



# **Rapid Assessment of Agricultural Livelihoods**

**Tilkaif District – Ninewah Province**  
September 2014

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## Introduction

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The agricultural system in Iraq is the third contributor to the GDP (circa 8% en 2012) and the second employer of the country in 2012 (around 25% of its labour force). Iraq has 9,000,000 hectares of arable land, 22% of its territory which 60% is actually cultivated. Iraq imports 80% of its food requirements. It also has a high dependence for some basic foods; wheat (50%), rice (81%), milk (67%). The agriculture sector is still a major source of livelihood for the poor and food insecure and is the largest source of rural employment. Disruption of agricultural production is strongly impacting the income of farmers as well as the national economy. Indeed the Iraqi Government normally maintains three to six months' supply of wheat in its food stocks and is committed to supplying each Iraqi citizen with a monthly 9 kg of subsidized flour (FAO).

Since January 2014, an estimated 1.8 million Iraqi Internally Displaced Persons (IDPs) have fled violence and unrest in successive waves. The newly displaced persons are in addition to the over 200,000 IDPs from previous waves of violence since 2003 and over 200,000 refugees from Syria.

The ongoing conflict has resulted in a disruption of the Public Distribution System upon which large numbers of people in Iraq depend. The food security of more than 4,000,000 individuals (not displaced) who rely on the PDS for more than 50 percent of their energy requirements has been compromised as a result. Of this group, approximately 1,500,000 individuals in the lowest 20 percent income group are estimated to have already become highly food insecure and are now in need of emergency food assistance. The remaining vulnerable individuals are at risk of becoming food insecure if the current situation continues.

Due to the ongoing conflict, the crop cycle has been largely interrupted in Anbar, Ninewah, Salah Al-Din and Diyala, as well as South Baghdad and Northern Babil (FAO). Large parts of the wheat production belt lie directly under the control of ISIL and affiliated armed groups. The three Governorates of the Kurdish Region of Iraq have not been directly affected by the conflict but indirectly hosting circa 800,000 IDPs.

The objective of this survey is to look at the impact of the crisis on the agricultural livelihoods of the farmers living in Tilkaif district, Ninewah Province, surveying the performance of the last agricultural season and the perspective for the coming one.

## Methodology

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In September 2014, ACF undertook, with the financial support of FAO, a rapid assessment of the Agricultural and Livelihoods situation of the district of Tilkaif in Ninewah Province in order to gain an understanding of the situation and inform potential immediate interventions. The data collection in the field took place between the 18<sup>th</sup> and the 22<sup>d</sup> of September in the town of Al-Qosh. Methodology followed by the assessment includes household interviews, key informants interview and review of secondary data.

The household questionnaire was defined by FAO and looked at demographics, presence of displaced families in the households, and the agricultural performance over the last 12 months. A copy of the questionnaire is available on request.

The team of surveyors was composed of 15 persons, previous employees of the Agricultural Departments from different sub-districts affected by the conflict and as such in stand-by with no activity.

### Key methodological constraints:

a) **Security and access:** ACF and FAO agreed to cover the whole district of Tilkaif, including 3 sub-districts: Wana, Al-Qosh and Tilkaif where security access was granted. The district of Tilkaif is still suffering from tensions following the August military offensive by insurgents. Some families are travelling back and forth, men in particular, to check on their properties and assets but a large part of the district is still not considered as safe for most organizations, including the UN. At the time of the survey, the sub district of Al-Qosh was the only area accessible for ACF.

b) **Readjustment of the plan to accommodate access constraints:** Representatives of the Ministry of Agriculture supported ACF in the process, by inviting some farmers to come for interviews in Al-Qosh. This particular methodology of holding interviews of families who are not in their own environment has the impact of negatively affecting the quality of data. A proportion of the interviewed families had just returned to their villages, whilst others were still displaced. A total of 307 families were finally interviewed of which 55 (18 percent) of them are still displaced. However, this number is not representative of the situation in the field as the sampling method used by the ministry may not have been representative of the whole population. The acquired data therefore has its limitations, and cannot be considered as statistically representative of the situation of *all* the population involved in agricultural livelihood living in Tilkaif District.

c) **Time limitation:** the initial plan included one week of field work. Due to the necessary readjustment, time for data collection and analysis was thus rather limited.

