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Food supply for the Home Army for the duration of the warsaw uprising

Zabezpieczenie Armii Krajowej w żywność na czas powstania warszawskiego

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Abstract. The literature on the Warsaw Uprising is extensive. It concerns its various aspects, ranging from strategic and operational issues, political problems, internal and international conditions, analysis of military actions during the uprising, reaction to the uprising, through the extermination of the population and insurgents, to the destruction of the city. Despite such abundance, the literature on the Uprising contains many gaps and discrepancies, and numerous issues are still waiting for more extensive research and elaboration.

Using archival material, including documents from archives in New York, London, Freiburg and Poland, as well as existing literature on the subject, the author presents previously unknown issues related to the supply of AK's units with food and water during the Warsaw Uprising. He describes the state of preparations and problems that occurred. He also claims that the Home Army was insufficiently supplied with food during the fights which had a significant impact on the development of events in Warsaw in the summer of 1944. In the article, the author proves that the provision of insurgent units with food and water had a very bad impact on morale, but, more importantly, on the ability to perform military operations within individual parts of Warsaw. He thoroughly describes the lack of commissariat's preparation during the occupation, as well as attempts to handle this issue before the fights commenced by the AK's Warsaw Area quartermaster, and indicates why they were destined to fail, at least partially. The state of preparation was became known not only through the first days of fighting, but rather during the following weeks of struggle in Warsaw. The noticeable chaos in the supply of food and water resulted from many factors, including the assumption made on the duration of the fights, as well as preparedness for battling under occupation, which resulted in keeping planning secret at a high degree, which led to discrepancies in the guidelines issued by the Home Army's Headquarters and the Home Army's Warsaw Area.

Keywords: Logistics, military supply support service, Warsaw Uprising, Home Army, 1944

Abstrakt. Literatura dotycząca Powstania Warszawskiego jest ogromna. Dotyczy ona różnych jego aspektów, począwszy od zagadnień strategiczno-operacyjnych, problemów politycznych, uwarunkowań wewnętrznych i międzynarodowych, analizy militarnych działań powstania, reakcji na powstanie, poprzez eksterminację ludności i powstańców, po zburzenie miasta. Mimo takiego bogactwa literatura powstańcza zawiera wiele luk i rozbieżności, wiele zagadnień czeka na bardziej obszerne zbadanie i opracowanie.

Wykorzystując materiały archiwalne, w tym dokumenty z archiwów w Nowym Jorku, Londynie, Freiburgu oraz Polsce, jak również istniejącą literaturę przedmiotu, autor przedstawia nieznaną dotychczas kwestię związane z zabezpieczeniem oddziałów AK w żywność i wodę na czas Powstania Warszawskiego. Wskazuje na stan przygotowań i występujące problemy z zaopatrzeniem. Twierdzi także, iż zabezpieczenie Armii Krajowej w żywność na czas walki było niewystarczające, a przez to miało istotny wpływ na rozwój wydarzeń w Warszawie latem 1944 r.

W artykule autor dowodzi, że zaopatrzenie oddziałów powstańczych w żywność i wodę miało bardzo istotny wpływ nie tylko na morale, ale przede wszystkim możliwość prowadzenia działań zbrojnych w poszczególnych rejonach Warszawy przez powstańców. Wnikliwie opisuje brak przygotowania intendenckiego w okresie okupacji, jak również czynione próby uporania się z tym problemem przed podjęciem walk przez kwatermistrza Okręgu Warszawa AK i wskazuje dlaczego nie mogły się w pełni powieść. Stan przygotowania obnażyły nie tylko pierwsze dni walk, ale przede wszystkim kolejne tygodnie zmagania w Warszawie. Dający się zauważyć chaos w kwestii zaopatrzenia miasta w żywność i wodę wynikał z wielu czynników, w tym przede wszystkim przyjęcia założenia o czasie trwania walk, jak również przygotowywania się do nich w warunkach okupacji, co skutkowało daleko posuniętą tajemnicą planowania i rozbieżnościami w wydawanych wytycznych między Komendą Główną AK a Okręgiem Warszawa AK.

