

# Food and Conflict in Europe in the Age of the Two World Wars

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## 7

### Brown Bread for Victory: German and British Wholemeal Politics in the Inter-War Period

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Bread is more than a foodstuff: it is a symbol of life. Its cultural status not only includes the Christian promise of brotherhood and equality of mankind, but bread consumption also marks crucial differences between individuals, social groups, and nations. This chapter will analyse a short but important episode in the history of consumption. During the two world wars bread was still the most important foodstuff in the European diet. It was a decisive resource in conflict and for victory. While the First World War was a testing field both for strategists and nutritionists, intensified research and cultural anxieties moved bread to the top of the social and political agenda of the Second World War.<sup>1</sup> The type of bread and the efficiency of bread policy were understood to be central for individual health, social efficiency, and national strength. This chapter will concentrate on wholemeal bread policy and compare the efforts of the main European powers, Germany and Great Britain, in the inter-war period.

#### **Brown bread between alternative movement and nutritional science, 1900–1940**

Today, wholemeal bread is often seen as a traditional food, typical of a coarse but nourishing peasant diet. This view may be right for some types of brown bread, but it is wrong for wholemeal bread. The term 'wholemeal' or 'Vollkorn' cannot be found in the German language before the turn of the nineteenth to the twentieth centuries. The first use can be dated at around 1910.<sup>2</sup> The syllable 'whole' resulted not only from the basic idea of using the whole grain for bread. It was an expression, too, recording the loss of traditional dishes during industrialisation and commercial bread production. While a growing number ate white bread,



traditionally a symbol of affluence and civilisation, a vocal minority criticised this development as the decline of mankind.

However, such complaints were also linked to innovative work in food production. Since the 1890s a growing number of bread reformers introduced new wholemeal breads to set a new standard for an improved diet. Named by their inventors, Felke-, Steinmetz-, Simons-, Schlüter-, Finkler- and Klopfer-Bread were introduced in Germany before the First World War.<sup>3</sup> Most of them were rye breads, while Graham-Bread became the leading alternative wheat bread. The re-establishment of a 'traditional' food – an imagined construct – was a direct reaction to the increase in modern milling. Technical improvements allowed an easy and efficient separation of bran and germ and made white flour popularly accessible. This trend to cheap white bread was accompanied by the use of bleaching agents.<sup>4</sup>

Bread reformers combined technical innovation with cultural traditionalism. They rejected the commercialisation of a staple food, because this was too important for public health and morale. Commercialisation was combined with anti-Semitism and a general fear of racial decline. New wholemeal bread was understood as an important factor in the rebirth of a strong and powerful nation.<sup>5</sup> These ideas were biological and mechanical: bread was understood as fuel for the human machine, which slowly but steadily was weakened by the consumption of white bread. Increasing prevalence of caries and decreasing physical fitness ratings were read as harbingers of physical decadence resulting from a modern diet.<sup>6</sup>

Bread reform was initially a project of social reformers, not of scientists. Most of the reformers were practical men, some had academic training, but none of them were nutritionists. Their work challenged the scientific establishment, which propagated a different understanding of changing food patterns. In the early 1880s, physiological work by Max Rubner, who later became the leading nutritionist in Germany, set the standards for the next decades. He proved that bran could be partly absorbed – an important argument for later reformers. But Rubner's work revealed, too, that human absorption was lower than that of animals, especially of pigs. As a consequence it made more sense to eat tasteful and digestible white bread and meat from animals fed with bran.<sup>7</sup> From a physiological point of view, bread reform was unnecessary. Modern milling technology was not an expression of decline, but of progress and a more efficient division of labour. The growing consumption of fine bread, especially fine wheat bread, seemed to back the argument of the scientific establishment.

During the First World War German bread changed dramatically. In autumn 1914 potato bread was introduced as a first 'war bread'. The extraction rate of grain rose from 65 per cent in 1914 to 75 per cent in 1915, 84 per cent in 1916, and to 94 per cent in 1917. The standard bread was not the wholemeal bread reformers dreamt of, but it was certainly a brown bread with a high amount of bran.<sup>8</sup> The First World War became a grand test in the bread question. The impact of the war on public health was disastrous. But it was still an open question whether the main cause was the severe malnutrition of the German population or the poor quality of bread. Some doctors even spoke of the war diet having been 'a healthy stroke'.<sup>9</sup> For the vast majority of consumers, however, the bread question seemed to be answered in favour of pre-war white bread.

The physiological debate was more differentiated. While reformers stressed the higher nutritional value of wholemeal bread, nutritionists were not sure how substances like bran or calcium were absorbed. Without research on vitamins and minerals, it was not possible to decide which bread had a higher nutritional value.<sup>10</sup> Many patients with stomach and intestinal problems had severe difficulties digesting war and wholemeal bread.<sup>11</sup> Doctors tried to accustom sick persons to regular war bread.<sup>12</sup> This alteration in diet, combined with the problems of purified flour, led to widespread problems with digestion and bowel movement. Flatulence was common. All in all, the consumption of war bread led to an aversion to dark bread, although there was no real alternative until the end of grain rationing in 1920. Bread reformers nonetheless favoured the wide range of wholemeal bread, which of course had a higher quality and purity than war bread. They argued that the war had reinforced the continuous worsening of bread quality and baking technology.

The discussion intensified in the early 1920s as the methodology of metabolism experiments improved and the essential function of vitamins was explored. Critics argued that traditional physiology did not account for the development of the digestive system and was concentrating on short-term investigation. The role of the kidney and of the interplay between different nutrients were not recognised.<sup>13</sup> In 1924, the German Ministry of Nutrition and Agriculture financed improved physiological and technological research. The results backed the well-known finding that the digestion of nutrients, especially of protein, declined, once the extraction rate was higher than 82 per cent. The content of Vitamin A and B also was too low to cover the necessary daily intake of an average person.<sup>14</sup> As a result, leading nutritionists



again began to advocate a 'rational division of labour' between man and animal: fine bread and meat for people, bran for animals. Wholemeal bread did not make sense.<sup>15</sup>

Bread reformers continued their campaign in the 1920s, and their position was now strengthened by research on vitamins. Recognition of these nutrients as the basic elements of health and well-being became accepted in the late 1920s. It was accompanied by intensive biochemical research on metabolism, chemical structure, and synthesis.<sup>16</sup> Traditional physiology was now replaced by the new science of nutrition, interested in the health implications of vitamins and minerals. As a consequence, the vitamin and mineral content of bread became the central indicator of its nutritional value. Essential ideas of bread reformers were slowly but steadily adopted by established nutritionists.<sup>17</sup>