## Target Area

The district of Tilkaif is part of the Ninewah Plain known for its rich agricultural lands. According to the Ministry of Agriculture, there are 4 Directories of agriculture in Tilkaif: Al-Qosh, Faida, Wana, and Tilkaif. Agricultural activities consist of a rain-dependent winter growing season extending from December to May. The table highlights the importance of the cereal production in the area:

Directory	Wheat - area cultivated (dunum)	Barley - area cultivated (dunum)	Total area cultivated (dunums)	No. Farmers Approximately	average area cultivated per farmers (Dunum)
Alqosh	98060	4200	102260	1200	85.22
Faida	24408	0	24408	400	61.02
Wana	105246	1595	106841	1100	97.13
Tilkaif	114433	4122	118555	1308	90.64
<b>Total</b>	<b>342147</b>	<b>9917</b>	<b>352064</b>	<b>4008</b>	<b>87.84</b>

Table 1: Cereal production in Tilkaif (Ministry of Agriculture)

ACF was initially targeting the district for the assessment. As explained already, for security constraints, the area surveyed has been limited and can represent only the north of Tilkaif as illustrated in the map below. List of the surveyed villages is included in the Appendix A.

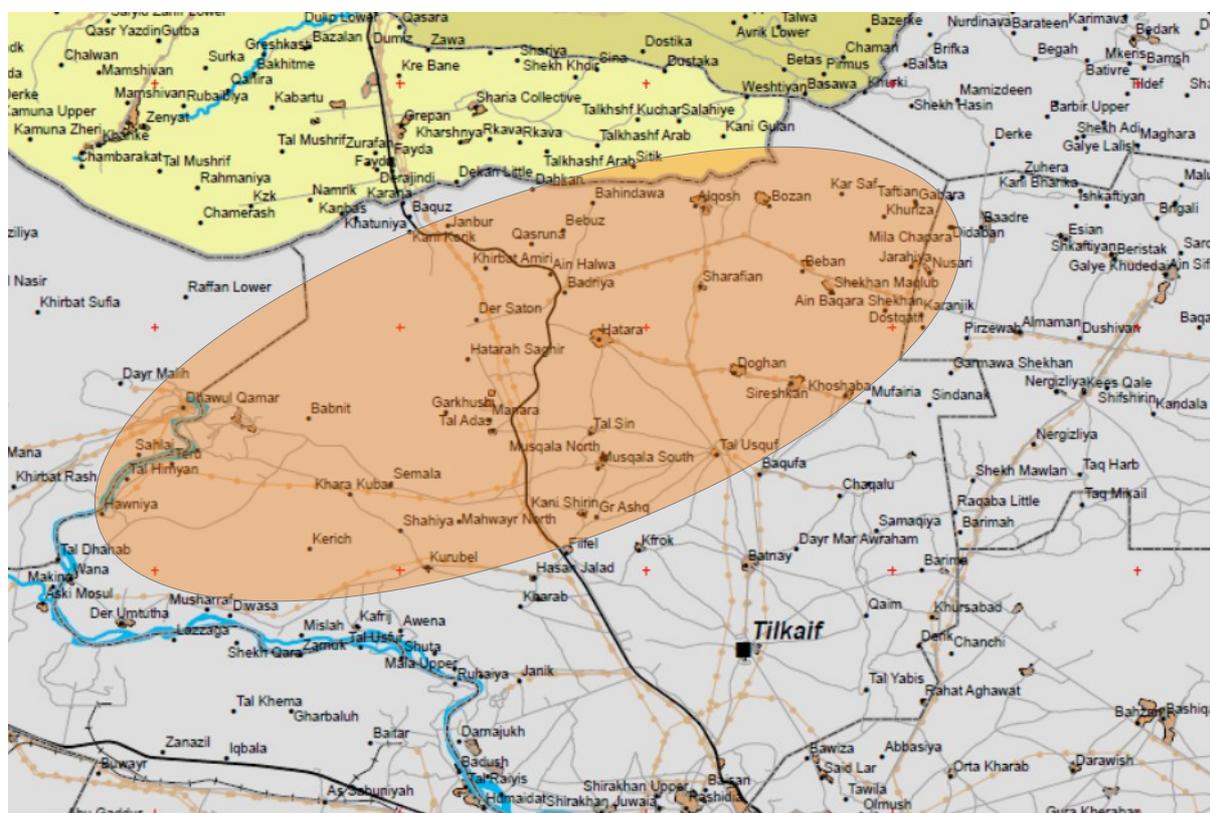


Figure 1: Map of Tilkaif District, and area surveyed (highlighted in orange)

The district of Tilkaif has been affected by the on going conflict in two different ways: After the conflict within Mosul (9<sup>th</sup> of June) the population had welcomed and supported many IDPs families arriving in several waves. In a second time (9<sup>th</sup> of August), Tilkaif district came under the control of IS/ISIS leading to the displacement of both local communities and the already displaced families. Kurdish military forces have progressively taken back large parts of the district of Tilkaif but the situation is still evolving with continuing tensions in central, west and southern areas. Returns are observed in the Northern part of the district, and expected in the whole district in the near future.

