



myAGRO

# 2022 IMPACT REPORT

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## GLOSSARY OF TERMS

**Connect:** myAgro's mobile layaway application used by Village Entrepreneurs to enroll and collect payments from farmers.

**Core Season:** Refers to packages (see package below) delivered in May and June. The inputs in these packages are planted during the "core" rainy season in West Africa in late June/early July and harvested in September and October.

**Crops:** myAgro sells the following crops.

- **Mali:** Gombo (Okra), Maize, Peanut, Rice, Sorghum
- **Senegal:** Bissap (Hibiscus), Gombo (Okra), Maize, Millet, Peanut, Rice, Watermelon

**Finishers:** Farmers who have enrolled in a myAgro package and "finished" paying for their package. myAgro only delivers packages to farmers who are finishers.

**Package:** myAgro sells packages to farmers that consist of inputs (seeds, fertilizer, chicks, tree seedlings), agricultural training, and delivery within 8-10 km of their village. For the packages of seeds and fertilizer, farmers select the crop they want to purchase based on the hectare size they want to plant. Poultry packages include 5 chicks and agroforestry packages include 10 tree seedlings.

**VE:** Village Entrepreneurs - VEs are myAgro's sales ambassadors within villages. They are trained on the myAgro model, and use our custom-designed Connect mobile app to help farmers enroll and make payments.

**Year Round (Off Season) Sales:** These terms are used interchangeably to refer to packages that are sold outside of the rainy season because they are less reliant on rain. Our poultry package is our main year round sales package though we can also offer tree seedlings at different times of year, too.

## SETTING THE GLOBAL CONTEXT

*In 2022, global economic and political volatility generated immense shifts that impacted West African farmers at the local level. While food insecurity has been a longstanding challenge in the region, the lingering effects of COVID-19, mounting pressures of climate change, and the war in Ukraine have spurred the worst food security crisis that the region has seen in a decade. 48 million people in West and Central Africa now face acute food insecurity, with women being disproportionately impacted.<sup>1</sup>*

In particular, the ongoing war between Russia and Ukraine has caused significant disruptions in global energy, fertilizer, and food supply chains that have directly impacted both Mali and Senegal, where we work – threatening agricultural productivity and food affordability.<sup>2</sup> Fertilizer prices increased dramatically, steepening the curve of global inflation built up from previous years: by the

second quarter of 2022, prices had more than doubled from the previous year. Meanwhile, global real commodity prices for staple crops have also increased – wheat prices, for instance, doubled.<sup>3</sup>

In Mali, these supply issues have come on top of a year of political turmoil, which included a period of economic sanctions between January and July 2022, imposed by the Economic Community of West African States (ECOWAS). These sanctions had varying impacts. For instance, Mali imports much of its food; even though consumer food was exempt from ECOWAS sanctions, market prices still rose as a result. Additionally, many of Mali's rural border populations make their livelihood via transnational movement for work and trade;

## SETTING THE GLOBAL CONTEXT

because of the ECOWAS sanctions, these populations struggled with a loss of income.

As a result of these global and regional shifts, farmers in Mali and Senegal were confronted with a significant rise in living costs and myAgro input costs (including fertilizers and seeds). The price of a myAgro package in 2022 increased on average by 65% from the year before for the four main crops we offer. This rise in cost was particularly steep in Mali, where package prices increased by 93% compared to Senegal, where package prices increased by 37%.

Despite the challenges of 2022, myAgro maintained its previous growth, reaching 100,000 farmers. In the midst of crisis

conditions, we pivoted to prioritize food security over field sustainability in two main ways. First, we separated vegetables from some of our grain packages (which were previously bundled) to make them smaller and more affordable, with the hope that more farmers could purchase a package and bolster their food security. Second, we launched year-round sales to provide farmers with packages of poultry, tomatoes, and moringa trees (agroforestry), which enabled farmers to diversify their products and earn income throughout the year, even during the dry season.

Non-myAgro farmers (“control farmers”) in Mali and Senegal were confronted with these same challenges, experiencing a higher cost of living and a dramatic

increase in seed and fertilizer costs. The situation significantly affected the strategies adopted by control farmers. For example, we found that they applied 48% less fertilizer per hectare in 2022, leading to much less favorable growing conditions for crops. Farmers that bought packages with myAgro were assured an optimal quantity of fertilizer, despite price spikes, and thus achieved favorable conditions that contributed to higher yields.

Across the board, increases in food prices (which averaged 39%) benefited both myAgro and control farmers, since both groups sold their harvest at higher prices. But because they produced more food than control farmers, myAgro farmers achieved higher profits than their peers.