Three factors accelerated this process of adoption. First, vitamin debate reinforced the critique of food processing and food quality. Economic depression and the ideas of the declining biological 'quality' of human beings and their environment went hand in hand. The 'domestication' of man seemed to favour civilisation. Visions of free trade and modern white-collar culture, associated with an American-style diet of sandwiches and white bread were discredited. It became popular to call for a more traditional diet and a change of lifestyle. Better bread was an important element in rethinking modernity. Second, caries became a symbol of declining food quality and deteriorating lifestyle. Dentists favoured hard brown bread as an everyday health cure. In 1933, the *Forschungsgemeinschaft für Roggenbrotforschung* (Rye Bread Research Council) was established to explore the relationship between bread and teeth. Bread reformers were invited to present their visions in new scientific journals.<sup>18</sup> Third, healthy nutrition became a topic of international nutritional science. Although Germany left the League of Nations in 1933, the league's recommendation of fresh vegetables, fruits, and brown bread lent further credibility to the position of bread reformers.<sup>19</sup>

In 1936–37 the scientific debate on brown versus white bread came to an end in Germany. As one author put it:

The development of nutritional physiology during the last one and a half decades, which was characterised by insights into vitamins, protein valency, minerals, and the relevance of nutritional ingredients, which led to the enormous progress of prophylactic and therapeutic medicine, has ended the old debate on grain nutrition....

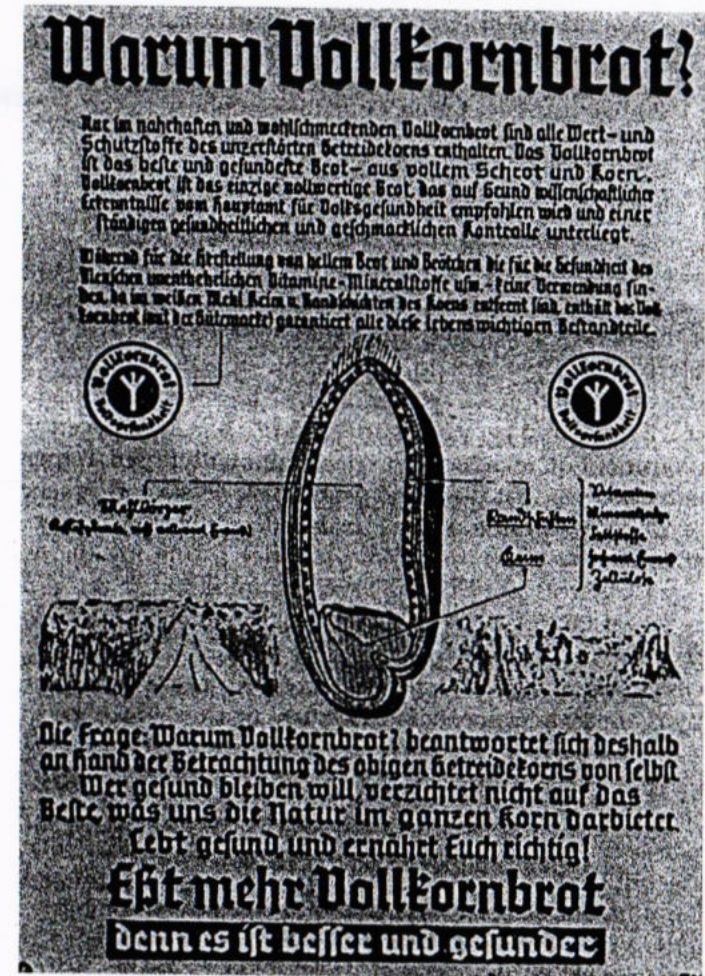


Plate 7.1 Vitamin and mineral content as arguments for wholemeal bread, 1941  
Source: 'Ein Werbezug wurde erfolgreich beendet', *Zahnärztliche Mitteilungen*, vol. 32 (1941), p. 219.

Strangely the end of the earlier dispute and the complete victory of the principles of integral grain utilisation, happened relatively quietly.<sup>20</sup>

Nutritionists and reformers, however, did not shape the direction of policy.<sup>21</sup> This was left to the German state and the Nazis who took command of a wholemeal bread programme in 1936.



### Creating a traditional 'German' foodstuff: agricultural economics and national-socialist bread policy, 1927–1939

In the 1920s German bread policy initially responded to the decreasing consumption of rye bread and agricultural pressures. In 1850 the share of rye bread was twice as high as that of wheat. During the second half of the nineteenth century the share of wheat increased significantly. Rye consumption was stagnating, while wheat consumption increased. Since the turn of the century, rye and wheat consumption were roughly equal, a relation that would not change fundamentally in the first half of the twentieth century. Total grain consumption had increased from 80 kg a head per year in the mid-nineteenth century to 140 kg in 1900. Consumption of rye and wheat, however, decreased thereafter, to 110 kg a head per year by the mid-1920s.<sup>22</sup> After hyperinflation wheat consumption increased, rye consumption decreased. Farmers and economists warned that this trend would have severe consequences for German finances, because rye was produced mainly in Germany, while two-thirds of wheat was imported. The price cut during the international agrarian crisis of 1925 and 1926 did not diminish this problem, because wheat imports were still rising and production of rye was not profitable for Eastern German producers.

The result was an agricultural policy in favour of rye and rye bread.<sup>23</sup> From 1928 on, advertisements told Germans to eat 'German' bread: 'The patriot eats rye bread.'<sup>24</sup> The success of such propaganda, however, was limited. The agrarian lobby was not able to standardise rye, to increase its quality or to establish bread brands. The wheat lobby, which favoured free trade, an international division of labour and easily digestible foodstuffs, fought hard and defended people's choice and the physiological superiority of wheat bread. Wheat-free days were not established and the increase in wheat tariffs was lower and less rigorous than the rye lobby demanded.

Economic and political priorities were transformed by the presidential cabinets and the Nazi government.<sup>25</sup> During the early 1930s bread policy in favour of rye and brown bread was one instrument in a programme of strengthening the balance of trade and national independence. A developed consumer society however, posed an important counterweight to an agriculturalist policy. Even the Nazi government was unable to ignore dominant consumption trends.<sup>26</sup> Between 1933 and 1936 the Nazis tried to concentrate on the supply side, seeking to reduce rye production and increase German wheat production with the help of new winter-resistant varieties. But such changes were slow.

