Wheat-to-Bread Processing Facilities Mapping

STUDY FOR NORTHEAST SYRIA, OCTOBER 2022[1]

WHOLE OF SYRIA (WoS) FOOD SECURITY SECTOR
Strengthening Humanitarian Response

iMMAP

Introduction

To inform the bread programs in Northeast Syria (NES), iMMAP, in collaboration with the Food Security and Livelihood (FSL) Cluster and the Bakeries and Bread Coordination Group (BBCG) in NES, conducts a regular mapping and monitoring exercise of the processing facilities in the wheat-flour to bread value chain in NES. This exercise aims to:

- Assess the capacity and functionality of wheat-flour to bread processing facilities in NES.
- Assess the accessibility and affordability of bread in NES.
- Identify existing gaps in bread production in NES to meet the bread needs of the local population.
- Identify the main bread production barriers and needed support to fill the gaps.

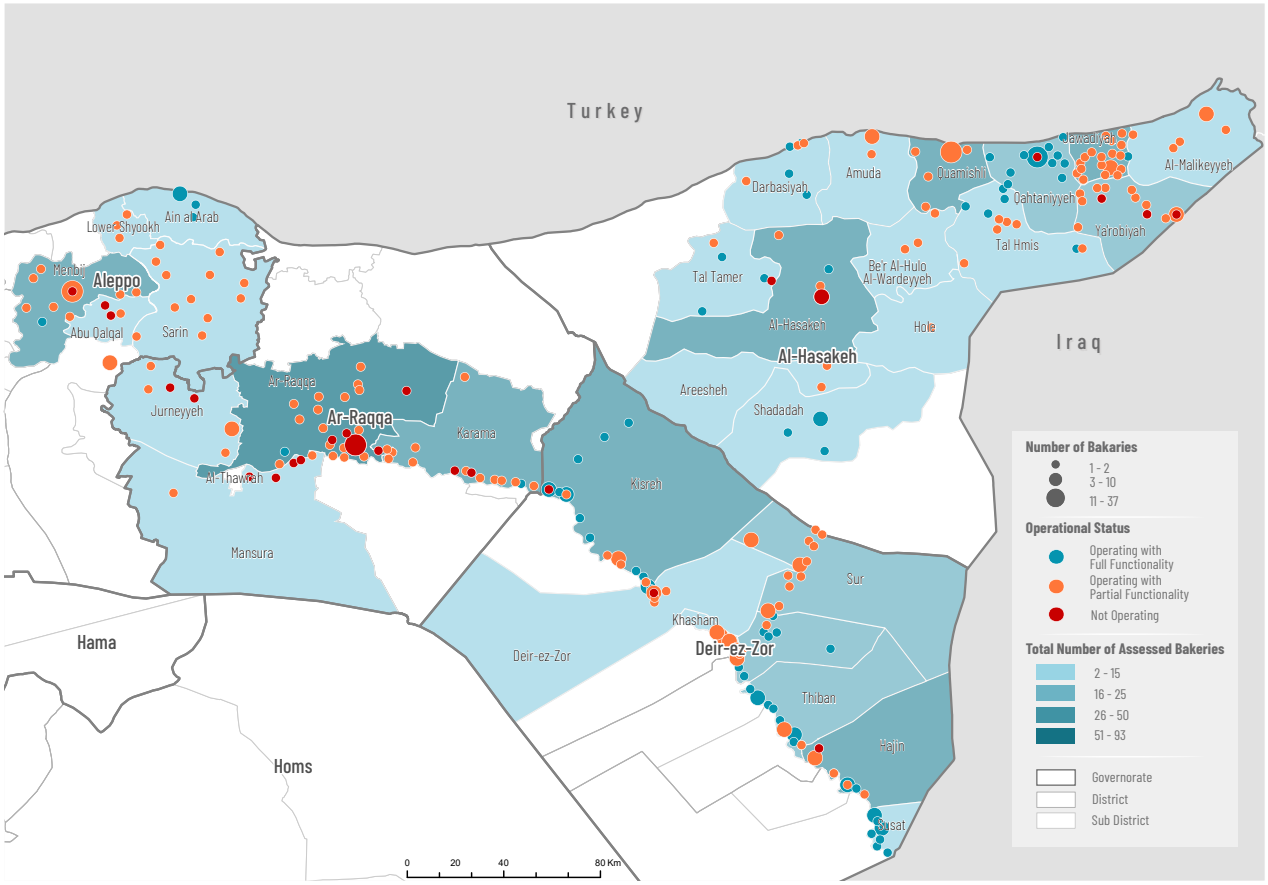
The first[2] round of the Wheat-flour to bread processing facilities mapping exercise in NES was conducted in August-September 2022. iMMAP's data collection partner and six NES FSL Cluster (NGO) partners conducted the data collection.

Thirty-one sub-districts were assessed across four governorates: 14 sub-districts in Al-Hasakeh governorate, 8 sub-districts in Deir-ez-Zor governorate, 5 sub-districts in Aleppo governorate, and 4 sub-districts in Ar-Raqqa governorate. The total number of assessed facilities was 861 wheat-flour to bread processing facilities that were mapped in NES; 568 bakeries, 260 mills, and 33 silos.

Key Findings

- **Operational status of processing facilities**

  The percentage of reported operating bakeries was 93% (n=526) of all assessed bakeries, where 83% were private bakeries, 12% were publicly owned bakeries, and 5% had joint ownership (public and private). This percentage of operational bakeries slightly decreased compared to Q4 2021, where 94% of the assessed bakeries reported that they were operational. The remaining 7% (n=42) of bakeries were non-operational, out of which 60% of these bakeries were permanently closed.