Słowa kluczowe: Logistyka, zabezpieczenie materiałowe wojsk, Powstanie Warszawskie, Armia Krajowa, 1944

Introduction

Even though it has been 80 years since the Warsaw Uprising and despite the extremely important role that event played in the latest history of Poland, many aspects have not been sufficiently described and remain unknown. It is curious that despite there being numerous synthetic accounts drawn up, the Home Army's Warsaw Area has not yet been the subject of a scientific monograph. Consequently, many aspects that would show the state of preparation in the Area before the battle are barely or entirely unknown. The same applies to supplies secured for the duration of the uprising. While subsequent publications contain brief mentions about the state of weapons and health services, all matters regarding securing the supply of food and water during the fight are almost entirely omitted. This is the reason why this paper aims to elaborate on that subject and present the actual state. Moreover, I have proposed a research hypothesis assuming that there was an insufficient food supply for the Home Army for the duration of the Warsaw Uprising, which in turn had a significant impact on the development of events in Warsaw during the summer of 1944.

Home Army's organisational structure

The Home Army (Polish: Armia Krajowa, AK) was a covert armed force of the Polish Underground State. The Headquarters (Polish: Komenda Główna, KG) were

AK's commanding body with Brig. Gen. Stefan Rowecki as the commander, who, following his arrest, was replaced by Brig. Gen./Div. Gen. Tadeusz Komorowski "Bor". AK's KG was organised in a manner resembling the pre-war General Staff. It comprised the following sections: section I: Organisation, section II: Intelligence and Counterintelligence, section III: Operations, section IV: Logistics, section V: Communication, section VI: Bureau of Information and Propaganda, section VII: Bureau of Finances and Control, as well as the following services: justice, armament, health, commissariat, pastoral ministry, military offices. Diversion and combat operations were conducted by separate organisational divisions, "Wachlarz" Union of Retaliation and later by the Kedyw Directorate for Subversion (Ney-Krawicz, 1990).

Territorial organisation was based on the pre-war administrative subdivision. A province corresponded to an area, whereas a district corresponded with a perimeter, which was further subdivided into regions and establishments. Two to three areas united under single headquarters comprised a territory. AK's commander supervised the Warsaw territory comprising three subareas: west, east and north; Białystok territory (with headquarters in Białystok) comprising the following areas: Białystok, Nowogródek and Polesie; Lviv territory (with headquarters in Lviv), comprising the following areas: Lviv, Ternopil, Stanisławów, Volhynia; West territory (with headquarters in Warsaw), comprising the following areas: Poznań and Pomerania, as well as standalone areas: Warsaw-city, Kielce, Łódź, Kraków, Silesia, Lublin, Vilnius. The basic organisational and tactical unit was a platoon of approx. 50 soldiers (Chmielarz, Jasiński, 2011, pp. 37–81).

Home Army's military operations were characterised by a gradual transition from sabotage and diversion up to subversive and partisan operations that were meant to take the form of a general uprising at a critical point in time. Pursuant to guidelines, AK's Warsaw Area's task was supposed to be termination of opponent's administrative apparatus, taking control over airports and supply warehouses, as well as any other key facilities controlled by the enemy, and, finally, causing him to quickly capitulate under concentrated AK's forces and measures.

The development of political settings and operational situation led to the Brig. Gen. Tadeusz Komorowski issuing an order on 20 November 1943 to carry out an intensified sabotage and diversion operation code-named Operation Tempest. AK's operations were supposed to be focused on relentlessly oppressing German rearguards as well as performing strong subversive operations, with a particular emphasis on lines of communication. The realisation was supposed to involve using all forces and measures at AK's disposal. This, however, did not mean that preparations for a general uprising were to be continued. Nevertheless, as the front line was being moved, subsequent mobilised units joined the realisation of Operation Tempest, which, despite initial cooperation, ended in Red Army's units disarming AK's soldiers (Komorowski, 2004).

As the Operation Tempest progressed, it became clear that Stalin did not intend to cooperate with the Home Army both in case of military and political matters. This became the direct cause for making a decision in July 1944 to change previous battle plans and to trigger an uprising in the political and military centre of the occupied country, i.e. in Warsaw, that comprised the Warsaw Area of the AK within its underground structures.

