

What about subsistence crisis in the middle of nineteenth century in England?

The aim of this work is to investigate the wheat market in England during the period 1853-1857. This period is characterised by a very deep crisis in Europe (Sweden, France, Belgium, Spain, and so on). For example, in France, the harvest shortfall was about 20 % in 1853. It seems that this crisis did not deeply affect England. As Bruce Campbell and Cormac O'Grada noticed recently "by the eve of the Industrial Revolution, England had become effectively famine-free". In fact, there was no famine at all in France during the period 1853-1857, but prices of all staple foodstuffs (wheat, meat, vines, etc.) were very high. The same occurred in many countries. If countries so different as France and Sweden were affected by a very deep harvest crisis it is very unlikely that this crisis did not affect England at all. At the moment, I am looking for some information in Hereford and Kent archives about the wheat, barley and oats markets during this period. The aim of this work is not to produce a new price data series but to investigate the trend of transactions on local British market and to examine the perception and the evolution of foreign trade grain over the year 1853-1856.

It is well known that the year 1846-1847 corresponded to one of the worst harvests of the nineteenth century. Furthermore, during the years 1846-1850, the potatoes blight caused a human disaster in some regions especially in Ireland and in a lesser extent in Flanders (O'Grada, Vanhaute, 2007). In Flanders this crisis was contemporary with the failed of small-scale subsistence agriculture and the need for a large part of the population for income from other source in "proto-industrialisation" (Vanhaute, 2007: 128-29). In France, the crisis of 1846-1847 was quite different. It affected first and foremost towns and especially the biggest (Herment, 2011, for Flanders see Ronsijn 2012)¹. French scholar had studied a lot this crisis. But like Jean-Michel Chevet and Cormac O'Grada underline, for France, and Paul Servais, for East-Wallonia, contrary to Flanders and Ireland, this crisis was not a lethal crisis and had no demographic impact (Chevet and O'Grada, 2007, Servais, 2011). Several explanations could put forward. Potatoes were not a crucial element in the diet for French and Walloon. In the north of France, poor people in the countryside were partially protected by the traditional system of assistance and alms provide by big landowners and big farmers (Farcy 1989, Herment, 2011). Finally, in the south of France the crisis did not have the same strength than in the north (Margairaz, 1983).

Some years later, in 1853, almost all West European countries were affected by another crisis which that was likely as deep as the one of 1846-1847. It is very strange that this crisis did not provoke a large scholar debate (Ronsijn 2009; Herment 2011). If it is true that "Western Europe in the first half of the nineteenth century still had not completely freed itself from old Malthusian restrictions [and that], food intake per capita, in particular, remained a problem"², then how to explain the lack of work about this crisis? It seems that several explanations could put forward. This crisis did not provoke a demographic shock similar to the one that affected Ireland; it partially occurred during the Crimean War; it preceded the bank crises of 1857; during the gloomier period there was no combination with an industrial crisis; relief policies pursued by French government, in Paris for example (Horii, 1983,

¹ Wouters Ronsijn underlined that in Belgium to the crisis "the food crisis of the 1840s and 1850s mainly affected urban population", Ronsijn, W., "Harvest crises and dearth crises: a comparison of the causes and effects of the food crises of the 1840s and 1850s in Belgium", working paper presented at Lisbon, 19-20 novembre 2012 GDRI CRICEC : *Harvest fluctuations and food shortages in European rural societies. Middle Ages-20th century* For France see for example, Lebrun, Yvonne, "L'éméute de Rennes des 9 et 10 janvier 1847", *Annales de Bretagne et des pays de l'Ouest*, tome 89, n° 4, 1982, p. 479-509.

² Vanhaute, Paping and O'Grada, "The European subsistence crisis of 1845-1850: a comparative perspective", 2007, p. 18

Herment 2011), and the remembrance of unrests during 1848, made European governments very sensitive to the “question sociale” especially in the biggest towns.

A last explanation could be put forward: the overseas grain should have saved Europe from a famine almost twenty years before the “grain invasion”³. This explanation is probably the best one for England, as I will try to show in this work. In the first part I measure the magnitude of the crisis for Continental Europe, England and abroad. In the second part, I gather and analyse some comments about this crisis, which were available in two English local newspapers during the years 1852-1854. Those local newspapers embedded a rich material on this matter. In the third part I to show the significance of overseas wheat trade for England as early as 1850 that protect England against subsistence crisis. In the fourth part I wonder about the principal provider countries for England during this period. Finally I wonder what was a subsistence crisis in the middle of the nineteenth century in Western Europe⁴?

I. Magnitude of the crisis.

In 1860 Alfred Legoyt, « chef de la statistique au ministère du commerce à Paris et secrétaire général de la Société de statistique », said that the crisis of 1853-1857 was the deepest agricultural crisis in France since 1800 (Legoyt, 1860)⁵. Contrary to 1846-1847, the price of all staples increased (meat, wines, fodder, wheat, oats, etc.), and the South of France was affected by the same trend (Margairaz, 1983, Armengaud, 1961)⁶. It is possible to estimate the shortfall of wheat’s harvest for the year 1853 at about 20 % (Horie, 1983; Herment, 2011). The price of wheat increased in Bassin Parisien as they increased in the South of France, in Belgium, in Prussia, in Denmark and... in England (Ejmaes, Persson, Rich, 2008; Ronsijn, 2009, Herment, 2011). During three years the price of wheat was higher than during 1846-1847⁷.

