Busara

How to enable youth to participate in agriculture?

A playbook for designing youth-inclusive agriculture programs

Image created using Midjourney

PROGRAM DESIGN PLAYBOOK

ACKNOWLEDGEMENTS

One Acre Fund and Busara seek to understand and address the barriers keeping youth from engaging in agricultural programs in sub-Saharan Africa, especially in the face of learning through evidence that youth are interested in agriculture.

In order to do so, One Acre Fund has supported this research financially, facilitated community access, and ensured context specific knowledge with the involvement of country specific partners and stakeholders. To this, behavioral science expertise was brought by Busara. Employing which, barriers to youth engagement were diagnosed and interventions were produced as a result of co-designing.

The authors would like to thank One Acre Fund for their enthusiastic involvement throughout this process. This playbook was made possible with support from the GRACE partnership between OAF and the Mastercard Foundation. And of course, the young people who made time to share their experiences thus making it possible for us to learn and surface what youth-inclusive agriculture actually requires.

The findings, conclusions, and recommendations contained within are those held by the authors and do not reflect the positions or policies of the Mastercard Foundation.

TABLE OF CONTENTS

Introduction

Throughout our study, one refreshing truth about youths that became apparent is that they aren't disinterested in agriculture. They are instead rationally avoiding a sector they perceive to be too slow, too uncertain, and too stigmatised to compete with other job alternatives.

This problem could more accurately be attributed to agricultural program designs than the attitude of youth. The consequences of which are far-fetching and stand tall.

Over 10 million young people enter sub-Saharan Africa's labor market every year (Mastercard Foundation, 2025). The current population of smallholder farmers is aging and climate pressures are mounting. If the next generation continues to exit agriculture, not because they lack capability or ambition but because the conditions make disengagement the rational choice, the effect on food systems[1] across the continent will be severe and difficult to reverse.

Treating youth disengagement as a motivation problem will not solve it. It is essential that programs create the conditions that allow for youth engagement. This playbook is written to plug just that and find more realistic solutions that enable younger people to act on their interest and inclination towards agriculture.

1 Food systems refer to the networks of people, land, inputs, markets, and institutions that move food from soil to plate.

The evidence in this playbook comes from 260+ youth, women, and household heads across Uganda, Ethiopia, and Burundi. As part of this study, we identified the barriers to youth engagement in agriculture at four levels (individual, interpersonal, community, and structural) using the Social Economic Model Framework to co-design solutions with the communities in these countries and the One Acre Fund field teams.

This playbook can be used to diagnose which barriers matter most in which contexts, help pick interventions that fit specific resource availability, and ultimately help design programs that actually enable youth to enter agriculture in substantial ways.

260+

youth, women, and household heads

Image created using Midjourney

Purpose of this playbook

This playbook is designed to serve as a guide for agricultural development practitioners, policymakers, and funders working to increase youth engagement in agriculture.

By focusing on research and co-design conducted by Busara and One Acre Fund across Uganda, Ethiopia, and Burundi, it translates behavioral insights and community-generated solutions into actionable guidance for designing youth-responsive agricultural programs.

Who can use it

Program designers and development organizations

- To diagnose which youth segments a program is reaching.
- To identify the specific barriers, behavioral, social, and structural, that limit youth engagement in a specific context.

Funders and policymakers

- To assess whether current programs address the right barriers at the right levels.
- To identify which interventions are grounded in behavioral evidence and community insight.

Field teams and Implementers

- To understand what drives youth decision-making around agriculture and how gender shapes participation differently.

Researchers and academics

- To explore how behavioral science frameworks (like the Social Ecological Model) can be applied to youth agricultural engagement.
- To see how qualitative research and co-design can generate actionable solutions.

What to expect from this playbook

The playbook is organized into three main parts:

PART 1

Know who you're designing for

Introduces four youth segments identified across Uganda, Ethiopia, and Burundi and explains why one-size-fits-all programming fails.

You will understand the specific barriers for each of the four youth segments, mapped across the four different levels of the Social Ecological Model- individual, interpersonal, community, and structural.

PART 2

The interventions

Eight evidence-informed interventions, each designed as a direct response to a specific barrier.

You will learn which intervention addresses which specific barrier, the lever it applies, and what it looks like in practice, common pitfalls, and what remains untested.

PART 3

Adapting the evidence to your context

A step-by-step guide for moving from diagnosis to design in your own context.

Features a design rationale template to make your logic explicit, a caveats section on evidence quality, and an honest account of what these interventions have and have not yet demonstrated.

What informed the making of this playbook

Evidence Review

01

We began by conducting a desk review of existing studies on youth engagement in agriculture, gender dynamics, and behavioral drivers in East Africa. This helped establish the broader context and identify evidence gaps.

Qualitative Study

02

We then conducted in-depth qualitative research across Ethiopia, Uganda, and Burundi, including FGDs and interviews with youth, parents, nursery managers and household heads. These conversations provided rich insights into youth aspirations, motivations, constraints, and gender-specific challenges.

Co-Design Sessions

03

Building on the qualitative findings, we facilitated co-design sessions with youth men and women and household heads to jointly explore problem areas, generate ideas, and prioritise solution directions. These sessions ensured that youth-centered and gender-centered insights directly informed the development of the prototype concepts.

Prototyping

04

Finally, we translated the prioritised ideas into prototype concepts.

