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The Taste of War: World War II and the Battle for Food

Lizzie Collingham

Food is rarely included in lists of the causes of the Second World War. The rise of fascism, German feelings of humiliation as a result of the Treaty of Versailles, and the economic and social instability which developed in the wake of the Great Depression, are all usually identified as important causal factors. However, food can be found at the heart of policies which set Germany and Japan on the path to war in the 1930s. My book, which this paper (partially) summarises, seeks to understand the role of food at the heart of the conflict, as a cause and an instrument of war, an important factor in strategy and logistics, and an all-consuming preoccupation for many soldiers and civilians. The focus on food is not intended to exclude other interpretations but rather to add an often overlooked dimension to our understanding of the Second World War. After all, starvation, malnutrition and its associated diseases killed at least 20 million people, a number to equal the 19.5 military deaths.<sup>1</sup>

The story of food's role as one of the causes of international conflict in the twentieth century begins in the last quarter of the nineteenth century. From the 1870s the amount of meat in the European diet rose steadily from 16 kilograms per person per year to 50 kilograms by 1914.<sup>2</sup> Ben Turner's family of mill workers in Huddersfield were able to eat a bit of meat virtually every day, in contrast to Richard Walker, an eighteenth-century farm labourer who spent half the family's annual income on bread.<sup>3</sup> The bread was supplemented by a little bacon, the occasional potato and a small amount of cheese. Three-quarters of all European foods in the eighteenth century were derived from plants, even the fat in the diet was drawn predominantly from plant oils.<sup>4</sup>

These changes in the European diet were made possible by the development of a global food economy. The growth of railways and the introduction of ocean-going steamships dramatically reduced the cost of transporting food. Whereas in the 1860s it had cost 4s. 7½ d. to ship a quarter of wheat from New York to Liverpool, by 1902 it cost a mere 11½ d. A global economy of specialized agriculture began to emerge.<sup>5</sup> North America, Argentina, Australia, New Zealand and Russia grew the wheat that made the European working-man's loaf and fattened the

cattle, sheep and pigs that were shipped as frozen meat for his table. This made food cheaper and more plentiful for the expanding urban working classes.<sup>6</sup> Britain was the first European country to follow the path of transferring the job of growing food to its colonies and by 1914 it was reliant on imports for over half of its food (measured by value).<sup>7</sup>

The apparent improvement in the British working man's diet hid a decline in the nutritional quality of his food. The soft white loaf made from American roller-ground wheat was more digestible but far less nutritious than the old style stone-ground bread. But the British celebrated their cheap white loaf as a symbol of Britain's free trade.<sup>8</sup> The country's dependence on imports was a positive force as the 'the large food deficit acted as a pump for the world's commerce'.<sup>9</sup>

Germany, in contrast, found itself in an uncomfortable position. Bismarck's protectionist tariffs had sheltered farmers from the growth in the global trade of cheap grain but as Germany's industrial revolution began to gather speed, more liberal voices within the country advocated a less protectionist economic course. Germany, they argued, should follow a path similar to that of Britain and expand manufacturing in order to produce exports which would then pay for the import of primary products, including cheap food to feed the growing urban population.<sup>10</sup> The economic writer and social reformer Karl Oldenberg warned that this would lead to ruin. Germany would become dependent on the United States and China for its food. The farming communities, which were the source of the nation's social health, would be destroyed. Meanwhile, the expanding urban areas would spread decay and undermine the nation's social fabric.<sup>11</sup>

Nevertheless, the German economy continued to expand and more and more imports of raw materials and food were required. Successive German governments tried to solve the problem by increasing Germany's self-sufficiency in food and this was fairly successful. In 1914 only 19 per cent of the German population's calories came from imports. But these meat, livestock feed and fat imports were important sources of energy and taste, providing 27 per cent of German's protein and 42 per cent of their fat consumption. Together with the Low Countries, Germany formed the largest wheat-deficit area in the world.<sup>12</sup> Agricultural protectionism had burdened the nation with a large agricultural sector which held back the process of industrialization and kept food prices artificially high.<sup>13</sup> Those who advocated free trade within

Germany argued that it was only by becoming a manufacturing and trading nation that Germany could hope to raise the standard of living of its growing urban population.<sup>14</sup>

German politicians were frustrated by their inability to challenge American and British dominance over both the world's wheat-growing areas and the sea lanes, and by Germany's lack of a dependent agricultural hinterland which could supply raw materials, or colonial markets to boost the German economy, in the same way that the empire created British wealth.<sup>15</sup> Behind the late nineteenth- and early twentieth-century jostle for a balance of power between Britain, Germany, Russia, Austria-Hungary and France, lurked the problem of how to feed a working population within the constraints of the economics of global trade. Within Germany, nationalist social commentators and an increasing number of German Conservative Party politicians, thought that successful pursuit of profit, power and influence was contingent on the country finding a more equitable position in the global economy of food production, import and export, and the only way to achieve this was through war. If it fought a short war the German government felt confident that it could feed its people for the duration of the conflict. Then, if Germany were victorious, it could defeat France and expand eastwards into a belt stretching from Finland to the Black Sea coast, thus establishing German dominance over western and eastern Europe. When they went to war in 1914 German politicians were hoping that the conflict would be decisive in disentangling the German nation from the world markets which put it at such a disadvantage.<sup>16</sup>

The First World War intensified Germany's problems with regard to its position in the world food economy. In the 1920s Germany's manufacturing industry did not produce enough exports to earn sufficient foreign exchange to pay for all its import requirements. Food and fodder amounted to half of these imports. The war reparations imposed by the Treaty of Versailles swallowed up yet more foreign exchange. In the inter-war years it was not too late for Germany to choose to follow the liberal course of participation in the international market, as a number of economists and agrarians advocated, but the economic difficulties of the 1930s effectively stunted free trade as the rest of Europe, including Britain, and America moved towards protectionism.<sup>17</sup> Many in conservative circles, and, of course, the National Socialists, believed that it was imperative that Germany should become less dependent on this hostile world market.<sup>18</sup> The agenda of the NSDAP's agronomists was to create a self-sufficient food economy which would provide the basis for military action.<sup>19</sup> Walther Darré, Hitler's Minister for Food

and Agriculture from June 1933, removed Germany's backward agricultural sector from the market and put it under the control of the Reich Food Corporation (*Reichsnährstand*). Nazi protectionism saw farm incomes rise and farm debt reduce.<sup>20</sup> However, farmers were not supposed to be motivated by profit but by the desire to work for the good of the German race and feed the nation.<sup>21</sup>