But this period coincided with the Crimean War. It was possible that dramatic increase of wheat’s prices was caused by the fall of import from Black Sea. So it is possible to invoke the lack of Russian’s wheat to explain the *crisis*, especially in England. Total wheat import of England corresponded to about 20 % of the home grown production during the period 1851-1861 (Ernaej, Persson and Rich, 2008: 146; Beckett and Turner, 2011: 61).

In fact it is not the case. France was, in normal years, self-sufficient and could export few quantities of wheat in England. But French harvests failed from about 20 % in 1853, and in same proportions in 1855. During these years France needed to import wheat⁸. So, for this country it is not necessary to invoke Crimean War to explain soared of wheat prices.

In England it is much more difficult to measure the fail of wheat yields. Michael Turner and John Beckett provided some data demonstrating this fail (Beckett and Turner, 2010: 68). Statistics provided by Brian Mitchell (Mitchell, 1988: 195) shows that yields for wheat was

³ See O’Rourke, K. H., “The European Grain Invasion, 1870-1913” *The journal of economic history*, vol. 57, n° 4, p. 775-801.

⁴ Kevin O’Rourke and Jeffrey Williamson said “Historians demand more. They tend to look for deviant behaviour and then search for explanations – for example, which countries did not catch up when and why, and did all countries catching up do so for the same reasons?”, O’Rourke, K. H. and Williamson J. G., *Globalisation and History. The Evolution of a nineteenth-Century Atlantic Economy*, MIT, 1999, p. 8.

⁵ Legoyt, A., « Des chertés en France et de leur influence sur le mouvement de la population. », *Journal de la société de statistique de Paris*, 1^{ère} série, 1^{er} volume, n° 4, 1860. Margairaz, D. *Les dénivellations interrégionales des prix du froment en France 1756-1870*, thèse pour le doctorat de 3^{ème} cycle sous la direction de J.-C. Perrot.

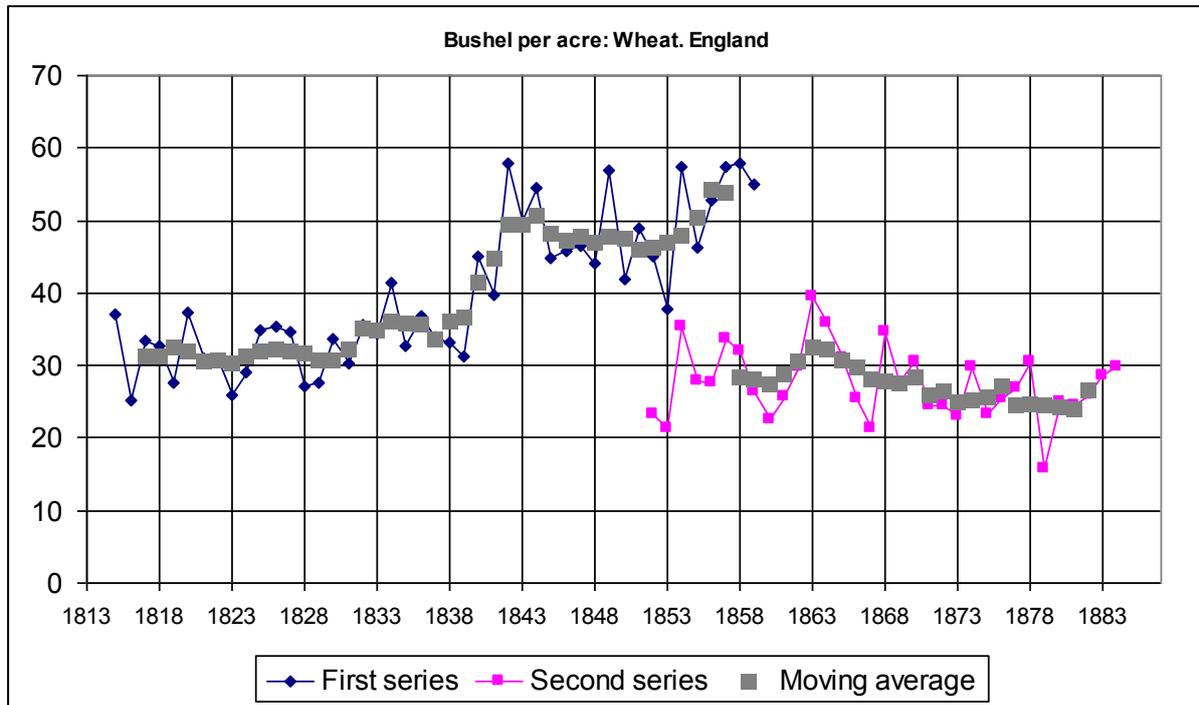
⁶ For south of France see, ARMENGAUD, A., *Les populations de l’Est-Aquitain au début de l’époque contemporaine*, Mouton, 1961, p. 187-194.

⁷ Mette Ejmaes, Karl Gunnar Persson and Soren Rich, “Feeding the British: convergence and market efficiency in the nineteenth century grain trade”, *Economic Historical Review*, 61, S1 (2008), p. 140–171.