Logistics within the Home Army's Command Office for the Warsaw Area

From spring 1941 Home Army's Warsaw Area led by colonel Antoni Chruściel "Monter" comprised eight districts. In summer 1944 its forces were estimated at 50,000 soldiers. Throughout the occupation the Area was subject to the Home Army's Command Office for the Warsaw Territory. The area's forces were supposed to fight outside of the city during the Operation Tempest, with only slight forces being left to protect public purpose facilities and civilian population. On 12 July 1944 the Area was excluded from jurisdiction of the Home Army's Command Office for the Warsaw Territory and was subjected directly to Home Army's Headquarters. Toward the end of July 1944 Home Army's leader, Div. Gen. Tadeusz Komorowski "Bór" made a decision to change the concept for using area forces and to involve them in battles for Warsaw.

In summer 1944 there were four military quartermaster divisions operating within the city, that were responsible for supplying materials for units and civilian population during battles planned by the AK. They were: Section IV of AK's Headquarters, Department IV of the Home Army's Command Office for the Warsaw Territory, Department IV of the Home Army's Command Office for the Warsaw Area and City Command Office's quartermaster department. However, the burden of supplying materials to AK's units fighting in battles for the capital was mainly borne by the Area quartermaster department.

Numerous tasks assigned to Department IV of the Home Army's Command Office for the Warsaw Area included supplying soldiers with food and water. Lieutenant/Captain Tadeusz Emil Dąbrowski "Daktyl" was its leader until spring 1943 (Chmielarz, 2014, s. 553). Due to tasks being imprecise and subject to changes during the general uprising and, subsequently, Operation Tempest, and as a result of general guidelines imposing an obligation to provide food for fighting units immediately before the beginning of the battle, the department he led did not undertake any intensive supply tasks. The dynamic changes in the East and the organisational chaos at the commissariat led to the change of the head of Department IV. On 1 May 1944 Cavalry Major (Res.) Tadeusz Dołęga-Kamieński "Badacz", the quartermaster of the Home Army's Command Office for the Warsaw Area, became its leader. He had

only several people at his disposal and was informed about there being absolutely no preparations made in terms of securing food for the duration of battles.

Owing to the function he served as well as his contacts and competency he was able to quickly put staffing matters and organisational structures of the department he managed in order by relying on his previous co-workers. He has also organised direct connectivity with quartermaster clerks within precincts comprising the Area. They included: Section I (Śródmieście) Cavalry Captain Tadeusz Znamierowski "Falkowski"; Section II (Żoliborz) Captain Stanisław Stefański "Szachista"; Section III (Wola) Captain Michał Janecki "Taternik"; Section IV (Ochota) Second Lieutenant Michał Karwacki "Sowa"; Section V (Mokotów) Cavalry Captain (Res.) Mieczysław Czychiryn "Brzozowski"; Section VI (Praga) Captain Stanisław Ułasiewicz "Zamożny"; Obwód VII (District) Major Tomasz Dziama "Roman"; Obwód VIII (Okęcie) Captain Stefan Niewolak "Nowina". The binding territorial structure consisted in each section clerk usually managing six bureaus: a) weaponry and ammunition, b) food and fuels, c) hygiene, d) transport, e) uniforms, f) council. Considering that sections were divisible into regions, their structure also included a quartermaster division that carried out tasks assigned by regions.

Quartermaster tasks in the scope of feeding soldier during battles

A majority of work was handled by food and fuels subclerks operating within sections. Their tasks included collecting detailed information on dislocation and supply at food points within section, participating in preparation of plans aimed at taking the points over and securing them against looting and destruction. An immensely important task handled by subclerks was developing a supply system that would enable securing food for several days of battle prior to its beginning, however without taking into account taking over German stockpiles and requisition of food among civil population.

The moment a battle started and facilities were being taken over, including German food stockpiles, the quartermaster was tasked with securing them using units and subunits of a rear echelon formation called the Military Service for Uprising Protection (Pol. Wojskowa Służba Ochrony Powstania, WSOP). Another assignment was division of acquired food among military forces and civilian administration in compliance with the previously agreed plan (Dołęga-Kamieński n.d./n.p., p. 4). Subsequently, after total control of the city was assumed, the Area quartermaster department's task was to transfer all material resources it held to the quartermaster department of the Territory, which in turn was supposed to establish a proper Area Corps Headquarters' commissariat service. During the first phase the aforementioned actions were supported by the designated City Command Headquarters whose structures were planned to be limited no earlier than after the end of formation and expansion of Area Corps Headquarters' commissariat services.