After his success in winning the farming vote during the 1933 election Darré fell from favour with Hitler. Hitler demonstrated just how bored he was by Darré's plans for internal agricultural restructuring by reading a newspaper while Darré was speaking in a meeting in July 1934.<sup>22</sup> But it is a mistake, which many historians have made, to conclude that issues of farming and food supply were of little importance to National Socialist policy-makers.<sup>23</sup> Details may have bored Hitler but the problem of the German food supply was a constant worry to him. In 1939 Germany was 83 per cent self-sufficient in the most important foodstuffs such as bread grains, potatoes, sugar and meat.<sup>24</sup> However, the best efforts of the Reich Food Corporation could not solve the problem of the need for some food imports, and most importantly, fodder. This conflicted with the National Socialist aim to prioritize the import of raw materials for the armaments industry.<sup>25</sup> In 1936 food shortages and rising food prices combined with fears of inflation and a rise in unemployment to revive the spectre of November 1918. Hitler demanded that a brake should be put on food prices.<sup>26</sup> Two years later he warned that unless sufficient foreign exchange was made available to overcome food shortages the regime would face a crisis. It was by now clear to Hitler and his leadership that, as the German standard of living rose, the country would face a food disaster unless large quantities of food could be imported.<sup>27</sup> This would, of course, slow down rearmament. In February 1939 he told a meeting of troop commanders that the food question was the most urgent problem facing Germany.<sup>28</sup>

The solution lay, in Hitler's mind, in the conquest of *Lebensraum* (living space). In his never published 'Second Book', written in 1928, Hitler had already formulated the argument that in order to achieve the same level of wealth and prosperity as the United States, Germany needed its own version of the American west.<sup>29</sup> The Reich Food Corporation confirmed this belief in the need for expansion. It calculated that Germany needed another 7-8 million hectares of farmland.<sup>30</sup> If farms in the Reich were consolidated and rationalized many farmers would have to be evicted from their tiny farms. The plan was to send them to farm the east, from where they

would supply the foodstuffs which Germany currently needed to import. *Lebensraum* would make Germany truly self-sufficient and immune to blockade and this would eventually enable Germany to challenge British and American hegemony.<sup>31</sup>

This vision of *Lebensraum* in the east was shared by many National Socialists, not least by Heinrich Himmler. Darré, who was director of Himmler's Race and Resettlement office, shared the vision of a greater Germany settled by a racially healthy German People.<sup>32</sup> As early as the summer of 1932, at a secret NSDAP leadership conference, Darré outlined plans for large eastern agricultural estates, run by an aristocracy of SS members and worked by enslaved former inhabitants.<sup>33</sup> This perceived need to expand eastwards made conflict inevitable. In a secret speech to young military officers in May 1942, Hitler explained why Germany had gone to war. While it was the duty of the German people to multiply, they lacked the space to do so. If they failed to multiply they faced racial decline and therefore needed to capture living space. 'It is a *battle for food*, a battle for the basis for life, for *the raw materials* the earth offers, *the natural resources* that lie under the soil and *the fruits* that it offers to the one who cultivates it.'<sup>34</sup> The future of the *Volksgemeinschaft* depended upon the creation of a new agrarian system throughout the Greater Reich.<sup>35</sup>

As soon as Germany attacked the Soviet Union, Himmler commissioned what has become known as the General Plan for the East from the office of the Reich Commissioner for the Strengthening of the German Race. Teams of German academics and agrarian experts, worked on the details. A mass migration of Germans into the east was expected, who would live in idyllic German towns and villages.<sup>36</sup> The plans spoke euphemistically of 'resettlement', 'evacuation' and 'Germanization' of the indigenous population.<sup>37</sup> Fourteen million of them would remain in the area, as slaves, the rest would be deported to labour camps further east.<sup>38</sup> At the end of December 1942 it was calculated that this would mean deporting 70 million people. It was expected that most would eventually die as a result of their labours. Once the regime acquired a taste for mass annihilation there was some discussion about whether it would be simpler just to execute them. Hitler likened the fate of the Slavs to that of America's 'Red Indians'.<sup>39</sup> The full extent of the agrarian radicalism of the Nazis is rarely fully appreciated because many of the crimes they planned to perpetrate remained on paper. There should be no doubt, however, that if the Germans had succeeded in defeating the Soviet Union they would

have conducted a far more extensive and terrible genocide than that which they were able to carry out under the limitations of occupation while they were still fighting the war.<sup>40</sup>

If the United States provided National Socialism with a model of expansion, the other prototype for the achievement of great power status was Great Britain's maritime empire, which Japan was keen to emulate.<sup>41</sup> A number of Japanese army officers were shocked by Germany's defeat in 1918. They realized that Germany had lost because it was dependent on outside sources for the resources required to wage total war. Japan was equally vulnerable in that it needed to import virtually all industrial raw materials, and was dependent on the United States for scrap metal and oil. In order to win in 1918, Britain, also an island nation, had drawn on the resources of its empire. It was clear to the group known as the 'total war officers' that Japan needed a similar maritime empire which would enable it to establish itself as a powerful world player, independent of the west and, in particular, the US.<sup>42</sup>

Modernization after the Meiji Restoration of 1868 meant that Japanese eating habits had changed and in the inter-war years meat consumption began to rise, virtually doubling between 1919 and 1937.<sup>43</sup> The annual consumption of 2 kilograms of beef or pork per person remained tiny but urban Japanese also began to eat more rice. By 1914 all Japanese were eating about a quarter more rice than they had in the 1890s. Then, from 1920, a marked gap began to open up between rural and urban diets. By 1929 city dwellers were eating at least 25 per cent more rice than those living in the countryside.<sup>44</sup> The rising demand was augmented by a 30 per cent increase in the population.

Japan looked to its colonies to make up the food deficit.<sup>45</sup> A 'Rice Production Development Plan' was implemented in Formosa and Korea which aimed to turn them into 'reserve rice baskets'.<sup>46</sup> By 1935 rice imports from the colonies equalled 20 per cent of the domestic crop.<sup>47</sup> If the urban population was pacified by rice imports, they only served to deepen the crisis in the countryside. Cheap colonial rice undercut the price of Japanese rice and depressed already penurious domestic agricultural wages.<sup>48</sup> The flood of colonial rice was followed by the Depression which significantly increased farm debt. In 1932 the government calculated that farm debt now amounted to more than double the value of farm production, or a third of the GNP.<sup>49</sup> The sense of crisis was compounded by crop failure in the north-east.<sup>50</sup> The resulting famine left half a million dead.<sup>51</sup>

