

Integrated Market Monitoring Initiative (IMMI)

Post-Earthquake Comparative Study | Bulletin Quarter 2 (Spring/Summer), 2023

Price Monitoring for Agriculture and Livestock Inputs



Introduction

Monitoring the price, availability, and affordability of agriculture inputs (crops and livestock) on a seasonal basis provides crucial information for implementing Food Security and Livelihood (FSL) activities. By tracking input prices, we gain insight into the functioning and viability of the market, which is relevant for both food assistance and agro-based livelihood programming. This initiative collects both qualitative and quantitative data to monitor prices and trends of selected crops and livestock inputs in targeted geographical locations. The evidence gathered from this monitoring informs the FSL Cluster, humanitarian partners/agency members on deciding the Cash Transfer Values for respective agricultural inputs/kits distributions over time and space. This support is aimed at improving agriculture production and similar to the way 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 specifically, is a comparative analysis of the impact of the earthquake that struck Turkey and Syria in February 2023 on the agriculture inputs prices and availability for the upcoming spring/summer agriculture production season in NWS¹.** Through this comparative study, the report provides valuable insights into the current state of the agriculture sector and its challenges in the aftermath of the earthquake; findings will be compared with the latest assessment conducted in NWS before the earthquake and will support in determining the appropriate response to support farmers in NWS in the aftermath of the earthquake.

Study Methodology and Respondents

The NWS FSL cluster and Agriculture Technical Working Group (ATWG) determined the range of agricultural inputs to be utilized during the current spring/ summer season. This quarter, the number of agricultural inputs has risen from 72 divided to six groups in Q2 2023 to 82, divided into seven separate categories.

Prior to the start of data collection, the specifications and naming of the selected agriculture inputs were validated with ATWG members. **Nine partners² collected input price data across 39 subdistricts in the governorates of Aleppo, Idleb, Ar-Raqqa and Al-Hasakeh as in figure 1.**

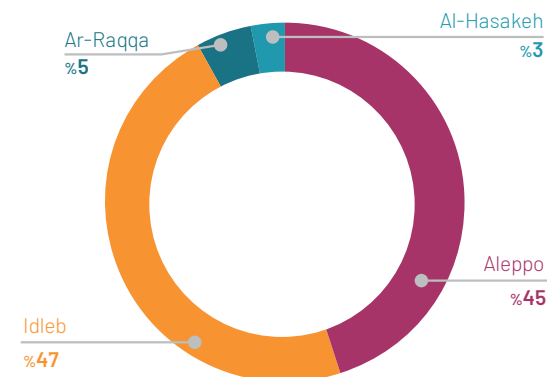


Figure 1. Percentage of Study Respondents per Governorate

¹ Spring/summer planting season (March–May) – WoS FSL Cluster Seasonal Calendar

² Bahar, IHR, IhsanRD, Insan Charity, IYD, Muzun, Shafak, Syria Relief and Violet

The data collection teams reached 2,612 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 based on the collected data in Q1 2023 and by validation of these values with partners who collected the data and obtaining explanations for the outliers.

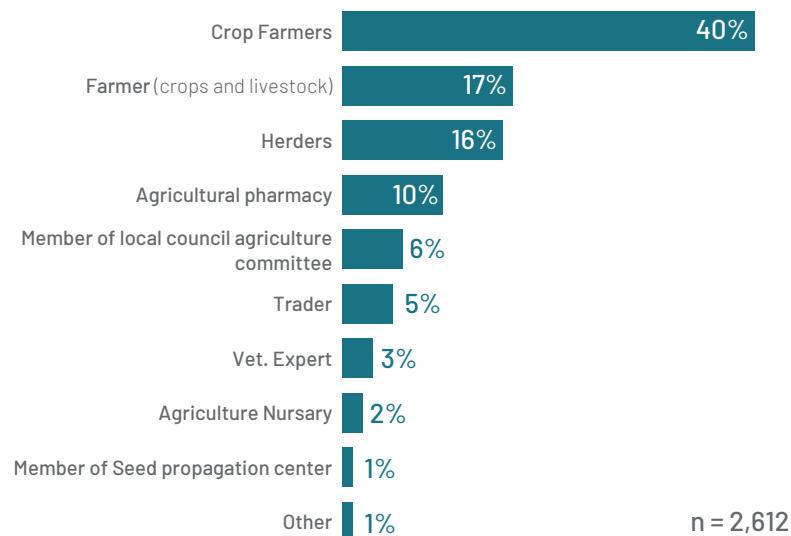


Figure 2. Data Collection Respondents

Interactive Dashboard

This report provides a summary of the key findings and a description of the study methodology. To access comprehensive evaluations and visuals of the availability, country of origin, and cost of agricultural inputs at various geographic levels such as sub-district, district, and governorate, please refer to the interactive dashboard available at the following [link](#), if you are interested to view the dashboard that compares prices before and after the earthquake, please follow this [link](#).