The preference for German food could not be guaranteed from the supply side alone. Consumers had to support the main aim of German policy, which was not autarchy, but 'freedom of nutrition'.<sup>27</sup> This term contained an aggressive and imperial component, which became more explicit after 1936.

A consumer-oriented policy needed to advertise the benefits from a change in consumer preferences. German bread policy came to focus on people's health. 'Health' acquired a new racial meaning in Nazi ideology. In the Weimar Republic health care had been directed towards supporting the sick and disabled. Nazi policy, by contrast, saw its ideal in leading people to health. Care was replaced by prophylaxis. Individual health was linked to the health of the *Volk*, a 'way of intensifying human work efficiency for the benefit of the whole community'.<sup>28</sup> Not individual dignity but functional materialism was at the centre of health policy: 'human beings only have a value as far as they command a productive output.'<sup>29</sup> Food was the source of human labour and so became the focus of health policy. In this context doctors had a specific function to play, comparable to a gardener: they had to separate healthy from sick people, strong from weak individuals, and remove the weed. Food was akin to fertiliser in a productive garden.

Wholemeal bread was not a foodstuff like any other: 'It is necessary to make diet healthier, to make people more efficient. It is necessary to change the diet, to achieve German freedom of nutrition.'<sup>30</sup> Wholemeal bread was the characteristic food for German people, the right fuel for an efficient and healthy Aryan race. Doctors had to guide people's diet in the right direction, while consumers had the duty of guarding and exercising their health: 'an organ, which is not used sufficiently will atrophy. If our diet becomes effeminate, our jaw, gums and teeth will degenerate. . . . The consumption of the natural products of this "backbone of nutrition" [wholemeal bread] will reduce disease and degeneration.' For advocates like Wegner, this meant that coarser wholemeal bread usefully challenged the human body. It would strengthen the racial community. Degenerate bodies would die sooner and no longer impose 'costs' on the nation.<sup>31</sup>

Improving individual health meant improving the nation. White bread was connected with urbanisation, commercialisation, and democracy. Instead, wholemeal bread would help roll back these developments and strengthen German people in their fight against cultural and racial decline. Although leading German scientists emphasised that their recommendation of wholemeal bread was the opinion of the 'whole scientific world, especially in Anglo-Saxonian countries', and that



'mankind must return to wholemeal bread',<sup>32</sup> their work had specific imperial and racist purposes.

Germany started the Second World War well prepared. This did not only mean the technical planning of a rationing system, introduced three days before the attack on Poland. Improvements in storage and production were combined with physiological, social, and psychological expertise, which also took consumers' views into consideration. In 1937, for instance, physiologists, doctors, and economists formed a committee for fair social consumer regulation (*Ausschuss für sozial-gerechte Verbrauchsregelung*) which fixed physiological norms for different consumer groups. Food resources were concentrated on children, mothers, and working people.<sup>33</sup> In contrast to the First World War, food was not primarily seen as a carrier of calories. Amount and quality of protein, fat, and vitamins were central points for the rationing norms. Every group should receive enough food of controlled quality. The focus on labour efficiency and on the biological future of the German race reflected national-socialist ideology as did the creation of insufficient norms for Jews and foreign workers. The war nutrition plan of 1 April 1939 anticipated a severe decline in food supplies in the second and third year of war, which had to be compensated for by the ruthless exploitation of conquered nations.<sup>34</sup> Grain products were the basic food-stuffs in Germany during the Second World War. Cereals and pulses amounted to 36.6 per cent of caloric consumption before the war and 39.2 per cent (1942–43) and 43.9 per cent (1943–44) during the war.<sup>35</sup> It is therefore not surprising that war preparations concerned this decisive sector of consumption.

#### **Institutionalising health and ideology: the work of the German Reichsvollkornbrotausschuß, 1939–1944**

The institutionalisation of German bread policy began in 1937. The first phase was characterised by testing in regional markets and developing an effective agenda for the whole of Germany. The second phase started with the founding of the National Committee for wholemeal bread (*Reichsvollkornbrotausschuß*) in the summer of 1939.

Regional efforts started in Swabia in 1937.<sup>36</sup> The initiative came from the NS-health care (*NS-Volkswohlfahrt*), which wanted to improve the diet of infants and mothers. Wholemeal bread should improve the health and racial quality of the next generation. Swabia was a white bread region and the first task was to propagate the new brown bread with the help of nursery-school teachers, nurses, and social workers.

Their propaganda may have been convincing, but consumers could not buy wholemeal bread in most places. Bakers often did not offer it, quality was generally low, and wholemeal flour was not produced by local millers. Two implications were drawn. First, bread policy had to start at the production level. Without sufficient supply and high quality, a change in diet was impossible. Second, individual choice had to be framed by institutional reforms. School meals were recognised as a vital transmission belt for propaganda. This meant a clean break with a German tradition based on family meals.

A second wholemeal bread campaign started in Saxony in 1938 and was coordinated by the regional department of public health.<sup>37</sup> Bakers, government, schools, and doctors established a network for the sale and propaganda of wholemeal bread. The training of millers and bakers was successful and clarified that standardisation and branding were necessary to promote 'health bread', which was, after all, more expensive than ordinary bread. Quality needed to be guaranteed and health effects demonstrated. In 1939 a first bread brand was created and used for advertisement.

At the same time the general propaganda for wholemeal bread led to rising levels of consumption. Regional eating patterns still differed greatly, but between 1937 and 1939 consumption rose by 50 per cent, especially in southern and western Germany. In 1939 wholemeal bread had a share of 13 per cent of total bread consumption.<sup>38</sup> For nutritionists this was an important step in the right direction, but only a start for a more fundamental change of German diet. During the next few years wholemeal bread's share needed to increase to half of the total bread consumption. To achieve this target, institutionalisation and organisation were vital.

