



Food and Agriculture  
Organization of the  
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# IRAQ

## Agriculture damage and loss needs assessment



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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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# Overview

The agriculture sector is vital to Iraq's economy and has been the second largest contributor to the country's gross domestic product (GDP). The Islamic State of Iraq and the Levant (ISIL) has escalated armed activities in the summer of 2014 at a particularly crucial time in the agricultural calendar, leading to significant damage and loss to the sector.

Harvested wheat, barley and vegetables were lost due to population displacements, looting and the burning of grain bins. Farmers were unable to plant for the next agricultural season. According to a research conducted in March 2016, Iraq has lost 40 percent of agricultural production since ISIL began occupying some of the most important agricultural areas in 2014, with damages continuing from the current armed conflict.<sup>1</sup>

In this context, the Food and Agriculture Organization of the United Nations (FAO) has conducted an agricultural damage and loss needs assessment across six of Iraq's 18 governorates – Anbar, Babil, Diyala, Ninewa, Salah al-Din and Wassit. Between December 2016 and January 2017, the assessment collected field data through community-level focus group discussions and key informant interviews.

The need to revitalize agricultural activities and livelihoods across these areas is unquestionable – not only for the communities in these regions, but for Iraq as a whole, given the role that agriculture plays in the livelihoods of the rural population.

## GOVERNORATES ASSESSED

### Districts/Subdistricts assessed:

- **Ninewa:** Qayara, Al Qosh, Bashiqa, Hamdaniya
- **Salah al-Din:** Baiji, Shirqat, Tooz
- **Diyala:** Khanaqin, Khalis, Muqdadiya
- **Anbar:** Ramadi, Haditha, Heet, Fallujah
- **Babil:** Musayab
- **Wassit:** Sowaira



1 Reach and Big Heart, 2016, Agricultural Market Assessment-Al Shikhan



# Importance of agriculture in Iraq

Although the contribution of agriculture to the overall Iraqi GDP is below 5 percent, one-third of the country's 36 million people reside in rural areas and depend on agriculture for their livelihoods.<sup>2</sup> After the public service and trade sectors, agriculture is the third largest provider of employment in the country, and the largest source of employment for the rural population.<sup>3</sup>

Within the agriculture sector, crop production constitutes the largest subsector and provides 75 percent of agricultural income. Meanwhile,

livestock is the second largest subsector with 13.5 million heads of cattle, goats, and sheep,<sup>4</sup> and an additional 39 million heads of poultry, as of 2013.<sup>5</sup> Additionally, the latest figures show that beekeeping produced natural honey, beehives and wax that contributed IQD 53 billion (USD 45 million) towards Iraq's GDP in 2007.<sup>6</sup> Although relatively small in comparison, the fisheries subsector is as important to household livelihoods in Babil, Baghdad and Salah al-Din governorates.



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<sup>2</sup> Source: Central Organization for Statistics and Information Technology (COSIT)

<sup>3</sup> Reach and Big Heart, 2016, Agricultural Market Assessment-Al Shikhan

<sup>4</sup> Source: FAO Statistics. <http://www.fao.org/faostat/en/#data/QA>

<sup>5</sup> Source: FAO Statistics. <http://www.fao.org/faostat/en/#data/QL>

<sup>6</sup> University of Bagdad, MM Omer Hamed, 2011, The reality of beekeeping in Iraq--0

# Crop production

Overall, crop production has suffered significant damage and losses, mainly due to insufficient machinery; displacement of local populations, comprising mostly of farmers; insecurity; fields littered with unexploded ordinances; looting; destroyed silos, storage and crop processing facilities; lack of seeds and fertilizers; and the collapse of government support in providing agricultural inputs and financial dues. Areas that have been liberated or are experiencing ongoing conflict have suffered the most, with wheat and barley production losses amounting to as much as 75 to 80 percent.<sup>7</sup> Ninewa governorate, in particular, produced virtually no grains or other foods due to destroyed crops and continued problems with insecurity, theft, looting and unexploded ordinances.

Previous difficulties related to lack of seeds, fertilizers and pesticides have been intensified by the suspension of government assistance and provision of such inputs. Other difficulties in accessing inputs include import and transport regulations that prevent the usage of fertilizers that could be used to manufacture improvised explosive devices, security concerns, infrastructure damage and other transportation challenges.

## HIGHLIGHTS

- Some 75 percent of farmers relied on crop production for their income prior to the crisis.
- Fruits and vegetables have become increasingly important in the assessed districts.
- Production losses have reportedly increased for all crops.
- Access to irrigation has declined sharply for farmers compared to before the crisis; much of the existing irrigation infrastructure is in urgent need of repair.
- Severe damage to agricultural infrastructure were reported in liberated and ongoing conflict areas, including damage to food storage and crop processing infrastructure, as well as significant farm equipment losses.