Key Findings – Agriculture Inputs General Findings

Exchange Rate and Currency Used for Trading Inputs

Figure 3 shows a clear shift in the currency used for trading inputs after the earthquake. Before the earthquake, the majority of the trading was conducted using US Dollar (USD) in all four governorates, ranging from 50% to 72%. Turkish Lira (TL) was the second most commonly used currency, with a percentage ranging from 17% to 28%. Syrian Pound (SYP) was used the least for trading inputs. However, after the earthquake, there was a noticeable change in the pattern of currency usage. **Al-Hasakeh shifted entirely to TL, while Aleppo and Idleb saw an increase in the usage of TL. Ar-Raqqa saw a significant increase in the usage of SYP.** Nevertheless, USD remained the most commonly used currency for trading inputs in all governorates, albeit with a lower percentage than before the earthquake.

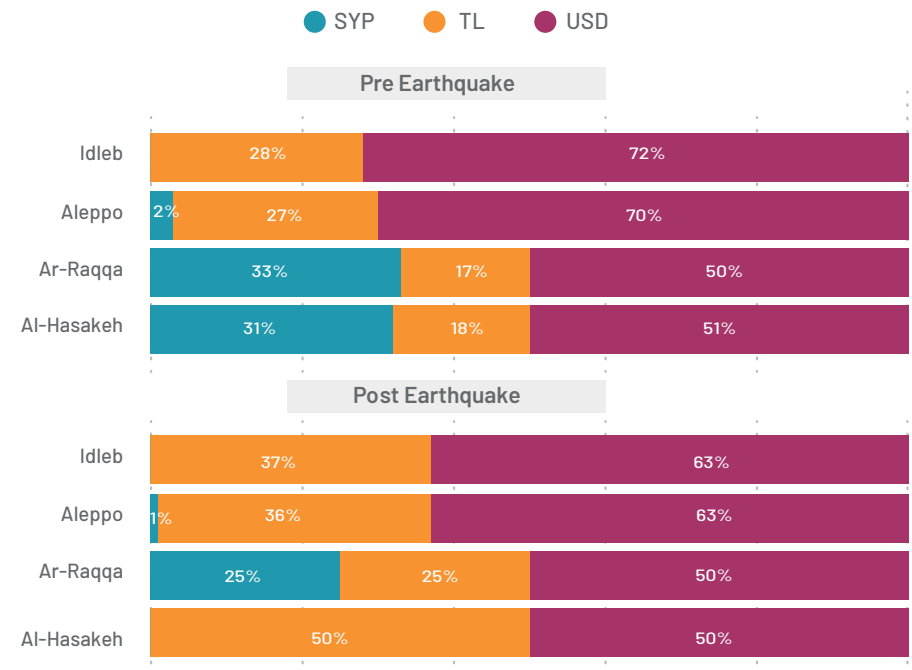


Figure 3. Currency Used in Trading Agriculture Inputs

Availability

Generally, most study respondents considered the agricultural inputs as available in the markets of Northwest Syria during the study period of the spring/ summer season of 2023. Before the earthquake, the input categories that were always available included agriculture equipment and fuel, agriculture inputs, and leafy vegetables, with availability percentages ranging from 82% to 90%. However, after the earthquake, the percentage of agriculture inputs always available increased to 96%, while the availability of spring/ summer fruits decreased to 69%. The availability of livestock inputs before the earthquake was 83%, which increased to 91% after the earthquake. Additionally, the availability of spring/summer vegetables increased from 75% to 86%. Interestingly, the availability of leafy vegetables remained relatively stable, with a minor decrease from 86% to 82%. Overall, the availability of input categories remained relatively stable, with a few noticeable changes post-earthquake.

