

Wheat-to-Bread Processing Facilities Mapping

STUDY FOR NORTHEAST SYRIA NOVEMBER 2021



North East Syria (NES)
FOOD SECURITY AND LIVELIHOODS
Working Group



Introduction

To inform the bread support 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 fourth round of the Wheat-flour to bread processing facilities mapping exercise in NES was conducted in November 2021. IMMAP's data collection partner and four NES FSL Cluster (NGO) partners conducted the data collection.

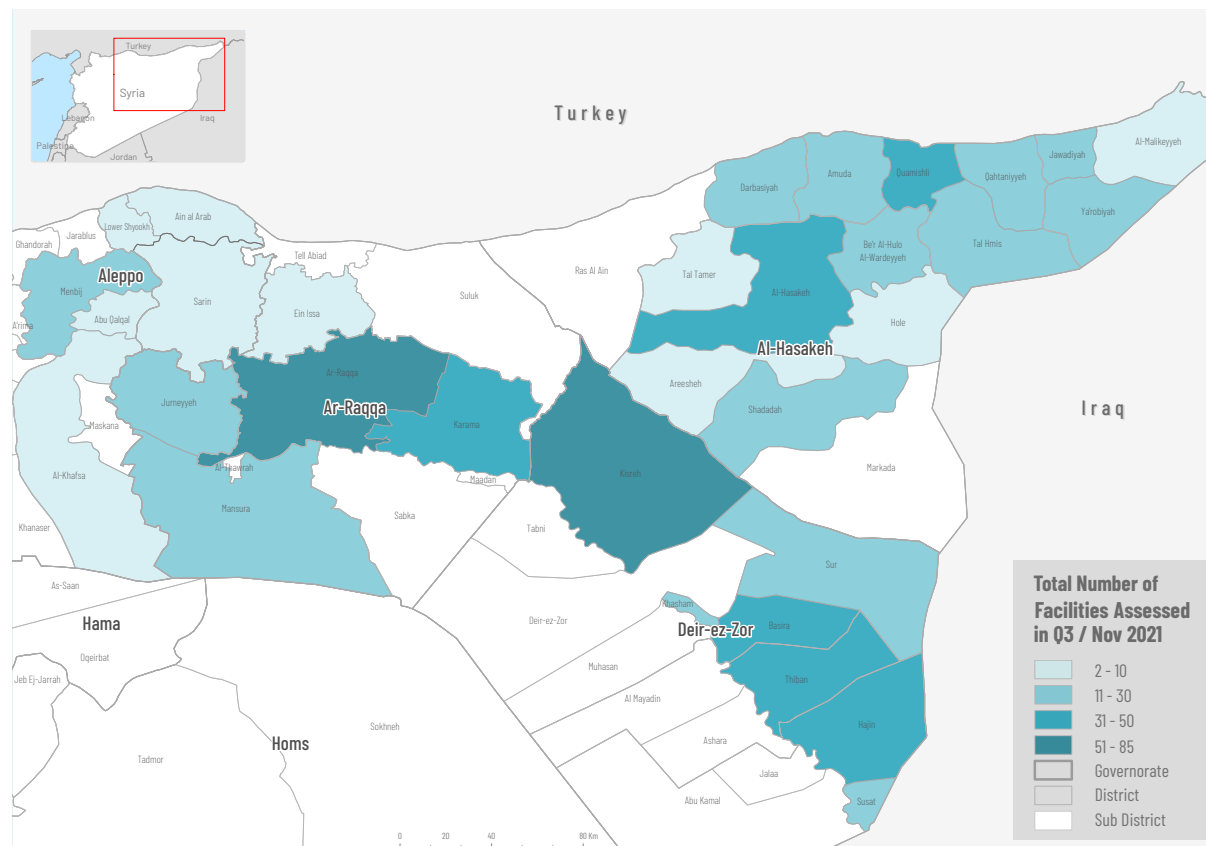
Thirty-one sub-districts were assessed across four governorates: 14 sub-districts in Al-Hasakeh governorate, 7 in Deir-ez-Zor governorate, 6 sub-districts in Aleppo governorate, and 4 in Ar-Raqqa governorate. Overall, 635 wheat-flour to bread processing facilities were mapped in NES, 431 were bakeries, 175 were mills, and 27 were silos.

Below are the preliminary findings and recommendations, and this the [link](#) for the interactive dashboard:

Key Findings

Operational status of processing facilities

The percentage of reported operating bakeries was 94% (n=403) of all assessed bakeries. This percentage remains unchanged compared to the previous round in July 2021, as 94% of the assessed bakeries reported that they were operational. On the other hand, 83% of the mapped mills (n=145) reported that they were operational, which is a higher percentage than the previous round, as 76% of the mapped mills reported that they were operational in July 2021. Also, the percentage of operating silos for this round, was 41% (n=11) which is lower than the previous round given that 65% of the mapped silos were operational in July 2021.