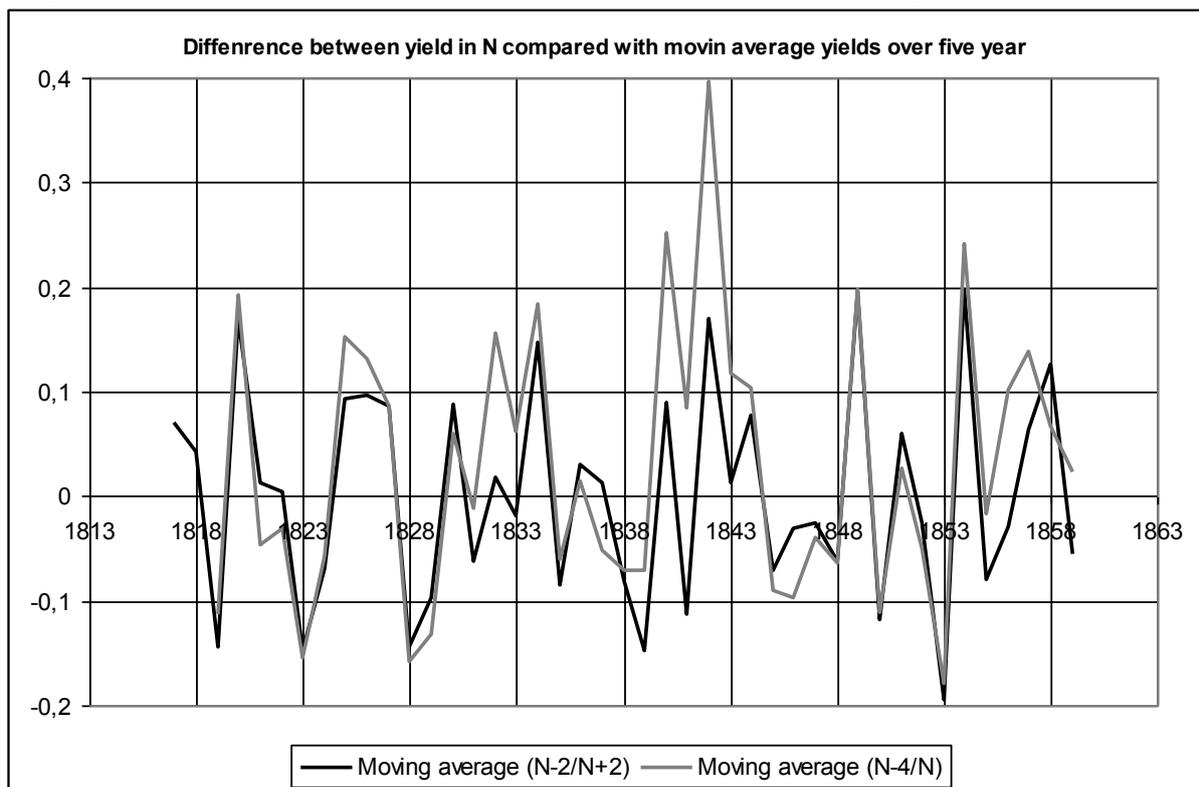
⁸ Germany, France and Denmark provided more than 40 % imports wheat of England during the period 1851-1860 (Ejmaes, Persson and Rich, 2008: 147)

low in 1853 (see graph 1.). Like in France, the shortfall of wheat crop could be estimated at about 20 % in 1853.

Graph1. Source: Brian. R. Mitchell, *British Historical Statistic*, 1988, p. 194-195⁹.



Graph 2. Source: Brian. R. Mitchell, *British Historical Statistic*, 1988, p. 194-195



⁹ The two series of prices are not directly comparable, but both show the bad years were the same than in France: 1860-1861; 1867; 1879.

So, independently of Crimean War, after the harvest of 1853, price of wheat increased in all Western and North of Europe because of the decline of yields for wheat but also for barley and rye. It is likely that even Spain and Italy were affected, indirectly for the former but directly for the latter. In Northern Italy, the harvest was bad in 1853¹⁰. It is very unlikely that, by itself, the Crimean War triggered off a so unanimous and sharply response in all Europe while all pieces of evidence revealed a period of bad harvests.

A last point needs to be examining before to cross the Ocean. During this period and for a long time, England was the first importer country. One can assume it was the poor harvest in England that determined the increase in price of wheat in all Western Europe. I cannot provide a clear answer to this question. But, if this assumption is correct, it is necessary to assume that French exporters, for example, did not stop to export because they wanted to take an advantage of opportunities provoked by the price gap between France and England. In fact the evolution of price between these two countries was correlated, as in whole Europe. So, opportunities of profit were the same in the two countries. In France, during this period, the problem was not researching opportunities for profit but provisioning Paris and big towns (Herment, 2011). Anyway, because France was the first producer for Wheat in Western Europe, it is possible to assume, that the increase of price in France induced a sharp increase of price of wheat in England. It is also possible to assume that the evolution of price of wheat in Germany (who was the major exporter in England) provoked a dramatic increase of price in England, and so on. At last, the record is always the same... During the years 1853-1854, Western Europe endured a very bad harvest that provoked a dramatic increase in price of wheat¹¹.

What was happening in USA and Canada during those years? Poor harvests in 1852 and 1853 triggered a sharp increase of prices of wheat and barley as shown in tables 1 and 2.

Table 1. Prices in USA. Source: Michell, H., "Notes on Prices of Agricultural Commodities in the United States and Canada, 1850-1934", *The Canadian Journal of Economics and Political Science / Revue canadienne d'Economie et de Science politique*, Vol. 1, No. 2 (May, 1935), p. 269-279, p. 269-270.