## 2022 OVERALL IMPACT

Although 2022's global crises impacted farmers at the local level, myAgro farmers were better positioned than their non-myAgro peers to take advantage of a long and wet rainy season. myAgro met its adjusted 2022 target by serving 100,000 farmers, including farmers served through new year-round product offerings. By introducing off-season products like poultry, we have built a pathway to double customer density in the short term and increase farmers' food security and income throughout the year. In alignment with previous years, our annual impact evaluation this year measured yield and income only among the nearly 88,000 farmers in Senegal and Mali who received our core season products (grains and vegetables) delivered in June 2022.



*“Since joining myAgro I have witnessed significant changes in my life. Now, I can provide for [my children], myself, and make sure their school fees are paid on time. I can buy them school supplies and give them pocket money.”*

**AMI THOUNE**

myAgro Farmer in Senegal



A man wearing a green polo shirt and a green cap with a logo is crouching in a field. He is holding several stalks of grain, possibly sorghum, in his hands. The background shows more of the field with tall grasses and some purple flowers. The overall scene is outdoors and appears to be a farm or agricultural setting.

## 2022 OVERALL IMPACT

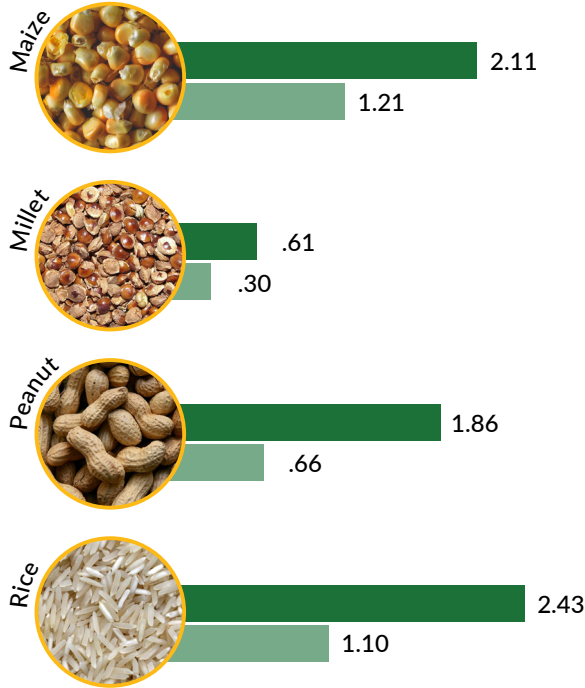
### **myAgro Farmers Grew 2.5X More Food Than Control Farmers**

Overall, myAgro's intervention resulted in a 156% increase in food production, which was slightly lower than 2021's overall yield increase of 176% (147% in Mali and 221% in Senegal). This yield is still 2.5 times the yield of control farmers. In Mali, we measured 157% higher yields compared to control farmers; in Senegal, we saw 155% higher yields. We attribute this increase in yield to the high quality of myAgro seeds and fertilizer, timely in-person agricultural training, and technical support and follow-up from our Call Center Agents. In contrast, control farmers did not have this support and used 48% less fertilizer on average.



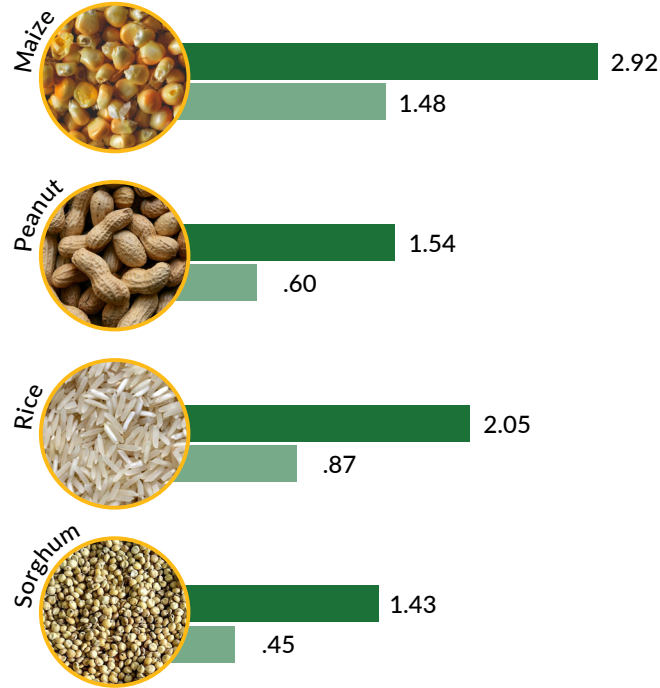
## Mali

Average yield (metric tonnes/hectare)



