sincerely in any plan for their relief, consistent with the general interests of the country. Under every circumstance, and upon every occasion, they are eminently entitled to the most attentive consideration; and when the amount of the immense revenue derived from their extensive commerce is recollected, it must be acknowledged that they have at all times a strong claim upon the assistance and protection of the Legislature. Under such considerations it is to be hoped

that their interests will never be invaded, and that every seasonable and requisite relief will never be withheld.

But the continuance of the prohibition of distillation from grain appears to be an unwise and inadequate remedy for the distresses of the West Indian planters.

It is scarcely reconcileable with the principles of justice, that the interests of agriculture, and of general trade, should be sacrificed to promote the advantages of the colonist; inasmuch, as on the other hand, it would be unfair to infringe upon the interests of the colonist, for the purpose of assisting any other branch of industry.

It is the obvious policy of every Government to guard with the most vigilant care against benefiting one class of the community, by a measure which is attended with serious injury to another.

The object which the prohibition was at first intended to promote, viz. relief to the West Indian interests, through the consumption of sugar in the distilleries, has been accomplished for a period, even beyond

the time originally proposed and recommended.\*

Thus the West Indian merchants have received considerable aid, whilst other classes of the community, equally deserving of Legislative attention, have been subjected to severe hardships.

The zealous regard of Government to the welfare of the West Indian planters, has

\* "Your committee are persuaded, that the permanent adoption of this measure would be attended with great evils to the agriculture of the country; they feel it incumbent on them to state, that nothing in this evidence before them could induce a recommendation to that effect; they conceive that its frequent repetition would be still more hurtful; and nothing but the strong case so clearly made out by the West Indian interest; coupled with the loss of our trade with the countries from whence we derived a great proportion of our foreign supply, could prevail upon them to advise even this slight temporary interference (guarded as it is by the proposed limitation) with an established system of agriculture."—*Report of the committee on the distillation of sugar.*

Within the last forty years the distillation from corn has been suspended only twice before this time, viz.

From 10th July, 1795, to 1st February, 1797; and

From 8th December, 1800, to 1st January, 1802.



been evinced upon many occasions. It is highly satisfactory to recollect the recent testimonies of the Legislature to the importance of our colonial possessions, and the invariable promptitude with which their interests, when endangered, have been consulted and promoted.

The heavy duties which have been imposed upon brandy and geneva, were recommended for the express purpose of increasing the consumption of colonial spirit,

*Rum*, by restricting the demand for the former articles; and in order more effectually to accomplish this desirable object, Government has of late refused to grant licences for the importation of brandy and geneva, so that every benefit through this channel, which could possibly be obtained, has been conferred; whilst a considerable amount of duty to the revenue is sacrificed by this arrangement.

It should also be considered, that the late regulation for supplying the navy with rum, instead of Spanish brandy, when the price of the former does not exceed one shilling per gallon (the rate of the latter)

has afforded them very important advantages.

The material reduction in the duties on coffee, which has recently taken place, was proposed for the purpose of encouraging its consumption.

The West Indian planters have not only derived important assistance from Legislative consideration, but their interests have also been essentially promoted through another source.

The embargo and non-intercourse acts of the American Government, tending to diminish the importation of Cotton into this country, operated to enhance the value of that article; and the returns which the West Indian planters received for their considerable crops of cotton were, in many instances, increased 100 per cent. above the ordinary estimates.

From these considerations it may be reasonably presumed, that the distresses which they were represented to have experienced, when enquired into by the committee appointed by the House of Commons have been in a great degree alleviated, and

the *present* situation of that respectable body may therefore be contemplated with peculiar satisfaction, as affording a very agreeable contrast to their former difficulties.

It still remains to be noticed, that the growth of sugar far exceeds the quantity that can be employed in general consumption. The fundamental evil is a redundant produce of the article, the culture of which should obviously be diminished, and proportioned to the requisite demand: the means of increasing that demand, consistently with a due regard to the protection of the revenue and agriculture, have been diligently investigated by a committee of the House of Commons.

They have, with indefatigable industry collected evidence relative to colonial produce; and they have suggested plans, which afford a better prospect of relief to the West Indian planters, than the prohibition of distillation from grain. I have annexed their *final* report on this important subject, on account of the valuable information which it contains\*.

\* I have refrained from a distinct examination of

An objection, formidable not on account of its intrinsic weight, but from its connection with that most important of all Legislative considerations, public morality, has, from motives truly honorable and patriotic, been urged against the repeal of the present restrictions on distillation from corn.

It has been maintained, that such a measure would operate as an encouragement to intemperance amongst the labouring poor.

If this objection can be substantiated, no person would more strenuously oppose, or more deeply lament, the permission of resuming distillation from grain than myself; because I am impressed with a solemn conviction, that the prevalence of intemperate habits amongst the lower classes in particular, is one of the greatest calamities which can befall a country, and is a certain

the plans suggested in this report, because it is not strictly connected with the subject under immediate consideration. They are discussed with great ability and ingenuity in the *Edinburgh Review*, vol. xiii. page 382.

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indication of its rapid approach to anarchy and ruin. But I am also not less forcibly persuaded, that the discontinuance of the prohibition of corn spirit will not have the mischievous tendency which has been predicted.

The reasoning, with which the objection has been supported, appears to me to amount to nothing more than vague declamation, and vain surmises, to assertions without proof, and apprehensions without foundation; and it will readily be acknowledged, that it would be absurd to sacrifice to these the great national advantages, which would result from an unrestricted freedom of distillation.

The decided and general partiality of the lower classes to corn spirits is clearly ascertained, and it is a harsh measure not to gratify this partiality, on the supposition that no injurious consequences can reasonably be expected from it.

Now it may be admitted, that this preference of corn spirits will occasion an increase in the consumption of spirits; but I contend that this increase, whilst it will

contribute to the improvement of the revenue, and to the interest of the distiller, will have no influence in the corruption of public morals.

About 60 years ago considerable alarm prevailed in this country on account of the intemperate use of distilled spirits amongst the inferior orders. The melancholy progress of the horrid vice of drunkenness, and all its lamentable consequences, were eloquently and pathetically described in the Senate, and in the pulpit, and petitions were presented to Parliament for the immediate application of an effectual remedy for so dreadful an evil.

It cannot be denied that the apprehensions which were entertained were well founded. The great cheapness of spirits then afforded the poorest of the people an opportunity of indulging with little restraint their intemperate propensities: but the high price of spirituous liquors has, of late years, considerably diminished the temptations to inebriety.

Mr. Burke, in his *Thoughts on Scarcity*, which contain a masterly and complete

refutation of the objection against spirituous liquors; speaking of general intemperance from this cause, says, "that evil I consider to be wholly done away; observation for the last forty years, and particularly for the last thirty, has furnished me with ten instances of drunkenness from other causes, for one from this."

If the present suspension of distillation from grain were immediately to cease, the price of corn spirit would be an effectual preventive of its general abuse.

That the alarm which we have been considering is altogether groundless is evident from the permission of corn distillation being lately granted by the Legislature to Ireland; in which country the partiality to corn spirit is confessedly much stronger, and prevails to a far greater extent than in Great Britain, and in which consequently increasing intemperance from this cause is more seriously to be apprehended.

A subsequent Act of Parliament has moreover reduced the duty upon corn spirits, distilled in Ireland, from 5s 8d to 2s 6d per gallon.

With respect to the moral and medicinal effects of spirituous liquors, considerable misconceptions and misrepresentations prevail. "Experience," observes Mr. Burke, "has long since taught me very little to respect the declamations on that subject;—whether the thunder of the laws, or the thunder of eloquence, is hurled on gin, always I am thunder proof. The alembic has, in my mind, furnished the world a far greater benefit and blessing, than if the *opus maximum* had been really found by chemistry, and, like Midas, we could turn every thing into gold."

The objection that spirituous liquors may be, and are often, abused, is equally applicable to every species of inebriating beverage. There are, I am inclined to think, fewer instances of intoxication from distilled spirits than from beer, and yet no person would contend that this is a sufficient reason for *its prohibition*.

That beer is more nutritive and more

\* See Thoughts on Scarcity.

wholesome, may readily be conceded, yet spirituous liquors have uses, which it does not possess. From their efficacy in resisting putrescency, and from their contracting power, they are highly beneficial in the prevention, the relief, and the removal, of many disorders, peculiarly incident to the labouring poor, which scanty diet, possessing little nourishment, has a tendency to produce. They conduce moreover to the preservation of health in cold and marshy situations; and they are in some degree necessary to those, who submit to the toils and are exposed to the perils of navigation. They are also, to adopt the language of Mr. Burke,\* "a medicine for the mind: under the pressure of the cares and sorrows of our mortal condition, men have at all times, and in all countries, called in some physical aid to their moral consolations." From the tasting of wine the poor are precluded; the temperate use of distilled spirits is sometimes their only remedy in sickness, their

\* See his Thoughts on Scarcity, &c.

only palliative of bodily suffering; and it tends to exhilarate their mind, when dejected by present distress, by melancholy recollections, or by gloomy anticipations. In power, they are highly beneficial in the prevention, the relief, and the removal, of many disorders, peculiarly incident to the labouring poor. The impolicy of continuing the prohibition of distillation from grain, has, I trust, been sufficiently established, by the arguments which have been produced, to prove that it is both *injurious* and *unnecessary*. A summary statement of some of the principal arguments may not be improper, as it may exhibit the proof, which they constitute, in a clearer and stronger light. The exclusion of grain from the distilleries is particularly detrimental to the interests of agriculture: it tends to lessen the production of corn in the country, by probably a much greater quantity than that which is used in distillation: it is a restraint on agricultural industry and ardour. Under the influence of the uncertainty and alarm which it creates, the farmer is deterred from cultivating corn, he suffers



great inconvenience and embarrassment from the want of that easy, secure, and profitable market for his grain, which the distilleries afford; and as his returns are very inadequate to his labour and risks, he feels any temporary disappointment of his hopes, or interruption to his usual system of operations, as a peculiar hardship.