BEHAVIORAL SCIENCE GLOSSARY

Cognitive biases

Present bias
The tendency to place greater weight on immediate costs and benefits relative to future ones, often leading individuals to prefer options with short-term rewards even when long-term outcomes may be better.

Trust deficits
A condition in which individuals have low confidence that institutions, markets, or other actors will behave reliably or fairly, which can reduce willingness to invest effort, resources, or participation.

Design principles

Gain framing
Presenting information by emphasising the benefits of taking an action, rather than the losses from not taking it. Behavioral research shows that the framing of outcomes can influence how people evaluate choices and respond to messages.

Hassle factors
Small administrative or practical barriers—such as extra steps, time, effort, or uncertainty—that make an action more difficult to complete and therefore reduce the likelihood that people will follow through.

Salience
The degree to which information stands out and captures attention at the moment of decision-making.

BEHAVIORAL SCIENCE GLOSSARY

Behavioral levers

Social proof
A form of social influence in which individuals look to the behaviour of others, particularly similar or relevant peers, as a cue for what actions are appropriate or effective in a given situation.

Identity priming
Design cues or contextual signals that temporarily make a particular identity or social role more salient, which can influence behaviour that is consistent with that identity.

Identity reinforcement
Strengthening an individual's identification with a valued role and encouraging behaviours that are consistent with that identity over time.

Immediate visible rewards
Providing quick, observable results from an action, which can increase motivation and engagement by reducing the perceived delay between effort and outcome.

Social recognition
Public acknowledgement of individuals' achievements or contributions, which can reinforce status, motivation, and continued engagement in valued behaviours.

Norm shifting
Changing perceptions of what behaviours are typical or socially approved in a community

Self-efficacy building
Strengthening individuals' confidence in their ability to perform a task successfully, often through demonstrations, early successes, or guided practice.

Transparency
Making processes, rules, or information clearly visible and understandable to reduce uncertainty and strengthen trust in systems or institutions.

Cognitive load reduction
Simplifying information or processes so they require less mental effort to understand and act upon, improving comprehension and follow-through.

BEHAVIORAL SCIENCE GLOSSARY

Frameworks

Socio-Ecological Model (SEM)
A framework for understanding behaviour as influenced by multiple levels of factors, typically including individual, interpersonal, community, and structural or societal conditions. It highlights that behaviour is shaped not only by personal characteristics but also by social relationships and broader environmental contexts.

Co-design
A participatory approach in which community members, users, and stakeholders co-create solutions together with practitioners or researchers, contributing ideas, experiences, and feedback to shape interventions that are relevant, feasible, and locally appropriate.

Other

Self-efficacy
An individual's belief in their capability to successfully perform a specific action or task.

Identity
An individual's self-concept or sense of "who they are."

PART 1

Know who you are designing for

Image created using Midjourney

Agricultural programs often roll out interventions that treat youth as a uniform category, overlooking the significant differences in their motivations, resources, and barriers (Madende, Henning & Jordaan, 2023). However, when conducting research, we found that they don't relate to farming in a single or the same way. Some see it as the best path to succeeding in life. Others see it as a temporary income stream while they build toward something else. Some participate only because they have no other option. And a few others, particularly young women, who work on family farms don't even consider themselves fully engaged farmers because they have no control over what gets planted, sold, or earned.

This section segments youth into four distinct types, based on the motivations and beliefs they foster, as well as the barriers that hold them back.

This distinction emerged clearly when conducting interviews and focus group discussions in Uganda, Ethiopia, and Burundi. And are hence a practical tool when designing useful entry points for a diagnosis. It is also important to note that gender is a cross-cutting dimension across all the segments. Young women that are a part of any segment will most likely have an additional set of barriers.

For each segmentation, we organized the specific barriers shaping young people's choices using the **Social Ecological Model (SEM) framework**. SEM recognises that behavior is not formed in a vacuum but is influenced by multiple factors, such as individual needs and wants, interpersonal relationships, community preferences, and an enabling environment (Bronfenbrenner, 1979).

It has been applied widely in health, education, and increasingly, agricultural development to understand participation barriers.

We used this framework because it shifts the focus from individual blame to a systemic diagnosis. It also distinguishes between barriers young people can address on their own and those requiring structural support, which matters for designing interventions at the right level.

The four segments described in this chapter are not fixed identities, but are a spectrum shaped by access to resources, household dynamics, gender norms, and lived experience.

A young person can move between segments as their circumstances change. A good program diagnosis will identify where the target group currently sits, because that dictates which barriers matter most and which interventions can reach them.

1 Reluctant participants

Who they are

Youth who engage in agriculture because of limited alternatives. They see farming as a necessary fallback rather than a first choice. They are strongly drawn to non-farm work with a daily, visible income and return to farming only when other options close off.

"I am not involved in agriculture because I have no one to work with... I have no knowledge, and the items (inputs) are difficult to get."

— Young woman, Uganda

BARRIERS FACED BY RELUCTANT PARTICIPANTS

Individual Perception of farming	**How it shows up:** Farming is described as 'dirty', 'backwards', and for people who have failed at everything else. In Uganda, it competes with boda-boda riding and in Burundi, with casual labour. Youth who farm actively hide that they do, when asked about their occupation. **What it means for design:** Shifting perceptions to position farming as a respected and aspirational profession is a prerequisite for technical training to attract this group.
Individual Present bias	**How it shows up:** Farming is seen as a 'waiting' game, with long cycles, delayed returns, and uncertain payoffs. Youth consistently prefer activities that offer daily visible income, even when they understand the long-term value of farming. **What it means for design:** Leading with short-cycle crops creates early, tangible returns, building the confidence needed for this group to commit to longer-cycle investments.
Individual Self-efficacy challenges	**How it shows up:** Past failures from climate shocks, counterfeit inputs, or poor yields have eroded confidence. Many have tried farming and given up, and say 'farming doesn't work for people like me'. **What it means for design:** This group needs to see success before they make the decision to invest effort. Peer role models who started from similar circumstances have proven more credible than external experts.

