

Research Terms of Reference

Northeast Syria Seed Security Assessment

SYR2204

Syria

April 2022

Version 1

REACH Informing
more effective
humanitarian action

1. Executive Summary

Country of intervention	Syria				
Type of Emergency	<input type="checkbox"/>	Natural disaster	<input checked="" type="checkbox"/>	Conflict	<input type="checkbox"/> Other (<i>specify</i>)
Type of Crisis	<input type="checkbox"/>	Sudden onset	<input type="checkbox"/>	Slow onset	<input checked="" type="checkbox"/> Protracted
Mandating Body/ Agency	USAID Bureau for Humanitarian Assistance				
IMPACT Project Code	SYR2204				
Overall Research Timeframe	01/03/2022 to 10/06/2022				
Research Timeframe	1. Pilot/ training: 13/04/2022		6. Preliminary presentation: NA		
	2. Start collect data: 21/04/2022 (Traders and Seed Multipliers)		7. Outputs sent for validation: 31/05/2022		
	3. Start collect date: 25/04/2022 (Farmers)				
	3. Data collected: 26/05/2022		8. Outputs published: 06/06/2022		
	4. Data analysed: 31/05/2022		9. Final presentation: 10/06/2022		
	5. Data sent for validation: 31/05/2022				
Number of assessments	<input checked="" type="checkbox"/>	Single assessment (one cycle)			
	<input type="checkbox"/>	Multi assessment (more than one cycle)			
Humanitarian milestones	Milestone		Deadline		
	<input type="checkbox"/>	Donor plan/strategy	__/__/__		
	<input type="checkbox"/>	Inter-cluster plan/strategy	__/__/__		
	<input checked="" type="checkbox"/>	Cluster plan/strategy	31/08/2022		
	<input type="checkbox"/>	NGO platform plan/strategy	__/__/__		
	<input type="checkbox"/>	Other (Specify):	__/__/__		
Audience Type & Dissemination	Audience type		Dissemination		
	<input type="checkbox"/> Strategic		<input type="checkbox"/> General Product Mailing (e.g. mail to NGO consortium; HCT participants; Donors)		
	<input checked="" type="checkbox"/> Programmatic		<input checked="" type="checkbox"/> Cluster Mailing (FSL sector, Northeast Syria Agriculture Working Group)		
	<input checked="" type="checkbox"/> Operational		<input type="checkbox"/> Presentation of findings (e.g. at HCT meeting; Cluster meeting)		
	<input type="checkbox"/> [Other, Specify]		<input checked="" type="checkbox"/> Website Dissemination (Relief Web & REACH Resource Centre)		
			<input type="checkbox"/> [Other, Specify]		

Detailed dissemination plan required	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
General Objective	To provide Food Security and Livelihoods (FSL) actors with the information on seed availability, seed use, and seed multiplication practices, particularly for wheat seeds, needed to identify methods to improve agricultural seed security in Northeast Syria (NES) in the face of persistent drought, loss of agricultural land, and shocks to international wheat markets.			
Specific Objective(s)	<ul style="list-style-type: none"> - To provide FSL actors with information on how farmers in NES use and procure agricultural seeds for wheat crops. - To provide FSL actors with information on what types of agricultural seeds farmers in NES use for wheat cultivation, and what the registration status and (perceived) quality of these seeds is. - To provide FSL actors with information on current practices around (wheat) seed multiplication practices in NES, particularly on the types of seeds being produced. - To provide FSL with information on the availability and sale of (wheat) seeds in markets in NES. 			
Research Questions	<ul style="list-style-type: none"> - In light of persistent drought and shocks to the international wheat market, how can humanitarian agencies promote seed security in NES? - What agricultural practices do farmers in NES use to cultivate wheat, particularly during this season (2021/2022) and during the previous season (2020/2021)¹? - Through which channels and using which modalities do farmers in NES procure wheat seeds? - Which varieties of wheat seeds² are most commonly multiplied, sold and used in NES, and where do they originate from? - To what extent are registered/certified³ seeds produced in NES, available in markets, and used by farmers? - What is the approximate yield of wheat seed multiplication in NES? - What are common wheat seed quality issues in NES? - How do traders store and transport wheat seeds? What challenges do they face? - To what extent have seasonal changes affected wheat prices in NES in recent agricultural seasons? 			
Geographic Coverage	Subdistricts in Northeast Syria (Al-Hasakeh, Deir-ez-Zor, Raqqa, and Aleppo governorates) where FSL sector partners operate and where wheat cultivation, wheat seed multiplication, and/or trade in wheat seeds takes place.			
Secondary data sources	<ol style="list-style-type: none"> 1. Seed System Security Assessment NW Syria – September 2015 2. Wheat Market System Rapid Assessment – Study on Northwest Syria 3. Seed Security Assessment – A Practitioners Guide Version 1 March 2015 – FAO 			

¹ The wheat season in NES normally starts with land preparation during the months of August to October, followed by planting during early November and late December, and lasts until harvest during June and July. [Current Season (2021/2022) is between August 2021 and July 2022, and Past Season (2020/2021) is between August 2020 and July 2021].

² Local Wheat Varieties are either Soft or Durum (Hard Wheat Seeds)

Durum (Hard Wheat Seeds) are Duma1/Cham3/Cham5/Cham7/Cham9/Bohouth7/Bohouth9/Bohouth11/ACSAD65

Soft Wheat Seeds are Duma2/Duma4/Duma6/Cham6/Bohouth10

³ Registered seed is seed that is grown by farmers and has gone inspections to ensure conformity with standards and registered as a seed that meets certain specifications. Certified seed is a progeny of registered seed that is handled to maintain variety purity and is grown by farmers under specific conditions. Certified seed is issued a certificate, by a seed certifying agency, showing seed specifications.

	4. Wheat and barley seed system in Syria: farmers, varietal perceptions, seed sources and seed management – Published 15 September 2011 5. Seed Security Assessment – Syrian Arab Republic - 2020					
Population(s)	<input type="checkbox"/>	IDPs in camp	<input type="checkbox"/>	IDPs in informal sites		
	<input type="checkbox"/>	IDPs in host communities	<input type="checkbox"/>	IDPs [Other, Specify]		
	<input type="checkbox"/>	Refugees in camp	<input type="checkbox"/>	Refugees in informal sites		
	<input type="checkbox"/>	Refugees in host communities	<input type="checkbox"/>	Refugees [Other, Specify]		
	<input type="checkbox"/>	Host communities	<input checked="" type="checkbox"/>	Farmers, seed multipliers, and seed traders		
Stratification	<input checked="" type="checkbox"/>	Geographical #: 8 ⁴ Population size per strata is known? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	Group #: __ Population size per strata is known? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	[Other Specify] #: __ Population size per strata is known? <input type="checkbox"/> Yes <input type="checkbox"/> No
Data collection tool(s)	<input checked="" type="checkbox"/>	Structured (Quantitative)		<input type="checkbox"/>	Semi-structured (Qualitative)	
	Sampling method			Data collection method		
Structured data collection tool # 1 <i>Farmer survey</i>	<input type="checkbox"/> Purposive <input type="checkbox"/> Probability / Simple random <input checked="" type="checkbox"/> Probability / Stratified simple random <input type="checkbox"/> Probability / Cluster sampling <input type="checkbox"/> Probability / Stratified cluster sampling <input type="checkbox"/> [Other, Specify]			<input type="checkbox"/> Key informant interview (Target #):_____ <input type="checkbox"/> Group discussion (Target #):_____ <input type="checkbox"/> Household interview (Target #):_____ <input checked="" type="checkbox"/> Individual interview (Target #): 8 * 75 = 600 ⁵ <input type="checkbox"/> Direct observations (Target #):_____ <input type="checkbox"/> [Other, Specify] (Target #):_____ 		
Structured data collection tool # 2 <i>Seed multiplier survey</i>	<input checked="" type="checkbox"/> Purposive <input type="checkbox"/> Probability / Simple random <input type="checkbox"/> Probability / Stratified simple random <input type="checkbox"/> Probability / Cluster sampling <input type="checkbox"/> Probability / Stratified cluster sampling <input type="checkbox"/> [Other, Specify]			<input checked="" type="checkbox"/> Key informant interview (Target #): 3 * 16 = 48 ⁶ <input type="checkbox"/> Group discussion (Target #):_____ <input type="checkbox"/> Household interview (Target #):_____ <input type="checkbox"/> Individual interview (Target #):_____ <input type="checkbox"/> Direct observations (Target #):_____ <input type="checkbox"/> [Other, Specify] (Target #):_____ 		
Structured data collection tool # 3 <i>Trader survey</i>	<input checked="" type="checkbox"/> Purposive <input type="checkbox"/> Probability / Simple random <input type="checkbox"/> Probability / Stratified simple random <input type="checkbox"/> Probability / Cluster sampling <input type="checkbox"/> Probability / Stratified cluster sampling <input type="checkbox"/> [Other, Specify]			<input checked="" type="checkbox"/> Key informant interview (Target #): 3 * 16 = 48 ⁷ <input type="checkbox"/> Group discussion (Target #):_____ <input type="checkbox"/> Household interview (Target #):_____ <input type="checkbox"/> Individual interview (Target #):_____ <input type="checkbox"/> Direct observations (Target #):_____ <input type="checkbox"/> [Other, Specify] (Target #):_____ 		
Target level of precision if probability sampling	90% level of confidence			10 +/- % margin of error		
Data management platform(s)	<input checked="" type="checkbox"/>	IMPACT		<input type="checkbox"/>	UNHCR	
	<input type="checkbox"/>	[Other, Specify]				

⁴ Eight governorate/AEZ combinations for the farmers' survey

⁵ Aleppo: zone 3; Al-Hasakeh: zones 1B, 2, 4, and 5; Ar-Raqqa: zones 4 and 5; Deir-ez-Zor: zone 5; farmers are sampled to a 90% confidence interval and a 10% margin of error, with a buffer of approximately 10%

⁶ A minimum of three key informant interviews in each of the 16 sub districts where partners have access and seed multipliers exists

⁷ A minimum of three key informant interviews in each of the 16 sub districts where partners have access

Expected output type(s)	<input checked="" type="checkbox"/>	Situation overview #: 1	<input type="checkbox"/>	Report #: __	<input type="checkbox"/>	Profile #: __
	<input type="checkbox"/>	Presentation (Preliminary findings) #: __	<input checked="" type="checkbox"/>	Presentation (Final) #: 1	<input type="checkbox"/>	Factsheet #: __
	<input type="checkbox"/>	Interactive dashboard #: __	<input type="checkbox"/>	Webmap #: __	<input checked="" type="checkbox"/>	Map #: 2
	<input type="checkbox"/>	[Other, Specify] #: __				
Access	<input checked="" type="checkbox"/>	Public (available on REACH resource center and other humanitarian platforms)				
	<input type="checkbox"/>	Restricted (bilateral dissemination only upon agreed dissemination list, no publication on REACH or other platforms)				
Visibility	REACH					
	Donor: USAID BHA					
	Coordination Framework: FSL sector					
	Partners: Partner logos where relevant					

4. Rationale

2.1 Background

Northeast Syria (NES) is highly reliant on agriculture, both as a livelihood activity and for consumption and is considered the Breadbasket of the Syrian Arab Republic; particularly Al Hasakeh governorate⁸. NES is considered the cornerstone of strategic crops and particularly Wheat, which is vital for food security in the whole country. Traditionally, farmers in NES primarily produce wheat covering almost 70% of Syrian wheat requirements⁹, and other crops like barley, perennial crops, vegetables, and industrial crops. However, in recent years, a lack of rainfall combined with economic hardship and other effects of the ongoing conflict have caused wheat production to decrease significantly^{10,11,12}. During a review session of the 2022 Humanitarian Needs Overview, the NES FSL sector reported that wheat crop yielded 33% of the annual wheat needs in NES in 2021 (200 thousand tonnes, compared to a need of 600 thousand tonnes). In the same session, the NES FSL sector mentioned that 75% of crop areas in NES were lost in 2021 due to failed rainfed crops, and the Wheat Appeal published by NES Forum in July 2021 reports that almost 1.8 million individuals in NES are at risk of facing emergency levels of food insecurity due to poor harvests.¹³ As a result, the NES FSL sector expressed the concern that, if farmers' access to certified and improved varieties is not ensured, they will not be able to achieve good crop productivity (HNO). Therefore, the FSL sector is investigating how best to support farmers in NES. To support this, a seed security assessment is needed for the region, and particularly for wheat considering its importance for food security in Syria. Understanding access by farmers and seed multipliers to various wheat varieties was highlighted by NES FSL as a key factor to help in advocacy and planning of humanitarian aid targeted towards wheat cultivation in the region.