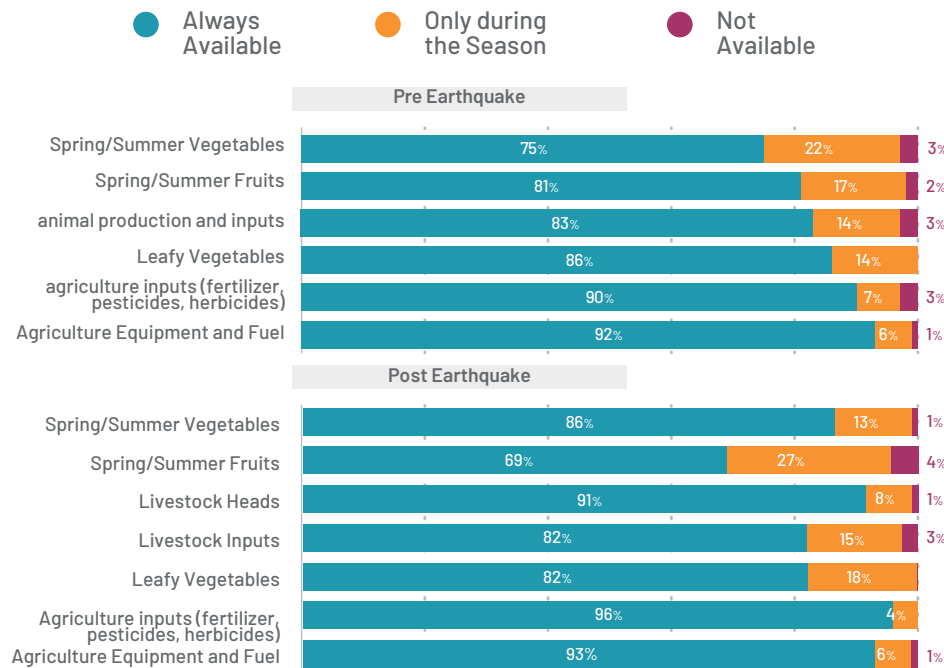


Figure 4. Reported Availability of Agriculture Inputs

Country of Origin

Across all assessed agricultural inputs were mainly sourced from Syria and Turkey with 46% and 28% respectively. The remaining 26% indicated different countries of origin for the assessed agricultural inputs, including but not limited to China, Ukraine, Russia, Spain, Germany, Holland, Uzbekistan, and Jordan, and varying across the type of inputs.

On a group level, Spring/summer vegetables came from Syria (47%) and Turkey (36%), while spring/summer fruits came mostly from Turkey (42%). Livestock heads and leafy vegetables were mostly sourced from Syria, and agriculture inputs including fertilizer, pesticides, and herbicides were mainly sourced from Turkey and China. Agriculture equipment and fuel were sourced from Syria and Turkey, with some also coming from China and other countries. European countries (mainly Ukraine and Spain) provided a significant portion of spring/summer fruit with 7%.

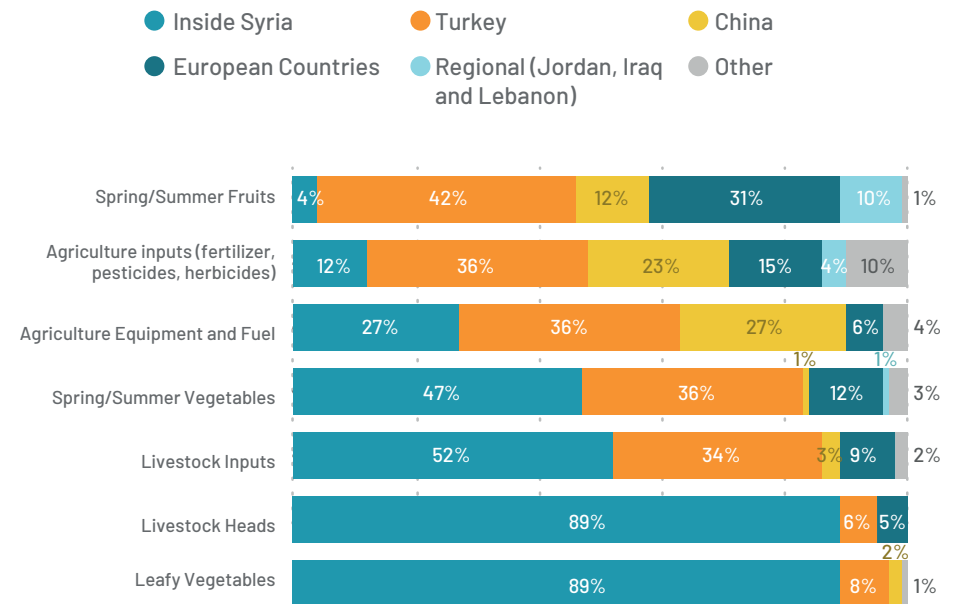


Figure 5. Country of Origin

Earthquake Impact

Across all assessed governorates, most respondents reported that prices stayed the same after the recent earthquake. Specifically, all respondents in Al-Hasakeh reported no price changes, while in Ar-Raqqa and Aleppo a 100% and 87% of respondents respectively, reported no price changes while 12% reported price increased in Aleppo and 1% reported that prices decreased. In Idleb, 82% of respondents reported no price changes, while 17% reported price increases and 1% reported price decreases. The numbers indicating an increase in the prices of certain agricultural inputs are reflective of the impact of the earthquake on Aleppo and Idlib, which are the governorates in Syria that were most affected by the earthquake.

On the sub-district level, for Aleppo governorate Atareb has the highest percentage of reported increase in prices at 44.29%. Daret Azza follows closely with 47.20% reported increase in prices. Other subdistricts with relatively high percentages of reported price increase include Afrin (22.78%), Sharan (22.25%), and A'zaz (16.79%).

