

plants exceed this, but such are not favourite plants. Two crops are gathered during the year—one eight months from the period of sowing the seed, about May; the second about September; or four months after the first. The produce of each plant averages about one pound avoirdupois. After the first crop, the dead twigs are removed; but if the plant be too luxuriant, which is frequently the case, it is pruned previously to the first crop. The period at which the pods expand is anxiously expected by the planter; and when this takes place, they are plucked by the hand from the trees, and the wool, with the seeds, is picked, or rather pulled, from the capsules. These two, viz., the Seeds and the wool, are afterwards separated by a machine called a gin,\*

---

• The philanthropic Rains Waite, having amassed a large fortune in Jan & 8, bequeathed in 1694 the remainder of his estate to poor children in the parish of Vere; and in 1740 other bequests were added. These sums were incorporated, and suitable powers given to the trustees. I do not know what the amount of the funds are at present, though their expenditure has recently attracted remark, and induced some rather angry discussion in the island; but in 1828-9, twelve thousand pounds were vested in Island securities bearing £6 per cent. interest—besides a lot of land which rented for £363 per annum, and some slaves, whose annual hire was £103. Independent of these sums, there was an excellent house, to which were attached five acres of land. This institution supported twelve boys.—Having given this outline of the Vere School, I shall now mention the reason of my alluding to it at all—it is this:—the seal of the charity has on one side a boy with a book in his hand, and on the other another boy with a mallet and chisel, making a cotton gin; on the exergue, *Eruditione et labore*. So that it would seem that the original founders considered the cultivation of cotton as one of the duties of those who were educated at the institution. As there is a Bill to be brought into the House of Assembly of Jamaica by Mr. Russel for the formation of a College (University), it is to be hoped the hon. framer of the Bill will not forget an Agricultural Professor. This appointment, however, should be very carefully made. Every one knows the fate of the “Agricultural Board,” which, from the period of its establishment to its dissolution, told us but little that we did not know before, and nothing that we might not have learned without it. But then it had Royalty for its patron, and Arthur Young, a ruined agriculturist, for its secretary, with the trifling salary of six hundred pounds per annum! It seems rather strange, though consonant with many very wise acts of the Government of those days, that it should have appointed a man to teach the principles of agriculture who had ruined himself as a farmer—as if a man who could not take care of his own property was the fittest to be entrusted with the care of that of others! It reminds me very much of the story so admirably told in “The Spectator” (Addison’s) of the quack who set up on Tower-hill to cure diseases of the eye—because he had lost one in the Emperor’s service! Watkins, speaking of the appointment, says, “A Board of Agriculture was established, of which he (Young) was appointed secretary, with a salary of six hundred a year; but

composed of two or more wooden rollers, about "one inch in diameter, ranged horizontally, close and parallel to each other, in a frame ; at each extremity they are toothed or channelled longitudinally, corresponding one with the other, and the central roller being moved with a treadle, or foot-lathe resembling that of a knife-grinder, makes the other two revolve in contrary directions. The cotton is laid in small quantities at a time upon these rollers whilst they are in motion, and, readily passing between them, drops into a sack placed underneath to receive it, leaving the seeds which are too large to pass with it behind. The cotton, thus separated from the seeds, is afterwards band-picked, and cleansed thoroughly from any little particles of the pods or other substances which may be adhering to it. It is then stowed in large bags, where it is well trod down, that it may be close and compact ; and, the better to answer this purpose, some water is every now and then sprinkled upon the outside of the bag, the marketable weight of which is usually three hundred pounds. An acre may be expected to produce from two hundred and forty pounds to that quantity, or two hundred and seventy pounds on an average."