2.2 Intended impact

In addition to other inputs such as water, seeds are an essential input to agricultural production. This assessment seeks to identify a few other trends in agricultural practices in NES, such as the use of pesticides and irrigation techniques. The primary focus, however, is on the use and availability of wheat seeds. Data collected from farmers, seed multipliers, and seed traders will be used to identify what types and varieties of seeds are currently in use, where they originate, what yields they generate, what challenges around obtaining high quality seeds are common, and what other practices farmers use to maximise production from their seeds. Interviews with seed multipliers and traders will specifically serve to establish the nature of existing supply chains. The resulting information will be used by the FSL sector to identify what humanitarian interventions would be of most use to wheat farmers. The supply chain information will be used to confirm whether local

⁸ [Wheat to Bread Assessment Report - FSL sector](#)

^{9,10} [Syria mVAM Bulletin #55: May 2021](#)

¹¹ [Northeast Syria's farmers brace for a catastrophic harvest amidst a severe water crisis – Syria Direct May 2021](#)

¹² [Wheat Market System Rapid Assessment – Study on Northwest Syria](#)

¹³ [Wheat Appeal North East Syria - Effects of the water scarcity on food security – July 2021](#)

seed production and availability can support such interventions and to identify where external inputs are required, as well as to flag potential ramifications of any changes in context (e.g. border closures and international supply chain disruptions).

5. Methodology

3.1 Methodology overview

The required information will be collected through three types of interviews: with farmers, seed multipliers, and seed traders. Three separate question routes will be used, each of which will be structured in nature. Some of the data will be collected at the individual level (with farmers), whereas two of the tools are based on a key informant methodology (with traders, and seed multipliers). Data will be collected by FSL sector partners who have extensive experience working on agricultural projects in NES. The geographic area of interest consists of all subdistricts that these partners can access. Of particular interest are the agro-ecological zones that these subdistricts are in, since they may affect how farmers operate. Data from interviews with farmers will be representative at specific geographical levels, whereas interviews with traders and seed multipliers will lead to indicative information on conditions. Data collection will take place between 21 April and 26 May 2022.

3.2 Population of interest

The population of interest is constrained by the areas of operation and existing contacts of the FSL sector partners who conduct data collection. As a result, not all locations in NES will be included in the sampling frame. Nor will all farmers, seed multipliers, and seed traders be included. Areas to be included in the sampling frame are all located in subdistricts where data collection partners have sufficient access to conduct the survey. Please see annex 1 for the list of subdistricts. Each individual group will be sampled as follows:

Farmers: the population of interest will consist of all farmers who are beneficiaries of the data collection partners' programming (receiving cash or in-kind goods) in one of the identified subdistricts. Farmers will be assessed via individual interviews. From their beneficiary lists, partners will select the farmers who conform to all selection criteria set by the FSL sector. These criteria will include the following:

- Must currently grow wheat on 10 or more dunams¹⁴
- Must currently or in the last season have (had) a permanent source of irrigation water

Each subdistrict is also located within an agro-ecological zone (AEZ)¹⁵, based on annual rainfall levels¹⁶. Finally, each subdistrict is located within one of four governorates (Al-Hasakeh, Deir-ez-Zor, Ar-Raqqa, or Aleppo). To maximise representativeness while keeping in mind data collection partner capacity, the sample of farmers to be interviewed will be stratified by AEZ within each governorate.¹⁷ Using beneficiary lists, farmers will be sampled to a 90% confidence interval and 10% margin of error. With the addition of a 10% buffer, that results in a sample of 75 farmers in each governorate/AEZ stratum. The table below contains an overview of the individual strata. Figure 1 shows the locations of the subdistricts to be included in the assessment and their agro-ecological zones.

Governorate	Agro-ecological zone	Sample
Aleppo	3	75
Al-Hasakeh	1B	75
Al-Hasakeh	2	75
Al-Hasakeh	4	75

¹⁴ A dunam is a commonly used measure of land in Syria. One dunam is equal to 1,000 square metres.

¹⁵ Agro-ecological zones (AEZ) are geographical areas (within NES in this context of this assessment) that exhibit similar climatic conditions that determine these areas ability to support agriculture.

¹⁶ [FAO/WFP Crop and Food Security Assessment Mission to the Syrian Arab Republic – Special Report](#) – Page 6

¹⁷ If a governorate only has one AEZ, that means that there will only be one stratum in that governorate. If a governorate has three AEZs, three separate samples will be created within that governorate. An AEZ that spans two governorates will thus be represented by two separate strata.

Al-Hasakeh	5	75
Ar-Raqqa	4	75
Ar-Raqqa	5	75
Deir-ez-Zor	5	75

Seed multipliers: interviews with seed multipliers will adopt a key informant (KI) approach, where partners will interview a minimum of 3 KIs per subdistrict which they have access to and where seed multipliers are available. These KI interviews need to be conducted with 1) a member of a committee regarded with seed multiplication in the sub district (someone who has knowledge about the situation of the seed multiplication in the sub-district) and 2 other seed multipliers

Traders: the interviews with traders will adopt a key informant (KI) approach, where partners will interview a minimum of 3 KIs per subdistrict which they have access to. These traders need to be 1) large wholesalers (or large retailers if there are not enough wholesalers in the subdistrict), 2) who sell wheat seed, and 3) who have good knowledge of the seed trade in their subdistrict.

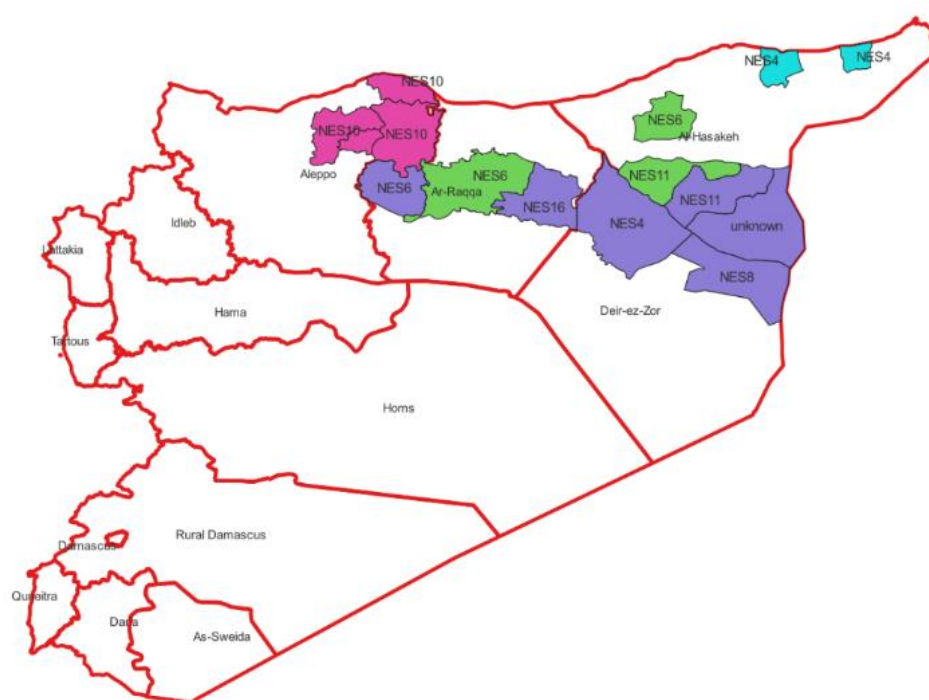


Figure 1: Map of Syria with the subdistricts of interest, coloured by AEZ

3.3 Secondary data review

The different types¹⁸ and varieties¹⁹ of wheat seeds were identified by NES FSL and more details can be found in this [handbook](#)²⁰, along with further details on types of wheat crop diseases and fertilizers. The questionnaires ask about two agricultural seasons (the current²¹ and the past²²), where the agricultural season for wheat starts with land preparation

¹⁸ Types of wheat are soft, and hard (durum)

¹⁹ Varieties available in NES are: Duma1, Duma2, Duma4, Duma6, Cham3, Cham5, Cham6, Cham7, Cham9, Bohouth7, Bohouth9, Bohouth10, Bohouth11, ACSAD65

²⁰ [The Wheat Field Handbook](#) – In Arabic

²¹ Current season (2021/2022): Between August 2021 and July 2022

²² Past season (2020/2021): Between August 2020 and July 2022

during August to October, and followed by planting during early November and late December, and lasts until harvest during June and July.

In terms of questionnaire design, the Seed Security Assessment (A practitioner's guide) by FAO was consulted along with material shared directly with REACH by NES FSL. The development of the questionnaires was led on by REACH and NES FSL, and fed back upon by a task force (members of technical expertise in agriculture) led by NES FSL. Lastly, NES FSL highlighted that due to lack of seed testing laboratories in the region, one of their partners is taking an initiative to test all the wheat varieties included in this assessment. The results of this initiative can be annexed and might be used to crosscheck the specifications of each variety with the results on yield and location of variety sowed. This is in aim to be used by NES FSL as advocacy and guidance for farmers on which varieties are best suited for which locations.

3.4 Primary Data Collection

Data will be collected by FSL sector partners who have volunteered to do so. REACH will train partner enumerators on the use of the tools and conduct a one-day data collection pilot with a select number of partners. Interviews will take place in person. Farmers will be randomly selected for interviews from lists supplied by the FSL sector and its partners. These lists will contain all farmers who are eligible to be interviewed, and thus represent the survey population for farmers. To prevent the transmission of personally identifiable information, data collection partners will assign a unique identifier to each contact on the lists. REACH will then generate a random sample from among these unique IDs, using a random number generator. The selected unique IDs will be sent back to data collection partners to instruct them on the respondents to visit. A 10% buffer is in place to allow for non-response. Trader and seed multiplier key informant selection will be done purposively by data collection partners. Data collection will take place between 21 April and 25 May 2022.

Three KoBo tools will be available for data collection: one for each of the targeted respondent types. Each tool is structured in nature and the traders KI tool asks enumerators to collect the respondent's shop name details. This information will be kept securely in case follow-up is necessary.

