ONLINE REPORT

ICRC

ICRC SOUTH SUDAN

MAIN FINDINGS: POST-HARVEST MONITORING OF THE 2020 SEEDS AND TOOLS PROGRAM

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ICRC SEEDS AND TOOLS PROGRAM 2020

In 2020, the International Committee of the Red Cross (ICRC) supported 63,333 households (approx. 380,000 people) in South Sudan, reliant on agriculture through its "Seeds and Tools Program", with the aim of enhancing their livelihood recovery and improving their food production and food security. The initiative targeted those with one or more of the following characteristics: farming communities in remote, hard-to-reach areas; those affected by the combined effects of conflict, armed violence and natural shocks; and those who were not assisted by other humanitarian actors.

Geographically, the program covered pre-selected priority areas in nine out of 10[1] states in South Sudan. The beneficiaries received combined cereal and vegetable seeds as well as tool kits during the main planting season (March-May), with the exception of a smaller group in Central Equatoria that was assisted in August during their 'second planting season'. Each household received a standard seed and tool kit, which was composed of: 5kg of maize, 5kg of sorghum, vegetable seeds (50g of okra, 20g Jews mallow - *khudra*, and 20g pumpkin) and a selection of tools (spade - *maloda*, rake, sickle, machete and hoe). In addition, selected communities facing an assessed urgent need during the lean season also benefited from one-off food distribution.

1. METHODOLOGY AND SCOPE OF THE SURVEY

The post-harvest monitoring exercise (PHM) was conducted within an eight-week period spanning from mid-October to mid-December 2020. The survey was carried out through individual interviews with 636 households and 55 focus-group discussions[2] in 90 communities that had received the seeds and tools from the ICRC across nine states.

IDPs and returnees represented 18% of the respondents. Within the overall target group, women comprised 64% of respondents, confirming the importance of their contribution to food production

1. Only Northern Bahr El Ghazal was not targeted.
2. Each focus group discussion involved 9-15 people (most group had more women than men)—with the necessary COVID-19 preventive measures put in place.

and livelihoods security. A two-stage cluster sampling approach was applied in all the areas assisted by the program to achieve country level validity at a 95% confidence level with a 5% margin of error. The survey was carried out with the use of a digital data collection tool (*Device Magic*), with the involvement of trained community-based South Sudan Red Cross (SSRC) volunteers in all targeted areas. Where present, government extension officers participated as well.

The program targeted communities that are locally considered as the most vulnerable, such as those in remote, hard-to-reach areas with no or very limited access to functional agro-input markets, as well as those that had previously suffered from the loss of productive and other essential assets due to conflict, armed violence and flooding. Therefore, even though the PHM findings can be considered indicative based on the survey's geographical scope, these cannot serve as a general reference on the 2020 harvest at the country level as a whole.

2. MAIN OBJECTIVES OF THE SURVEY

- To assess the immediate outcomes of the program concerning harvest quantity
- To obtain feedback from the affected communities regarding the main challenges faced during the pre- and post-harvest period
- To assess food security prospects for the upcoming lean season in early 2021
- To make recommendations for future action in farming communities for the ICRC

3. MAIN FINDINGS

One of the main findings indicate an average cereal yield decline of 49% when compared to the 2019 harvest. The respondents reported that almost 30% of the yield losses were due to the severe flooding and/or excessive rains during the maturing stages of the crops, whilst 13% reported major losses due to increased presence of pests (attributing it to higher humidity due to heavy rains).

The findings reveal that the cereal harvest was at the level locally considered as "normal", or even beyond, in the areas where farmers could benefit from stable and safe conditions with no floods, especially in parts of Western, Eastern and Central Equatoria, Upper Nile, Jonglei and Western Bahr El Ghazal states. A positive correlation was observed between better yields and the adoption of good agricultural practices promoted by the ICRC (e.g. in-line planting).

On the other hand, very poor or 'zero' yields were witnessed in the areas that were affected by severe flooding (e.g. larger parts of Unity and Lakes), armed violence combined with heavy rains (e.g. four payams of Tonj North, Warrap; two payams of Greater Pibor Administrative Area and one payam of Cueibet, Lakes) and localized conflict (e.g. Lobonok, Central Equatoria). There were instances, such as in parts of Jonglei, where some of the targeted communities experienced complete harvest losses due to flooding, while the communities at a distance of only few kilometers away reported above-average yields.