BARRIERS FACED BY RELUCTANT PARTICIPANTS

Structural Limited land access	**How it shows up:** Dependence on family land means access can be revoked. They may be allocated degraded or marginal plots with no security of tenure, which makes investing in improvements feel pointless. **What it means for design:** Even motivated participants will disengage if they lack reliable access and autonomy of land. Programs need to either work within family land dynamics or explore group plot arrangements.
Structural Market uncertainty	**How it shows up:** Unpredictable prices and exploitation by middlemen make the expected return from farming feel too unreliable to justify the effort. **What it means for design:** Price transparency tools and market linkages must accompany production-focused intervention for this group. They need to see visible and believable returns.

2 Income diversifiers

Who they are

Youth for whom agriculture is one of multiple income streams. They farm seasonally or part-time while running small businesses, doing casual labour, or pursuing education. Farming is a strategy, not an identity—they stay engaged as long as it is worth their time.

"Mostly I am self-employed as a tailor; it gives me daily income, and I am also involved in farming so as to get food."

— Young man, Uganda

BARRIERS FACED BY INCOME DIVERSIFIERS

Individual Knowledge gaps	**How it shows up:** This group relies on traditional methods of farming, likely inherited, and have limited exposure to improved practices. They underestimate the technical skill required, which leads to suboptimal yields that reinforce their view of farming as a low-return activity. **What it means for design:** Training must focus on high-impact practices. Short, practical, demonstration-based sessions with immediate visible results work best.
Community Absence of visible role models	**How it shows up:** Limited visibility of peers successfully scaling farming alongside other livelihoods constrains their imagination of what dual-income farming can look like. **What it means for design:** Role models who reflect farming as one of multiple income streams are more motivating than single-livelihood success stories; the message should be that farming complements existing activities, not replaces them.
Structural Time constraints	**How it shows up:** Schedules designed for full-time farmers conflict with their existing commitments, making sustained participation unfeasible and driving dropout despite continued interest. **What it means for design:** Flexible, modular delivery is key for this group. Fixed multi-day training will consistently underperform. Digital tools, on-plot demonstrations, and peer networks that allow asynchronous learning may fit their lives better.

3 Committed innovators

Who they are

Youth who see agriculture as their primary livelihood path and are actively experimenting, learning, and seeking to scale. They are often exposed to successful role models early or have had early wins that reinforced commitment. Motivation is not their problem, access to assets such as land, finance and market is.

"I would say that as long as we are alive, we will never abandon it (agriculture). Even if we achieve the vision I am talking about, we will still continue to practice agriculture."

— Young farmer, Burundi

BARRIERS FACED BY COMMITTED INNOVATORS

Individual Self-efficacy	**How it shows up:** Even committed farmers lose confidence when climate shocks, fake inputs, and unstable markets hit. The issue is less starting confidence and more sustaining it through repeated setbacks. **What it means for design:** Advanced technical support and peer mentorship from experienced farmers help build resilience; the focus shifts from attracting them to preventing burnout.
Inter-personal Parental gate-keeping of key assets such as land	**How it shows up:** Motivated innovators can be held back by parental control over land and decisions, limiting their ability to adopt or test new practices like improved seed varieties. **What it means for design:** Household engagement, not just youth engagement, is necessary for this group to scale. Farmer field days and demonstration plots that parents can observe directly are more effective than asking youth to relay information. Group farming models, cooperative arrangements, or land-lease facilitation directly address this lockout.

BARRIERS FACED BY COMMITTED INNOVATORS

Structural Financing challenges	**How it shows up:** Even with bankable ideas, they often lack collateral, so without credit they can't afford inputs, equipment, or storage—meaning strong yields still don't scale. **What it means for design:** Youth-appropriate financial products, flexible, low-collateral credit, are the most direct unlock for this segment. Linking them to savings groups or cooperative finance mechanisms can create a financial opportunity that formal banking does not offer.
Structural Market uncertainty	**How it shows up:** As they scale, price volatility and middlemen hit harder. Unlike subsistence farmers who stay small as a buffer, scaling youth are stuck between ambition and the lack of financial safety nets to absorb the risk. **What it means for design:** Market linkages and price transparency tools matter more for this group than for others. They need reliable off-take arrangements or access to market price data to plan production decisions confidently.

4 Passive helpers

Who they are

Youth, especially young women, do much of the farm work but have little say in what is grown, when it's sold, or how income is used. Many don't even see themselves as farmers, since the role implies ownership and agency they don't have.

"I work in my parents' farm and help with sowing and harvesting, but I cannot make decisions about what to sow and which fertilizer we use."

