

German Agricultural Occupation of France and Ukraine, 1940–1944

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ABSTRACTS

Dieser Aufsatz vergleicht und vernetzt die nationalsozialistische landwirtschaftliche Ausbeutung von Frankreich und der Ukraine. Sie trägt zu unserem Verständnis der Prinzipien, Funktionsweise und Auswirkungen der Ernährungs- und Agrarpolitik im NS-Reich sowohl im Westen als auch im Osten bei. Wir befassen uns zunächst mit der allgemeinen Ernährungs- und Beschaffungspolitik des Dritten Reiches und wie sie sich auf die Völker und die Landwirtschaften in Europa unterschiedlich ausgewirkt hat: Wie haben die Nationalsozialisten eine Agrarpolitik für ihr ganzes Reich konzipiert, geplant und gestaltet? Wir zeigen, wie der Traum von einer autarken kontinentalen Wirtschaftsgemeinschaft („Großraumwirtschaft“), die Pläne zur Kolonisierung vor allem des Ostens, aber in geringerem Maße auch des Westens (der „Generalplan Ost“ in seinen verschiedenen Varianten) und der Wille, große Teile der sowjetischen Bevölkerung durch Hunger zu zerstören (der „Hungerplan“) sowohl in Visionen als auch in Umsetzungen miteinander interagierten. Zweitens vergleichen wir, wie deutsche Besatzer die landwirtschaftliche Ausbeutung in ihren wichtigsten landwirtschaftlichen Eroberungen durchführten. Wie haben deutsche Agronomen die Landwirtschaft der von ihnen dominierten Gebiete Ukraine und Frankreich verändert? Mit welchen Ergebnissen? Wir zeigen, dass sie sich in beiden Fällen in erheblicher Weise auf die existierenden Machtstrukturen stützten. Drittens unterstreichen wir die Zusammenhänge und Transfers zwischen diesen beiden Besatzungsregimen: die Praxis, Landarbeiter massenhaft umzusiedeln, um den Bedarf an Arbeitskräften in der Agrarproduktion zu decken, den Einsatz von deutschen „Landwirtschaftsführern“, die Tätigkeit der Landbewirtschaftungsgesellschaft Ostland sowohl in der besetzten Sowjetunion als auch im besetzten Frankreich und den Anbau der Gummipflanze Kok-sagyz.

This paper compares and interconnects Nazi agricultural exploitation of Ukraine and France. It contributes to our understanding of the principles, workings, and implications of the food and agriculture policy in the Nazi empire both in the West and in the East. We are dealing first

with the food and procurement policy of the Reich and how it diversely impacted peoples and agricultures in Europe: how did the Nazis imagine, plan, and craft an agricultural policy for their whole empire? Specifically we show how the dream of an autarkic continental economic community (“Großraumwirtschaft”), the plans to colonize mostly the East but to a lesser extent the West, too (the “Generalplan Ost” in its several variants), and the will to destroy large swathe of the Soviet population by starvation (the “Hungerplan”) interacted with one another both in visions and in implementations. Second, we compare how German occupants carried out agricultural exploitation of Ukraine and France, which were the main agricultural acquisitions of Nazi Germany. How did German agronomists set about to transform the agriculture of the countries they dominated? With what results? We show that both in the East and in the West they relied on existing administrative structures. Third, we underline connections and transfers between these two occupation regimes: the practice of forcibly and massively moving peasants to fit production needs, the institution of German agricultural managers to rule local farmers (“Landwirtschaftsführer”), the establishment of the Ostland farming company both in the occupied Soviet Union and occupied France, and the culture of the rubber-plant kok-sagyz.

Introduction

Since the groundbreaking work by Aly and Heim,¹ historical research has amply demonstrated how the racial and expansion policies of the Nazi regime were linked to its food and resource policy.² Questions of grain and oilseed procurement were linked to the Eastern drive and to the extermination of Jews, Sinti, and Roma, and to the starvation of prisoners of war (POWs) and civilian Poles, Ukrainians, Belorussians, Russians, and others. To feed the German army high rations and to sustain the population of the Reich with sufficient food supplies, the German government organized starving rations in occupied territories and destroyed ethnic minorities and captives. Not only the long-term colonial vision – and its carrying out – of a Europe under German dominion with a de-industrialized, de-urbanized, and re-agrarianized Eastern Europe, freed from Jews, Communists, and “useless” persons, led to organized mass killings; but the organization of the food procurement from occupied territories to the Reich was a major factor bringing about intentional devastation and death by shooting, hanging, gazing, and hunger in the *Generalgouvernement* and the occupied Soviet territories.³

Although agriculture and agricultural sciences under the Nazis in Germany proper are well studied,⁴ contemporary historiography has long shown little interest for German

1 G. Aly/S. Heim, *Vordenker der Vernichtung: Auschwitz und die deutschen Pläne für eine Neue Europäische Ordnung*, Hamburg 1991.

2 C. Gerlach, *Kalkulierte Morde: die deutsche Wirtschafts- und Vernichtungspolitik in Weißrußland 1941 bis 1944*, (2nd ed.), Hamburg 2012; A. J. Kay, *Exploitation, Resettlement, Mass Murder: Political and Economic Planning for German Occupation Policy in the Soviet Union, 1940–1941*, New York 2006; T. Tönsmeier/P. Haslinger/A. Laba (eds.), *Coping with Hunger and Shortage under German Occupation in World War II*, Cham 2018.

3 Gerlach, *Kalkulierte Morde*; W. Lower, *Nazi Empire-building and the Holocaust in Ukraine*, Chapel Hill 2005; K. C. Berkhoff, *Harvest of Despair: Life and Death in Ukraine under Nazi Rule*, Cambridge, MA 2004.

4 G. Corni/H. Gies, *Brot – Butter – Kanonen: Die Ernährungswirtschaft in Deutschland unter der Diktatur Hitlers*,

agricultural policies in the occupied territories, in the West and East. Comparing and interconnecting how Germans diversely exploited peasants in their European colonies is a task ahead of us.⁵ The goal of this paper is more modestly to provide the reader with an understanding of the principles, workings, and implications of the food and agriculture policy in the Nazi empire both in the West and in the East. We are dealing first with the general food and procurement policy of the Reich and how it diversely impacted peoples and agricultures in Europe: how did the Nazis imagine, plan, and craft an agricultural policy for their whole empire? Specifically we show how the dream of an autarkic continental economic community (*Großraumwirtschaft*), the plans to colonize mostly the East but to a lesser extent also the West (the *Generalplan Ost* in its several variants), and the will to destroy large swathes of the Soviet population by starvation (known in the historiography as the *Hungerplan*) were distinct but interacted with one another both in visions and in implementations.

Second, we compare how German occupants carried out agricultural occupation in the territories they occupied, taking two case studies, Ukraine and France, which were the main agricultural acquisitions of Nazi Germany. How did German agronomists set about to transform the agriculture of the countries they dominated? With what results? We show that, notwithstanding vastly different occupation regimes, they relied on existing administrative structures to a considerable extent in both countries. Third, we underline interconnections between these two occupation regimes: the practice of forcibly and massively moving peasants to fit production needs, the institution of German agricultural managers to rule local farmers (*Landwirtschaftsführer*), the *Ostland* farming company both in the occupied Soviet Union and occupied France, and the culture of the rubber-plant kok-sagyz.

Berlin 1997; S. Heim (ed.), *Autarkie und Ostexpansion: Pflanzenzucht und Agrarforschung im Nationalsozialismus* (Geschichte der Kaiser-Wilhelm-Gesellschaft im Nationalsozialismus, Bd. 2), Göttingen 2002; G. Gerhard, *Nazi Hunger Politics: A History of Food in the Third Reich*, Lanham 2015; T. Saraiva, *Fascist Pigs: Technoscientific Organisms and the History of Fascism*, Cambridge, MA 2016.

- 5 Brandt's famous work from 1953 does not draw a comparison, but describes parallel case studies (K. Brandt, *Germany's Agricultural and Food Policies in World War II. Volume II. Management of Agriculture and Food in the German-Occupied and Other Areas of Fortress Europe. A Study in Military Government*, Stanford 1953). Most importantly, it is historiographically outdated, as it can be read as justifying and disculpating Nazi occupation policies. Klemann and Kudryashov (H. A. M. Klemann / S. Kudryashov, *Occupied Economies: An Economic History of Nazi-Occupied Europe, 1939–1945*. London / New York 2012) devotes only a few pages to agricultural questions. Tooze's masterpiece (*The Wages of Destruction: The Making and Breaking of the Nazi Economy*, London 2006) has more on agriculture, but not organized in a systematic East-West comparison. The most important work to date on Nazi agricultural occupation in the East is Gerlach's on Belarus (Gerlach, *Kalkulierte Morde*, pp. 231–371) and on the Agrarreform under German occupation of Soviet territories (C. Gerlach, *Die deutsche Agrarreform und die Bevölkerungspolitik in den besetzten sowjetischen Gebieten*, in: *Besatzung und Bündnis, Deutsche Herrschaftsstrategien in Ost- und Südosteuropa*, Berlin / Göttingen 1995, pp. 9–60). If a lot has been written on food supply and the black market in France (among others F. Grenard, *Les Scandales du ravitaillement : détournements, corruption, affaires étouffées en France, de l'Occupation à la Guerre froide*, Paris 2012), the work of Cépède is still the most comprehensive one on French occupied agriculture and agricultural policies (M. Cépède, *Agriculture et alimentation en France durant la IIe Guerre mondiale*, Paris 1961).