Years	Wheat	Oats	Barley	Rye
1852	0,737			
1853	0,923	0,32	0,473	0,61
1854	1,238	0,31	0,62	0,75
1855	1,625	0,33	1,075	0,875
1856	1,445	0,27	1,175	0,788

Table 2. Prices in Canada. Source: Michell, H., "Notes on Prices of Agricultural Commodities in the United States and Canada, 1850-1934", *The Canadian Journal of Economics and Political Science / Revue canadienne d'Economie et de Science politique*, Vol. 1, No. 2 (May, 1935), pp. 269-279, p. 269-270

Years	Wheat	Oats	Barley	Rye
1852	0,737			
1853	0,936	0,413	0,551	0,648
1854	1,459	0,575	0,827	1,118
1855	1,865	0,681	1,005	1,19
1856	1,394	0,527	1,013	0,867

¹⁰ For Spain, see Barquín Gil, R. « El precio del trigo en España (1814-1883) », *Historia agraria*, n° 17, 1999, p. 177-217. For Italy, see De Petris, N. ; Fornaci, T. ; Vazza, G. and Versetti, P., « Il movimento dei prezzi in Genova dal 1845 al 1905 », *Giornale degli economisti et annali di economia*, 9/10, 1965, p. 886-920 and Martini, M., « L'expansion d'une culture commerciale », *Histoire & Mesure*, 2000 vol. 15 - n°3-4. p. 377-397.

¹¹ It is noteworthy that Susan Fairlie quoted that price of English wheat decline during all the nineteenth century except during the decade 1851-1860. She quoted that if years 1853-1856 suppressed the decline continue during this decade. "The Corn Laws and British Wheat Production, 1829-76", *Economic History Review*, New Series, Vol. 22, No. 1 (Apr., 1969), pp. 88-116, p. 105.

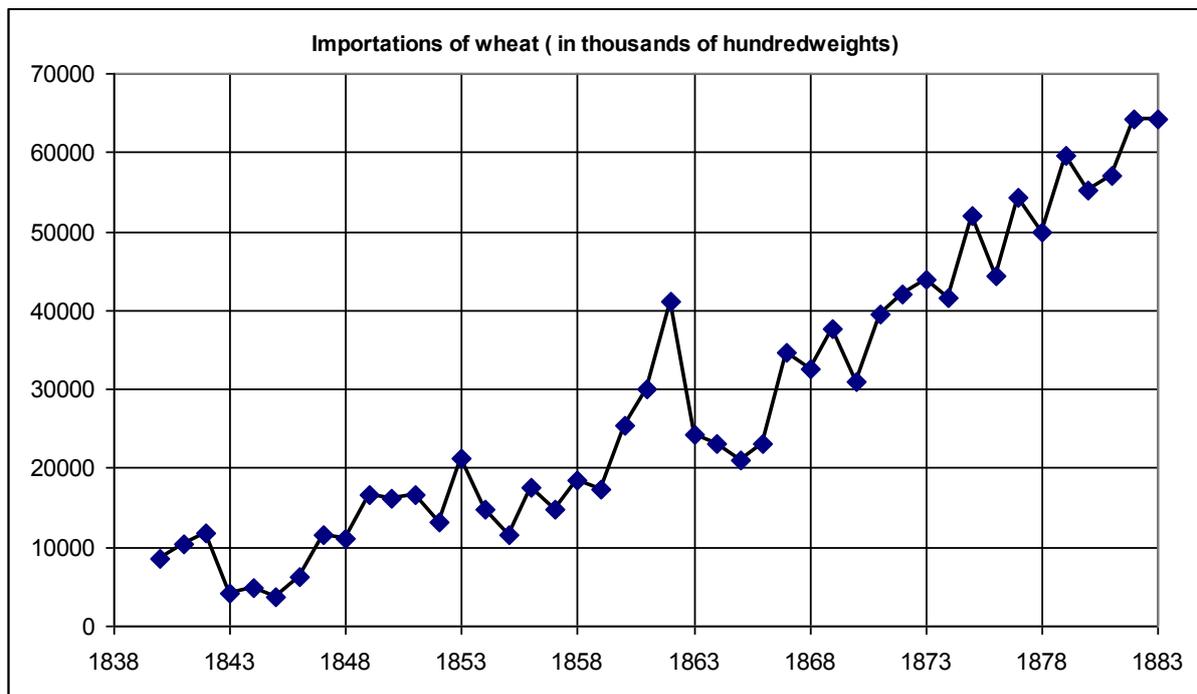
In North America, like in Western Europe, the prices of wheat and Barley increased during this period owing the failure of crop, especially in 1853. It is very doubtful that Crimean War provoked by itself this dramatic increase of price of wheat in all *Atlantic Economy* for a very simple reason: the Crimean war between France, England and Russia began later and during the year 1853, all European countries bought a lot of grains in Russia... especially England.

II. Local point of views about the crisis.

It is necessary now to examine in which extent English market depended of the importations. M. Turner and J. Beckett underlined that during the first part of the nineteenth century, until the end of 1850', yields increased in England and could provide wheat for Englishmen on the whole (Beckett and Turner, 2010). But it is necessary to examine more precisely the provisioning of wheat markets in England to determine if importations played crucial role to feed British.

It is possible to examine the evolution of import of wheat. The graph 2 shows a dramatic increase of importations at the beginning of the 1860' before the *Grain Invasion*.

Graph. 2. Source, Brian. R. Mitchell, *British Historical Statistic*, 1988, p. 224-225.



The years 1861-1862 were remarkable because a very great shortfall of crops occurred in 1861. The graph shows that the increased of importations during the years 1853 is very important too compared to previous years and following years.