— Research participant, Uganda

BARRIERS FACED BY PASSIVE HELPERS

Individual Knowledge gaps	**How it shows up:** Exclusion from formal training due to timing, childcare, or not being seen as the primary farmer means they mostly learn by observation, which rarely includes improved practices. The knowledge gap follows from exclusion, not the other way around. **What it means for design:** Addressing knowledge gaps before structural reasons for exclusion is the most common design mistake for this segment. Training must be preceded by, or combined with, interventions that make attendance physically possible.
Individual Low self-efficacy	**How it shows up:** Repeated exclusion from decision-making and training creates a learned sense of incapacity. Women in this group often say they 'don't know enough' or are 'not ready' to take on independent farming roles, even when they have years of practical experience. **What it means for design:** Peer trainers and mentors who look like them, i.e., young women, who have moved from helper to independent farmer, are the most credible source of confidence-building.

BARRIERS FACED BY PASSIVE HELPERS

Inter-personal Household power dynamics	**How it shows up:** Older men control what gets planted, what gets sold, and how income is used. Even when a woman has attended training, she cannot apply new techniques without household approval. Her participation in programs does not translate to autonomy. **What it means for design:** Programs that reach women but ignore their household context will fail to produce real behaviour change. Engaging male household heads through farmer field days, joint demonstration plots, or community events is not optional for this group.
Community Restrictive gender norms	**How it shows up:** Women carry a double burden of unpaid domestic and childcare work alongside unrecognised farm labour. Their mobility, economic contribution, and leadership in agriculture are all constrained or undervalued. **What it means for design:** Making contributions visible through public recognition at community events, certificates, and symbolic awards shifts the social norm in ways that private training cannot. Visibility changes what household members, peers, and community leaders consider normal.
Structural Time poverty and childcare	**How it shows up:** The most immediate practical barrier to participation. Training sessions scheduled during hours when young mothers must care for children are simply inaccessible, regardless of motivation or interest. This is structural, not behavioural. **What it means for design:** On-site childcare at training locations is the single most direct structural unlock for this segment. Without it, every other intervention for this group will underperform.

PART 2

The interventions

Image created using Midjourney

Based on the barriers identified for the different segments, we co-designed (co-creating ideas with the community) in Uganda, Ethiopia and Burundi. Each prototype applies specific behavioural principles to reduce constraints, shift perceptions, and increase sustained engagement in agriculture, making it more feasible for young people.

Think of this section as a reference library to identify which intervention is suitable for the segment that is of more interest to you.

For each intervention, we give information on the SEM level and barrier it addresses, the behavioural lever it applies, what it looks like in practice, common pitfalls, and the implementation pathway.

Intervention map

A quick-reference grid of all the eight interventions at a glance.

No.	Intervention	Primary barrier addressed	Relevant segments	Origin[2]
1	On-site child play areas create supervised play spaces at training sites	**Time poverty/ childcare:** Burden of caregiving that makes participation unrealistic for many young women	Passive helpers	Ethiopia
2	Peer champions and mobile mentors increases agricultural knowledge and self-efficacy via peer learning rather than top-down extension delivery	**Self-efficacy/ knowledge gaps:** Lack of practical agricultural skills and confidence	All segments	Ethiopia Uganda
3	Aspirational messaging and visual storytelling reframes farming as a viable, respected livelihood by connecting agriculture to the futures young people want	**Perception of farming:** Social stigma that makes farming an unattractive choice for ambitious young people	Reluctant participants	Ethiopia
4	Youth storytelling through lived experiences counters stigma and the absence of relatable role models by amplifying real stories of young people succeeding in agriculture	**Absence of role models/ stigma:** Lack of visible, relatable success stories	Reluctant participants Passive helpers Income diversifiers	Uganda
5	Price transparency tools and shared information tools cut market uncertainty by giving young farmers timely, reliable price data	**Market uncertainty/ trust deficits:** Unpredictable market conditions and eroded institutional trust that makes agricultural investment feel risky	All segments	Uganda
6	Community spotlights and recognition shifts gender norms and household dynamics by recognising and celebrating young women's agricultural achievements	**Gender norms/ household dynamics:** Household power imbalances and community expectations	Passive helpers	Uganda
7	Input journey transparency board rebuilds trust in input delivery systems	**Trust deficits/ market uncertainty:** Perceived risk of engagement	Committed innovators	Burundi
8	Practical learning with fast-growing seedlings shortens the time spent waiting for visible returns later	**Present bias/ self-efficacy:** Preference for immediate returns over distant agricultural payoffs, compounded by low belief in their own capacity	Reluctant participants	Burundi

2 Origin refers to the country where this intervention idea was generated through co-design sessions with young male and female farmers

1 On-site child play areas

STRUCTURAL - SEM LEVEL

Ethiopia

Barrier addressed
Time poverty and childcare as a barrier to training participation

Behavioural lever
Immediate visible rewards + self-efficacy building

What it looks like in practice

- Areas with shade next to the training site, set up with mats and toys before each session begins.
- Trusted community volunteers ideally young women supervising the children during training hours.
- Mothers/caregivers can check on their children during breaks, maintaining proximity and reducing anxiety.
- The play area is announced in advance as a feature of the training so mothers can plan to attend and also spread word to their contemporaries.

Intervention overview

This intervention establishes dedicated play areas at nursery and training locations, equipped with mats and toys to facilitate participation of farmers who are caregivers for children. Peer volunteers provide mild supervision, ensuring children remain safe and proximal during technical sessions. By integrating childcare into the training infrastructure, the program shifts the perception of agricultural learning from an exclusive activity to one that is compatible with maternal roles.