In Central, Eastern and Western Equatorias and Western Bahr el Ghazal, the yield decline when compared to 2019 was mostly attributed to excessive rainfall. This is unlike other states (Lakes, Unity, Jonglei and Upper Nile) where continuous flooding conditions for long durations (12-32 weeks) caused total harvest loss and even displacement of affected communities and their livestock.

ACCESS TO LAND AND SEEDS

A general increase was observed in the land allocations for cereal seeds provided by ICRC. Notably, 57% of the respondents reported that they either maintained or increased the amount of land they allocated for cereals (sorghum and maize) compared to the previous season.

HARVEST YIELD AND SELF-SUFFICIENCY

Overall, the average gross cereal harvest was 306kg per household. Only 30% of respondents reported that they had obtained yields above 306kg. Therefore, the 2020 harvest falls short of meeting the 750kg cereal yield requirement per six-member household, which are the minimum to maintain self-sufficiency until the next harvest[3]. After post-harvest losses and in-season consumption, the net remaining average harvest for the lean season was 156kg per household. The amount is only enough to satisfy food needs of a six-member household for an average of 2.5 months.

Seventy-one per cent (71%) of respondents from Lakes State (four *payams*) and Unity State (ten *payams*) reported yields less than 306kg. On the other hand, in areas generally less affected by floods and heavy rains, 53% of respondents from Central, Eastern and Western Equatorias and Western Bahr El Ghazal reported yields slightly above 306kg per household. Upper Nile and Jonglei had mixed results. Although they experienced some of the worst reported yields, some communities witnessed significant success with the yields beyond the self-sufficiency threshold of 750kg. Of the respondents that reported high yields, over half were from *bomas* in Upper Nile (Abwong, Nyongkuach and Tonga) and Jonglei (Pading, Thor, Phom and Boma). These areas experienced stable security conditions with no floods or heavy rains affecting their harvest.

HARVEST AND STORAGE LOSSES

Ninety-four per cent (94%) of the respondents reported that they had lost on average 88kg of grain per household due to poor harvest handling (47kg) and storage (41kg). The main causes of the harvest losses were rain related, followed by spillages (poor handling during harvest) and birds (especially sorghum), storage pest infestation, and rodents. Excessive rains and flooding during harvesting caused a lot of grain rotting due to poor drying conditions and improper storage.

MAIN CHALLENGES FACED BY FARMERS

The most frequently identified challenges were the yield losses due to adverse climatic conditions (floods/heavy rainfall), followed by birds, crop pests and diseases. In some cases, the flooding prevented the harvesting of mature crops or washed away young crops that had been planted later in the season. Communities most affected by flooding were not able to harvest cereals for drying and storage facilities were compromised by damp conditions. In some cases, beneficiaries were displaced entirely. Challenges concerning insecurity also added to the already existing problems, primarily in Warrap state. In addition to adverse climate conditions, it was also reported that the influx of IDPs due to conflict or armed violence increased the burden on the host farming communities (e.g. parts of the Equatorias, Jonglei and Warrap).

4. MAIN CONCLUSIONS

- The survey findings indicate a **49% decline in cereal yields as compared to those in 2019**. As a result, **tens of thousands of households in the targeted rural areas are at a high risk of food insecurity during the lean season**.
- Despite the overall good harvest of 2019, the 2020 floods have shown how **fragile the recovery and resilience-building processes are in rural communities**.
- A stable security environment remains paramount for preventing further deterioration of the situation and ensuring the continuum of the necessary structural support for these vulnerable communities.

3. This figure is based on the minimum monthly nutritional requirements of a six-member household regarding cereals. On the other hand, a quantity of 1,000kg of cereal over a 12-month period is commonly considered by the farming household itself as "adequate".

5. MAIN RECOMMENDATIONS

- Prioritize the communities whose crops were most affected for possible support for the next agricultural season – within the 'priority areas approach' of the ICRC in South Sudan
- Analyze and build on the best practices among the targeted farmers who achieved good yields
- Include sensitization on adapting the planting calendar based on the observed weather patterns
- Explore options for helping communities become more resilient to adverse climatic conditions
- Continue to build farmers' capacities in adoption of good agro practices in land preparation, planting, pest control, crop management, harvesting and storage

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