This, it will be seen, is a product neither requiring expensive buildings nor great capital, and, in the present condition of Jamaica, when *the* cultivation of the sugar cane (if we are to credit the **lacrymose** statements of the papers) is necessarily about to be abandoned, its **substitution** would be a partial salvation for the proprietary. The picking and subsequent operations would furnish **employment** for females and children, while its cultivation could be carried on by any one who possessed twenty, or even ten *acres* of land, **freeholds**, which are as common in Jamaica as leaseholds in England. Indeed, it appears to me nearly inexplicable, that the poorer class of white and **coloured** females, upon whom the evils of emancipation fell, **if** possible, more severely than the proprietors--for in that sweeping measure they lost their **all**--have not been induced to attempt the re-establishment of cotton plantations. **I** have seen very many cotton trees in Jamaica, ten or twelve

---

what other benefits this institution may have produced, the world has yet to learn." (This was written in 1821.) I cannot help remarking here, that while Young, who in reality did nothing to improve agriculture, for he went blindly to work, received **£600** per annum for undertaking to teach what he had shown he did not understand, **Tull**, whose father Jethro **Tull** *did* improve agriculture by the introduction of the drill-husbandry, and the substitution of **labour and arrangement**, **in** the place of manure and fallow, in the cultivation of land, should have been permitted to waste away, **and** die in the Fleet Prison. [See **Tull** on Horse-hoeing, &c. folio, 1733; also **Wade, Brit. Hist.** p. 458.3

feet high, **growing** in the immediate vicinity of **negro** cottages, which seemed to bear very luxuriantly ; and on many estates the wicks used for the lamps that burned in the mill, boiling, and distilling houses, were supplied from the produce of cotton trees growing on the property. **But** notwithstanding the apparent ease with which they were grown, **and** the luxuriance with which they flourished, I do not remember ever to have seen more than two or three trees together in any one single locality, from the earliest period of life up to the moment I left Jamaica. Whence, then, was this indifference-wicked indifference to the bounties of nature ? It was to be found in the absence of a proprietary, and the servile condition of the labouring population, now happily morally and politically improved. And here I cannot avoid expressing the delight which I feel when I find that even this state of things, so immeasurably superior to what it was but five years ago, is on the verge of still greater improvement, and, as the paper on cotton already alluded to, from the pen of my esteemed friend Dr. **Macfayden**, amply testifies, promises a still more desirable condition, progressive not only to the **labouring** classes, but those who have been the greatest sufferers by the late wonderful and unprecedented changes, in which a whole people were, by one imperial act, elevated from bondsmen to be citizens of the freest, the most intellectual, and the most powerful state that the **pen** of history records, or the tongue of tradition describes.

**That** the inhabitants of Jamaica did not turn their attention to the minor products of the island during the continuance of slavery, will not **be** surprising, when it is considered that, with the exception of a few old families, the white population was migratory ; while the **coloured** population, up to a very recent period, (1830,) enjoying none, or very few of the immunities of freedom, were urged by no incentives to improve their **circumstances** ; but, now that all the people of the island enjoy the same rights, immunities, and liberties, without distinction of **creed** or **colour**, it will much surprise me, especially after the successful attempt to re-establish the growth of cotton by Mr. **Gourgues**, if many of them do not exert their energies in developing the resources of the island, and thereby enriching themselves and improving their condition, rather than confine themselves to desks as clerks, or toil on the parched **wharfs** of Kingston or elsewhere, or follow the trade of carpenter, cabinet-maker, or mason,-occupations that, to my certain knowledge, have been long since overstocked. It would be easy here to dilate **upon** the advantages which would accrue to Jamaica were its population **more** rural, or, rather, rurally disposed ; but, however tempting the

opportunity, I must at present forbear, as I am desirous of speaking rather fully of—

