Integrated Market Monitoring Initiative (IMMI)

Bulletin Quarter 3 (Winter Season), 2022

Price Monitoring for Agriculture and Livestock Inputs

Northwest Syria

Introduction

Price of inputs is an overarching indicator that provides key information for the implementation of the Food Security and Livelihood (FSL) activities. As an outcome of input supply and demand forces, input price monitoring gives timely insight into many different drivers that influence the functioning and viability of a market, and this is relevant for food assistance and agro-based livelihood programming. The scope of this initiative is based on qualitative and quantitative data collection that is used to monitor the price, availability, and affordability of agriculture inputs (crops and livestock) across the targeted geographical locations on a seasonal basis. Monitoring prices and trends of the cost value of selected crops and livestock inputs, provide evidence to inform the FSL Cluster, humanitarian partners/agency members in deciding on Cash Transfer Values for respective agricultural inputs/kits distributions over time and space to support crop and livestock holders aimed at improved agriculture production, the same way the standard food basket and survival minimum expenditure basket (SMEB) values inform cash transfer values for Food assistance programming.

Study Objectives

This initiative aims to monitor the agricultural input markets in Northwest Syria (NWS) on a seasonal basis, to assess the availability, country of origin, and prices of agricultural inputs. This report covers the winter agriculture production season of NWS in 2022.

Study Methodology, Geographical Coverage and Study Respondents

The set of agriculture inputs covered in this round (winter season) were identified by the NWS FSL cluster and Agriculture Technical Working Group (ATWG). The study covered 42 agriculture inputs categorized into five different groups. Prior to the start of data collection, the specifications and naming of the selected agriculture inputs were validated with ATWG members. Ten partners collected input price data across 40 subdistricts in the governorates of Aleppo, Idlib, Ar-Raqqa and Al-Hasakeh as in figure 1. The data collection teams reached 2,287 study respondents in total from various agricultural backgrounds (see figure 2). The reported prices of agricultural inputs were validated through discussions with the technical and field experts of ATWG participating organizations. The outliers’ data were revised based on the identified acceptable market price range generated in the validation workshop.

Figure 1. Percentage of Study Respondents per Governorate

[Diagram showing percentage of study respondents per governorate: Aleppo 43%, Idlib 36%, Ar-Raqqa 16%, Al-Hasakeh 5%]
Interactive Dashboard

This report provides a summary of the key findings and a description of the study methodology. For detailed analysis and visualization of the agricultural inputs’ availability, country of origin, and prices of agricultural inputs and food items at different geographical levels (sub-district, district, governorate), refer to the produced interactive dashboard through this link.

Figure 2. Data Collection Respondents

<table>
<thead>
<tr>
<th>Role</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmer</td>
<td>55%</td>
</tr>
<tr>
<td>Agricultural pharmacy</td>
<td>15%</td>
</tr>
<tr>
<td>Herders</td>
<td>12%</td>
</tr>
<tr>
<td>Trader</td>
<td>12%</td>
</tr>
<tr>
<td>Member of local council agriculture</td>
<td>7%</td>
</tr>
<tr>
<td>agriculture committee</td>
<td>7%</td>
</tr>
<tr>
<td>Vet</td>
<td>3%</td>
</tr>
<tr>
<td>Agriculture Nursery</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
<tr>
<td>Member of Seed propagation center</td>
<td>1%</td>
</tr>
</tbody>
</table>

n = 2,822

Key Findings – Agriculture Inputs General Findings

Exchange Rate and Currency Used for Trading Inputs

In Aleppo and Ar-Raqqa governorates, nearly equal use of the US Dollar (USD), Turkish Lira (TRY), and Syrian Pound (SYP) was reported. However, in Al-Hasakeh governorate it was reported that the use of US Dollar (USD) and Turkish Lira (TRY) was more common, while in Idleb governorate the use of Syrian Pound (SYP) was totally absent for trading agriculture inputs. There has been a notable depreciation in exchange rates of both the TRY and SYP against the USD in the last two years.

Figure 3. Currency Used in Trading Agriculture Inputs
**Availability**

Generally, most study respondents considered the agricultural inputs as available in the markets of Northwest Syria during the study period of the winter season of 2022. On average, the agricultural inputs availability percentage for all groups covered in this round was reported to be 96% available (Aleppo governorate 97%, Al-Hasakeh governorate 96%, Ar-Raqqa governorate 95%, and Idleb governorate 95%).