Map 1



I. Reorganizing Europe Agriculture to serve German Priorities: Hunger and Agricultural Specialization in the Nazi Empire

That Germany should become the centre of an autarkic continental trade system was an important tenet for many anti-liberal economists in inter-war Germany. The desire to free Germany from overseas imports and from dependency toward the Anglo-saxon powers in its food deliveries led to the idea of building an autonomous *Großraumwirtschaft* by coalescing the agricultural efforts and potentials of all countries of continental Europe, including the European part of the Soviet Union. It was believed that Germany could not solve its agricultural problems within its borders only, even expanded back to their 1914 state.⁶ The countries of Europe would enter a common food market protected from outside competition and oriented toward the needs of Germany. Such a trade entity promised to yield Germany cheap and diversified food produces. It would offer a life insurance against any British-led continental blockade. The experience of the blockade during WWI obsessed many Nazi leaders who convinced themselves that the war was

6 Herbert Backe, a specialist of grains production in Russia, came to prominence after the launch of the Four Year-Plan in 1936, where he was in charge of food policy.

lost from the moment morale dwindled on the home front: maintaining good food supplies in Germany had the highest priority in case of a new world conflict. NSDAP leaders and army generals shared this vision with central economic actors.⁷ Herbert Backe, the leading agricultural politician behind the Nazi food policy and Minister for Agriculture from 1942, wrote during the war: “In place of the international world economy the *Großraumwirtschaft* steps in, characterized by the coalition of peoples of the same or related races in the same space.”⁸ Such an integrated agricultural space would allow for a healthy specialization of the regions of Europe and end the soil-destroying monocultures and overseas extensive farming, Backe argued. To replace them, the Germans were teaching occupied “backward” nations of Europe how to intensify production and embrace “food freedom” (*Nahrungsfreiheit*) from overseas imports.⁹

Food and agricultural specialists played a prominent role in designing and implementing the Nazi food policy in Europe, which was at the same time a colonial and a racial policy. Many Nazi politicians and higher bureaucrats who played a major role in the racial policy in occupied territories were trained in agronomy in the broad sense: Heinrich Himmler, Herbert Backe, his secretary SS-Gruppenführer Hans-Joachim Riecke, Theodor Oberländer, Otto Schiller, etc. Countless experts and academics in agricultural sciences helped devise occupation plans and supervise occupation of European countries. Remarkably, several of them were born or had lived in the former Russian empire or in the Soviet Union. Analyses of the “overpopulation” of Poland, Ukraine, Russia, and of the “Russian grain question” during the 1920s–1930s played a key role in how Nazi Germany envisioned its dominion over Europe, with the intersection of food and demographics constructed as a “geopolitical” issue which needed a territorial solution if Germany was to survive in the long run: the *Großraumwirtschaft* was truly based on a “geopolitics of starvation”.¹⁰

The *Generalplan Ost* was an immense and long-time SS-led endeavour to design the future of continental Europe under German hegemony. The plan, in its many and evolving variants, set out to colonize and germanize regions to the East and to a lesser extent to the West of the Reich in several decades after the war. Some 31 million people from the occupied Soviet territories were to be deported to Siberia – this made out two-thirds of the local population planned to survive war and genocide – and the rest would be enslaved by ten million German colonists. Ukraine was to become an enormous Germanized territory deep into Soviet / Russian territory, reaching to the Volga.¹¹ Already during the war the SS experimented with colonization in Ukraine.¹²

Parallely to the *Generalplan Ost*, German war planners crafted concrete plans to occupy the Soviet Union. They divided the Soviet Union in two sections, along a line stretching

7 Corni/Gies, *Brot – Butter – Kanonen*, p. 499.

8 H. Backe, *Um die Nahrungsfreiheit Europas: Weltwirtschaft oder Großraum*, Leipzig 1942, p. 216.

9 *Ibid.*, p. 235.

10 A. Dallin, *German Rule in Russia 1941–1945. A study of occupation policies*, London 1957, p. 310.

11 C. Madajczyk/S. Biernacki, *Vom Generalplan Ost zum Generalsiedlungsplan*, München 1994.

12 Lower, *Nazi Empire-building*, pp. 171–179.

from Arkhangelsk to the north and to Astrakhan to the south (the A-A line): west of this line lied enough land to feed Germany and counter the effects of a maritime blockade.¹³ Further, Herbert Backe divided the Soviet Union into surplus regions (Ukraine, South Russia, North Caucasus) and deficit regions (Central Russia with Moscow, Northern Russia with Saint-Petersbourg, Belarus): with industrialization, the Bolsheviks had forced urbanization and so considerably modified the grain balance, he argued; instead of exporting grain, the producing regions had to support growing cities. Backe proposed to counter this – in his view – wrong development by reagrarianizing the Soviet Union: the deficit regions had to be cut off from supply, with cities left to starve, whereas the surplus regions would produce for Germany. Ukraine, with its rich soils, would become the true granary of Europe.¹⁴ These ideas were endorsed by Hitler and the higher command staff. If they could not be implemented to the fullest, they had nonetheless dire consequences for the Soviet population: during the siege of Leningrad 1.5 million people died of hunger. In Ukraine, Kiev and Charkov were cut-off from the countryside leading to an unknown number of deaths by starvation. That Kiev had to starve was a common mantra among German occupying forces.¹⁵ A capital of 851,000 inhabitants before the war, Kiev had less than 300,000 inhabitants by mid-1943. An unknown part of this tremendous drop is explained by excess deaths by starvation and related diseases.¹⁶ Among 3.35 million Soviet POWs, at least 2 million died of starvation or execution. High number of Jews in ghettos and patients of psychiatric hospitals and other closed establishments died of starvation.¹⁷ France and Ukraine were major acquisitions in agricultural terms for the German conquest strategy: with these two countries under its yoke, Germany and its empire, it was thought, could become self-sufficient and resist the sea blockade. This turned out to be wrong. Relatively quickly after the invasion of the Soviet Union, it occurred to the agricultural command that given the problems of lacking workforce, agricultural inputs, and machinery, Ukraine could never replace Germany's future food production in the foreseeable future.¹⁸ What is more, notwithstanding the terrible sufferings imposed by the occupants onto the population, Ukraine could never in the course of the war feed completely the occupation forces and the three million fighting men and their horses.¹⁹

13 Brandt, *Germany's Agricultural and Food Policies in World War II*, p. 56.

14 *Ibid.*, p. 58; Gerhard, *Nazi Hunger*, p. 25.

15 Berkhoff, *Harvest of Despair*, pp. 164–186.

16 *Ibid.*, p. 186; "Kiev" in *Bol'shaya sovetskaya entsiklopediya*, Moscow 2008, online: <http://bse.sci-lib.com/article060949.html> (accessed on 8 October 2019).

17 C. K. Priemel, *Occupying Ukraine: Great Expectations, Failed Opportunities, and the Spoils of War, 1941–1943*, in: *Central European History* 48 (2015), pp. 31–52, at p. 46.

18 H.-J. Riecke, *Aufgaben der Landwirtschaft*, in: *Ostaufgaben der Wissenschaft: Vorträge der Osttagung deutscher Wissenschaftler (24.–27. März 1942, Berlin)*, hrsg. vom Hauptamt Wissenschaft d. Dienststelle Rosenberg, 1942, pp. 28–37.

19 H.-E. Volkmann, *Landwirtschaft und Ernährung in Hitlers Europa 1939–1945*, in: *Militärgeschichtliche Mitteilungen* xxxv (1984), pp. 9–74.

Table 1a. Deliveries of major agricultural products from France‡ to Germany† (1940–1944)

Foodstuffs	France
Bread Grain (wheat, rye) (tons)	2 950 000
Secondary cereals (oat, barley) (tons)	2 431 000
Straw° and hay* (tons)	3 788 000
Meat (tons)	891 000
Eggs° (thousand)	311 300
Fats (margarine, tallow, oils) (tons)	51 200
of which	
Oils (tons)	39 400
Butter (tons)	88 000
Potatoes* (tons)	752 000
Sugar* (tons)	99 000
Wine (hectoliter)	10 400 000
Milk (hectoliter)	1 445 000
Cheese (tons)	45 000

Sources: Cépède, *Agriculture et alimentation en France durant la IIe Guerre mondiale*, pp. 356–160; ° *Rapport sur l'organisation de la disette en France sous l'occupation*, 15.04.1945, pp. 9–10, 1990072/1, Archives nationales; * M. Weinmann, *Die Landwirtschaft in Frankreich während des 2. Weltkrieges unter dem Einfluß der deutschen Besatzungsmacht*, Tübingen 1961, pp. 92–102.

‡ Both occupied and “free” zones.

† Both to occupying troops and deliveries to the Reich.

Tables 1a and 1b give an overview of the total deliveries from France and the Soviet Union to Germany during the whole conflict. These data should be handled with care because there is an uncertainty as to the amount of food that was misappropriated by German occupants and so did not enter the official statistics of deliveries to the Wehrmacht and to the Reich. In the case of France, this amount is estimated and accounted for in the data series;²⁰ for the case of the Soviet Union and Ukraine (which made roughly 60% of all Soviet procurements to Germany), the volumes looted are not taken into account. They reached far greater proportions in Ukraine than in France. Moreover, in both cases, the data includes comestibles both for occupying troops and deliveries to the Reich.

20 Note that deliveries of potatoes and sugar were partially compensated with imports from Germany.

Table 1b. Deliveries of major agricultural products from occupied Soviet territories to Germany † (1941–1944) (tons, rounded)

Foodstuffs	occupied Soviet territories
Bread Grain	5 016 400
Feed Grain	4 135 500
Oilseeds	952 100
Livestock and meat	563 700
Eggs (thousand)	1 078 800
Oils	20 500
Butter	206 800
Potatoes	3 281 700
Sugar	401 000

Source: Brandt, *Germany's Agricultural and Food Policies*, p. 129.

† Both to occupying troops and deliveries to the Reich.

In the Soviet case, the great majority of foodstuffs did not reach the Reich but was consumed by the German troops and occupying administration: 80% of all cereals, 88% of the meat and virtually all potatoes. Only by oilseeds did the Reich get the lion's share (¾) of what the occupied USSR produced.²¹

II. Agricultural Occupation in France and Ukraine

Although France and Ukraine were part of one economic design, the respective roles assigned to them within the continental hierarchical food system of “fortress Europe” bore vastly different occupation regimes. It was not only a question of racial ideology and colonial utopia though. Both local/national and front conditions were extremely different, and these differences had, too, tremendous consequences for the survival of local populations.

In the Reichskommissariat Ukraine (and in other parts of the pre-1939 occupied Soviet territories, with the exception of Northern Caucasus) German occupiers did not bother to negotiate with the local population and to take into account not only their aspirations, but their most fundamental human needs. German occupiers tolerated no autonomy, no self-government above the village level.²²

21 Brandt, *Germany's Agricultural and Food Policies in World War II*, p. 129.

22 Erich Koch, Reichskommissar for Ukraine, ordered his subordinates to treat the population of Ukraine in a “hard and uncompromising” way, with the “constant threat and the use of punishment and reprisals, even when no direct provocation for such exists” (quoted by Berkhoff, *Harvest of Despair*, p. 52).

In France, German authorities preferred to deal with a weakened domestic French authority in Vichy than having the French government flee to North Africa and continue to lead the war from there. The point was to exploit France at its full industrial and agricultural potential for German needs, while using the already functioning French administration and hence without many occupation troops.