It has had a material effect on the value of landed property, particularly of such land as is peculiarly adapted for the growing of barley. It has produced a general preference of grazing to tillage, wherever the former was practicable; from the present discouragement of corn-growing, many acres of arable land have been turned into pasturage, in consequence of which the home production of corn must be considerably diminished.

The continuance of the measure will be attended with more serious effects than those which have been yet experienced; it will occasion great distress to the farmers, as their immense stocks of damaged barley can be consumed only in distillation. It will produce a dreadful aggravation of all those

evils, which have hitherto accompanied the prohibition of corn distillation; it will probably impress the farmers with a persuasion, that even in years of the greatest abundance, the use of grain in the distilleries will not be allowed, and consequently induce them to neglect tillage to such a degree, that the country may no longer produce the necessary supplies of grain for its population.

From the prohibition of corn distillation, the REVENUE experiences an annual loss to an enormous amount, on account of the difference in the duties of sugar and corn spirits, the disproportionate consumption of sugar spirit, and the almost incredible extent of illicit distillation.

The DISTILLERS also suffer severely from the measure; and the prosperity and security of general commerce are interrupted by it.

Every encroachment on agricultural industry; every interference in the corn trade is justifiable only by the most urgent necessity.

The prohibition of distillation from grain,

though productive of such calamitous consequences, is altogether unnecessary.

The prohibition is not necessary as a precaution against scarcity; because the low price of grain, and the immense supplies which we have received from the Continent clearly prove the complete improbability of such an event; even if it were to be apprehended, this precautionary measure would still be unnecessary, because from the consequent high price of grain, distillation from corn would cease without any legal prohibition.

Indeed the free use of grain in the distilleries is a security against scarcity, because perfect liberty in the disposal of grain, and the indefinite vent which the distilleries afford are a strong inducement to its cultivation, and because the quantity raised for the distilleries is a provision against any occasional deficiency in the crops; hence the stoppage of the distilleries, as discouraging tillage, as restricting the freedom of the corn trade, as withdrawing from the country in any emergency the surplus produce consumed in the distilleries, and as

being a forced limitation of the corn market, has a tendency to produce scarcity; and it not only occasions a scarcity of corn, but also of provisions in general, on account of the large supplies of cheap food for cattle, which the distilleries afford.

It is an inadequate remedy to the distresses of the West Indian planters, who have, it must at the same time be considered, been greatly benefited by recent events and regulations,—who have no right to expect that on their account the general interests of the country should be sacrificed, and to whom the Legislature has suggested other and more effectual modes of relief for their difficulties.

From the whole of what has been stated, the impolicy of a measure attended with so many serious evils, and justified by no necessity, is the plain and obvious conclusion: and this is still more apparent from the consideration of the alarming aspect of the present times.

The sacrifice of a certain, easy, and considerable source of revenue, and more particularly the discouragement of agriculture,

at a period when we are engaged in a most expensive war, with an enemy, who in a time of scarcity may deprive us of our usual resources from importations of grain from the Continent, are surely repugnant to the maxims of wise policy. The force of these arguments, cannot, I imagine, be invalidated by representing them as consisting of mere gratuitous assertions, and visionary speculations; they are supported by clear and indisputable proofs, by documents of unquestionable authority, and by evidence delivered upon oath. Nor am I conscious of having endeavoured to magnify the dangers of the measure, which I have been considering. Sensible, that partial investigation and interested feelings are little consistent with a candid inquiry, it has at least been my object to regard, with an unbiassed judgment, the *real* merits of the question in those various points of view in which it could be examined, and to adopt, as the foundation of all my reasoning on this important subject, the unequivocal testimony of facts.

The opinion, which I have freely deli-

vered with respect to the EVILS arising from the prohibition of distillation from grain, and the NECESSITY of its immediate repeal, is not that of a solitary individual;—it is expressed in numerous petitions from counties and agricultural societies;—it is sanctioned by some of the most enlightened statesmen in the kingdom.

The expediency of permitting the use of grain in the distilleries has been defended with distinguished zeal and ability by a nobleman, whose wisdom, moderation, and firmness, conferred invaluable blessings on Ireland; and he has prosecuted, with unwearied assiduity, the investigation of this momentous subject. It is to be hoped, that his exertions in the protection of agriculture will be crowned with the same success, which attended all his measures for the security and the happiness of Ireland. The important services which he will thus render to his country, though less glorious than those performed by him in the illustrious station, which he lately filled, will *eminently* entitle him to its praises and its gratitude.



The nation now looks forward with anxious expectation to the time when this great question, involving so many important interests, will again engage the attention of the Legislature. It is most earnestly to be wished, that the consideration of it may not be deferred to any distant period. From a careful review of every circumstance, I have no hesitation in predicting, that any great delay will be attended with most serious consequences.

If the long continuance of a fluctuating policy should deprive the farmers of confidence in the security of the corn market, it will not easily be regained. If restrictive innovations, materially diminishing the profits of the corn grower, should lead to a derangement of the general system of husbandry, when their fatal tendency is proved to the conviction of the most strenuous of their present advocates, by an alarming deficiency of grain, the repeal of them at that time will probably have little influence in prevailing on the farmers again to alter their plan of operations; nor will such an alteration be immediately practicable.

But there is, I sincerely trust, no occasion for indulging such gloomy apprehensions: legislative wisdom will, doubtless, by timely remedies, avert the danger. The cause of agriculture will, it may be hoped, prevail. The petitions of so large and respectable a portion of the people will not be disregarded.

The repeal of a prohibitory act, which threatens the destruction of agriculture, may, I think, with confidence, be anticipated.

From the speedy removal of the present restrictions on distillation, incalculable blessings will flow to the country. The farmer will pursue his occupations with undiminished alacrity, animated by the certainty of obtaining an adequate remuneration for his labours. The means of national subsistence will be augmented. The re-

The following provision has been made in the last Act, which was not introduced into the former Acts for prohibiting the use of corn in distillation, viz.—“And be it further enacted, that this Act may be varied, altered or REPEALED, by any Act to be passed in this present Session of Parliament.”

venue will be improved. Stability will be restored to general commerce.

To the gloom and despondency, which now overspread the mind of every friend to agriculture, brighter prospects will succeed. Instead of the deep and inevitable distress, in which the farmers will be involved by the continuance of the prohibition, they will be, in some degree, recompensed for their industry by the sale of their large stocks of damaged and inferior grain, for which there is at present no market. Instead of seeing agriculture languishing under the baneful influence of a restrictive policy, we shall see it rising with rapidity to its former flourishing state. Instead of witnessing, with melancholy presages of future dearth, the daily increasing conversion of arable land into pasturage, we shall behold our fields covered with luxuriant crops of corn. Instead of contemplating, with dismay, the prospect of approaching scarcity, our fears and anxiety will be considerably diminished by the satisfactory assurance, that we are in a great measure secured against the risk of a defi-

ciency of national subsistence by the superfluous produce raised for the distilleries, which, in the contingency of unfriendly seasons, may be diverted from the purpose for which it was originally designed, and turned into food for man.

Few measures, in short, are calculated to produce more important benefits to the country, or are more essentially connected with its strength, prosperity, and happiness, than the repeal of the prohibition of its cultivation from corn.

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NOTES.

NOTE (A.)

ONE farmer deposed, that, in former years, after the wet harvest, he has known that damaged sort of corn disposed of to distillers to be used as raw grain, as was understood in the market; and that the merchants to whom he sold it informed him, that it was purchased for that purpose. He had himself sold, he declared, barley as bad as that which had been described this year to be unmarketable, and some even worse in quality, to merchants who shipped it to Scotch distillers. The barley referred to at the former period was of inferior quality, being more vegetated than that of the last year; for altho' in the latter instance the grain was wet, yet the degree of heat was not so great as in the former. The heat exhausted the barley as much as that time as the wet had done lately; but this year he said it had turned black when steeped, and had not vegetated in double or treble the time it had done in preceding seasons.