**Figure 4. Reported Availability of Agriculture Inputs**

Always Available | Only during the Season | Not Available
---|---|---
Fertilizer, Pesticides and Herbicides | 94% | 2%
Land’s Services | 97% | 3%
Livestock Inputs | 94% | 5%
Winter and Cash Crops | 97% | 2%
Winter Vegetables Seeds | 97% | 2%

**Country of Origin**

Across all assessed agricultural inputs, Syria was reported as the main country of origin of the inputs with 68% and was followed by 17% from Turkey. The remaining 15% indicated different countries of origin for the assessed agricultural inputs, including but not limited to China, Ukraine, Russia, Spain, and Jordan, and varying across the type of inputs.

On a group level, Pesticides, Fertilizer and Herbicides recorded the highest percentage of imports from outside the region 37% being from China and Russia and 37% from countries such as Turkey, Ukraine, and Uzbekistan. The Livestock Inputs reported 82% of locally produced inputs in Syria, while the other country of origin outside of the region was mainly Turkey, followed by European countries (including Ukraine) and China. For Winter Land’s Services, Winter and Cash Crops, and Winter Vegetables Seeds, an average of 98% of the inputs were locally produced in Syria.

**Figure 5. Country of Origin**

Inside Syria | Turkey | China | Russia | Other | Regional (Jordan, Iraq, and Lebanon) | European Countries
---|---|---|---|---|---|---
Fertilizer, Pesticides and Herbicides | 11% | 34% | 17% | 7% | 7% | 24%
Livestock Inputs | 81% | 26% | 3% | 10% | 1% | 1%
Winter Vegetables Seeds | 83% | 12% | 1% | 24% | 1% | 1%
Winter and Cash Crops | 90% | 6% | 2% | 100% | 100% | 100%
Key Findings – Agriculture Input Prices

Fertilizer, Pesticides and Herbicides

Six chemical products were assessed under the Fertilizers, Pesticides and Herbicides group during the third quarter of 2022 across the local markets in NWS. Collected data recorded the high price of both the complex fertilizer (15:15:15 N:P:K), and urea fertilizer – 46%. The median price of 1 Ton of complex fertilizer was 880 USD (950 USD in Aleppo governorate, 850 USD in both Ar-Raqqa and Al-Hasakeh governorates, and 872.5 USD in Idleb governorate), whereas the median price of 1 Ton of urea fertilizer was 822 USD (860 USD in Aleppo governorate, 830 USD in Ar-Raqqa governorate, 800 USD in both Al-Hasakeh and Idleb governorates).

The collected data recorded that one cubic meter of organic manure from poultry was more expensive in comparison to the organic manure from sheep and cow, hence showing the use of poultry organic manure in Al-Hasakeh governorate and Ar-Raqqa governorate indicated by the reported high prices, and the use of sheep/cow organic manure in Aleppo governorate and Idleb governorate indicated by the reported low prices. The median price of 1 cubic meter of organic manure from poultry was 128 USD in Al-Hasakeh governorate and 125 USD in Ar-Raqqa governorate, whereas the average price of 1 cubic meter of organic manure from sheep and cows was 20 USD in Aleppo governorate and 25 USD in Idleb governorate. Study respondents raised concerns regarding the continuous increase and instability of the prices of agriculture inputs, and of fertilizers, pesticides, and herbicides.
**Land Services**

Seven types of land services were assessed under the land services group during the third quarter of 2022 across the local markets in NWS. Cash crops harvesting (Manual) was recorded at 13 USD/donum, Hand weeding was recorded at 15 USD/donum, and cost of 1 hectare of barley harvesting (by harvester) was recorded at 99 USD/donum, ranked in that order, these services recorded the highest median costs across the assessed lands’ services in NWS. Whereas sowing was recorded at 3.5 USD/donum, one face of Plowing using cultivator was recorded at 3.5 USD/donum, and one face of plowing using disc was recorded at 5 USD/donum, ranked in that order, these services recorded the lowest median costs across the assessed lands’ services in NWS.

In addition, Aleppo governorate recorded the highest median costs for 5 services out of the 7 assessed lands’ services in NWS, this was followed by Al-Hasakeh governorate which recorded the highest median costs for 3 services, and Ar-Raqqa governorate came last as it recorded the highest average cost for only one service.