Occupation in France

The Armistice treaty of June 1940 defined two zones of occupation (later called “occupied zone” and “free zone”), separated by the guarded “demarcation line”. A large military occupation apparatus was established in the Northern occupied zone. The Alsace-Moselle was factually annexed to the Reich and both *départements* Nord and Pas-de-Calais were placed under the authority of the German military command in Belgium. A third zone was created in the North-East even though it was not stated in the Armistice treaty: the “forbidden zone”, where the return of French refugees was prohibited, and whose western border (the “North-East line”) was also guarded. The point was to prepare this zone for eventual German settlement and annexation and hence to bring France back to its medieval borders, according to a memo addressed to Hitler in 1940.²³

Backwardness of French Agriculture

France was the major economy among occupied countries.²⁴ Therefore it had a very significant role to play to support Germany’s war effort. But according to many German experts at that time, even though French agriculture benefited from favourable conditions for production (good weather, great ratio of arable land against population, fertile soils, etc.), it was not developed to its full potential. German authorities supposedly had to fight the backwardness of French agriculture in order for France to completely realize its role in the new European food economy:

It is an intolerable state that in France there are currently 5.5 million hectares of uncultivated land, [...] while in Germany we are trying to pull even small surfaces of arable land from the sea to increase our cropping areas. The great battle for agricultural production in Europe, [...] will soon make the deplorable aspect of uncultivated land and hundreds of abandoned villages disappear in France.²⁵

Lauenstein, director of *Ostland*, a German farming company that is discussed below, described French countryside in 1941 in the following terms: “Vast extents of good land

23 P. Schöttler, Eine Art Generalplan West. Die Stuckart-Denkschrift vom 14. Juni 1940 und die Planungen für eine neue deutsch-französische Grenze im Zweiten Weltkrieg, in: Sozial.Geschichte: Zeitschrift für Sozialgeschichte des 20. und 21. Jahrhunderts 3 (2003), pp. 83–131.

24 M. Boldorf / J. Scherner, France’s Occupation Costs and the War in the East: The Contribution to the German War Economy, 1940–44, in: Journal of Contemporary History 47 (2012) 2, pp. 291–316.

25 H. Backe, Complément sur la conférence faite par M. le Secrétaire d’État Backe le 9 juillet 1941 à Paris, Paris 1941.

were left in fallow for years, perhaps decades, the cattle was in deplorable state”.²⁶ Agriculture specialist Dr. Vageler was also very critical:

*As to fundamental research in Agriculture and Forestry, in particular for pedology and local lore [Standortkunde], it seems that France is the most backward country in Europe. [...] Especially the tillage methods and the dominant assumptions on the matter are widely outdated and completely irrational.*²⁷

A Techno-Administrative Structure

The occupation authorities headquarters were in Paris in the Hotel Majestic, under the supervision of the Militärbefehlshaber in Frankreich (MBF). The Agriculture and Food supply group was inside the Economy department and organized around three divisions: Group I Agricultural Production, Group II Food supply, Group III Headquarters of the *Ostland* company, which managed numerous French farms in North-Eastern France, in the forbidden zone. The staff was composed of civilian military-government officials, who usually were experts in their field before the war. In order to control the activity of every French administrative branch at each geographical level in the occupied zone, the German military administration territorial structure paralleled the French. A group *Agriculture and Food supply* was created in each *Feldkommandantur* with 1 to 3 specialists.²⁸ Dr. Fritz Reinhardt,²⁹ the chief of the *Agriculture and Food supply* department in Paris had only a small staff of experts to assist him with the extensive administrative work involved, hence he had to rely heavily upon the French administration.³⁰ The German authorities did not manage directly, but they overlapped with the French services, while monitoring them. They were no substitute to the French authorities although they often threatened to replace them.³¹ Until December 1942 this organization concerned only the “occupied zone” in the Northern part of France. After 1942, *Agriculture and Food supply* officials were set up also in Southern France but spread farther apart than in the North. The German influence on agriculture in the “forbidden zone” of North-Eastern France was far stronger than in both previous zones, as we will see later.

26 Lauenstein to the personnel of Ostland company in France, 3.06.1941, Archives départementales des Ardennes, 12 R 106, quoted by J. Mièvre, L'« Ostland » en France durant la Seconde guerre mondiale: une tentative de colonisation agraire allemande en zone interdite. *Annales de l'Est, Mémoire 46*, Université de Nancy II, 1973, p. 47.

27 Dr. Vageler, Research programme for the year 1943/44, 15.09.1943, Bundesarchiv Berlin Lichterfelde (BAL), R 73/15317.

28 The *Feldkommandanturen* corresponded essentially to the level of the French départements.

29 Fritz Reinhardt (1898–1965) was trained in agronomy at the University of Halle (Diplomlandwirt and then Doctor in natural sciences), member of the NSDAP since 1929, of the SS since 1934. He was an expert on fertilizer questions and the combating of insects and plant diseases. Before the war he worked in the Agriculture department of IG Farben, for the Reichsnährstand, and for the Ministry of the Reich for Food and Agriculture where he was personal referent to State Secretary Backe.

30 Brandt, *Germany's Agricultural and Food Policies in World War II*, p. 506.

31 G. Eismann, *Hôtel Majestic: ordre et sécurité en France occupée, 1940–1944*, Paris 2010, p. 139.

Fitting German Needs and Intensifying French Agriculture

German authorities tried to influence French agriculture to make it fit German needs. They demanded – and obtained – the adoption of specific laws, for instance to create a Plant Protection Service, to fight against the Colorado Potato Beetle, to regulate seeds. They imposed cropping plans and they decided personnel policy.³² While German authorities had a more practical influence on agriculture in the occupied zone, they also tried to gain control over French agriculture as a whole, notably influencing Vichy's legislation, which had to be applied in both zones.

A major instrument to increase food exports from France was to diminish French rations. It resulted in lower official food rations than anywhere else in the countries Germany occupied in the West-Denmark, Protectorate of Bohemia and Moravia, Belgium, the Netherlands, or Norway.³³ At the end of 1943, the bread ration in France was lowered to 300 grams against 350 g in 1940, and meat was set at 120 g per week against 360 g in 1940.³⁴ These diminutions allowed to import more food products to Germany to maintain high rations in Germany. Indeed, in 1943, as bread rations were lowered in France, the country provided more bread grain than ever before in the war, accounting for 46% of German imports.³⁵ Table 2 displays the lowest and highest rations for occupied France, occupied USSR and Germany.³⁶

The goal of German officials was to make French agriculture more productive especially for specific crops needed for the food supply of occupying forces and of German civilians in the Reich: fodder to sustain meat production, oilseeds to supply fats, and grain. In order to orient French agricultural production towards German needs, the German military authorities in Paris designed cultivation plans. For each agricultural campaign Reinhardt and his staff negotiated mandatory surfaces and obligatory crops with the French Ministry of Agriculture (wheat, oil seeds, beets, oats, etc.) for the occupied zone, and after 1942 for the whole French territory. Those plans had then to be enforced locally by German officials in the *Feldkommandanturen* and by French Agricultural Services.

32 Among others dismissal of the French minister of Agriculture and choice of the head of the Corporation Nationale Paysanne, Archives nationales, 19900072/1.

33 Klemann/Kudryashov, *Occupied Economies*, p. 108.

34 H. Umbreit, *Der Militärbefehlshaber in Frankreich 1940–1944*, Boppard am Rhein 1968, p. 310.

35 Michel's report "Der Beitrag des französischen Raumes zur Kriegswirtschaft", 1944, pp. 12–14 Bundesarchiv Militärarchiv (BA MA) RW 35/1446.

36 For Ukraine, only specific strata of the population, working for the Germans, were entitled to rationing at all. The others had to find food all by themselves (Berkhoff, *Harvest of Despair*).

Table 2. French, Soviet and German lowest and highest food rations (grams per week)

	France, August 1942		Occupied Soviet territories, March 1943		Germany, April 1942	
	Lowest Ration (Elderly)	Highest Ration (Heavy Labour)	Lowest Ration	Highest Ration (Heavy Labour)	Lowest Ration	Highest Ration (Heavy Labour)
Meat	193	397	100	350	300	850
Fats	101	151	50	250	206	575
Bread	1 400	2 450	1 500	4 000	2 000	4 400
Potatoes	1 092	1 092	2 500	4 500	–	–
Sugar	190	247	–	150	–	–

Sources: France: Cépède, *Agriculture et alimentation en France*, p. 388; USSR: Volkman, *Landwirtschaft und Ernährung*, p. 47; Germany: *Ibid.*, p. 67.

Fertilizers were of course a crucial product in this “battle for production” to increase yields, but they were only available very scarcely. Michel Cépède estimated that the amount of synthetic fertilizers available to French farmers during the war was under 55% of the (already low) pre-war consumption, and even under 35% after 1943.³⁷ Their allocation was henceforth of strategic importance and was decided upon by Reinhardt in Paris. Fertilizers were allocated in priority to crops “of first importance”.³⁸

To make French agriculture produce more, the Germans extended cultivated surfaces by reducing the amount of uncultivated land. According to German agricultural experts, France had 1,5 million to 5 million hectares of land remaining uncultivated.³⁹ For them it was a clear sign that French agriculture was in need for intensification. German authorities launched the *Brachlandaktion* (“Fallow action”) to recultivate 400,000 ha uncultivated and fallow lands.⁴⁰ But soon experts had to understand that considering the scarce means of production – fertilizers, workforce, farm machinery, and gasoline – it was not profitable to cultivate each and every piece of land.⁴¹ Recultivation targets were reduced to 120,000 ha from which only 45,000 ha were indeed recultivated during the 1943/44 campaign.⁴² German officials had more success in modifying crop rotations to reduce fallows.⁴³ Out of the 820,000 ha of fallows inside rotations in 1942 in the occupied zone, only 480,995 ha were left in January 1944.⁴⁴

The German military authorities in Paris were determined to boost the French oil seeds production to meet Berlin’s autarkic goals. However, oil seeds were not commonly grown in France, mainly because fats were imported from the colonial empire.⁴⁵ Indeed France grew oilseeds only on 11,470 ha during in 1936/37 against 50,000 ha in Germany.⁴⁶ During the 1941/42 campaign oil seeds cultivation accounted for 37,900 ha, already 3.3 times more than in 1936/37. German authorities in Paris planned to extend those areas to 250,000 ha in 1942/43 and then to at least 400,000 ha in 1943/44.⁴⁷ Each *département* was assigned a minimum surface area to crop in oilseeds, which corresponded to

37 Cépède, *Agriculture et alimentation en France*, p. 236.

38 Meeting at the Majestic, 18.01.1943, 19900072/1, Archives nationales.

39 The width of this range indicates that those figures were part of a discourse to delegitimize certain agricultural practices like fallowing. See Backe, *Um die Nahrungsfreiheit*, p. 230 and H. Backe, *La Mission de l’agriculture en Europe: conférence faite à Paris, le 9 juillet 1941, Corbeil 1941*.