Map 1 :Bakeries Operational Status in NES, September 2022

1 Data collection was conducted between mid-August and mid-September 2022, and the report was issued in October 2022.

2 Four rounds of Wheat-Flour to Bread Processing Facilities Mapping in NES have been published by iMMAP, one in 2020,and three in 2021. The latest November 2021 report for NES can be accessed through this link.

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The main and more recently reported reasons for non-operating bakeries in all governorates were related to the need for machines and equipment maintenance, high operational costs, and lack of access to humanitarian support. Furthermore, out of the assessed operational bakeries, 63% (n=331) were partially operational mainly due to reported high operational costs, lack of access to humanitarian support, and the insufficient allocations of subsidized flour that is distributed by the Local Self Administration (LSA) of NES among the bakeries.

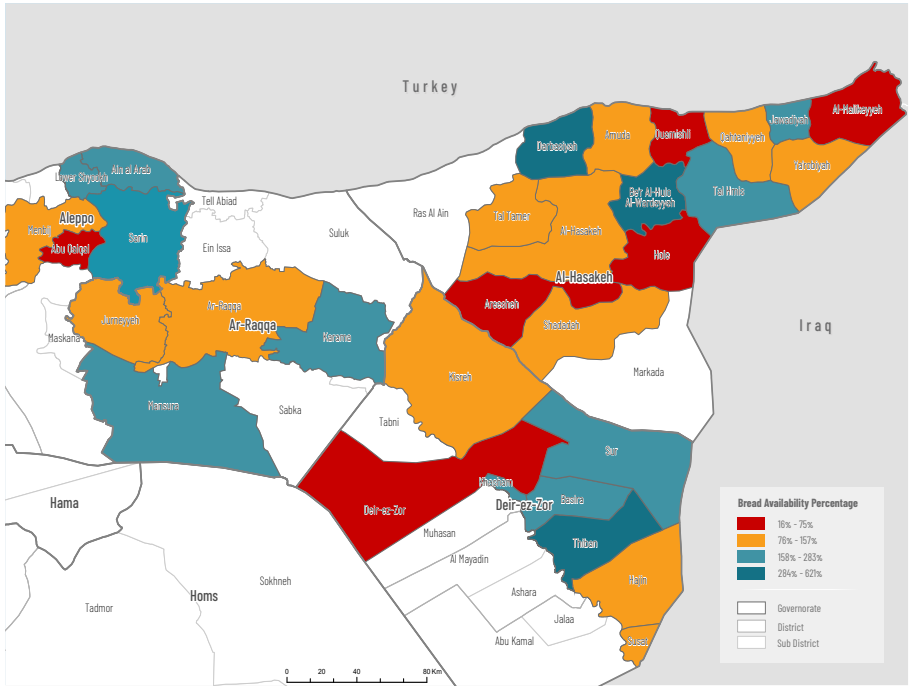
On the other hand, 87% of the mapped mills (n=226) reported that they were operational, demonstrating an increase of 4% in comparison to Q4 2021. Furthermore, the percentage of operating silos was 58% (n=19) which showed a 17% increase in comparison to Q4 2021. However, the changes in the functionality percentages may be due to the 36% increase in the number of assessed facilities in Q3 2022 in comparison to Q4 2021.

- **Facilities' actual functionality stood low against their full production capacity.**

The reported maximum potential total weekly production capacity of all assessed bakeries was 25,494 MT of bread; however, the bakeries' actual recorded total weekly production was 7,707 MT of bread. Overall, the weekly actual capacity of produced bread increased from 6,321 MT in Q4 2021 to 7,707 MT in Q3 2022, indicating a 22% increase in bread production. The increase in bread production can be associated with the overall increase in the number of assessed bakeries, in addition to the reported highest availability of locally milled flour in the months June to September 2022. On average, although the actual production increased, **the functionality of bakery facilities stood low at 30% across the assessed operational bakeries.** At governorate level, bakeries in Aleppo governorate recorded the highest functionality rate of 41%, while **bakeries in Ar-Raqqa governorate recorded the lowest functionality rate of bakeries at 21%.**

The increase in bread production allowed increased access for the population to meet their bread needs, hence meeting the local standard minimum bread quantity needs per individual. In Q4 2021, the individual daily portion of produced bread (all types of bread) in NES was 339g, covering100% of the local standard minimum daily bread needs (330g) per individual[3]. In Q3 2022, there was a 35% increase in the individual daily portion of bread reaching an average of 458g per individual. Aleppo governorate had the highest increase in the individual daily portion of bread (62%), while Deir-ez-Zor was the only governorate that encountered a 4% decrease in the individual daily portion but is still meeting the local standard minimum daily bread needs (363g).

	INDIVIDUAL DAILY PORTION OF PRODUCED BREAD (IN GRAMS)		
GOVERNORATE	Q4 2021	Q3 2022	% CHANGE
ALEPPO	308	498	↑ 62%
AL-HASAKEH	314	346	↑ 10%
DEIR-EZ-ZOR	380	363	↓ -4%
AR-RAQQA	388	428	↑ 10%



Map 1 : % of Population Bread Needs Covered by Total Production in NES, September 2022

Be'r Al-Hulo Al-Wardeyyeh sub-district in Al-Hasakeh governorate recorded the highest percentage of population bread needs coverage being 621% with 4 operational bakeries. This percentage indicates that the reported amount of produced bread in this area is high in regard to the total population in the area. **On the other hand, Deir-ez-Zor center sub-district in Deir-ez-Zor governorate and Al-Malikeyyeh sub-district in Al-Hasakeh governorate recorded the lowest percentage of population bread needs coverage being 18% with 12 operational bakeries and 16% with 2 operational bakeries respectively**

As for mills, the reported maximum potential total weekly production capacity of all assessed mills was 21,314 MT of flour; however, the mills' actual recorded total weekly production was 15,292 MT of flour. On average, the mills' functionality stood at 72% across the assessed operational mills, which showed a 3% increase from Q4 2021.