Evidence

A 2023 paper by Becot, Inwood, and Rissing found that unmet childcare needs are pervasive on family farms, with many women missing training opportunities or struggling to balance farm work and caregiving; the authors note that childcare provision is a critical enabler of women's participation in agricultural programs (Becot, Inwood, & Rissing, 2023).

Priority segments: Passive helpers

2 Peer champions and mobile mentors

INDIVIDUAL - SEM LEVEL

Ethiopia, Uganda

Barrier addressed
Low self-efficacy and fear of failure

Behavioural lever
Social proof + self-efficacy enhancement

Intervention overview

This intervention recruits and trains credible young men and women to serve as “Mobile Mentors” for their peers. These champions would conduct hands-on, on-plot demonstrations that break down complex agricultural tasks into simple, reproducible steps. By providing reassurance and technical guidance during the first planting phase, the mentors help navigate technical uncertainty. The goal is to facilitate the transition from theoretical interest to the physical act of planting and fostering long-term engagement.

What it looks like in practice

- Peer champions are selected based on credibility, relatability within the community, and technical skill. The most effective champions are those who started from similar circumstances as their target audience.
- Champions visit plots during the first planting phase since on-plot context makes guidance immediately applicable.
- Demonstrations are broken into three to five simple steps that a mentee can replicate alone after the champion leaves.
- Champions are reachable by phone, between visits for quick clarifications.
- In Ethiopia: champions are recruited from existing One Acre Fund member networks; compensated with recognition and small input incentives.

Evidence
A peer-based agricultural extension model studied in rural Uganda trained local farmers trained to be extension agents and provide information to their peers using mobile phones. Analysis proved this significantly improved worker performance. (Amadu, 2023).
Although not strictly in-field mentors, WeFarm enabled farmer-to-farmer knowledge exchange via SMS and online/mobile networks, leveraging peer experience to solve challenges and share tips. (Omulo & Kumeh, 2020).

Priority segments: Reluctant participants, Committed innovators

3 Aspirational messaging and visual storytelling

INDIVIDUAL - SEM LEVEL

Ethiopia

Barrier addressed
Perception of farming as low-status, slow, and for people who failed elsewhere

Behavioural lever
Salience + gain framing

Intervention overview

This campaign uses locally grounded stories and imagery to make nursery visits and tree planting more attractive to women and youth farmers. By presenting relatable success stories and images of the material benefits such as income, shade, and household improvements, the campaign makes farming feel more rewarding. The strategy moves away from purely technical information toward gain-framed narratives that resonate with young people's personal identities and goals.

What it looks like in practice

- Materials developed with and featuring youth from the target communities.
- Distribution through high-traffic community venues: churches, market days, schools, health centres, and spaces where the target audience already spends time.
- Visual communication such as posters, short audio clips for community radio, and simple video stories shared via WhatsApp.
- Messaging that focuses on what farmers gain (income, respect, independence) rather than what they risk losing.

Evidence

New vision - Ugandan youth using technology for tree planting: This article describes how youth-led initiatives combine storytelling, imagery, and digital tools to make tree planting more attractive and rewarding. It shows that campaigns can shift perceptions by linking tree planting to modern identity, community pride, and visible benefits. (Ruhweza, 2025).

J-PAL policy insight on digital video extension: This summary report covers how video-based advisory services (often showing local farmers) increased knowledge and adoption of agricultural practices and was scaled into government programs in Ethiopia. (Baul et al., 2024 in Journal of Development Economics)

Priority segments: Reluctant participants

4 Youth storytelling through lived experiences

COMMUNITY - SEM LEVEL

Uganda

Barrier addressed
Social stigma framing agriculture as work for those who have failed; absence of relatable role models

Behavioural lever
Social proof + Identity reinforcement

Intervention overview

This prototype engages young farmers as authentic narrators who document and share their agricultural journeys through photos, videos, and audio shared via radio and social media. Outstanding storytellers receive public recognition or symbolic rewards to reinforce the value of their contributions. By giving youth the tools to share their lived experiences, the approach reinforces farming as a credible, modern livelihood.

What it looks like in practice

- Stories featuring realistic non-linear success stories including setbacks which are more credible and motivating.
- Content distributed through channels the target audience actively uses: local radio for rural reach, WhatsApp groups for peer-to-peer spread, community screenings for collective viewing.
- Public recognition events celebrating farmer success , give them visible status within the community and reinforce farming as a source of identity, not shame.

Evidence
Organizations like Farm Radio International and AGRA have piloted interventions where youth and farmers share their own agricultural stories through radio, social media, and community platforms, with recognition events reinforcing their role as credible narrators. These initiatives highlight authentic journeys and use trusted local media to amplify voices (Agri Ghana Online, 2025).

Priority segments: Reluctant participants, Income Diversifiers, Passive helpers

5 Price transparency and shared information tools

STRUCTURAL - SEM LEVEL

Uganda

Barrier addressed
Market uncertainty, price volatility, and exploitation by intermediaries

Behavioural lever
Salience + hassle reduction

Intervention overview

This prototype provides youth with real-time crop price information through community price boards, WhatsApp-based chatbots, and USSD (Unstructured Supplementary Service Data) codes menus for basic phones. By verifying and making market data visible, young farmers are in a position to negotiate more effectively with intermediaries and plan their sales during peak price windows. The strategy professionalises the agricultural identity of youth by treating them as business-oriented actors rather than passive price-takers.