40 See Reinhardt’s report one year after the introduction of *Landwirtschaftsführer* in France, 4.05.1944, AJ/40/793 (1), Archives nationales.

41 Letter from Sicherheitspolizei to Dr. Brandt, personal staff of the Reichsführer-SS, 3.02.1944, BAL, N 19/1305. See also the reports on *Brachlandumbruch* in AJ/40/793 (3), Archives nationales.

42 On the *Brachlandaktion* see AJ/40/793 (1)-(3), Archives nationales.

43 See *Berichte über den Einsatz der La-Führer*, 6.01.1944, AJ/40/793 (3), Archives nationales.

44 See Reinhardt’s report one year after the introduction of *Landwirtschaftsführer* in France, 4.05.1944, AJ/40/793 (1), Archives nationales.

45 For the period 1935–1938 the domestic production for oilseeds accounts for only 4,5% of the French metropolitan consumption, G. Bertrand, H. Neveux, M. Agulhon, and M. Gervais, *Histoire de la France rurale*. ed. by G. Duby and A. Wallon. 4 vols, Paris 1992, vol 4, p. 74.

46 According to uncorrected data from *Statistique agricole annuelle 1945*, Ministère de l’Agriculture, Paris 1947; *Statistisches Jahrbuch für das Deutsche Reich, Berlin 1880–1942*.

47 According to Reinhardt’s Report on the action of *Landwirtschaftsführer*, 4.05.1944, AJ/40/793 (1), Archives nationales, and box AJ/40/793 (7) on oilseeds, Archives nationales.

an expected amount of oilseeds production at the end of the year. Then local officials had to enforce the plan and monitor agricultural productions in farms, to make sure that the foreseen areas were indeed cultivated with oilseeds. Sowing seeds had to be imported from Germany, usually in exchange for French seeds of other plants (vegetable or fodder plant). Specific propaganda towards farmers was designed to incline them to cultivate more oil seeds. But oilseeds were hard to crop, because they need significant amount of fertilizers, which were lacking throughout the war.

Statistical data about agricultural production during the war is highly uncertain because it was based on statements from the peasants themselves. They had direct personal interest to declare a lower production in order to be less taxed. Following the same reasoning, the French state had every interest to show low production data to the German authorities. While keeping this uncertainty in mind, Table 3 shows us that area allocated to oilseed still rose during the war, contrary to almost any other crop.⁴⁸ Sunflower appeared for the first time in French agricultural statistics in 1943 and as a whole cropping area of oilseeds was multiplied by 25 between 1937 and 1944.⁴⁹ This clearly reveals a singular path for oilseed production. Total yearly production of oilseeds jumped from an average of 13,000 tons before the war to 31,000 t in 1942, and 132,000 t in 1943. But this rise masks a drop in productivity from 1.09 ton per hectare before the war to 0.6 t/ha in 1943.⁵⁰ This is at least partly due to the serious shortage of chemical fertilizers.⁵¹

48 Only pastures, tobacco, flax and fallows stayed the same or rose between 1939 and 1944 according to uncorrected data from *Statistique agricole annuelle* 1945.

49 According to uncorrected data from *Statistique agriculture annuelle* 1945, pp. 510–512.

50 Brandt, *Germany's Agricultural and Food Policies in World War II*, p. 543.

51 Around 50% of the pre-war availability until 1942, then 35% in 1943, and only 9% in 1944, Cépède, *Agriculture et alimentation en France*, p. 236.

Table 3. Acreage in France‡ from 1937 to 1944 for major crops (hectares)

	1939	1940	1941	1942	1943	1944	Progression 1939–1944
Total arable land	19 485 728	18 510 980	17 719 435	17 492 161	17 377 859	17 164 313	- 12 %
of which							
Wheat	4 583 979	4 252 266	4 364 989	4 279 516	4 227 345	4 163 418	- 9 %
Other Cereals	5 282 967	4 459 606	3 915 908	3 806 408	3 798 751	3 697 269	- 30 %
Potatoes	1 278 878	1 061 295	829 316	777 205	796 423	796 527	- 38 %
Oils Seeds	7 586	8 580	15 149	37 858	242 097	284 772	+ 3 654 %
Flax	47 610	31 869	23 702	34 289	49 108	49 457	+ 4 %
Pulses	261 310	242 746	215 731	221 541	222 852	172 977	- 34 %
Fallows	no data	no data	no data	2 264 857	1 769 490	1 827 337	-
Pastures	11 485 960	11 847 090	12 680 632	12 161 027	11 757 531	12 023 637	+ 5 %

Sources: Statistique agricole annuelle 1945, p. 453–522 and Statistique agricole annuelle 1943, p. 111 and p. 181.

‡ French metropolitan territory without the départements Moselle, Bas-Rhin, and Haut-Rhin for which no data was submitted.

Occupation in Ukraine

Invasion, Plunder, and Destruction

The German invasion of the Soviet Union encountered tremendous military successes in the summer and fall of 1941 and again in the fall of 1942. With their advance into Soviet territory, the Germans occupied 40% of the grain fields and 45% of the livestock of the whole Soviet Union, both mainly located in Ukraine.⁵² The Reichskommissariat Ukraine counted 17 million inhabitants on 340,000 square kilometers at the beginning of 1943.⁵³

Contrary to earlier campaigns to the West, South-East, and East, the German armies entered an immense space devoid of power structures. First, the Soviet Union was centrally organized around a double hierarchy: state organs and party organs ran their echelons from the top to the bottom. No significant economic life could take place outside their reach. Power structure and infrastructure were deliberately destroyed both by the Germans forces and the Soviet authorities, far beyond the destruction wrought by combat. Because Germans led a *Weltanschauungskrieg* to destroy the Soviet state, they killed party members en masse, who were executives in companies, farms, and administration, and destroyed the Soviet party and state hierarchies. Their effort at annihilating the Soviet state in the occupied territories were seconded by the Soviet leadership who ordered highly successful “scorched earth” strategy which left the German armies with a devastated country and a dead economy.⁵⁴

As a result, all systems of distribution, collection, and exchange between enterprises and farms ceased to function. In agriculture since collectivization, no farm could operate without precise orders coming from the party hierarchy at the local, regional, republican, and central level: plans and calendars of sowing and harvesting were set by this hierarchy, not by the farms. What every farm had to sow and harvest, where and when, with what machinery and for what price was the sole responsibility of the bureaucratic apparatus, and indeed, of Moscow. With the invasion, this whole system evaporated.⁵⁵ In the summer 1941 peasants did not begin harvest before receiving orders from the Germans or the Banderites, the Ukrainian insurrectionary army.⁵⁶

Therefore, contrary to the occupation of France, that of Ukraine and other parts of the Soviet Union required to organize a new power structure replacing the old one. There was no “collaborating” government to collaborate with. We will see soon that this replacement meant that German occupiers reproduced to a great extent the Soviet power structure in the village. Furthermore, a fundamental question had to be solved of how far the German occupier should go with the reconstruction of the destroyed economy. This question provoked important debates and was never entirely decided, with positions

52 Dallin, *German Rule in Russia*, p. 320.

53 https://en.wikipedia.org/wiki/Reichskommissariat_Ukraine (accessed on 27 September 2019).

54 Priemel, *Occupying Ukraine*.

55 Brandt, *Germany's Agricultural and Food Policies in World War II*, p. 56.

56 Berkhoff, *Harvest of Despair*, p. 130.

ranging from the total destruction of the industry to create a purely agricultural land, to that of re-building a strong industrial base to serve the needs of the war economy.⁵⁷ In Ukraine, many peasants welcomed the Germans as liberators, even if the German forces committed atrocities.⁵⁸ Peasants were undernourished and extremely poor. The majority of peasants were women, because men had been drafted to the army, deported or killed during the dekulakization drive of the early 1930s.⁵⁹ The 1941 harvest was excellent but less so in the Left Bank (East of the Dnieper) because combats and Soviet-style evacuation had destroyed crops more extensively than in western Ukraine.⁶⁰

Immediate Exploitation, Long-Term Colonization, or Land Reform?

The German occupying forces and administration followed at the same time three competing and intertwined goals until their departure in the spring of 1944. The first was to exploit peasants and their lands to the utmost in order not only to feed the army – 4 to 6 million men, plus administrative personnel both German and local – but to bring substantial amount of grain and oilseed to the Reich to maintain the comparatively high life standard of the German population.

To guarantee extreme exploitation, many military authorities and administrators proposed to keep the kolkhoz system: resuming “collective” farming was the best way to pressure the peasants to give as much grain as possible. As a leading German expert wrote in 1943: “From the viewpoint of acquisition the kolkhoz system appeared as ideal” mainly because the “peasant does not get his hands on the agricultural commodities that his work produces” and “the state keeps in their hands how much they want to give away to the village population.”⁶¹ By contrast, allowing for the distribution of land parcels among the peasants would have brought chaos, many believed, and made the control of the peasant work and output over hundreds of thousands of farms almost impossible, not to speak about the lack of machinery, draft animals, managing experience, and agronomic knowledge among workers of collective farms. Backe himself was a supporter of keeping the kolkhozes.

But the idea of immediate exploitation was in tension with another, far reaching and long-term goal: that of colonizing Ukraine. Himmler and the SS, who were strong players among the occupying forces, were keen to create a tabula rasa of Ukraine, “freeing” it from Jews, Communists and rebels in order to create a new land aristocracy exploiting the Ukrainian peasants in large plantations. Their desired model was that of giant exploitation, the former Soviet state farms, but managed in the guise of Prussian Junker latifundiae. In that they agreed with those who wanted to keep the collective farms. But they opposed them in that they favoured colonization by German settlers, an intention

57 Priemel, *Occupying Ukraine*.

58 Berkhoff, *Harvest of Despair*, p. 125.

59 *Ibid.*, p. 129.

60 *Ibid.*, p. 131.

61 O. Schiller, *Ziele und Ergebnisse der Agrarordnung in den Besetzten Ostgebieten*, Berlin 1943, p. 3.

which could only disorganize production in the short run and bring heavy conflicts with local peasants and Ukrainian nationalist organizations.