For Idlep governorate several subdistricts in Idleb have experienced a noticeable increase in prices. The subdistrict of Bennsh has seen the highest reported increase in prices, with a staggering 72.28% of respondents indicating that they have experienced a rise in prices. Following closely behind are Armanaz, with a reported increase of 50.59%, and Sarmin, with a reported increase of 35.03%. Other subdistricts that have seen notable increases in prices include Tefnaz (33.14%), Kafr Takharim (25.43%), Salqin (28.19%), Jisr-Ash-Shugur (24.14%), and Qourqeena (20.00%). Respondents mentioned many reasons for the prices increase of which the disruption of supply chains caused by the earthquake. In fact, the earthquake's impact on the agriculture sector has caused significant disruptions in the supply chain, making it difficult to transport goods from farms to markets. The damage to infrastructure such as roads and bridges has added to the challenges, resulting in shortages that have driven up prices as demand exceeds supply.

The destruction of crops due to the earthquake is another critical factor contributing to the price increases. Depending on the severity of the earthquake, some crops may have been damaged or destroyed, leading to a decrease in supply. This reduced supply can increase the remaining crops' value, leading to higher prices. Furthermore, increased demand is also contributing to the rising prices. Following a natural disaster, people may begin stockpiling agricultural items, leading to an increase in demand. This surge in demand can put pressure on supply, leading to higher prices.

Overall, multiple factors are contributing to the reported price increases in the sub-districts of both governorates. Supply chain disruptions, crop damage, and increased demand are all playing a role. Understanding these factors is crucial for developing effective strategies to support farmers and promote sustainable agriculture practices in the region. By addressing these issues, it may be possible to mitigate the effects of the earthquake on the agriculture sector and support the region's long-term recovery.

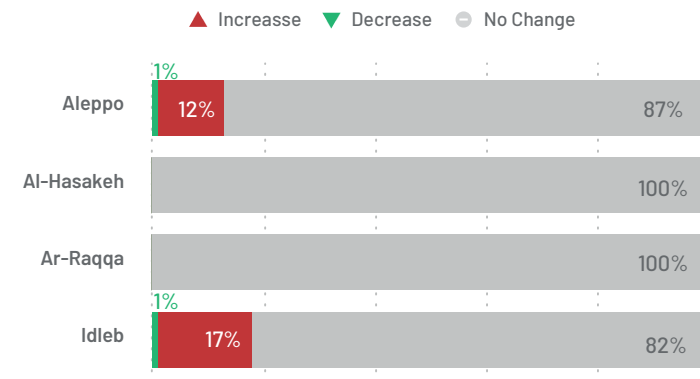


Figure 6. Price Change after Earthquake

Key Findings – Agriculture Input Prices

Fertilizer, Pesticides and Herbicides

Fifteen products were assessed under the Fertilizers, Pesticides and Herbicides category during the second quarter of 2023 across the local markets in NWS. Collected data recorded that before the earthquake, the median price of 1 can of Lannate pesticide ranged from 2 to 3 US dollar across the four governorates. The cost of watering one donum of land varied between \$15 in Idleb and \$80 in Al-Hasakeh. The median price of 1 envelop of Zinnet pesticide ranged from \$1.5 to \$2.15. The cost of 1 kg of copper oxychloride fungicide varied between \$8 and \$10.8, while Copper sulphate fungicide cost between \$7.5 and \$9 per kg. The median price of 1 L of Decis insecticide ranged from \$8 to \$10.8, and Dimethoate insecticide cost between \$8.5 and \$11 per liter. The median price of 1 L of Gramixin herbicide ranged from \$6 to \$6.5, and Alpha cypermethrin insecticide ranged from \$7 to \$10 per liter. The median price of 1 ton of composted fertilizer NPK varied between \$700 and \$900, while Organic fertilizer (chicken and sheep/cow) cost between \$25 and \$100 per ton. Phosphate fertilizer ranged from \$360 to \$800 per ton, and Soluble fertilizer ranged from \$1950 to \$2200 per ton. Finally, Urea fertilizer cost between \$510 and \$700 per ton.

After the earthquake, the median prices for most agricultural inputs saw a slight increase, ranging from \$0.5 to \$5. However, the median price of 1 kg of copper oxychloride fungicide significantly increased 40% from \$11 to \$15. The cost of watering one donum of land also increased from \$80 to \$100 in Al-Hasakeh, and from \$14.5 to \$25 in Idleb. The median price of other inputs remained relatively stable, with minor fluctuations of less than \$5.