**WHEAT**—In recommending the cultivation of which to the inhabitants of Jamaica and ‘the West Indians generally, I must, however, repudiate all claims to having originated the idea ; that honour is due to Dr. **Hamilton**, of Plymouth—a gentleman whose acquirements entitle him to the highest grade in the ranks of science, and whose exertions to call forth the latent products of the West Indies should command the gratitude of every man, woman, and child connected with them. In 1840, **Dr. Hamilton** did me the honour to present me with the copy of a pamphlet, published at his expense at Plymouth, entitled “*Memoir on the **Cultivation of Wheat within the Tropics.***” In that pamphlet he has fully shown the ease with which wheat may be cultivated in the West Indies, and has successfully combated the false notion that wheat would not thrive in the tropics ; at the same time that he has removed the preposterous objections which have been urged by many well-meaning but thoughtless persons against its introduction into our West India islands. Our author remarks—“ It has been objected to the culture of wheat in the West Indies, that its introduction will have an injurious effect upon the black population, by lessening the demand for their **labour** ; and were it proposed to convert the whole of the arable land in that quarter into fields of wheat, there might be some plausible ground for the objection; since a wheat farm of a thousand acres may be fully cultivated by **from forty to fifty** able-bodied men, aided by half as many women and children ; whilst a similar extent of land under the culture of the cane requires at least one able-bodied negro for every acre under **tillage.\* \* \*** The culture of the corn comes within the reach of the poorest peasant; while, from the enormous outlay of capital it requires, the precarious nature of its returns, and the necessity for grinding off the crop as fast as it is cut, the culture of the cane is a lottery exclusively restricted to the wealthy,” (p. 1.) Such are a few of the arguments employed by this very able writer to combat objections which I could hardly have brought myself to believe had been urged by the generally liberal, generous, light-hearted, and spirited West Indians, were I not able to testify to the facts themselves, for I happened to be in Jamaica at the time the experiments were made in sowing the wheat forwarded by Dr. Hamilton; and though they were, as we shall see, successful beyond the most sanguine expectations of the Doctor himself, yet, such was the force of prejudice, and such the attachment to sugar, that not only was a deaf ear turned to the monitor, but the boon was distrusted, and the **bounty**

neglected. But *humanum est errare*—and the West Indians, in this instance, only betrayed the predominant feeling of distrust of innovation, which all nations have exhibited from the earliest periods up to the present day, when the philosophic Davy proved by chemical ratiocination the impracticability of lighting London with gas, and the vicarious Lardner demonstrated by algebraic calculation the impossibility of crossing the Atlantic by steam. Hastily, therefore, waiving all that might be urged against the selfish and unchristian arguments brought by a minority, I am happy to say, of the West Indians against the introduction of wheat as a staple in the colonies, I proceed to follow Dr. Hamilton throughout his philanthropic and valuable treatise. He tells us [quoting from Washington Irving, *Life of Columb.* vol. ii. c. ii. p. 120,) that the sugar cane, vine, melon, gourd, cucumber, and *wheat*, were all **introduced** at one and the same time into the West Indies. Columbus in his second expedition having found the settlement of La **Navidad**, which he had attempted to found in St. Domingo, **in** ashes, and the settlers exterminated by the aborigines, sailed to another spot, thirty miles east of Monte **Christo**, where, on the 7th Dec. 1493, he founded a city, and called it Isabella. The works being in forwardness, he made an excursion into the interior of the island, from which he did not return **till** the 29th March, not only pleased with the expedition, but “the appearance of everything in the vicinity of the harbour was calculated to increase his anticipations of future prosperity. The plants and fruits of the Old World, which he was endeavouring to introduce into the islands, gave promise of rapid increase. The orchards, fields, and gardens were in a state of great forwardness. The seeds of various **fruits** had produced young plants; the *sugar cane* had prospered exceedingly in the soil: a native *vine* trimmed with care had yielded grapes of tolerable flavour, and cuttings from **EUROPEAN VINES** *already began to form their clusters.* On the 30th of March, a husbandman brought to Columbus **EARS OF WHEAT** which had been sown **in** the latter part of January. The *smaller kind* of garden herbs came to maturity in *sixteen days*; and the *larger kind*, such as melons, gourds, pumpkins, and cucumbers, were *fit for table* within a month after the seed had been put into the ground. The soil, moistened by brooks and rivers and frequent showers, and stimulated by an ardent sun, possessed those principles of fecundity which surprise the stranger, accustomed to less vigorous climates, by the promptness and prodigality of vegetation.” “Thus we see,” adds Dr. Hamilton, “that the cultivation of wheat within the tropics commenced in the West Indies almost with their discovery, was coeval with the introduction of the cane, and was as **triumphantly** successful as that of