For men like Major-General Ugaki Kazunari, leader of the 'total war officers', the agrarian crisis confirmed the need for greater independence from western capitalism.<sup>52</sup> A group of young officers in the Kwantung army agreed with him, and, on the night of 18 September 1931, they took matters into their own hands and planted a bomb on a Japanese-owned stretch of railway. They then claimed this was the work of bandits sponsored by the Chinese regional government and triggered the Japanese occupation of Manchuria which resulted in the creation in 1932 of the puppet state of Manchukuo.<sup>53</sup> The army represented Manchuria as a treasure house of resources such as gold, coal, livestock, soya beans, and cotton. With Manchuria as part of Japan, they argued, it could withstand political isolation and the economic threat and military might of other powerful nations.<sup>54</sup> An aggressive vision of a Japanese economic bloc began to develop which was later named the 'Greater East Asian Co-Prosperty Sphere'.<sup>55</sup>

International disapproval of Japan's behaviour in China led to Japan's withdrawal from the League of Nations in 1933. At home right-wing militarist groups gained increasing power and influence within the government, aided by a series of terrorist attacks, which intimidated the traditional ruling class. In June 1936 Prince Konoé Fumimaro became prime minister and appointed Hirota Koki as his foreign minister. Aggressive advocates of imperialism, they took Japan down an isolationist path which made war with the west ever more likely.<sup>56</sup>

Japan in the 1930s was supremely successful at making voluntary membership of an organization virtually compulsory. Through the host of 'voluntary' associations, ultra-nationalism was spread from above. The citizen was redefined as a member of a family which owed its allegiance to the Emperor. Although there were plenty of Japanese who did not share this view of themselves and the nation, to express dissent from the state line became increasingly difficult and dangerous.<sup>57</sup>

In July 1937 the Kwantung army took advantage of a skirmish between Japanese and Chinese troops in the small town of Wanping, to take Japan to war with China. In the same year, the Ministry of Agriculture adopted an agrarian emigration scheme which was supposed to solve Japan's agrarian crisis, under the characteristically long-winded title, 'Plan for the Settlement of One Million Households over Twenty Years'. A survey by the Ministry of Agriculture had worked out that in order to ensure that every farm in Japan was the optimum size, 31 per cent of the farming population would have to leave the land.<sup>58</sup> Accordingly, 1 million poor tenant

farmers would be persuaded to move to farms in Manchuria. Japanese planners ignored the presence of Chinese farmers on the land, describing Manchuria as a place of 'vast virgin plains, unhampered by tradition, ready to welcome armies of fresh immigrants'.<sup>59</sup>

Both Japan's plans for Manchuria and the German General Plan for the East imagined the creation of an idealized agrarian version of Japanese or German society.<sup>60</sup> By transporting potentially destabilizing groups which had lost out in the process of modernization to utopian communities, they sought to transform them into a positive by-product of modernity.<sup>61</sup> The Japanese planners did not go so far as the National Socialists in that they did not envisage wholesale extermination of the indigenous population. But, the Japanese method of obtaining land for the settlers was to coerce the indigenous farmers into 'selling' their land.<sup>62</sup> Tsukui Shin'ya, an official who organized forcible land purchases in 1938, described how, 'we trampled underfoot the wishes of farmers ... and, choking off their entreaties full of lamentations and kneeling, forced them to sell it. ... I was saddened that we would be leaving them to a future of calamity, and I felt that we had committed a crime by our actions.'<sup>63</sup> The Chinese twisted the name of the colonial office (*kaituoju*) and renamed it the 'office of murders' (*kaidaoju*).<sup>64</sup>

Reality did not, of course, live up to the ideal. Life in an isolated Manchurian village, detested by the indigenous inhabitants and subject to attack by 'bandits', was harsh.<sup>65</sup> Nor did the scheme do much to solve rural problems in Japan where villages were by now suffering from a lack, rather than an excess, of labour. It was the same in Poland where a series of actions between 1939 and 1942 started to put the General Plan for the East into practice. Hundreds of thousands of Polish farmers (many of them Jewish) were evicted from their farms. A few were sent to the Reich as forced labourers, others were sent to concentration camps and at least 18,000 Jews faced the horrors of the extermination camps at Majdanek and Auschwitz.<sup>66</sup> The empty farms were taken over by ethnic Germans but they were depressed by the primitive living conditions, harried by vengeful partisans and hampered by lack of machines, fertilizer and experience with the climate and soil conditions. Productivity on the seized land declined.<sup>67</sup> By 1944 many of the re-settled farmers began to flee as the Red Army advanced on Germany.<sup>68</sup> The Red Army also began to advance across the plains of Manchuria in August 1945, pushing the terror-stricken Japanese settlers before them. Of the 220,000 farmer settlers, around 80,000 died. About 11,000 of them met a violent end at the hands of

the avenging Chinese, some committed suicide, and about 67,000 starved to death. The remaining 140,000 traumatized survivors were eventually repatriated to Japan.<sup>69</sup>

Millions of eastern Jews and Soviet citizens died in order to free up food for their German occupiers. Over 7 million tons of Soviet grain and 17 million cattle, 20 million pigs, 27 million sheep and goats, and more than 100 million domestic fowl, disappeared into the stomachs of the German soldiers and administrators.<sup>70</sup> But the Germans never succeeded in feeding the entire Wehrmacht on eastern plunder which was the stated aim of the Hunger Plan, devised in 1940 by the agronomist and later Minister of Food, Herbert Backe. The plan was to divert Ukrainian grain from the Soviet cities. The siege of Leningrad, where 1 million died of starvation, the blockades of the Ukrainian cities of Kiev and Kharkov, which accounted for at least another 200,000 deaths from starvation, were not an incidental consequence of war but a deliberate part of this plan. Eastern supplies of grain, potatoes, meat and vegetable oils did help to stave off a civilian food crisis within Germany in the autumn of 1942. Goebbels announced that Germany was 'digesting' the occupied territories.<sup>71</sup> But in the light of the grandiose visions of Herbert Backe the east was a disappointment as a source of food. The backward nature of Soviet agriculture, the disruption caused by the continued fighting; the loss of agricultural labour, machines, animals and fertilizer; the contradictions of the German agricultural policy which demanded draconian collection quotas without price incentives; the growth of the black market and the Soviet peasants' ability to hide food stores from the German farm administrators, all combined to frustrate German hopes.