## Senegal

Average yield (metric tonnes/hectare)



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The total volume of food produced by myAgro farmers in 2022 was 41,693 metric tons, which was lower than the volume in 2021 of 64,432 metric tons. This decrease occurred in large part because myAgro unbundled vegetables from packages resulting in smaller-sized packages to enable more farmers to purchase a package and improve their food security, even amid economic pressures.

 myAgro Farmers  
 Control Farmers

## 2022 OVERALL IMPACT



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Khady, myAgro peanut farmer in Senegal

**myAgro served 54% women farmers across all countries in 2022.**

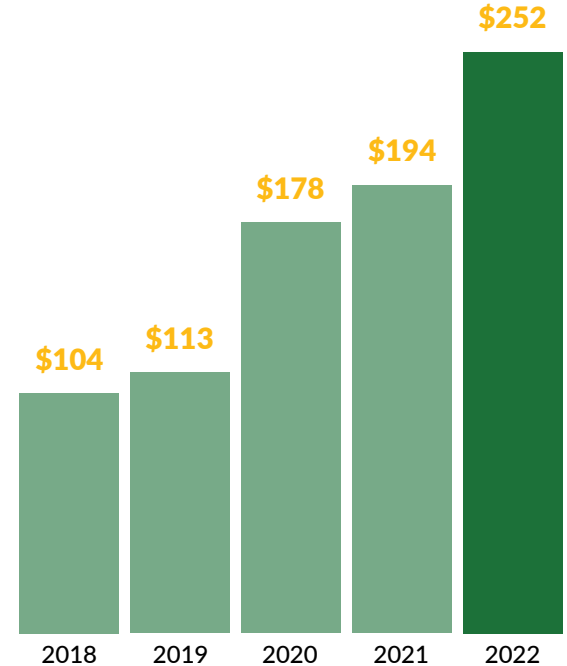
54% Female Farmers



## 2022 OVERALL IMPACT

### myAgro Farmers Earned on Average \$252 More Than Control Farmers: a 30% Increase YoY from 2021 to 2022

The total impact per farmer, measured in US dollars, was \$252, up from \$194 in 2021. However, there is a difference measured between Mali and Senegal, with \$121 per farmer in Mali and \$395 in Senegal. The total additional income (or impact) generated by myAgro farmers in Mali and Senegal from core season packages was \$22,041,066.



Impact per Farmer (\$); Mali and Senegal between 2018 and 2022

## 2022 OVERALL IMPACT

### 2022: A Year of Investment for Scale

*Investing in our people, systems, and products is critical to myAgro's ability to scale. Social Return on Investment (SROI) is the amount of impact generated for each dollar invested.<sup>4</sup> myAgro's SROI at the end of our core season delivery (in June 2022) was \$1.12. Because of the investments made in people and systems later in 2022 to ramp up for the 2023 season and to serve nearly 400,000 farmers by 2024, our January - December 2022 SROI decreased to \$0.86.<sup>5</sup>*

These investments for scale included the formation of a strong senior and middle management team and hiring to reach capacity in key departments (finance, human resources, technology, and innovation). We also redesigned our app, myAgro Connect, to improve user experience and allow for faster transactions. And we introduced new internal systems for technology (Freshdesk), accounting (Sage Intacct), payroll (Payspace), development (Blackbaud), and our call center (Kiamo). These systems enable us to reach more farmers by increasing the efficiency of programs and operations, lowering cost per farmer.