Map 1: Assessed Facilities in NES, November 2021

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- **Facilities' actual functionality stood low against their full production capacity, with no major changes compared to the previous round.**

In this round, November 2021, the reported maximum potential total weekly production capacity of all assessed mills was 67,845 MT of flour; however, the mills' actual recorded total weekly production was 46,712 MT of flour. On average, the mills' functionality stood at 69% across the 145 assessed operational mills across the NES region. As for bakeries, the reported maximum potential total weekly production capacity of all assessed bakeries was 17,206 MT of bread; however, the bakeries' actual recorded total weekly production was 6,321 MT of bread. On average, the functionality of bakery facilities stood at 37% across the 431 assessed operational bakeries across the NES region. This indicated that the operational bakeries in NES were only producing at 37% of their potential/full production capacity during the reporting period. Compared to the previous round, there was no major change in the functionality of bakery facilities, as bakeries were producing at 41% of their potential/full production capacity in July 2021. Nonetheless, on governorate level, bakeries in Aleppo governorate in this round recorded the highest functionality rate of 60%, while bakeries in Deir-ez-Zor governorate recorded the lowest functionality rate of bakeries at 22%.

- **The reported average percentage of produced subsidized bread in NES remained stable.**

In this round, the average percentage of produced subsidized bread was reported to be around 78% of total production (3,997 MT/Week). Compared to the previous round, July 2021, there was no major change in the average percentage of subsidized bread production, as it was 81% of total production (3,949 MT/Week). At the governorate level, the average percentage of total weekly production of subsidized bread in Aleppo and Deir-ez-Zor governorates was as high as 98% (1,281 MT) and 94% (1057 MT), respectively. Al-Hasakeh governorate had the lowest average percentage of weekly recorded production of subsidized bread (63%) compared to other governorates.

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

Only 8% (n=12) of assessed mills reported that they are currently receiving support. The Local Self Administration (LSA) solely provided support to the mills, and the main reported types of support were the provision of fuel, wheat grain, wages, and rehabilitation. Nevertheless, 55% (n=5) of interviewed silo representatives reported that they are currently receiving aid support. The support to the silos was also solely provided by LSA, and the main reported types of support were the provision of wheat grain, wages, rehabilitation, and road access maintenance.

On the other hand, the majority of the interviewed bakery representatives, 84% (n= 253), reported that they were receiving support, this denoted an increase in the percentage of supported bakeries compared to July 2021 (75%). Nonetheless, most supported bakeries (97%) indicated that they receive support from the LSA. The bakeries' support from the LSA was mainly flour and yeast distribution and provision of energy: fuel and electricity support. On the other hand, other supported bakeries (3%) reported receiving support from NGOs, and the main reported types of support were the provision of flour and yeast, and provision of energy: fuel and electricity support.

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

When asked about their needs to operate at full functionality, 42% of operating bakeries (n=172), 67% of operating mills (n=97), and 67% of operating silos (n=6) 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 257,050 USD, the total estimated equipment maintenance cost was 518,900 USD, and the total estimated cost of purchasing new needed equipment was 143,900 USD. As for mills, the total estimated cost of building infrastructure rehabilitation for all the assessed mills was 186,300 USD, and the total estimated machine rehabilitation cost was 640,610 USD. On the other hand, the total estimated cost of building infrastructure rehabilitation for all assessed silos was 94,000 USD, and the total estimated cost for machine and equipment maintenance was 39,000 USD.

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

Many bakeries (n=191) reported limited availability of locally milled flour, representing 47% of the assessed bakeries. At governorate level, assessed bakeries in Al-Hasakeh governorate reported the highest level of limited availability of locally milled flour (71% n=63). Overall, in NES, the main reported reason behind the limited availability of local flour throughout the year was the drought-induced shock on wheat production. 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 shortage of wheat grain supply may have also caused an increase in wheat and flour prices. Nevertheless, 54% of non-operational mills (n=18) and 68% of partially functional operational mills (n=38) reported that the shortage of wheat is one of the main challenges that affected their operation.

- **Bakeries' usage of locally milled flour decreased by 18% in November 2021 compared to March 2021.**

Much of the flour used by the bakeries for bread production was locally milled flour 80% (3354 MT/week). There was a notable decrease in locally milled flour usage to produce bread compared to the previous rounds in July 2021 (84%, 4417 MT/week) and March 2021 (98%, 5028 MT/Week). This change was primarily driven by Aleppo and Ar-Raqqa governorates, as there was a notable increase in their dependence on imported flour. In March 2021, bakeries in Aleppo governorate, on average, reported not using any imported flour to produce bread, while in this round, the percentage increased to 43%. Similarly, in Ar-Raqqa governorate, on average, bakeries reported using imported flour at 4% to produce bread in the previous round, while in this round, the percentage increased to 17%.

- **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 11% than the price of locally milled flour. The reported median price for one MT of imported flour was 445 USD, whereas the median price for one MT of locally milled flour was 400 USD. There was a major increase in the median price of locally milled flour as it increased by 75 USD (23%) compared to the previous round (July 2021, 325 USD). Also, there was an increase in the median price of imported flour as it increased by 55 USD (14%) compared to the previous round (July 2021, 390 USD).