	Al-Hasakeh		Aleppo		Ar-Raqqa		Idleb	
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
1 ton of Soluble fertilizer <i>(all formulas) with origin</i>	2,200	2,000	2,000	2,000	2,200	2,000	1,950	2,050
1 ton of composed fertilizer NPK <i>(all formulas 20:20:20, 15:15:15, 10:10:10) with the origin of the country</i>	725	750	850	900	700	750	820	800
1 ton of Phosphate fertilizer <i>(Mono, Di, Triple, and DAP) with the origin of the country</i>	600	800	400	800	500	700	360	350
1 ton of Urea fertilizer <i>(Azot %46) with the origin of the country</i>	550	550	700	510	550	550	640	520
1 ton of Organic fertilizer <i>(Chicken)</i>	55	75	59	80	55	75	60	100
1 donum of Watering cost? <i>(Water and operation)</i>	80	80	55	60	80	75	15	14.5
1 ton of Organic fertilizer <i>(Sheep, Cow, and Checkin)</i>	25	35	25	43.5	25	35	25	35
1l of decis insecticide <i>(deltamethrin)</i>	8.5	11	9.75	10	8	10	10	9
1l of dimethoate	10	11	8.75	9.5	10	11	10	8.5
1 kg of fungicide <i>Copper oxychloride</i>	8.75	10	10.8	10	8	9	10	10
1 Liter insecticide <i>Alpha cypermethrin</i>	7	7	9.5	10	7.5	7	10	10
1 envelop of zinnet	1.5	2	1.5	2.15	1.5	2	1.5	1.775
1 kg of fungicide <i>Copper sulphate</i>	9	8	8	7.5	8	7	8	7.2
1 Liter herbicide <i>Gramixin</i>	6	8	6.5	6.375	6	8	6	6
1 can of Iannate	2.5	2	3	2.25	2.5	2.5	2	2.25

▲ Increase ▼ Decrease ● No Change

Figure 7. Median Prices in USD of Fertilizer, Pesticides and Herbicides - Pre-Post Earthquake 2023

Livestock Heads

Four of livestock heads and seven of livestock products were assessed under the livestock group during the second quarter of 2023 across the local markets in NWS. Collected data shows some notable differences in the prices of livestock heads across the Northwest Syria governorates before and after the earthquake. For instance, for 1 kg of cow meat for consumption, the median prices varied between \$2.8 and \$3 in the pre-earthquake period, whereas they ranged between \$4 and \$5.5 in the post-earthquake period. Similarly, for 1 live cow head - milking, the median prices varied from \$1300-\$2000 in the pre-earthquake period to \$1400-\$1775 in the post-earthquake period. **However, it is important to note that no pre-earthquake data is available for 1 kg of bull meat for consumption, 1 kg of milk, and 1 live bullhead - meat producing added later based on the AGTWG request.** Therefore, more data may be needed to provide a comprehensive comparison of the prices of livestock heads across the governorates over time.

	Al-Hasakeh		Aleppo		Ar-Raqqa		Idleb	
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
 1 Cow Head - Milking <i>(average weight 500 kg)</i>	1350 ▲	1500	2000 ▼	1750	1300 ▲	1400	1800 ▼	1775
 1 Kg Bull - Meat <i>(average weight 450 kg)</i>	NA	1400	NA	1400	NA	1300	NA	1220
 1 Sheep - Milking	165 ▼	150	175 ▲	200	150	150	150 ▲	200
 1 Hen - Eggs (young layers)	6.5 ▲	12	5.3 ▼	5	6.0 ▲	8.5	5.0 ▲	6
 1 kg of bull - Meat for Consuming	NA	2	NA	7	NA	2	NA	6
 1 kg Sheep - Meat	4 ▲	8	3.5 ▲	8	4 ▲	8	3.5 ▲	8
 1 kg Cow - Meat	3 ▲	4	3 ▲	5.5	3 ▲	3.5	2.8 ▲	5
 1 kg Chicken - Meat	2	2	1.5 ▲	2	2	2	1.5 ▲	2.1
 1 Kg of White Cheese	NA	3	NA	4	NA	2.5	NA	3.5
 1 Kg of Yogurt	NA	0.7	NA	1	NA	0.7	NA	0.775
 1 Kg of Milk	NA	0.4	NA	0.7	NA	0.4	NA	0.6

▲ Increase ▼ Decrease ● No Change

Figure 8. Median Prices in USD of Livestock Heads - Pre-Post Earthquake 2023

Livestock Inputs

Sixteen livestock inputs were assessed within the livestock inputs group during the second quarter of 2023 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 (\$533/ 1MT of poultry mixture’s feed), followed by cows’ mixture feed (\$435/ 1MT of cow mixture’s feed), and sheep mixture feed being the cheapest at (\$431/1MT of mixture’s feed). For the individual feed items, the median price of 1 kg of alfalfa hay in Al-Hasakeh decreased from \$0.7 to \$0.6 post-earthquake, while in Aleppo and Ar-Raqqa, it remained unchanged at \$0.5 and \$0.7, respectively. In Idleb, the price slightly decreased from \$0.5 to \$0.55. Chicken feed prices increased post-earthquake in Al-Hasakeh, Aleppo, and Ar-Raqqa, while it remained the same in Idleb.