## 2022 COUNTRY-SPECIFIC IMPACT

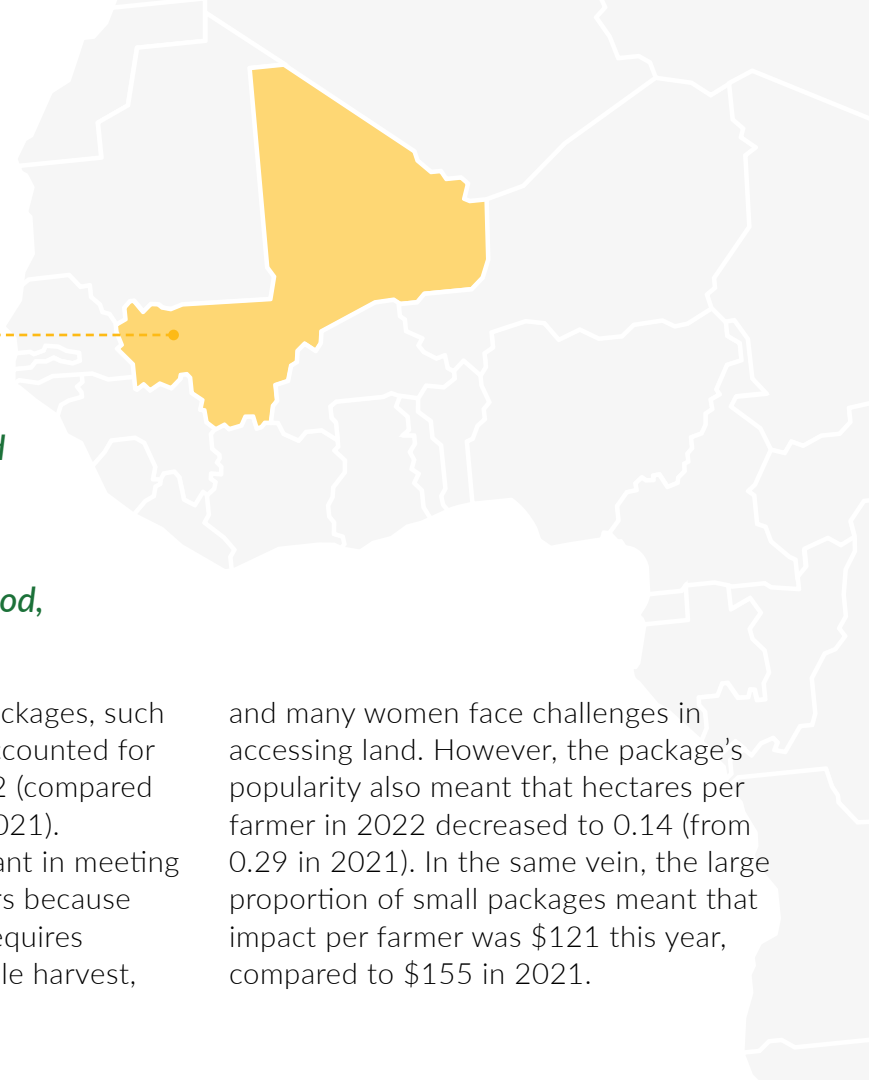
### Mali

*Our longest-standing program, founded in 2012, operates in Mali. This year, myAgro delivered its core program of seeds, fertilizer, and agricultural training to 46,000 Malian farmers, of whom 70% were women. Our farmers grew more than 6,300 hectares of peanuts, sorghum, maize, rice, and okra, producing 14,939 metric tons of food, which was less than 2021.*

Based on the context we shared on page 1, we served 35% fewer farmers in 2022 than in 2021. This was likely due, in part, to the high proportion of women clients that myAgro serves in Mali. Women's purchasing power is more quickly affected by increases in living costs than men's. myAgro responded by promoting more

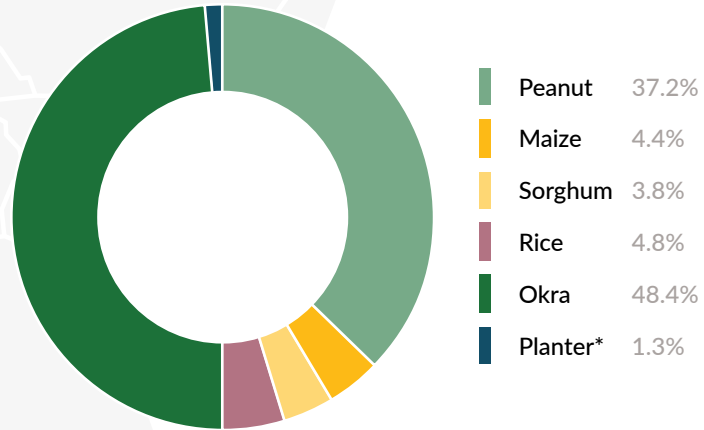
affordable and nutritious packages, such as okra. As a result, okra accounted for 45% of all packages in 2022 (compared to just 9% of packages in 2021). Promoting okra was important in meeting the needs of women farmers because it is a nutritious crop that requires little land to grow a profitable harvest,

and many women face challenges in accessing land. However, the package's popularity also meant that hectares per farmer in 2022 decreased to 0.14 (from 0.29 in 2021). In the same vein, the large proportion of small packages meant that impact per farmer was \$121 this year, compared to \$155 in 2021.