Looking at these movements through an agricultural calendar, it shows that families from Tilkaif should have theoretically been able to conduct the cereal harvest and post-harvest activities. With the preparation and planting season being in November and December, the next cropping season should be possible if continuing returns are confirmed.

**Constraints for both past and coming seasons are analysed in the following pages.**

## Main Findings

### 1. Profile of Households Surveyed

A total of 307 households have been interviewed during the survey representing 2,799 individuals. Each household comprises in average 1.56 families and 9.1 persons, with households ranging in size from 1 to 43 persons.

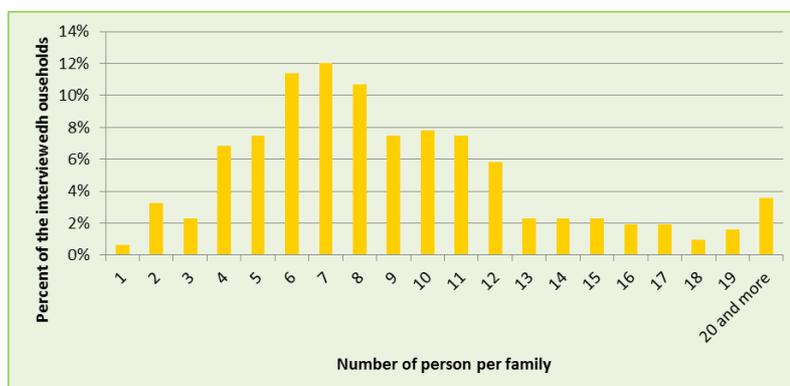


Figure 2: Household size

Of the surveyed population 99 percent of the persons interviewed were men and 99 percent of the households are headed by men. 96.8 percent of the head of households are married and 1.9 percent and 1.3 percent are respectively single or widowed. It is interesting to note that, of the female-headed households, 50 percent are widows whilst the same holds true for only 1 percent of the male-headed households. No female head of household is single. 9 percent of the heads of households are declared having a disability. The proportion of males and females in the population is equal. Figure 3 presents the disaggregation per age and gender of the interviewed population.

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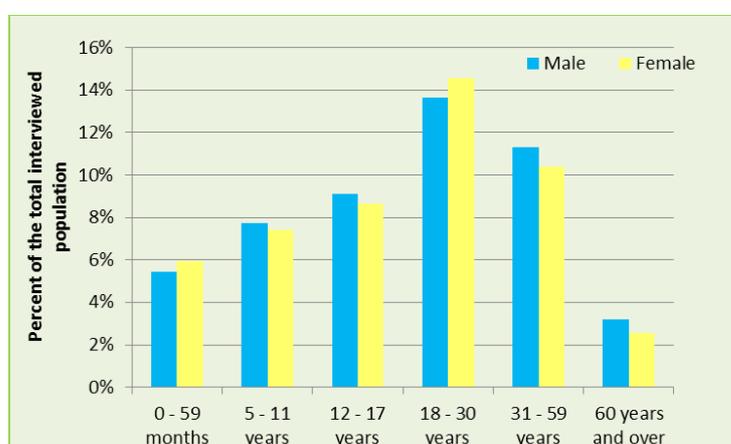


Figure 3: Disaggregation of the population per age and gender

There is at least one pregnant/lactating woman in 15.9 percent of the households interviewed. If individuals aged below 18 years old and above 60 years old are considered as dependant, the dependency ratio (number of dependants per active person) is of 1.

Only 4.5 percent of the interviewed households are hosting IDPs. Within those families, only 7.6 percent of the IDPs received rent or services from them.

Figure 4 presents the level of education of the head of household. Education level is on average quite low as in most rural areas of Iraq, with 72 percent of the heads of interviewed families have no or only primary education.