**Figure 7.** Median Prices in USD of Land’s Services, Sept. 2022

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Al-Hasakeh</th>
<th>Aleppo</th>
<th>Ar-Raqqa</th>
<th>Idleb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of 1 hectare of barley harvesting (by harvester)</td>
<td>$100</td>
<td>$97.5</td>
<td>$100</td>
<td>$100</td>
</tr>
<tr>
<td>1 donums hand weeding</td>
<td>$15</td>
<td>$15</td>
<td>$15</td>
<td>$14.5</td>
</tr>
<tr>
<td>1 donums of cash crops hand harvesting without packing cost</td>
<td>$12</td>
<td>$15</td>
<td>$12</td>
<td>$12</td>
</tr>
<tr>
<td>Cost per face of 1 donums plowing using disc</td>
<td>$5</td>
<td>$5</td>
<td>$5</td>
<td>$5</td>
</tr>
<tr>
<td>Cost per face of 1 donums plowing using moldboard</td>
<td>$5.5</td>
<td>$7</td>
<td>$5</td>
<td>$6</td>
</tr>
<tr>
<td>1 donums sowing (by seeder)</td>
<td>$3</td>
<td>$4</td>
<td>$3</td>
<td>$4</td>
</tr>
<tr>
<td>Cost per face of 1 donums plowing using cultivator</td>
<td>$3</td>
<td>$4</td>
<td>$3</td>
<td>$4</td>
</tr>
</tbody>
</table>
Livestock Inputs

Nine livestock inputs were assessed under the livestock inputs group during the third quarter of 2022 across the local markets in NWS; these were grouped into three main categories: Mixture feed, individual feed items, and animal vaccine & vitamins. For the mixture feed category, the median reported price of 1 MT of poultry mixture feed for meat and eggs was the highest in comparison to that of cows and sheep mixture feed (573 USD/1 MT of poultry mixture’s feed), this was followed by sheep mixture feed (500 USD/1 MT of cow mixture’s feed), and cows mixture feed being the cheapest at (485 USD/1 MT of sheep mixture feed). Furthermore, Idleb governorate recorded the lowest average price for 4 services out of 9 assessed livestock services.

In addition, the median price of 1 kg of animal vitamins was 12.5 USD in Al-Hasakeh governorate, whereas the median price of 1 kg of animal vitamins was 4.5 USD in Idleb.

Figure 8. Median Prices in USD of Livestock Inputs, Sept. 2022
Winter & Cash Crops Seeds

With close coordination among the field agricultural technical experts, iMMAP added more specification to the 12 assessed winter and cash crop seed types to avoid a large range of prices. This resulted in having 12 crop seed items under this group as illustrated in Figure 9 “Median Prices in USD of Winter and Cash Crops – Q3 2022”.

The median price of winter and cash crops seeds varied across different seed types as assessed across the governorates. Cowpea seed, cumin seed, and local keel bean seed, respectively, recorded the highest average prices of the assessed seed types under winter and cash categories across NWS. Soft wheat seeds, hard wheat seeds and barley seeds, respectively, recorded the lowest average prices of the assessed seed types under winter and cash categories across NWS.

It is worth noting that out of the 12 assessed crop seed types under the winter and cash crops seeds in NWS, Aleppo governorate recorded the highest median price for 7 crop seed types, this was followed by Idleb governorate which recorded the highest average price for 6 crop seed types, and Al-Hasakeh governorate with Ar-Raqqa governorate came last with 5 crop seed types.

Figure 9. Median Prices in USD of 1MT of Winter and Cash Crops, Sept. 2022
Winter Vegetables Seeds

By applying the specifications on different varieties of the assessed winter vegetables seeds, the winter vegetable seeds types become 8 winter vegetable seed types under this group. Lettuce seed, carrot seed, spinach seed, pea seed, and chard seed, respectively, recorded the highest median prices of the assessed winter vegetable seed types under winter vegetables group in NWS. Whereas winter radish seed, garlic bulb and onion bulb that exceeds the diameter of 2 cm, respectively, recorded the lowest average price across the assessed winter vegetable seed types under winter vegetables group in NWS.

It is worth noting that not all the winter vegetable seeds types under this group had the same unit of measurement, rather the selected unit of measurement was identified based on the unit used across the local market, however, for the purpose of reporting the units were unified in certain categories. In addition, out of the 8 winter vegetable seed types, Aleppo governorate recorded the highest average price for 4 items in NWS, this was followed by Idlib and Ar-Raqqa governorates where each governorate recorded the highest average price for 3 items.