3 The survival need is 250g/person/day

Wheat-Flour to Bread Processing Facilities Mapping

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- **The reported average percentage of produced subsidized bread from total production in NES remained stable, while the reported produced quantity increased by 55%.**

  In this round, the average percentage of produced subsidized bread was reported to be around 80% of total production (6,202 MT/Week). In comparison to Q4 2021,there was no major change in the percentage of subsidized bread production from total production, as it was 78% of total production, however, the overall quantity of produced subsidized bread increased from 3,997 MT/week to 6,202 MT/Week, indicating a 55% increase. At the governorate level, the average percentage of total weekly production of subsidized bread in Deir-ez-Zor and Aleppo governorates was as high as 92% (1,596 MT) and 89% (1,610 MT), respectively. Al-Hasakeh governorate had the lowest average percentage of weekly recorded production of subsidized bread reaching 64% (1,708 MT) compared to other governorates in relation to the actual production capacity.

- **The level and type of wheat-flour to bread program support differed across facilities.**

  The majority of the bakery representatives interviewed, 83% (n= 437), reported that they had received humanitarian support, showing no significant change in comparison to Q4 2021 which was 84%. Nonetheless, most bakeries with humanitarian support (95%) indicated that they had received support from the LSA of NES. The bakeries' support from the LSA of NES was mainly flour distribution, followed by yeast distribution and operational cost support. On the other hand, other supported bakeries (5%) reported that they had received humanitarian support from NGOs, and the main reported types of support were flour and yeast distributions.

  Additionally, only 11% (n=25) of assessed mills reported that they had received humanitarian support. Ninety-six percent (n=24) of the support provided to the mills was from the Local Self Administration (LSA) of NES. The main reported types of humanitarian support were the provision of fuel, followed by wheat grain, wages, and rehabilitation.

  Finally, 42% (n=8) of interviewed silo representatives reported that they had received aid support. The support to the silos was also solely provided by LSA of NES, and the main reported types of humanitarian support were the provision of wheat grain, wages, rehabilitation, and road access maintenance.

- **The majority of assessed facilities indicated their need for maintenance or rehabilitation support.**

  When asked about their needs to operate at full functionality, 61% of operating bakeries (n=320), 43% of operating mills (n=172), and 79% of operating silos (n=15) indicated their need for machine maintenance and/or support in building rehabilitation. The total estimated cost of building infrastructure rehabilitation for all the assessed bakeries was 412,450 USD, the total estimated equipment maintenance cost was 967,200 USD, and the total estimated cost of purchasing new needed equipment was 790,540 USD.

  As for mills, the total estimated cost of building infrastructure rehabilitation for all the assessed mills was 257,050 USD, and the total estimated machine rehabilitation cost was 518,900 USD. On the other hand, the total estimated cost of building infrastructure rehabilitation for all assessed silos was 120,500 USD, and the total estimated cost for machine and equipment maintenance was 137,300 USD.

- **The long dry spell-induced shock on wheat production still affects the availability of local wheat grain and locally milled flour.**

  Thirty-four percent of bakeries (n=179) reported availability of locally milled flour, while the remaining 66% reported limited or no availability of locally milled flour. At governorate level and similar to Q4 2021, assessed bakeries in Al-Hasakeh governorate reported the highest level of limited availability of locally milled flour (78% n=145). Overall, in NES, the main reported reason behind the limited availability of local flour throughout the year was the prolonged dry spell-induced shock on wheat production. As reported by the bakery representatives interviewed, the low levels of rainfall and water availability in NES negatively affected wheat production, and in turn, this led to a negative supply shock of wheat and flour to the bread production.

  The limited amount of wheat and flour also had a negative effect on the amounts of allocated and distributed flour to the bakeries, hence limiting bakery productivity. Nevertheless, 56% of non-operational mills (n=19) and 72% of partially functional operational mills (n=79) reported that the shortage of wheat is one of the main challenges that affected their operation.

- **Bakeries' usage of locally milled flour increased by 7% in comparison to Q4 2021.**

  Much of the flour used by the bakeries for bread production was locally milled flour 87% (5,560 MT/week). There was an increase in locally milled flour usage to produce bread compared to the previous rounds in Q4 2021 (80%, 3,354 MT/week). Aleppo and Deir-ez-Zor governorates contributed to the highest use of locally milled flour, covering 93% and 92% of their flour usage respectively. This in turn indicated a decrease in imported flour usage in Aleppo governorate which was reported as 43% in Q4 2021 and decreased to 7% in this quarter. **The highest governorate using imported flour is Al-Hasakeh, using 17% imported flour from Turkey and 3% from Iraq.**

- **Increasing prices of both imported and locally milled flour.**

  Overall, the market price of imported flour in the assessed areas was reported to be higher by 18% than the price of locally milled flour. The reported median price for one MT of imported flour was 580 USD, whereas the median price for one MT of locally milled flour was 490 USD. There was a major increase in the median price of locally milled flour as it increased by 90 USD (23%) compared to the previous round (Q4 2021, 400 USD). **Also, there was an increase in the median price of imported flour as it increased by 135 USD (30%) compared to the previous round (Q4 2021, 445 USD).**

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- **On average, the bread production cost slightly decreased compared to Q4 2021.**

  The average[4] production cost of bread (baking one MT of flour) in the NES region was reported to be 131 USD. The average total production cost consists of flour, yeast, fuel, labor, packaging bags, and other input costs. The average cost of inputs was derived from calculating both subsidized and unsubsidized market prices of bread production inputs. Overall, the average production cost of bread slightly decreased compared to Q4 2021, where the average cost of producing one MT of flour in the mapped NES region was 136 USD. Overall, Ar-Raqqa governorate recorded the highest average bread production cost of 170 USD/MT, while Deir-ez-Zor governorate recorded the lowest average bread production cost of 99 USD/MT.