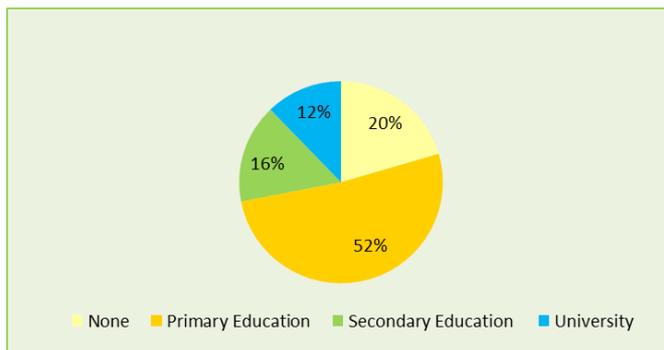


Figure 4: Highest Level of education of the head of household

## 2. Crop Production

Government policies in the agricultural sector have been characterized by the state determination to control and subsidize farm inputs (fertilizers, seeds, insecticides, farm equipment and machinery) and prices of strategic crops. The most important crop, wheat, has been the most controlled and the most affected by the lack of open markets (FAO). Although Iraq allocated more than 40% of the arable land to growing wheat, production is still far below the country's needs in a normal year. One major reason for the low production is the low productivity of the wheat that is grown. Some of the causes which contribute to the low productivity include low yielding wheat varieties, severe and frequent droughts in the rained areas (a consequence of low and erratic rainfall and the effects of the climate change), low soil fertility, and soil salinity in the irrigated areas.

### Access & Use of Land

In Iraq, about 50 percent of the land suitable for cultivation is irrigable, and the rest is rain-fed, of which around half may be farmed every year depending on rainfall and fallowing patterns. The rain-fed sub-sector, located in the three Governorates of the autonomous northern region, Dohuk, Erbil and Sulaymaniyah (40 percent), and in the Governorates of Ninewah, Kirkuk and Salah Al-Din in the central region (60 percent), consists of a rain-dependent winter growing season.

All families interviewed owning land and having access to rain-fed land. 97 percent depend only on rain-fed agriculture. An average of 84 dunums (figure 5) is cultivated in line with the figures provided by the Ministry of Agriculture with an average of 87 dunums per family, and 40 percent of the families with less than 50 dunums (Figure 1, page 4).

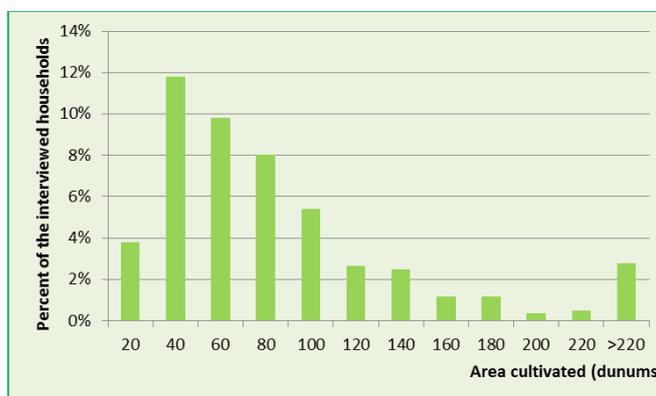


Figure 5: Land use

## Crops & Harvest

In the northern Governorates of Dohuk, Erbil and Sulaymaniyah, the annual contribution of some 800,000 tonnes, in a reasonably good year, comprises around 50 percent wheat, 30 percent barley and 20 percent chickpeas. The farming systems is mainly wheat monoculture with utilization of fertilizer applications juxtaposed with a barley/fallow rotation, with usually no fertilizer use, but may incorporate chickpeas one year in three or four. Prior to the current escalation of conflict, an above-average national wheat harvest of 3 million tonnes, some 16 percent above the five-year average, was forecast by FAO. The barley crop, at 900,000 tonnes, was similar to the previous year but 15 percent above the five-year average.

The Ninewah Province, noted for producing more than 1 million tonnes of wheat and barley in a good year, contributes on average to over 20 percent and 38 percent of the national wheat and barley production, respectively. Annual wheat production in Ninewah was approximately 655,000 tons for last year [FAO].

Interviewed farmers did not mention specific abnormal situation during the cultivation season and all are reporting the predominance of cereal production (99 percent) and some of them vegetables (3 percent) and chickpeas (3 percent). Surprisingly, farmers focused only on wheat during the whole interview and very few mentioned other crops.