The experience in Saxony led to the decision to establish a national *Vollkornbrotausschuß* in summer 1939. The different interest groups had failed to work together without a coordinating agency. The establishment of a national committee was to give the elite of the 'thousand-year empire' the power to change dietary habits in a long-term, sustainable way. The possibility of shaping consumption with the help of the rationing system was discarded. Success had to be based on conviction: 'We have to go the arduous but more successful way and gain the voluntary support of our people.'<sup>39</sup>

The *Vollkornbrotausschuß* was located in Berlin and led by the *Hauptamt für Volksgesundheit der NSDAP*. By the end of 1939, 96 people were working for better German bread.<sup>40</sup> Although it was generally accepted that scientifically documented high quality was the road to



success, the precise type of bread to be promoted remained subject to debate. Each German region had a different type of traditional black bread and bread reformers had offered a wide range of products. At the end of 1939 wholemeal bread was defined as bread from the whole grain, which meant an extraction rate of 100 per cent. Flour should be clean and the husk separated. Supplements, bleaching agents or artificial colours were forbidden. Bread should be produced from fresh flour and stored several days before selling or eating. This definition was put into the statutory instructions for millers in December 1939. 'Wholemeal bread' now became a recognised brand, which replaced the traditional terms of brown or wholemeal bread. Every producer or baker, who wanted to sell 'wholemeal bread' had to send a sample of their bread to approved laboratories. If quality was acceptable, they received advertisement material and a quality brand label, which had to be placed on every 'wholemeal bread'. Producers had to pay for this label, but, in exchange, were allowed to ask higher prices than for ordinary bread.<sup>41</sup>

At the same time the *Reichsvollkornbrotausschuß* started to professionalise producers and bakers. Training started in November 1939 at a regional level. Significantly, it was flour that was the subject of quality control and standardisation, not the resulting kind of bread. Different traditions of baking led to a wide range of different wholemeal breads. Standardisation of flour did not result in a uniform wholemeal bread. Regional committees for wholemeal bread were established in the early 1940s and became more and more important during the war.

At the end of 1939, 2420 (1.25 per cent) of all German bakers produced certified wholemeal bread. This number grew to 12,959 at the end of 1940, 22,903 in October 1941, and 27,454 in 1943.<sup>42</sup> It amounted to 22.8 per cent of all producers, including all bread factories and the majority of efficient urban bakeries. Training networks assisted decentralised and flexible production under wartime conditions. Higher and fixed prices made wholemeal bread attractive for calculating producers.

Another task of the *Reichsvollkornbrotausschuß* was to initiate nutritional research. German scientists were especially interested in the chemical composition of grain and grain products and in metabolism studies. They tried to optimise the cultivation of high quality grain, storage and supply, processing, and the mixture of different qualities.<sup>43</sup> Further research was done to improve the method of home cooking and baking. New recipes found their way into cook books and housekeeping guides or were presented directly by the *NS-Frauenschaft*.<sup>44</sup> The digestion of sick persons and infants was examined. Better knowledge of human physiology was to be the foundation for detailed advice to doctors and

politicians.<sup>45</sup> This product-oriented work was combined with modern consumer-oriented marketing. Standardised quality enabled a new brand for the new product. In December 1939 a national quality brand label (*Reichsgesundheitsgütemarke*) was designed, which connected the Germanic rune or *Lebensrune* with the term 'people's health', around the slogan 'Wholemeal bread is healthier and more nutritious and filling!' From spring 1940 on this brand was propagated everywhere in Germany – supported by the propaganda ministry, which was a member of the *Reichsvollkornbrotausschuß*.



Plate 7.2 'Wholemeal bread is healthier and more nutritious and filling!', 1940  
Source: *Zugkräftige Kinowerbung für Vollkornbrot*, Leipziger Fachzeitung für Bäcker und Konditoren, vol. 52 (1940), p. 187.

Placards and bills were posted, and standardised slides advertised wholemeal bread at cinemas. Newspaper and magazine articles informed people of the advantages of changing their diet. Brochures were published and distributed by NS-organisations. Between 1940 and 1941, for example, 300,000 copies of 'Kampf ums Brot' (Battle for Bread) were sold. Films like 'Die Sache mit der Uhr', 'Drei Silben sollst Du mir nur sagen' or 'Das Geheimnis des Erfolges' became part of the cinema programme.<sup>46</sup>



There were advertisements on German buses and trams. An advertisement week was established once a year during harvest festival. Shop windows were decorated and bread became an important element of harvest parades. The mobilisation of Germans for a strong and healthy nation became a ubiquitous image. In 1941 several exhibitions started. Commercial advertisement was further improved by the foundation of a National Wholemeal Advertisement cooperative. The bread card itself suggested that 'Wholemeal bread is better and healthier!'



Plate 7.3 Slide for cinema advertisement, 1940: 'Healthy Teeth, Strong Bones, Good Development'

Source: 'Zugkräftige Kinowerbung für Vollkornbrot', *Leipziger Fachzeitung für Bäcker und Konditoren*, vol. 52 (1940), p. 187.

Marketing and propaganda were also supported by more direct forms of communication. Different groups were assigned different tasks. Doctors, for example, were asked to propagate better bread to every patient face to face. While taking their case history, doctors were to ask patients, whether they were eating wholemeal bread – and to give reasons for switching to it. The wide range of diseases combined with unhealthy eating made it possible to exhort patients to consume 'health' bread. Doctors were advised to follow a step-by-step strategy. People should not change their eating patterns from one day to another, but

start with one or two slices a day and increase this amount gradually. Direct communication was always individualised. Health strategists were convinced that a small impetus was enough to start people thinking and acting to promote greater individual and national strength. To do so, German doctors themselves needed to prefer wholemeal bread. *Volksge-meinschaft* meant that every single German should do his or her duty, acting as a model for the whole community.

Wholemeal bread policy therefore was a distinctive kind of health policy. It was an integral part of Nazi-ideology and a vital source for building and strengthening the Aryan race.



Plate 7.4 Strong Pupils for a Strong Germany, 1941

Source: *Vollkornbrotfibel*, ed. Reichsvollkornbrotausschuß (Planegg, 1941), p. 1.



Wholemeal bread became a topic of children's education. Specialised brochures, like the National Wholemeal bread primer, established the ideal of strong, healthy, and competitive pupils, who were superior to weak and silly consumers of white bread. Hard bread was a symbol of a patriarchal world, where fitness was a vital element in a race war.<sup>47</sup> At school the bread question became part of natural history. Food was presented as fuel for healthy and efficient people, a foundation



## Neuzeitliche Ernährung

des Säuglings erfordert nach der Stillzeit eine Beikost zur Milch, die nicht nur nahrhaft ist, sondern auch lebenswichtige, für die richtige Entwicklung des Kindes unerlässliche Funktionstoffe enthält. PAULY'S NÄHRSPESIE entspricht diesen Anforderungen in idealer Weise. In ihr sind die Stärkebestandteile des Mehlkörpers wie auch die im Keimling und den Randschichten enthaltenen Vitamine des B-Komplexes und Mineralstoffe harmonisch vereint. Sie ist kraftvoll und leicht verdaulich. Von den frühkindlichen Verdauungsorganen wird sie bereitwillig aufgenommen und bestmöglich ausgenutzt. Darum die neuzeitliche, unter klinischer Kontrolle stehende PAULY'S NÄHRSPESIE aus dem vollen Korn.  
MILIPA-PAULY, Friedrichsdorf/Taunus

of national and racist strength.<sup>48</sup> But the habituation to wholemeal bread started even earlier. Wholemeal products were introduced as part of infant feeding. In 1942 experiments with infants began to explore the earliest age to start with wholemeal mash. Wholemeal bread was an element of hardening the body at the earliest possible stage.