In addition, the median price of **1 kg of animal vitamins** was \$8 in Idleb governorate, whereas the median price of **1 kg of animal vitamins** was \$0.65 in Ar-Raqqa. **However, it is important to note that no pre-earthquake data is available for some items as they were added later based on the AGTWG request**

	Al-Hasakeh		Aleppo		Ar-Raqqa		Idleb	
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
1 kg of alfalfa hay	0.7	0.6	0.5	0.6	0.7	0.6	0.5	0.55
1 kg of animal vitamins	NA	1	NA	3	NA	0.65	NA	8
1 kg of soybean meal	NA	0.75	NA	0.6	NA	0.875	NA	0.6
1 MT fodder barely	NA	450	NA	372.5	NA	450	NA	352.5
1 MT of (cows) fodder – Mixture for milk and meat	NA	380	NA	380	NA	590	NA	390
1 MT of (poultry) fodder – Mixture for eggs and meat	NA	450	NA	450	NA	650	NA	580
1 MT of (sheep) fodder – Mixture for milk and meat	NA	350	NA	400	NA	575	NA	400
1 MT wheat	NA	50	NA	120	NA	50	NA	100
1 MT wheat bran	NA	450	NA	300	NA	550	NA	322.5
50 kg chicken feed (for layers)	35	45	26	30	35	40	30	30
Cost of Enterotoxaemia vaccination per sheep	0.18	0.15	0.2	0.2	0.2	0.2	0.25	0.35
Cost of FMD vaccination per cow	NA	0.5	NA	0.6	NA	0.225	NA	1.3
Cost of FMD vaccination per sheep	NA	0.5	NA	0.3	NA	0.2	NA	0.5
The fee of Grazing one livestock head in a month	35	25	15	7	35	20	15	10
The fee of renting one donom of agriculture residuals	25	10	20	15	20	10	25	20
The fee of renting one Grazing donom	82	30	60	20	80	55	50	52.5

▲ Increase ▼ Decrease ● No Change













Figure 9. Median Prices in USD of Livestock Inputs – Pre-Post Earthquake 2023

Agriculture Equipment and Fuel

Following the recommendations of the agricultural technical experts, iMMAP assessed 26 inputs under the agriculture equipment and fuel group during the period of data collection. The median prices of fuel in Northwest Syria governorates before and after the earthquake seem to have remained relatively stable. The prices of 1 liter of European diesel for generators and heavy machines were \$1 before and after the earthquake across all four governorates, including Al-Hasakeh, Aleppo, Ar-Raqqa, and Idleb. Similarly, the prices of 1 liter of locally refined diesel first and second grade also did not show any significant changes, with only slight variations between the pre- and post-earthquake prices. For instance, the median price of 1 liter of locally refined diesel first grade in Idleb increased from \$0.66 to \$0.66, whereas the price of 1 liter of locally refined diesel second grade in Idleb increased from \$0.55 to \$0.52. Therefore, it can be concluded that the prices of fuel in Northwest Syria governorates did not show any significant fluctuations after the earthquake.

It is observed that the prices of wheat harvesting remained constant for all governorates. However, there were variations in the cost of solar system construction for irrigation, cultivation costs for vegetables, drip irrigation network, the establishment of plastic tunnels, harvesting costs for vegetables, and land preparation costs. For instance, in Aleppo, the cost of constructing a solar system for irrigation and a drip irrigation network remained high post-earthquake, whereas, in Idleb, the cost decreased. In contrast, the cost of vegetable cultivation and harvesting increased in Idleb. The establishment of a plastic tunnel cost for vegetable production increased substantially in Aleppo and Ar-Raqqa, whereas the cost decreased in Al-Hasakeh and remained constant in Idleb. Overall, the prices of most agricultural inputs and services increased post-earthquake, especially in Aleppo and Idleb governorates.

Overall, there appears to be a trend of an increase in price for various agricultural equipment items across four governorates in the post-earthquake period included under this group. For example, the median price for a germination tray increased from \$0.50 to \$3.00 in Al-Hasakeh, while the median price for a tree grafting sticker increased from \$1.00 to \$1.20 in Idleb. However, there are also instances of prices decreasing, such as the median price for compost, which decreased from \$0.30 to \$0.33 in Idleb. The changes in prices are likely influenced by a variety of factors, including changes in supply and demand, availability of resources, and the impact of the earthquake on the agricultural industry in these governorates.

	Al-Hasakeh		Aleppo		Ar-Raqqa		Idleb	
								
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
 20 liter	18	▲ 19.5	22	● 22	22	▼ 21	25	▼ 20
16 liter	16	● 16	18	● 18	18	▼ 17	20	● 20
10 liter	10	● 10	12	▲ 15	12	▲ 12.25	10	▲ 12
 Shovel	7	▼ 3.75	4	● 4	4	● 4	5	● 5
 Styrobox	13.5	▼ 3	15	▼ 4	15	▼ 4	16.5	▼ 5
 Trowel	5.5	▼ 5	4	▼ 3	4	▼ 3	5.25	▼ 5
 Mattock	3	▲ 5	2	▲ 3	2	▲ 3	4	▼ 3.5
 Axe	3.5	▼ 3	2	▲ 3	2	▲ 2.5	3	● 3
 Bilhook	2	● 2	2	● 2	2	● 2	3	● 3
 Canvas bag	0.5	▲ 1	0.5	▲ 1.5	0.5	▲ 1.35	0.75	▼ 0.5