31% of families are reporting a normal level of harvest, marginal decrease of harvest is reported by 47% of farmers, and a significant decrease of harvest is reported by 9% as illustrated in Figure 6. Out of the farmers reporting decrease of yield, 81% perceived that it was due to reduced rainfall.

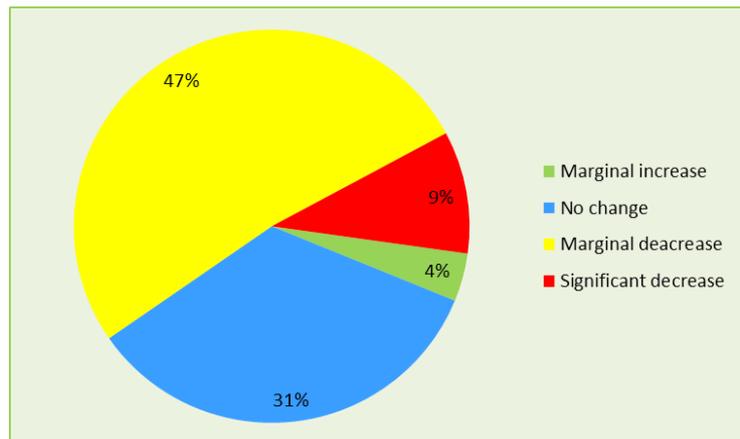


Figure 6: Evolution of the wheat harvest

According to the farmers, the conflict has not had a significant impact on the harvest activities in Tilkaif District. However, Tilkaif district has been directly affected from August, after the harvesting and post-harvesting activities of the wheat cultivation.

## Post-harvest Activities & State of the Market

As mentioned before, farmers from Tilkaif did not face specific difficulties or constraints related to the conflict in their harvest activities. **On the opposite, post-harvest activities and marketing have been strongly affected.**

Usually, farmers are selling the large part of their wheat production to the Ministry of Trade. Farmers are encouraged to sell their production to the government by above private market price ensuring necessary profit for the farmers. The government subsidizes output prices of

strategic crops to promote their culture. The Ministry of Trade is collecting wheat to be redistributed to the Iraqi population through the PDS.

This year, farmers living in Tilkaif had started to deliver their wheat production to the government silos in rural areas around Mosul in early June. As mentioned earlier, the annual wheat production in Ninewah was estimated, approximately, to 655,000 tons in 2014 and only about 179,000 (27 percent) tonnes has been sold as in September. Farmers in Al-Qosh are reporting that circa 80 percent of the production has been delivered to the government silo and 20 percent is still being stocked by the farmers. Farmers are not used to sell their production to the private sector as market prices are well below the government prices. For many at the moment, they still have this 20% of their stock (wheat). Limited storage capacity results in wheat being in the outside and losses are expected with the upcoming rainy season.

The government usually pays the producers two months after the delivery. Then farmers of Tilkaif district, being under the responsibility of Mosul directorate were not paid before the fall of Mosul and have no hope of being paid for the wheat they delivered before the offensive.

#### **Consequences of the current situation:**

→ **At the household level:** For both farmers who had already delivered their wheat harvest to Government silos and farmers who have unsold wheat surplus, the economic situation is difficult **with a severe income gap**. This income gap is impacting directly the financial capacity of the families on a daily basis to cover their basic needs as well as their productive capacity to buy seed, fuel and fertilisers to conduct the upcoming winter cropping season.

→ **At the national level:** The wheat is purchased by the Board of grain of Ministry of Trade in order to redistribute it to the Iraqi population through the Public Distribution system (PDS). Iraq's wheat production is blended with imported wheat, milled into flour and distributed as part of Iraq's food ration or PDS. The PDS is Iraq's "safety net" food program that distributes flour, rice, sugar and vegetable oil to Iraq's citizens. Under the PDS, every Iraqi, irrespective of income level, is entitled to a monthly food ration for a nominal fee. A former U.S. Department of Agriculture economist estimates that about quarter of Iraqis living in rural areas were dependent on subsidised food before the latest violence, while another quarter used it to top up food they bought.

A limited share of the harvest had been delivered to the government silo in Ninewah and the opposition groups are now controlling all nine silos in the Province. This results in a huge gap in supply for the board of grain. In addition, security impacts the movement of wheat from storage sites to flour mills (OCHA). The food security of more than 4 million individuals, who are not displaced, but who rely on the PDS for more than 50 per cent of their energy intake, have had their household food security compromised (OCHA). Cereal import requirements for 2014-2015 are now expected to increase sharply.