Eating outside also became important for bread policy. In April 1940 wholemeal bread became compulsory for the *Reichsarbeitsdienst*. The *Reichsvollkornbrotausschuß* concentrated its work on canteens, school meals, and restaurants. The longer the war, the greater the importance of wholemeal products.<sup>49</sup> Wholemeal products became a symbol for a nation that took care of its people.

Wholemeal products, too, were introduced in hospitals. During the First World War stomach and digestion trouble was a reason for receiving white, or at least better, bread. Now, wholemeal bread was this better bread – and doctors prescribed it ruthlessly.<sup>50</sup> They believed that most patients and old people, too, could be accustomed to wholemeal bread consumption. Those, who could not were denounced as 'intestinal cripples'.<sup>51</sup> Even wounded soldiers were forced to eat hard bread. Germany was no 'dictatorship of favours': the value of people depended on their contribution to the efficiency of the nation.

Importantly, German bread policy did not end in Germany. Wholemeal bread became a symbol of a victorious Germany and a superior Aryan race. Diffusion started in August 1940, when wholemeal bread production began in some parts of the *Generalgouvernement* Poland.<sup>52</sup> In late 1941 foreign wholemeal bread committees were established in Bohemia and Moravia, the Netherlands, the Warthegau, Belgium, northern France, and Bulgaria. In 1942, for example, nearly 40 per cent of Dutch producers were 'allowed' to produce 'German' wholemeal bread.

The advance of German wholemeal bread policy, however, was not a simple victory march. Its structures and directions need to be separated from its perceptions and results under wartime conditions: German bread policy was welcomed by most nutritionists of 'neutral' countries.<sup>53</sup> Its emphasis on health was an important image factor for foreign elites and backed the illusion of a scientific and rational Germany, while German task forces and soldiers were executing hundreds of thousands in Eastern Europe. The perception of many 'enemies' was positive. German policy followed the recommendations of the League of Nations and was often perceived as a leading example of a strong and effective health policy. Although there was some criticism of the digestibility of this hard food, it is astonishing that the ideological and racist implications were not discussed abroad.



German consumers judged differently. The German state tried to analyse consumer perceptions. Reports of the *Sicherheitsdienst der SS* documented that consumers were distrustful: 'Previous experiences with wholemeal bread campaigns show that people, especially in southern Germany, strongly resist wholemeal bread, because their habitual preference is to eat white bread where possible.'<sup>54</sup> Generally prices seemed to be too high. On the other hand, many consumers argued in favour of the new health bread. They wanted intensified wholemeal bread propaganda, favoured recipes backed by the authority of doctors and more information on the different types of bread. Others did not find wholemeal bread to be as nourishing. At the same time most German people were unable to distinguish between rye or brown bread on the one hand and wholemeal bread on the other.<sup>55</sup> In 1940–41 intensified propaganda, better quality and greater availability led to a higher popular acceptance of the 'German' bread.<sup>56</sup> Although bread policy in general was viewed with scepticism, especially because the regional differences were not reflected in the rationing system adequately, many consumers now understood and welcomed wholemeal bread policy.<sup>57</sup>

From autumn 1942 bread quality deteriorated, following crop failures.<sup>58</sup> Already in April 1942 bread was produced with the addition of one-third of the grain type 2800. Bread became crumbly and was more and more eaten as a side dish; bread with butter decreased. Although the quality of wheat bread again improved in January 1943, rationing placed limits on a successful bread policy.<sup>59</sup> These general problems affected wholemeal bread, too. Quality diminished, and standards deteriorated: 'During the last summer [1942] an increasing number of complaints on short weight and the general composition of bread were brought to the laboratory. . . . It was more than obvious that these things needed to be clarified, because of considerable unrest among the population that undermines our whole economy of supply unnecessarily.'<sup>60</sup> The *Reichsvollkornbrotausschuß* tried to stabilise wholemeal bread quality, but the results were limited.

As a consequence, the number of wholemeal dishes increased rapidly. Gruel and groats became more and more common at breakfast and even dinnertime. Wholemeal cookies and flakes were introduced, wholemeal cereals for babies and toddlers had a quickly growing market share. Recipes for wholemeal cakes were tested at the *Reichsfachschule* of bakery at Berlin. The *Deutsche Arbeitsfront* had several pastry cooks. Wholemeal waffles made their way into German households, too.<sup>61</sup> This development was welcomed enthusiastically by doctors and nutritionists. Dishes like Bircher-Benner's muesli or Werner Kollath's

*Frischkornbrei* seemed to be healthy alternatives to traditional fatty and heavy breakfasts. At the same time these were parts of a functional diet for a nation which first conquered Europe, and then ended up as undernourished survivors living amidst the ruins of bombed cities.

A nutritional perspective would stress the increase of wholemeal consumption during the war and a better supply of vitamin B<sub>1</sub>, E, minerals, and protein.<sup>62</sup> Wholemeal bread stabilised and improved the standards of health. But it must be stressed that German nutrition and bread quality were optimised at the expense of conquered nations. Inside Germany, too, high quality wholemeal bread was a dish reserved for Aryan Germans, while forced labourers had to make do with poorer quality bread.

### Learning from the enemy? British bread policy, 1939–1945

From the early twentieth century bread reform was a common topic in most European countries, especially in Switzerland and France. Driven by alternative lifestyle movements, this discourse was reinforced by nutritional research and eventually fixed on the nutritional recommendations of the League of Nations.<sup>63</sup> In the new scientific knowledge on food requirements and existing deficits in food supply, British and US nutritionists played a decisive role. Yet it also resulted from a middle-class social reform interest in optimising the eating patterns of the poor and workers.<sup>64</sup> Bread was one central issue in this debate. In Britain, at the beginning of the 1880s a Bread Reform League was established to educate the working classes to eat wheatmeal flour instead of common white bread. At this time German physiologists warned German people not to follow 'British' advice to eat wholemeal bread and a wide range of wholemeal dishes: 'One would chew the husk in the soup, the bread, in vegetables, and in dessert. How disgusting!'<sup>65</sup> The Bread (and Food) Reform League was not very successful, although their agitation continued.<sup>66</sup> Popular preference for white bread and the mass production of bread by big companies were not reversed easily.