- **On average, the bread production cost increased by 31% compared to the last round in July 2021.**

The average production cost of bread (baking one MT of flour) in the NES region in November 2021 was reported to be 136 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 increased compared to the last rounds in July and March 2021, where the average cost of producing one MT of flour in the mapped NES region was 104 USD and 81 USD, respectively. Compared to July 2021, bakeries in Al-Hasakeh governorate reported a major increase of 90% in the average bread production cost as it increased from 83 USD/MT to 158 USD/MT. Overall, Al-Hasakeh governorate recorded the highest average bread production cost this round, while Deir-ez-Zor and Aleppo governorates recorded the lowest average bread production cost of 97 and 94 USD/MT, respectively. Ar-Raqqa governorate recorded an average bread production cost of 144 USD/MT.

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- **Overall stability in the levels of bread availability compared to the last round in July 2021.**

In this round, 54% of interviewed bakeries (n=217) reported that bread was always available, 42% (n=171) reported that bread was fairly available, and 4% (n=15) reported that bread was unavailable. There is no notable change in bread availability compared to the last round in July 2021, where 4% of interviewed bakeries reported that bread was unavailable. In this round, most of the bakeries that reported that bread was not available at all (4%, n=18) were in Deir-ez-Zor governorates, particularly in Kisreh and Tal Hmis subdistricts. The most cited reasons for the low availability of bread were due to the increase in population as a result of internal displacement which increased demand for bread while the quantity of allocated and distributed flour to those subdistricts remained low.

- **Stability and consistency of prices of subsidized bread.**

Compared to the previous round in July 2021, the median selling price of one kg of subsidized bread in NES remained stable at 200 SYP/kg. The median price of subsidized bread was consistent at 200 SYP/kg across Aleppo, Deir-ez-Zor, and Al Hasakeh governorate. However, the median price of subsidized bread in Ar-Raqqa was slightly higher at 235 SYP/kg.

- **Replicate and upscale the rehabilitation support to the wheat-flour to bread facilities.**

Replicating and upscaling the rehabilitation of building infrastructure, machine maintenance, and equipment procurement for bakery and mill facilities is recommended, especially in areas with high population density and a shortage of production due to the facilities' limited capacity to produce. (Refer to "Annex Table 1: NES Bread Needs and Production Gap Analysis" for geographical and population targeting at sub-district level). Assessed bakeries reported that their most needed support was building rehabilitation, dough mixing machine maintenance and oven house maintenance. On the other hand, the most cited types of support that the operational mills reported were their needs for machine maintenance and building and structural rehabilitation.

- **Upscale the wheat-flour to bread support in Al-Hasakah governorate.**

Although Al-Hasakeh governorate compared to the previous round witnessed a notable increase in the recorded production of subsidized bread (56% in March 2021 - 66% in July 2021), this round, it had the lowest percentage of recorded production of subsidized bread compared to other governorates. Also, during this round, 50% of the assessed bakeries that did not produce any subsidized bread were in sub-districts in Al-Hasakeh governorate. Unsupported bakeries that sell unsubsidized bread in some areas can directly affect the overall prices of bread in the market and, in turn, make it less affordable. This indicated a need to expand or upscale the support of the bread program in Al-Hasakeh governorate to ensure bread is affordable and accessible at subsidized prices.

- **Strengthen coordination with the Local Authorities.**

The wheat-flour to bread value chain in NES is relatively centralized and controlled by the Local SANES, who provides input and focuses on ensuring stable bread prices in the market. Therefore, it is recommended for humanitarian partner organizations to coordinate closely with the local authorities to provide better facilitation of flour distribution, and at the same time, fill the gaps that the local authority is unable to cover. This way, access to bread and subsidized bread prices would be more uniformly distributed across the different governorates while avoiding overlaps and covering gaps of the bread program.

- **Further studies and continuous market monitoring.**

The wheat-flour to bread market system is highly unstable and constantly faces changes given the SYP currency inflation, exchange rate volatility, and ongoing conflicts. Therefore, it is recommended to continue collecting data regularly on the bakery, mill, and silo operations. This will ensure that the existing humanitarian partners' interventions and bread program synergies with SANES in the NES region are aligned with the prevailing political and market trends and needs. In line with the wheat, flour, and bread monitoring activities, there are potential upcoming Crop Monitoring and Wheat Value Chain studies. These studies aim to assess the gaps in local wheat production and inform the NES FSL Cluster members' future interventions that aim to support local wheat production to enhance local wheat-flour to bread value chain. In that regard, it is recommended to integrate the wheat value chain studies and the bakery bread facilities mapping study to holistically generate information on the whole wheat-flour to bread value chain that can fully inform the bread program implementation in relation to the supply chain management and the value chain development.