3.5 Data Processing & Analysis

Data will be checked and cleaned by REACH staff after data collection ends. Data cleaning and processing will be done in accordance with the [IMPACT Quantitative Data Processing Checklist](#). Personally identifiable information will be deleted following the required mitigations as identified in the risk indicator table in the data management plan that is available upon request.

Using the collected data, REACH staff will calculate summary statistics and create a set of visualisations for the most relevant indicators. Given the timeliness of the data within the FSL sector's planning cycle, REACH will provide basic summary statistics for each indicator in the 3 tools with disaggregation by governorate and/or agro-ecological zone depending on the sampling strategy.

Each route of interview in the assessment will have two outputs: (1) an HTML file including all analysis results presented as tables; (2) an excel file that combines all analysis results in one single table. For the farmer assessment, the two outputs will also include confidence intervals as it follows a probability sample. After this, REACH will then contribute further analysis and reporting narrative, which will be published in a Situation Overview. This analysis will be conducted jointly with NES FSL, where REACH will elaborate on the results of the assessment and include visualisations and NES FSL will identify areas of advocacy, recommendations, and technical comparisons if required.

Additionally, secondary data supplied by NES FSL (through an initiative of one of its partners) will be annexed and used to further explain results on variety yields, variety status in terms of certification, quantities sown and harvested, and other aspects related to where each variety is best suited for cultivation and how the location and type of irrigation could have an impact on the yield. All of this is dependent on the nature of data to be received by NES FSL.

6. Key ethical considerations and related risks

The proposed research design meets / does not meet the following criteria:

<i>The proposed research design...</i>	<i>Yes/ No</i>	<i>Details if no (including mitigation)</i>
... Has been coordinated with relevant stakeholders to avoid unnecessary duplication of data collection efforts?	Yes	
... Respects respondents, their rights and dignity (<i>specifically by: seeking informed consent, designing length of survey/ discussion while being considerate of participants' time, ensuring accurate reporting of information provided</i>)?	Yes	
... Does not expose data collectors to any risks as a direct result of participation in data collection?	Yes	
... Does not expose respondents / their communities to any risks as a direct result of participation in data collection?	Yes	
... Does not involve collecting information on specific topics which may be stressful and/ or re-traumatising for research participants (both respondents and data collectors)?	Yes	
... Does not involve data collection with minors i.e. anyone less than 18 years old?	Yes	
... Does not involve data collection with other vulnerable groups e.g. persons with disabilities, victims/ survivors of protection incidents, etc.?	Yes	
... Follows IMPACT SOPs for management of personally identifiable information ?	Yes	

5. Roles and responsibilities

Table 3: Description of roles and responsibilities

<i>Task Description</i>	<i>Responsible</i>	<i>Accountable</i>	<i>Consulted</i>	<i>Informed</i>
<i>Research design</i>	Assessment Officer	Research Manager	Deputy Country Coordinator, FSL sector, IMPACT HQ Research Design & Data Unit, Data	Country Coordinator

			Officer, Data Specialist	
<i>Supervising data collection</i>	Assessment Officer, FSL sector	Research Manager	NES FSL/AWG	Country Coordinator, IMPACT HQ, Data Specialist
<i>Data processing (checking, cleaning)</i>	Data Officer	Assessment Officer	Research Manager, FSL sector, IMPACT HQ Research Design & Data Unit, Data Specialist	Country Coordinator
<i>Data analysis</i>	Data Officer, Assessment Officer	Research Manager	Data Specialist, IMPACT HQ Research Design & Data Unit	Country Coordinator, FSL sector
<i>Output production</i>	Assessment Officer, Data Officer	Research Manager	Data Specialist, IMPACT HQ Research Reporting Unit	Country Coordinator, FSL sector
<i>Dissemination</i>	Assessment Officer	Research Manager	FSL sector, IMPACT HQ Research Department - Communication	Country Coordinator
<i>Monitoring & Evaluation</i>	Assessment Officer	PD Officer	FSL sector, IMPACT HQ Research Department	Research Manager, Country Coordinator
<i>Lessons learned</i>	Assessment Officer, Data Officer	Research Manager	PD Officer, FSL sector, Data Specialist, Head of Programmes, IMPACT HQ Research Department	Country Coordinator

Responsible: the person(s) who executes the task

Accountable: the person who validates the completion of the task and is accountable of the final output or milestone

Consulted: the person(s) who must be consulted when the task is implemented

Informed: the person(s) who need to be informed when the task is completed

6. Data Analysis Plan

Please see below Annex 2, 3, and 4.

7. Monitoring & Evaluation Plan

IMPACT Objective	External M&E Indicator	Internal M&E Indicator	Focal point	Tool	Will indicator be tracked?
Humanitarian stakeholders are accessing IMPACT products	Number of humanitarian organisations accessing IMPACT services/products Number of individuals accessing IMPACT services/products	# of downloads of x product from Resource Center	Country request to HQ	User_log	x Yes
		# of downloads of x product from Relief Web	Country request to HQ		x Yes
		# of downloads of x product from Country level platforms	Country team		x Yes
		# of page clicks on x product from REACH global newsletter	Country request to HQ		x Yes
		# of page clicks on x product from country newsletter, sendingBlue, bit.ly	Country team		x Yes
		# of visits to x webmap/x dashboard	Country request to HQ		<input type="checkbox"/> Yes
IMPACT activities contribute to better program implementation and coordination of the humanitarian response	Number of humanitarian organisations utilizing IMPACT services/products	# references in HPC documents (HNO, SRP, Flash appeals, Cluster/sector strategies)	Country team	Reference_log	NA
		# references in single agency documents			NA
Humanitarian stakeholders are using IMPACT products	Humanitarian actors use IMPACT evidence/products as a basis for decision making, aid planning and delivery Number of humanitarian	Perceived relevance of IMPACT country-programs	Country team	Usage_Feed back and Usage_Survey template	Regular REACH Syria research surveys
		Perceived usefulness and influence of IMPACT outputs			
		Recommendations to strengthen IMPACT programs			
		Perceived capacity of IMPACT staff			
		Perceived quality of outputs/programs			

	documents (HNO, HRP, cluster/agency strategic plans, etc.) directly informed by IMPACT products	Recommendations to strengthen IMPACT programs			
Humanitarian stakeholders are engaged in IMPACT programs throughout the research cycle	Number and/or percentage of humanitarian organizations directly contributing to IMPACT programs (<i>providing resources, participating to presentations, etc.</i>)	# of organisations providing resources (i.e.staff, vehicles, meeting space, budget, etc.) for activity implementation	Country team	Engagement_log	x Yes
		# of organisations/clusters inputting in research design and joint analysis			x Yes
		# of organisations/clusters attending briefings on findings;			x Yes

ANNEX 1: SUBDISTRICTS IN NORTHEAST SYRIA

Please see below for a list of subdistricts in Northeast Syria, showing whether partners have access or not.

Governorate	Subdistrict	Agro-ecological zone	Partner access	Data Collection Sample Target based on partners' capacity
Aleppo	Ain al Arab	3	confirmed	
Aleppo	Lower Shyookh	2		
Aleppo	Sarin	3	confirmed	
Aleppo	A'rima	3		
Aleppo	Jarablus	2		
Aleppo	Abu Qalqal	3	confirmed	
Aleppo	Al-Khafsa	3		
Aleppo	Menbij	3	confirmed	X
Al-Hasakeh	Al-Hasakeh	2	confirmed	X
Al-Hasakeh	Areeshah	4	confirmed	X
Al-Hasakeh	Be'r Al-Hulo Al-Wardeyyeh	2		
Al-Hasakeh	Hole	4		
Al-Hasakeh	Markada	5	confirmed	
Al-Hasakeh	Shadadah	5	confirmed	X
Al-Hasakeh	Tal Tamer	4		
Al-Hasakeh	Al-Malikeyyeh	1B	confirmed	X
Al-Hasakeh	Jawadiyah	1B	confirmed	
Al-Hasakeh	Ya'robiyah	1B		
Al-Hasakeh	Amuda	1B		
Al-Hasakeh	Qahtaniyyeh	1B		
Al-Hasakeh	Quamishli	1B	confirmed	
Al-Hasakeh	Tal Hmis	2		
Al-Hasakeh	Darbasiyah	1B		
Al-Hasakeh	Ras Al Ain	2		
Ar-Raqqa	Ar-Raqqa	4	confirmed	X
Ar-Raqqa	Karama	5	confirmed	X
Ar-Raqqa	Sabka	5		
Ar-Raqqa	Al-Thawrah	5		
Ar-Raqqa	Jurneyyeh	5	confirmed	
Ar-Raqqa	Mansura	5	confirmed	X
Ar-Raqqa	Ein Issa	4		
Ar-Raqqa	Suluk	4		
Ar-Raqqa	Tell Abiad	2		
Deir-ez-Zor	Hajin	5		
Deir-ez-Zor	Susat	5		
Deir-ez-Zor	Thiban	5		
Deir-ez-Zor	Basira	5		
Deir-ez-Zor	Deir-ez-Zor	5		
Deir-ez-Zor	Khasham	5		
Deir-ez-Zor	Kisreh	5		
Deir-ez-Zor	Sur	5	confirmed	X

ANNEX 2: FARMERS DAP

Research Question	IN #	Data Collection Method	Indicator Group / sector	Indicator / Variable	Questionnaire Question	Instructions	Questionnaire Responses	Data collection level	Sampling	Disaggregation variable(s)	(For probability sampling) Are disaggregation variables in line with stratification plan? Y/N	Maps planned?
NA	Q 1.1	Individual Survey	Key Characteristics	Enum ID	Enumerator ID	text		Individual	Stratified Random Sampling			
	Q 1.2	Individual Survey	Key Characteristics	Organization	Organization doing the data collection	select one	NES4 NES6 NES8 NES10 NES11 NES16 NES19 NES62	Individual	Stratified Random Sampling			

	Q 1.3	Individual Survey	Key Characteristics	Date	Date of Survey	date		Individual	Stratified Random Sampling			
	Q 1.4	Individual Survey	Key Characteristics	Gov	Governorate	select_one_external		Individual	Stratified Random Sampling			
	Q 1.5	Individual Survey	Key Characteristics	Dist	District	select_one_external		Individual	Stratified Random Sampling			
	Q 1.6	Individual Survey	Key Characteristics	SD	Sub District	select_one_external		Individual	Stratified Random Sampling			
	Q 1.7	Individual Survey	Key Characteristics	Community	Community	select_one_external		Individual	Stratified Random Sampling			
	Q 1.7.1	Individual Survey	Key Characteristics	community_other	Other, please specify	text		Individual	Stratified Random Sampling			
	Q 1.8	Individual Survey	Key Characteristics	agrizone	In which Agrizone is the farm located?	select_one	1A 1B 2 3 4 5	Individual	Stratified Random Sampling			
	Q 1.8.1	Individual Survey	Key Characteristics	respondent id	Please enter the respondent unique ID	text						