A Home Army's Warsaw Area quartermaster's recollections were following: Digital determination of general needs for the Uprising was particularly difficult. During the initial period it was difficult to anticipate the limits of influx of people, troops in particular, to Warsaw [...]. By using probabilistic methods I have determined that the general number of people assigned to me for supply at that time to be 50,000 people (Dołęga-Kamieński, n.d./n.p., p. 6–7). When Major "Badacz" was taking over heading the IV Department of the Area, he had three central warehouses located at ul. Leszno 18, ul. Nowogrodzka and ul. Dzika 19 at his disposal. Office materials and supplies, maps and plans, candles, cigarettes and money were gathered there. It was already mentioned that the Area practically did not have any food supplies at its disposal. Only after the decision to start battles in Warsaw, i.e. toward the end of July 1944, eight food storages located within the city that were organised earlier by the AK's Headquarters Quartermaster Department led by Lt Col. (NN) "Tański" the Area's quartermaster. They comprised the following: "Magistrat" at the corner of ul. Nowy Świat and Al. Jerozolimskie, "Wilno 2" at the corner of ul. Wileńska and ul. Szwedzka, "Wybrzeże" at Wał Miedzeszyński "R.W." at Al. Ujazdowskie 39, "Zimny" at ul. Chłodna 4, "Bednarz" at ul. Bednarska, "Wróbel" at ul. Inżynierska, "Roma" at ul. Nowogrodzka (Materials of Mjr Badacz, n.d./n.p.). However, neither their content nor stock is known. Still, it could be assumed that they were abundant, yet insufficient to fully satisfy army's needs. There was very little time until the beginning of fighting, nevertheless, an attempt to secure crucial products was made. It was probably then that the Area quartermaster department acquired a part of a significant supply of the Central Welfare Council (Pol. Rada Główna Opiekuńcza), a social organisation operating in Poland under occupation (Kroll, 1985). Considering the aforementioned, Major "Badacz" agreed during a meeting with Major Commissariat Aleksander Niżyński "Ekonom", the quartermaster of the AK's Warsaw Territory that due to the meager amount of supplies, the Area quartermaster will have precedence over others regarding their disposal (Gozdawa-Gołębiowski, 1992, p. 55).

The main assumption of the uprising was to have it begin at the moment when insurgents can expect to succeed. Moreover, the success was to take place within several days. This in turn determined actions taken up by the commissariat. It should be noted, however, that Mjr "Badacz" was not familiarised with battle plans and each of his several attempts to change it were rejected. His recollection of that was as follows: [...] I was told that I don't need it and I should proceed according to my previous assumptions. I was to receive necessary amendments and guidelines from the Area Commissioner as works progressed I admit that I wasn't used to such work system. Having the several years of experience as an operations officer and, subsequently, the chief of 3 various division staffs, operations groups and the army led by remarkable and widely-known strategists, I knew that during preparations the quartermaster has always been a member of the inner circle of the team

of co-workers and professional advisers to the commander, since an operation that wasn't secured with tailored materials wouldn't be guaranteed to succeed. [...] That course of action was a great mistake, which had a great negative impact during the Uprising. At the same time, the answer I got showed me the little significance attributed to quartermaster's work and how the Area Commissioner and his Chief of Staff didn't appreciate the cardinal principle of synergy of all elements handled by the commander. Unfortunately, my opinion presented above proved to be justified and had a particular bearing during actions, when it was too late for any economic amendments (Dołęga-Kamiński, n.d./n.p., p. 21–22). It should be noted, however, that the problem frequently occurs within armies, regardless of the time and place or the level of their technicisation (Kurasiński, 2016, pp. 2–3). It is clear that the Area quartermaster was using his personal contacts and was not entirely cut off from information on plans, still crucial guidelines were published as late as several days prior to the uprising. Staffing levels within the AK's Warsaw Area show the scale of the problem. It was assumed that the day before the uprising there were approx. 50,000 troops and they needed to have food organised for them (Polskie Siły Zbrojne, 1950, p. 682–683).