Japan's south-east Asian empire was equally disappointing as a source of nourishment. By mid-1942 the Japanese were the masters of this part of the world, which had produced 67 per cent of the rice entering pre-war world trade.<sup>72</sup> This should have been the answer to Japan's rice shortage problems. But due to chaotic mismanagement rather than a malicious, premeditated policy, the occupying power succeeded, in an astonishingly short space of time, in running down the entire region. In terms of managing the food supply, the administration's greatest mistake was to allow the rice industry to disintegrate.<sup>73</sup> A decisive blow to the rice trade was the massacre of between 6,000 and 50,000 Malayan Chinese between February and March 1942. The Japanese sinisterly referred to this as the *sook ching*, or purification of the area.<sup>74</sup> Despite the term, this was probably not the result of a genocidal policy of extermination but of an uncontrolled killing spree instigated by the *kempeitai* (secret police)

and the ordinary troops, who felt a deep-seated animosity towards the Chinese because of the brutality of the fighting they had experienced in China.<sup>75</sup>

The killing of the Chinese reinforced the collapse of the region's commercial networks which were severely strained by the loss of labour to Japanese war-related projects the breakdown of irrigation works and rice mills,<sup>7677</sup> and the disarray of the transport system which cut deficit areas off from areas of surplus rice production.<sup>78</sup> The Japanese tried to make a virtue out of the disintegration of the inter-regional food trade and introduced the catastrophic policy of 'regional autarky', banning the movement of commodities (including rice) across national and regional borders from mid-1943.<sup>79</sup> The result was famine in Upper Burma, cut off from rice supplies from the south. Lack of documentation has meant that these victims of Japanese food policy have largely been forgotten, and there do not appear to be any figures for how many died.<sup>80</sup> In Malaya the vigorously promoted 'Grow More Food Campaign' was a resounding failure as the peasants followed the pattern of disillusioned peasants the world over, and reduced their cultivation to subsistence levels.<sup>81</sup> The population of Singapore were reduced to living on tapioca (cassava) which provided calories but few vitamins. A Singaporean complained, 'We are full in tummy but we lack good substance.'<sup>82</sup> Tropical ulcers became common, malaria, beriberi and tuberculosis claimed thousands.<sup>83</sup> By 1946 the death rate in Malaya had risen to double the pre-war rate.<sup>84</sup>

The Tonkin region of northern Indo-China was gradually cut off from its usual supplementary rice supplies from Cochin-China in the south. The region's own rice harvest was reduced by the re-allocation of land from rice to jute and hemp, imposed by the Japanese army who needed more of these raw materials for making rope and sacks.<sup>85</sup> Indo-China was the main supply base for the Japanese southern army which meant that the French government's rice levies on the population were often unreasonable and this was worsened when the Japanese army began to go out into the villages and requisition rice directly.<sup>86</sup> In 1944 the Tonkin peasantry began to starve. Thousands abandoned their homes and wandered about looking for food. 'They roam in long endless groups ... disfigured by poverty, skinny, shaky, almost naked ... Looking at these human shadows who are uglier than the ugliest animals, seeing the shrunk corpses, with only a few straws covering them for both clothes and funeral cloth, at the side of the roads one could feel that human life was so shameful.'<sup>87</sup> Neither the French nor the Japanese authorities ever tried to gather accurate figures for the

number of deaths. It has been estimated that between 1 and 2 million Vietnamese died.<sup>88</sup> New research suggests that for many villages in north Vietnam, the famine rather than the Vietnam war, was the worst experience, in terms of the death toll, of the twentieth century.<sup>89</sup>

The most grotesque aspect of it all was that in March 1945 the Japanese were in possession of 500,000 tons of rice, in store in the south of the country. This was supposed to be shipped to hungry Japanese troops in the Pacific and civilians in Japan.<sup>90</sup> But the highly effective American blockade of Japanese shipping made it almost impossible to transport these supplies. By October 30,000 tons of the stores had rotted and were no longer fit for consumption.<sup>91</sup> When in November 1945 Chinese Nationalist troops were brought in to disarm the Japanese troops, they ransacked the area and transported as much food as possible over the border into China.<sup>92</sup>

Japanese soldiers, waiting for supplies, would have been extremely glad of this rice because the American blockade had a devastating impact on the imperial army's troops scattered across the Pacific islands. The military high command's answer was to intensify its demands for self-sufficiency. On Bougainville troops were told, 'The regiment will confidently complete its mission even if its supply line is cut in the rear by bravely establishing a self-supporting status in the present location.'<sup>93</sup> Japanese units began to lead strange semi-agrarian, semi-military existences.<sup>94</sup> On Guadalcanal the disruption of supply lines led to the deaths of 15,000 soldiers. It was while surveying the survivors that Imamura Hitoshi's faith was finally shaken in the Japanese army's mantra that soldiers could continue 'fighting without food, if they had strong moral[e]'<sup>95</sup> On New Guinea the soldiers resorted to cannibalism, eating captured enemy soldiers.<sup>96</sup>

Official figures for exactly how many Japanese soldiers died of starvation do not exist, but a Japanese scholar has produced estimates based on careful examination of the conditions in each battle theatre. Altogether it would appear that 60 per cent, or more than 1 million, of the total 1.74 million Japanese military deaths between 1941 and 1945 were caused by starvation and diseases associated with malnutrition.<sup>97</sup> By the end of the war, a call for 'self-sufficiency' from Imperial Headquarters had become a euphemism, indicating that a decision had been taken to leave the troops to die of starvation.<sup>98</sup>

If German and Japanese expectations of empire were disappointed, Britain's reliance on its imperial trading network proved to be the strength of its food policy. It was able to draw on

the resources of a wide variety of countries with more productive agricultural systems, from the United States to Argentina, the Commonwealth and the colonies.<sup>99</sup> The United States provided more dried egg than anyone really wanted, as well as condensed milk, Spam and sausage meat. Australia was transformed into a vast food-processing plant for the United States army. Australia provided US servicemen with tens of thousands of tons of canned meat and vegetables, biscuits, dehydrated vegetables, and processed milk. Indeed, it 'supplied more food per head of population to the Allied larder than did any other country'.<sup>100</sup> Argentina supplied Britain with 40 per cent of all its wartime meat requirements, mostly in the form of corned beef.<sup>101</sup> The Dominions restructured their agriculture, with Canada switching from arable to livestock farming. Canada became Britain's chief supplier of bacon.<sup>102</sup> New Zealand switched from making butter to producing cheese and then back to butter in response to the loss of Britain's vegetable oil supply in south-east Asia.<sup>103</sup> West African women and children cracked open millions of palm fruits in order to supply Britain with more than 400,000 tons of palm kernels which were used to make the 2-3 ounces of margarine which were part of the weekly ration. Although Britain reduced the weight of its food imports by half it still managed to import 56 per cent of the calories consumed by Britain's wartime population.