	Q 1. 9	Indi dual Surve y	Key Char acteri stics	intro_cons ent	Hello, my name is ____(name) ____ and I work for an organizatio n called (Organizati on).This questionnai re was developed by REACH to have a better understand ing of the Wheat Seeds Security in the region. REACH, specializes in providing information to humanitari an actors in northern Syria that allows them to make decisions and plans based on evidence and facts on the ground. Please note that REACH	select one	YesNo			Indi vidu al	Stratified Random Sampling				
--	--------------	----------------------------	--------------------------------	-------------------	---	---------------	-------	--	--	--------------------	----------------------------------	--	--	--	--

					does not provide any humanitarian assistance or services and this assessment does not directly link to any aid programme .In order to provide information to humanitarian actors, we are currently working on a survey to have an understanding of the agricultural practices in NES and in particular in regards to wheat cultivation and the availability of the different wheat seeds. This assessment will help to identify gaps in								
--	--	--	--	--	---	--	--	--	--	--	--	--	--

					local production and supply as well as provide some insights on the wheat varieties available.I will ask you a number of questions about wheat seeds, regarding their availability and the varieties you use, touching up on some questions on quantity of seeds sown, some questions about the water, fuel, and fertilizers, and some questions regarding challenges. Your participatio n in								
--	--	--	--	--	---	--	--	--	--	--	--	--	--

answering these questions is voluntary and we hope that you will agree to participate. However, your refusal to participate will not affect you in any way. If you agree to participate, the information that you provide will remain confidential, and will not be shared with anybody other than those involved in the study. Also note that it is your right to refrain from answering any question or to stop completing

					the questionnaire at any time if you wish. This survey is expected to take between 20 and 45 minutes depending on your answers. Do you agree to participate in this interview?							
	Q 1. 9. 1	Individual Survey	Key Characteristics	gender	Gender of respondent	select one	Male Female	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone (AEZ)	Y	
What are agricultural practices in Northeast Syria like this season (2021/2022)?	Q 1. 10	Individual Survey	Current Season Cultivation	current_crop_group	What types of crops are you cultivating this season (2021/2022)?	select multiple	Cereals Oil Seeds Perennial Crops Spices Legumes Vegetables Industrial Crops Other None	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	Yes

	Q 1. 11	Individual Survey	Current Season Cultivation	current_crop_group	Which crops are you cultivating in the current season (2021/2022)?	select multiple	WheatBarleyCorn/maizePeanutsSesameSunflowerAppleApricotsGrapesLemonsOlivesOrangesPearsPistachioCorianderCuminGarlicSoybeansChickpeasLentilsPeasCucumberEggplantJews MallowLettuceOkraOnionPotatoZucchiniSquashSugar BeatTomatoTomato (protected)WatermelonCottonTobaccoOther	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	Yes
	Q 1. 11.1	Individual Survey	Current Season Cultivation	current_crop_other	Other, please specify	text		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 1. 12	Individual Survey	Current Season Cultivation	total_area	What is the total land area you are using for cultivation of Wheat in this season, in donum?	decimal		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 1. 12.1	Individual Survey	Current Season Cultivation	experience	For how many years have you been cultivating wheat?	integer		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q.	Individual Survey	Current Season Cultivation	irrigation source	Do you have a permanent source of irrigation?	select one	Yes No	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

	Q 1. 13	Individual Survey	Current Season Cultivation	first_rainfall_ack	During which month was the first effective rainfall for Wheat in this season 2021/2022 ?	select one	January February March April May June July August September October November December Don't know	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 1. 14	Individual Survey	Current Season Cultivation	first_rainfall_ack	Can you recall in which week of the month did it first rain this season 2021/2022 ?	select one	First weekSecond weekThird weekFourth weekI don't remember	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 1. 15	Individual Survey	Current Season Cultivation	first_irrigation	During which month did you first irrigate Wheat in this season 2021/2022 ?	select one	January February March April May June July August September October November December I didn't irrigate my wheat crops	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

	Q 1. 16	Individual Survey	Current Season Cultivation	contact_number	Can you recall in which week of the month did you first irrigate wheat in this season 2021/2022 ?	select one	First week Second week Third week Fourth week I don't remember	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 1. 17	Individual Survey	Current Season Cultivation	quantity_current_change	Do you recall how much wheat seeds in total, in kg, you sowed during the current season 2021/2022 ?	select one	Yes No	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 1. 18	Individual Survey	Current Season Cultivation	quantity_current	What volume of wheat seeds in total, in kg, have you sowed in this season 2021/2022 ?	decimal	decimal	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Did farmers sow Wheat seeds in the past season 2020/2021?	Q 2. 1	Individual Survey	Past Season Challenges	wheat_ack	Have you cultivated Wheat in the past season (2020/2021)?	select one	Yes No	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
What did the last agricultural season (2020/2021) look like?	Q 2. 2	Individual	Past Season	yield_expectation	In your opinion, was your	select one	Higher than expected As Expected Lower than Expected	Individual	Stratified Random Sampling	1. Governorate	Y	

		Survey	Challenges		yield in the last harvest in season 2020/2021:					2. Agroecological Zone		
	Q 2.3	Individual Survey	Past Season Challenges	challenges	What challenges did you face in the past season 2020/2021?	select multiple	Pests Drought Low Rainfall Frost Ground Mice Fires Shortage of Fuel Lack of Seeds Lack of Fertilizers Lack of Labour Damaged Irrigation Systems Movement Restrictions Increasing Operational Costs None Other	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 2.4	Individual Survey	Past Season Challenges	increasing_costs	Would you please specify for what you had increasing costs?	select multiple	Increasing Costs of Machinery Maintenance Increasing Costs of Labor Force Increasing Costs of Fuel Increasing Costs of Transshipment Increasing Costs of Fertilizers Increasing Costs of Seeds Other Prefer not to answer	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 2.5	Individual Survey	Past Season Challenges	drought_impact	Were you impacted by drought/low rainfall in past season 2020/2021?	select one	Yes No	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 2.6	Individual Survey	Past Season Challenges	drought	What did you do to cope with drought/low rainfall in past season?	select multiple	Sold the crop as fodder Used a Different Irrigation Source Cultivated a Different Crop Increased frequency of irrigation Had to give up other tasks Nothing Other	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

					2020/2021 ?								
--	--	--	--	--	----------------	--	--	--	--	--	--	--	--

	Q 2. 7	Indi vidu al Surve y	Past Seas on Chall enge s	different_cr op	What other crops did you switch to?	select multipl e	Wheat Barley Corn/maize Peanuts Sesame Sunflower Apple Apricots Grapes Lemons Olives Oranges Pears Pistachio Coriander Cumin Garlic Soybeans Chickpeas Lentils Peas Cucumber Eggplant Jews Mallow Lettuce Okra Onion Potato Zucchini Squash Sugar Beat Tomato Tomato (protected) Watermelon Cotton Tobacco		Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica l Zone	Y	
	Q 2. 7. 1	Indi vidu al Surve y	Past Seas on Chall enge s		Other, please specify	text			Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica l Zone	Y	

	Q 2. 8	Indi dual Surve y	Past Seas on Chall enge s	increased_ irrigations	How many additional times did you have to irrigate to cope with drought/lo w rainfall, in the past season 2020/2021 ?	integer	integer	Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica I Zone	Y	
	Q 2. 9	Indi dual Surve y	Past Seas on Chall enge s	farmers_se ed_securit y	Do you in this sub district have access to adequate seed of the right variety they need in time for planting?	select one	Yes No	Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica I Zone	Y	
	Q 2. 10	Indi dual Surve y	Past Seas on Chall enge s	farmers_se ed_insecur e	Will you let us know briefly, why in this sub district you don't have access to adequate seed of the right variety they need in time for planting?	select multipl e	Limited supply of wheat seed quantities Limited number of varieties available in this sub district High price of preferable varieties Monopsony Time of which the variety is available Other	Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica I Zone	Y	
	Q 2. 10 .1	Indi dual Surve y	Past Seas on Chall	other	Other, please specify	text		Indi vidu al	Stratified Random Sampling	1. Gover norate 2.	Y	

			enges							Agroecological Zone		
	Q 2. 11	Individual Survey	Past Season Challenges	quality_concerns	Which of the following concerns do you face?	select multiple	Seeds purity concerns Good quality seeds are difficult to afford Seed diseases High prices of suitable varieties Unavailability of drought tolerant varieties Supply chain impacts on quality of seeds Quality seeds are monopolized Other None	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
What were wheat cultivation practices in Northeast Syria like in the last agricultural season (2020/2021)?	Q 2. 9	Individual Survey	Wheat Varieties in Past Season	seed_type	What type of Wheat seeds did you use to cultivate Wheat in 2020/2021?	select one	Soft Wheat Durum Wheat Both	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 2. 10	Individual Survey	Wheat Varieties in Past Season	variety_past_season	Which varieties of Wheat seeds did you use during the past season of 2020/2021?	select multiple	Duma1/Cham3/Cham5/Cham7/Cham9/Bohouth7/Bohouth9/Bohouth11/ACSAD65/Duma2/Duma4/Duma6/Cham6/Bohouth10/unknown	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	Yes
	Q 2. 11	Individual Survey	Wheat Varieties in Past Season	registration_status	What was the registration status of the wheat seeds you used in the past season 2020/2021?	select one	Registered Unregistered Both I don't know	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

Q 2.12	Individual Survey	Wheat Varieties in Past Season	registered_seed	Which varieties of Wheat seeds you used in past season 2020/2021 were registered?	select multiple	List of Varieties (Filtered)	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 2.13	Individual Survey	Wheat Varieties in Past Season	improved_status	Were the wheat seeds you used in the past season 2020/2021, improved?	select one	Yes, they were improved seeds No, they were not improved seeds Only some were improved I don't know	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 2.13.1	Individual Survey	Wheat Varieties in Past Season		Which varieties of Wheat seeds you used in past season 2020/2021 were improved?	select multiple	List of Varieties (Filtered)	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 2.14	Individual Survey	Wheat Varieties in Past Season	certification_status	Were the wheat seeds you used in the past season 2020/2021, certified?	select one	Yes No Only some were certified I don't know	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 2.14.1	Individual Survey	Wheat Varieties in Past		Which varieties of Wheat seeds you used in past season	select multiple	List of Varieties (Filtered)	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

		Season		2020/2021 were certified?								
Q 2. 15	Individual Survey	Wheat Varieties in Past Season	imported_status	Did you use imported wheat seeds in the past season 2020/2021 ?	select one	Yes No I don't know		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 2. 16	Individual Survey	Wheat Varieties in Past Season	imported_from	If imported, will you please specify the country that the seeds are imported from? (focus on the existing varieties in nes)	select multiple	I don't know Turkey Iraq Russia China USA Canada France Ukraine Other		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 2. 16 .1	Individual Survey	Wheat Varieties in Past Season	imported_other	Other, please specify	text	text		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

	Q 3. 1	Individual Survey	Source of Varieties and Quantities Acquired	local_from	Where from did you get the seeds in 2020/2021 season?	select multiple	Seed Supplier Traders (market) From other farmers directly From an association of farmers (farmer cooperative) From authorized seed multipliers From a local council From Contract Growers From family/friends/neighbours Stored from previous seasons Seed aid from NGOs Other Prefer not to answer	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 3. 1. 1	Individual Survey	Source of Varieties and Quantities Acquired	source_other	Other, please specify	text	text	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 3. 2	Individual Survey	Source of Varieties and Quantities Acquired	purchase_quantity_ack	Do you recall how much wheat seeds you acquired in the past season, from the sources you mentioned?	select one	Yes No	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 3. 3	Individual Survey	Source of Varieties and Quantities Acquired	purchase_quantity	What quantity, in kg, did you acquire from these sources in 2020/2021 season?	decimal	decimal	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