A third idea was that of a land reform: splitting up the collective lands and distribute plots among the former *kolkhozniki*. It was favoured by many in the Ministry for Eastern Affairs (*Ostministerium*) and Ministry of Foreign Affairs. The great majority of peasants wanted to return to family farming, and effectively used the disappearance of Soviet power to split up the *kolkhozes*.⁶² The goal of de-collectivization was therefore to gain strong support among the population, especially among the Ukrainian peasants who resented the Soviet system for the imposition of the *kolkhozes*, the famine of 1932–33 and continuing food shortages, punishment operations, and humiliations. Furthermore, it would have been, it was thought, a clear national and international signal that the campaign against the Soviet Union was a liberation war aimed at freeing the peoples of the Soviet Union from Moscow's dominion and from the Stalinist regime.⁶³

It is important not to overstate the significance of these tensions. They were never that important as to hamper significantly the agricultural exploitation of Ukraine. Moreover, the different goals were not contradictory: Long-term colonization plans were compatible with the effort to raise output by quickly reorganizing the farm economy.⁶⁴ During the whole occupation, the advocates of full exploitation succeeded in imposing their views at every step, even if some efforts in the direction of easing centralized controls over farms and redistributing land to peasants were made.⁶⁵ So there was no real dilemma between giving the peasants what they asked for and jeopardizing the supplies of the military and civilians, on the one hand; and keeping the *kolkhozes* to guarantee the output and losing the support of the peasants, on the other hand. Feeding the Reich and its armies had steadily the highest priority and was the only systematically and persistently pursued goal of the occupation.

From Kolkhozes to Cooperatives: An Unachieved Reform

Notwithstanding the relentless goal of procuring as much grain and other foodstuffs as possible from the Ukrainians, some changes were introduced at the beginning of 1942. A new Agrarian Order (*Agrarordnung*) was passed into law by Reich Minister for the Occupied Eastern Territories Alfred Rosenberg in February. A compromise between the different visions of the agricultural occupation, it was penned by Otto Schiller (1901–1970), an expert in Soviet agriculture: Schiller had worked in seed production in the

62 Berkhoff, *Harvest of Despair*, p. 128.

63 Prior to the German retreat land privatization occurred in rare cases to reward collaborators and to antagonize the peasantry and the rebels in partisan regions. V. Yu. Vasiliev / R. Yu. Podkur / S. D. Galchak / D. Beyrau / A. Weiner, *Zhizn' v okkupatsii. Vinitskaya oblast'. 1941–1944 gg.*, Moscow 2010, pp. 464–465. The "Proclamation concerning the introduction of property in land of family farmers" of 3.06.1943, declaring the privatization of lands, is usually seen as a failure with no concrete realizations. Dallin, *German Rule in Russia*, pp. 360–363; Brandt, *Germany's Agricultural and Food Policies in World War II*, pp. 670–671. However, see a dissident view in Berkhoff, *Harvest of Despair*, p. 177.

64 Gerlach, *Die deutsche Agrarreform und die Bevölkerungspolitik in den besetzten sowjetischen Gebieten*.

65 Brandt, *Germany's Agricultural and Food Policies in World War II*.

Volga region and North Caucasus in the 1920s and had been agricultural attache to the German embassy in Moscow in 1931–1936.⁶⁶ Now a high-ranking functionary within the Ostministerium, he had been tasked with elaborating a reform concept for Soviet agriculture and supervising its implementation. The *Agrarordnung* has received extensive, even disproportionate treatment in historiography, from Brandt and Dallin in the 1950s to Corni/Gies and Gerlach in the 1990s. Remarkably, Otto Schiller himself has played a leading role in extolling the significance of his work in the occupied territories and setting the tone in the historiography.⁶⁷ But it is important to remember that the great majority of Soviet peasants never left the kolkhoz under German rule.

The kolkhoz system was maintained as the major organizational form of agricultural production in Soviet occupied territories with the exception of the territories annexed by the Soviet Union in 1939–1940 under the secret protocol of the Molotov-Ribbentrop Pact: the Baltic countries and the Eastern regions of Poland and Romania.⁶⁸ More than 80% of kolkhozes were maintained in Ukraine.⁶⁹ They were renamed “communes”, but the system of control and exploitation created by the Stalinist leadership in the 1930s was maintained and hardened, as shown in a study of the Kirovograd region (right-bank Ukraine).⁷⁰ The German military and civil administration stepped into the Soviet apparatus’ shoes to control the village: the key enforcement measures were taken at the district level staffed with the Ukrainian administration inherited from Soviet times, but led by a German district farm leader (*Kreislandwirt*) replacing the party first secretary. Regional farm leaders (*Gebietslandwirte*) sat higher up, at the regional level. In the kolkhozes the chairman was replaced by a village leader (*starosta*).⁷¹ Like in Soviet times, it rained down ominous instructions on the kolkhozes from the district administration: when and what to sow, when and how to harvest, to enforce work discipline and so on. The language of these orders, demanding for instance the “over fulfillment of the daily work norms,” strikingly resembled the Soviet one.⁷²

The kolkhoz system was all about mandatory procurements. To enforce it, the Stalinist leadership had introduced a wage payment system called *trudodni*, which allowed to exploit the peasants without jeopardizing the procurement campaign. Peasants received their salaries in kind only after the harvest had been secured by the authorities. The peasants were given an enlarged family plot, but taking care of a bigger plot and working for the kolkhoze would conflict exactly like during Soviet times. Above the kolkhozes, the

66 Ibid., pp. xxvi–xxvii; Gerlach, *Die deutsche Agrarreform*.

67 Brandt, *Germany’s Agricultural and Food Policies in World War II*, pp. 93–97. Brandt gives the text of the *Agrarordnung* in English in full, pp. 665–670; Schiller was a leading author of this sum. Dallin, *German Rule in Russia*, pp. 325–339; Gerlach, *Die deutsche Agrarreform und die Bevölkerungspolitik in den besetzten sowjetischen Gebieten*; Corni/Gies, *Brot – Butter – Kanonen*, pp. 543–548.

68 Gerlach, *Kalkulierte Morde*, p. 347.

69 Berkhoff, *Harvest of Despair*, p. 134.

70 I. Petrenko, *Natsists’kij okupatsijnij rezhim na Kirovogradshhini 1941–1944 rr. Kirovograd Tsentral’no-Ukrains’ke vidavnistvo*, 2004, p. 183.

71 Ibid., p. 184.

72 Ibid., p. 187, 190.

Soviet Machine-Tractor Stations (MTS) concentrated the appliances and were responsible for harvesting to ensure that the peasants could not take grain for themselves. But there were few machines left after the Soviet retreat and what was left was in bad shape.⁷³ Gasoline was lacking.⁷⁴ The occupiers soon forced the peasants to give back to the kolkhoze the cows and horses they had shared among themselves when Soviet power left the village. But there were so few animals (mostly cows were used for farming for lack of draft animals) and machines that agricultural work was done mostly by hand during the war, including plowing and harvesting.⁷⁵

To discipline the peasants, the German occupying forces applied more violence than their Soviet precursors, forcing children under 14 to work in the fields, fining and jailing peasants and using them for forced labour for low norm fulfilment, taking hostages to pressure communities, shooting and hanging for non-compliance or as examples.⁷⁶ Medals and gifts were used as carrots.⁷⁷ Deportation to Germany was an ever present threat. All in all, the kolkhoz remained the dominant farm organization over the whole occupation period because it gave to the German occupants great control and exploitation levers.⁷⁸

The *Agrarordnung* reformed land tenure around three gradations: the kolkhoz, the cooperative, and private ownership. The second step, presented in the *Agrarordnung* as intermediary, was Schiller's favoured form. Given the lack of machinery and horses, it made sense to help peasants to share appliances and means for agricultural works. The kolkhoz fields were cut into equal strips. Each farmyard received a strip in each field. This distribution did not take the family size or the number of its workers into account, as had been the case in the *mir* village organization before the Revolution. Plowing and seeding was done collectively, but each peasant harvested individually his allotted strips. The cooperatives in the *Agrarordnung* were tightly controlled by the German administration, which imposed the crop plan. The members of the cooperative were collectively responsible before the Germans. But because field maintenance was done individually, underperforming workers could be easily spotted and punished.⁷⁹ The MTS retained the heavy equipment, whereas draft animals were distributed among the peasants.⁸⁰ Schiller's design offered a way to maintain control over the peasants and to maximize production: Splitting up the kolkhozes without privatizing land, but keeping the peasants organized around a few obligatory common assignments, and ensuring that the peasants would maximize production.

73 Ibid., p. 211.

74 Ibid., p. 214.

75 Ibid., pp. 191–192.

76 Ibid., p. 189.

77 Ibid., pp. 195–196.

78 Vasiliev / Podkur / Galchak / Beyrau / Weiner, *Zhizn' v okkupatsii*, p. 464.

79 Gerlach, *Kalkulierte Morde*, p. 349.

80 Gerlach, *Die deutsche Agrarreform und die Bevölkerungspolitik in den besetzten sowjetischen Gebieten*, p. 17; O. Schiller, *Ziele und Ergebnisse der Agrarordnung in den Besetzten Ostgebieten*. Berlin 1943; Brandt, *Germany's Agricultural and Food Policies in World War II*, pp. 668–669.

The implementation of the *Agrarordnung* was paradoxical: where the distribution of land plots to the peasants could have had the most economical, political and ideological impact – in the Ukraine – the reform was carried on slowly. And where the reform’s expected impact was the least – in the other Soviet territories – it was implemented to the fullest. As a result, whereas 20% of the collective farms were transformed into cooperatives in the regions under control of Army Groups North and Centre, at the end of 1942 it was the case of only 8% of them in Ukraine. It reached 16.8% in August 1943.⁸¹ For Belorussia Gerlach finds a stabilization of the total cultivated area and, as in France, a reduction of fallows, which he partly explains with the change in agricultural organization squeezing more work out of the peasants.⁸² Whether the cultivated areas were maintained in Ukraine and whether the *Agrarordnung* provoked a similar intensification is not decidable given the lack of relevant case studies.