If we assume that during the 1850' about 25 % of wheat consumed by English people was imported, what did happen when the harvest shortfall was about 20 %? It is necessary to suppose that importations filled the lack of wheat¹².

¹² Susan Fairlie wrote : « The assumption that changes in home wheat prices were impervious to foreign influence is based broadly on the supposed fact that up to, and even after, 1846 wheat imports formed but a tiny proportion of total home consumption and that in normal years Britain was virtually self-sufficient. Even supposing, however, that imports were marginal [...] it is inescapable that on balance Britain was already deficient in wheat even in the first half of the nineteenth century. » She added below « No one has yet tried to assess whether imports or home output was increasing faster, but it is surely curious to say that imports were thus increasing at a time when home output was supposedly outrunning home demand. » Fairlie, S. « The Corn

In a certain way it is not sure that historians had measure the importance of this fact. In 1990, R. Perren said that “Most wheat was consumed close to the farming districts where it was grown in the mid-nineteenth century [...] The manufactured towns of the West Riding of Yorkshire were supplied from the North and East Ridings and Lincolnshire [...] Warwickshire and Staffordshire supplied Birmingham [...]”¹³. It is necessary to determine if the importations of wheat played a role in the feeding of British people and especially in industrial towns.

Our aim is not to prove that importation played a very important role for feeding English people. Every newspaper could prove it. We just want to understand how, and in what extent, two local English newspapers recorded this reality: *The Hereford Journal* and the *The Rochester and Chatham Journal, and south eastern advertiser (Maidstone and Kentish journal)*.

First, we collected some information in *Hereford Journal*¹⁴ for the year 1852-1853 just before the beginning of the crisis. During this period imports of grains should be very weak.

Herefordshire is located in the West of England. This county is deeply rural. The cattle-rearing was very important (Hereford cattle is well-known until now) but in the middle of nineteenth century, the county was able to feed its population¹⁵. The growth of population is not very impressive during the first half of the century: 88.436 inhabitants in 1801, only 115.489 in 1851 (+31 %)¹⁶. during this period, in Herefordshire, the growth of yield exceeded, without any doubt, the growth of population. Importations should have no role for provisioning the local markets contrary to the markets of industrialising area.

Every week *The Hereford Journal* reported a brief chronicle about markets of Ludlow¹⁷, Gloucester, Shrewsbury, Birmingham and Bristol. Those chronicles were very short but well informed¹⁸. The most interesting is not the fact that they provided prices of wheat, barley, oats, beans and peas, but information on the trade, especially mentions of foreign wheat¹⁹.

The best is to quote the source:

“There is an increase in the supply of English Wheat, with rather more old offering; the new is mostly in bad condition; good qualities Is lower, other sorts neglected. Holders of foreign are firm. Both malting and grinding Barley are a dull sale, but there is no reduction in their value. Oats is dull, at a reduction of 1s per sack. Averages: Wheat 43s; Barley 31s 4d; Oats 18s 9d; Beans 36s”

This chronicle was that one of Bristol market of December 30, 1852. We can notice that some holders were “holders of foreign” wheat²⁰. Every week the reporter from Bristol quote the tendency for *English* and *Foreign* wheat. But this was Bristol. What happened at inland towns? At Gloucester, almost every week, the reporter quoted sales on *foreign* wheat. But Gloucester is not very far from the sea. In Worcester, the reporter mentioned *English* or/and *foreign* wheat one week out of three weeks. At Birmingham the percentage is higher than at Worcester. *English* and/or *Foreign* wheat was recorded during 50 % of the weeks of the year.

Laws and British wheat production 1829-1876 », *Economic History Review*, vol. 22, 1969, p. 88-116, p.91-92, see also table 1, p. 103.

¹³ Perren, R. “Structural Change and Market Growth in the Food Industry: flour Milling in Britain, Europe and America, 1850-1914”, *The Economic History Review*, vol. 3, (Aug., 1990), p. 420-437, p. 422.

¹⁴ Hereford Archives, microfilm.

¹⁵ In 1874 the acreage under corn crops was 110,131 acres, about 25 % of the total acreage of the Herefordshire (532,898 acres). *Littleburys’s Directory and Gazetteer of Herefordshire, 1876-1877*, second edition, p. 13.

¹⁶ Source: Census of 1851.

¹⁷ For the market of Ludlow the newspaper reported only the prices of grains.

¹⁸ It is possible to collect similar chronicles in every local newspaper.

¹⁹ We recorded 38 chronicles for each market between October 6th 1852 and June 29th 1853.

²⁰ It is important to underline that the *Corn Return* recorded only home grain. See Lucy Adrian, “The nineteenth century Gazette Corn Returns from East Anglia markets”, *Journal of Historical Geography*, 3, 3 (1977), p. 217-236.

Shrewsbury was the sole market where there was no mention of *foreign or English wheat*. In fact all quantities sale in Shrewsbury were obviously English. If it was not the case the columnist made the distinction between the two origins. There were no chronicles for Hereford during this period, but chronicles for the year 1854 did not mention *foreign wheat*²¹. So, except for markets of deeply rural counties, like Herefordshire or Shropshire, the importations played a very important role during this period for feeding English people, especially in the industrial towns. It seems obvious that a large part of the provisioning of England depended of importations during a *normal year* and many more during years of bad crops.

III The dependence of England during the year 1853.