The debate changed during the First World War. Bread was the basic foodstuff especially for workers. This staple food was not rationed, although the grain supply was endangered by German submarines, especially in 1917. British bread policy expressed confidence and security even if the extraction rate of grain had to be increased from c.70 per cent in 1914 to 76 per cent in 1916 and 81 per cent in March 1917.<sup>67</sup> The resulting 'war bread' was favoured by many doctors, who recognised it as a kind of wholemeal bread. This 'has come to stay, with great advantage



and economy to mankind.<sup>68</sup> But war bread was unpopular with the public, especially because wheatflour was often combined with mixtures of corn and other plants.<sup>69</sup> 'Dark in colour, it had an unfamiliar flavour, was difficult to bake and tended to produce a moist, soggy, and unpalatable crumbly mix.'<sup>70</sup> Tradition and taste were more important than medical advice. People did not believe, that 'it will be the fault of the public if it returns to the old over-refined white flour'.<sup>71</sup>

During the 1920s the health advantages of brown bread were backed by a growing number of physiological experiments, by epidemiological investigations of eating patterns and an improved knowledge of vitamin and mineral content of diet. But this did not mean that the majority of nutritionists recommended brown bread. The frontiers of the British 'brown vs. white bread controversy'<sup>72</sup> were similar to the early German ones.

During the world depression (1929–32) the social problem of malnutrition became a recognised part of the debate in Britain, emphasising the centrality of vitamins and minerals for a healthy lifestyle.<sup>73</sup> Educating the working class therefore became a crucial task for nutritionists, since public knowledge of these invisible nutrients was low. In contrast to Germany, in Britain science and civil society took the lead in changing

people's diet: 'According to present knowledge, a diet of brown bread, milk, butter, cheese, fresh fruit, and salad will provide all the essentials. There is no scientific evidence that meat is necessary.'<sup>74</sup> While the position of independent nutritionists changed in favour of brown bread, the important interest groups of millers and bread producers were still in favour of the common white wheat loaf, consumed by the majority of Britons.

This dietary preference became a problem when the Second World War started in September 1939. British grain supplies were even more vulnerable than in 1914. The Royal Navy had lost its supremacy and 88 per cent of wheat consumption came from imports. British defence was intensified in 1936, but the systematic creation of food stocks started only in February 1939. Bread was not rationed in Britain during the Second World War.<sup>75</sup> For most experts it was clear that it would not be sufficient to increase the extraction rate of grain.<sup>76</sup> What policy should be taken then?

At the beginning of the Second World War many British politicians linked German victories with the improved diet of German people and soldiers: 'Their present diet is much more scientific and effective than ours.'<sup>77</sup> Nutritionists stressed that Germany had learned the lessons from the First World War and had concentrated on protective foods to optimise the efficiency of its labour and military force: 'The present German rations are based on the simple but sound principle that a "peasant diet" of 'high extraction' or wholemeal bread, plenty of vegetables and potatoes, and some dairy produce in the form of cheese or separated milk, provides all the essentials of sound nutrition.'<sup>78</sup> While the British air force fought the Battle of Britain, many nutritionists turned to German food and bread policy for inspiration. British government should 'be fired with some of the inspiration of the Dictators'<sup>79</sup>.

Of course, public discourse was differentiated. White bread had been a symbol of freedom and Britain's civilising mission.<sup>80</sup> The Ministry of Food concentrated its work on an institutional framework which guaranteed the basic food requirements of all, favoured poor people, mothers, and children but still allowed individual choice. It was not possible to guarantee a continuous supply of white flour and bread. A central problem of war policy in a free society was 'to persuade the people of this country to change their dietary habits' voluntarily.<sup>81</sup> Modern war was a war of resources and food. Most experts and politicians believed that traditional dishes, including brown bread, were inevitable. Parliament even debated whether to use some kind of 'propaganda of Dr Goebbels.'<sup>82</sup> At the same time, in the view of most nutritionists,

Plate 7.6 The nutritional quality of brown bread, advertisement, 1939  
Source: *The Lancet*, vol. 237 (1939), no. fr. 09.09., p. 28.



war was also finally an opportunity to improve public health: 'Modern scientific investigation of nutrition has made it quite clear that wholemeal bread is a more nourishing food than white bread and that it would be better for the nation's health to eat brown bread.'<sup>83</sup> As in Germany, the term 'brown bread' was not clearly defined in Britain. For most this was bread made from flour of a higher extraction rate, comparable to the former 'war bread'. It never meant to produce 'German' wholemeal bread. This was not only the bread of the enemy, but the bread of snobbish extremists. Britain's way through the age of extremes lay between extreme positions. 'German' wholemeal bread 'is all right for long-haired gentlemen in Bloomsbury, but the people who have to do the world's work do not want that sort of thing put down their throats every day.'<sup>84</sup> Moreover, British food producers were not able to produce such a type of bread.<sup>85</sup>

British bread policy changed slowly. Partly, this was a result of the strong position of millers and the bread industry, which preferred the production of white bread. White flour kept longer, held more air and water, and bran and germ could be sold as animal food. The turnover of trade was higher and wholemeal bread took more skill and time to make.<sup>86</sup> But the main reason was that the Ministry of Food tried to improve the quality of white bread with the fortification of Vitamin B<sub>1</sub> and calcium. In July 1940, it decided to introduce a new enriched white flour.<sup>87</sup> British policy used the improvements of modern nutritional science. This decision was backed by leading nutritionists, who saw this as a 'revolutionary advance, because it can only mean that, in the future, whilst the preferences of the public will always receive first consideration, steps will be taken to make good any nutritional deficiencies both in individual foodstuffs and in our diet as a whole.'<sup>88</sup> Fortification policy was discussed not only in Britain but in Germany and the United States, too. While Americans started fortified bread in 1942, in Germany mainly margarine was fortified with Vitamin A after 1940. As a staple food, bread did not seem to be the right one for experiments with public health.