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<sup>7</sup> As of the time of data collection, Heet (Anbar), Shirqat (Salah al-Din), Qayara (Ninewa), Haditha (Anbar), Bashiqa, Hamdaniya, and Al Qosh (Ninewa) were considered ongoing conflict areas while Fallujah (Anbar), Ramadi (Anbar), Muqdadiya (Diyala), and Baiji (Salah al-Din) were considered liberated areas. Additionally, Khalis and Khanaqin (Diyala), Tooz (Salah al-Din), Musayab (Babil), and Sowaira (Wassit) were considered to be crisis-affected.

# Irrigation and other agricultural infrastructures and assets

Currently, on average across all assessed areas, only 20 percent of farmers are thought to have access to irrigation, compared with 65 percent prior to the crisis. Substantial amount of irrigation infrastructure are in urgent need of repair. Ninewa governorate has been particularly affected, as ISIL looted and destroyed over 90 percent of pipes, sprinklers, water pumps and channels, and filled in some of the wells, according to key informants.

The lack of access to spare parts for generators has also been a limiting factor for irrigation through channels.

Essential machinery and tools used by farmers have either been looted or damaged during the armed conflict. Farmers' financial constraints, combined with the higher prices of equipment, prevent most from repairing or replacing their equipment and tools.



## SHORT-TERM RECOMMENDATIONS

1. Pay dues to farmers from the Public Distribution System (PDS);
2. Support cash-based interventions and improve farmers' access to credit and loans;
3. Distribute seeds, fertilizers and pesticides directly;
4. Support quick repair schemes for damaged tools, machinery, greenhouses and storage facilities;
5. Support vegetable and fruit production to meet immediate food security needs, as well as the longer term needs of the affected population;
6. Improve access to post-harvest storage, processing facilities and immediate market areas;
7. Improve access to land and clear unexploded ordinances and land mines; and
8. Repair damaged irrigation systems and provide temporary watering systems in the form of new wells and extended water transportation pipes



# Livestock

Livestock production has been an important pillar of Iraq's agriculture sector, representing one-third of the total value of agricultural production. Cattle, goats and sheep are the main livestock in Iraq, supplying meat, wool, milk and skins. Animal husbandry was an important source of income and food for female-headed households in the assessed governorates.

A significant number of livestock were lost, dead or injured due to the conflict. On average, as much as three-quarters of cattle, sheep, goats and buffalo were lost, although in some areas this figure reached as high as 85 to 95 percent. Poultry losses were significant in all areas; in some cases, flock sizes numbering in the hundreds fell to virtually zero.

Reduced herd sizes were most frequently attributed to security-related problems such as livestock being stolen or killed. Other reasons included the lack of and/or high prices of animal feed, inability to access pasture due to occupation or explosive contamination and government suspension of veterinary programmes (e.g. medicines, vaccines, etc.). As a coping mechanism, farmers are selling their livestock to obtain cash.

According to farmers, rebuilding herds will require improved security, temporary shelters, replanting of pastures and clearance of unexploded ordinance. In addition, feed, fodder and government emergency veterinary services are needed, as well as the support to improve the sector's economic viability.

## HIGHLIGHTS

- Livestock represented one-third of the total value of agricultural production in Iraq prior to the crisis
- Animal husbandry was an important source of income and food for female-headed households in targeted governorates.
- Significant numbers of livestock were lost, found dead or injured. For cattle, sheep, goats and buffalo, as much as three-quarters were lost on average.
- Poultry suffered the most, with losses estimated at 85 percent. In some cases, flock sizes that numbered in the hundreds fell to virtually zero.
- The provision of medicine, vaccines and other veterinary services previously available from the Government is now limited due to insecurity and the financial crisis.





## SHORT-TERM RECOMMENDATIONS

1. Improve security and clear pastures of unexploded ordinances;
2. Support pasture replanting;
3. Help restock small ruminants, including sheep, goats and poultry;
4. Provide direct in-kind distribution support of feed and fodder;
5. Support temporary shelters with tarpaulins;
6. Resume emergency veterinary services and access to markets;
7. Rehabilitate and equip laboratories; and
8. Rehabilitate and establish livestock water points, and improve pastures and cross-breeding.









# Fisheries and aquaculture

The fisheries and aquaculture sector represents the smallest agricultural subsector in Iraq, yet it is still vital to household livelihoods in certain parts, particularly in Babil governorate where the largest number of fish farms are located. Since 2014, engagement in fisheries and aquaculture has fallen by 50 to 75 percent. Ongoing conflict areas have been hit the hardest. In some areas, about 20 percent of men were engaged in the sector, compared with only 2 to 6 percent now.

Reasons for production losses were attributed to the high cost of fish feed and insufficient access to boats, fuel, gear and equipment, and the lack of shops to purchase inputs such as lime, feed, seed and fingerlings. Selling production is also challenging, given low demand, low prices offered for fish and a lack of storage and processing facilities.

After fingerlings, medicine, gear and the rehabilitation of ponds were reported as the most urgent needs. Furthermore, farmers need better fish breeds to increase profitability, as well as improved access to credit and loans, markets, marketing support and processing facilities.