Recommendations

- **Strengthened support for local wheat to flour production.**

During this round, 25% of the assessed bakeries reported low availability of locally milled flour. Also, there was an increase in the median price of locally milled flour as it increased by 100 USD (55%) compared to the previous round (March 2021, 210 USD). Local wheat production is critical for the resilience of the wheat-flour to bread market systems. Therefore, it is recommended to continue and expand the support to local wheat farmers with subsidized farming inputs to sustain the viability of the local wheat to flour supply chain, ensuring locally produced wheat to be processed into local flour to reach the bakeries and end consumers.

- **Consider in-depth selection criteria/targeting of new bakeries for support at the sub-district level.**

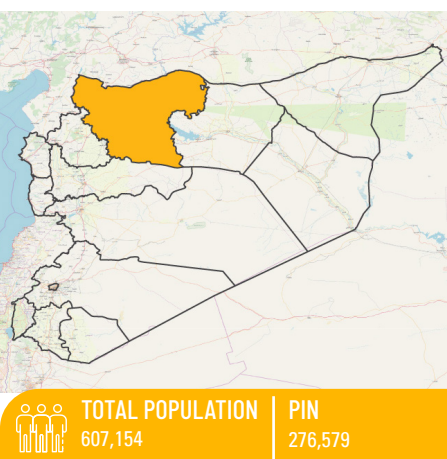
For better targeting, it is important to consider indicators at the sub-district level during bread program implementation. The main indicators to consider are the percentage of unsupported bakeries, bakery productivity (total production/capacity), population and PiN bread needs, and availability of regular and subsidized bread. (Refer to "Annex Table 1: NES Bread Needs and Production Gap Analysis" for geographical and population targeting at sub-district level).

Mapping of Wheat-to-Bread Processing Facilities

Aleppo November 2021



North East Syria (NES)
FOOD SECURITY AND LIVELIHOODS
Working Group



BAKERIES

30

Bakery Status

Non-Operational 0
Operational 30



Reasons for Non-Operation

N/A

N/A

N/A

Functionality

Full 20 (67%)
Partial 10 (33%)

Ownership

Public 3 (10%)
Private 26 (87%)
Mix 1 (3%)



CURRENCY USED

USD 0%

TL 0%

SYP 100%



QUALITY CONTROL
(LAB TESTING)

0

Bread Production

Daily Bread Production (MT)
Subsidized Bread 183

Price (SYP) /KG
184-227

Unsubsidized Bread 0

N/A-N/A

Tourist Bread 4

1333-1538

Average Subsidized Bread Package Weight 1,202g

Average Unsubsidized Bread Package Weight N/Ag

Daily Production 187 MT

Full Daily Capacity 313 MT

Current Productivity 60%

Daily Bread Needs of Total Population 200 MT

Subsidized Bread Availability to PIN

Daily Bread Needs of PIN Population 91 MT

100%

Bakery Management

Availability

Always Available Fairly Available Not Available

Bakery Owner 22 (73%)

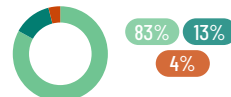
Private Investor 3 (10%)

LSA 3 (10%)

Employee 0 (0%)

Other 2 (7%)

Bread



Local Flour



Imported Flour



Yeast



Fuel



Support Status

Never Received Support 5 (17%)
Used to Receive Support 1 (3%)
Currently Receive Support 24 (80%)

Type of Support

Rehabilitation 9%
Operational Support 5%
Flour 44%
Yeast 42%

Source of Support

NGO 2
LSA 3
1
2
1
23
1
22

Source and Price of Flour

Imported Flour 300-550 \$/MT
51%

Local Flour 17-400 \$/MT
49%

Trader 15%
Mill 0%
LSA 85%
NGO 0%

0%
0%
100%
0%



MILLS

2

Mills Status

Non-Operational 0
Operational 2



Reasons for Non-Operation

N/A

N/A

Functionality

Full 2 (100%)
Partial 0 (0%)

Reasons for Limited Functionality

N/A

N/A

Ownership

Public 2 (100%)
Private 0 (0%)
Mix 0 (0%)



MILLS SOURCE OF WHEAT

LSA

Milling Capacity

Maximum Capacity 835 MT
Current Capacity 835 MT

Production Functionality 100%

Market Actors Supplied by Mills

Bakeries Supplied 18

Traders Supplied 0

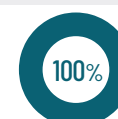


SILOS

2

Silos Status

Non-Operational 0
Operational 2



Functionality

Full 2 (100%)
Partial 0 (0%)

Ownership

Public 2 (100%)
Private 0 (0%)

Reasons for Non-Operation N/A



SILOS SOURCE OF WHEAT Farmers

Needed Support for Silos

Building Rehabilitation 2

Machine Rehabilitation 2

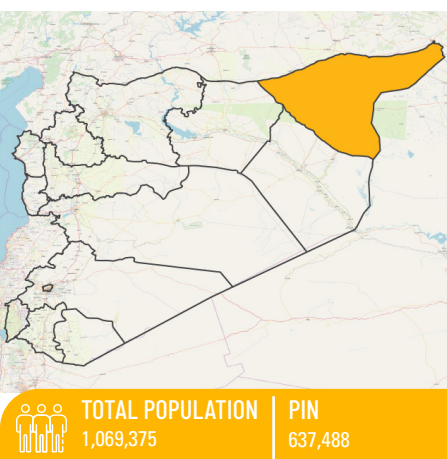
Estimated Cost of Machines and Rehabilitation \$ 22,000