the other exotics tried by Columbus, while the crop attained to maturity in an infinitely **shorter** space than was required in the proverbially fine climate of Andalusia. Taking the *latter part* of *January* to imply the interval between the 21st and the **31st**, and the ears spoken of as ripe specimens, the interval required by the crop to reach maturity could not have exceeded at the outside sixty-eight days-or, assuming a mean date, sixty-four days, but one day beyond nine weeks ; an interval nearly corresponding with the results obtained in the valleys of Aragua, and within about twenty-six days of those which have been obtained in Jamaica, New Providence, and **Barbados**.”—[p. 6]. I pass over what Humboldt has said [Personal Narrative, vol. iv. p. 112] of corn having been “cultivated with success in several regions which are now thought too hot or too damp for this kind of agriculture ;” that “**the** province of Carthage produced wheat until the sixteenth century ;” that “in the province of Caraccas this culture is very ancient ;” that “the environs of Tucayo alone export annually more than eight thousand quintals of **excellent** flour ;” all of which places are within the tropics; and proceed to relate the experiments recently made in Jamaica, at the request and solicitation of Dr. Hamilton. I must remark here also, that similar experiments have been made with success in Antigua, Bahamas, Dominica, St. Christopher, Barbados, (in this island Mr. Young proposed and attempted the formation of a company for the cultivation of wheat, but **I** know not with what success,) St. Vincent, and I believe Curagoa. An account of these experiments would have been incorporated in this paper, did space permit ; but as I have already extended the article to a length not contemplated when I commenced it, I must defer these to another and more distant opportunity.

In August 1834, **Dr.** Hamilton transmitted to the amiable, learned, and philanthropic Bancroft, late Inspector-General of Hospitals in Jamaica, a portion of wheat from the celebrated harvests of La Victoria, which wheat the Doctor had procured through the kindness of Sir R. **K.** Porter, Her Majesty’s minister at Caraccas, requesting the Doctor to “use his influence to obtain for it a fair trial and correct reports of the result.” Accordingly, on 8th July, 1835, Dr. **Bancroft** wrote to Dr. Hamilton as follows :—“As you express in your late letters a desire to be informed as to the growth of various plants which you have been the means of introducing here, I will now proceed to give such particulars of several of them as I have been able to collect up to the present time. The Jamaica Society have received samples from three or four **different** places of the (Victoria) wheat produced there, *all of which appear to be of a favourable sort*. First, from the mountains of **St.** Ann’s, where

the seed had been sown the latter end of January, and *the corn was ripe the latter end of April*. In another part of the district, the dates of sowing differed, but the wheat ripened in nearly the same period. Next, from the mountains of St. Andrew's. On one property, Fair Hill, the sowing and the ripening happened at the same dates as in the first-mentioned case. Of this corn ONE GRAIN produced twenty-eight ears, containing altogether **1500 GRAINS** [being an average of fifty-three grains for each ear]. Notwithstanding this apparent success, the proprietor of the place *thinks it unlikely* that the planters would grow the Victoria wheat in preference to the great corn, as it is called here, *i. e. Zea Mays*. On another plantation, again, Charlottenburg, the seed was sown early in March, and received a top-dressing ; in the course of a few days, it had sprung up three inches above the ground ; and, as favourable and moderate rains continued to fall subsequently, the corn thrived well, and ripened in the *early part of June*, producing abundantly grain of a larger size than the parent seed, the ears being large and full. Six of these, for instance, yielded three hundred and thirty-six grains, weighing half an ounce to each ear. Mr. W. B. King, an Assistant Judge of Assize and a member of Assembly, has since sent me two bundles of the ears of his wheat, and I intend to enclose one or two of them as a specimen of the produce of the Victoria wheat here. From the trial just made, Mr. King has no doubt that the grain could be cultivated in many parts of this island, and that it might become a profitable resource."