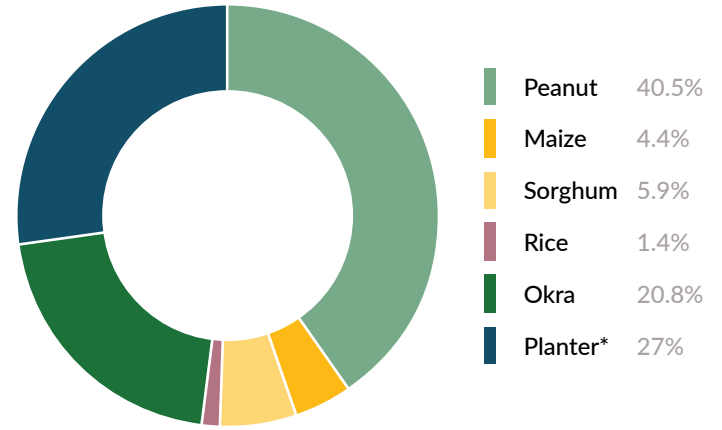
## FARMERS DELIVERED BY CROP TYPE

(Mali 2022)



## TOTAL IMPACT BY CROP TYPE

(Mali 2022)



\* The planter is a farming tool used to support planting that Malian farmers can purchase from myAgro.

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*“Last year I planted a 1/4 hectare. This year I only planted 1/8 hectare and still tripled my harvest, which for me is a great achievement. Even my neighbors ... did not have the same harvest as me, which makes me proud to be a myAgro farmer.”*

**MARIAM SIDIBE**

myAgro Farmer from  
Banankélé, Mali



## 2022 COUNTRY-SPECIFIC IMPACT

### Senegal

*Although farmers in Senegal faced similar increases in prices for food and inputs, the situation did not result in a reduced number of farmers served. In 2022, that number increased by 4%; myAgro delivered seeds and fertilizer to 42,000 farmers, 31% of whom were women. myAgro farmers in Senegal planted 12,675 hectares of peanuts, millet, maize, rice, and okra, producing in total 26,754 metric tons of food, which was very similar to 2021.*

As opposed to Mali, where the average package size decreased, in Senegal the average package size increased by 9% – from 0.28 hectares in 2021 to 0.30 hectares in 2022. The impact per farmer also grew significantly, from \$254 to \$395. As mentioned above, control farmers reduced the use of fertilizers by half as they struggled

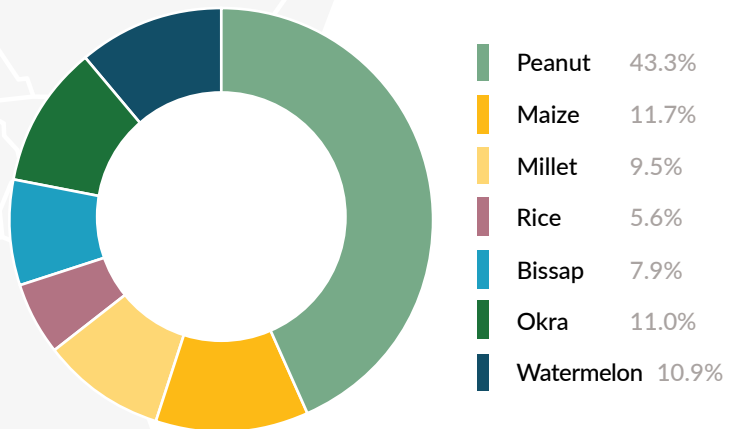
to confront increased prices. In contrast, myAgro farmers bought a package that optimized the ratio of seeds and fertilizer for their fields. Because the resulting higher yields produced more food, myAgro farmers enjoyed greater benefits resulting from the increase in market price. Since peanut farmers make up 43% of all myAgro farmers

in Senegal, their outcomes significantly influence calculation of average impact per farmer. And as the impact per hectare of peanuts increased from \$1.73 to \$2.30, their contribution to the overall impact was even more significant – and that during a year when peanut yield in Senegal was not as high as had been predicted.



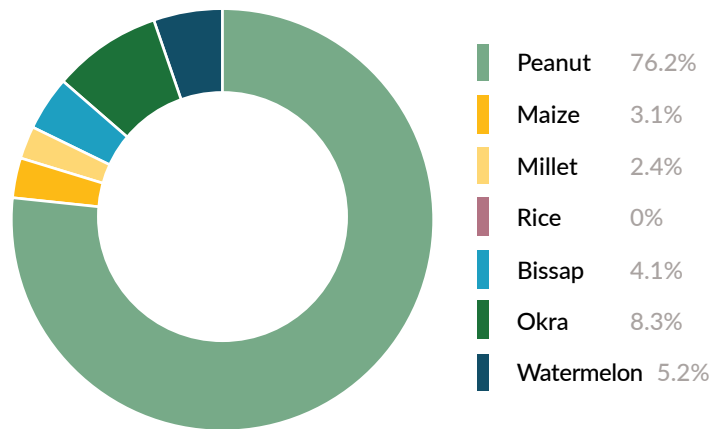
## FARMERS DELIVERED BY CROP TYPE

(Senegal 2022)