Silos Capacity

Silos Maximum Storage Capacity 25,000 MT

Mapping of Wheat-to-Bread Processing Facilities

Al-Hasakeh November 2021



BAKERIES

153

Bakery Status



Reasons for Non-Operation

Machines Need Rehabilitation
High Operational Cost
No Access to Support

Functionality

● Full 59 (41%)
● Partial 84 (59%)

Ownership

● Public 13 (8%)
● Private 134 (88%)
● Mix 6 (4%)



CURRENCY USED

USD 0%

TL 0%

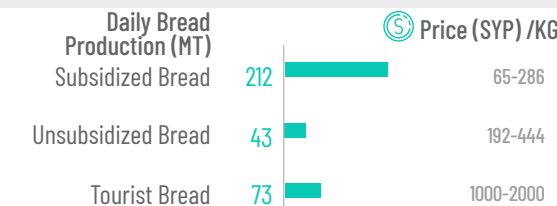
SYP 100%



QUALITY CONTROL
(LAB TESTING)

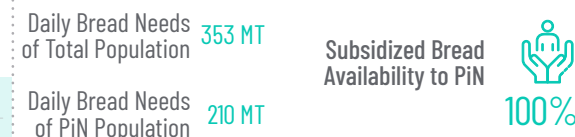
28

Bread Production



Average Subsidized Bread Package Weight 1,461g

Average Unsubsidized Bread Package Weight 1,999g

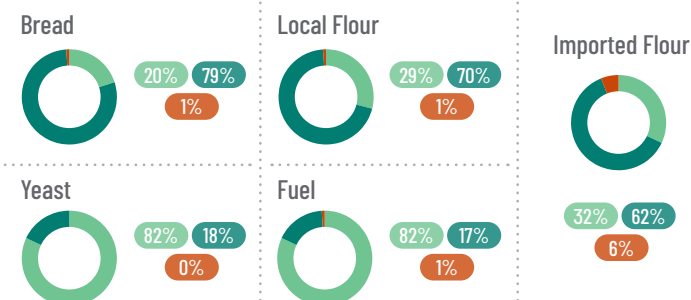


Bakery Management

Availability

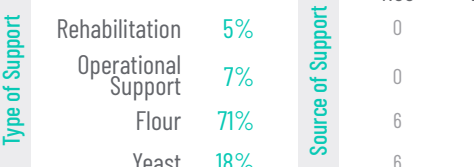
● Always Available ● Fairly Available ● Not Available

Bakery Owner 98 (69%)
Private Investor 34 (24%)
LSA 9 (6%)
Employee 2 (1%)
Other 0 (0%)

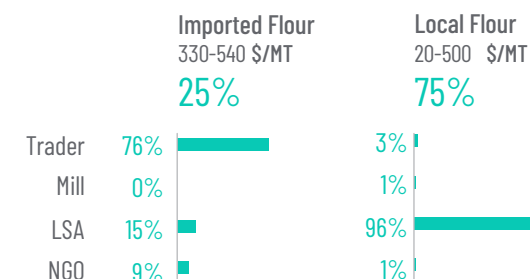


Support Status

Never Received Support 28 (20%)
Used to Receive Support 0 (0%)
Currently Receive Support 115 (80%)



Source and Price of Flour



MILLS

56

Mills Status



Functionality

● Full 13 (33%)
● Partial 26 (67%)

Ownership

● Public 4 (7%)
● Private 46 (82%)
● Mix 6 (11%)

Reasons for Limited Functionality

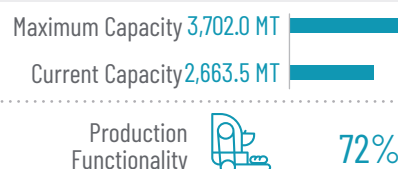
Wheat Shortage
Fuel/Electricity Shortages
High Operational Costs



MILLS SOURCE OF WHEAT

Farmers, LSA, Traders

Milling Capacity



Market Actors Supplied by Mills



SILOS

12

Silos Status



Functionality

● Full 2 (29%)
● Partial 5 (71%)

Ownership

● Public N/A (0%)
● Private N/A (0%)

Reasons for Non-Operation

Wheat Shortage



SILOS SOURCE OF WHEAT

LSA, Farmers, Traders

Needed Support for Silos

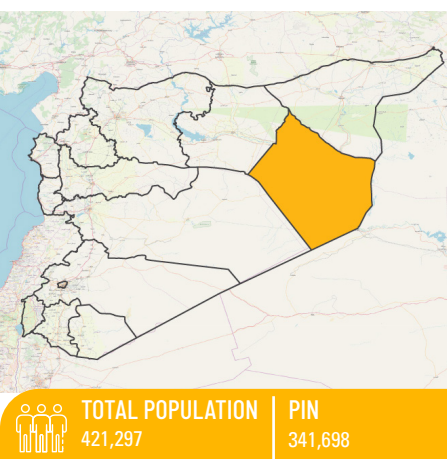
Building Rehabilitation 4
Machine Rehabilitation 2
Estimated Cost of Machines and Rehabilitation \$17,000