## Mains Constraints for the Winter Cropping Season

→ **Access to land:** The current security situation is still volatile and returns are unequal according to the villages and sub-districts. The proportion of farmers who will be able / willing to conduct the upcoming winter season in Tilkaif is very unclear as of now. Lastly, presence of mines or unexploded weapons will have to be checked to ensure safety of the farmers.

→ **Access to seeds and fertilizer:** The agricultural policies adopted by the Ministry of Agriculture have made the agricultural inputs seeds and fertilizers in particular, available to farmers, particularly for the strategic crops, such as wheat. As a result, farmers rely heavily on the inputs provided by the government for wheat. Farmers in Tilkaif depend from Mosul Agricultural Department to have access to those inputs; however this department is not currently functional. Some will use grain remaining from their last harvest, which represents limited productive capacity. Financial capacities of the most vulnerable farmers in particular, are limited. Interviewed farmers have made very clear that **seeds and fertilizers were their priority needs for the coming cropping season** with 92 and 96 percent of them requesting support for seeds and fertilizer as illustrated in Figure 7.

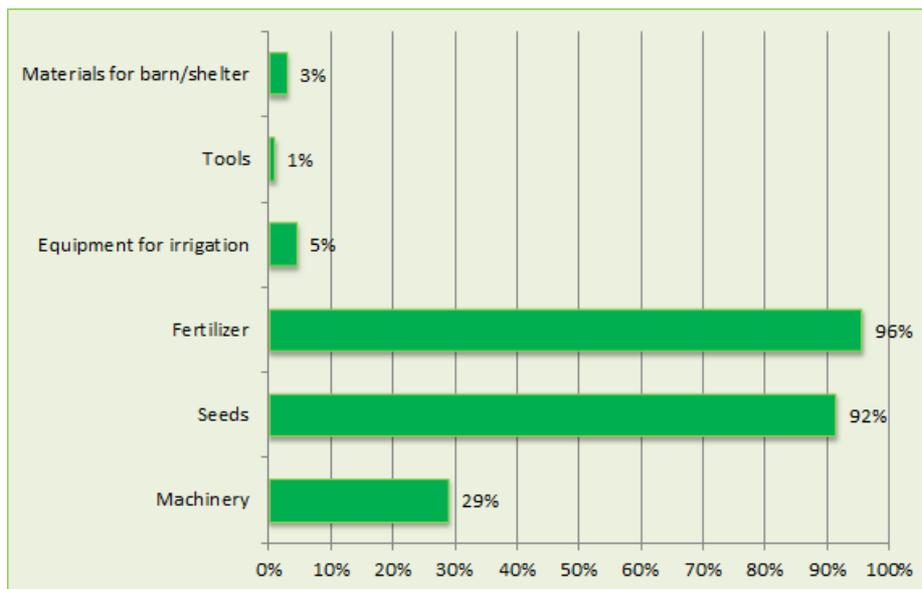


Figure 7: Support requested by farmers

⇒ *There is an urgent need to assist the small farm holders to conduct the next wheat cropping season in accessing seeds and fertilizer to protect their livelihood.*

→ **Access to fuel:** Farmers are used as well to benefit from subsidies to access to fuel for tractor. For the same reason than above, this subsidy is compromised by the current standby of the agricultural department in the area. Farmers are reporting this as a major constraint for the future season. This will have a direct impact on the farmers' production costs. The

conflict results in a sharp reduction of the availability of the fuel leading directly to an increase of the fuel price. Farmers have already faced a sharp dip in their income. **Availability and access to fuel** in Tilkaif is considered by the farmers as a **key constraint** for the coming cropping season and may have a direct impact on their ability to prepare the land.

⇒ *There is an urgent need to assist the small farm holders to conduct the next wheat cropping season in accessing fuel to protect their livelihood.*

→ **Access to market:** As seen before, farmers are facing difficulties to sell their last production as the governmental silos are not accessible. Market prices are far below and according to the farmers, are not covering the production cost. Some farmers are questioning the relevance of participating in the next farming season with no guarantee of being able to get sufficient income from their harvest.