	Q 3. 4	Individual Survey	Source of Varieties and Quantities Acquired	seed_quantity_source	Of any of the sources you mentioned, did any of them not have enough of the seeds you wanted?	select one	Yes No		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 3. 5	Individual Survey	Source of Varieties and Quantities Acquired	seed_sufficient	Will you let us know which ones DID NOT have enough seeds?	select multiple	List of Sources (Filtered)		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 3. 6	Individual Survey	Source of Varieties and Quantities Acquired	purchase_modality	How did you pay for the seeds you purchased?	select multiple	Cash Debt Exchange/Bartered Other		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 3. 6. 1	Individual Survey	Source of Varieties and Quantities Acquired	purchase_other	Other, please specify	text	text		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 3. 7	Individual Survey	Source of Varieties	planted_portion	Did you plant all the wheat seeds you	select one	I planted all the wheat seeds I owned I planted only part of the wheat seeds I owned		Individual	Stratified Random Sampling	1. Governorate 2.	Y	

		and Quantities Acquired		owned in the past season 2020/2021 ?					Agroecological Zone			
Q 3. 8	Individual Survey	Source of Varieties and Quantities Acquired	partially_planted	What did you do with the Wheat seeds you owned in past season 2020/2021 and did not plant?	select multiple	Sold Stored Gifted Other		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 3. 8. 1	Individual Survey	Source of Varieties and Quantities Acquired	other_partial_plant	Other, please specify	text	text		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 4. 1	Individual Survey	Source of Varieties and Quantities Acquired	past_season_quantack	Do you recall how much wheat seeds in total, in kg, did you sow in the past season of 2020/2021 ?	select one	Yes No		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 4. 2	Individual Survey	Source of Varieties and Quantities	past_season_quant	How much wheat seeds in total, in kg, did you sow in the past	decimal	decimal		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

		Acquired		season of 2020/2021 ?							
Questions in Section 5 below to be looped for every variety selected							Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
							Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 5.1	Individual Survey	Varieties Yield, Source, and Price	area_cultivar	How much quantity, in kilogram, did you sow using [Duma 1] in the season of 2020/2021 ?	decimal	decimal	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 5.2	Individual Survey	Varieties Yield, Source, and Price	yield_variety_ack	Can you estimate the yield of [Duma 1] in kg/Donum in 2020/2021 ?	select one	Yes No	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Q 5.3	Individual Survey	Varieties Yield, Source, and Price	yield	How much was the yield for [Duma 1] in kg/donum in 2020/2021 ?	decimal	decimal	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

	Q 5.4	Individual Survey	Varieties Yield, Source, and Price	main source	What was the main source of [Duma 1] wheat seeds you sowed in past season 2020/2021?	select one	Seed Supplier Traders (market) From other farmers directly From an association of farmers (farmer cooperative) From authorized seed multipliers From a local council From Contract Growers From family/friends/neighbours Stored from previous seasons Seed aid from NGOs	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 5.5	Individual Survey	Varieties Yield, Source, and Price	seed_quality_clean	Were the [Duma 1] wheat seeds you acquired from this source, clean?	select one	Yes, they were clean (no impurities) No, they were not clean (some impurities) I don't remember	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 5.5.1	Individual Survey	Varieties Yield, Source, and Price	seed_quality_damage	Were the [Duma 1] wheat seeds you acquired from this source, damaged?	select one	Yes, they were damaged No, they were not damaged I don't remember	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 5.6	Individual Survey	Varieties Yield, Source, and Price	seed_germination	Did the [Duma 1] wheat seeds acquired from this source and used in the past season 2020/2021 germinate as expected?	select one	Better than expected As expected Worse than expected	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

	Q 5. 7	Indivi dual Surve y	Varie ties Yield , Sour ce, and Price	seeds_qua lity_overall	How would you rate the [Duma 1] wheat seeds you acquired from this source in terms of quality?	select one	Good Average Poor	Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica l Zone	Y	
	Q 5. 8	Indivi dual Surve y	Varie ties Yield , Sour ce, and Price	purchase_ price	How was the price or term of trade for the [Duma 1] wheat seeds you acquired from this source in the past season 2020/2021 ?	select one	Very affordabe Somewhat affordable Not affordabe I did not purchase (gifted)	Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica l Zone	Y	
	Q 5. 9	Indivi dual Surve y	Varie ties Yield , Sour ce, and Price	sow_again	Will you sow this variety again?	select one	Yes No	Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica l Zone	Y	

	Q 5.10	Individual Survey	Varieties Yield, Source, and Price	sow_again_no	Why won't you sow this variety again?	select multiple	This variety is not available anymore The price of this variety increased This variety cannot withstand drought conditions This variety did not produce yield as expected I want to use better quality varieties I want to use other varieties that require less inputs Other	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 5.11	Individual Survey	Varieties Yield, Source, and Price	sow_again_no_other	Other, please specify	text		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
How did farmers access water for wheat production in the last agricultural season (2020/2021)? How did farmers irrigate their crops during the last agricultural season (2020/2021)?	Q 6.1	Individual Survey	Irrigation and Water Sources	rainfed_irrigated	Did you irrigate the Wheat crop you cultivated in the past season 2020/2021?	select one	Yes No, only rainfed	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 6.2	Individual Survey	Irrigation and Water Sources	water source	Where did you get water for cultivation of Wheat in past season 2020/2021?	select multiple	Water network (pipelined) Private well/borehole Communal well/borehole Directly from surface water (lake/river/etc) Water trucking (public source) Water trucking (private source) Other Prefer not to answer	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 6.3	Individual	Irrigation and	pvt_borehole_count	From how many "Private	integer		Individual	Stratified Random Sampling	1. Governorate	Y	

		Survey	Water Sources		well/borehole" did you get water to cultivate wheat in the past season 2020/2021?					2. Agroecological Zone		
	Q 6.3.1	Individual Survey	Irrigation and Water Sources	pvt_borehole_active	Is it (are they) still active? [Private well/borehole]	select one	Yes, all of them are active Yes, but only some of them are active No, they are all inactive I don't know	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 6.3.2	Individual Survey	Irrigation and Water Sources	pub_borehole_count	From how many "Public well/borehole" did you get water to cultivate wheat in the past season 2020/2021?	integer		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 6.3.3	Individual Survey	Irrigation and Water Sources	pub_borehole_active	Is it (are they) still active? [Public well/borehole]	select one	Yes, all of them are active Yes, but only some of them are active No, they are all inactive I don't know	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 6.4	Individual Survey	Irrigation and Water Sources	irrigation_system	Which type of irrigation systems did you use in the past season 2020/2021?	select multiple	Drip Irrigation Sprinkler Irrigation Furrow Irrigation Centre Pivot Irrigation Other	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

	Q 6.5	Individual Survey	Irrigation and Water Sources	water_ufficiency_past	Did you have access to sufficient water to irrigate your wheat crops in the past season 2020/2021 ?	select one	Yes No		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 6.6	Individual Survey	Irrigation and Water Sources	water_usage_compare	How do you estimate your consumption of water to irrigate wheat for this season (2021/2022) compared to past season (2020/2021)?	select one	Much Lower Lower Almost Similar More Much More		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 6.7	Individual Survey	Irrigation and Water Sources	water_ufficiency_current	Do you expect to have enough water to feed your crops during the current season (2021/2022)?	select one	Yes No I don't know		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

Where do farmers get fuel for agricultural purposes from?	Q 7. 1	Individual Survey	Fuel Type	fuel_source	Where from did you get fuel for agricultural purposes in the past season 2020/2021 ?	select multiple	From the local market From the local authority From a local NGO From friends/family/neighbours Other I don't need fuel	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 7. 1. 1	Individual Survey	Fuel Type		Other, please specify	text		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 7. 2	Individual Survey	Fuel Type	fuel_type	What type of fuel for agricultural purposes did you use in the past season 2020/2021 ?	select multiple	Manually refined kerosene High quality petrol Manually refined petrol High quality diesel Manually refined diesel Gas Other I don't remember	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 7. 2. 1	Individual Survey	Fuel Type	other_fuel	Other, please specify	text	text	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

Where from and what type of fertilizers do farmers use for wheat?	Q 8. 1	Individual Survey	Fertilizer Type	fertilizers_type	What fertilizers did you use to cultivate wheat in the season of 2020/2021 ?	select multiple	NPK fertilizers Urea fertilizers Green manure Organic fertilizers Phosphate Fertilizers I make my own fertilizer I didn't use fertilizers Other Prefer not to answer	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 8. 1. 1	Individual Survey	Fertilizer Type	fertilizers_type_other	Other, please specify:	text		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q.	Individual Survey	Fertilizer Type	Loop - NPK Fertilizer as example				Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 8. 2	Individual Survey	Fertilizer Type	fertilizers_source_imported	Where did you get "NPK Fertilizer" from in the past season 2020/2021 ?	select multiple	From the local market From the local authority From other farmers From a local NGO From an International NGO From friends/family/neighbours I directly imported fertilizers other Prefer not to answer	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 8. 2. 1	Individual Survey	Fertilizer Type		Other, please specify	text		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

	Q 8.3	Individual Survey	Fertilizer Type	fertilizers_source_imported	From which countries did you get the "NPK Fertilizer" in the past season 2020/2021?	select multiple	Turkey Iraq Russia China Canada USA India France Other I don't know	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 8.3.1	Individual Survey	Fertilizer Type	imported_other	Other, please specify	text	text	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Do farmers use registered seeds?	Q 9.1	Individual Survey	Registered Seed Availability	registered_seed_source	Where can you get registered seeds in this sub district?	select one	Formal sector Informal sector Both Registered seeds are unavailable in this sub district	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 9.2	Individual Survey	Registered Seed Availability	registered_seeds	Have you bought or used registered wheat seeds in the last 5 years in this sub district?	select one	Yes No	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 9.3	Individual Survey	Registered Seed Availability	registered_seeds_use	Why did you buy/use registered seeds?	select multiple	Better Seeds Quality Better Yield Replace Old Variety Replace Old Seeds No owned seeds (no stored seeds) Better Purchase Price Other	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

	Q 9.4	Individual Survey	Registered Seed Availability	seed_not_formal	Why did you not buy/use registered wheat seeds in the past 5 years?	select multiple	Registered seeds are expensive Registered seeds are of poor quality Not enough Money to buy registered seeds Not aware of registered seeds Other	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 9.5	Individual Survey	Registered Seed Availability	registered_variety_availability	Did you obtain a new variety of wheat seeds during the past 5 years?	select one	Yes No	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 9.6	Individual Survey	Registered Seed Availability	registered_quantity_availability	What new varieties did you obtain during the past 5 years?	select one	Duma1/Cham3/Cham5/Cham7/Cham9/Bohouth7/Bohouth9/Bohouth11/ACSAD65/Duma2/Duma4/Duma6/Cham6/Bohouth10/Other	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
What has farmers' experience with crop disease been like in the last 3 years?	Q 10.1	Individual Survey	Wheat Crop Diseases	diseases	What wheat crop diseases did you ever witness in your farm in the past 3 years?	select multiple	Nematodes Smut diseases Rust diseases Root Rot Bacterial Sun Pest Physiological diseases e.g frost None Other	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	Yes
	Q 10.2	Individual Survey	Wheat Crop Diseases	wheat_rust	How many times has your crops been affected by wheat rust in the past 3 years?	integer	integer	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