The *Maidstone and Kentish journal*, the second newspaper I recorded for the year 1853, reported chronicles for a wide range of markets²². This newspaper gave information from Mark-Lane (London), Liverpool, Hull, Birmingham, etc, and from Maidstone (Kent). Information were more numerous and more precise than for Herefordshire. Sometimes it is possible to quote some comments about the crisis. The evolution of the point of view of *specialists* of grain market during the year is very instructive²³.

At the beginning of the summer of 1853, prices grew up in all Europe, and in England to, of course. But there were no sign of anxiety in the comments of reporter. The 9th August a chronicles said: “The fine weather of the last week has effected a great change in the appearance of the cereal crops; all of which are now fast becoming, ready for the sickle.” But, in fact, in a lot of districts yields of wheat were under “the average”:

“A very elaborate report on the state of crops is published in the *Gardener’s chronicle*. The figures represent districts:

	Good	Average	Under average
Wheat	27	29	186
Barley	80	113	39
Oats	76	122	47
Beans	49	73	21
Pease	30	60	37

Owing these optimist views, the price of wheat decrease on English market during the month of August, but the anxiety was not totally away from the comments.

The first sign of the crisis occurred the 20th of September. At this date it was impossible to ignore the bad situation. After a short and slight fall in August the price of wheat increased again.

In 1853, the *Maidstone and Kentish Journal* reported a note from Messrs. A. Mongredien and Co. It was said that: “The deficiency in our own crops, whatever that may be, would have excused but a limited influence on prices”. But it was quoted in the same note that France and Italy needed to buy wheat in ports of Black Sea:

“France and Italy, instead of affording us their usual annual supply, now interfere powerfully with those which we are accustomed to receive from eastern Europe. The number

²¹ The sample of market is very weak (8 markets between June and August 1854). This first result is provisional.

²² Kent Archives, microfilm.

²³ Unlike the population of Herefordshire, the population of Kent increased very fast between 1801 and 1851 (308.000 inhabitants in 1801, 616.000 in 1851). Owing proximity of London agriculture of was market-oriented but the need of local population was very important to. However we are not interested mainly by the agriculture of Kent. See *The Economy of Kent 1640-1914*. Alan Armstrong (ed.), Kent County Council, 1995. Mary Dobson, “Population 1640-1831”, p.5-29; Alan Armstrong, “Population 1831-1914”, p. 30-50 and Gordon Mingay, “Agriculture”, p 51-84. See also in French: G. E. Fussell, “Quatre siècles de systèmes de culture dans le Kent, 1500-1900”, *Etudes rurales*, 59, p. 7-33, 1975.

of sheep that were loaded with wheat at Odessa between the 29th July and the 26th August last was 127; of these, the destinations were follows:-

- For Leghorn, Genoa and Marseilles (sic) 102
- For Trieste, Venice, &c. 16
- For England 9

“At the corresponding period last year the same number of shipments took place, of which fully three-fourth were for England, and only one-fourth was for all other places. This is a most significant fact. To put it in another shape, it appears that in former years (when our crops was fair and our wants few) we received 200,000 qrs out of 260,000 qrs shipped at Odessa in a given time, leaving 60,000 qrs for the supply of the Mediterranean ports; whereas this year (when our crop is deficient and our wants large) we received only 20,000 qrs out of the same amount of shipments; whilst 240,000 qrs are diverted to the Mediterranean ports [...]” After those remarks, the note continues that “it is at periods like these, that the absence of statistical data in regard to our crops is more severely felt and can explain the great change in price of wheat in London during the past weeks.”

At the end of September the first sign of Crimean War appeared. September the 27th at Mark-Lane “Great excitement has prevailed in our market to-day, owing the probability of a war with Russia and the prospect of short arrival from abroad.” In fact, despite those remarks, imports from Russia were very high at the end of the year²⁴.

In October, a circular reported in the *Maidstone and Kentish Journal* the 18th of October, from Taylor and Bright, a great grain merchant of Hull, underlined “*We repeat our previously-expressed conviction, that the crop of 1853 – talking in all kinds of grains, and regarding their product in the shape of flour, is the worst this country has known for a quarter of a century. We believe the potato disease never was worse*”²⁵.

In two months, the change on appraisal on the crop was striking. At the beginning of August, some people were anxious, at the end of October it was said that the crop was the worst since 25 five years (around 1828), and everybody understood that England was absolutely dependant of foreign wheat.

IV Origins of foreign wheat.