## TOTAL IMPACT BY CROP TYPE

(Senegal 2022)



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*“I used to plant 3-4 hectares and get very little yield in return. From a quarter of a hectare with myAgro, I cultivated enough to save money, take care of my family’s needs for food, my children’s school materials, and hospital bills. If the farming keeps going like this, whatever I do in the future is going to be supported by my agricultural practice.”*

**FAMA GUEYE**

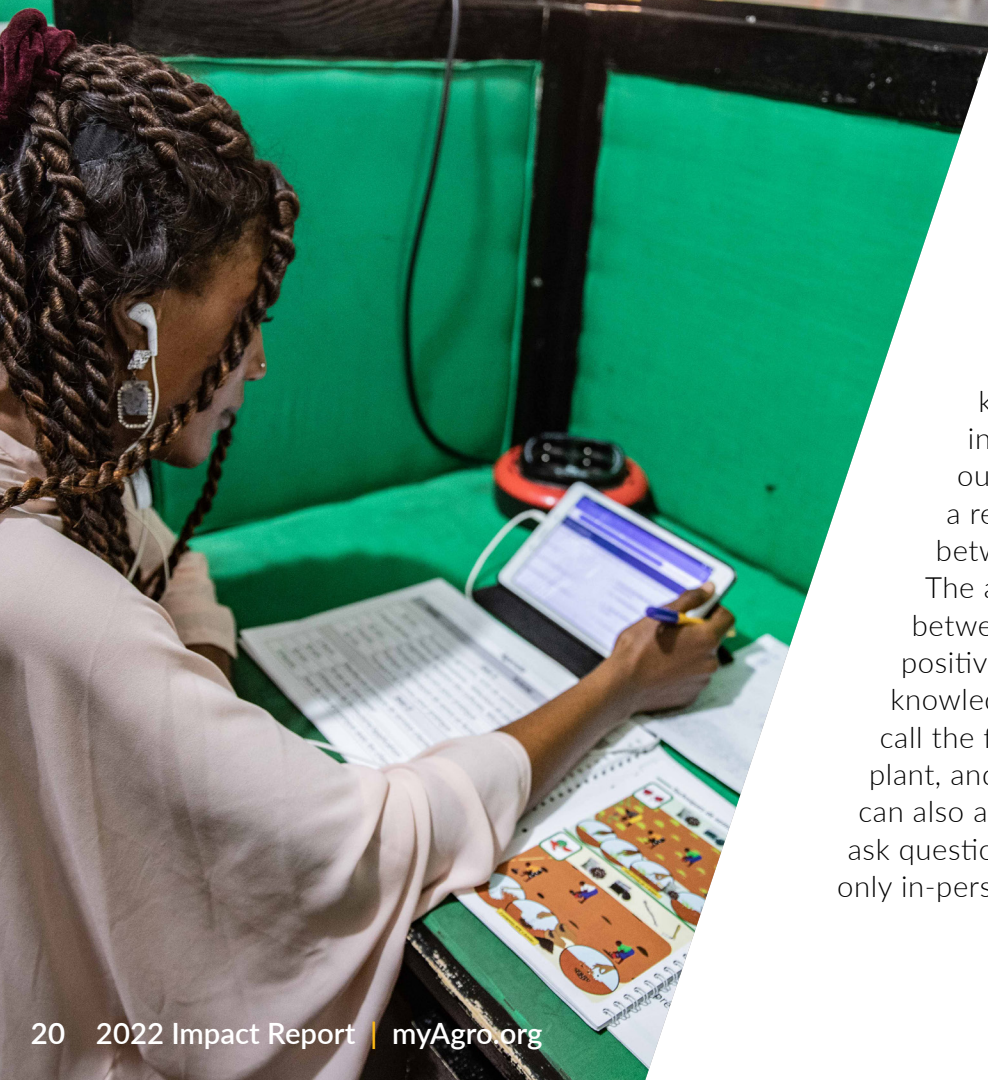
myAgro Farmer from  
Kanel, Senegal





## Climate Change and Unpredictable Rains

In 2022, farmers experienced long and heavy rains in Senegal and Mali; while this may seem like a positive trend, unpredictable and variable rainfall actually poses a challenge for cultivation of certain crops. For instance, millet requires a lot of light for optimal plant growth but frequent daytime rainfall in Senegal during the 2022 growing season meant that cloud cover limited the crop's photoperiod and caused poor plant development. Additionally, intense rains during the flowering period caused the millet pollen to wash away, preventing grain formation. Meanwhile in Mali, sorghum yields were lower than in 2021 due to a variety of factors including heavy rainfall. These provide clear examples of the adverse impacts of climate change that include not only decreased rainfall, but also less predictable rain patterns. myAgro's existing core model prepares farmers to be resilient in the face of climate challenges such as this. All farmers who work with myAgro receive treated seeds that are resilient to weather and pests; the correct type and right amount of fertilizer to optimize their yield; and agricultural training on like microdosing fertilizer, organic composting, intercropping, and crop rotation that strengthen the climate resilience of their farms. With the introduction of poultry and moringa tree packages in 2022, farmers also have a way to diversify their income, being less reliant on the rainy season, therefore being more resilient to climate change.