### 3. Livestock

The survey and the methodology provided a only very general snapshot of the livestock sector and does not allow to get a deep understanding of the situation. Moreover, the households were selected for the interviews primarily on their wheat cultivation activities, thus the proportion of livestock holders in this survey is underestimated compare to the Tilkaif population. The livestock represents a less significant part of the livelihood of the surveyed families with only 20 percent of them are reporting keeping some livestock. Small ruminants are predominant in the livestock activities both in terms of number of families keeping them and number of animals as illustrated in Figures 8 and 9 below.

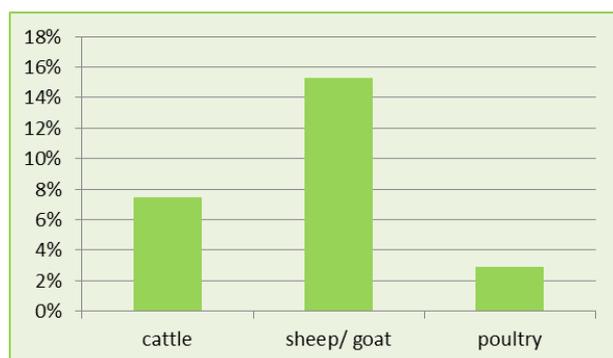


Figure 8: percentage of farmers keeping livestock

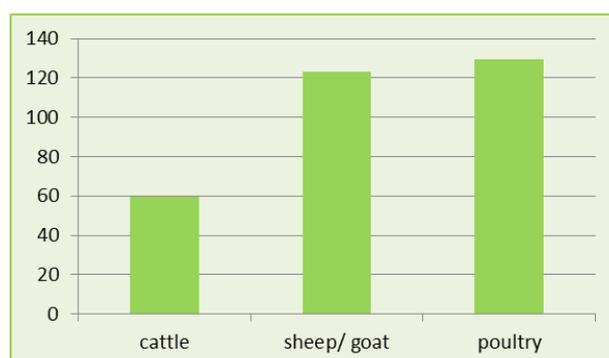


Figure 9: Average size of the Herds

Approximately 4 percent of the interviewed families representing 20 percent of the families keeping livestock have sold some animals in the last six months. **The main reported reason for selling livestock is the need of income for the families.** Only 6 percent of the families who sold livestock did it because of lack of fodder.

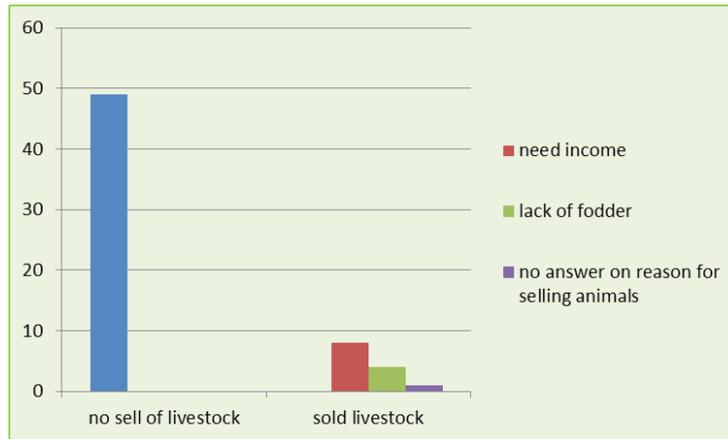


Figure 10: Sale of livestock and reasons

The main support requested by the farmers in terms of livestock is first in term of animals farmers are asking support to increase their herds for both farmers who have currently livestock and farmers who don't. Small ruminants are predominantly requested by respectively 8 percent of the all surveyed farmers and 39 percent of the farmers currently keeping livestock. 22 percent of the farmers currently keeping livestock are as well requesting support in terms of access to fodder.