	Q 10.3	Individual Survey	Wheat Crop Diseases	pesticides	For wheat crops, what pesticides did you use in the last 3 years?	select multiple	Difenoconazole (Famous as Spectro) Tebuconazole (Famous as Gensel) Other None Prefer not to answer	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 10.3.1	Individual Survey	Wheat Crop Diseases	pesticides	Other, please specify	text		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
What type of humanitarian aid would be of use to farmers to help them produce wheat?	Q 11.1	Individual Survey	Humanitarian Aid Received and Preference	aid_received_ack	Have you received any type of humanitarian aid in the past 2 years?	select one	Yes No Prefer not to answer	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 11.2	Individual Survey	Humanitarian Aid Received and Preference	wheat_aid_ack	Was any of this support related to Wheat?	select one	Yes No	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 11.3	Individual Survey	Humanitarian Aid Received and Preference	aid_frequency	How many times you received wheat support in the past 2 years?	Integer	integer	Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

		renc e									
Q 11 .4	Indivi dual Surve y	Hum anita rian Aid Rece ived and Prefe renc e	aid_receiv ed	What type of assistance did you receive?	select multipl e	Wheat Seeds Wheat Fertilizers Cash for Wheat Agricultural Inputs Irrigation Support (system, maintenance, cash, etc..) Fuel Other	Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica I Zone	Y	
Q 11 .4. 1	Indivi dual Surve y	Hum anita rian Aid Rece ived and Prefe renc e		Other, please specify	text		Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica I Zone	Y	
Q 11 .5	Indivi dual Surve y	Hum anita rian Aid Rece ived and Prefe renc e	aid_pref	If you were to be a beneficiary of humanitari an aid targeting wheat, what is your preference for assistance ?	select multipl e	CASH For Seeds Agricultural Equipment Harvest Equipment Fuel Seeds Fertilizers Other	Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica I Zone	Y	
Q 11 .6	Indivi dual Surve y	Hum anita rian Aid Rece ived and	cash_for_s eed	If you were to receive Cash for Seeds, would you be able to acquire	select one	Yes No	Indi vidu al	Stratified Random Sampling	1. Gover norate 2. Agroec ologica I Zone	Y	

			Preference		your needs of Wheat seeds locally?								
	Q 11.7	Individual Survey	Humanitarian Aid Received and Preference	if_cash	If you received CASH assistance, will you be able to acquire the inputs allocated to cultivate Wheat from a local source?	select one	Yes No		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
Other	Q 12.1	Individual Survey	Other	other	do you have anything else to add?	select one	Yes No		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	
	Q 12.2	Individual Survey	Other	other_text	What else do you have to add?	text	text		Individual	Stratified Random Sampling	1. Governorate 2. Agroecological Zone	Y	

ANNEX 3: SEED MULTIPLIERS DAP

RQ	IN D #	Indicator Group / sector	Indicat or / Variabl e	Questionnaire Question	Instr ucti ons	Questionnaire Responses	Data collection level	Samplin g	Disaggre gation variable(s)	(For probability sampling) Are disaggregatio n variables in line with stratification plan? Y/ N	Maps Plan ned?
Key Characteristics	Q 1. 1	Key Characteristics	EnumID	Enumerator ID	text		Sub district	Purposive			
	Q 1. 2	Key Characteristics	Organizat ion	Organisation	select one	NES4 NES6 NES8 NES10 NES11 NES16 NES19 NES62	Sub district	Purposive			
	Q 1. 3	Key Characteristics	Date	Date	date	Dates	Sub district	Purposive			
	Q 1. 4	Key Characteristics	Gov	Governorate	select one	Governorate names	Sub district	Purposive			
	Q 1. 5	Key Characteristics	Dist	District	select one	District names	Sub district	Purposive			
	Q 1. 6	Key Characteristics	SD	Subdistrict	select one	Subdistrict names	Sub district	Purposive			

	Q 1. 7	Key Characteristic s	Communi ty	Community	select one	Community names	Sub district	Purposive			
	Q 1. 8	Key Characteristic s	Name of associatio n	What is the name of your business?	text		Sub district	Purposive			
	Q 1. 9	Key Characteristic s	KI occupatio n	What is your occupation?	text		Sub district	Purposive			
	Q 1. 9. 1	Key Characteristic s	KI unique ID	Please enter the respondent unique ID	text		Sub district	Purposive			
	Q 1. 9	Key Characteristic s	intro_con sent	<p>Hello, my name is ____ (name) ____ and I work for an organization called (Organization).</p> <p>This questionnaire was developed by REACH to have a better understanding of the Wheat Seeds Security in the region. REACH, specializes in providing information to humanitarian actors in northern Syria that allows them to make decisions and plans based on evidence and facts on the ground. Please note that REACH does not provide any humanitarian assistance or services and this assessment does not directly link to any aid programme.</p> <p>In order to provide information to humanitarian actors, we are currently working on a</p>	select one	Yes No	Sub district	Purposive			

survey to have an understanding of the agricultural practices in NES and in particular in regards to wheat cultivation and the availability of the different wheat seeds. This assessment will help to identify gaps in local production and supply as well as provide some insights on the wheat varieties available.

I will ask you a number of questions about wheat seeds, regarding their availability and the varieties you use, touching up on some questions on quantity of seeds sown, some questions on concerns about wheat seeds quality, and some questions regarding challenges and wheat crop diseases. Your participation in answering these questions is voluntary and we hope that you will agree to participate. However, your refusal to participate will not affect you in any way.

If you agree to participate, the information that you provide will remain confidential, and will not be shared with anybody other than those involved

			<p>in the study. Also note that it is your right to refrain from answering any question or to stop completing the questionnaire at any time if you wish.</p> <p>Do you agree to participate in this interview?</p>								
--	--	--	--	--	--	--	--	--	--	--	--

	Q 1. 10	Key Characteristic s	multiplier s_count_ ack	Do you know how many seed multipliers multiplied wheat seeds in this sub district in the past season 2020/2021?	select one	Yes No Prefer not to answer	Sub district	Purposive			
	Q 1. 11	Key Characteristic s	multiplier s_count	How many seed multipliers multiplied wheat seeds in this sub district in the past season 2020/2021?	integ er		Sub district	Purposive			

What were wheat multiplication practices in NES in past season 2020/2021?	Q. 2.	Varieties Multiplied and their Status	crops_type	What types of crops were cultivated by seed multipliers in the past season (2021/2022) in this sub district?	select multiple	Cereals Oil Seeds Perennial Crops Spices Legumes Vegetables Industrial Crops Other None	Sub district	Purposive			
	Q. 2. 1	Varieties Multiplied and their Status		Other, please specify	text		Sub district	Purposive			
	Q. 1	Varieties Multiplied and their Status		Which crop seeds were multiplied in this sub district in the past season 2020/2021?	select multiple	Wheat Barley Corn/maize Peanuts Sesame Sunflower Apple Apricots Grapes Lemons Olives Pranges Pears Pistachio Corianer Cumin Garlic Soybeans Chickpeas Lentils Peas Cucumber Eggplant Jews Mallow Lettuce Okra Onion Potato Zucchini	Sub district	Purposive			Yes

					Squash Sugar Beat Tomato Tomato (protected) Watermelon Cotton Tobacco Other						
	Q 2. 1. 1	Varieties Multiplied and their Status	crops_type_other	Other, please specify	text		Sub district	Purposive			
	Q 2. 2	Varieties Multiplied and their Status	wheat_multiply_ack	Do you know what was the total area of land, in hectare, that was used for wheat seeds multiplication in this sub district in the past season 2020/2021?	select one	Yes No Prefer not to answer	Sub district	Purposive			
	Q 2. 2. 1	Varieties Multiplied and their Status	wheat_multiply	What is the total area of land, in hectare, used to multiply wheat seeds in this sub district in the past season 2020/2021?	integer	integer	Sub district	Purposive			
	Q 2. 3	Varieties Multiplied and their Status	seed_type	What type of wheat seeds were multiplied in this sub district in the past season 2020/2021?	select one	Soft Wheat Hard Wheat Both	Sub district	Purposive			
	Q 2. 4	Varieties Multiplied and their Status	seed_variety	Which varieties of Wheat seeds were multiplied in this sub district during the past season of 2020/2021? (local varieties)	select multiple	Duma1 Duma2 Duma4 Duma6 Cham3 Cham5 Cham6 Cham7 Cham9 Bohouth 7 Bohouth 9 Bohouth10 Bohouth 11	Sub district	Purposive			Yes

					ACSAD65 Other					
Q 2. 4. 1	Varieties Multiplied and their Status	variety_ot her	Other, please specify	text		Sub district	Purposive			
Q 2. 5	Varieties Multiplied and their Status	imported_ status	Do you know if some seed multipliers used imported wheat seeds for seed multiplication in this sub district in the past season 2020/2021?	select one	Yes No I don't know	Sub district	Purposive			
Q 2. 6	Varieties Multiplied and their Status	imported_ from	Will you please specify the country that the wheat seeds were imported from?	select multi ple	I don't know Turkey Iraq Russia China USA Canada France Ukraine Other	Sub district	Purposive			
Q 2. 6. 1	Varieties Multiplied and their Status	imported_ other	Other, please specify	text	text	Sub district	Purposive			
Q 3.	Varieties Yield, Source, Status, and Price	loop for each variety multiplied - Using Duma 1 as example				Sub district	Purposive			
Q 3.	Varieties Yield, Source, Status, and Price					Sub district	Purposive			
Q 3.	Varieties Yield, Source, Status, and Price	variety_ar ea_ack	Do you know what was the total area of land, in hectare, that was used for wheat seeds multiplication in this sub district in the past season 2020/2021?	select one	Yes No Prefer not to answer	Sub district	Purposive			

	Q 3. 1	Varieties Yield, Source, Status, and Price	variety_ar ea	What was the total quantity of [Duma 1] wheat seeds, in kilogram, sowed for multiplication purposes during the past season 2020/2021, in this sub district?	deci mal	decimal	Sub district	Purposive			
	Q 3. 3	Varieties Yield, Source, Status, and Price	base_see d	What was the source of the seeds used for multiplication of [Duma 1], in this sub district, during the past season 2020/2021?	select multi ple	Local Imported local and imported	Sub district	Purposive			
	Q 3. 4	Varieties Yield, Source, Status, and Price	base_see d_importe d	From which country(s) were the seeds sourced for this variety [Duma1]?	select multi ple	Turkey Iraq Russia China USA Canada France Ukraine Other	Sub district	Purposive			
	Q 3. 4. 1	Varieties Yield, Source, Status, and Price	imported_ other	Other, please specify	text		Sub district	Purposive			
	Q 3. 5	Varieties Yield, Source, Status, and Price	base_see d_local	What was the source of the seeds used to multiply this variety in this sub district during the past season 2020/2021?	select multi ple	Stored from previous seasons (reused seeds produced) From other multipliers From local authorities From agri-input suppliers From farmer associations From individual farmers Agricultural Development Department Research centers Other I don't know	Sub district	Purposive			