On 25 July AK's Headquarters issued an instruction for section quartermasters for the duration of the uprising (Instrukcja, 1944, p. 193–197). It contained an expectation that each troop checking it at a concentration point is to be provided with dry provisions for two days of battling. It was not until later that the fighting units were to be provided with food by the quartermaster, his food officers and sub-officers. It was assumed that it was to be obtained using supplies and territories gained through fights. The Area's quartermaster was to be provided then with all taken over food storages and processing plants, which were expected to be staffed with Military Service for Uprising Protection's forces.

On the very same day the second part of the operational order issued by the Commissioner of the AK's Warsaw Area appeared together with AK's Headquarters' instruction. It contained detailed tasks to be handled by the commissariat during the uprising. It was, however, inconsistent with guidelines provided in the aforementioned AK's Headquarters' order. This is because it indicated that food during the first three days was to be provided by section quartermasters from their own or, as it was stated, reserved supplies. Whereas bread was to be collected from bakeries located within sections. It was assumed that starting from the fourth until the tenth day food would be supplied from ex-German warehouses handed off to sections by the Area quartermaster. Allocated lump amounts of cash were to be used to buy foods for the first three days of fights that were lacking within sections (Plan działania, 1944, p. 4–6).

Neither the AK's Headquarters' order, nor the Area's Commissioner's instruction have assumed that the insurgents would not succeed within the first several days or that the fights could continue for days or even weeks or months, which

is what has actually happened in the summer of 1944. That situation caused that Area sections that had supplies for the first days of fights, which was not always the case, did not have any reserves, which made further fights dependent on civilian population's involvement, amount of war gains, organisation and carrying out large-scale requisitions and external assistance (material air drops). Additionally, as can be seen based on the aforementioned documentation, it was as early as at the stage of planning service operations and security during fights that significant discrepancies between Home Army's Headquarters' guidelines and these provided by the Home Army's Command Office for the Warsaw Area became noticeable. They proved inconsistencies in undertaken actions as well as nervous tension and rush in command's doings.

Subsequent days passed. During that time relevant staff needed to register material supplies of which they were in possession, plan allotments for individual sections and units, and move accumulated supplies. The tension within the city resulting from evacuation of some German offices, establishments and withdrawal of German army units begun to give way to the state from before the unsuccessful assassination of Adolf Hitler. On 28 July the order to mobilise issued by the AK's Warsaw Area Commissioner was revoked, and despite the sounds of battles that were coming from Warsaw foreground, a significant number of officers that had better knowledge of the situation of their own units did not anticipate that the decision to start fighting would be made soon. Suddenly, in the afternoon of 31 July 1944, Div. Gen. Tadeusz Komorowski "Bór", single-handedly made a decision to commence the uprising, against arrangements made in the morning during a briefing at the Home Army's Headquarters, and issued an order to the AK's Warsaw Area Commissioner to start fighting the following day at 5 p.m.

After 28 July, the exact date remains unknown, the Area quartermaster demanded a briefing with quartermasters from all sections. On 1 August at 10.50 a.m. Major "Badacz", who was on his way to the said briefing, got an order determining 5 p.m. as the "W" hour. That meant that there were only six hours left before the fighting was to start. It was thus a fortunate coincidence rather than planned action that quartermasters were able to become acquainted with detailed guidelines. The District quartermaster was the only one not present during the briefing that took place within premises at ul. Krzyckiego. Everyone else, including Major "Badacz", was surprised by the decision to commence fighting, nevertheless they accepted the decision and acquainted themselves with previously prepared, written guidelines that were provided to each person present. They comprised five documents:

1. Daily norms for troops rations;
2. Breakdown of approved and numbered foray kitchens for troops within each section;
3. Food allotment for each section together with a detailed specification from Area Headquarters' warehouses;

4. Breakdown of food supplies within Central Welfare Council's kitchens assigned for Area Headquarters' disposal, divided into sections;
5. Allotment of bakeries supplied with flour stocks for individual sections (Dołęga-Kamieński, n.d./n.p., p. 31).