Cooperatives were not only about raising production and giving more leeway to the peasants. Gerlach shows that the German occupiers sought to enhance political control on the peasants: not every peasant was entitled to an allotment. In densely inhabited regions of Western Ukraine, the occupiers decided to have a minimum allotment size of 4-7 hectares, irrespective of the number of peasants. In these regions, the cooperatives made many families landless. For instance, in Kirovograd region, of 81 courtyards only 66 were allotted land (6 hectares each). 15 families were left without land because they had not fulfilled the “minimum amount of workdays”.⁸³ Furthermore the *Agrarordnung* was a means to exclude politically “unreliable” villagers and “scroungers”, and more generally all those whom the occupiers considered superfluous peasants. Those who did not receive land were deported to Germany for compulsory work or shot by the police if not compliant.⁸⁴

We have seen in this second part the main characteristics of German agricultural policies both in occupied France and Ukraine. They show different strategies for one common goal: extracting as much foodstuffs and resources from occupied territories. Both of them show that the Germans, regardless of the tremendous differences in occupation practices in both countries, relied heavily on existing structures and norms to exploit land and people: the French agricultural administration and the Soviet kolkhoze. The ideas of maintaining existing structures to guarantee the procurement of a maximum amount of comestibles, and changing how agriculture worked (“modernizing”) in order to raise outputs in the future were in tension. We will now look at the imperial side of Nazi agricultural and Food supply policies which enabled transfers between East and West.

81 Berkhoff, *Harvest of Despair*, p. 134.

82 Gerlach, *Kalkulierte Morde*, p. 330.

83 Petrenko, *Natsists'kij okupatsijnij rehzhim*, p. 204, 207.

84 Gerlach, *Die deutsche Agrarreform und die Bevölkerungspolitik in den besetzten sowjetischen Gebieten*, pp. 20–21.

III. Administrating the Countryside in Occupied Territories: Transfers between East and West

Although very different in nature and practice, the occupation of North-Eastern France and of the Ukraine grew more interconnected toward the end of the war. German officials had plans to colonize both regions after the war. As occupation of France hardened in 1942, German occupiers transferred control mechanisms of agricultural production from the occupation of Poland and Soviet territories to France, particularly to the Forbidden Zone. We will dwell on two German institutions created not only to exploit, but to transform agriculture of occupied territories: the *Landwirtschaftsführer* and the *Ostland* company.

One example of those transfers are forced migrations, more or less temporary, in agriculture. Indeed, Germans moved hundreds of thousands of agricultural workers within the Eastern occupied territories to take part in harvesting in the sparsely settled Southern and Eastern steppes of Ukraine. To free up land to settle Volksdeutsche, the German administration deported Ukrainian peasants of Zhitomir region to South Ukraine.⁸⁵ In North-Eastern France, as workforce was lacking in the fields, German authorities resorted to the same pattern of forced migration: from January 1943 on, at least 20,000 Poles were deported from the region of Lodz to the *départements* Ardennes, Meuse, and Meurthe-et-Moselle.⁸⁶

Global Change for the Nazi Empire: The Crisis of 1942 / 1943

To understand why occupation practices and institutions were transferred from the East to the West in the second half of the occupation, we have to return to a dramatic change which affected the whole Nazi empire at the turn of 1942–1943. At this time several crises came to a head. First, on the Western front, at the end of 1942, the allied forces freed Northern Africa. Consequently, the French government and the Reich lost access to raw materials including food produces and fertilizers.⁸⁷ Second, on the Eastern front, the Wehrmacht lost the strategic initiative and began a slow retreat after its defeat at Stalingrad (February 1943). As a result of these setbacks, the German leadership strengthened its grip both in Germany and in the occupied territories. Declaring “total war” they demanded that all resources be fully exploited for the military effort. German occupiers intensified requisitions of raw materials, workers, and finished products.

In France in the first years of occupation, the economic exploitation consisted in requisitions but also in purchases on the black market. To keep the extent of these purchases secret, German offices financed them with occupation funds, that is with the money paid

85 Gerlach, *Die deutsche Agrarreform und die Bevölkerungspolitik in den besetzten sowjetischen Gebieten*, pp. 34–35.

86 A. François, *Les Polonais déportés dans les Ardennes pendant la Seconde Guerre mondiale*, in: *Revue Historique Ardennoise* 48 (2016), pp. 155–176.

87 F. Grenard/F. Le Bot/C. Perrin, *Histoire économique de Vichy: L'État, les hommes les entreprises*, Paris 2017, p. 102; Gerlach, *Kalkulierte Morde*, p. 328.

on a daily basis by the French government to the German occupation forces.⁸⁸ In 1942 black market purchases sky-rocketed, running to about 8 million RM per day – more than one-third of occupation funds. Aside from soldiers, German agencies, seeking consumer goods and raw materials, and the Wehrmacht agencies, purchasing goods for the troops, became black market clients on a large scale.⁸⁹

From the beginning of occupation MBF chief economist Elmar Michel criticized black market purchases by Germans: they undermined the goal of exploiting France over the long term, which required a policy of reconstruction, not looting. Michel was successful in finding allies within the Ministry of Finances in Berlin, and finally, in March 1943, Berlin forbade the German army to enter black market operations.⁹⁰ As a consequence of this limitation of the Wehrmacht's liberalities, German authorities began demanding the French Ministry of Agriculture more output via heightened planned requisitions. Michel calculated that whereas France had yielded 12% of its grain output to Germany in 1942, it was already 17% the following year. As far as meat was concerned, the raise was from 15% to 23%, on the background of a rising agricultural output (see table 4).

In Ukraine, the Wehrmacht pillaged the countryside to a far broader extent than in France, and basically without any outside control. Based on the principle that the Army had to feed itself from the land it occupied and on the ideas that Ukraine was the breadbasket of Europe and that its inhabitants were inferior Slavs, the German military expected to live off comfortably from the villagers. Even the agricultural department of the Army's own Economic Command set one of its main tasks to "protect the farming enterprises and their means of production from seizures by our own troops". It had to send *Landwirtschaftsführer* to the zones immediately behind the front line to organize food procurement for the Army and prevent uncontrolled seizures by the military.⁹¹ In 1942, after first tensions appeared in the Reich with food supply, the Army had to feed itself more intensely from the land, leading to an unprecedented looting campaign in the summer. It is important to notice that the army requisitioned not only food products and cattle, without compensation. They took horses and cars for their own transportation needs so that the farming activities were slowed down or made impossible.⁹²

88 Boldorf / Scherner, *France's Occupation Costs*, p. 299.

89 *Ibid.*, p. 306.

90 Grenard, Le Bot, Perrin, *Histoire économique de Vichy*, p. 107.

91 Denkschrift der Wirtschaftsorganisation Ost über den Einsatz der Landwirtschaftsführer im Schwarzerdegebiet Südrusslands, auf der Krim und in Transnistrien, anonymous, BA MA MSG 2/1268.

92 Volkmann, *Landwirtschaft und Ernährung*, p. 49.

Table 4. French production and deliveries to the Reich, 1941–1943

	French production (tons)					Deliveries to the Reich (in percentage of the French production)		
	1941	1942	1943	Progression 1942–1943	1941	1942	1943	
Bread grain	3 756 000	4 013 000	4 193 000	+ 4,5 %	+ 14,6	+ 12,1	+ 17,0	
Fodder grain	3 002 000	2 466 000	2 712 000	+ 10 %	+ 20,1	+ 18,6	+ 25,3	
Meat	1 142 000	914 000	976 000	+ 6,8 %	+ 14,5	+ 15,3	+ 23,3	
Butter	–	111 000	118 000	+ 6,3 %	–	+ 1,8	+ 15,3	
Vegetables	1 440 000	1 408 000	1 408 000	0	+7,0	+ 7,0	+ 7,6	
Fruits	4 883 000	911 000	913 000	+ 0,2 %	+ 4,5	+ 6,5	+ 12,9	
Wine (1000 hL)	49 428	47 429	47 585	+ 0,3 %	+ 4,1	+ 5,8	+ 10,4	

Source: Michel's report "Der Beitrag des französischen Raumes zur Kriegswirtschaft", 1944, p. 12 (Bundesarchiv Militärarchiv RW 35/1446).

Simultaneously with the interdiction to enter black market deals in France, Hitler forbade uncontrolled confiscations by the Wehrmacht in the East in spring 1943. From now on the troop had to report on their requisitions and needs to the military economic command.⁹³ This heightened control of military behaviour contributed to good procurement results in Ukraine and in Belorussia in 1943, notwithstanding the growing influence of partisans and the lack of workforce and machinery.⁹⁴

Ruling the Peasants: The Landwirtschaftsführer from East to West

In Ukraine, the Germans ruled over 100,000 farms and 3,000 mechanization enterprises (MTS), which needed a centralized bureaucratic apparatus to function.⁹⁵ The Economic Command Staff East of the Wehrmacht (*Wirtschaftsführungsstab Ost*) created a new control structure over agriculture to replace the Soviet one. But in fact, the Germans compromised with the existing structure, and all in all they kept a lot of what Soviet administration had created, as we have seen earlier. A key echelon in the hierarchy was the *Landwirtschaftsführer* (La-Führer, La-Fü), controlling farm activities of a group of kolkhozes. When the Wehrmacht transferred to German civil authorities of the Reichskommissariat Ukraine, the whole agricultural bureaucracy was transferred, including the 14,000 La-Führer. In the territories (in Ukraine and elsewhere) which remained under military rule, the same system of agricultural control remained in place.

On average, one La-Führer had 108 collective farms under his responsibility.⁹⁶ Even if assisted by translators and local agronomists, this made impossible for him to visit regularly every farm. Most La-Führer were farmers from Germany who had no command of either the Ukrainian or the Russian language and were ignorant of the natural conditions for farming, especially in the Ukrainian steppes to the East.⁹⁷

In January 1943, Backe, who monitored closely French agriculture, demanded to raise productivity “by any means necessary”, especially to cultivate fallows.⁹⁸ For Reinhardt, this could only be possible if the German and French agricultural administrations would get both more qualified workforce, vehicles, and gasoline. His request was backed by the *Militärbefehlshaber* himself and resulted in the establishment of 182 German *Landwirtschaftsführer* in March 1943 and in the liberation of 550 French agronomists, with whom they were supposed to work.⁹⁹

There were 788 La-Führer stationed all over France in April 1944, aged between 32 and 55. Many had worked for the *Reichsnährstand* before the war and were considered by their hierarchy as having a strong experience with the German *Erzeugungsschlacht*

93 Ibid., p. 50.

94 Ibid., Gerlach, *Kalkulierte Morde*, p. 320.

95 Dallin, *German Rule in Russia 1941–1945*, p. 320.

96 Berkhoff, *Harvest of Despair*.

97 Ibid.; Brandt, *Germany's Agricultural and Food Policies in World War II*.

98 “in weitreichendem Umfange alle Maßnahmen”, AJ/40/793 (1), Archives nationales.