"Such then," observes Dr. Hamilton, "were the results of the first modern attempts to cultivate wheat in the West Indies ; results which, having been obtained under the immediate auspices of so learned and accurate an observer as Dr. Bancroft, merit the greatest weight and consideration:" and I can only add, that the appearance of this wheat was, in a great measure, superior to any I had ever seen, and that the impression on my mind at the time was, that it only required the encouragement of the leading men of the island to insure its permanent introduction. But, alas ! they were at that time saddled not only with an incubus in the person of the Marquis of Sligo, as governor, who, though a proprietor of the soil, never planted or encouraged the planting of a potato but only so far as it conduced to an increase of the sugar proceeds, but they were struggling against the mighty influence of the Anti-Slavery Society, and combating the prejudices of three-fourths of the British public. After this person's compulsory return from the government of the island, Dr. Hamilton wrote to him, requesting he would exert his influence to procure a trial on his estates of the growth

of Victoria wheat. He accordingly recommended the Doctor to Mr. Bravo, who had rented his estates, and who appears to have made a successful trial of the growth of the wheat ; but, through the absurd regulations and preposterous charges of the late Post-Office system, the Doctor did not learn the contents of “ a bulky letter closely written, bearing the Kingston post-mark, and containing, no doubt, the important information ;” so that “ the public lost the benefit of Mr. Bravo’s information.”—[p. 28]. From this period up to May 1839, Dr. Hamilton received no information whatever as to the success or non-success of the Victoria wheat in the West Indies. In that month and year he read in the *St. Christopher Advertiser* the following pleasing intelligence :—

“ **JAMAICA.**—*Victoria Wheat.*—The following reasons for the cultivation of wheat in that island are by John B. King, Esq., of St. Ann’s. We extract them from the Proceedings of the Old Harbour Agricultural Society :—‘ First, the simplicity of its cultivation ; remaining on *the ground so short a time—THREE MONTHS* ; requiring so *little attention*, and liable to so few contingencies. Second, *its importance as an article of food*. Third, on account of its not injuring the English agricultural interest, because wheat and flour are extensively imported into England, **and almost the whole of our island supply is foreign.**\* Fourth, on account of its value as a crop, and the ready market it meets. And lastly, on account of its supplying permanent employment to a large portion of our population in the mountain districts, in a way that is not **strange** to them.’ ” We have then an account of the successful cultivation of *oats* and *barley*.

- 
- The quantity of flour imported into Jamaica in 1841 was 127,820 barrels.
  - ” ” ” 1842 „ 106,369 „
  - ” ” ” 1843 „ 106,369 „

The editor of that very excellent paper, the *Jamaica Times*, to whom) am indebted for this information, says, “ Flour, with an additional duty of *1s.* per barrel, presents an increase, as compared with last year, of about 9000 barrels. The enormous excess in the consumption of 1841 over either of the subsequent years is no doubt attributable to the severe drought of 1840-41.” [*Jam. Times*, Nov. 25, 1843.] Now I contend, that the drought would not have affected the wheat harvest one-tenth part so much as it did yams, plantains, cocoas, and other ground provisions or roots ; and that the money expended in 1841 for flour, which, taking it at the lowest selling price in Kingston on the 9th December last, (according to De Cordova’s *Mercantile Intelligencer*, published in Kingston,) of 30s. per barrel, will show’ the enormous expenditure, to the foreigner, of £191,730 in one year ; while, taking the three years together, it is no less than \$497,512, or nearly half a million. This statement needs no comment.

“ Oats.-Mr. King, speaking of oafs, says, ‘ They have succeeded beyond my most sanguine expectation, and are about the same time in coming to perfection as Indian corn (*Zea Mays*). The sample I procured for seed was kiln-dried for the tropics, and, consequently, from a large handful I succeeded in obtaining but a few plants: each seed threw up an amazing quantity of stems. To make up for the loss of seed, *I took up the few roots when about three weeks, and divided and transplanted them*, by which means I obtained about ten plants from each seed: each plant threw up from twenty-five to thirty heads, each head containing from fifty to one hundred seeds, so that taking the smallest numbers 25 and 50 make 1250 grains each plant, or nearly 11,000 fold.’ ”

Doctor Hamilton, in a note, says-“ If in the place of the smallest numbers we take the means, we shall have an increase of  $1 \times 10 \times 27\frac{1}{2} = 275 \times 75 = 20,625$  grains for 1. The highest numbers give an increase of 30,000 for 1.” \*