The British government went to great lengths (price controls, subsidies and rationing) to protect its citizens from wartime inflation. The same cannot be said for its colonial administrations which argued that rationing would be impossible to impose on food systems which were dispersed and beyond full colonial control. The result was that throughout the empire those who bought their food on a daily basis were faced by inexorable rises in the price of food. Every day they were able to buy a little less to eat. For some the price rises deprived them of their ability to buy even the most basic of subsistence diets. Uncontrolled inflation in effect robbed them of their entitlement to food.<sup>104</sup> In the Gambia villagers resorted to eating seed nuts.<sup>105</sup> The Scottish Livingstone hospital in Moleopolole, Bechuanaland reported in 1945 that the poorest people were living on roots and berries.<sup>106</sup> The number of the British empire's African subjects who died of wartime hunger is unknown. Starvation peaked with the arrival of drought in many areas in 1942 and there was famine in northern Nigeria and Tanganyika. Outside British Africa similar processes claimed the lives of 25,000 Cape Verde islanders and 300,000 Rwandans.<sup>107</sup> The worst famine was in Bengal. At least 1.5 million Bengalis died during 1943-44, when food scarcity was at its height. Altogether about 3 million may have died as a

result of the famine as epidemics of smallpox, cholera and a particularly nasty strain of malaria which killed its victims within six hours swept through Bengal, killing those weakened by malnutrition.<sup>108</sup> The failure of the colonial government in India to protect the sub-continent's inhabitants from the inflationary consequences of war were, in the words of Leo Amery, Secretary of State for India, 'the worst blow we have had to our name as an Empire in our lifetime'.<sup>109</sup>

India was an important British military base. It was a significant source of military manpower, and in 1943 preparations were under way to launch a campaign from Bengal to re-take Burma and Malaya.<sup>110</sup> And yet the government made lamentably little effort to maintain economic stability within the colony. In contrast, the Middle East Supply Centre, which officially exercised far less power, was able to hold in check uncontrolled hoarding and runaway inflation and, for the most part, to protect the indigenous population's entitlement to food. There was famine in the Aden Protectorate and in British Somaliland, and there were bread shortages, but a third of the Egyptian rice crop was used to enrich the diet of the Egyptian population and infant mortality declined in the region during the war, which is usually an indicator of satisfactory nutrition.<sup>111</sup> Admittedly, British motivation to maintain political stability in the Middle East was heightened by the fact that in the spring of 1942 only a few hundred kilometres of desert lay between the German army and Cairo, while the Japanese in Burma were at the end of their supply lines and several hundred kilometres of jungle separated them from Calcutta. However, it is hard to come to any other conclusion than that the Indian government presided over the development of a nationwide food shortage due to a combination of incompetence and complacency. Churchill was right in thinking the Indian government was sclerotic. It lacked the self-confidence 'to take a firm stand against agricultural or industrial interests' and failed to 'make Punjab provide cheap food or industrialists cheap goods'.<sup>112</sup> Instead it allowed businessmen and Punjabi landlords to make vast profits from the war while its efforts to protect the standard of living of workers in the cities and the countryside were ineffectual.<sup>113</sup> In Bengal the government lacked vision, and even when it was clear that a famine was in the offing, they failed to grasp that it was not simply a matter of food supply but that the poor had lost their purchasing power and could not afford what food was available on the markets.

Steps were taken to address the problem only once the military chiefs of staff warned the War Cabinet that 'unless the necessary steps are taken to rectify this situation, the efficient

prosecution of the war against Japan by forces based in India will be gravely jeopardised and may well prove impossible'.<sup>114</sup> The famine was causing trouble among the troops who were destined to re-take Burma. Bengali soldiers were receiving distressing letters from their families and many of the soldiers were so horrified by the awful sight of the famine victims that they were reported to be feeding the beggars with their own rations.<sup>115</sup> Viscount Wavell, appointed as Viceroy in September 1943, took decisive action to remedy the situation. But he struggled to persuade the British government to ship extra food to India to relieve the crisis.

At the beginning of 1943 Churchill had taken the decision to cut the amount of shipping travelling to the Indian Ocean by 60 per cent.<sup>116</sup> The United States was supplying less meat to Britain than it had promised and the Ministry of Food was lobbying hard for extra shipping to be sent to Argentina and Australia to replenish Britain's depleted meat reserves. The Anglo-American Torch landings and the subsequent fighting in North Africa were diverting thousands of tons of shipping away from civilian to military supply. Preparations for an assault on continental Europe meant that yet more ships had to be allocated to the build-up of American troops in Britain. Military requirements took priority; British civilians came next. Churchill's decision augmented imports to the British Isles by about 2 million tons.<sup>117</sup> But the success of the British government in sheltering its own civilians from the worst consequences of the disruption of world trade came at a cost elsewhere in the empire.

For the sugar-producing island of Mauritius Churchill's decision spelled disaster. The island was stuck with a crop which nobody wanted and no means of making the money to buy in the food imports on which its inhabitants were completely dependent. Burma, their main supplier of rice, had fallen to the Japanese. The islanders made a valiant attempt to grow manioc, maize, peanuts and sweet potatoes.<sup>118</sup> But by March 1943 the Mauritians' food stores were virtually exhausted. Shipping officials took pity on the islanders and diverted ships carrying 3,000 tons of wheat to the island. But throughout the war Mauritius never received a cargo of lentils and pulses, the main source of protein in the local diet. In contrast to the British who ended the war generally physically healthier, the Mauritians ended the war severely malnourished.<sup>119</sup>

Churchill was adamant that the restriction on Indian Ocean shipping should not be lifted in order to send food to India. He was not alone in his outlook. A committee which was appointed to look into the question of food supplies for India decided that the risk of civilian hunger in India was a lesser evil than jeopardizing British civilian food supplies or military

supplies for the Indian army. In November 1943 the committee even turned down a Canadian offer of 100,000 tons of wheat for India for lack of shipping.<sup>120</sup> It was not until Wavell was able to persuade Claude Auchinleck and Louis Mountbatten, respectively Commander-in-Chief of the Indian Army and Supreme Commander of the Allies in South-East Asia to take a cut in supplies that he was able to get the cabinet to agree to a shipment of 200,000 tons of grain for Indian civilians. Wavell pronounced the British cabinet 'short-sighted and callous'.<sup>121</sup>

When Wavell heard of the wealth of supplies airlifted in to Holland in March 1945 he remarked with bitterness, 'A very different attitude [exists] towards feeding a starving population when the starvation is in Europe.'<sup>122</sup> The plight of the Bengal famine victims placed a question mark over the sincerity of the Allies' claim that they were fighting to bring freedom from want - let alone justice, fairness and tolerance - to the world.<sup>123</sup> Although Britain did not set out with the explicit intention of exporting wartime hunger to the empire, this is, in fact, what happened.

The Soviet Union and Nationalist China were unable to export hunger outside their home territory. In both nations the misery of starvation was imposed instead on the peasantry. The weakest link in the Soviet wartime edifice was undoubtedly agriculture. The struggles of Soviet farmers make the problems faced by farmers in the other major combatant countries pale in comparison. With the nation's best agricultural land lost to the Germans until 1943, it was not so much a question of carefully balancing production to favour bread grains and maintain a minimum level of fats, fodder and meat, as a desperate struggle to cultivate as much of anything as possible. Throughout the war the Soviet Union struggled to feed its vast army, let alone all its citizens. The battle to produce food in the Soviet Union extracted every ounce of food from the peasantry while reducing both them and the land to a state of exhaustion.