- **Thirty percent increase of prices of subsidized bread.**

  Compared to the previous round in Q4 2021, the median selling price of one kg of subsidized bread in NES increased to 260 SYP/kg, where it was 200 SYP/kg in Q4 2021. The median price of subsidized bread increased by 50 SYP in Aleppo governorate reaching 250 SYP/kg, by 40 SYP in Al-Hasakeh governorate reaching 240 SYP/kg, by 120 SYP/kg in Deir-ez-Zor governorate reaching 320 SYP/kg, and by 45 SYP in Ar-Raqqa governorate reaching 280 SYP/kg.

- **Deir-ez-Zor Central Mill Fire Incident.**

  On September 8th, 2022, Deir-ez-Zor central mill encountered a fire accident that was caused by a dust explosion in the flour suction fan as a result of high pressure and high temperature. The central mill is one of the main public mills in Deir-ez-Zor governorate producing white flour and is managed by the Local Self Administration (LSA) of NES and supplies flour to around 180 bakeries. This mill is supported by the LSA of NES with the provision of wheat, wages, and rehabilitation needs with general commitments of the mill to sell flour at subsidized prices, produce certain quality and quantity, prohibition of purchasing materials from or having contracts with other sources than the LSA of NES, and distribute flour to bakeries as indicated by the LSA of NES. The full capacity of the mill per week was 1,400 MT/week, while the actual production stood at 1,300 MT/week reaching a 93% functionality.

  The quantity of wheat that was provided by the LSA of NES to the mill for this season was 51,000 MT, and the mill could store 100,000 MT of wheat and 10,000 MT of flour. The mill faced challenges prior to the fire accident through its inability to increase production lines, low quality of wheat, and power cuts.

  Following the fire accident, the mill remained working for 22 hours on a daily basis, but the production of flour decreased immensely. The weekly production of the mill decreased to 160 MT, which shows an 88% decrease in the production of flour, reaching only 12% functionality. This was causing drastic effects on the distribution and production of bread in bakeries. It was still supplying 180 bakeries, but with lower amounts of flour. By the time of reporting, the mill had not received any support in the rehabilitation after the fire accident, and the rehabilitation of the mill was estimated at 125,000 USD.

- **Recommendations and implications for FSL – Bread program in NES**

- **Consideration of sub-district needs prior to implementation of bread programs** Although at governorate level all governorates were meeting the local standard minimum bread quantity needs per individual, at a sub-district level seven of the assessed sub-districts' quantity of produced bread did not meet the individual daily portion of bread (330g) per individual. Five sub-districts (Areesheh, Al-Malikeyyeh, Deir-ez-Zor, Amuda, and Quamishli) out of these seven sub-districts had records of even lower production of subsidized bread to cover the minimum bread quantity needs per individual (ranging from 0%-48% coverage). Therefore, **it is recommended when planning bread program activities to consider the gaps in production reported at sub-district level in relation to the population size to avoid overproduction in sub-districts that have lower demand and lower population needs. Concerning the bakery Support Program Expansion; prioritize the subdistricts with low regular bread coverage to increase the amount of regular bread to meet at least the needs of bread of PIN at subdistrict level.**

- **More effective and efficient support to be provided to Deir-ez-Zor central mill.** The central mill in Deir-ez-Zor is a critical public mill that provides flour to around 180 bakeries and encountered an 81% drop in functionality due to the fire incident in September 2022. The immediate functionality of this mill is critical in keeping the stability of bread availability across bakeries in Deir-ez-Zor governorate, since the productivity of bakeries in Deir-ez-Zor governorate already stands low at 25% in relation to their actual capacity. Therefore, **it is recommended for local authorities and humanitarian partners to provide the required machine and/or building rehabilitation to allow the mill to resume its functions at maximum capacity.**

- The main and more recently reported reasons for non-operating bakeries in all governorates were related to the need for machines and equipment maintenance, high operational costs, and lack of access to humanitarian support. **It is recommended to engage humanitarian partners to conduct feasibility studies of flour-based interventions such as new mill/bakery construction, mill/bakery rehabilitation, mill/bakery machine/equipment procurement, and mill/bakery renovations, especially in areas where these facilities are critically malfunctioning but with high population of people.**

- The highest governorate using imported flour was Al-Hasakeh, using 17% imported flour from Turkey and 3% from Iraq. However, the market price of imported flour in the assessed areas was reported to be higher by 18% than the price of locally milled flour. **It is recommended to consider FSL programming that encourages increased local flour production from local wheat production to mitigate risk of border closure as well as to avoid out-competing the chain actors (wheat-flour to bread value chain) due to imports of flour. Such imports of flour are not sustainable in the long run.**

TELL US WHAT YOU THINK!

LINK

4 Median prices of operational cost stood low in comparison with average prices, mainly due to fluctuation in costs of flour, as some bakeries were receiving flour with subsidized prices.