Such, then, was the prodigious return from one seed of oats. Is it not, therefore, surprising that the attention of British capitalists, who find money ever and anon for loans to assist the statesmen of modern Utopias and American Lilliputs-who build bridges for Greeks and lay down railroads for Belgians, and, I verily believe, if cleverly attacked, would lend money on mines in the moon-should not have been called to profitable cultivation of wheat in the West Indies, and especially at this period, when the League is moving heaven and earth to annul or amend the Corn Laws ?-But I am warned that I must proceed with the immediate subject before me. As Mr. King had expressed an opinion that barley would thrive equally with wheat and oats in Jamaica, Dr. Hamilton wrote to Dr. Bancroft on 8th May, 1839, en-

\* Notwithstanding this very astonishing increase, the amount has been exceeded in Europe. In *The Times* of last year, there was an interesting account of the increase of a grain of wheat. It was planted in a pot, and the ears, on being counted, amounted to 98,600; and I am convinced, from what I know of tropical vegetation, that this amount, great as it may appear, could be exceeded in Jamaica. Wheat is not only a hardy, but a singular plant. It may almost be said to possess a property of increase peculiar to itself. A French agriculturist and chemist recently sowed wheat on plate glass, and watered it carefully; and, though there was not a particle of earth near its roots, it germinated, grew, flourished, and produced ears of corn! I regret I could not learn if the seed so procured was sown; and, if sown, if it had germinated and produced seed.—(See *Andes de Chide*.)

closing samples of Eclipse and other wheats, and promising a supply of barley and oats for Mr. King's further experiments, as soon as he could obtain them. This promise he redeemed on 23rd July, by transmitting specimens of *Teff* and *Adja*; the former, according to Dr. Hamilton, the *Poa Abyssinica*, and not the *Panicum Teff*; the latter, the *Triticum Spelta*,\* according to Professor Desvaux. It was not till the 15th July, 1839, and then by an indirect channel, that Dr. Hamilton, who had so disinterestedly exerted himself to secure to the West Indians so valuable a product as wheat and its congeners, received any account whatever of the progress of the experiment. This was through Sir R. K. Porter, who had exerted his weight and influence greatly in favour of Dr. Hamilton's philanthropic attempt. The information, taken from the Jamaica papers, was contained in the *Grenada Free Press*, "which furnished the first conclusive evidence of the fact I had been so long labouring to establish, namely, the practicability of cultivating wheat at levels little exceeding that of the sea, to the southward of Cuba."—p. 29.

"**VICTORIA WHEAT**.—This wheat appears to have been cultivated in Jamaica with success. The President of the Agricultural Association, speaking of it, says—'I have great pleasure in reporting to the meeting the result of three experiments, made under the auspices of the society, in respect to the Victoria wheat which was placed under the care of this society by Dr. Hamilton, through the assistance of the

---

\* *Triticum Spelta*.—This would seem to be, if the surmise of Loudon be correct, a species of wheat distinct from the common wheat, as it is more hardy than the latter, has a stout, almost *solid* straw, with strong spikes, and chaff adhering firmly to the grain. The grain is light, yields but little flour, and makes but indifferent bread. In Switzerland, in elevated situations, where common wheat would not grow, in Bavaria, and other parts of Germany, where common wheat would not ripen, it is sown in spring, and ripens in August. The *Poa Abyssinica* is one of the bread-corns of Abyssinia. The bread made from it is called *teff*. It is the ordinary bread of the country, — that made from wheat being the food of the higher classes. The way of manufacturing it is by allowing the dough to become sour, when, generating carbonic acid gas, it serves instead of yeast. [This was formerly, in the northern parts of Jamaica, the common practice in making bread, which was called *leavened* bread, in contradistinction to *unleavened* bread, eaten at the passover of the Jews.] It was then baked into circular cakes, which are white, spongy, and of a hot, acid taste, but easy of digestion. This bread, carefully toasted, and left in water for three or four days, furnishes the *bousa*, the common beer of the country, similar to the *quas* of Russia.—[See Bruce's Travels.]