Another farmer spoke to the same effect with respect to the sale of damaged barley for the use of the distilleries. A corn buyer also confirmed the testimony of the two former deponents, and further stated, that he had not the smallest doubt that, if distillation was permitted, the whole of the large stock of damaged barley, which was now perishing in the granaries, might be marketable. He moreover stated, that he had known distillers to purchase the inferior sorts of barley

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for distillation, in preference to the better qualities, to be used as raw grain. Another evidence was of similar nature, and an additional observation, that in the early part of this season the barley very much deceived the maltsters: they thought it would make tolerably decent malt, and of course a considerable quantity of very bad malt is now on hand, which is unsaleable to the brewers; they would not give the price for it—it had paid a duty of 34s 8d. and was not fit for use, but would certainly answer for the distillers.

NOTE (C. 2.)  
An Account, from the Average Price of the Twelve Maritime Districts, of the Average Prices of Wheat, Barley, and Oats, on the 28th May, 1808, and on the 10th February, 1810.

The evil consequences of Legislative interference in the corn trade appear from the following circumstance:—  
“The average quantity of all kinds of grain imported into Great Britain between 1770 and 1775 amounted to 20,976 quarters annually; the quantity exported to 665,035 quarters: so that the balance in our favour amounted to 644,450 quarters. During this period it will be observed, wheat could not be imported till the price amounted to 53s 4d, and not even then under a duty of 16s; if above that price, and not exceeding 80s, the duty 5s. But mark the difference in 1757; the corn laws were altered, and 4s was fixed as the import price, and the duty 6d per quarter. Immediately the exportation began to decrease; and on the average of years between 1773 and 1793 the importation exceeded the exportation by 430,157 quarters. In 1775 the imports exceeded the exports by 972,400 quarters; making a difference in the quantity of corn produced in the years 1750 and 1775 of less than 2,679,859 quarters.”

NOTE (C. 1.)  
An Account, from the Official Return for Middlesex, of the Prices of Wheat, Barley, and Oats, on the 28th May, 1808, and on the 10th February, 1810. Ordered by the House of Lords to be printed, 5th March, 1810.

	WHEAT, per Quar.	BARLEY, per Quar.	OATS, per Quar.
Weeks ending 28th May, 1808	80 0	47 3	47 9
10th February, 1810	94 8	58 10	59 11

NOTE (C. 2.)  
An Account, from the Average Price of the Twelve Maritime Districts, of the Average Prices of Wheat, Barley, and Oats, on the 28th May, 1808, and on the 10th February, 1810.

	WHEAT, per Quar.	BARLEY, per Quar.	OATS, per Quar.
Weeks ending 28th May, 1808	79 5	43 7	36 11
10th February, 1810	96 6	44 8	25 6

NOTE (C. 3.)  
An Account of the Prices of Wheat, Barley, and Oats, in Scotland, in the Four Weeks preceding the 15th May, 1808, and the 10th February, 1810.

	WHEAT, per Quar.	BARLEY, per Quar.	OATS, per Quar.
Average of the Four Weeks preceding the 15th May, 1808	s. 66 6	s. 44 7	s. 33 6
Average of the Four Weeks preceding the 10th February, 1810	77 8	38 9	27 1

**NOTE (C. 4.)**  
*An Account of the Average Prices of Grain in England and Wales, at the several periods when the Sugar Distillation Bill was determined upon and extended.*

	WHEAT per Quar. s. d.	BARLEY per Quar. s. d.	OATS, per Quar. s. d.
May 7th, 1808..	92 0	40 8	39 6
July 2d, 1808..	81 1	44 7	38 8
Nov. 19th, 1808..	92 7	45 0	38 8
March 14th, 1809..	95 7	46 6	39 4
Oct. 28th, 1809..	102 3	51 11	39 5
Feb. 10th, 1810..	100 0	48 1	37 11
April 14th, 1810..	104 11	47 4	38 3

*N. B. The Prices cannot be given for the particular days when the Sugar Distillation Bill was determined upon and extended, as the Returns are only made weekly.*

**NOTE (D.)**

It was stated in the evidence before the Lords (to which I have had occasion repeatedly to refer) that the price at which damaged barley rated was 20s a 24s up to 26s per quarter, and the price of the best Norfolk barley 34s a 36s per quarter. The stock of oats was also considered to be very abundant indeed; and 18s per quarter the price at which very good horse corn might be bought at the markets in the vicinity of Norfolk; at the Spalding market, which is considered one of the best for oats, the whole quantity on the last market day averaged only 18s per quarter. In Cambridgeshire the best oats are stated to be worth 24s a 26s, and the average price in that county to be 18s per quarter: this was considered, *below* the average price of common years, and *below* a remunerating price to the farmer.

**NOTE (E.)**

A clear and satisfactory elucidation of this point is given in a very intelligent letter, which recently appeared in a London paper, and which comes from the pen of a gentleman, (*Mr. Sandars*) to whom the public are indebted for much valuable information upon the subject of corn distillation. I have introduced an extract of the letter, as particularly applicable to the consideration of the relative value of grain;—

“We have heard much of the relative value of grain, but a reference to past examples will prove the fallacy of the calculations generally accredited. We have known wheat to be a bad crop, and the price 17s per bushel; the same year oats and barley have been plentiful at 4s 6d per bushel for the former, and 6s per bushel for the latter. We have also known the crop of wheat to be good, and the crops of oats and barley to be bad: the former has sold at 12s, and the two latter at 5s 6d and 7s, per bushel; which

Wheat

22	1	6	74	100
22	2	6	74	100
22	3	6	74	100
22	4	6	74	100
22	5	6	74	100
22	6	6	74	100
22	7	6	74	100
22	8	6	74	100
22	9	6	74	100
22	10	6	74	100
22	11	6	74	100
22	12	6	74	100
22	13	6	74	100
22	14	6	74	100
22	15	6	74	100
22	16	6	74	100
22	17	6	74	100
22	18	6	74	100
22	19	6	74	100
22	20	6	74	100
22	21	6	74	100
22	22	6	74	100
22	23	6	74	100
22	24	6	74	100
22	25	6	74	100
22	26	6	74	100
22	27	6	74	100
22	28	6	74	100
22	29	6	74	100
22	30	6	74	100
22	31	6	74	100
22	32	6	74	100
22	33	6	74	100
22	34	6	74	100
22	35	6	74	100
22	36	6	74	100
22	37	6	74	100
22	38	6	74	100
22	39	6	74	100
22	40	6	74	100
22	41	6	74	100
22	42	6	74	100
22	43	6	74	100
22	44	6	74	100
22	45	6	74	100
22	46	6	74	100
22	47	6	74	100
22	48	6	74	100
22	49	6	74	100
22	50	6	74	100
22	51	6	74	100
22	52	6	74	100
22	53	6	74	100
22	54	6	74	100
22	55	6	74	100
22	56	6	74	100
22	57	6	74	100
22	58	6	74	100
22	59	6	74	100
22	60	6	74	100
22	61	6	74	100
22	62	6	74	100
22	63	6	74	100
22	64	6	74	100
22	65	6	74	100
22	66	6	74	100
22	67	6	74	100
22	68	6	74	100
22	69	6	74	100
22	70	6	74	100
22	71	6	74	100
22	72	6	74	100
22	73	6	74	100
22	74	6	74	100
22	75	6	74	100
22	76	6	74	100
22	77	6	74	100
22	78	6	74	100
22	79	6	74	100
22	80	6	74	100
22	81	6	74	100
22	82	6	74	100
22	83	6	74	100
22	84	6	74	100
22	85	6	74	100
22	86	6	74	100
22	87	6	74	100
22	88	6	74	100
22	89	6	74	100
22	90	6	74	100
22	91	6	74	100
22	92	6	74	100
22	93	6	74	100
22	94	6	74	100
22	95	6	74	100
22	96	6	74	100
22	97	6	74	100
22	98	6	74	100
22	99	6	74	100
22	100	6	74	100

proves clearly, that the value of each article depends more upon its surplus or deficient quantity than on the surplus or deficient quantity of the other, and not altogether on the scarcity or abundance, as is generally supposed.

The consumption of oat and barley meal is never much increased but by extremely high prices of wheat, for people do not economize from calculation, but from necessity.

On this point much of the merits of the case seems to hinge. The present price of wheat has alarmed some, but unless it advances considerably, they have nothing to fear, it is not so high as to encrease the consumption of oatmeal, nor to prevent that article falling below the price at which it invariably sells, when wheat is 5s per bushel lower than now is; and from this fact I think we may fairly infer, that distillation from oats and barley could be productive of no evil, but of much good; so far as it would give the farmer confidence in providing for the future.

the present prices according to the price Register. — Owing to the quantity of wheat imported, and the quantity of spirits from grain, the distillation of spirits from grain is becoming more and more profitable, and it is to be feared that the present prices of wheat will induce a great quantity of spirits to be distilled from grain, which will be a great injury to the trade in spirits.

AN ACCOUNT OF THE AVERAGE PRICES OF GRAIN IN ENGLAND AND WALES, FROM 1795 TO 1810.