Silos Capacity

Silos Maximum Storage Capacity 407,000 MT

Mapping of Wheat-to-Bread Processing Facilities

Deir-ez-Zor November 2021



BAKERIES

124

Bakery Status



Reasons for Non-Operation

Theft
N/A
N/A

Functionality

● Full 96 (78%)
● Partial 27 (22%)

Ownership

Public 16 (13%)
Private 106 (85%)
Mix 2 (2%)



CURRENCY USED

USD 0%

TL 0%

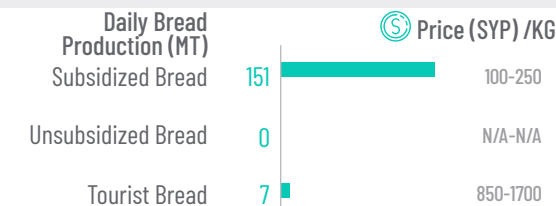
SYP 100%



QUALITY CONTROL
(LAB TESTING)

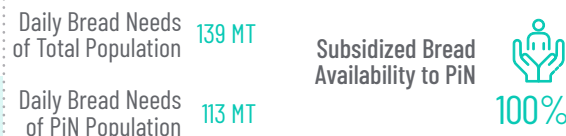
0

Bread Production



Average Subsidized Bread Package Weight 1,855g

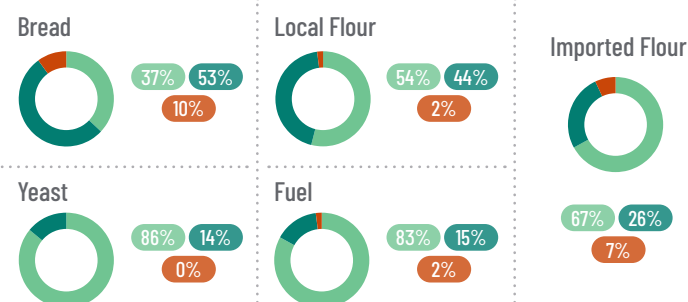
Average Unsubsidized Bread Package Weight N/Ag



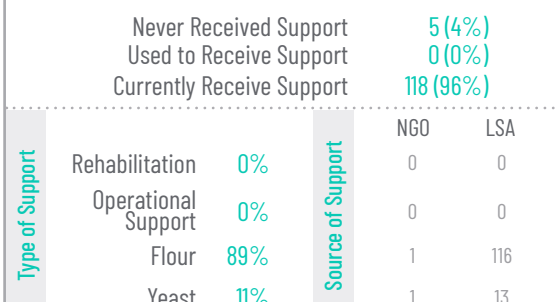
Bakery Management

Availability

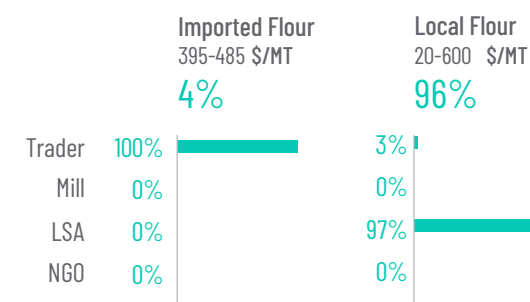
● Always Available ● Fairly Available ● Not Available



Support Status



Source and Price of Flour



MILLS

99

Mills Status



Reasons for Non-Operation

Wheat Shortage
High Operational Costs

Functionality

● Full 72 (77%)
● Partial 21 (23%)

Ownership

Public 0 (0%)
Private 99 (100%)
Mix 0 (0%)

Reasons for Limited Functionality

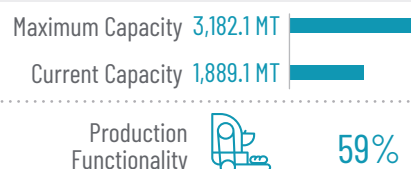
Wheat Shortage
High Operational Costs
Fuel/Electricity Shortages



MILLS SOURCE OF WHEAT

Farmers, Traders, LSA

Milling Capacity



Market Actors Supplied by Mills



SILOS

3

Silos Status



Functionality

● Full 0 (0%)
● Partial 0 (0%)

Ownership

Public 3 (100%)
Private 0 (0%)

Reasons for Non-Operation N/A



SILOS SOURCE OF WHEAT N/A

Needed Support for Silos

Building Rehabilitation 0

Machine Rehabilitation 0

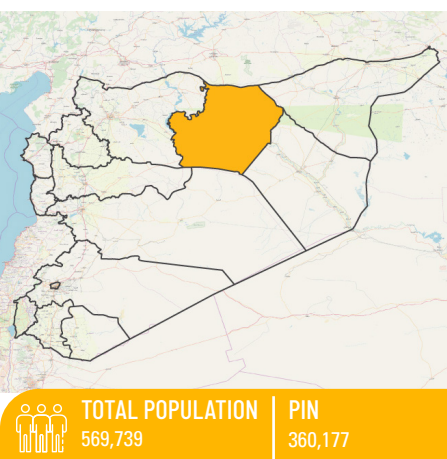
Estimated Cost of Machines and Rehabilitation \$0