What it looks like in practice

- Current and reliable community price boards placed in high-traffic locations such as community centres and health clinics.
- Digital channels (WhatsApp, USSD) provide price information in the format most accessible to the target group. USSD is critical for youth without smartphones.
- Price data is sourced from verified local market agents, not national averages that do not reflect local trading conditions.
- The intervention includes a brief orientation session explaining how to use the price information in negotiation.

Evidence
Sauti- East Africa provides smallholder farmers and traders with real-time market price information through USSD, SMS, and WhatsApp platforms. This system is designed for accessibility, ensuring even those without smartphones can access verified local data. By making market information transparent, Sauti empowers youth and farmers to negotiate more effectively and plan sales strategically. The platform professionalises farming by positioning youth as business-oriented actors who can make informed decisions rather than passive price-takers.

Priority segments: All segments

6 Community spotlights and recognition

COMMUNITY - SEM LEVEL

Uganda

Barrier addressed
Gender norms and household power dynamics

Behavioural lever
Social recognition + norm shifting

Intervention overview

This prototype identifies high-performing young women farmers and publicly recognizes their achievements during influential community events like market days or church gatherings. Recognition is accompanied by symbolic rewards such as certificates, tools, or seedlings. By elevating these achievements publicly, the approach reinforces the dignity of agricultural labor and fosters pride among youth.

What it looks like in practice

- Recognition events timed to coincide with high-attendance community occasions.
- Awards are symbolic and community-appropriate: certificates, agricultural tools, seedlings.
- The community leaders who present awards matter as much as the awards themselves.
- Recipients are selected based on genuine achievement, not program participation alone.

Evidence

Women in Agribusiness Week, Uganda: The Women in Agribusiness Week was launched by the Inter-Religious Council of Uganda (IRCU), Kampala Capital City Authority (KCCA), and Guzakuza to celebrate women's achievements in agriculture. Recognition events were timed to coincide with high-attendance community occasions, ensuring visibility and impact. Symbolic awards such as certificates and tools were presented by respected leaders, reinforcing the dignity of agricultural labor and positioning women farmers as role models. This initiative elevated farming as a source of pride and identity for youth.

Priority segments: Passive helpers

7 Input journey transparency board

STRUCTURAL - SEM LEVEL

Burundi

Barrier addressed
Mistrust of formal systems due to unpredictable input delivery and misinformation

Behavioural lever
Transparency + cognitive load reduction

Intervention overview

This prototype uses visual timeline boards and infographics at community collection points to provide real-time status updates on the delivery of agricultural inputs. By mapping the "journey" of inputs from government warehouses to the final distribution point, the tool provides a shared, visual reference point for all farmers. This transparency reduces the spread of misinformation and prevents the erosion of trust that occurs when delivery timelines shift due to factors outside local control.

What it looks like in practice

- Boards placed at cooperative offices, community collection points, and other locations where farmers already gather.
- Visual timeline formats prioritised over text-heavy notices. The graphic shows where inputs currently are in the delivery chain, making status immediately legible.
- Boards updated on a fixed, announced schedule as the reliability of the update schedule is as important as the accuracy of the content.
- When delays occur, boards communicate the reason rather than just the new date.

Evidence
While there is limited evidence on agricultural input tracking, a related study by Martina Björkman and Jakob Svensson in Uganda found that sharing clear, accessible information about service performance in the education sector increased transparency and citizen engagement. (Björkman & Svensson, 2009).

Although this study focuses on education rather than agricultural inputs, it shows that legible information can empower communities to track delivery processes and reduce information asymmetries.

Priority segments: Passive helpers

8 Practical learning with fast-growing seedlings

INDIVIDUAL - SEM LEVEL

Burundi

Barrier addressed
Present bias: farming feels too slow and uncertain compared to non-farm alternatives

Behavioural lever
Immediate visible rewards + self-efficacy building

What it looks like in practice

- Crops selected for short time-to-visible-result, not just short time-to-harvest, with germination and early growth visible within a week to reduce the sense of 'waiting'.
- Demonstrations run on real plots in the community that feel similar to participants' own context.
- The financial return is made explicit and calculated with participants
- Short-cycle learning is framed explicitly as a bridge to longer-term crops. Participants understand they are building toward, not settling for, fast-growing varieties.

Intervention overview

This prototype anchors agricultural training in short-cycle crops or seedlings that allow young farmers to observe visible results and financial returns quickly. Instead of relying on long-cycle theoretical instruction, learning is delivered through hands-on demonstrations where youth can verify success in real-time. Technical innovators provide "training-of-trainers" support to ensure that field guidance is accurate and timely.

Evidence
FAO's Farmer Field Schools in Uganda emphasize hands-on training with crops that germinate quickly, reducing the "waiting" barrier for youth. Demonstrations are run in community plots that mirror participants' conditions. Facilitators highlight both technical accuracy and financial literacy. This approach has boosted production and sustained youth interest in agriculture (Action Against Hunger, 2023).

Priority segments: Reluctant participants

PART 3

Applying this guide to your context

Image created using Midjourney

From diagnosis to design logic

When thinking of the most impactful solutions, you should consider three factors:

who this is going to affect, where it will be implemented, and when.

Answering these questions are crucial as they provide invaluable insights into the target population, context of the intervention, and the timing of it, which are essential when designing effective solutions.