AN ACCOUNT OF THE AVERAGE PRICES OF GRAIN IN ENGLAND AND WALES, FROM 1795 TO 1810. INCLUSIVE, WHEN PROHIBITIONS HAVE BEEN LAD, CONTINUED, OR REPEALED FROM THE DISTILLATION OF SPIRITS FROM GRAIN; SPECIFYING AT WHICH OF THE SAID PERIODS RESPECTIVELY THE DISTILLATION HAS BEEN PROHIBITED OR ALLOWED, AND THE PRICE PER QUARTER OF EACH GRAIN AT THE TIME WHEN SUCH CHANGE TOOK PLACE, AND ALSO SPECIFYING THE PRESENT PRICES ACCORDING TO THE LATEST RETURN. — ORDERED BY THE HOUSE OF LORDS TO BE PRINTED, 12th March, 1810.

Distillation prohibited (by Act of 35 G. III. c. 119, and 36 G. III. c. 20) from 10th July 1795, to 1st February, 1797.	ENGLAND AND WALES		Pease per Qr
	Wheat per Qr	Barley per Qr	
Average Prices for the Week ending nearest to 1st February, 1797	95	44	52
Distillation prohibited (by Act of 41 G. III. Stat. 1. c. 3.) from 8th December 1800, to 1st January, 1802.	100	44	34
Average Prices for the Week ending nearest to 8th December, 1800	100	44	5
Average Prices for the Week ending nearest to 1st January, 1802	100	44	7
Distillation prohibited (by Act of 48 G. III. c. 118, by Proclamation of the 16th November 1808, continued to forty days after the Commencement of next Session of Parliament) by 49 G. III. c. 7, by Proclamation of 16th November, 1809, continued to forty days after next Session of Parliament) from 30th June 1808, to 4th March 1810.	100	44	78
Average Prices for the Week ending nearest to 30th June, 1808	100	44	44
Average Prices for the Week ending nearest to 17th February, 1810	100	44	65
			53

NOTE (F.)

At the several Periods recorded from the present Price of Wheat, the Distillation has been prohibited or allowed, and the Price per Quarter of each Grain at the Time when such change took Place, and also specifying the present Prices according to the latest Return.



NOTE (F. 2.)

AN Account of the AVERAGE PRICES of GRAIN in SCOTLAND, at the several Periods respectively from the Month of July 1795 inclusive, when Prohibitions have been laid on, continued, or removed from the Distillation of Spirits from Grain, specifying at which of the said Periods respectively, the Distillation has been prohibited, or allowed, and the Price per Quarter of such Grain at the Time when such Change took place, and also specifying the present Prices according to the latest Returns.

	Wheat per Qr.	Rye per Qr.	Barley per Qr.	Oats per Qr.	Beans per Qr.	Pease or Big per Qr.	Beer or Big per Qr.
Distillation prohibited (by Acts of 35 G. III. c. 119, and 36 G. III. c. 20.) from 17th July 1795, to 1st February 1797.	69 10	27 4	30 6	21 4	33 4	33 5	s. d. 26 3
Average Prices of the four Weeks ending nearest to 1st February, 1797.	47	25	28	17	28	27 0	24 6
Distillation prohibited (by Acts of 39 G. III. c. 77, and 39 G. III. c. 91.) from 20th October 1799, to 1st January 1802.	74 0	36 4	36	29	35 10	46 0	28 11
Average Prices of the four Weeks ending nearest to 1st January, 1802.	70	38	36	27	35	35 6	34 2
Distillation prohibited (by Act of 48th G. III. c. 18, by Proclamation of the 16th Nov. 1808, continued to 30th June 1810, being the Return to the latest period.)	77 8	45 5	48 3	42	70 8	71 3	39 0
Average Prices of the four Weeks ending nearest to 30th June, 1810.	77	45	48	37	71	48 6	33 7

N. B. Returns of the Prices of Grain from Scotland are made Monthly (not Weekly) pursuant to Act of 31 G. III. c. 30.

	Wheat per Qr.	Rye per Qr.	Barley per Qr.	Oats per Qr.	Beans per Qr.	Pease or Big per Qr.	Beer or Big per Qr.
Distillation prohibited (by Act of 35 G. III. c. 119, and 36 G. III. c. 20.) from 17th July 1795, to 1st February 1797.	69 10	27 4	30 6	21 4	33 4	33 5	s. d. 26 3
Average Prices of the four Weeks ending nearest to 1st February, 1797.	47	25	28	17	28	27 0	24 6
Distillation prohibited (by Acts of 39 G. III. c. 77, and 39 G. III. c. 91.) from 20th October 1799, to 1st January 1802.	74 0	36 4	36	29	35 10	46 0	28 11
Average Prices of the four Weeks ending nearest to 1st January, 1802.	70	38	36	27	35	35 6	34 2
Distillation prohibited (by Act of 48th G. III. c. 18, by Proclamation of the 16th Nov. 1808, continued to 30th June 1810, being the Return to the latest period.)	77 8	45 5	48 3	42	70 8	71 3	39 0
Average Prices of the four Weeks ending nearest to 30th June, 1810.	77	45	48	37	71	48 6	33 7

N. B. Returns of the Prices of Grain from Scotland are made Monthly (not Weekly) pursuant to Act of 31 G. III. c. 30.

This assertion is corroborated by a very recent instance. Upon the 6th of February last the highest price of the best potatoe oats at the Liverpool Corn Exchange is shewn in the statement to have been 4s 2d per bushel. On the 27th February, when the account was received of the bill, which did not extend the prohibition to Ireland, having passed the House of Commons, the highest price was 4s 6d per bushel. And on the 13th March, when it was known that the bill had passed both Houses, and that the use of grain was allowed in the distilleries of Ireland, at this date the highest price of oats (which it will be recollected is the grain principally employed in distillation throughout that country) was 4s. 4d per bushel in this market, which is connected considerably more than any other in the kingdom with Ireland. The whole rise which took place in consequence of the use of grain being permitted in Ireland was only 4d per bushel; but this advance was merely nominal, and could not even be supported, until the bill had passed the Lords, for the prices almost immediately fell; and from the statement it will be found that the best Irish potatoe oats are reduced to 4s per bushel, which is absolutely below what the rate was when the prohibition was in force; and even at this price no material sales can be effected. This very recent instance supplies, I presume, a satisfactory refutation of the alleged objection.

NOTE (G.)

NOTE (H.)

A Return of the Quantity of Corn imported into Liverpool and the other Ports of Great Britain, from Ireland, from the 1st January, 1809, to the latest period to which the same can be made up. Ordered by the House of Lords to be printed, 5th March, 1810.

	Imported between the 5th January, 1809, and the 5th January 1810.		Other Ports of Great Britain.		Total.	
	Quarters.	Bush.	Quarters.	Bush.	Quarters.	Bush.
Barley	11473	3	523	0	11996	3
Beans	2537	1	...	...	...	...
Oats	366186	6	415852	2	782038	8
Pease	16	0	1	0	17	0
Rye	401	6	...	...	...	...
Wheat	52901	4	1663	4	54564	8
Oatmeal	11041	0	53846	1	64887	1
Wheat Flour	10005	3	100	0	10105	3

[Since the 5th January to the 24th April, 1810, there have been imported into Liverpool, from Ireland, ...]

Wheat, 12628 Quarters, Oats, 97,106 Quarters, Barley, 140 Quarters, Total, 1138 Quarters.

Statement of the Amount of Imports in Wheat, Flour, Barley, and Oats, from Foreign Countries, into Great Britain, for Five Years, ending 5th January, 1808.

[Taken from the Appendix to the Report of the Committee, pages 198-9.]

YEAR.	WHEAT.	FLOUR.	BARLEY.	OATS.
	Quarters.	Cwt.	Quarters.	Quarters.
1803	182641	30299	1093	2515
1804	365069	5685	9071	5005
1805	38147	51503	27634	274156
1806	126911	244730	2058	183198
1807	182558	497231	2963	425904

NOTE (I.)

A Return of the Quantity of Corn imported into Liverpool and the other Ports of Great Britain, from the different Countries, from the 1st January, 1809, to the latest period to which the same can be made up. Ordered by the House of Lords to be printed, 5th March, 1810.

COUNTRIES.	Imported into the Port of London between the 5th Jan. 1809, and the 5th Jan. 1810.		Imported into the Port of Liverpool between the 5th Jan. 1809, and the 5th Jan. 1810.		Total.	
	Quarters.	Bush.	Quarters.	Bush.	Quarters.	Bush.
Denmark and Norway	...	...	...	...	...	...
Holland	...	...	...	...	...	...
Russia	...	...	...	...	...	...
Sweden	...	...	...	...	...	...
Poland	...	...	...	...	...	...
Germany	...	...	...	...	...	...
Holland	...	...	...	...	...	...
France	...	...	...	...	...	...
Sicily, &c.	...	...	...	...	...	...
Total.	...	...	...	...	...	...

An Account of the Quantities of each Sort of Grain which have been imported from the different Countries, from the 1st January, 1809, to the latest period to which the same can be made up. Ordered by the House of Lords to be printed, 5th March, 1810.

The Returns from the Out-Ports not yet received.

NOTE (K. 2.)