	Al-Hasakeh		Aleppo		Ar-Raqqa		Idleb		
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	
Construction of Solar System Cost for Irrigation for one dunam (panel, tubes, battery, and tank)	500	▲ 700	250	▲ 450	300	▲ 450	1500	▼ 1300	
Drip irrigation network for a dunum of vegetables	80	● 80	40	▲ 80	35	▲ 75	60	● 60	
1 PC Pruning scissors (Country of Origin: Switzerland or France)	45	● 45	50	▼ 45	50	▼ 45	50	▼ 31	
Harvesting Cost for Vegetables (Handle and Machinery) USD/Dunum	35	▲ 37.5	40	▼ 10	40	▼ 10	15	▲ 40	
Cultivation Cost for Vegetables (Handle and Machinery) USD/Dunum	12	▲ 18	10	▲ 12	12	● 12	11	▲ 35	
Land Preparation Cost USD/Dunum	9	▲ 10	7	● 7	9.5	▼ 7	10	▲ 20	
1 donums of wheat harvesting (by harvester)	9	▲ 10	8	● 8	11.5	▼ 8	10	● 10	
Establishment of a Plastic Tunnel cost of vegetable (By square meter)	0.3	▲ 6	0.3	▲ 15	0.3	▲ 13	0.25	▲ 0.38	
1 PC Pruning scissors (Country of Origin: China)	5	● 5	2	▲ 8	2	▲ 8	3.5	▲ 8	
1 PC of germination tray (all types)	1.4	▲ 3	0.5	▲ 3	0.5	▲ 3	1	▼ 0.5	
Bitmoss USD/KG	1.6	▼ 0.75	1	▲ 1.5	1	▲ 1.5	0.6	▲ 1	
1 PC Tree grafting sticker	1	● 1	5	▼ 1	5	▼ 1	1	▲ 1.2	
1 L of European diesel (for generators and heavy machines)	1	● 1	1	● 1	1	● 1	1.08	▲ 1.09	
Compost USD/KG	0.25	▲ 1	0.3	▲ 1	0.3	▲ 1	0.3	▲ 0.33	
1 L of Locally refined diesel	First Grade	0.64	▼ 0.57	0.65	▼ 0.6	0.65	▼ 0.6	0.66	▲ 0.662
	Second Grade	0.55	● 0.55	0.55	▼ 0.5	0.55	▼ 0.5	0.55	▼ 0.519

Figure 10. Median Prices in USD of Agriculture Equipment and Fuel - Pre-Post Earthquake 2023

Leafy Vegetable

Four types of seeds were assessed under the leafy vegetable seeds group during the second quarter of 2023 across the local markets in NWS. Arugula, mulukheia, parsley, and rashede seeds, respectively, recorded the highest median prices of the assessed leafy vegetable seed types under spring/ summer leafy vegetables group in NWS. The figure shows a comparison of the median prices for different types of leafy vegetable seeds across four Northwest Syria governorates before and after the earthquake. The prices of 1 g of cress seeds varied across governorates before the earthquake, ranging from \$0.004 in Al-Hasakeh to \$0.006 in Idleb. However, post-earthquake, the median price for 1 g of cress seeds increased significantly across all governorates, with the highest increase seen in Al-Hasakeh, where the median price reached \$0.7. Similarly, the median prices for 100 g of parsley, arugula, and jute mallow seeds increased post-earthquake in all governorates. While the median price for 100 g of arugula seeds remained the same in Al-Hasakeh, it increased in the other three governorates, with Idleb showing the highest increase at \$0.2. Overall, the data suggests that the prices of leafy vegetable seeds have increased significantly in Northwest Syria post-earthquake, particularly in Al-Hasakeh.

	Al-Hasakeh		Aleppo		Ar-Raqqa		Idleb	
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
100 g of arugula seeds	0.5	● 0.5	0.5	▼ 0.4	0.5	● 0.5	0.5	▲ 0.7
100 g of jute mallow (mulukheie) seeds	0.3	▲ 0.5	0.3	▲ 0.35	0.3	▲ 0.5	0.3	▲ 0.5
100 g of parsley seeds	0.3	▲ 0.5	0.35	▼ 0.3	0.3	▲ 0.5	0.4	▲ 0.5
1 g of cress (rashede) seeds	0.004	▲ 0.7	0.005	▼ 0.0035	0.004	▼ 0.001	0.006	▲ 0.05

▲ Increase ▼ Decrease ● No Change

Figure 11. Median Prices in USD of Leafy Vegetables Seeds Pre-Post Earthquake 2023

Vegetables Seeds

According to the data collected, there were significant differences in the median prices of spring/summer vegetable seeds across the Northwest Syrian governorates before and after the earthquake. The median price for 1 kg of beans, for instance, dropped in Al-Hasakeh and Ar-Raqqa after the earthquake, while it slightly increased in Aleppo and considerably increased in Idleb. Similarly, the median price for 100 g of cucumber seeds increased in Al-Hasakeh, Ar-Raqqa, and Idleb, and even doubled in Al-Hasakeh. On the other hand, the median price for 1 gr of hybrid bell pepper seeds decreased considerably in Idleb, while it remained stable in Al-Hasakeh, Aleppo, and Ar-Raqqa. These variations in prices across governorates may reflect the differences in the earthquake's impact on agricultural production and supply chains.