In general, the reported average price of imported items was higher than the reported average price of locally sourced winter vegetable seeds. Only lettuce and carrots seeds showed different price patterns in this regard with a significant variation between the imported and local types. The median price of 1 gr of imported lettuce seeds was 0.21 USD, whereas the average price of 1 gr of local lettuce seeds was 0.14 USD.

Figure 10. Median Prices in USD of 1KG of Winter Vegetables Seeds, Sept. 2022

- 1 kg of lettuce seeds
  - Al-Hasakeh: $200
  - Aleppo: $200
  - Ar-Raqqa: $200
  - Idleb: $100

- 1 kg of carrot seeds
  - Al-Hasakeh: $100
  - Aleppo: $150
  - Ar-Raqqa: $100
  - Idleb: $125

- 1 kg of spinach seeds
  - Al-Hasakeh: $4
  - Aleppo: $4
  - Ar-Raqqa: $4
  - Idleb: $5

- 1 kg of pea seeds
  - Al-Hasakeh: $4
  - Aleppo: $4
  - Ar-Raqqa: $4
  - Idleb: $4

- 1 kg of chard seed
  - Al-Hasakeh: $3
  - Aleppo: $4
  - Ar-Raqqa: $3
  - Idleb: $3

- 1 kg of onion bulbs that exceeds the diameter of 2 cm
  - Al-Hasakeh: $3
  - Aleppo: $3
  - Ar-Raqqa: $3
  - Idleb: $1

- 1 kg of garlic bulbs
  - Al-Hasakeh: $1
  - Aleppo: $1
  - Ar-Raqqa: $1
  - Idleb: $1

- 1 kg of winter radish seeds
  - Al-Hasakeh: $0
  - Aleppo: $0
  - Ar-Raqqa: $0
  - Idleb: $0
**Recommendations**

- Agricultural input prices have drastically increased across the study area compared with the winter agriculture production season of NWS in 2021 for the same inputs, and this could be a result of continued conflict and the sowing season approaching cropping winter season that triggers farmers and traders to start pre-positioning themselves for crop production. The reported increase in prices of agricultural inputs highlighted the worsening household purchasing power of vulnerable Syrian households. Given the recorded price increase rate of change for various agricultural inputs, then as the FSL Cluster partners design and plan for agricultural input and livelihood provision programming then there is a need to factor in, the respective price increase changes over time when deciding the cash transfer value or unit cost per farming household targeted for agriculture input support.

- One of the main reasons for the higher prices of agricultural inputs than last year was the 10% drop decreases in the percentage of agriculture inputs reported as the country of origin from Turkey in comparison with the winter agriculture production season of NWS in 2021 against a 5% increase in imports from European countries this year.

- Similar to Q3 2021 study which reported that agriculture (crops and livestock) inputs were widely available in the markets across NWS. The present report recorded that most agriculture inputs were locally available, with Aleppo, Idleb, and Ar-Raqqa governorates recorded with the highest sources to obtain agricultural items.

- Where possible, the humanitarian partners need to gradually promote the distribution of locally procured quality open pollinated varieties which are locally adapted seeds (cereals, pulses, and vegetables). Distribution of open pollinated varieties has a merit upon harvest, it is possible for seed selection and seed retainment for subsequent planting in future cropping seasons, thereby, breaking the cycle of seed shortage or prohibitive cost of imported hybrid seeds which at harvest cannot be retained for subsequent cropping, thus, setting donor dependence syndrome tendencies year in year out as beneficiaries would need seed distributions. Furthermore, support for agriculture nursery and seed multiplication projects is needed from donors, partners, and local authorities.

- The prohibitive cost of livestock feed ingredients and fodder has been persistently mentioned across NWS and these prices might increase over the year as the crop residues and the pastures become exhausted with climate-induced aridity. High livestock feed and fodder prices were particularly noticeable in winter when livestock are fed with expensive feed concentrates and crop residue. Partners ought to support livestock keepers to locally purchase grain and farm by-products from farmers and import feed additives to produce fodder/feed concentrates through livestock local feed formulations at the household level. In that regard, it is also recommended for donors, partners, and local authorities to support the fodder crops value chain.

- Expensive chemical fertilizers can be substituted by farmers’ application of compost manure and crop residue in cooperation to improve soil fertility, especially for vegetable production to reduce the cost of production.

- Expensive herbicides and pesticides can be complemented with farmers’ adoption of the integrated pest and disease management practices of crop rotation and mulching.