	Q 3. 5. 1	Varieties Yield, Source, Status, and Price	base_see d_local_o ther	Other, please specify	text		Sub district	Purposive			
	Q 3. 6	Varieties Yield, Source, Status, and Price	lab_test	Were the seeds from this variety [Duma 1] wheat seeds tested in a laboratory to ensure their quality?	select one	Yes No I don't know Prefer not to answer	Sub district	Purposive			
	Q 3. 7	Varieties Yield, Source, Status, and Price	base_see d_type	What class of base seed was used to multiply [Duma 1] wheat seeds in this sub district in the past season 2020/2021?	select multi ple	Nucleus Foundation Registered Certified Improved Other I don't know I prefer not to answer	Sub district	Purposive			
	Q 3. 7. 1	Varieties Yield, Source, Status, and Price	seed_typ e_other	Other, please specify	text		Sub district	Purposive			
	Q 3. 8	Varieties Yield, Source, Status, and Price	certified_ variety	Was the harvested production from this [Duma 1] certified? (i.e After the seed multiplier sowed the base seed and harvested the production, was this harvested production of seeds, certified?)	select one	Yes, it was certified No, it was registered only No, it was neither certified nor registered Prefer not to answer	Sub district	Purposive			
	Q 3. 10	Varieties Yield, Source, Status, and Price	certified_ by	Who certified this produce from [Duma 1]?	select multi ple	The agri development department The local authority Seed multipliers themselves 3rd party entity (Certification association) Other Prefer not to answer	Sub district	Purposive			
	Q. 10 .1	Varieties Yield, Source,	certified_ by_other	Other, please specify	text		Sub district	Purposive			

		Status, and Price								
Q 3.11	Varieties Yield, Source, Status, and Price	registered_variety	By whom was the produce from [Duma 1] registered?	select multiple	The agri development department The local authority Seed multipliers themselves 3rd party entity (Certification/Registration organization) Other I don't know Prefer not to answer	Sub district	Purposive			
Q 3.11.1	Varieties Yield, Source, Status, and Price	registere_d_by_othe_r	Other, please specify	text		Sub district	Purposive			
Q 3.12	Varieties Yield, Source, Status, and Price	not_reg_not_cert	Why was this produce from [Duma 1] not registered nor certified?	select multiple	There are no certification/registration agencies available The variety produced did not match the certification/registration specifications The cost of certification/registration is high Other Prefer not to answer I don't know	Sub district	Purposive			
Q 3.12.1	Varieties Yield, Source, Status, and Price		Other, please specify	text		Sub district	Purposive			
Q 3.13	Varieties Yield, Source, Status, and Price	variety_production_past_ack	Do you know how much seeds, in kg, was harvested from this variety [Duma 1] in the past season 2020/2021, in this sub district?	select one	Yes No I don't know	Sub district	Purposive			

	Q 3. 13 .1	Varieties Yield, Source, Status, and Price	variety_pr oduction_ past	How much seeds, in kg, was harvested from this variety [Duma 1] in the past season 2020/2021 in this sub district?	deci mal	decimal	Sub district	Purposive			
	Q 3. 14	Varieties Yield, Source, Status, and Price	variety_la nd_area_ ack	Do you know what was the total land area, in hectare, for seed multipliers sowed [Duma 1] in the past season 2020/2021 in this sub district?	select one	Yes No I don't know	Sub district	Purposive			
	Q 3. 14 .1	Varieties Yield, Source, Status, and Price	variety_la nd_area	What was the total land area, in hectare, for seed multipliers sowed [Duma 1] in the past season 2020/2021 in this sub district?	deci mal	decimal	Sub district	Purposive			
	Q 3. 15	Varieties Yield, Source, Status, and Price	variety_pr ice	Do you know for how much, in SYP, did seed multipliers sell 1 kg of [Duma 1] wheat seeds in the past season of 2020/2021 to farmers in this sub district?	select one	Yes No	Sub district	Purposive			
	Q 3. 16	Varieties Yield, Source, Status, and Price	variety_pr ice	for how much, in SYP, did seed multipliers sell 1 kg of [Duma 1] wheat seeds in the past season of 2020/2021 to farmers in this sub district?	deci mal	decimal	Sub district	Purposive			

Do multipliers export wheat seeds?	Q 5.1	Wheat Exports	sell_locally	To whom did seed multipliers from this sub district sell part of their production of wheat seeds during the past season 2020/2021?	select multiple	Farmers Other Traders who sell to Farmers The local authority FAO NGOs GOS Agricultural Development Company None Other Prefer not to answer I don't know	Sub district	Purposive			
	Q 5.1.1	Wheat Exports	sell_locally_other	Other, please specify	text		Sub district	Purposive			
	Q 5.2	Wheat Exports	export_seeds	Do some seed multipliers in this sub district export wheat seeds, from which they multiplied in their fields, to other countries during the past season?	select one	Yes No I don't know Prefer not to answer	Sub district	Purposive			
	Q 5.3	Wheat Exports	export_past_season	Do you know how much wheat seeds, in Tonne, were exported during the		Yes No Prefer not to answer	Sub district	Purposive			

				past season of 2020/2021?							
	Q 5.3.1	Wheat Exports	export_past_season	how much wheat seeds, in Tonne, were exported during the past season of 2020/2021?	decimal	decimal	Sub district	Purposive			
how does wheat produced by farmers compare to wheat produced by multipliers?	Q 6.1	Comparison of Multipliers and Farmers	compare_price	When compared to the seeds produced by farmers in this sub district, how do you rate the wheat seeds produced by seed multipliers in the past season 2020/2021 in terms of price?	select one	Much more expensive More expensive Similarly priced Less expensive Much less expensive I don't know	Sub district	Purposive			
	Q 6.2	Comparison of Multipliers and Farmers	compare_yield	When compared to the seeds produced by farmers in this sub district, how do you rate the wheat seeds produced by seed multipliers in the past season 2020/2021 in terms of yield?	select one	Much better yield Better Yield Similar Yield Poorer Yield Much poorer yield I don't know	Sub district	Purposive			
	Q 6.3	Comparison of Multipliers and Farmers		When compared to the seeds produced by farmers in this sub district, how do you rate the wheat seeds produced by seed multipliers in the past season 2020/2021 in terms of tolerance to drought?	select one	Much more tolerant More tolerant Similarly tolerant Less tolerant Much less tolerant I don't know	Sub district	Purposive			

Q 6. 4	Comparison of Multipliers and Farmers		What were the top 3 challenges that seed multipliers faced in this sub district in the past season 2020/2021?	select multi ple	Unavailability of certified seed Unavailability of registered seed Drought Ground mice Fire Flooding Salinization Crop Diseases Lack of labourers Increased operational costs Lack of fertilizers in local markets Lack of fuel for agricultural purposes Other None I don't know Prefer not to answer	Sub district	Purposive			
Q 6. 4. 1	Comparison of Multipliers and Farmers		Other (Please Specify)	text		Sub district	Purposive			
Q 6. 5	Comparison of Multipliers and Farmers		Would you please specify for what did seed multipliers had increasing costs?	select multi ple	Increasing Costs of Machinery Maintenance Increasing Costs of Labor Force Increasing Costs of Fuel Increasing Costs of Transshipment Increasing Costs of Fertilizers Increasing Costs of Seeds Prefer not to answer Other I don't know	Sub district	Purposive			
Q 6.	Comparison of Multipliers and Farmers		Other (Please Specify)	text		Sub district	Purposive			

	5.1										
What seed multipliers' experience with crop disease been like in the last 3 years?	Q 7.1	Crop Diseases and Treatment	diseases	What were the wheat crop diseases witnessed in this sub district by seed multipliers during the past 3 years?	select multiple	Nematodes Smut diseases Rust diseases Root Rot Bacterial Sun Pest Physiological diseases e.g frost None Other I don't know	Sub district	Purposive			
	Q 7.1.1	Crop Diseases and Treatment	diseases_other	Other, please specify	text		Sub district	Purposive			
	Q 7.2	Crop Diseases and Treatment	pesticides	Are pesticides available in the local market in this sub district to address these diseases?	select one	Yes, for all diseases Yes, but only for some diseases No	Sub district	Purposive			
	Q 7.3	Crop Diseases and Treatment	unavailable_pesticides	Which of the seed diseases witnessed in this sub district DO NOT HAVE a pesticide available in local markets in this sub district?	select multiple	Filtered List of Diseases	Sub district	Purposive			
	Q 7.4	Crop Diseases and Treatment	seed_treatment	Did seed multipliers treat wheat seeds in this sub district during the past 3 years?	select one	Yes No Prefer not to answer	Sub district	Purposive			
	Q 7.5	Crop Diseases and Treatment	fungicides	Which type of wheat seeds treatment/sterilizers did seed multipliers use?	select multiple	Difenoconazole (Famous as Spectro) Tebuconazole (Famous as Gensel) Other I don't know	Sub district	Purposive			
	Q 7.	Crop Diseases and Treatment	fungicides_other	Other, please specify	text		Sub district	Purposive			

	5. 1										
	Q 7. 6	Crop Diseases and Treatment	fungicide s_availability	Are these treatment materials available locally?	select one	Yes No	Sub district	Purposive			
	Q 8. 1	Varieties in last 3 years	3_years_ variety	Which of these varieties have been multiplied by seed multipliers in this sub district during the past 3 years?	select multi ple	Duma1 Duma2 Duma4 Duma6 Cham3 Cham5 Cham6 Cham7 Cham9 Bohouth 7 Bohouth 9 Bohouth10 Bohouth 11 ACSAD65 Other Prefer not to answer	Sub district	Purposive			Yes
	Q.	other		Do you have anything else to add?			Sub district	Purposive			

ANNEX 4: TRADERS DAP

Research Question	IND #	Indicator Group / sector	Indicator / Variable	Questionnaire Questions	Instruction	Questionnaire Responses	Data collection level	Sampling	Disaggregation variable(s)	(For probability sampling) Are disaggregation variables in line with stratification plan? Y/ N	Maps Planned?
Key Characteristics	Q1.1	Key Characteristics	Enum ID				Sub district	Purposive			
	Q1.2		Organization			NES4 NES6 NES8 NES10 NES11 NES16 NES19 NES62	Sub district	Purposive			
	Q1.3		Date				Sub district	Purposive			
	Q1.4		Gov				Sub district	Purposive			
	Q1.5		Dist				Sub district	Purposive			
	Q1.6		SD				Sub district	Purposive			
	Q1.7		Community				Sub district	Purposive			
	Q1.8		market_name	What is the name of the market?	text	text	Sub district	Purposive			

	Q1.9		Shop_name	What is the name of the shop?	text	text	Sub district	Purposive			
	Q1.10		intro_consent	<p>Hello, my name is ____ (name) ____ and I work for an organization called (Organization).</p> <p>This questionnaire was developed by REACH to have a better understanding of the Wheat Seeds Security in the region. REACH, specializes in providing information to humanitarian actors in northern Syria that allows them to make decisions and plans based on evidence and facts on the ground. Please note that REACH does not provide any humanitarian assistance or services and this assessment does not directly link to any aid</p>	select one	Yes No	Sub district	Purposive			

programme.

In order to provide information to humanitarian actors, we are currently working on a survey to have an understanding of the agricultural practices in NES and in particular in regards to wheat cultivation and the availability of the different wheat seeds. This assessment will help to identify gaps in local production and supply as well as provide some insights on the wheat varieties available.

I will ask you a number of questions about wheat seeds, regarding their availability and the varieties you sell, touching up on some questions on quantity of seeds sourced/sold, some questions

on stocking and restocking of wheat seeds, and some questions regarding challenges faced. Your participation in answering these questions is voluntary and we hope that you will agree to participate. However, your refusal to participate will not affect you in any way.