In order to achieve the objectives, we advise that you follow the steps on the next page:

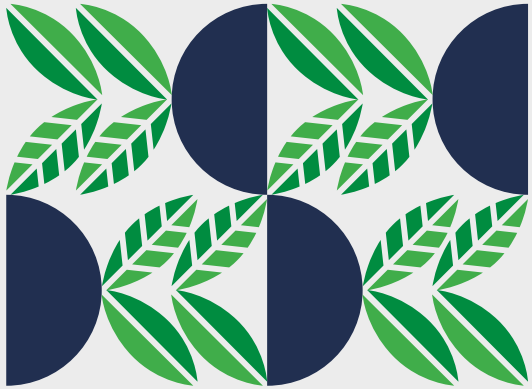
1 Identifying the target segment

- Which segment of people am I targeting through direct community engagement?
- Where do they fall within the agricultural segments discussed earlier?

2 Identify the priority barrier

Once you have identified the right segment in Part 1, read through the barriers and assess:

- Which barrier has the biggest impact on them?
- Which barrier is easy to overcome or solve for?



3 Identify the right intervention

- Go through Part 2 of this document and assess which interventions were designed to address which barriers.
- Choose the intervention with the greatest impact, and that is feasible to implement within your program.
- Read more about our approach to interventions for each segment in Part 3 for inspiration.

4 Testing the solution

- Before full deployment, test your selected intervention with a small community to verify it is viable and desirable for your target population.
- Testing can be qualitative (focus groups or interviews) or quantitative (pilots) to assess whether the intervention is going to be effective.
- The approach you choose depends on what you want to learn, the available resources, and how much time you have before rollout.

Design rationale

This template is a structured way to make your design logic explicit before you commit to an intervention. It is not a form to be filed but a tool that aids in thinking through the situation. The most useful version of this exercise is one where you are honest about what you do not know, name the constraints your program cannot fix, and resist the temptation to over-promise on outcomes.

Design rationale template

I am solving for _____ [population] in _____ [region].

Our target segment is [segment name] — confirmed through [brief description of how you identified them: interviews, observations, existing data].

The primary barriers are [barrier 1] and [barrier 2], which are [SEM level: individual / interpersonal / community / structural] constraints.

This means the problem is not [motivation / knowledge / access — whichever is the common wrong assumption for this group].

To tackle this barrier, we will implement _____ [specific intervention from our playbook]. We believe that this intervention will have a high / medium / low impact because of _____.

We believe that this intervention will take a lot / a little effort. Based on local context, we will tailor the intervention in the following ways: 1- _____ 2- _____ 3- _____.

We will need to do the following to implement our intervention: [Research Strategy] [Resources Required] [Who will implement it?] [Collaboration with Other Implementing Partners] [What will be the total duration?] [How will the outcome be measured?].

This intervention will be implemented in [where] _____ area of _____ country.

The timing for the implementation is set for [when] _____ (time/date/month/occasion).

We will know it is working when [metric that is not just attendance] at [timeframe: three months / six months / end of season].

The barrier our program cannot address is [name the structural constraint outside program scope — land tenure, deep poverty, policy environment]. This means realistic outcomes look like [honest expectation], not [over-promised outcome].

Caveats and limitations

Throughout the different stages of this work, we are putting forward important caveats and limitations that guide how these interventions can be implemented/received by the different stakeholders.

Research evidence

Uganda
Ethiopia
Burundi

Barrier diagnosis, segment profiles, and the Social Ecological Model framework. Multi-country, qualitative and quantitative.

Research-informed designs

Uganda
Ethiopia
Burundi

Designed directly from the barrier evidence in each country. Treat it as a well-grounded hypothesis, not a proven solution.

Tested prototypes

Uganda only
— interventions 02, 04, 05 and 06
Ethiopia (01, 03), and Burundi (07. 08, 09)
— not yet tested

Designed, implemented, and observed in the field. Early evidence of what works, what fails, and documented pitfalls.

Insights from the tested prototypes

Intervention	What the prototype showed	What was not tested or observed	What to verify before applying elsewhere
02 — Peer champions	Farmers prefer hands-on, in-person training with practical demonstrations, and trainers gain credibility when they show visible success on their own farms, though social barriers such as jealousy, familiarity, and lack of respect can arise, meaning trainers often need recognition, small incentives, and support materials to stay motivated and effective.	• Long-term knowledge retention and application • Effects on women's empowerment and income • Trainer burnout/dropout • Gender mix dynamics • True costs of incentives • Long-term motivation and retention of trainers	• Fair trainer selection across areas; resource needs (transport, tools) urban vs rural • Hybrid in-person/remote feasibility • Gender barriers • Measurable outcomes (e.g., yield changes) • Sustainability without constant NGO support • Integration with existing extension services
04 — Youth storytelling	Youth prefer short videos shared on platforms like WhatsApp, TikTok, YouTube, and Facebook because the combination of visuals and audio makes farming practices easier to demonstrate and share, while community screenings and radio help reach those without digital access, and recognition through awards or public visibility further motivates participation.	• Long-term retention of storytellers • Actual peer adoption from viewers • Multilingual reach • Misinformation risk • Integration with formal OAF channels	• Digital access & literacy • cultural/privacy/gender sensitivities • cost-effectiveness of giving phones/data • whether recognition reduces dropout • pilot hybrid (digital + offline) and multilingual formats