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Khadija Seck, myAgro call center agent

## **New Developments in Agriculture Training**

In previous years, myAgro agriculture training has included an in-person visit to farmers at the time of planting as a knowledge booster. In 2022, half the farmers received an in-person visit, and the other half received a phone call from our Call Center Agents. In our harvest evaluation, we included a research question exploring the difference in effectiveness between these two strategies (in person versus mobile support). The analysis showed no significant difference in farmer yields between the two groups. The conclusion may be interpreted positively, as Call Centers are just as effective in transferring knowledge. Call Centers have an added benefit in that Agents can call the farmer when the farmer should be planting to remind them to plant, and provide them with agricultural training reminders. Farmers can also access the Call Center in the midst of planting or cultivation to ask questions in real-time, which would otherwise be impossible using only in-person visits.

## IMPACT BEYOND INCOME

*While we calculate and express the impact per farmer in terms of additional US dollars earned, because our mission is to move smallholder farmers out of poverty. However, we also want to understand how our impact matters to farmers' households. Amongst other ways of measuring impact, myAgro began focusing in 2019 on food security and nutrition – key motivators behind our strategies to promote crop diversification and inclusion of fruits and vegetables in our grain packages.*

In order to measure impact on household food security, myAgro has piloted the use of what we refer to as a Nutrition Survey, with a sample of 500 households including myAgro farmers and control farmers. The survey measures household scores for three indices, one of which is the reduced Coping Strategy Index (rCSI). The rCSI is an indicator of a household's

food security, and assesses the extent to which households must resort to particular coping strategies when they do not have enough food or enough money to buy food. It focuses specifically on five coping strategies:

1. Relying on less preferred or less expensive foods;
2. Borrowing food or relying on help

from a friend or relative;

3. Limiting portion sizes at mealtimes;
4. Restricting consumption among adults in order for small children to eat; and
5. Reducing the number of meals eaten in a day.

The index was measured between June and December 2022, a period that includes the lean season (August-October), when households tend to run out of stored food and a new harvest is not yet ready.

***The pilot study results suggested that the lean season was shorter and less severe for myAgro farmers.*** We believe this is because myAgro farmers are able to rely on their food stocks from the previous year, as well as invest in a more diverse crop mix. This

## IMPACT BEYOND INCOME

diverse crop mix enables them to harvest various crops at different times of year. For example, vegetables are ready for harvest earlier in the rainy season while peanuts, millet, and other crops are harvested closer to October. This generates food and income throughout the year. Future studies will provide additional data and in-depth analysis to further explore these results.