The first of them was preserved. It was signed by Major "Badacz", dated 31 July 1944. The document determines food norms during the first period of fighting. This is presented in the bellow table:

Table. 1. Daily norms for troops rations

| Daily combat ration | | | |
|--------------------------------------|-----------------------|----------------|---|
| No. | Article | Weight | Remarks |
| 1. | Bread for troops | 500 g | |
| 2. | Beef | 300 g | or canned meat 150 g |
| 3. | Fat | 50 g | |
| 4. | Potatoes | 700 g | to be replaced with more hard vegetables or flour in case of a general, seasonal lack of potatoes |
| 5. | Hard vegetables | 150 g | |
| 6. | Salt | 25 g | |
| 7. | Fresh onion | 12,5 g | dried onion to be provided using the 1:10 ratio |
| 8. | Vinegar | 1 g | |
| 9. | Dried soup vegetables | 1 g | |
| 10. | Roots | 0,5 g | |
| 11. | Flour for spices | 10 g | |
| 12. | Coffee | 25 g | |
| 13. | Sugar | 25 g | |
| Total calorie count | | 4,000 calories | |
| Daily combat ration – dry provisions | | | |
| No. | Article | Weight | Remarks |
| 1. | Rusks | 500 g | |
| 2. | Canned meat | 200 g | |
| 3. | Fat | 75 g | |
| 4. | Coffee | 30 g | |
| 5. | Sugar | 75 g | |
| 6. | Salt | 5 g | |
| Total calorie count | | 3,000 calories | |

Source: Daily norms for troops rations (NORMY, 31 VIII 1944, p. 3)

Realisation of assignments during the uprising

While carrying out Gen. "Bor"'s instruction, on 31 July 1944 at 7.00 p.m. Col. "Monter" ordered alerting Area sections. The order, as could be expected, reached most section commanders with a significant delay, with some of them receiving it as late as the next morning or at 5 or 6 p.m., as was in case of the western subsection commander (Malinowski, 1983, p. 167–169). This has made the course of concentration of platoons more difficult and caused that there were fewer troops checking in at concentration points, whereas weapons and food storages, etc. had to be moved. Moreover, it has completely prevented realisation of pre-uprising plans within Warsaw District. At the same time, on the day the order to start fighting for Warsaw was issued, Gen. Reiner Stahel called in commanders of individual defence sectors and told them to be "maximally vigilant" because of information that the uprising in Warsaw may start any time soon (Mirecki, Christoforow, 2007, p. 587).

Thus, the rushed and nervous preparations for the uprising caused by the delayed orders were guaranteed to lead to losing the element of surprise. On 1 August at approx. 1.00 p.m. in Żoliborz in Warsaw, Second Lieutenant Bogdan Kunert "Szajer", the commander of the Group "Żniwiarz" 226th platoon, issued an order to Corporal Officer Cadet Zdzisław Sierpiński "Świdza" and his six subordinates to move weapons from the warehouse at ul. Kochowskiego to a villa at the corner of ul. Gomółki and ul. Sułkowskiego, near the unit's concentration point. Fire was exchanged with the passing German patrol during the march. Additional forces were directed to Żoliborz. They have detected one of insurgents' concentration points near ul. Suzina. Regular fighting begun and German command was notified about it. The element of surprise was lost – the single advantage left, that brought much hope.

The consequences of that event became visible in the course of fights that started in Warsaw in the afternoon. Most attacks launched by insurgents failed, main facilities staffed by Germans were not taken over and that was topped with a painful loss of life and wounds they suffered. As a result of blocking large city blocks access to some weapon, ammunition and food warehouses and stores was lost. Aggressive fights have additionally decreased the head count and the number of available weapons and ammunition. Any gains in that scope proved to be insignificant. All of the above caused that as soon as the first night, on 1 August, a large number of insurgents from Żoliborz, Wola, Ochota and Mokotów left the city to hide in nearby forests. Despite an extremely unfavourable operational and tactical situation, on 2 August, early in the afternoon, a decision was made at the AK's Headquarters to continue fighting for Warsaw.