Mapping of Wheat-to-Bread Processing Facilities

Aleppo September 2022

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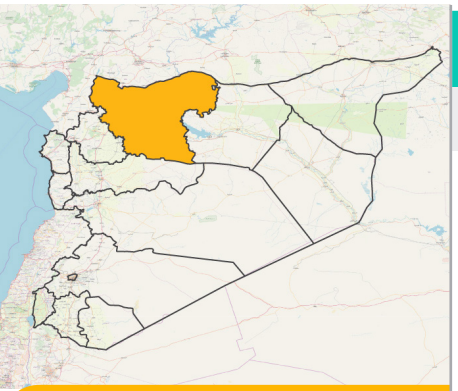

TOTAL POPULATION 515,553 | PIN 269,742

BAKERIES 62

Bakery Status

- Non-Operational 4
- Operational 58

94%

Reasons for Non-Operation

High Operational Cost

Competition

N/A

Functionality

Full	14 (24%)
Partial	44 (76%)

Ownership

Public	5 (8%)
Private	53 (85%)
Mix	4 (6%)

CURRENCY USED

USD 0% | SYP 100%

QUALITY CONTROL (LAB TESTING) 26

Bread Production

Daily Production (MT)		Price (SYP) /KG
Subsidized Bread	230	228 - 273
Unsubsidized Bread	4	248 - 248
Tourist Bread	19	2232 - 2500
Free Bread (NGO)	5	
Others	0	
Average Subsidized Bread Package Weight		1,123g
Average Unsubsidized Bread Package Weight		1,150g

Daily Production	257 MT
Full Daily Capacity	632 MT
Current Productivity	41%
Daily Bread Needs of Total Population	170 MT
Daily Bread Needs of PiN Population	89 MT
Subsidized Bread Availability to PiN	100%

Bakery Management

Bakery Owner	45 (78%)
Private Investor	5 (9%)
Employee	7 (12%)
LSA	1 (2%)
Joint LSA	0 (0%)
Committee	0 (0%)
Other	0 (0%)

Availability

Always Available | Fairly Available | Not Available

Bread	71%	15%	14%
Local Flour	60%	23%	17%
Yeast	97%	3%	0%
Fuel	83%	3%	14%
Imported Flour	59%	14%	27%

Support Status

Never Received Support	0 (0%)
Used to Receive Support	0 (0%)
Currently Receive Support	58 (100%)

Type of Support		Source of Support	NGO	LSA	Other
Rehabilitation	2%		2	1	0
Operational Support	26%		1	36	0
Flour	36%		1	49	0
Yeast	36%		1	49	0

Source and Price of Flour

	Imported Flour 450-600 $/MT	Local Flour 21-450 $/MT
	7%	93%
Trader	100%	0%
Mill	0%	0%
LSA	0%	100%
NGO	0%	0%

MILLS 10

Mills Status

- Non-Operational 3
- Operational 7

70%

Reasons for Non-Operation

Wheat Shortage

N/A

N/A

Functionality

Full	2 (29%)
Partial	5 (71%)

Ownership

Public	2 (20%)
Private	8 (80%)
Mix	0 (0%)

Reasons for Limited Functionality

Low Demand in Area

Wheat Shortage

Need for Machine Rehabilitation

MILLS SOURCE OF WHEAT LSA

Milling Capacity

Maximum Capacity	2,665 MT
Current Capacity	1,846 MT
Production Functionality	69%

Market Actors Supplied by Mills

Bakeries Supplied	85
Traders Supplied	0

SILOS 5

Silos Status

- Non-Operational 1
- Operational 4

80%

Functionality		Ownership	
Full	4 (100%)	Public	5 (100%)
Partial	0 (0%)	Private	0 (0%)

Reasons for Non-Operation Need for Building Rehabilitation, Need for Machine Rehabilitation, Security Challenges

SILOS SOURCE OF WHEAT LSA, Farmers, Traders

Needed Support for Silos

Building Rehabilitation	3
Machine Rehabilitation	3
Estimated Cost of Machines and Rehabilitation	$ 10,000

Silos Capacity

Silos Maximum Storage Capacity 35,500 MT

Mapping of Wheat-to-Bread Processing Facilities

Al-Hasakeh September 2022

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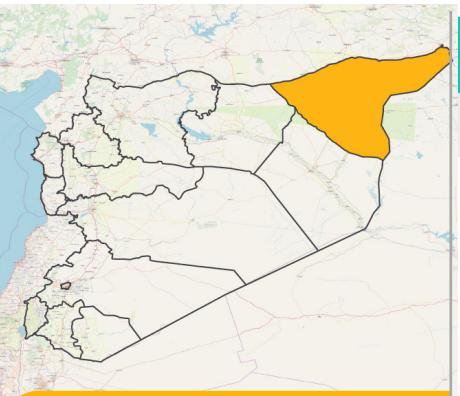

TOTAL POPULATION 1,102,095 | PIN 476,175

BAKERIES 193

Bakery Status

Non-Operational 7
Operational 186
96%

Reasons for Non-Operation
- No Access to Support
- Need for Machine Rehabilitation
- High Operational Cost

Functionality
- Full 69 (37%)
- Partial 117 (63%)

Ownership
- Public 37 (19%)
- Private 154 (80%)
- Mix 2 (1%)

CURRENCY USED: USD 1% | SYP 99%

QUALITY CONTROL (LAB TESTING) 58

Bread Production

Daily Production (MT)		Price (SYP) /KG
Subsidized Bread	244	120 - 400
Unsubsidized Bread	63	120 - 714
Tourist Bread	60	2000 - 2830
Free Bread (NGO)	15	
Others	0	

Average Subsidized Bread Package Weight	1,184g
Average Unsubsidized Bread Package Weight	1,220g

Daily Production	381 MT
Full Daily Capacity	968 MT
Current Productivity	39%
Daily Bread Needs of Total Population	364 MT
Daily Bread Needs of PiN Population	157 MT
Subsidized Bread Availability to PiN	100%

Bakery Management

Bakery Owner	140 (75%)
Private Investor	27 (15%)
Employee	6 (3%)
LSA	9 (5%)
Joint LSA	3 (2%)
Committee	0 (0%)
Other	1 (1%)