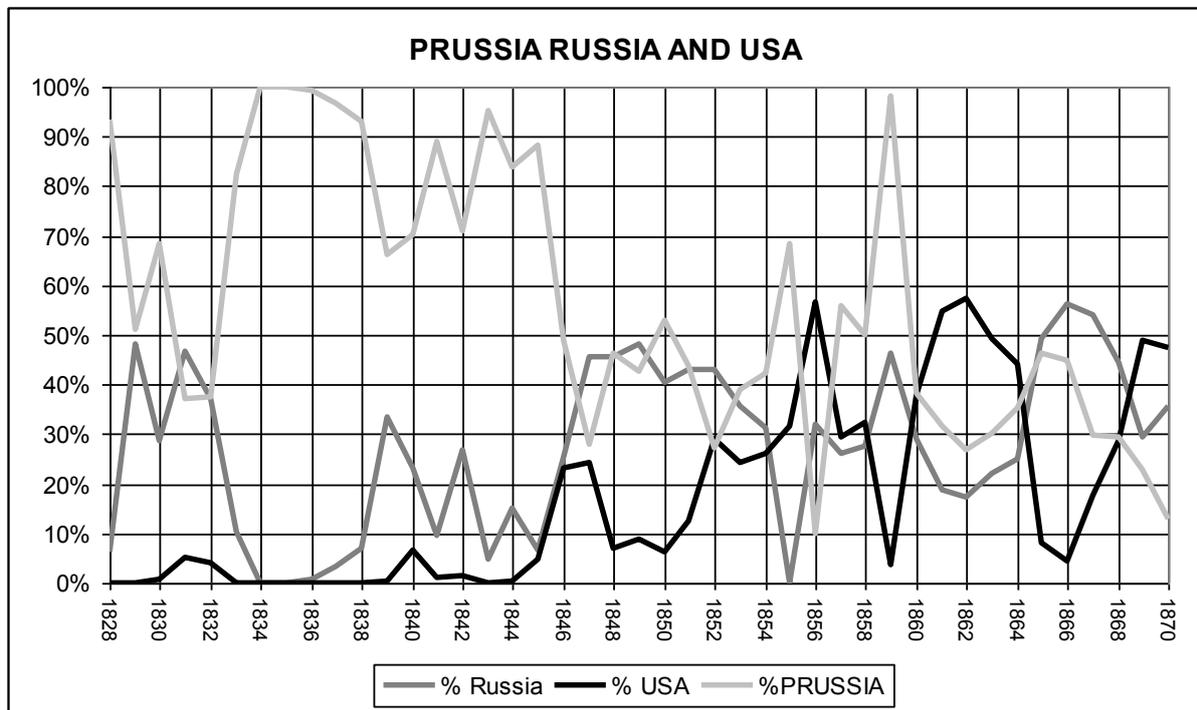
During the first part of the nineteenth century, Prussia, France and Denmark were the most important importer countries of Wheat for England. In 1846-1847, for the first time since 1830, imports from Russia surpassed the imports from Prussia²⁶. During the same period the imports from USA increased a lot (see below). So, if bad harvest during the period 1828-1830 caused a shift in importation of wheat structure of England to Prussia from Russia, the harvest of 1846 provoked for the first time an outbreak of imports from USA.

²⁴ Vernon J. Puryear, “Odessa: Its Rise and International Importance, 1815-50”, *Pacific Historical Review*, Vol. 3, No. 2 (Jun., 1934), p. 192-215, p. 200.

²⁵ *Maidstone and Kentish Journal*, October, 18, 1853. The Taylor and Bright’s *circular* dated October 11. Taylor and Bright were “extensive corn merchants in Hull”. The Henry Smith Bright was ruined in 1857. See *Hobart Town Daily Mercury*, April, 1, 1858. <http://trove.nla.gov.au/ndp/del/article/3247407>

²⁶ It is striking that imports of Russian grain were very high during the years 1828-1832. These years was years of bad crops.

United Kingdom's imports of wheat from Prussia, Russia and USA (in % of total Prussia+Russia+USA); Source, B. Mitchell, Table 18 p, 229-230, Principal Sources of Imports of Wheat - United Kingdom 1828-1980. In thousand of hundredweights.



In fact, each period of crisis provoked an increase of importations from Russia and/or from USA, despite the increase of yields in England. During the year 1853, the level of imports from Russia was the same than from Germany, and imports from USA increased again to reach a peak in 1856 when Prussia could not anymore sent grain. Some years later, during the years 1860-1862, imports from USA surpassed those from all other countries for the first time and reached about 50 % OF total imports from Germany, Russia and USA²⁷.

English and foreigners were aware of the problem of the dependence of United Kingdom vis-à-vis foreign wheat. In 1846, Augustin Rollet, French *directeur des subsistances de la marine* said: “[...]le moment approche où l’Angleterre, pour maintenir son état de prospérité, qui a pour base la satisfaction complète des intérêts, et non celle tout restreinte des intérêts mal compris de l’agriculture, sera forcée d’admettre, sous des conditions modérées, le libre accès des blés étrangers sur ses marchés.” But Rollet was French and so a he was an usual suspect. But the crisis of 1846-1847 occurred. During the crisis of 1846-1847, American and Russian corn saved United Kingdom because Prussia did not provide corn in sufficient quantities. The necessity to find new sources of supply for wheat was crucial.

Some proposals were unexpected like the one of Lieutenant-Colonel W. H. Sykes, Vice-President of the *Royal Society*. He wrote: “In the month of November last [November 1846],

²⁷ See Jean Heffer, *Le port de New York et le commerce extérieur américain 1860-1900*. Jean Heffer said : « A un moment critique de leur histoire, la chance des Etats-Unis a été que le Royaume-Uni avait davantage besoin du blé du nord que du coton du sud », p. 61.

in consequence of the high ruling prices of bread stuffs in England, with the almost certain prospect of a speedy enhancement that would cause much privation in the mass of population, I was induced to call the attention of the Statistical Society of London to India, as a source of supply; not only on the ground of the great variety of bread-grains which India produces, but for the average cheapness of these grains, which, compared with prices in England, would leave a very wide margin, even when scarcity did not prevail in Europe, for the costs of transit from the interior to the coast in India, the expense of shipping and freight, and other contingent charges, and yet leave a moderate profit; but which source of supply, in cases of protracted dearth in Europe, not only would become of high importance to the welfare of England, but would hold out to merchants the chances of a considerable pecuniary return.”²⁸
In fact it will take 40 years for supplying United Kingdom whit Indian wheat.