In Britain public and scientific opinion was sceptical, too. Ernest Graham-Little, MP and a leading member of the Food Education Society, a successor of the Bread and Food Reform League, pointed out that 'the universal scientific opinion is that the organic and natural supplies of vitamins are far superior to the synthetic kind.'<sup>89</sup> The decision to fortify bread had been based on rat experiments. It was only a theoretical proposition that synthetic vitamins were absorbed by the human intestinal tract.<sup>90</sup> An alternative view was developed by the Medical

Research Council, which recommended in August 1940 an increase of grain extraction to 80–85 per cent and an addition of calcium salts to flour used for bread.<sup>91</sup> This was a compromise, based on scientific knowledge, partly welcomed by the Food Education Society, but strictly rejected by millers and the baking industry. The Government decided to introduce new 'wholemeal' bread with an extraction rate of 85 per cent at the same price as the reinforced 'white' loaf in December 1940. But white bread was still available and dominant. In 1940–41 the 85 per cent national wheatmeal bread had a market share of only 9 per cent.

Its general introduction was blocked by producers and the government, which followed consumers' preferences. In 1941 it became clear that producers were not able to introduce fortified flour.<sup>92</sup> The consequences of 'bad' white bread for public health and warfare were still discussed, although German bread politics was no longer mentioned. Doctors and nutritionists continued to favour bread made from flour of 85 per cent extraction, which was propagated as a fair compromise between public health, commercial interests, and traditional habits.<sup>93</sup> But politics did not change until March 1942, when the Battle of the Atlantic was at its peak and shipping space became scarce. Now, the national wheatmeal bread became standard and white bread production was stopped.<sup>94</sup> The new British bread was fortified with calcium. It was a modern product, not a 'natural' one, based on knowledge of the human metabolism.<sup>95</sup> Although there were still some critics and the digestibility of the national wheatmeal was questioned, the British bread question was effectively solved by a scientifically based compromise.<sup>96</sup> When the British government reduced the extraction rate to 80 per cent in February 1945, people's acceptance of the new bread was high: 'This is a very drastic departure from what has been shown to be of great value to the health of the people.'<sup>97</sup> But it also meant that at the moment when victory was near, the balance between health; taste, and commercial interests would break down. The subsequent increase of flour extraction rate to 90 per cent and the post-war rationing of bread were dominated by political factors.<sup>98</sup> Britain was caring enough to feed defeated Germans,<sup>99</sup> but it was not able to continue a successful bread policy that improved public health and bread quality, while restricting individual choice and freedom of enterprise.

### Hidden logics of consumption

German and British bread policies in the inter-war period were based on comparable scientific assumptions. Wholemeal bread was superior to



white bread and had a higher vitamin and mineral content: consumption would improve people's health. In both countries scientists were concerned by the decreasing quality of food and by unhealthy lifestyles caused by industrialisation and commercialisation. Bread reformers first emphasised these themes. But established scientists were soon rethinking modernity as well once vitamin research identified the close relationships between food and health and between individual eating and national power. Since the mid-1930s most German and British nutritionists favoured the consumption of brown bread.

Comparable knowledge, however, led to different policies. In Britain, prior to the Second World War, general recommendations were aimed mainly at poor and working class people, who were asked to adjust their eating habits to a healthier diet. Social reform was supported mainly by health service officers, teachers, and social workers. Germany went in a different direction. The bread question was a question of the nation's racial quality. Consequently, bread policy had to be directed at the entire German population. Individual health and social differences were important factors, but they were overwhelmed by questions of racial quality and imperial policy. Bread policy was institutionalised and became a domain of state planning. Bread consumption was too important to be left to individual choice. The different bread policies were founded on different conceptions of human nature and society. While individual freedom and market efficiency were favoured in Britain, Germany looked towards a strong institutional framework for guiding people in the 'right' direction. Public institutions needed to help those unable or unwilling to consume the way German elites preferred. People's 'health' had very different meanings in these two societies. In Germany individual health was replaced by racial health. Wholemeal bread was healthy, because Germans were hardened and prepared to accept voluntary self-denial for the benefit of the whole community. In Britain, a public obligation to eat 'war bread' was a short-lived wartime emerging measure.

The differences in German and British bread policies were influenced, too, by different market structures. While milling and baking in Britain was dominated by big companies, in Germany small and middle-sized firms remained important. British firms were able to influence food policy more directly. They also financed scientists who questioned dominant physiological positions, improved the quality of flour and white bread, and widened the public debate with innovative methods, such as the enrichment of flour. In Germany, the introduction of wholemeal bread caused more problems, although the *Reichsnährstand* allowed

governmental guidance. The decentralised system of small bakeries was functional in wartime. Nevertheless it took considerable effort to train and teach many thousands of small bakers and firms. Yet it was these entrepreneurs who understood local and regional consumption patterns and were able to manufacture different kinds of wholemeal bread to suit the preference of their consumers.

On their own respective terms German and British bread policies were both efficient for people's health and the labour force. However, bread policies were not decisive for victory or defeat in the Second World War. Germany had learnt its lessons from the First World War, but without the exploitation of conquered European countries even the efficient institutions of the wholemeal bread policy would not have been able to guarantee an adequate food supply for the German population. Britain found a functional and pragmatic compromise, ensuring a sufficient and fair share of food resources even in the most critical times.

In the long run, bread policies stabilised the different consumption patterns of the pre-war years. Once bread rationing came to an end, British producers and consumers again favoured white bread. Since the early 1950s this development was increasingly backed by British nutritionists. Long-term experiments with German orphans at Wuppertal and Duisburg in 1947–49 produced no evidence of the superiority of wholemeal bread.<sup>100</sup> Fortification was continued until the mid-1970s, when brown bread slowly started a come back as a healthy alternative.<sup>101</sup> In Germany white bread has become much more important since the early 1950s. But nutritionists continued to favour brown and wholemeal bread, especially in eastern Germany.<sup>102</sup> Bakers continued to produce wholemeal bread, although the extraction rate was lowered to 90 per cent. Based on traditional regional eating patterns wholemeal bread held its pre-war market share in the 1950s.<sup>103</sup> Individual choice – not bread policy – established it as a 'German' foodstuff.