The Soviet Union entered the war with its agricultural sector in a wretched state of disrepair in the aftermath of Stalin's programme of collectivization. Between 4 and 5 million kulaks had been murdered, and in the Ukraine, where resistance to collectivization had been particularly strong, as many as 7 million peasants had died of starvation. One survivor recalled how, in 1933, 'You could go into a village and see the corn standing high in the fields yet there would not be a soul in the entire village. They had planted the corn in the spring, and died during the summer, so that the corn grew untended.'<sup>124</sup> The surviving peasants were coerced into working for the new Party-owned farms, the *kolkhozy*, which, by consolidating peasant landholdings, were supposed to make farming more efficient. Collectivization was described by

a Cherkessian peasant as a 'slave system'.<sup>125</sup> The end result was to relocate hunger to the villages rather than the towns and cities.<sup>126</sup>

After the German attack in June 1941, the redirection of all energies towards maintaining the fighting dealt agriculture a fundamental blow.<sup>127</sup> After nineteen million able-bodied peasants had been called up the agricultural workforce which remained was 92 per cent female.<sup>128</sup> Collectivization served the government well in that it gave it a level of control over the countryside which the German occupiers across the front line would have envied. Collectivization enabled the government to extract virtually every crumb of food from the farms and to just about feed its army and industrial workers. If the peasants had been able to retreat into self-sufficiency the situation in the Soviet Union's cities would surely have become untenable. But the ruthless procurement quotas pushed the farms into a vicious cycle of over-extraction and falling productivity. The grain harvest of 95.6 million tons in 1940 fell to 26.7 million in 1942.<sup>129</sup>

If the peasantry had attempted to live solely on the food they received in payment from the collective farms they would certainly have starved to death. They survived on the potatoes which they grew in their private plots.<sup>130</sup> Indeed, the produce sold by the peasants at the collective farm markets were a vital source of nutrition for the rest of the civilian population. In many towns and cities these markets were the *only* source of fresh vegetables and dairy products.<sup>131</sup> Under the conditions of war, the communist system was forced to resort to the free market in order to ensure the survival of its population. In a further humiliation, lend-lease food shipments from America made a crucial difference from 1943. By 1942 'the sight of men and women falling dead of starvation on [the] streets [of Moscow] became too commonplace to attract crowds'.<sup>132</sup> Even on the assembly lines people collapsed and died of starvation.<sup>133</sup> James R. Miller, points out that the figure of 30 million war deaths does not even include 'war-related physical consequences such as those caused by chronic malnutrition'.<sup>134</sup> All but the most privileged Soviets were affected by hunger and malnutrition.

The Soviets were faced with the situation which the National Socialists in Germany most feared, fighting a brutal war on their own territory while the civilian population came close to starvation. The level of hunger in the Soviet Union made a mockery of the argument, so often propounded by the British and the German governments, that an adequate food supply was a cornerstone of success in the circumstances of total war. Despite desperate hunger and starvation the Soviet Union did the most of all the combatant nations in the European theatre to defeat

Germany. Even after the Allied invasion of France the great majority of the Wehrmacht's fighting capacity was concentrated on the eastern front, with 156 German divisions in the east, compared to 59 in France and 27 in Italy. The Red Army was responsible for 80 per cent of Germany's total battle casualties.<sup>135</sup> The human price the Soviets paid for victory was colossal. For every Briton or American that died as a result of the war, eighty-five Soviet citizens lost their lives.<sup>136</sup>

The country which was worst hit by starvation was China. Chiang Kaishek made the mistake of thinking that because 'China is an agricultural country and her agrarian foundation is resilient' it would withstand the strains of war better than the highly industrialized countries 'whose economies are more easily affected by war'.<sup>137</sup> He was wrong. In order to withstand the strains of the Second World War a nation required a large and well-equipped army which could be fed with a steady stream of food, medicines and arms. It therefore needed a strong industrial base in order to produce these supplies and a flexible capitalized agricultural sector which could adapt to wartime difficulties and still produce increased quantities of nutritious food for the army and the industrial population. An infrastructure and logistical apparatus which could deliver the goods to the front was essential and on the home front a nation required a robust civilian economy, an efficient administration and a reasonably united population. Moreover, the government needed the money to finance the war effort. Nationalist China had none of these things.<sup>138</sup>

During the first three years of war the Nationalists coped relatively well. They managed to suppress inflation and to boost agricultural productivity.<sup>139</sup> Between 1937 and 1940 food was quite plentiful.<sup>140</sup> Then, in 1940, the Japanese occupied Yichang, a strategic town which linked the food-producing province of Sichuan to the war zones. They also cut the railroad link between the southern province of Yunnan and northern Indo-China, which was used to import rice. Finally, they captured the major ports in the province of Fujian which supplied food to the southern province Guangdong, which did not grow enough food to feed its population. Free China's link to international grain imports was now severed. In the south more than 2 million people were immediately threatened with starvation.<sup>141</sup> Once the Burma road was closed in 1942 China's only source of Allied aid was by air over the 'hump' of the eastern Himalayas.<sup>142 143</sup>

In the same year the rice and wheat harvests were adversely affected by bad weather and a food panic ensued.<sup>144</sup> An inflationary spiral was set in motion which lasted until the

Nationalist's defeat by the Communists in 1949.<sup>145</sup> The purchasing power of the wages of white-collar workers in the vast civil bureaucracy fell to less than 15 per cent of their pre-war level.<sup>146</sup> The government introduced rationing but they did not have sufficient funds to pay for their food requirements. Instead they insisted that the peasantry pay their taxes in kind. The food levy was increased in 1943.<sup>147</sup> In this way the civil administration in the cities was fed, but the price was paid in the villages.