*An Account of the Importation of Wheat, Barley, and Oats, into the Port of London, in the Months of September, October, November, and December, 1809; the Month of January, and up to the 17th February 1810; distinguishing each Month, and the Importation of each Article, and whether such Importations came from the Out Ports, from Ireland, or from Foreign Countries.*

	WHEAT.		WHEAT-FLOUR.		BARLEY.		OATS.		OATMEAL.	
	From the Out Ports.	From Ireland.	From the Out Ports.	From Ireland.	From the Out Ports.	From Ireland.	From the Out Ports.	From Ireland.	From the Out Ports.	From Ireland.
1809. September	11800	5367	6440	7924	3455	1022	56940	6136	500	..
October	17280	17372	9485	2576	4730	361	30410	19976	975	..
November	15190	52792	7500	1077	1330	..	47150	22770	1475	..
December	15720	30854	11980	246	19730	135	51550	6457	2925	..
1810. January	10326	150806	9687	1927	2987	498	52970	38783	1125	..
February (to the 17th inclusive)	9707	20966	9576	183	1673	..	23392	2779	1321	..
Total	80023	277657	51666	15551	8179	1000	257411	96501	8321	..

The farmers are in general disposed to prefer grazing to tillage, because it is attended with less uncertainty, is conducted with less expence, and is not subject to the payment of tythes. Hence tillage requires the constant and zealous encouragement of the Legislature. In England and Wales, 3,160,000 acres of land are employed in cultivation of wheat, 861,000 do. do. do. barley, 2,872,000 do. do. do. oats and beans. 6,893,000 acres of land only are employed in the cultivation of grain of every description;—whereas 17,479,000 acres of land are employed in pasturage.

	WHEAT.		WHEAT-FLOUR.		BARLEY.		OATS.		OATMEAL.	
	From the Out Ports.	From Ireland.	From the Out Ports.	From Ireland.	From the Out Ports.	From Ireland.	From the Out Ports.	From Ireland.	From the Out Ports.	From Ireland.
1809. September	11800	5367	6440	7924	3455	1022	56940	6136	500	..
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February (to the 17th inclusive)	9707	20966	9576	183	1673	..	23392	2779	1321	..
Total	80023	277657	51666	15551	8179	1000	257411	96501	8321	..

NOTE (L. 2.)

The following table shows the quantity of wheat, wheat-flour, barley, oats, and oatmeal, imported into the Port of London, in the Months of September, October, November, and December, 1809; the Month of January, and up to the 17th February 1810; distinguishing each Month, and the Importation of each Article, and whether such Importations came from the Out Ports, from Ireland, or from Foreign Countries.

APPENDIX.

Fourth Report from the Committee on the Distillation of Sugar and Molasses, &c. communicated by the Commons to the Lords, and ordered to be printed 26th February, 1810.

DISTILLATION OF SUGAR AND MOLASSES, &c.

THE COMMITTEE appointed to inquire, and report, how far and under what Circumstances, it may be practicable and expedient to confine the DISTILLERIES of the United Kingdom to the use of SUGAR and MOLASSES only; and also what other Provision can be made for the Relief of the GROWERS of SUGAR in the BRITISH WEST INDIA COLONIES; and to report the same, with their Observations and Opinion thereupon, from time to time, to the House:—and who were empowered to report the MINUTES of the EVIDENCE taken before them:—

HAVE, pursuant to the Order of the House, further examined the matters to them referred; and have agreed to the following:—

APPENDIX.

Fourth Report from the Committee on the Distillation of Sugar and Molasses, &c. communicated by the Commons to the Lords, and ordered to be printed 26th February, 1810.

DISTILLATION OF SUGAR AND MOLASSES, &c.

THE COMMITTEE appointed to inquire, and report, how far and under what Circumstances, it may be practicable and expedient to confine the DISTILLERIES of the United Kingdom to the use of SUGAR and MOLASSES only; and also what other Provision can be made for the Relief of the GROWERS of SUGAR in the BRITISH WEST INDIA COLONIES; and to report the same, with their Observations and Opinion thereupon, from time to time, to the House:—and who were empowered to report the MINUTES of the EVIDENCE taken before them:—

HAVE, pursuant to the Order of the House, further examined the matters to them referred; and have agreed to the following:—

## REPORT.

Your committee next proceeded to inquire whether any and what relief might be afforded to the colonies, by reducing the prohibitory duty on the importation of refined sugar, to a duty which should be merely equivalent to that on raw sugar.

It may be proper to premise, that there is a process called claying, which does not subject the sugar to the prohibitory duty, and makes it liable only to an additional duty of 4s per cwt., which is not more than proportionate to its additional value. This is, however, not what is meant by refined, which is, properly speaking, sugar that has undergone solution, and a fresh granulation, and such sugar is charged with a duty of £8. 8s per cwt.; which acts as an absolute prohibition of its import.

The advantages which the planter would derive from refining his sugar, before he imports it, are these:

First, The immense loss would be avoided which now arises from drainage in the passage, amounting to nearly one-eighth of the whole.

This loss to the planter, if sugar be estimated at its shipment at the low rate of 12s per cwt. is not less on the whole importation than

£.600,000 per annum. It is indeed alleged, that this loss might be avoided by claying, but it appears that the process of claying is not applicable to all sugars, and, from its increasing disuse, it seems to be regarded as by no means beneficial.

Another benefit to the planter would arise from the great increase of his distillery; for every cwt. of sugar refined would furnish materials for the distillation of nearly three gallons of Rum, and this additional distillation would be accompanied by no additional expence.

A third benefit to be expected by the planter would be the reduction of his home freight. At present the ships on an average obtain barely one-third of a freight out, and are therefore obliged to charge two-thirds of their freight out on their freight home. Should the refinery take place to any considerable extent, there would be a large export of coals and utensils. Besides, as the freight home is paid not on the sugar that

is taken on board, but on what is landed, it follows that the freight of that eighth of the sugar which is lost on the passage must be discharged on the remainder. Were this waste avoided, it is obvious that on this account only the freight home might be reduced one-eighth, and without loss to the ship-owner, and this would

be, at the present rate of freight, a saving to the planter of about £2,300,000 in his whole import.

Lastly, a benefit of no small importance may arise to the colonies from the number of European vessels which would be wanted in various capacities for the refinery; and by this means would be obviated the alarming decrease of white population, which the present distress of the colonies cannot fail to accelerate. To this may be added, that the refinery would furnish a considerable number of the negroes an employment superior to that of field labour, and thereby contribute to that gradation among them, on which their improvement and well-being so much depends.

To the shipping interest, it does not appear that any injury could possibly occur. Instead of a cwt. of raw sugar, the freight home would be 56lb. of refined, 22lb. of bastard sugar, and three gallons of rum, which is at least equivalent.

With regard to the revenue, it is clear that if the duty laid on the refined sugar and the bastard should equal in amount that of the raw sugar which produced it, no loss could arise. In some other points of view the alteration would be beneficial to the revenue. The waste being avoided, a greater quantity would arrive,

and arriving, at no additional expence, it might be afforded cheaper. The consumption thereby promoted, the duties must also increase. The revenue would also gain in another way. It has been found impossible to prevent the molasses produced in the refinery from getting illegally into distillation, by which the revenue is materially injured. No such consequence could result from molasses produced in the West Indies, as the article is not of sufficient value to pay the charge of importation.

It has been observed, that the planter loses one-eighth of his produce; one-eighth of his capital may therefore be regarded as unproductive. The same remark applies to the shipping; being obliged to take on board a quantity of sugar, equal to one-eighth, which does not arrive, it follows that one-eighth of the West India shipping is also unproductive. Capital, under such circumstances, not only detracts from the income of individuals, but is so much loss of national stock; and in this light must be regarded the two sums before stated, making an aggregate loss to individuals and to the nation of £,900,000 annually.

It is next to be considered, what effect such alteration of the duty would have on the domestic refinery, for the encouragement of which



it was obviously first imposed. Inas far as the colonial refinery might be promoted by such alteration, there can be no doubt but that the domestic refinery must decrease; and if this effect were extensive and immediate, the greatest injury could not fail to arise to those, who, on the faith of existing laws, had embarked their capitals in these establishments.

Presuming that the House would not entertain a measure which could have such an effect, without, at the same time, entertaining a consideration of compensation to the individuals who might be injured by it, your committee thought it incumbent on them to make inquiry as to the amount of these capitals and the nature of their investment.

It is stated that there were two years ago, 364 refining pans in employ in London alone, but that 70 of these are now out of employ.

The number of pans in other parts of the United Empire are supposed to be 240, and it is presumed that an equal proportion of these, viz. 46, are from the same causes now unemployed.

The total then would be 488 pans in employ, and 116 out of employ.

The capital requisite for each pan is stated to be £3000, of which two-thirds are allotted to the buildings, and one-third to the utensils.