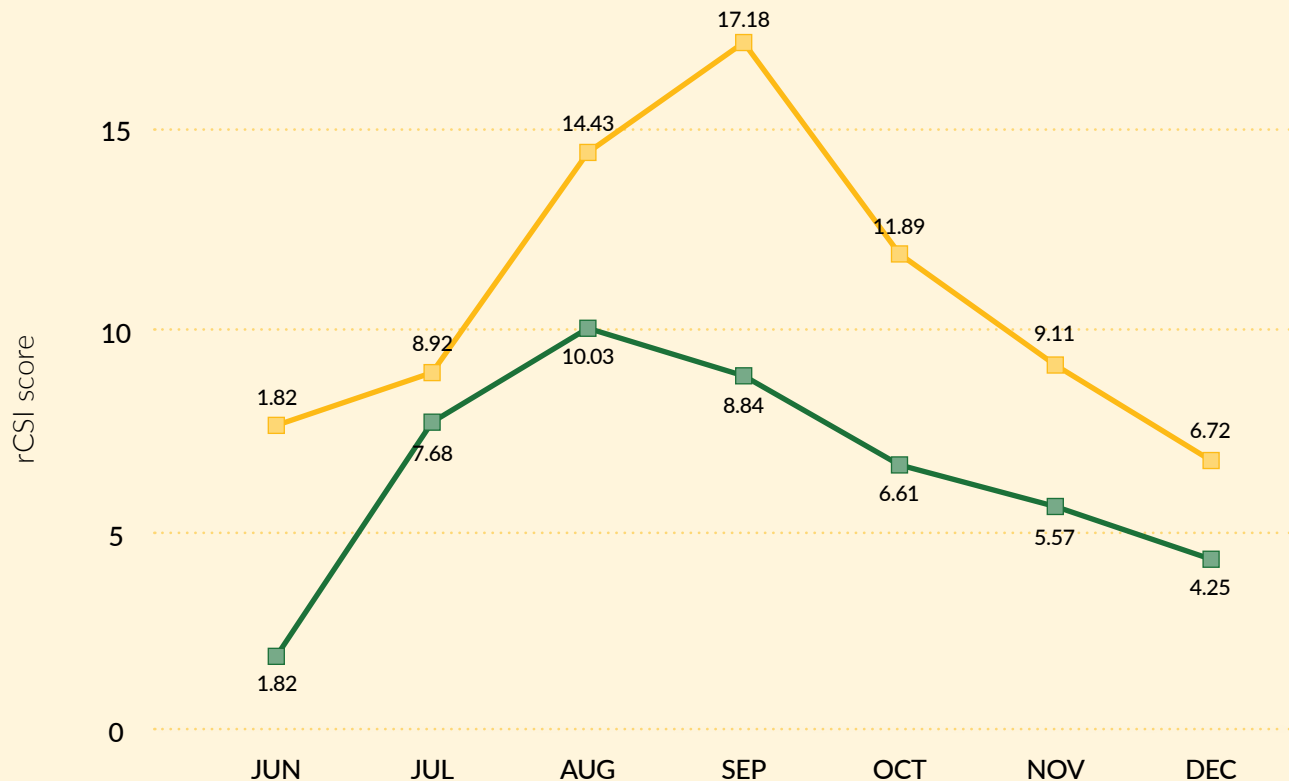
## NUTRITION SURVEY: Reduced Coping Strategies Index

»»»

myAgro households rely on fewer coping strategies to feed their families—especially during the lean season from August to October—than non-myAgro farmers.

We believe this is because myAgro farmers are able to rely on their food stocks from the previous year, as well as invest in a more diverse crop mix. This diverse crop mix enables them to harvest various crops at different times of year generating food and income throughout the year.

 myAgro Farmers  
 Control Farmers





## LOOKING FORWARD

*The past year has been an important opportunity for myAgro to learn and adapt, designing responsive solutions to the range of evolving challenges faced by the smallholder farmers we serve. Entering the 2023 season, myAgro is excited and optimistic to continue testing and scaling these innovations, with the goal to reach 175,000 farmers globally.*



## APPENDIX A: METHODOLOGY

*myAgro conducts annual evaluations to quantify the impact of our services on farmer yield and income. The harvest evaluation physically measures the harvest results of a subset of myAgro and control farmers to calculate the amount of food grown, the net profit, and compare results. The delta between the two is considered myAgro's impact.*

The sample includes more than 2,100 farmers (both myAgro and control farmers) in Senegal and Mali. To begin, a census of control farmers is conducted in non-myAgro villages, which identifies farmers who have similar profiles and incomes, and who farm in similar agro-ecological conditions to myAgro farmers. Control farmers for the evaluation are selected randomly from this list. This process helps to ensure that selected control farmers have similar farming experiences to

myAgro farmers in the sample – with the only difference between the two groups being myAgro's intervention.

myAgro offers four main packages in both Mali and Senegal, and uses a number of methods to calculate yields, depending on the crop. For peanuts, millet, sorghum, and rice, the method is known as crop cutting experiments (CCE); for Maize, the method of the slide rule is used. Every year, an external auditor assures correct execution

of the documented methodologies. For a number of packages and add-on crops such as okra, the impact report draws from previous years' consistent yield measurements.

Our Data team then leverages yield information to calculate the net profit (based on current market data) per farmer of both groups. The delta value between the two is considered myAgro's impact on farmer income. The research is designed to have a power of 80% and a confidence level of 95%.



## ENDNOTES

- 1 [WFP](#)
- 2 Diao, et al. (2022). Mali: Impacts of the Ukraine and global crises on poverty and food security. International Food Policy Research Institute. <https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/135949/filename/136163.pdf>.
- 3 Diao, et al. (2022). Senegal: Impacts of the Ukraine and global crises on poverty and food security. International Food Policy Research Institute. <https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/135950/filename/136161.pdf>.
- 4 At myAgro, SROI is calculated as Impact Generated divided by Net Loss before Philanthropic Revenue (i.e. the amount of money needed from donors to break even).
- 5 In 2022, myAgro shifted our Fiscal Year from July-June to alignment with the calendar year (January-December).



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