## HIGHLIGHTS

- A decline in engagement in fisheries and aquaculture, particularly in ongoing conflict zones.
- Production losses were attributed to the high cost of fish feed and insufficient access to boats, fuel, gear, equipment and shops to purchase inputs such as lime, feed, seed and fingerlings.
- Selling production is challenging, with low demand and low prices as well as a lack of storage and processing facilities.



## SHORT-TERM RECOMMENDATIONS

1. Provide direct support and cash-for-work to rehabilitate existing ponds and hatcheries;
2. Provide fingerlings, fish feed and medicines
3. Support quick repairs of fishing equipment and gear; and
4. Support market and processing facilities

# Markets and supply chains

Before the crisis, most inputs were imported and publicly distributed by the Ministry of Agriculture's State Company for Agricultural Supplies (SCAS) through the SCAS governorate branch to district-level local agents and then to farmers. Some imported inputs were also privately distributed through wholesalers and retailers, and a smaller share was produced domestically and distributed through either public or private chains. Accordingly, important formal arrangements included government support through the subsidization of agricultural inputs, relaxed taxation on imports and a system to ensure input quality control.

Due to severe disruptions to the SCAS system in liberated and ongoing conflict areas, some places have not received government inputs in more than two years. The SCAS system is no longer viable and, as such, the system now relies mainly on importers and distributors dealing directly with private wholesalers. Other challenges include the lack of quality control mechanisms and restrictions on the importing and transporting of fertilizers and pesticides because of their potential use for explosive devices. Physical structures, such as shops, markets, roads and transport storage facilities, have also suffered significant damage. Access to local functional markets for agricultural inputs is restricted in most areas and non-existent in Al-Qayara, Bashiqa, Al-Qosh, Hamdaniya and Baquba.

## HIGHLIGHTS

- Disruptions to the SCAS system have been minimal in crisis-affected areas, but more severe in liberated and ongoing conflict areas, where some places have not received government inputs for more than two years.
- Access to local functional markets for agricultural inputs is restricted in most areas and non-existent in Al-Qayara, Bashiqa, Al-Qosh, Hamdaniya and Baquba.
- There is a lack of quality control mechanisms and restrictions on importing and transporting fertilizers and pesticides because of their potential use in explosive devices.
- Physical structures such as shops, markets, roads and transport storage facilities suffered significant damages.





## SHORT-TERM RECOMMENDATIONS

1. Support the public distribution of agricultural inputs through the SCAS system;
2. Rebuild physical structures such as markets, feeder roads and storage facilities (including cold storage) and ensure functional transport services;
3. Support better quality control mechanisms of inputs and unlicensed input traders; and
4. Improve the agriculture sector's overall economic viability.



# Impact of the crisis on rural livelihoods

## HIGHLIGHTS

- 87 percent of the households in assessed communities were engaged in agricultural and related activities prior to the crisis.
- In liberated and ongoing conflict areas, farmers left most of their possessions behind as they fled to safety.
- People's assets, job opportunities and local businesses have all been severely damaged.
- The increase of food insecurity has led to negative coping mechanisms, including indebtedness and switching to less expensive foods and fewer meals a day.
- A structured approach to meet immediate as well as longer-term needs is required.

The Iraqi population remains extremely vulnerable, especially in liberated and ongoing conflict areas where they continue to face severe security and financial challenges. Prior to the crisis, the majority (87 percent) of the households in the assessed communities were engaged in agriculture and related activities. In liberated and ongoing conflict areas, farmers had fled in fear of their safety, leaving most of their possessions behind. People's assets, job opportunities and local businesses have all been adversely impacted.

While wage labour in agriculture and the selling of agricultural goods were the most common forms of employment, more than half the workforce is now unemployed. Before the crisis, an average farm employed around 14 workers. However, farmers can no longer afford this and are currently relying on family members to carry out most activities. In most cases, inactive farmers, eager to generate much-needed income, are now taking jobs in construction or transportation, or working for the municipality.

Farmers in liberated areas who have now returned revealed that most, if not all, crops, livestock and agricultural machinery and tools left behind were lost. Consequently, farmers' incomes from current activities have been drastically reduced, exacerbated by payment delays from the Government to farmers for crops purchased over the last three years.

Food insecurity has become more widespread. According to the focus group discussions across all assessed areas, people are not only relying on less expensive and less nutritious food but are also reducing their number of daily meals. Most also reported that they have borrowed money to provide for their families.





## SHORT-TERM RECOMMENDATIONS

1. Provide multi-purpose cash assistance to the most vulnerable people;
2. Support cash-for-work schemes to rebuild community agricultural infrastructure and remove debris;
3. Develop programmes that improve the dietary diversity of local households;
4. Advocate for the payment of dues to farmers through PDS;
5. Support the clearance of unexploded ordinances; and
6. Improve access to grants, affordable loans and market measures in support of rebuilding small local businesses.



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