If you agree to participate, the information that you provide will remain confidential, and will not be shared with anybody other than those involved in the study. Also note that it is your right to refrain from answering any question or to stop completing the questionnaire at any time if you wish.

Do you agree to participate in this interview?

	Q2.1	Modality and Currency of Purchase	purchase_modality	What modality of purchase do traders in this sub district accept at their shops?	select multiple	Cash Vouchers Sell on Credit/Debt Barter Deferred Payments Other I don't know	Sub district	Purposive			
	Q2.1.1		purchase_modality_othe r	Other, please specify	text		Sub district	Purposive			
	Q2.2		main_currency	What is the main currency used in the markets in this sub district?	select one	SYP TRY USD Traders accept multiple currencies I don't know	Sub district	Purposive			
	Q2.3		sell_current	Are (were) wheat seeds sold in this sub district in this agricultural season 2021/2022?	select one	Yes No I don't know	Sub district	Purposive			
Which varieties were sold in the current season that were not sold in the last season? And why? What was the main source of each variety sold by traders in the past season? What restocking,	Q3.2		wheat_varieties	What varieties of wheat seeds were sold in this sub district during the past season 2020/2021?	select multiple	I don't know Duma1 Duma2 Duma4 Duma6 Cham3 Cham5 Cham6 Cham7 Cham9 Bohouth 7 Bohouth 9 Bohouth10 Bohouth 11 ACSAD65 Other	Sub district	Purposive			

storage, and transport challenges do traders face when trading wheat seeds? What is the general model of storage of wheat seeds used by traders?	Q3.2.1		varieties_other	Other, please specify	text		Sub district	Purposive			
	Q3.3		sell_outside	Do traders in this sub district sell wheat seeds to farmers in locations outside of this sub district?	select one	Yes No I don't know	Sub district	Purposive			
	Q3.4		sell_location	Which locations did traders sell wheat seeds to during the past season of 2020/2021?	select multiple	Another market, in another sub district in the same district Another market, in another district in the same governorate Another market, in another governorate in the same region Another market, in another region Some traders export wheat seeds Other I don't know	Sub district	Purposive			
	Q3.4.1		sell_location_other	Other, please specify	text		Sub district	Purposive			
	Q3.5		sources	Where from did traders in this sub district source wheat seeds during the past season of 2020/2021?	select multiple	Directly from individual farmers From farmer cooperatives/associations From the local authority From a local seed multiplier From other traders From agri input dealers Agricultural development company Stored from previous	Sub district	Purposive			

					season Some traders have their own lands to cultivate and produce wheat seeds to sell Other I don't know Prefer not to answer						
	Q3.5.1		sources_other	Other, please specify	text		Sub district	Purposive			
	Q3.6		customers	Who were the main customers for wheat seeds in the markets in this sub district?	select multiple	Individual farmers Farmer cooperatives/associations Seed multipliers Community Members Local Authority Agricultural development company Agro Input Dealers Other I don't know	Sub district	Purposive			
	Q3.6.1		customers	Other, please specify	text		Sub district	Purposive			
	Q4.1	Varieties sold in this season	different_varieties_current	Did traders in this sub district sell varieties in the current season that were not sold in the last season?	select one	Yes No I don't know	Sub district	Purposive			

	Q4.2		varieties_current_season	Which varieties were sold in this sub district during the current season (2021/2022) that were not sold in the last season (2020/2021)?	select multiple	I don't know Duma1 Duma2 Duma4 Duma6 Cham3 Cham5 Cham6 Cham7 Cham9 Bohouth 7 Bohouth 9 Bohouth10 Bohouth 11 ACSAD65 Other	Sub district	Purposive			
	Q4.2.1		varieties_current_other	Other, please specify	text		Sub district	Purposive			
	Q4.3		change_reason	Why did/are traders sell/selling different varieties during the current season that were not sold in the last season?	select multiple	Some varieties became unavailable Some varieties prices increased Some varieties prices decreased The source is selling different varieties Source doesn't have enough quantities Demand on preferable varieties changed Customer feedback that some varieties quality is poor Only existing and available varieties Other I don't know	Sub district	Purposive			

Q4.3.1		change_reason_other	Other, please specify	text		Sub district	Purposive			
Q5.	Source of Each Variety, status, and price	loop for varieties sold in past season 2020/2021 - Duma 1 as example				Sub district	Purposive			
Q5.						Sub district	Purposive			
Q5.1		supplier	What was the main source of [Duma 1] wheat seeds in the past season 2020/2021 in this sub district?	select one	Directly from individual farmers From farmer cooperatives/associations From the local authority From a local seed multiplier From other traders From agri input dealers Stored from previous season Some traders have their own lands to cultivate and produce wheat seeds to sell Imported Other (specify) I don't know	Sub district	Purposive			
Q5.1.1		supplier_other	Other, please specify	text		Sub district	Purposive			
Q5.2		current_price_ack	Do you recall for what price were [Duma 1] wheat seeds sold for in this sub district in the past season 2020/2021?	select one	Yes No	Sub district	Purposive			
Q5.3		current_price	What was the price of [Duma 1] wheat seeds per kg in this sub district in the past	decimal	decimal	Sub district	Purposive			

				season 2020/2021? [In the main currency reported]						
	Q5.4		registration_status	Were there registered wheat seeds available of [Duma 1] variety in this sub district in the past season?	select one	Yes No I don't know	Sub district	Purposive		
	Q5.5		certification_status	Were there certified wheat seeds available of [Duma 1] variety in this sub district in the past season?	select one	Yes No I don't know	Sub district	Purposive		
	Q5.6		high_sale_month	During which month(s) do traders sell more of [Duma 1] variety in the markets in this sub district?	select multiple	I don't know January February March April May June July August September October November December	Sub district	Purposive		

	Q6.1	Restocking and Storage challenges	restocking_challenges	What restocking challenges did traders in this sub district face during the past season?	select multiple	Lack of wheat production in the area Supply cannot meet demand fast enough Price inflation (can't afford restocking, etc) Supplier/trader requesting currencies that I cannot/do not prefer to pay in Supplier/trader unwilling to sell Supplier/trader on curfew Supplier/trader out of stock Supplier/trader has limited supply No suppliers/traders Road closures to/from community Supplier does not have proper authorization/permission for movement Transport roads are insecure (for example risk of theft/fear of checkpoints/etc.) Government restrictions (for example, curfew and covid lockdowns) No issues Not sure Other	Sub district	Purposive			
	Q6.1.1		restocking_challenges_other	Other, please specify	text		Sub district	Purposive			

	Q6.2	machinery_tools	Which of the following equipment for storing and selling seeds do traders in this sub district own?	select multiple	Grain Peeling equipment Seed Screening equipment Equipment for prevention of storage pests Seed Grading equipment None Other I don't know	Sub district	Purposive			
	Q6.2.1	machinery_other	Other, please specify	text		Sub district	Purposive			
	Q6.3	storage_location	Where do traders in this sub district store wheat seeds?	select multiple	In their shops In a warehouse they own In a warehouse they rent In a shared warehouse with other traders At their homes In a granary At Silos Other I don't know	Sub district	Purposive			
	Q6.3.1	storage_location_other	Other, please specify	text		Sub district	Purposive			
	Q6.4	storing_modality	How do traders in this sub district package wheat seeds in the storage location?	select multiple	In Plastic containers In Hessian Sacks In Woven Polyethelyne Bags In Metal Containers Other I don't know	Sub district	Purposive			
	Q6.4.1	storing_modality_other	Other, please specify	text		Sub district	Purposive			

	Q6.5		storing_method	Where are the seed packages placed during storage?	select multiple	On metal shelves On pallets On concrete floor On mud floor Other I don't know	Sub district	Purposive			
	Q6.5.1		storing_method_other	Other, please specify	text		Sub district	Purposive			
	Q6.6		storage_challenges	Which of the following issues did traders in this sub district face with keeping stocks of wheat seeds during the past season 2020/2021?	select multiple	Theft Humidity Limited storage space Flooding Contamination of products by rodents, pests, etc.. Heat wave Other None	Sub district	Purposive			
	Q6.6.1		storage_challenges_other	Other, please specify	text		Sub district	Purposive			
	Q7.1	Transport modality and challenges	transport_modality	Through what means do wheat seeds supplies physically reach traders' shops in this sub district and storage locations?	select multiple	Car Truck Other	Sub district	Purposive			
	Q7.2		transport_for_seeds	Is this transport modality only used to carry wheat seeds?	select one	Yes, only for wheat seeds transportation No I don't know	Sub district	Purposive			

	Q7.3		transport_challenges	Which of the following challenges did traders or seed suppliers face in the past season 2020/2021?	select multiple	Availability of Trucks (transport modality) Theft or robbery of seeds Theft or robbery of cash Physical attacks on traders Verbal harassment of traders Arbitrary detention Government checkpoints Non-government checkpoints Poor quality of roads Supplier does not have proper authorization for movement High transport costs None Other Don't know	Sub district	Purposive			
	Q7.4		transport_challenges_other	Other, please specify	text		Sub district	Purposive			
How do traders market their wheat seeds? Is there monopoly in wheat seeds trade? What impacts the prices in markets?	Q8.1	Marketing	seed_marketing	Which of the following do traders in this sub district do to increase the value of their wheat seeds, commercially?	select multiple	Run sales promotion Clean out impurities Sort according to varieties Package according to popular demand Grade according to seed size Display old and fresh seeds separately Sell grain and seed separately Seed treatment Other None I don't know	Sub district	Purposive			

			in the seed sector in this sub district?							
Q9.4		monitor_entities_names	Will you please name the organizations that monitor and regulate the trade in the seed sector in this sub district?	text	text	Sub district	Purposive			
Q9.5		certificates	Are there certified varieties available in the markets in this sub district?	select one	Yes No I don't know	Sub district	Purposive			
Q9.6		certificate_credibility	Do the specifications in the certificate match the actual certified seed quality?	select one	Yes, accurately Yes, partially accurate No I don't know	Sub district	Purposive			
Q10.1	Impacts on wheat seeds prices	purchase_modality	How were the wheat seeds prices in this sub district impacted during the past agriculture season 2020/2021?	select multiple	Prices of wheat seeds increase just before planting time Prices of wheat seeds decrease just before planting time Prices of wheat seeds increase after planting and before harvesting Prices of wheat seeds decrease after planting and before harvesting Prices of wheat seeds increase just after harvesting Prices of wheat seeds decrease just after harvesting There is no impact of	Sub district	Purposive			

					seasonality on price I don't know					
Q10.2	top_factors	What are the top 3 factors that impacted the prices of wheat seeds in the markets in this sub district during the past season 2020/2021?	select multiple	Currency inflation Supply quantities Demand quantities Events of stress in the area (drought, conflict, lockdown, etc..) Availability of preferred varieties SA table prices Border closures Agricultural season Climate conditions (rainfall, drought) Other None I don't know	Sub district	Purposive				
Q10.2.1	top_factor_other	Other, please specify	text		Sub district	Purposive				
Q10.3	drought_impact	What impact did lack of rainfall have on wheat seeds prices in the markets in this sub district	select one	Increased prices Decreased prices No impact I don't know	Sub district	Purposive				

				during the past season 2020/2021?							
Other	Q10.4		other	Do you have anything else to add	select one	Yes No	Sub district	Purposive			
	Q10.5		other_text	What else do you have to add?	text	text	Sub district	Purposive			