To keep a pan at work, a further capital of £6000 in London, and a larger sum in the out-ports, is requisite for the purchase of sugar, and to discharge other current expences. But this latter capital does not come into the present view, as it would not be engaged were the refinery to stop. Allowing then £3000 for each pan, it would amount to £1,464,000 for those that are in employ, and £348,000 for those which are out of employ. But as this latter capital may perhaps at any rate not become again productive, it would hardly be reasonable to allow for it as though it were so at present, and perhaps half the value only might be considered as liable to depreciation. This deduction would leave the total of the buildings and utensils subjected to loss at £1,638,000; this would not however be total loss, for many of the buildings would be convertible to other purposes, and of all the site and materials would retain their value, neither would the utensils be entirely lost. An estimate of this nature cannot be expected to be exact, but it is perhaps not wide of the mark to say, that the total eventual loss would be one-half of their cost, or £819,000. Your committee thought it right to present to the House the extreme case, in order to shew

that even the extreme case could not occasion a loss equal to that which arises annually in this present system in the course of their importations.

In this extremity could however hardly be observed. Your committee have already observed that in a matter so delicate it is impossible to say what difficulties might arise, entirely to obstruct the progress of refinery in the West Indies. As any rate it is probable, that from want of capital there such progress would be very gradual, and that the colonial refinery would at last be confined to such sugars as are exposed to the greatest waste in the passage, and are least able to pay their freight in a raw state. Thus it may be supposed, that ultimately not above one half of the domestic refineries would be superseded by those of the West Indies; and therefore not above a half the above mentioned injury could arise, and even this would be rendered less, by its being gradual, and in great part remote.

So much however is certain, that in as far as the measure shall produce any effect, that effect will be highly beneficial to the planter and the nation, and that the benefits arising from it, will furnish ample funds for compensating any injury that it could produce. On the other hand, if should the refinery not succeed in the West Indies, it cannot be imagined that from any

successful speculation any serious injury could arise to the refiners of this country.

In the course of their inquiries, it has appeared to your committee, that effectual relief to the West Indian colonies was only to be expected in one of the three following ways: a change of their staple commodity, sugar, for some more lucrative produce, and reduction of the expences attending its cultivation and sale, or an advance of price, whether effected by an increased demand, or a diminution of the supply. The first of these modes has been presented as impracticable, and if it be practicable, it could not be effected to so great an extent, and within so short a time, as to prevent the ruin of a great proportion of West Indian proprietors. Difficulties nearly equal have been alleged to exist in the way of an efficient reduction of the expence attending the cultivation and sale of colonial produce, and against opening new markets in any of the modes hitherto proposed, a pertinacious struggle has been maintained by different parties, each of them respectively jealous of the alterations suggested in the present system, as likely to be injurious to their particular interests. As to a diminution of the supply, it could not be effected without loss, except by the discovery of

of some profitable mode of employing the labour of the negroes, which (as is above-stated) has not yet been devised; and this object, even if it had been otherwise attainable, must have been defeated by the great increase of colonial produce created by our recent conquests.

Under such circumstances, your committee could not but favorably entertain the consideration of a plan for employing sugar in fattening cattle. The advantages of this scheme, supposing the success to be but moderately answerable to the expectations formed, are obvious and peculiar; the relief it offers would be of the most desirable kind, that of opening a new source of consumption;—within ourselves, and therefore independent of external accident, or war; not interfering with the interest of any body of men whatever; extensive in proportion to the degree in which it should prove beneficial to those great classes, the feeders and consumers of cattle; and on the favorable supposition of eminent success, it would be attended with this especial advantage, that whatever increase of the price of sugar might be occasioned by the increased consumption from this cause, the burthen would fall generally on the whole country, and might perhaps be even compensated by a reduction in the price of cattle,

arising from the improvement in the mode of feeding them. The positive evidence in favour of this plan cannot be stated as very strong; nor indeed could such be expected, while the public attention has not been immediately called to the subject, and experiments have been so discouraged by the cost of the material, as to prevent their having been tried to any satisfactory extent, or in sufficient variety to ascertain accurately either the absolute or the comparative advantage of the practice. A nearly universal current of opinion may however be alleged in support of it; nor would it be difficult to produce high commendatory authorities from writers upon the subject of aliment in almost every country, with which the observations of the best informed colonists entirely agree. The apparent results from the evidence of an honorable member of this House appear discouraging; but it does not seem impossible to account for them, without concluding against the general effect of sugar given in larger quantities and in a less diluted form. Experiments, which it is hoped will prove more decisive, are about to be instituted. As however it is evident, that even the present price of sugar, swelled as it is by the duty, must prove an insuperable bar to its adoption for this purpose, your committee

thought it advisable to inquire into the possibility of admitting a drawback to be received on all so employed, without risk to the present revenue, which appears by the evidence of Mr. Frewin to form the only ground of doubt concerning the allowance.

On private application, Mr. Parkes, a very intelligent practical chemist, took the subject into consideration, and in a manner very creditable to his public spirit, undertook a course of experiments, and has detailed in a very clear and able paper (which will be found in his evidence) several substances, which appear capable of being so united with sugar, as to prevent its being again used either for common economical purposes, or in wash for distillation, and from which it cannot be again separated without very considerable skill, difficulty, and expence, at the same time, not injuring, as is supposed, its nutritive qualities.

That those experiments are however absolutely conclusive, or of themselves form a sufficient basis for legislative provision, your committee mean not to affirm, and therefore do not at present recommend the indulgence alluded to; but they regard the magnitude of the subject, and the prospect of success, as sufficient to justify their having entered on the inquiry, and

to warrant their hope, that before the next Session of Parliament it may be prosecuted with such diligence and zeal as completely to develop the truth.

Your committee are aware, that relief to the growers of sugar has been looked for and solicited in a reduction of the duty paid on the British consumption of that article. Upon this subject it has not been judged necessary to collect specific evidence. It is sufficiently obvious, that the duty in this, as in other cases, ought to be so proportioned as to fall entirely upon the consumer, whereas it is certain, that for some years past, the tax on sugar has been borne not by the consumer, but by the cultivator. It is equally certain, that excessive duties are apt to check consumption.

If a quantity of sugar, considerably exceeding the average ordinary quantity consumed in the United Kingdom, could, at a reduced price, be forced into consumption, the revenue, in reflecting that object by lowering the rate of duty, might find a compensation in the extension of that duty to the additional consumption. But the planter, it is evident under his present circumstances, however desirable the object may be to him, is unable to bear that it should be accomplished at his expence, for even now receive

ing no return of profit by the present price, the only expedient in his power would be to reduce in a ruinous manner his cultivation to that point, which should proportion the supply to the existing demand of the mother country. To what extent the consumption of sugar in the United Kingdom might, under judicious encouragement, be carried, must be matter of conjecture; it appears in the evidence before your committee to have been progressive, even under the heavy accumulations of duty, which it has sustained, but more rapidly progressive under those low prices, at which, with much disadvantage and loss to the planter, it has lately been sold.

Your committee think it necessary to state (what the accounts produced before them will fully confirm) that the cultivation of the old British colonies has done little more than keep pace with the extension of British consumption, and that the excessive glut of the market is imputable chiefly to the admission of the produce of the conquered colonies into the privileges of our own, at a time too, when access to the foreign market was subjected to unusual difficulties. Thus circumstanced, the British colonies appear to your committee to have a well-grounded claim upon the legislature for such regulations of duty on home consumption, and

of bounty on exportation, as may place them at least in a situation as advantageous as that which they would have enjoyed had they been left in the exclusive possession of the market of this kingdom. Your committee did, in the first instance, propose a measure which, whilst it promises some immediate relief, must only be considered as a temporary expedient; but they cannot refrain from pressing, under circumstances of such severe distress, the necessity of a reduction of the duty, unless some other effectual modes of relief shall be adopted. They are clearly of opinion, that if a practicable commutation of any part of the duty can be devised, such a reduction must afford relief to the planter, either by diminishing his charges to that amount, if the market price should continue unaltered, or by increasing the number and competition of consumers, if the price should fall.

In this view your committee recommend to the serious attention of the House a regulation of the duty on sugar, to be governed by the average price taken at stated periods, under the authority and directions of the Legislature; a principle which they find recommended by a committee of the House of Commons, in their report presented 24th July 1807; and again,



with some variation of detail, suggested in the report of the House of Assembly of Jamaica, dated 13th November, 1807.

Your committee understand that a bill, materially reducing the duty on coffee, is now in its progress through the House, and have not therefore thought it necessary to enter into any particular investigation of that subject. They cannot, however, refrain from expressing their opinion, that this measure, inasmuch as it may tend to increase the consumption of coffee, will not only benefit the grower of that article, by relieving the market from the present glut, but may prove of ultimate advantage to the grower of sugar, by withdrawing a proportion of the negroes to another object of cultivation. It must also tend to the additional security of the islands, by increasing the number of that middling class of white settlers, upon whom their defence so greatly depends.

Your committee having now gone through the consideration of all the measures that have been suggested to them in pursuance of the orders of the House, before they close their final report, feel it to be their duty to state, that nothing has occurred since their appointment which has opened the prospect of any improvement in the situation of the West Indian body;

and therefore they cannot forbear to press on the serious consideration of the House the several reports that have been laid on your table.