Silos Capacity

Silos Maximum Storage Capacity 0 MT

Mapping of Wheat-to-Bread Processing Facilities

Ar-Raqqa November 2021



BAKERIES

124

Bakery Status



Reasons for Non-Operation

No Financial Liquidity
Machines Need Rehabilitation
No Access to Support

Functionality

● Full 7 (7%)
● Partial 100 (93%)

Ownership

● Public 12 (10%)
● Private 88 (71%)
● Mix 24 (19%)



CURRENCY USED

USD 0%

TL 0%

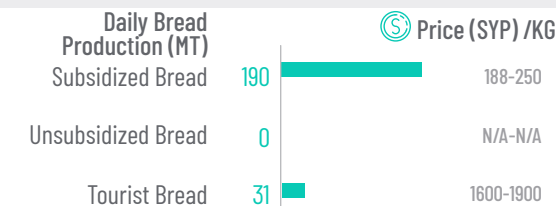
SYP 100%



QUALITY CONTROL
(LAB TESTING)

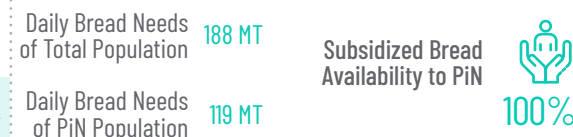
13

Bread Production



Average Subsidized Bread Package Weight 1,083g

Average Unsubsidized Bread Package Weight N/Ag

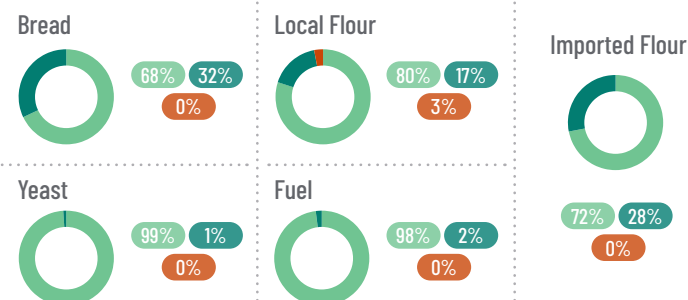


Bakery Management

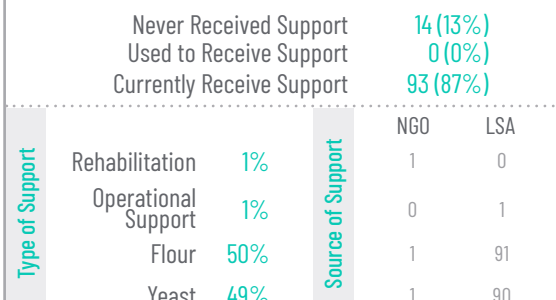
Availability

● Always Available ● Fairly Available ● Not Available

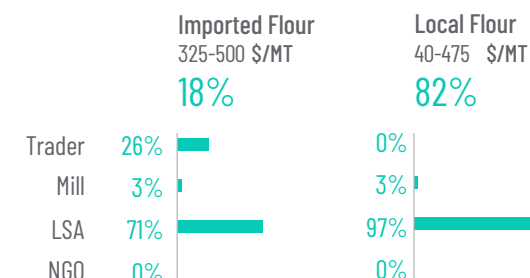
Bakery Owner 72 (67%)
Private Investor 30 (28%)
LSA 0 (0%)
Employee 5 (5%)
Other 0 (0%)



Support Status



Source and Price of Flour



MILLS

18

Mills Status



Reasons for Non-Operation

High Operational Costs
Wheat Shortage

Functionality

● Full 2 (18%)
● Partial 9 (82%)

Ownership

● Public 1 (5%)
● Private 19 (95%)
● Mix 0 (0%)

Reasons for Limited Functionality

Fuel/Electricity Shortages
High Operational Costs
Wheat Shortage



MILLS SOURCE OF WHEAT

Farmers, Traders, LSA

Milling Capacity



Market Actors Supplied by Mills



SILOS

10

Silos Status



Functionality

● Full 2 (100%)
● Partial 0 (0%)

Ownership

● Public 10 (100%)
● Private 0 (0%)