Nationalist China's entire war effort rested on the peasantry, who provided the two essentials: manpower and food.<sup>148</sup> With the capture of Yichang, the northern war zones were effectively cut off from the capital and food supplies.<sup>149</sup> The army was forced to live off the land in its own country. Apart from constant demands for 'food, animal feed, draft animals, wood, coal, clothing, transport equipment, and cooking utensils' they also conscripted more than a million farmers to build roads, dig anti-tank trenches and construct dykes along the banks of the Yellow River. The peasants were not paid and they were expected to provide their own food.<sup>150</sup> <sup>151</sup> Agricultural production, which was already under an immense strain due to the drafting of able-bodied men into the army, began to collapse.<sup>152</sup>

In Henan the peasants were assailed by a series of biblical afflictions in 1942. Drought was followed by frost and hail and then by a plague of locusts. The harvest fell to three-quarters of its normal level.<sup>153</sup> 'Peasants who were eating elm bark and dried leaves had to haul their last sack of seed grain to the tax collector's office.'<sup>154</sup> When the American journalist Theodore White visited the province in February 1943 he saw corpses by the sides of the roads. The desperate ate leaves, peanut husks, 'green slime' from pools of water and even each other. 'A doctor told us of a woman caught boiling her baby; she was not molested, because she insisted that the child had died before she started to cook it.'<sup>155</sup> White estimated in March 1943 that about 5 million people were dead or dying.<sup>156</sup>

One of the cruel aspects of the hunger and famine imposed on the peasantry in the name of feeding the army, was that the troops themselves were frequently weak and malnourished. In Hubei province in May 1943 troops evacuated an entire town and then set about plundering everything of value which the inhabitants had left behind. The elderly who had remained in their houses were murdered.<sup>157</sup> In the province of Guangdong army requisitioning created a famine in which 1.5 million peasants died. Meanwhile, the rice which the army officers had coerced from the starving peasants was smuggled across the front line and sold to the Japanese at great

personal profit.<sup>158</sup> The army felt the peasants' rage in the spring of 1944 when the Japanese launched their Ichigo offensive. As the Nationalist army began to withdraw the peasants began attacking the retreating Chinese troops with ancient guns and farm implements. As many as 50,000 Nationalist soldiers were disarmed by their own countrymen. About one-fifth of these were murdered, some were buried alive by the peasants.<sup>159</sup>

The Chinese paid the price of an Allied strategy which prioritized other areas of conflict. When the Ichigo offensive began, Nationalist China's best divisions were away in Burma fighting for the British in order to retake Rangoon. The death toll reveals which groups in Chinese society bore the burden of the struggle against the Japanese. Two million Nationalist soldiers died and at least 15 million civilians, 85 per cent of them peasants, and virtually all of them the victims of deprivation and starvation.<sup>160</sup>

The only combatant country to experience an agricultural boom was the United States. By providing American farmers with a market for their food, and with a healthy income, the war pulled agriculture out of the Depression. America had sufficient resources to spare to produce farm machinery and fertilizers, which accelerated the agricultural revolution that transformed farming into an industry.<sup>161</sup> The United States was able to meet with ease the food requirements of its 11.5 million servicemen, and rationing had the least impact on the structure and content of civilian meals than in any other country. American soldiers and civilians alike consumed significantly more and better food than their allies or their enemies. In addition, the US was able to supply the Soviet Union, China and Great Britain with large quantities of much-needed food. In 1945 the United States War Food Administration acknowledged the importance of food as a 'weapon of war. As such, it ranks with ships, airplanes, tanks and guns. Food, particularly American food, has been especially crucial in the present war, because it has been essential to the fighting efficiency of our allies as well as our own military forces, and has been required to maintain colossal industrial productivity here and in other allied countries. Modern war demands enormous food production.'<sup>162</sup>

The resources of the United States were sufficiently impressive for the government to rely on a laissez-faire approach to the mobilization of the economy for war. Even in spheres such as food production and supply, where it was necessary for the state to over ride the free market, the American government exhibited a cautious distrust of its own interventionist measures. The success of this strategy meant that at the end of the war, the government looked to the consumer

as the saviour of the American economy.<sup>163</sup> The ‘former head of the Office of Price Administration, Chester Bowles, told his former colleagues in advertising, the resulting mass markets, where “the janitor’s appetite for a sirloin steak is as profitable as the banker’s,” would democratize the benefits of prosperity’.<sup>164</sup> The notion had become widespread that Americans were fighting to defend the American way of life.<sup>165</sup> And one of the most powerful symbols of the American lifestyle was the abundance of food. Wherever they went during the Second World War, Americans had more food than anyone else. If plentiful food became central to the Americans’ view of themselves, it also entered the consciousness of those whose countries America used as a base, liberated or defeated. In the post-war world, the administration was to discover that the ability to command plentiful quantities of food continued to equate with power.

After the war a productivity revolution made plentiful cheap food for all a reality in the western developed world, with the consequence that we now worry about obesity. As many developing countries such as China, India and Brazil, catch up with the west the worldwide demand is growing for energy-intensive foods such as meat and milk products. Even poorer countries have become increasingly dependent on food imports. In West Africa urbanization has produced a large body of townspeople who have switched from eating traditional staples such as millet and cassava to eating rice, which has to be imported. In Indonesia small improvements in income have led to a growing demand for imported vegetable oils.<sup>166</sup> But the world’s agriculture cannot sustain a global population where everyone eats as much meat and dairy food as the average American.

In addition, the technological innovations of the green revolution appear to have run their course and many agricultural experts agree that there is little prospect of increasing yields as a result of new farming techniques.<sup>167</sup> Climate change is only likely to make matters worse. It is a dismal prospect, but as the worldwide demand for meat and livestock products, vegetable oil and grain grows, it seems likely that the share of food available for the world’s poor will decline further. The Food and Agriculture Association has reported a rise in the number of chronically hungry and undernourished people to an estimated 923 million (many of them concentrated in sub-Saharan Africa and south-east Asia).<sup>168</sup> Even in the west it seems likely that in the future food will become increasingly expensive and scarce. As the 2007-2008 food riots in countries such as Egypt, Haiti and Mexico demonstrate, food is again becoming a catalyst for political conflict.<sup>169</sup> These concerns are motivating Chinese and Indian land purchases in Africa.

Concerns about food shortages are clearly influencing political ideologies and national strategies today, just as they did in the 1930s.

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<sup>1</sup> John Ellis, *The World War II Databook. The Essential Facts and Figures for All the Combatants* (Aurum Press, London, 1993), pp. 253-4. Statistics for the Second World War are unreliable. The figure of 19.5 million military deaths is a lower estimate and it includes many soldiers who died of malnutrition, associated diseases and starvation while fighting. It does not include the many Chinese prisoners of the Japanese or Soviet prisoners in German hands who died of starvation while in captivity. The millions of civilians who died of starvation in Africa and Asia are frequently not included in civilian wartime casualty figures. If they are included then the figure of total deaths caused by the Second World War rises from about 50 to about 70 million.

<sup>2</sup> Hans J. Teuteberg, *Der Wandel der Nahrungsgewohnheiten unter dem Einfluß der Industrialisierung* (Göttingen, Vandenhoeck & Ruprecht, 1972), p. 65; Belinda J. Davis, *Home Fires Burning. Food, Politics, and Everyday Life in World War I Berlin* (The University of North Carolina Press, London, 2000), p. 69. Modern Europeans now eat about 77 kilograms of meat per capita per year.