On the 13th June, 1808, SAMUEL PARKES, Esq. was called, and examined by the Committee.

Q.—WHAT is the business in which you are engaged?  
A.—A manufacturing chemist. Q.—Have you made any experiments on the mixture of different substances with sugar, so as to prevent its being used for domestic purposes, or for distillation, without injuring its nutritious qualities? A.—I have made a great many experiments, the results of which I am ready to state to the committee.

[The witness here read, and afterwards, on the 16th of June, delivered to the committee the following statement.]

To the Honorable the Committee of the House of Commons, now sitting on West India Concerns,

GENTLEMEN,

When I was informed of your inquiries respecting the possibility of rendering sugar unfit for common use, without destroying its nutritious properties, and received your requisition to engage in the investigation of the subject, I lost no time in instituting such a series of experiments as I conceived would be necessary to ascertain the fact.

This being entirely new ground, no chemist having ever engaged in such an undertaking that we know of, I made a great number of experiments, the chief of which I will en-



deavour to describe, and their results, with as much brevity as the nature of the subject will permit.

Interwoven with these details, you will perceive an account of some facts already known to chemists; but I was desirous of furnishing you with every thing of importance on the subject. To this end I have examined a large body of chemistry, with great care, and I hope no work has escaped me that would have thrown any light upon the inquiries in which you are engaged.

Sugar is said to contain more nutriment in the same bulk than any other known substance; but how to allow it a duty free for the purpose of feeding cattle, and at the same time guard against any encroachment upon the revenue now arising from it, may be attended with considerable difficulties. The chief difficulty, in my estimation, arises from the soluble nature of sugar; for if sugar be mixed with ground corn, barley meal, or other farinaceous matter, which it might be in the presence of an excise officer, there would be danger of its afterwards being washed out by means of water, the water evaporated, and the sugar brought again into the market.

One pound of water is capable of dissolving one pound of sugar. Lime-water renders sugar still more soluble, and deprives it of a part of its sweetness; but as water takes up so small a portion of lime, (300 parts of water dissolving only 1 part of lime) I conceive this would not be a proper means of rendering sugar unfit for common use. Lime in powder, if mixed with sugar, might perhaps answer better, if this would not injure the cattle; and it would prevent the sugar so mixed from being fraudulently used for the still, as lime, even in small quantities, has the property of rendering sugar incapable of fermentation.

An aqueous solution of sugar may be preserved a long time unaltered if the sugar be pure; but if mixed with mucilaginous or farinaceous matter, it quickly enters into the various

fermentations. This property of sugar is an objection to its being mixed in a state of solution with any kind of ground corn for any considerable time before it is intended for use.

Sugar is found by analysis to be a triple compound, consisting of 28 parts, by weight, of carbon, 8 parts of hydrogen, and 64 parts of oxygen.

Sugar being of vegetable origin, few bodies are capable of uniting chemically with it. Most substances, therefore, if mixed with it, would form mere mixtures, and not chemical compounds. There is one substance, however, which mixes readily with sugar, which destroys its taste entirely, and yet does not decompose it: this is a fixed alkali. If, therefore, potash or soda be mixed with sugar, either of them will completely destroy its saccharine taste; but the sugar will not be decomposed, for it may be recovered, unchanged, by the addition of sulphuric acid, which would form an alkaline sulphate, which might be precipitated from the solution by alcohol. Hence it may be supposed, that the mixture of a small quantity of an alkali with sugar would not deprive it of its nutritious qualities.

Having mixed 112 grains of good brown sugar with 10 grains of a very strong solution of caustic potash, the sugar lost its sweetness entirely, and the whole acquired a disagreeable urinous taste. One cwt. of sugar would require about 4lb. of American potash to reduce it to this state, the expence of which would be about 2s 9d. or 3s. On the mixture of potash and sugar, I poured 3 grains of sulphuric acid diluted with a little water: this restored the sugar to its usual flavour, the sulphuric acid having formed a salt by its union with the alkali. The expence of thus recovering the saccharine taste of the sugar would be only 1s. per cwt.; but as a salt would then be in solution with it, this would prevent its being applied to common purposes, for the affusion of alcohol would be too dear a man expedient to recover it; and if the solution of sugar

and potash were boiled, the sulphate of potash, that might be formed by the addition of sulphuric acid, could not be separated from the sugar, even by alcohol.

Sugar has the property of rendering oil miscible with water: any cheap refuse oil, therefore, that the cattle would eat, might be mixed with it, and this property would give facility to the mixture.

I mixed immediately 4 grains of palm oil with 112 grains of sugar. The mixture acquired a full taste of the oil, so as to render it unfit for household purposes; but the flavour is so grateful, that it is very probable cattle would eat it with greediness. 4lb of palm oil, which on an average would cost 2s 6d, would be sufficient to prepare 1 cwt. of sugar.

There is, however, another oil that would come much cheaper, which might readily be mixed with sugar, though I have some doubts whether cattle could be brought to eat any food with which it were united. What I refer to is animal oil, or oil of hartshorn.

A single drop of oil of hartshorn was carefully mixed with 224 grains of raw sugar, (a proportion of half a pound of oil to 1 cwt. of sugar) and was found more than sufficient to spoil it, both in taste and smell, for common use. If, however, cattle would eat sugar mixed with this article, nothing could be cheaper, for 1 pennyworth would be enough for 1 cwt. of sugar; and it is not very unlikely but that they might be brought to eat it; for it is well known, that at first all cattle refuse oil-cake, and afterwards eat it with great relish.

Since I engaged in this inquiry, I have been informed, that cattle will eat rancid fish oil with avidity; such oil, and especially the dregs of oil, usually called oil fish, which comes very cheap, might be put into the hogsheads of sugar at the West India docks, in the presence of an officer, and if once poured on sugar, no common expence would ever be able to separate it. Linseed oil, being more fluid, might be poured

into the hogsheads at the cane holes: this would so spread itself throughout the whole hogshead, that I am persuaded the sugar could never afterwards be used for any domestic purpose. Moreover, it is well known, that sugar, when mixed with oil, is incapable of the vinous fermentation: this would be an additional security against a fraudulent use of it.

Sulphur of potash or soda has the property of converting sugar into a mucilaginous substance, not unlike gum. Mucilage and sugar are both highly nutritive, but they differ in their chemical properties. Sugar is soluble not only in water, but in alcohol; mucilage is soluble in water, but insoluble in alcohol. Sugar is an essential ingredient in all vinous fermentation; mucilage is incapable of that process.

In order to ascertain the expence of treating sugar with an alkaline sulphuret, I mixed 14 grains of dry sulphuret of potash with 112 grains of sugar: the mixture soon became clammy, and lost all flavor of sugar. If a sulphuret of potash were manufactured directly for this purpose, a sufficient quantity for mixing with 1 cwt. of sugar would cost near 14s; but I apprehend there are common alkaline sulphurets, which might be had cheap enough, if the cattle would not refuse the mixture. Respecting the nature of this mixture, or the nutritious quality of sugar when reduced by an alkaline sulphuret, it may be remarked, that mucilage is very similar, in some of its properties, to sugar; for many plants, which yield sugar at a certain period of their growth, only contain mucilage at an earlier period: this is the case with several of our wall-fruits. In the operation of malting, the mucilage of the barley absorbs oxygen, and is converted into sugar. No chemical means, however, has yet been discovered of effecting the same purpose. We can, as you have seen, readily convert sugar into mucilage; but have not yet acquired the means of regenerating sugar from the same mucilage. This circumstance is in favour of adopting this

method for the deterioration of sugar, if it should be found to agree with the cattle.

Having moistened 112 grains of sugar with water, 2 drops of a solution of sulphate of iron, and 2 drops of tincture of galls, were mixed with the mass; by exposure to the air, this sugar became quite black, and tasted of iron very strongly. It would cost 1s per cwt. to blacken sugar in this way; but as oak bark, or any other substance that contains the gallic acid, might be employed instead of galls, it could be done in quantities at less expence; and I know of no cheap method by which sugar thus treated could be rendered again fit for sale or common use. Indeed, if the gallic acid were separated from the gallate of iron, by means of potash, the sugar might then be fermented, and fraudulently used for the still; but this could not be expected to succeed, unless it were done by an experienced chemist, for an excess of potash would render the sugar incapable of fermentation. And even if the mixture were submitted to distillation, it is probable that part of the iron would come over in the process, and contaminate the spirit.

112 grains of sugar were mixed with 10 grains by weight of oil of vitriol, previously diluted with a little water. This rendered the mixture so sour, that it would be impossible to use such sugar for common purposes. The oil of vitriol also blackens it considerably. It would cost 3s or 3s 6d per cwt. to treat sugar in this way; but a less quantity of oil of vitriol might be sufficient, and when mixed with a large portion of other food, I think the acid would not be disagreeable to cattle.

No experiment was made with nitrous acid, because the operation of that acid on sugar has been long known to chemists. By its means two new acids are formed from sugar, the first the malic, and then the oxalic acid, neither of which would be of any use as food for cattle.