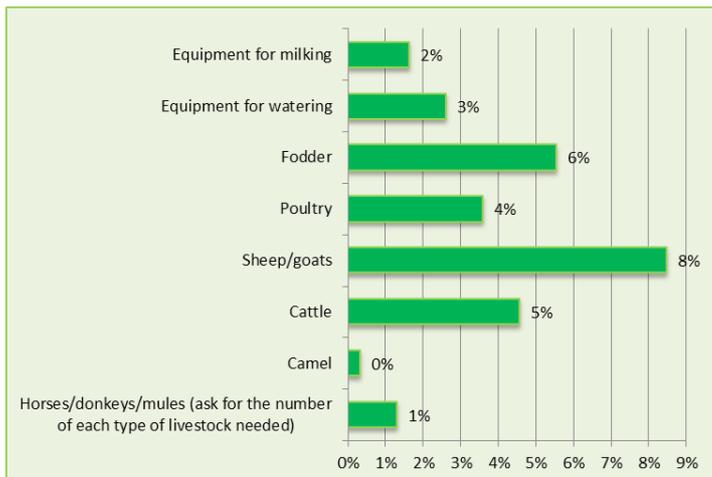


Figure 11: Type of livestock support requested by ALL surveyed families

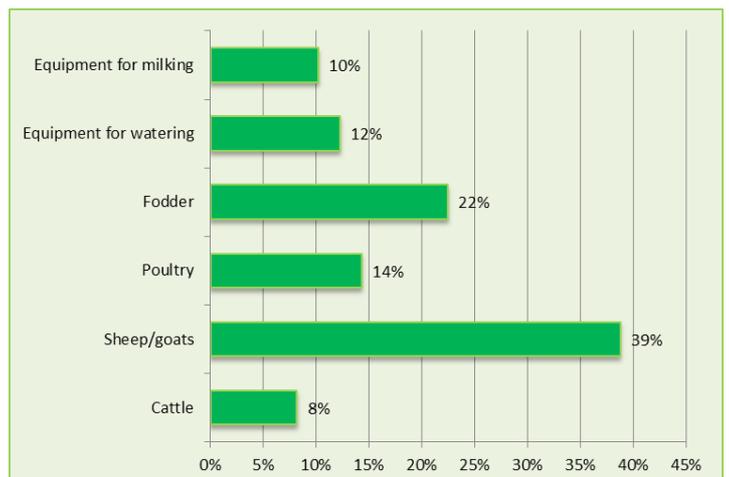


Figure 12: Type of livestock support requested by those families currently keeping livestock

Farmers are expressing fewer needs in terms of support to maintain their livestock activities compared to the activities linked to wheat production as seen before. It would be, nevertheless, crucial, to deepen the understanding around their capacity to keep their production stable and in particular the strategies they have designed for the coming winter.

## Conclusions & Recommendations

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The population of Tilkaif is largely dependent on agriculture and is one of the major contributors for the national cereal production.

The current conflict has strongly disrupted the livelihood of the farmers mainly due to the disruption of the governmental agricultural services. Government bodies have a strong control of key elements within the agricultural production chain, for cereal in particular, from supply of inputs to purchase of the harvest.

The disruption of the Agricultural services under Mosul authorities has strongly impacted the farmers living in Tilkaif with the following consequences at short term:

- **Loss of income** due to either failure to sell the harvest as silos fall under opposition group's control or no payment by the authorities for the grain delivered to the silo before the fall of Mosul.
- **Uncertainties about the market and their access to the government silo** next year: farmers have no guarantee as of now that their next harvest will be purchased by the Ministry of trade and may face again a loss of income next year if they have no other choice than selling their harvest at lower price to the private sectors. This situation does not encourage them to invest into the agricultural inputs needed for the upcoming agricultural season.
- **Incapacity to access to the necessary inputs** for the upcoming winter cropping season through the usual channel, as the agricultural department in charge of provision of subsidised inputs are not functional at the moment. In addition, the lack of financial resources faced by the families impedes them to purchase through alternative supply channels.

⇒ *There is an urgent need to assist the small farm holders to conduct the next wheat cropping season in accessing seeds, fertilizer and fuel to protect their livelihood.*

It has to be underlined that the gap of income from the last harvest has a major impact on the household economy, in particular for the most vulnerable. In case of provision of agricultural inputs, there is a high risk for the families to sell the inputs instead in order to cover their basic needs.

⇒ *It is recommended that any provision of agricultural inputs be complemented by the provision of a food protection ration, to mitigate the risk of resale.*

## Appendix A - List of Villages/ Origin of Interviewed Persons.

Villages	Number of interview
Al-Qosh	39
Ain halwa	1
Tafsrya	2
Amede	1
Amery	2
Amiri	2
Ayin hlwa	4
Beban	2
Bozan	4
Bozan	1
Dashftan	1
Dekan little	22
Doghan	22
Doghat	36
Hatara	35
Kabara	4
Kani Shirin	1

Villages	Number of interview
Karana	13
khmirsd	1
Khorazan	13
Khoshaba	9
Khunza	4
Khunza	4
krana	1
Krsaf	33
Manara	9
Mufairia	1
Nasirik	23
Nusari	3
Perozawa	1
Shaqiya	1
Shekhan	3
Shekhka	3
Sireshkan	3