Availability

Always Available | Fairly Available | Not Available

Bread	38%	50%	12%
Local Flour	22%	65%	13%
Yeast	88%	12%	0%
Fuel	80%	20%	0%
Imported Flour	55%	35%	10%

Support Status

Never Received Support	44 (24%)
Used to Receive Support	5 (3%)
Currently Receive Support	137 (74%)

Type of Support		Source of Support	NGO	LSA	Other
Rehabilitation	5%		1	9	0
Operational Support	8%		0	15	1
Flour	69%		15	118	1
Yeast	18%		15	19	1

Source and Price of Flour

	Imported Flour 300-700 $/MT	Local Flour 25-650 $/MT
	20%	80%
Trader	80%	0.5%
Mill	0%	0.5%
LSA	0%	99%
NGO	20%	0%

MILLS 86

MILLS SOURCE OF WHEAT: LSA, Farmers, Traders

Mills Status

Non-Operational 17
Operational 69
80%

Reasons for Non-Operation
- Wheat Shortage
- High Operational Cost
- No Financial Liquidity

Functionality
- Full 30 (43%)
- Partial 39 (57%)

Ownership
- Public 3 (3%)
- Private 82 (95%)
- Mix 1 (1%)

Reasons for Limited Functionality
- Wheat Shortage
- Fuel/Electricity Shortage
- High Operational Cost

Milling Capacity

Maximum Capacity	5,475 MT
Current Capacity	4,286 MT
Production Functionality	78%

Market Actors Supplied by Mills

Bakeries Supplied	189
Traders Supplied	28

SILOS 21

SILOS SOURCE OF WHEAT: LSA, Farmers, Traders

Silos Status

Non-Operational 10
Operational 11
52%

Functionality
- Full 8 (73%)
- Partial 3 (27%)

Ownership
- Public 20 (95%)
- Private 1 (5%)

Reasons for Non-Operation: Bombing and Shelling, Displacement, Security Challenges

Needed Support for Silos

Building Rehabilitation	8
Machine Rehabilitation	8
Estimated Cost of Machines and Rehabilitation	$ 127,300

Silos Capacity

Silos Maximum Storage Capacity 726,000 MT

Mapping of Wheat-to-Bread Processing Facilities

Deir-ez-Zor September 2022

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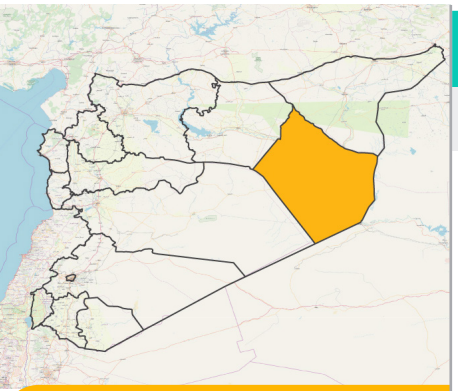


TOTAL POPULATION 683,200 | PIN 338,553

BAKERIES 169

Bakery Status

- Non-Operational 4
- Operational 165

98%

Reasons for Non-Operation
- Displacement
- Need for Machine Rehabilitation
- No Financial Liquidity

Functionality
- Full 88 (53%)
- Partial 77 (47%)

Ownership
- Public 8 (5%)
- Private 159 (94%)
- Mix 2 (1%)

CURRENCY USED

USD 0% | SYP 100%

QUALITY CONTROL (LAB TESTING) 1

Bread Production

Daily Production (MT)		Price (SYP) /KG
Subsidized Bread	228	200 - 400
Unsubsidized Bread	0	250 - 250
Tourist Bread	18	1111 - 2500
Free Bread (NGO)	2	
Others	0	
Average Subsidized Bread Package Weight		1,297g
Average Unsubsidized Bread Package Weight		1,000g

- Daily Production 248 MT
- Full Daily Capacity 1,001 MT

Current Productivity 25%

- Daily Bread Needs of Total Population 225 MT
- Daily Bread Needs of PiN Population 112 MT

Subsidized Bread Availability to PiN 100%

Bakery Management

Bakery Owner	119 (72%)
Private Investor	35 (21%)
Employee	10 (6%)
LSA	1 (1%)
Joint LSA	0 (0%)
Committee	0 (0%)
Other	0 (0%)

Availability

Always Available | Fairly Available | Not Available

	Always	Fairly	Not
Bread	23%	74%	3%
Local Flour	32%	67%	1%
Yeast	98%	2%	0%
Fuel	59%	40%	1%
Imported Flour	84%	9%	7%

Support Status

Never Received Support	21 (13%)
Used to Receive Support	1 (1%)
Currently Receive Support	143 (87%)

Type of Support		Source of Support	NGO	LSA	Other
Rehabilitation	1%		0	1	0
Operational Support	1%		0	2	0
Flour	97%		2	142	0
Yeast	1%		2	0	0

Source and Price of Flour

	Imported Flour 300-750 $/MT	Local Flour 200-600 $/MT
	8%	92%
Trader	94%	0%
Mill	0%	0%
LSA	0%	100%
NGO	6%	0%

MILLS 141

Mills Status

- Non-Operational 9
- Operational 132

94%

Reasons for Non-Operation
- Fuel/Electricity Shortage
- High Operational Cost
- No Financial Liquidity

Functionality
- Full 75 (57%)
- Partial 57 (43%)

Ownership
- Public 3 (2%)
- Private 138 (98%)
- Mix 0 (0%)

Reasons for Limited Functionality
- Wheat Shortage
- High Operational Cost
- N/A

MILLS SOURCE OF WHEAT

LSA, Farmers, Traders

Milling Capacity

Maximum Capacity	9,089 MT
Current Capacity	6,379 MT
Production Functionality	70%

Market Actors Supplied by Mills

Bakeries Supplied	180
Traders Supplied	146

SILOS 1

Silos Status

- Non-Operational 0
- Operational 1

100%

Functionality
- Full 1 (100%)
- Partial 0 (0%)