99 Letter from Stülpnagel to the Army High-Command, 13.02.1943; letter from Wi III/1 to the *Bezirkschef* A, B, C and Commander from Gross-Paris, 15.02.1943, AJ/40/793 (1), Archives nationales.

(Battle for production).¹⁰⁰ An undefined number of them came from occupied Ukraine and Poland and had to undergo training at the *Wehrwirtschaftsersatzabteilung V* in Gera. Others had not worked in the East, but came directly from farms in Germany. They were often older or unable to fight and for these reasons were sent to France to supervise agriculture.¹⁰¹

The La-Führer were assigned to reinforce the local *Agriculture and Food supply* groups at the level of the *Feldkommandanturen*. Each La-Fü had to advise on 55,000 hectares of agricultural land on average. Only 70% were equipped with a car.¹⁰² The rest of them had to travel by bike. Added to the fact that only about 10% of them spoke French this made it complicated if not impossible to complete their mission of counsel.¹⁰³

According to Reinhardt, La-Führer in France “will serve as agricultural advisers and not as production controllers [as they did in Ukraine].”¹⁰⁴ Their mission was to increase French agricultural production according to German needs, mainly by enforcing the cropping plans. Concretely they had to make sure that the cultivated area that had been planned for each crop was effectively cultivated. Those cultivation plans were designed every year in Paris by Reinhardt’s group at the MBF, in negotiations with French authorities, to ensure deliveries to Germany and food supply. Each of them had a notebook (*Taschenbuch für Landwirtschaftsführer*) containing a short agricultural lexicon, main figures on French agriculture, specifics on the most common French varieties of wheat and oats and advice on how to introduce new crops.

The La-Fü first assessed wastelands and uncultivated areas and prepared their recultivation.¹⁰⁵ They also assessed the numbers of abandoned farms.¹⁰⁶ They then spent most of their time “advising” French farmers.¹⁰⁷ They organized meetings with farmers, mayors, trustees, and French agricultural services, sometimes showing movies on “good” agricultural practices. Those meetings were often followed by farm and field inspections to show one good and one bad example of farming in the village.¹⁰⁸ La-Führer also had to be available one day a week at their office for counseling, which was about every aspect of

100 67% apprenticeship or agricultural winter school, 9% agronomist, 2% state examined farmer, 22% without any degree. According to *Befehlshaber* South-West about 121 La-Führer, 25.08.1943, AJ/40/793 (2), Archives nationales.

101 Among others before being stationed in France, Gustav Bubritzki worked for the *Milch- und Fettanstalt* Ukraine and Joachim Lipke was *Gebietslandwirt* in the Russian steppe. AJ/40/460, Archives nationales and RH 36/258, BA MA. Eduard Linberg was employed by the Ostland in occupied Poland and transferred in 1943 to the Ostland company in occupied France, BA MA, RH 36/259.

102 Reinhardt’s report one year after the introduction of *Landwirtschaftsführer* in France, 4.05.1944, AJ/40/793 (1), Archives nationales.

103 Report of the *Befehlshaber* South-West, 25.08.1943, AJ/40/793 (2), Archives nationales; BA MA RH 36/368 and RH 36/369.

104 Entretien du Majestic, Reinhardt to Bonnafous, the French Minister for Agriculture and Food Supply, 29.04.1943, 3W 75/1, Archives nationales.

105 Report of the *Befehlshaber* North West to the MBF in Paris about the La-Führer’s activities, 13.01.1944, AJ/40/793 (1), Archives nationales.

106 “Mission and provisional tasks of the La-Führer”, AJ/40/793 (1), Archives nationales.

107 More specifically with the 400 French agronomes that were released in early 1943.

108 AJ/40/793 (3), Archives nationales.

farm management: fertilization through synthetic and organic products, fight against the Colorado potato beetle, cultivation of oilseeds, new crops (mainly soy and kok-sagyz), animal husbandry conditions.¹⁰⁹ The La-Führer advocated for a more intensive and productivist agriculture.

But La-Führer also assessed agricultural activity: production, size of herds, measure of cultivated areas, silos, etc. They established statistical data in order to correct French statistics and monitored the deliveries for food supply.¹¹⁰ The establishment of La-Führer was a clear sign that the Germans distrusted the French authorities down to the regional level and preferred to take the matter of food requirement in their own hands. Their establishment was a complete surprise for the French, who did not appreciate this extra German monitoring over the whole country.¹¹¹

In their monitoring of agricultural production, La-Führer fought against the black market, in accordance with the policy adopted in Paris. Some of them were specifically responsible for the collection of milk and fats, key products for the (German) food supply. Alongside their agricultural mission, the La-Führer were also supposed to monitor the “political atmosphere”, not unlike the control functions they exerted in Ukraine. Their daily contact with rural population make them precious assets, providing “important intelligence material.”¹¹²

A large survey of soil was conducted starting 1943 in the formerly “occupied zone” with the goal to create “soil maps as a basis for the cultural planning of the [Ostland] and the MBF.”¹¹³ Such maps would provide the occupation authorities with a better knowledge of the territory, a first step towards ecological occupation. The point was to scientifically assess the potential for yield improvement of cultivated area, to test the worthiness of re-

109 They advocated for the building of manure pits. MBF group Wi III/1 to the Befehlshaber and Feldkommandanturen, 27.04.1944, AJ/40/793 (1), Archives nationales. They checked for the mandatory signs in front of each potato field and for farmers who did not spray properly. Reinhardt's report one year after the introduction of Landwirtschaftsführer in France, 4.05.1944, AJ/40/793 (1), Archives nationales. Letter from MBF division for agricultural production to the 3 district chefs, 08.06.1944: “The Landwirtschaftsführer are instructed to support the increase of the acreage for oilseeds in any manner. Protests are to be kept to a minimum.” AJ/40/793 (7), Archives nationales, Lyautey translated. Reinhardt's report one year after the introduction of Landwirtschaftsführer in France, 4.05.1944, AJ/40/793 (1), Archives nationales. Better use of pasture, and building of silos for animal feed. MBF group Wi III/1 to the Befehlshaber and Feldkommandanturen, 27.04.1944, AJ/40/793 (1), Archives nationales. See also AJ/40/793 (3), Archives nationales.

110 Reinhardt's report one year after the introduction of Landwirtschaftsführer in France, 4.05.1944; template for reports on the activity of La-Führer, 10.09.1943, both in AJ/40/793 (1), Archives nationales.

111 Letter from French Minister for Agriculture and Food Supply Bonnafeous to Reinhardt, 12.04.1943: “You even declared that the liberation of 545 [French] agronomists that I demanded a few months ago was related to the acceptance of the establishment of those agricultural counselors in the occupied zone by my Department. This condition has never been brought to my attention and I am very surprised to see it invoked today (...) This is why I am bound to demand you in the strongest and the most insistent manner to please renounce to the implementation of those counselors.” AJ/40/793 (1), Archives nationales, translated by Lyautey.

112 In their reports “ist kurz auf Beobachtungen über die politische Haltung und Stimmung der französischen Bauernschaft einzugehen”; “wichtiges Nachrichtenmaterial”. Reinhardt's report one year after the introduction of Landwirtschaftsführer in France, 4.05.1944, AJ/40/793 (1), Archives nationales.

113 Title of the project, Research Programme 1943/44, Imperial Institute for foreign and colonial forestry in Hamburg, 15.09.1943, BAL R 73/15317. Note that the “occupied zone” concentrated most of France's agricultural production. Not any map has yet been found in the archives.

cultivating wastelands and to rationalize the use of synthetic fertilizers knowing precisely what the soils' requirements for each nutrient were.

In the context of “the inevitability of having to replace the lost Ukrainian soil yields”, this work was considered vital for the war (*kriegswichtig*).¹¹⁴ La-Führer collected more than 17,500 soil samples overall. The survey was supervised by Dr. Vageler, head of the Department of *Agriculture and Forestry* of the German institute in Paris and analyses were performed in his home university, the Imperial Institute for foreign and colonial forestry in Hamburg. The survey showed a less acute soil acidification than expected, which meant some fertilizer phosphate could be saved for the German armaments industry.¹¹⁵ However the results showed that expectations on the re-cultivation of wasteland were to be reconsidered given the very low availability of synthetic fertilizers.¹¹⁶

La-Fü were present not only in occupied USSR or France, but in several European countries under German dominion: in Italy, the Netherlands, Belgium, Serbia, Croatia, Montenegro, Albania, Greece, and some parts of Romania.¹¹⁷ In November 1943 an order of Hitler forbade any further transfer of La-Fü from the East to the West: they were to serve in combat units on the Eastern Front.¹¹⁸

To Modernize and to Colonize: Ostland and LBGU

German authorities saw farming in France and the Soviet Union as backward, mainly because, in their view, the land and the soils were not used intensively enough. As British and French colonizers, German planners and administrators pursued the goal of modernizing the agriculture of their Western and Eastern colonies, in Ukraine and the French Forbidden Zone.¹¹⁹ To this effect they set up special corporations which pursued several goals: to regroup land in bigger farms, develop mechanization, the use of fertilizers, both synthetic and natural, “rationalize” tillage, and introduce new varieties. In all these aspects, there is a lack of historical information. More research is needed on what Germans agricultural specialists did precisely in their experimental farms in Ukraine and France, and what they wanted the La-Fü to require from the French and Ukrainian peasants.

In the East, collective farms were already big enough, mostly. A Farming Corporation Ukraine was formed (*Landbewirtschaftungsgesellschaft Ukraine*, LBGU) to manage the farms.¹²⁰ It controlled deliveries and producers. But purchase, storage, handling, processing, imports, and exports were managed by another German enterprise, the *Zentralhan-*

114 Letter from Heske to Marcus, Reichsforschungsrat, 11.03.1944, BAL R 73/15317.

115 Letter from Reinhardt to Vageler, 16.03.1944, BAL R 73/15317.

116 Letter from *Sicherheitspolizei* to Dr. Brandt, personal staff of the Reichsführer-SS, 3.02.1944, BAL, N 19/1305.

117 Gerlach, *Die deutsche Agrarreform und die Bevölkerungspolitik in den besetzten sowjetischen Gebieten*, p. 38; order from Oberst Matzky and Major Krantz, 30.11.1944, BA MA, RW 19/3160.