Reasons for Non-Operation Building Needs Rehabilitation



SILOS SOURCE OF WHEAT LSA

Needed Support for Silos

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

Silos Capacity

Silos Maximum Storage Capacity 24,000 MT

Annex Table 1: NES Bread Needs and Production Gap Analysis

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 operating bakeries	Number of supported bakeries	Number of unsupported bakeries	%Unsupported bakeries	Weekly full bread production capacity in MT	% Current productivity
Menbij	306,135	62,200	707	144	651	0	7	0	0	658	93%	92%	453%	49	56	-507	13	12	1	8%	1,449	45%
Abu Qalqal	58,505	28,557	135	66	28	0	0	0	0	28	21%	21%	42%	107	107	38	1	1	0	0%	70	40%
Al-Khafsah	87,420	40,226	202	93	35	0	0	0	0	35	17%	17%	38%	167	167	58	1	1	0	0%	42	83%
Ain al Arab	87,390	87,129	202	201	112	0	21	0	0	133	66%	55%	56%	69	90	89	4	3	1	25%	140	95%
Lower Shyokh	16,064	16,079	37	37	126	0	0	0	0	126	340%	340%	339%	-89	-89	-89	3	0	3	100%	126	100%
Sarin	51,640	42,388	119	98	329	0	0	0	0	329	276%	276%	336%	-210	-210	-231	8	7	1	13%	364	90%
Al-Hasakeh	271,260	222,099	627	513	504	35	294	21	7	861	137%	84%	102%	-234	102	-12	27	17	10	37%	1,036	83%
Tal Tamer	52,341	13,008	121	30	28	0	7	0	0	35	29%	23%	93%	86	93	2	4	4	0	0%	189	19%
Shadadah	37,337	10,416	86	24	189	0	7	0	0	196	227%	219%	786%	-110	-103	-165	6	5	1	17%	231	85%
Be'r Al-Hub Al-Wardeyyeh	8,907	9,893	21	23	126	0	0	0	0	126	612%	612%	551%	-105	-105	-103	6	5	1	17%	175	72%
Areeshah	43,663	32,303	101	75	28	0	0	0	0	28	28%	28%	38%	73	73	47	2	2	0	0%	126	22%
Hole	70,145	122,350	162	283	56	0	0	0	0	56	35%	35%	20%	106	106	227	2	2	0	0%	77	73%
Qamishli	300,751	113,873	695	263	7	182	84	14	0	287	41%	3%	8%	408	674	242	26	17	9	35%	672	43%
Tal Hmis	29,424	23,514	68	54	154	0	0	0	0	154	227%	227%	284%	-86	-86	-100	14	12	2	14%	371	42%
Amuda	48,746	11,432	113	26	84	0	77	0	0	161	143%	75%	318%	-48	29	-58	3	1	2	67%	210	77%
Qahtaniyyeh	28,499	15,100	66	35	14	70	0	0	0	84	128%	21%	40%	-18	52	21	17	17	0	0%	364	23%
Al-Malikeyyeh	88,443	23,161	204	54	0	0	0	21	0	21	10%	10%	39%	183	183	33	1	1	0	0%	42	50%
Jawadiyah	27,570	9,713	64	22	98	0	0	0	0	98	154%	154%	437%	-34	-34	-76	15	15	0	0%	385	25%
Ya'robiyah	27,816	16,334	64	38	28	21	0	0	0	49	76%	44%	74%	15	36	10	12	11	1	8%	196	25%
Darbasiyah	34,473	14,292	80	33	161	0	35	0	0	196	246%	202%	488%	-116	-81	-128	8	6	2	25%	539	36%
Kisreh	120,745	91,046	279	210	287	0	49	7	0	343	123%	105%	140%	-64	-15	-84	36	32	4	11%	2,044	2%
Basira	41,539	11,852	96	27	154	0	0	0	0	154	160%	160%	562%	-58	-58	-127	16	16	0	0%	651	24%
Khasham	31,021	13,897	72	32	91	0	0	0	0	91	127%	127%	283%	-19	-19	-59	12	12	0	0%	112	81%
Sur	39,344	52,649	91	122	161	0	0	0	0	161	177%	177%	132%	-70	-70	-39	17	16	1	6%	721	2%
Hajin	107,173	110,691	248	256	133	0	0	0	0	133	54%	54%	52%	115	115	123	14	14	0	0%	511	26%
Susat	30,923	27,043	71	62	56	0	0	0	0	56	78%	78%	90%	15	15	6	11	11	0	0%	413	14%
Thiban	50,552	34,520	117	80	175	0	0	0	0	175	150%	150%	219%	-58	-58	-95	17	17	0	0%	623	28%
Ar-Raqqa	393,512	282,160	909	652	791	0	189	0	0	980	108%	87%	121%	-71	118	-139	69	55	14	20%	3,717	26%
Karama	53,827	33,680	124	78	301	0	0	0	0	301	242%	242%	387%	-177	-177	-223	25	25	0	0%	994	30%
Mansura	46,259	10,383	107	24	147	0	21	0	0	168	157%	138%	613%	-61	-40	-123	9	9	0	0%	413	41%
Jurneyyeh	38,418	14,572	89	34	91	0	0	0	0	91	103%	103%	270%	-2	-2	-57	4	4	0	0%	203	45%
Grand Total	2,629,842	1,596,560	6,075	3,688	5,145	308	791	63	7	6,314	104%	86%	141%	-239	867	-1,520	403	350	53	13%	17,206	15%