Ownership
- Public 1 (100%)
- Private 0 (0%)

Reasons for Non-Operation N/A

SILOS SOURCE OF WHEAT

Farmers, Traders

Needed Support for Silos

Building Rehabilitation	0
Machine Rehabilitation	0
Estimated Cost of Machines and Rehabilitation	$ 0

Silos Capacity

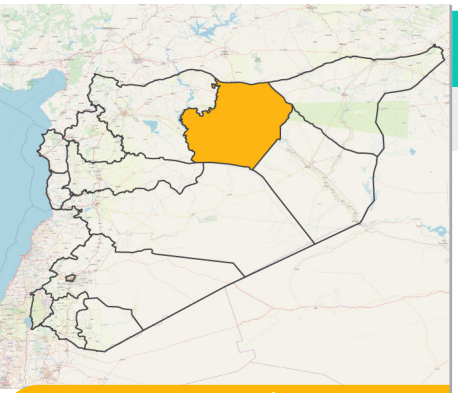
Silos Maximum Storage Capacity 12,000 MT

Mapping of Wheat-to-Bread Processing Facilities

Ar-Raqqa September 2022

WHOLE OF SYRIA (WoS) FOOD SECURITY SECTOR
Strengthening Humanitarian Response

iMMAP



TOTAL POPULATION 502,572 | PIN 304,767

BAKERIES 144

Bakery Status

- Non-Operational 27
- Operational 117

81%

Reasons for Non-Operation
- Competition
- No Financial Liquidity
- High Operational Cost

Functionality
- Full 25 (21%)
- Partial 92 (79%)

Ownership
- Public 18 (12%)
- Private 107 (74%)
- Mix 19 (13%)

CURRENCY USED

USD 3% | SYP 97%

QUALITY CONTROL (LAB TESTING) 5

Bread Production

Daily Production (MT)		Price (SYP) /KG
Subsidized Bread	184	228 - 509
Unsubsidized Bread	0	N/A - N/A
Tourist Bread	29	2000 - 2900
Free Bread (NGO)	2	
Others	0	
Average Subsidized Bread Package Weight		1,067g
Average Unsubsidized Bread Package Weight		N/Ag

Daily Production	215 MT
Full Daily Capacity	1,041 MT
Current Productivity	21%
Daily Bread Needs of Total Population	166 MT
Daily Bread Needs of PiN Population	101 MT
Subsidized Bread Availability to PiN	100%

Bakery Management

Bakery Owner	84 (71%)
Private Investor	22 (19%)
Employee	3 (3%)
LSA	6 (5%)
Joint LSA	3 (3%)
Committee	0 (0%)
Other	0 (0%)

Availability

Always Available | Fairly Available | Not Available

Bread	42%	51%	7%
Local Flour	42%	55%	3%
Yeast	95%	3%	2%
Fuel	84%	16%	0%
Imported Flour	83%	4%	13%

Support Status

Never Received Support	19 (16%)
Used to Receive Support	0 (0%)
Currently Receive Support	99 (84%)

Type of Support		Source of Support	NGO	LSA	Other
Rehabilitation	0%		0	1	0
Operational Support	10%		0	21	0
Flour	46%		1	97	0
Yeast	44%		1	94	0

Source and Price of Flour

	Imported Flour 400-650 $/MT	Local Flour 25-630 $/MT
	14%	86%
Trader	83%	3%
Mill	0%	0%
LSA	0%	97%
NGO	17%	0%

MILLS 23

Mills Status

- Non-Operational 5
- Operational 18

78%

Reasons for Non-Operation
- Fuel/Electricity Shortage
- High Operational Cost
- Wheat Shortage

Functionality
- Full 11 (61%)
- Partial 7 (39%)

Ownership
- Public 1 (4%)
- Private 22 (96%)
- Mix 0 (0%)

Reasons for Limited Functionality
- High Operational Cost
- Low Demand in Area
- No Financial Liquidity

MILLS SOURCE OF WHEAT LSA, Farmers, Traders

Milling Capacity

Maximum Capacity	4,085 MT
Current Capacity	2,781 MT
Production Functionality	68%

Market Actors Supplied by Mills

Bakeries Supplied	128
Traders Supplied	33

SILOS 6

Silos Status

- Non-Operational 3
- Operational 3

50%

Functionality
- Full 3 (100%)
- Partial 0 (0%)

Ownership
- Public 6 (100%)
- Private 0 (0%)

Reasons for Non-Operation: Need for Machine Rehabilitation, Bombing and Shelling

SILOS SOURCE OF WHEAT LSA, Farmers

Needed Support for Silos

Building Rehabilitation	3
Machine Rehabilitation	2
Estimated Cost of Machines and Rehabilitation	$ 33