118 Hitler's order (Führerbefehl), 27.11.1943, quoted in letter of WFST/Org. (1. Staffel), 14.12.1943, BA MA RH 4/491.

119 For French North Africa see D. K. Davis, *Resurrecting the Granary of Rome: Environmental History and French Colonial Expansion in North Africa*, Athens 2007.

120 Brandt, *Germany's Agricultural and Food Policies in World War II*, p. 83; Gerlach, *Die deutsche Agrarreform und die Bevölkerungspolitik in den besetzten sowjetischen Gebieten*, p. 32.

delsgesellschaft Ost für landwirtschaftlichen Absatz und Bedarf GmbH (ZHO or ZO).¹²¹ LBGU had the same functions as the Agricultural Corporation *Ostland* (of its full name *Ostdeutsche Landbewirtschaftungsgesellschaft*), which was active in Poland and France. *Ostland*¹²² was a farm management company, involved in occupied Poland starting early 1940, and beginning in summer 1941, in occupied Soviet territories. Its purpose was to manage seized farms and prepare estates for the German agrarian colonization to come. In France, the company was active as soon as September 1940 in the Forbidden Zone.¹²³ In order to maintain agricultural production at a normal level, the implementation of the company was very fast, mostly on abandoned farms. But “poorly managed farms”, according to German criteria, were also brought under the *Ostland*’s authority. At its height, the company managed 11,500 French farms on 170,000 hectares of farmland, and more than half of agricultural land in the *département* Ardennes. The goal of this enterprise was to apply German “national-socialist” methods to French agriculture in order to boost its production: regrouping of land and mechanization, agronomic trials in experimental fields, selected high-quality seeds, synthetic fertilizers, etc. *Ostland* set up 35 experimental station in the Forbidden Zone.

The management of the workforce was also national-socialist: every estate (around 450 hectares) was under the rule of a German chief of culture, who led non-German farmworkers. They were French or foreign, some of which were deported to Eastern France.¹²⁴ The workforce was accounted according to their productivity and each group had a productivity factor.¹²⁵

Even though the purpose of *Ostland* might have been, at the beginning of the war, to prepare the area for a potential annexation, and although French refugees were not allowed back in the “Forbidden Zone” where the company was active, no German settlers were ever sent to France in the farms managed by this company. The colonization plans remained plans and only Wehrmacht officials worked in those farms, without their families.

The *Ostland* company was both a showcase and a first implementation of those “German” methods in France.¹²⁶ Not only the new way of production were tested (in ploughing for example), but also new varieties and crops (soy and kok-sagyz among others),

121 Corni/Gies, Brot – Butter – Kanonen, p. 537; Gerlach, Kalkulierte Morde, p. 57.

122 Not to be mistaken with the *Reichskommissariat Ostland*, which was the military administrative entity that managed the Baltic States, Belarus and the North-Eastern part of Poland starting 1941. The company changed its name to “Reichsland” after 1941 to avoid any misunderstanding.

123 For more information of the *Ostland* company in France, see Mièvre, L’“Ostland” en France; M. Lyautey, L’Ostland en France pendant la Seconde Guerre mondiale, Mémoire de master de l’EHESS, 2017, 184 pp. and the work of A. François, Les Polonais déportés.

124 More than 600 foreign Jews from Paris and 20,000 Poles were deported in order to work for the *Ostland* in North-Eastern France.

125 1 for men; 0,7 for women; 0,3 for youth; 0,5 for Jews, and 0,3 for POW of colour. 12R 143, Archives départementales des Ardennes.

126 The Militärbefehlshaber himself describes the goal of *Ostland* to be “a german example of agriculture in order”. Letter from Stülpnagel to Oberkommando Wehrmacht, 13.02.1943, AJ/40/793 (1), Archives nationales (Lyautey translated).

before they could be considered for a wider use on the whole French territory. Several agronomic trials were also designed to scientifically prove the superiority of German varieties over French ones, to then be able to extend their cultivation all over the country.¹²⁷ Colossal means were put into this company, especially considering the war condition: tens of thousands of men and women for the workforce, hundreds of tractors, fuel, fertilizers, seeds, chemical products, and sprayer to fight the Potato beetle, etc. But *Ostland* was also thought as a place where a new “elite of German farmers learns to think on a large scale, to work and compare in a European way, to use the soil with the aim of achieving a maximum in nutrition, not ideologically, but nevertheless obsessed with the idea of German exemplary performance.”¹²⁸

The Germans exported farm appliances to the Forbidden Zone of France and to the occupied Soviet Union. Under the *Ostackerprogramm*, ZO brought 7,000 tractors, 20,000 generators, 250,000 steel plows, 3,000,000 scythe, thousands bulls, cows, boars, and stallions to the Soviet occupied territories.¹²⁹ In France, *Ostland* brought 433 tractors, 373 ploughs, 116 trucks and other appliances, mainly from Lanz, a German manufacturer of farm equipment. This material remained in France after liberation and played an enduring role in the mechanization of agriculture locally. In Ukraine, the *Ostackerprogramm* contradicted the radical plunder which occupation forces practiced, first during the German advance in 1941, and second during the German retreat in 1943–44, and other occasions (summer 1942).

Kok-sagyz’s Travel from Soviet Kazakhstan to France via Occupied Ukraine

Germans pushed to introduce new crops in French and Ukrainian farming. This drive was motivated by specific demands of German war industry and German food economy. For instance, oilseeds were in high demand, so Germans forced French farmers to cultivate rapeseed. An interesting case is that of the rubber plant kok-sagyz, which made its way from Kazakhstan to Ukraine, Poland, and France during German occupation. Several countries during WWII were interested in the industrial properties of dandelions, including the Soviet Union, Germany, and the USA.¹³⁰

Heim has extensively studied how German scientists and the SS developed research on kok-sagyz plants, the extraction of rubber from it (especially in Auschwitz) and its farm-

127 “Der Aufbau der Versuchsabteilung der ‘Reichsland’ im besetzten nordfranzösischen Gebiet”, Dr. Leitzke, 12R 99, Archives départementales des Ardennes.

128 “Hut ab vor ihrer Leistung! Eine landwirtschaftliche Elite”, Zeitungsdienst des Reichsnährstandes, n163, 21.07.1941, BAL, R 3601/2353.

129 Gerlach, *Kalkulierte Morde*, pp. 323–324.

130 In the USA, pedologist Marlin Cline worked on dandelions, trying unsuccessfully to turn it into crops. John M. Duxbury, Memorial statement on Marlin G. Cline (1909–2009), online on: https://ecommons.cornell.edu/bitstream/handle/1813/19175/Cline_Marlin_G_2009.pdf (accessed on 8 October 2019). There is still interest in turning dandelions into rubber for the tire industry. Ludwig Burger, Tire makers race to turn dandelions into rubber, Reuters, 20 August 2014, online in: <https://www.reuters.com/article/us-dandelion-rubber/tire-makers-race-to-turn-dandelions-into-rubber-idUSKBN0GK0LN20140820> (accessed on 8 October 2019).

ing.¹³¹ Germans relied heavily on literature, researchers, equipments, fields and seeds from the Soviet Union.¹³² Basically, they transferred under their control the research being done on kok-sagyz in occupied Soviet territories. The SS plundered equipments, secured institutes, deported scientists and libraries to Germany and to their research facilities in Auschwitz. For that, men were sent to Ukraine, including the Crimea, and the North Caucasus, searching for anything kok-sagyz related. Two Russian scientists are named, a certain Nikitin and Yakov Alexeievich Popov as being used by the SS for research on kok-sagyz, but there were many more.¹³³

The SS wanted to develop kok-sagyz in France. The crop was introduced for the 1944–1945 campaign, to use as an ersatz for rubber. It was a special demand from the Reichsführer-SS and cultivation was planned on at least 2,500 ha in regions where sugar beets yields were high (North-Eastern France mostly and also around Paris and Orléans). Seeds were provided by Germany. The crop was ultimately tested in 59 farms in the summer 1944. The SS even planned to deport 180,000 additional Poles as workforce to develop French kok-sagyz production.¹³⁴

Conclusion

In this paper we have attempted to take an integrated and connected view of Nazi domination of Europe. Going beyond serialized case studies and comparison of occupational regimes, we have looked at how personal, material and intellectual circulations within its empire shaped the colonial visions and occupation practices of Nazi Germany in three areas: displacement of peasants, cultivation of strategic plants like kok-sagyz, and political and economic control at the district level via the La-Führer. Deepening the research on what agricultural practices and seeds were imposed, and widening the geographical scope to include other occupied countries is a task ahead of us.

Already in 1942 it occurred to the German occupiers that the new acquisitions to the Reich to the East and to the West could not substantially relieve its agriculture from its productive tasks. Both in Ukraine and France, ideas of greatly intensified farming and rising outputs crushed against the workforce shortfalls and material shortcomings. The *Großraumwirtschaft* never materialized and autarkic agricultural development remained a dream, and actually a nightmare for millions of Europeans who were not near the top of the Nazi food chain.

131 S. Heim, *Plant Breeding and Agrarian Research in Kaiser-Wilhelm-Institutes 1933–1945: Calories, Caoutchouc, Careers*, New York/Berlin/Heidelberg 2008, pp. 103–120.

132 In the occupied territories of the Soviet Union, though, the general contempt for the kolkhoze system and for Ukrainian and Russian agricultural practices among occupying forces was combined with a great and sustained interest in the advances of Soviet agronomy among German researchers. From the first day of the invasion to the last day of occupation, German occupiers translated the best works of Soviet agronomists and tried to maintain agricultural research on the bases of Soviet agricultural institutes. Gerlach, *Kalkulierte Morde*, p. 332.

133 Heim, *Plant Breeding*, p. 110–111.

134 See AJ/40/793 (11), Archives nationales.

Agronomists played a leading part in this lamentable history. Riecke, Schiller, Backe, Reinhardt, and many lesser colleagues participated in the initiation and unfolding of the great genocide and starvation which characterize WWII. Placed by the Nazi regime at key positions within the occupation apparatus, they endorsed the goal of building an empire premised on a hierarchy of food production and food entitlement which led to millions of deaths by hunger. On the ground they controlled the most numerous of all occupation apparatuses, as well as a large network of monitoring functionaries and procurement enterprises. Squeezing the most grain and oilseeds out of the farms was their major task. As the war persisted, intensifying production became a ubiquitous objective to which they committed themselves. Constraining the locals to produce technical crops which were necessary for Germany's war effort was another priority. If they happily failed in their grand scheme of colonization and autarky, they proved frighteningly successful in fulfilling these three tasks at the cost of the local populations.