## Notes

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- 2 W. Hartmann, *Das Schrot (Vollkorn-) und Soldatenbrot*, (Berlin, 1910). For a detailed analysis, see U. Spiekermann, 'Vollkorn für die Führer: Zur Geschichte der Vollkornbrotspolitik im Dritten Reich', *Zeitschrift für Sozialgeschichte des 20. und 21. Jahrhunderts*, 16 (2001), pp. 91–128, here 93–4.
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- 4 J. Buchwald and M. P. Neumann, 'Über das Bleichen der Mehle', *Zeitschrift für das gesamte Getreidewesen* (1909), pp. 257–62.
- 5 See G. Simons, 'Rasse und Ernährung', *Kraft und Schönheit*, 4 (1904), pp. 156–9; G. Simons, 'Tod der Nahrungsmittelindustrie!', *Vegetarische Warte*, 38 (1905), pp. 273–5; S. Steinmetz, *Zeitgemäßes Mehl und Brot: Der Grundstein zum Aufbau neuer Volkskraft* (Freiburg i.Br., 1917); V. Klopfer, 'Vollkorn-Ernährung', *Blätter für Volksgesundheitspflege*, 14 (1914), pp. 142–4.
- 6 A. Kunert, *Unsere heutige falsche Ernährung als letzte Ursache für die zunehmende Zahnverderbnis und die im ganzen schlechtere Entwicklung unserer Jugend*, 3rd edn (Breslau, 1913).
- 7 M. Rubner, 'Ueber den Werth der Weizenkleie für die Ernährung des Menschen', *Zeitschrift für Biologie*, 19 (1883), pp. 45–100.
- 8 G. Schwenk, 'Unser tägliches Brot, wie es ist, und wie es sein sollte', *Vegetarische Warte*, 50 (1917), pp. 32–3; V. Klopfer, *Die Verbesserungen des Brotes durch Aufschließung der Kleie und Vervollkommnung der Bäckverfahrens* (Dresden and Leipzig, 1918).
- 9 G. Klemperer, 'Die Krankenernährung in jetziger Zeit', *Berliner klinische Wochenschrift*, 54 (1917), pp. 642–3, here 642. Research included all groups of the population, see E. Rhonheimer, 'Über die Verträglichkeit des Weizen- und Roggen-Vollkornmehles (94% Ausmahlung) im Säuglingsalter', *Zeitschrift für Kinderheilkunde*, 16 (1917), pp. 259–64.
- 10 See 'Diskussion zum Vortrag des Herrn Röhmann: Ueber den Nährwert des Vollkornbrotes', *Berliner klinische Wochenschrift*, 53 (1916), pp. 94–7.
- 11 C. v. Noorden, 'Ueber Verdauungsbeschwerden nach dem Genuss von Kriegsbrot und ihre Behandlung', *Berliner klinische Wochenschrift*, 52 (1915), pp. 349–50; A. Theilhaber, 'Das Kriegsbrot und das Vollkornbrot', *Vegetarische Warte*, 52 (1919), pp. 24–5.
- 12 G. Klemperer, 'Die Krankenernährung in jetziger Zeit', *Berliner klinische Wochenschrift*, 54 (1917), pp. 642–3.
- 13 R. Berg, 'Unser täglich Brot', *Die Umschau*, 28 (1924), pp. 581–5.
- 14 M. Rubner, 'Unser Brotgetreide in physiologischer und volkswirtschaftlicher Hinsicht', *Sitzungsberichte der Preussischen Akademie der Wissenschaften*, phys.-sc. class (1925), pp. 126–39, esp. pp. 135–36.
- 15 'Gesamtergebnisse', in M. Rubner (ed.), *Die Verwertung des Roggens in ernährungsphysiologischer und landwirtschaftlicher Hinsicht* (Berlin, 1925), pp. 46–50, here 50; K. Mohs, 'Getreideverarbeitung, Müllerei, Brotversorgung. Aktuelle Probleme', *Die Technik in der Landwirtschaft*, 9 (1928), pp. 223–6.
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- 18 See J. Kientopf, 'Entstehung und Entwicklung der Forschungsgemeinschaft für allgemeine Ernährungsphysiologie unter besonderer Berücksichtigung zweckentsprechender Brotnahrung', *Forrog-Blätter*, 1 (1934), cols. 11–18.
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- 20 W. Kraft, 'Die Probleme der physiologisch richtigen Brotkorn-Nahrung', *Schweizerische Medizinische Wochenschrift*, 21 (1940), pp. 913–18, here 913.
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- 23 F. Schröder, 'Das Roggenbrot als Volksnahrungsmittel', *Reichs-Gesundheitsblatt*, 1 (1926), pp. 88–90; L. Rerup, 'Nachdenkliches zur Reichs-Roggenwoche', *Weckruf*, 16 (1929), pp. 702–3; H. Fikentscher, 'Die Roggenbrotfrage und ihre Behebung', *Mitteilungen der Deutschen Landwirtschafts-Gesellschaft*, 45 (1930), pp. 595–6. For fascist Italy, compare A. Nützenadel in this volume.
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- 30 Wirz, 'Ernährung und Vierjahresplan', p. 885.
- 31 W. Wegner, 'Der Kampf für unser täglich Brot', *Deutsches Ärzteblatt*, 67 (1937), pp. 718–19, here 719.
- 32 Quotations from a radio talk by W. Stepp, 'Vollkornbrot tut not!', *Ärzteblatt für Ostpreußen* (1940), pp. 102–3, here 103.
- 33 K. Häfner, *Materialien zur Kriegsernährungswirtschaft 1939–1945*, s.l. s.a. I am grateful to Prof. Dr Günther Schmitt, Göttingen, for giving me this unpublished manuscript by a leading member of the German Ministry of Agriculture and Nutrition.
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- 35 Häfner, *Materialien zur Kriegsernährungswirtschaft 1939–1945*.
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- 37 See U. Spiekermann, 'Vollkornbrot in Deutschland. Regionalisierende und nationalisierende Deutungen und Praktiken während der NS-Zeit', *Comparativ*, 11 (2001), pp. 27–50, here 38–42.
- 38 Detailed figures can be found in J. Hunck, 'Die Lenkung des Brotverbrauchs', *Die Rundschau*, 35 (1938), pp. 360–1; P. Pelshenke, 'Besonderheiten der Vollkornbrote in den einzelnen Gauen Großdeutschlands', in P. Pelshenke (ed.), *Vollkornbrot. Herstellung und Anerkennung*, 2nd edn (Berlin, 1940), pp. 53–8.
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- 54 *Meldungen aus dem Reich 1938–1945*, vol. 5 (Herrsching, 1984), pp. 1557–8 (09.09.1940).
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- 58 Note, the intake based on the rationing system was inadequate for standard consumers from 1940 on. See A. Bickel, 'Zur Kenntnis der menschlichen Eiweißernährung in Deutschland während des Krieges', *Zeitschrift für Volksernährung*, 15 (1940), pp. 221–3, 236–7.
- 59 For grain and bread regulations, see 'Brot und Brotbereitung', *Biologisch-Medizinisches Taschenjahrbuch*, 9 (1944), pp. 9–38, esp. p. 18.
- 60 F. Schaefer, 'Brote aus hochausgemahlten Mehlen', in *Deutsche Lebensmittel-Rundschau* (1943), pp. 69–71, here 69.
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