	Al-Hasakeh		Aleppo		Ar-Raqqa		Idleb	
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
100 g of cucumber seeds <i>(around 2700 seeds)</i>	15	28	25	30	15	27	32	30
100 g of zucchini seeds	1	2	25	17	1	2	25	18.75
1 g of tomato hybrid seeds <i>(around 275 seeds)</i>	4	3.5	4	6	4	3.5	25	20
1 gr of hybrid bell pepper seeds <i>(150-100 seeds)</i>	2	2	2.5	2.5	2	2	18	4
1 gr of hybrid eggplant seeds <i>(250-200 seeds)</i>	3	3.5	3.35	5	3	3.5	15	20
1 kg of beans	5	2	3.5	3	4	1.5	5	8
100 gr of bell pepper seeds	3	2	2	1.5	4	2	2.1	1.7
100 gr of eggplant seeds	2	2	3	1.5	2	2	2	2
1 kg of elite potato seeds (banella)	2	2	2	1.8	2	2	2.5	2.5

100 gr of cucurbit seeds	1	2	2	1	1	2	1.5	1.25
100 g of Okra seeds	1	2	0.6	0.8	1	2	0.9	0.5
100 g of annual radish seeds	0.6	1	0.7	0.7	0.6	0.8	0.8	0.7

▲ Increase ▼ Decrease ● No Change

Figure 12. Median Prices in USD of Vegetables Seeds - Pre-Post Earthquake 2023

Fruit Seeds

Three inputs were assessed under the fruit seeds group during the second quarter of 2023 across the local markets in NWS. The median price for 100g of melon seeds (around 2700 seeds) remained relatively stable in Al-Hasakeh and Ar-Raqqa, while Aleppo saw a decrease in price pre-earthquake and an increase in price post-earthquake. Idleb saw a slight decrease in price post-earthquake. Similarly, the median price for 100g of watermelon seeds (around 800 seeds) saw a decrease in Al-Hasakeh, Ar-Raqqa, and Idleb post-earthquake, while Aleppo saw no significant change. On the other hand, the median price for 100g of strawberry seeds saw a significant decrease in Al-Hasakeh, and a slight decrease in Idleb post-earthquake, but a slight increase in Aleppo, and no data was available for Ar-Raqqa. Overall, it seems that the impact of the earthquake on fruit seed prices was not as pronounced as on vegetable seed prices, with more stability in prices observed.

	Al-Hasakeh		Aleppo		Ar-Raqqa		Idleb	
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
100 g of melon seeds <i>(around 2700 seeds)</i>	50	50	40	80	50	55	42	47.5
100 g of strawberry seeds	100	20	20	22	N/A	18	5	29
100 g of water melon seeds <i>(around 800 seeds)</i>	50	12	40	40	50	12	35	31

▲ Increase ▼ Decrease ● No Change

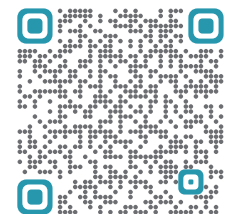
Figure 13. Median Prices in USD of Fruits Seeds - Pre-Post Earthquake 2023

Recommendations

- Given the disruption to supply chains caused by the recent earthquake, it is not surprising that some sub-districts in Aleppo and Idlib governorates have reported an increase in prices for certain agricultural inputs. To mitigate the impact of these price increases on farmers and other residents in affected areas, it may be necessary to explore alternative supply chain routes or transport methods that can bypass damaged infrastructure.
- To address crop damage caused by the earthquake, it may be helpful to provide support to farmers in affected areas to help them replant crops and restore damaged farmland.
- Increased demand for agricultural inputs following a natural disaster can exacerbate supply chain disruptions and drive-up prices. It may be helpful to work with local communities and aid organizations to encourage responsible stockpiling and distribution of these items in order to prevent hoarding and ensure that supply is more evenly distributed.
- Given the localized nature of the price increases (i.e., they are concentrated in certain sub-districts), it may be necessary to conduct further research and outreach to better understand the specific challenges facing these communities and to tailor assistance programs accordingly. This could include targeted support for farmers, subsidies for certain agricultural inputs, or other forms of aid that can help alleviate the economic impact of the earthquake.

These recommendations were developed with a focus on the impact of the earthquake. If you are looking for recommendations on agricultural inputs themselves, please refer to the previous report available through this [link](#).

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THINK!



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