<sup>3</sup> Ben Turner, *About Myself, 1863-1930* (Humphrey Toulmin, London, 1930), pp. 45-7; see also Meacham Standish, *A Life Apart. The English Working Class 1890-1914* (Thames & Hudson, London, 1977) p. 78.

<sup>4</sup> Sir Frederic Morton Eden, *The State of the Poor. A History of the Labouring Classes in England, with parochial reports* (Abridged and edited by A. G. L. Rogers, first pub. 1797, George Routledge & Sons, London, 1928), pp. 264-5; see also David Davies, *The Case of Labourers in Husbandry Stated and Considered with an appendix containing a collection of accounts shewing the earnings and expenses of labouring families in different parts of the Kingdom* (first published 1795, Augustus M. Kelley Publishers, Fairfield, New Jersey, 1977); Teuteberg, *Der Wandel der Nahrungsgewohnheiten*, pp. 66-7.

<sup>5</sup> Frank Trentmann, 'Coping with shortage: the problem of food security and global visions of coordination, c.1890s-1950', in Frank Trentmann and Flemming Just (eds), *Food and Conflict in Europe in the Age of the Two World Wars* (Palgrave Macmillan, Basingstoke, 2006), p.15.

<sup>6</sup> Adam Tooze, *The Wages of Destruction. The Making and Breaking of the Nazi Economy* (Allen Lane, London, 2006), p. 191; John Belcham, , *Industrialization and the Working Class: the English Experience, 1750-1900* (Scolar Press, Aldershot, 1990), pp. 207-9.

<sup>7</sup> Belcham, *Industrialization and the Working Class*, p. 208; Avner Offer, *The First World War. An Agrarian Interpretation* (Clarendon Press, Oxford, 1989), pp. 100-01.

<sup>8</sup> Trentmann, 'Coping with shortage', pp. 17-18.

<sup>9</sup> Offer, *The First World War*, pp. 85-6.

<sup>10</sup> Trentmann, 'Coping with shortage', pp. 19-20.

<sup>11</sup> Offer, *The First World War*, p. 21.

<sup>12</sup> *Ibid.*, pp. 86, 230, 324, 331.

<sup>13</sup> Trentmann, 'Coping with shortage', p. 19.

<sup>14</sup> Offer *The First World War*, p. 331.

<sup>15</sup> *Ibid.*, p. 321.

<sup>16</sup> *Ibid.*, pp. 333-4; K. Zilliacus, 'Economic and social causes of the war', in Dwight E. Lee (ed.), *The Outbreak of the First World War. Causes and Responsibilities* (D. C. Heath and Co. Lexington, MA, 1975), pp. 28-9; Fritz Fischer, *World Power or Decline. The Controversy over Germany's Aims in the First World War* (W. W. Norton & Co., New York, 1974), pp. 17-19; Ian Kershaw, *Hitler. 1889-1936* (Allen Lane, London, 1998), p. 79.

<sup>17</sup> Trentmann, 'Coping with shortage', p. 26; Amy L. S. Staples, *The Birth of Development. How the World Bank, Food and Agriculture Organization, and World Health Organization Changed the World, 1945-1965* (Kent State University Press, Kent, OH, 2006), p. 72.

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<sup>19</sup> *Ibid.*, p. 76; Joachim Lehmann, , 'Agrarpolitik und Landwirtschaft in Deutschland 1939 bis 1945', in Bernd Martin and Alan S. Milward (eds), *Agriculture and Food Supply in the Second World War. Landwirtschaft und Versorgung im Zweiten Weltkrieg* (Scripta Mercaturae Verlag, Ostfildern, 1985), p. 29.

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- <sup>22</sup> Anna Bramwell, *Blood and Soil. Richard Walther Darré and Hitler's 'Green Party'* (Kensal Press, Abbotsbrook, Buckinghamshire, 1985), p. 108.
- <sup>23</sup> Gustavo Corni, *Hitler and the Peasants. Agrarian Policy of the Third Reich, 1930-1939* (Berg, Oxford, 1990), pp. xv-xvi; John E. Farquharson, 'The agrarian policy of National Socialist Germany', in Robert G. Moeller, *Peasants and Lords in Modern Germany. Recent Studies in Agricultural History* (Allen & Unwin, London, 1986), p. 233.
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<sup>43</sup> B. F. Johnston with Mosaburo Hosoda and Yoshio Kusumi, *Japanese Food Management in World War II* (Stanford University Press, Stanford, CA, 1953), pp. 84-5.

<sup>44</sup> *Ibid.*, pp. 75-6.

<sup>45</sup> *Ibid.*, p. 76.

<sup>46</sup> Michael Lewis, *Rioters and Citizens. Mass Protest in Imperial Japan*, (University of California Press, Berkeley, 1990), p. 245.

<sup>47</sup> *Ibid.*, p. 246.

<sup>48</sup> Martin, *Japan and Germany*, pp. 86-7; Carter J. Eckert, 'Total war, industrialization, and social change in late colonial Korea', in Peter Duus, Ramon H. Myers and Mark R. Peattie (eds), *The Japanese Wartime Empire, 1931-1945* (Princeton University Press, Princeton, NJ, 1996), p. 7; Ramon H. Myers and Yamada Saburo, 'Agricultural development in the Empire', in Ramon H. Myers and Mark R. Peattie, *The Japanese Colonial Empire, 1895-1945* (Princeton University Press, Princeton, NJ, 1984), p. 437; Ronald H. Dore and Tsutomu Ouchi, 'Rural origins of Japanese fascism', in James William Morley (ed.), *Dilemmas of G*, p. 189.

<sup>49</sup> Kerry Smith, *A Time of Crisis: Japan, the Great Depression and Rural Revitalization* (Harvard University Press, Cambridge, MA, 2001), pp. 59, 64.

<sup>50</sup> Sandra Wilson, *The Manchurian Crisis and Japanese Society, 1931-33* (Routledge, London, 2002), p. 64.

<sup>51</sup> Hane, Mikiso, *Peasants, Rebels and Outcasts. The Underside of Modern Japan* (Pantheon Books, New York, 1982), pp. 134-5; Young, *Japan's Total Empire*, p. 324.

<sup>52</sup> Yamamuro Shin'ichi, *Manchuria under Japanese Dominion* (University of Pennsylvania Press, Philadelphia, 2006), pp. 18-20; Michael A. Barnhart, *Japan Prepares for Total War. The Search for Economic Security, 1919-1941* (Cornell University Press, London, 1987), p. 27.

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<sup>59</sup> Wilson, *The Manchurian Crisis*, p. 58.

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<sup>61</sup> Young, *Japan's Total Empire*, p. 309.

<sup>62</sup> *Ibid.*, pp. 401-2.

<sup>63</sup> Shin'ichi, *Manchuria*, p. 203.

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