I mixed 112 grains of sugar with 10 grains of common

alum. Here the sugar lost a great portion of its sweetness, and acquired a disagreeable astringent taste. One cwt. of sugar would require 10lb. of alum for the formation of such a mixture, which would cost 2s 3d. In this and the last experiments, the sugar might be completely restored by the addition of nitrate or muriate of barytes, which would precipitate the sulphuric acid from the sugar in the one case, and from the earth of alum in the other; but as both these are poisonous salts, no one would think of using them to regenerate sugar for domestic purposes.

112 grains of sugar were mixed with 20 grains of common salt. This proportion of salt destroys the sweetness of the sugar, and renders it unfit for human consumption. If Government would allow the farmer waste salt free of duty, of which a sufficient quantity may be had at the salt-works, called the "pickings of the pans," at 5s. or 10s. per ton, it appears to me, that this would be the most suitable, convenient, and economical article that could be used to prevent the sugar from being again brought into common consumption. Cattle and horses are fond of it; it is known to agree well with them, and there is no cheap way by which the sugar could be separated from it. Cattle are so fond of salt, that they will even devour large quantities of marle if mixed with it. In America, it is a common practice to sprinkle salt in layers upon hay when making it into hay-ricks, and it is found to assist in preserving the hay, and to render the cattle healthy. If it were thought advisable to mix it with sugar in this country, such a mixture might be consumed in this way in large quantities, and the mixture might be made by means of a cheap and simple apparatus, similar to that employed by architects for mixing their mortar, called a mortar-cylinder mill.

Should Parliament not think it advisable to allow the farmer waste salt, duty free, the salt contained in sea water might be used with advantage. Whenever an excise officer

shall witness the complete solution of sugar in sea water. I apprehend the duty on sugar may be remitted, without any danger of that sugar ever being taken for any purpose of common consumption: 30lb. of sea water contain, on an average, 1lb. of common salt, and would take up near 30lb. of sugar.

On this subject I have consulted some farmers of great intelligence and experience, who are of the class of improved breeders, and feed both sheep and cattle on an extensive scale. These gentlemen entered cordially into my views, and communicated to me the following particulars: They say, that with sugar salt may be used in the proportion of one sixth with advantage; but that for the purpose of securing the revenue, the mixture might be 1 part salt, 1 part train oil, and 10 parts of sugar. From my own experiments, I am persuaded, that less than 5 per cent. of train oil would effectually prevent sugar from ever being used for domestic purposes. These gentlemen are of opinion, that the salt causes a quick circulation of the fluids; and that chalk, which has long been given with salt to calves, acts upon this principle. The salt induces the calf to lick up the chalk, but the improvement in the colour of the flesh may be owing to the salt impelling the fluids, which otherwise, from a calf's confinement, would be stagnant.

I next tried saltpetre with sugar, and made several experiments with it; but it appeared to me that the quantity necessary to alter the flavour of the sugar sufficiently would be too dear for the use of the farmer.

I then tried asafœtida; 112 grains of sugar were mixed with a quarter of a grain of this gum in solution. This rendered the mixture so strong in flavour and smell as to make it unfit for any common purpose; but whether this offensive property could be sufficiently disguised for cattle by the mixture of other food can only be known by trial. It would cost about 4d per cwt. only to treat sugar thus with asafœtida.

Many other experiments were made; but, as their results did not seem to bear so much on the question as I expected, they would not bear to take up your time by reciting them.

In addition to those substances, on which I have operated, several others have occurred to me; but it would depend upon the taste of the cattle whether any of them could be brought into use. The articles I allude to are—rape oil, whale oil, foot oil, horse turpentine, coal tar, common tar, the galls of animals, blood, wood ashes, soap lye, madder, wormwood, gentian, quassia, &c. in decoction, and the residuum procured from makers of oil of vitriol, called sulphur ashes.

In this list I have not adverted to urine; but I am inclined to think that, all things considered, this might be the best to mix with sugar, to prevent its getting again into common consumption. If farmers were allowed sugar duty free, on condition of an officer of excise seeing a certain quantity of urine mixed with every cwt. of the sugar, there could, I think, be no danger of the farmer ever using it for other purposes than those for which Government would allow him to draw the duty. Besides, the disgusting nature of urine is such, that the quantity might safely be fixed so low, that there would be no danger of the cattle not eating the sugar, when mixed with a large portion of other food. The beneficial effect of urine upon horses is so well known, that it has become a common practice with grooms, whenever they want a horse to have a remarkably fine coat, to mix urine in the manger with his corn.

Chaff is an article much used by feeders of cattle. Sugar stained with oil might be mixed with chaff, as another preventive. Besides, as chaff is naturally astringent, the quantity of chaff that can now be given to cattle is limited. By mixing such sugar with it, more might be used, and more sugar also might be given to cattle than they could otherwise bear. Such a mixture would be much cheaper than feeding in the usual



way with oil cake, on account of the fattening property of sugar, and the small value of chaff. The largest shew Ox supposed to have been ever led in England, I am told, is now feeding by Lord Talbot, in Staffordshire, and that a part of his food is treacle. Horses, oxen, and sheep, prefer the sweetest vegetables, and thrive best with such food. Hence the Swedish turnip, now so generally cultivated, is preferred to the old sorts, the Swedish containing one-fourth more sugar.

There are many testimonies on record to the nutritious properties of sugar. Mons. Lennes, first surgeon to the late Duke of Orleans, relates the following circumstance:—“A vessel,” said he, “laden with sugar, bound from the West Indies, was becalmed for several days on her passage, during which the stock of provisions was exhausted. Some of the crew were dying with the scurvy, and the rest were threatened with death by famine. In this emergency, we had recourse to the sugar. The consequence was, the symptoms of the scurvy went off; the crew found it a wholesome and substantial aliment, and returned in good health to France.”

It is related, that sugar given alone was found to fatten horses and cattle during the war before last in St. Domingo for a period of several months, in which the exportation of sugar and the importation of grain were prevented by the want of ships.

According to Dr. Rush, sugar has the most favorable effect on the animal economy; and that eminent physician, Sir John Pringle, remarked, that the plague has never been known in any country, where sugar composes a material part of the diet of the inhabitants.

Sugar has this advantage over most kinds of aliment; that it is not liable to have its nutritious qualities affected by time or weather; hence it is preferred by the Indians in their excursions from home. They mix maple sugar with an equal

quantity of ground Indian corn, and pack the mixture in little baskets, which frequently get wet in travelling, without ever injuring the sugar. A few spoonfuls of this mixture in half a pint of water afford them a pleasant and strengthening meal. Another way of using sugar for cattle has occurred to me: that is, to mix it with various kinds of damaged meal, such meal as would be totally unfit for human consumption. Or a mixture of damaged barley meal, oatmeal, damaged flour, rape cake, or linseed cake, might be made, and then baked with sugar into bread. This would form a kind of gingerbread, with which cattle might be fed very cheaply. The trial perhaps might be made at his Majesty's bakehouse at Deptford. A large quantity of the different kinds of damaged meal is annually baked in London into what is called dog-bread, for kennels, &c. The bakers of that would easily come into the way of baking this also. Horses at sea will eat ship-biscuit; this is well known to mariners. Should there be any difficulty in getting cattle to eat this new kind of sweet bread, it might at first be ground for them.

I have been induced to suggest this method of using sugar for cattle, and some others mentioned above, because I conceive it would be a desirable thing, should Government give sugar to farmers free of duty, to allow them an option in the articles to be employed for the deterioration of the sugar. This would tend to bring feeders of cattle sooner into the general use of it; and indeed different localities may perhaps require something of the kind, in order to occasion a general consumption.

As for charcoal, I am inclined to think that it could not be employed for such a purpose, for the following reasons:

Before charcoal could be so used, it must be finely levigated; and levigated charcoal cannot be had but at considerable expence. I apprehend that charcoal cannot afford any nutri-

ment to cattle, and that probably it would be prejudicial to the animal economy.

3d. The mixture of charcoal with sugar, I imagine, would not prevent that sugar from being afterwards fraudulently used for the still; for it is a common practice with rectifiers to mix charcoal with coarse spirit, this being found to improve its flavour.

4th. Charcoal being mixed with sugar could never prevent the use of the sugar for general consumption; for this substance might be separated with the greatest ease. All that would be necessary, would be to dissolve the sugar in water, and separate the charcoal by filtration.

I now proceed, in conformity with your suggestion, to make a brief recapitulation of the most material parts of this paper, and to endeavour to enumerate, and to place in one point of view, those articles recommended above, which appear to me to be best calculated to answer the desired purpose.

- |                          |                       |
|--------------------------|-----------------------|
| Caustic potash,          | Oil of hartshorn,     |
| Train oil,               | Linseed oil,          |
| Waste salt,              | Sea water,            |
| Mixture of salt and oil, | Asafoetida,           |
| Urine,                   | Chaff and refuse oil. |

Any of these, in my opinion, might be employed with perfect safety to the revenue.

I have the honour to be,

Gentlemen,

Your faithful and obedient humble servant,

SAMUEL PARKES.

*Haggerstone Chemical Works,  
16th June, 1808.*