During the crisis of 1853-1857, new source of supply was planed. The 16th of August 1853, there was a mention of a statement of the *Canadian Journal in Maidstone and Kentish Journal*. This statement explained that USA could not export a large part of its production of wheat, contrary to the Canada, because of the growth of population in USA²⁹. They pointed that USA exported 9,441,090 bushel in 1831 and 11,028,397 bushels in 1851. Notwithstanding, the *Canadian Journal* quoted that:

“The year 1846 witnessed a great increase, occasioned by the free admission of bread-stuffs into English market, under the operation of Peel’s free-trade measures. The famine year doubled the ordinary exports of bread-stuffs from the United States. They rose to 22,000,000 bushel of wheat; but the subsequent falling off in every succeeding year to one-half that amount shows that the large exportation of 1847 was a convulsive effort”³⁰.

Below the statement said that: “In the quantity grown [in USA] there has unquestionably been a great augmentation; but it was nearly all been absorbed by the home consumption; and as that consumption has so nearly kept pace with the production for a period of 21 years, during which the wheat-growing region of the north-west has been brought under cultivation, there is no reason to conclude that the exports will, for the next 20 years, show any considerable increase over their present amount.” Of course, for the author, the sole medium to increase supply of new world grain could come from Canada. In fact, Canadian wheat played a weak role for supplying United Kingdom during this crisis contrary to those from USA³¹.

We can see that the problem of provisioning England was well known and well identified as soon as 1847, and that a lot of remedies were considered. In 1860 when a third crisis occurred, the new way of grain was well identified: About 50 % of foreign wheat was imported from USA and Canada.

Conclusion.

“Historically, the worst famines as well as the episodes of most acute dearth have been the product of back-to-back harvest failures.” Said Cormac O’Grada and Bruce Campbell (Campbell and O’Grada: 2011, 865). During the period 1853-1857 Western Europe experienced such a situation, especially France and Germany. It is now necessary to specify

²⁸ Lieut-Colonel W. H. Sykes, “Prices of the Cerealia and other Edibles in India and England Compared”, *Quarterly Journal of Statistical Society of London*, vol. 10, n° 4, nov. 1847, p. 289-316, p. 289

²⁹ *Rochester and Chatham Journal, and south eastern advertiser*. Tuesday, August 16, 1853. Kent Archives, microfilm.

³⁰ *Kentish and Maidstone journal*, August, 16th, 1853.

³¹ In 1853 the first attempt to send wheat from California occurred. RODMAN W. Paul, “The Wheat Trade between California and the United Kingdom”, *The Mississippi Valley Historical Review*, Vol. 45, No. 3 (Dec., 1958), p. 391-412, p. 394. In 1856, another unusual attempt was made to import directly wheat from the Chicago to England by Saint-Laurent River. See Heffer, Jean, *Le port de New York...*, op. cit., p. 24. Those attempts had not consequence.

what I want to say when I write “crisis”. If “crisis” means “lethal crisis”, it is possible to assure that there was no “crisis” in England like in France in the middle of the nineteenth century. During this period, as usual, grains markets dealt with a lot of troubles. Some were temporary and had no noteworthy effects in the level of prices. For example, the flood in the west of England during November 1852 reduced the attendance in the market places. The *Hereford journal* wrote that in Worcester: “Owing the flood there was a very small attendance and supply of wheat, for which rather higher prices were obtained.” In Shrewsbury “The unusually high floods prevailing round this place prevented many attending, yet there was a fair attendance, and the market ruled firm at the close as follows. Wheat 5s 2 d to 5s 7d; Barley 3s 5d to 3s 11d; oats 2s 3d to 3s per bushel”³².

Some troubles were more influential, especially the variations of yields. As we show above, during the years 1853-1856 yields decreased dramatically in all Western Europe.

So, there was no subsistence crisis during the 1850’ in England despite crop failure in all Western countries in Europe. For England, like for France, it was necessary to fulfil the lack of grain by importations. The Crimean War is very often invoked to explain the necessity to import wheat from USA. This was not the case in 1853 and no more after, especially in 1861-1862, except in 1855 and the beginning of 1856. Even during the first months of 1854, England imported wheat from Russia in great quantities. New ways for wheat were implemented during this crisis almost twenty years before the “*grain invasion*”. The question is not to know if there was subsistence crisis, but to understand how English were feed and more generally how the growing population of Western Europe was feed. Because England had the control of the ocean, England could find wheat, and more generally grains, to feed English population in Russia, in Prussia or in USA and Canada. It was not the increase of yields that protected England from subsistence crisis during the 1850’ but the control of the sea. Until the First World War United Kingdom did not experience subsistence crisis because of control of sea. During this period England experienced a lot of remedy to feed its population: Russia, USA, India, Argentina, Australia, and so on.

Those considerations imply another question. What happened in 1846-1847? Why this crisis was so harshly felt in England? As we showed above, Americans’ grains arrived in England, and more generally in Europe, in great quantities for the first time but... to late. The lack of means of transportation could not explain the interval between the supplying of American grain and the need of Europe. In fact, the framework of the crisis of 1846-1847 was special. The prices increased very late. Prices were stable in England until November/December and increased dramatically in January. In France, until January although prices were high during autumn, they became to increase really tremendously between January and February. When people understood that a new crisis emerged it was very late to organise provisioning of England but France also³³.

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³² *Hereford Journal*, November, 17, 1852.

³³ For France see Yvonne Lebrun, “Le commerce des grains après l’émeute de Rennes (1847)”, *Annales de Bretagne et des pays de l’Ouest*. Tome 91, n° 1, 1984. p. 73-96.

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