Considering the very low level of realisation of tactical tasks within individual districts, victualling matters did not look good either. Private soldiers usually heard about alerts at the last moment and checked in at concentration points which frequently were far away from their homes. Moreover, they came with some of the

equipment missing, including dry provisions. District quartermaster's department was surprised by the decision to launch the fights, and was thus cut off at its staging post for the entire duration of the uprising from its own units (Maliszewski, 1945, p. 6). As a result of some German forces moving before the fighting started, a number of section food storages and warehouses were lost. Access to them was cut off by enemy forces stationing nearby or they became unaccessible as a result of blockades and closing bridges to civilian traffic. Some weapons and food was also lost prior to the uprising as a result of ordered inspections conducted by German patrols. As a result, in some parts of Warsaw, e.g. in the Old Town, there was a situation when during the first couple dozen of hours of fighting some units and subunits have lost their food supplies entirely (Utracka, 2012). The exodus of a large fraction of insurgent forces to forests around Warsaw has additionally paralysed the commissariat which was deprived of its material supply base and staff (low level of reporting), and thus had to operate on an ad hoc basis under conditions of a constantly changing tactical situation. A majority of units of the Military Service for Uprising Protection that were intended to take over and secure food storages received different assignments (as assault echelon units) or they have not checked in at concentrations points. The first days of August have also shown that food rations indicated in the order of 31 July were excessive and overly diversified, hence in most cases it proved impossible for section quartermasters and unit food officers to satisfy them.

The failure of the first several dozens of hours of fighting for the city has almost entirely blighted victualling plans and forced building the victualling system for fighting units from scratch. The quartermaster of the 28th Infantry Division summarised it as follows: The outcome of war operations over the course of the first several days of the uprising has turned almost 80% of developed plans upside down. Points in which larger stores were located were either cut off or the battles taking place in their vicinity prevented any use of these warehouses. Supplies had to be organised on an ad hoc basis (Fałkowski, n.p./n.d.).

The difficult victualling situation that occurred after the first couple dozens of hours of fighting for Warsaw was overcome mainly as a result of taking over poorly protected German food stores at that time or within several subsequent days. The greatest successes in that field included the following takeovers: German food and uniform warehouses at ul. Stawki on 1 August; there were 2,000 tonnes of sugar, 300 tonnes of flour and 430 tonnes of canned products stored inside them (Sprawozdanie, p. 23–24); Haberbusch i Schiele Brewery warehouses at ul. Ceglana 4/6 that contained large stocks of grains and other food products (Raport Sytuacyjny, p. 57–58); Polish Security Printing Works' (Polska Wytwórnia Papierów Wartościowych S.A.) warehouses at ul. Sanguszkki that had large portions of dried potatoes, canned products, fruits, chocolate and alcohols stored inside (Kulesza, 2003, p. 67–68); "Pluton" company's warehouses at ul. Grzybowska 37 with an abundant supply of sugar, flour, groats, marmalade and other food products (Drozdowski, 1974, p. 265–281); the

Capital Grasberg's Steam Mill buildings at ul. Prosta 28/30 contained 800 tonnes of grains, mainly wheat and barley. "Społem" warehouses in Czerniaków at ul. Czerniakowska 196 and 204 with large stores of sugar and sweets and factory buildings at ul. Solec were also taken over, whereas the main source of supplies in Mokotów was in food stores of the Citizen Committee for Refugees (Komitet Opieki nad Uchodźcami) located at the artificial honey factory at ul. Puławska 140.

Insurgents have also turned to social and charitable organisations that were gathering supplies for their assistance. Immediately prior to its establishment, the Central Welfare Council had from 700 to 900 tonnes of food stored at ul. Ludna 9, Mokotowska 48, Hoża 53 and within social establishments and kitchens across Warsaw. A great number of them became damaged or taken over by the military after the fighting begun.

Units and subunits have also begun conducting requisitions of goods, both without any compensation and by paying for taken over goods. At first they were doing it on their own, and later in a more regulated manner (the Operations and Requisition Group was established after 10 August). It was the only way to supply fighting troops with food in many places across Warsaw. Material drops that were taking place from the night of 4 August, at first conducted by the West and after 13 September by the Soviet air force, complemented aforementioned means.