Silos Capacity

Silos Maximum Storage Capacity 100,024 MT

Annex Table 1: NES Bread Needs and Production Gap Analysis, September 2022

WHOLE OF SYRIA (WoS)
FOOD SECURITY SECTOR
Strengthening Humanitarian Response

iMMAP

Sub-District	Total population	PiN	Weekly bread needs of population in MT	Weekly bread needs of PiN in MT	Weekly subsidized bread in MT	Weekly unsubsidized bread in MT	Weekly unsubsidized tourist bread in MT	Weekly NGO-free bread in MT	Weekly other types of bread in MT	Total weekly bread production in MT	Bread availability to the population - % of population bread needs covered by total production	Subsidized bread availability to the population - % of population bread needs covered by subsidized & free bread	Subsidized & free bread availability to PiN - % of PiN bread needs covered by subsidized & free bread	Bread production gap in MT per week	Subsidized & free bread production gap in MT per week for total population	Subsidized & free bread production gap in MT per week for PiN	Number of supported bakeries	Number of bakeries	Number of unsupported bakeries	%Unsupported bakeries	Weekly full bread production capacity in MT	% Current productivity
Ain al Arab	86,088	27,060	198.9	62.5	292	0	35	33	0	360	181%	163%	520%	-161	-126	-262	6	6	0	0%	479.5	75%
Sarin	50,158	29,827	115.9	68.9	302	26	0	0	0	328	283%	261%	438%	-212	-186	-233	12	12	0	0%	1,099	30%
Lower Shyookh	15,961	16,064	36.9	37.1	86	0	0	0	0	86	233%	233%	232%	-49	-49	-49	3	3	0	0%	287	30%
Abu Qalqal	58,035	30,336	134.1	70.1	89	0	0	0	0	89	66%	66%	127%	45	45	-19	3	5	2	40%	161	55%
Menbij	305,311	166,455	705.3	384.5	838	0	95	0	0	933	132%	119%	218%	-228	-133	-453	34	36	2	6%	2,394	39%
Areesheh	28,932	17,106	66.8	39.5	32	18	0	0	0	50	75%	48%	81%	17	35	8	3	4	1	25%	115.5	43%
Be'r Al-Hulo Al-Wardeyyeh	8,916	7,906	20.6	18.3	128	0	0	0	0	128	621%	621%	701%	-107	-107	-110	4	4	0	0%	214.2	60%
Hole	28,376	9,957	65.5	23.0	48	0	0	0	0	48	73%	73%	209%	18	18	-25	3	3	0	0%	124.6	39%
Al-Hasakeh	313,220	92,439	723.5	213.5	592	0	168.4	75.6	1	837	116%	92%	313%	-113	56	-454	25	32	7	22%	1,551.9	54%
Shadadah	36,579	33,314	84.5	77.0	85	0	0	0	1	86	102%	101%	110%	-2	-1	-8	8	9	1	11%	136.5	63%
Tal Tamer	44,951	17,894	103.8	41.3	107	0	0	0	0	107	103%	103%	259%	-3	-3	-66	4	5	1	20%	133	80%
Jawadiyah	27,397	19,257	63.3	44.5	76	51	0	0	0	127	201%	120%	171%	-64	-13	-32	17	26	9	35%	619.5	21%
Al-Malikeyyeh	86,012	23,851	198.7	55.1	32	0	0	0	0	32	16%	16%	58%	167	167	23	2	2	0	0%	80.5	40%
Ya'robiyah	27,718	21,878	64.0	50.5	89	1	0	0	0	90	141%	139%	176%	-26	-25	-38	12	17	5	29%	448	20%
Tal Hmis	28,830	15,197	66.6	35.1	117	0	0	0	0	117	176%	176%	333%	-50	-50	-82	7	11	4	36%	486.5	24%
Amuda	48,749	24,964	112.6	57.7	6	57	45	0	0	108	96%	5%	10%	5	107	52	0	5	5	100%	192.5	56%
Qahtaniyyeh	28,401	14,506	65.6	33.5	93	0	0	10	0	103	157%	157%	307%	-37	-37	-69	1	24	23	96%	722.4	14%
Quamishli	354,699	157,261	819.4	363.3	0	311	134	0	0	445	54%	0%	0%	374	819	363	41	41	0	0%	1,232	36%
Darbasiyah	39,315	20,645	90.8	47.7	300	0	71	21	0	392	432%	353%	673%	-301	-230	-273	10	10	0	0%	721	54%
Karama	52,647	32,467	121.6	75.0	223	0	0	0	0	223	183%	183%	297%	-101	-101	-148	23	26	3	12%	1,344	17%
Ar-Raqqa	364,953	229,288	843.0	529.7	778	0	136	0	0	914	108%	92%	147%	-71	65	-248	59	93	34	37%	4,648	20%
Jurneyyeh	37,184	10,245	85.9	23.7	105.5	0	0	13.5	0	119	139%	139%	503%	-33	-33	-95	7	10	3	30%	338.1	35%
Mansura	47,788	32,767	110.4	75.7	175	0	67	0	0	242	219%	159%	231%	-132	-65	-99	9	15	6	40%	873.6	28%
Hajin	105,177	41,899	243.0	96.8	245	0	0	0	0	245	101%	101%	253%	-2	-2	-148	24	28	4	14%	840	29%
Susat	32,946	19,842	76.1	45.8	105	0	0	0	0	105	138%	138%	229%	-29	-29	-59	11	13	2	15%	364	29%
Thiban	49,804	24,855	115.0	57.4	457	0	0	0	0	457	397%	397%	796%	-342	-342	-400	17	17	0	0%	1,337	34%
Kisreh	111,654	44,376	257.9	102.5	249.95	2	92	11.05	0	355	138%	101%	255%	-97	-3	-158	24	39	15	38%	1,974	18%
Sur	38,267	10,492	88.4	24.2	154	0	0	0	0	154	174%	174%	635%	-66	-66	-130	22	22	0	0%	1,071	14%
Basira	39,030	15,105	90.2	34.9	155	0	15	0	0	170	189%	172%	444%	-80	-65	-120	20	21	1	5%	655.9	26%
Deir-ez-Zor	275,894	159,164	637.3	367.7	98	0	16	0	0	114	18%	15%	27%	523	539	270	10	14	4	29%	353.5	32%
Khasham	30,428	22,820	70.3	52.7	134	0	0	0	0	134	191%	191%	254%	-64	-64	-81	15	15	0	0%	409.5	33%