Still, none of that would do any good, if the civilian population would not enthusiastically approach the situation by individually or collectively organising food for fighters which saved them from hunger. Their efforts were particularly important over the course of the first two weeks. Regardless of all attempts that were made, the availability of food was decreasing as fighting progressed, which is illustrated by the following breakdown prepared by one of insurgent food clerks.

Table 2. Food rations for insurgents

| Article/Date | 30 VII | +/- 11 VIII | +/- 21 VIII | +/- 11 VIII | +/- 1 IX | +/- 21 IX | +/- 1 X |
|-------------------------|--------|-------------|-------------|-------------|--------------------------|------------------|---------------------|
| Bread | 500 | 500 | 300 | 100 | 50 | grains | |
| Meat | 300 | 100 | 50 | +/-25 | +/-25 | +/-50 | - |
| Fats | 50 | 10-20 | 20-30 | 20 | 10-20 | 5-10 | +/-5 |
| Potatoes | 700 | - | - | - | - | - | - |
| Hard vegetables | 150 | 200 | 200-250 | 200 | 300, a portion in grains | 330, ½ in grains | 400 grains and bran |
| Flour for spices | 10 | | | | | | |
| Sugar | 25 | 25 | 50 | 50 | 100 | 50 | 25 |
| Coffee | 25 | 25 | 30 | 25 | 30 | 30 | 30 |
| Marmalade/honey | 100 | 50 | +/-25 | 25-30 | +/-50 | +/-25 | - |

Source: Note by Magóra, a food clerk (Materiały Mjr. Badacza, n.d/n.p.)

A separate issue during the uprising, which was not appreciated enough in plans for securing supplies for the duration of fights was providing fighters and civilian population with water. Daily needs were estimated at 100,000 m³. Both the River Pumping Station (Stacja Pomp Rzecznych) at ul. Czerniakowska and the Filtering Station (Stacja Filtrów) at ul. Koszykowa were not taken over by insurgents and they were occupied by Germans throughout the entire fighting period, which enabled them to freely control water provision across the city. The staff was mainly composed of Poles led by inż. Henryk Janczewski and inż. Włodzimierz Świdorski. They have increased the level of water supply to 145,000 m³ as early as within the first few days to cancel out losses caused by damages to the water supply network as a result of aerial bombardment, artillery fire and explosions (Gajewski, 1979, p. 97). Unfortunately, the damages to the water supply network were so extensive that water stopped being provided in some parts of Warsaw after the first two weeks of August. It was not until then that a decision was made to build wells at a larger scale and to repair existing ones as well as to seize all private pumps. Still, that has not resolved the issue of insufficient water supply, in particular due to Germans starting to cut off individual regions within the city from water from 29 August on in response to their problems fighting against insurgents. Water supply was suspended to enable defeating raiders in Warsaw. The task was entrusted to Lieutenant Schmachtel (Bericht, 1944, p. 37–38).

Final conclusions

Provision of insurgent units with food and water during the first days of fighting and during following weeks was insufficient, which had a very bad impact on morale, organisation of actions or even the ability to perform military operations within individual parts of Warsaw.

During the occupation there was insufficient gravity given to securing Home Army's units with food for the duration of fights and all rushed attempts made by the AK's Warsaw Area quartermaster, Cavalry Major (Res.) Tadeusz Dołęga-Kamiński „Badacz”, to handle this issue within as few as several weeks before the fights commenced were destined to fail, at least partially.

The noticeable chaos in the supply of food and water resulted from many factors, including the assumption made on the duration of the fights, as well as preparedness for battling under occupation, which resulted in keeping planning secret at a high degree, which led to discrepancies in the guidelines issued by the Home Army's Headquarters and the Home Army's Warsaw Area.

As a result of development of battles and mistakes made by AK's military structures, the issue of securing food supplies became one of the most important challenges within Warsaw engulfed in the Uprising. It was successfully managed largely owing to supplies made by the civilian population and their generosity, although material air drops and top-down activities undertaken by insurgent military authorities and civilians during the course of fighting, despite their ad hoc nature, were also a positive contribution.

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