Insights from the tested prototypes

Intervention	What the prototype showed	What was not tested or observed	What to verify before applying elsewhere
05 — Price transparency tools	Farmers prefer a combination of tools, such as price boards, WhatsApp, and USSD, to access market information, but trust depends on credible sources and consistent updates, while tools must use simple and local languages and provide actionable guidance on where and when to sell; however, digital options face barriers like data costs, connectivity, and literacy, making voice and multilingual features important for accessibility.	Whether farmers change selling behaviour (hold for better prices), long-term accuracy, income impact, relationships with middlemen, and data privacy issues	• Network/device coverage • Data accuracy & update cadence • Literacy/language needs • Tamper/security risks for physical boards • Measure economic impact • Test combined board + digital approach
06 — Community spotlights	Success is defined not only by high yields but also by good farming practices and improved livelihoods, and while transparent nomination and verification processes are essential for fairness, public recognition can motivate winners and inspire peers, though it may also create risks of jealousy or community tension, making practical rewards such as tools, inputs, or training especially valued.	• Long-term impact on farmers who do not win • Effectiveness of consolation rewards • Scalability of farm visits and verification processes • Strategies for managing social tensions	• Ways to reduce jealousy after recognition events • More efficient verification methods • Effects on collaboration within farmer groups • Which reward types are most meaningful for different farmers

For Interventions On-site child play areas, Aspirational messaging and Visual storytelling, Input journey transparency board and Practical learning with fast-growing seedlings, none have been tested with the community. The table below states the evidence base for each design, what remains untested, and what a practitioner needs to verify before implementing.

Intervention	Evidence-basis for the design	What was not tested or observed	What to verify before applying elsewhere
01 — On-site child play areas **Ethiopia**	Designed from barrier evidence showing childcare as the primary structural barrier for young mothers in Ethiopian nursery training contexts.	Whether supervised community childcare is culturally accepted in target communities. Whether the training site infrastructure allows for an adjacent, safe play space. Whether the volunteer supervisor model is sustainable.	Do not assume cultural acceptance. Conduct a brief community consultation on childcare norms before setting up. Pilot with one training site before rolling out.
03 — Aspirational messaging **Ethiopia**	Designed from evidence of strong perception barriers and social stigma around farming among urban-adjacent and peri-urban youth in Ethiopia.	Whether gain-framed messaging outperforms loss-framed messaging in this specific community. Which distribution channels reach the target group? How long does perception shift take to consolidate?	Co-design materials with local youth before production. Test two message framings on a small group before committing to full distribution. Plan for repeated exposure, not a one-off campaign.
07 — Input journey board **Burundi**	Designed from evidence of deep mistrust of input delivery systems and frustration about delivery schedules.	Whether cooperative offices are sufficiently trusted as the board location. Whether a reliable update owner can be identified and sustained. Effects in communities with weak cooperative structures.	Identify the update owner and confirm their commitment before launching. If cooperative infrastructure is weak, find an alternative trusted location such as a health post, church, or market point, before adapting the model.
08 — Practical learning with fast-growing seedlings	Designed from evidence of strong present bias and slow-return aversion among youth in Burundian tree nursery contexts.	Whether fast-growing varieties available locally have sufficient market demand. Whether the bridge framing (fast crops as an entry point to longer-cycle investment) is persuasive in this community. Transition rates from fast-cycle to long-cycle crops.	Confirm local market demand for the fast-growing variety before selecting it. Plan a follow-up check-in at three months specifically to support the transition conversation.

Conclusion

Youth exclusion from agriculture is not a motivation problem. It is a design problem.

The research across Uganda, Ethiopia, and Burundi consistently showed that young people respond rationally to the conditions around them, the incentives, risks, social signals, and power dynamics that determine whether farming feels viable.

The four segments in this playbook are not fixed character options. They are positions shaped by context and shift when conditions change.

What that means for programs is that the most important design decisions happen when a practitioner asks who they are designing for, confirms that answer through direct engagement, maps the real barriers rather than the assumed ones, and designs interventions that address those barriers in the right order. This playbook is a starting point and is not to be used as a fixed prescription, as the interventions documented here emerged from specific contexts. Therefore, for any stakeholder reading this, you will need to adapt in your own way. What does not change is the diagnostic logic: know your segment, confirm your barriers, design the sequence, name what you cannot fix, and measure what actually matters.

REFERENCES

1. Action Against Hunger. (2023). *Learning through farmer field schools: How Ugandan communities found self-sustainability.* https://www.actionagainsthunger.org/story/learning-through-farmer-field-schools-how-ugandan-communities-found-self-sustainability/
2. Agri Ghana Online. (2025, September 1). *AGRA and Farm Radio International partner to amplify African farmers' and youth voices.* https://agrighanaonline.com/agra-and-farm-radio-international-partner-to-amplify-african-farmers-and-youth-voices/
3. Amadu, F. O. (2023). Peer effects in agricultural extension: Evidence from community knowledge workers in rural Uganda. *Social Sciences & Humanities Open,* 7(1), 100484. https://doi.org/10.1016/j.ssaho.2023.100484
4. Becot, F., Inwood, S., & Rissing, A. (2023, February). *Unmet childcare needs are a pervasive issue on family farms but guidance largely absent from farm programming: Linking Childcare to Farm Children Safety Project – Research Brief #1.*
5. Björkman, Martina, & Svensson, Jakob. (2009). Power to the people: Evidence from a randomized field experiment on community-based monitoring in Uganda. *The Quarterly Journal of Economics,* 124(2), 735–769. https://doi.org/10.1162/qjec.2009.124.2.735
6. Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. *Harvard university press.*
7. Consultative Group on International Agricultural Research (CGIAR). (2025, August 14). Africa's smallholder farmers face collapse if we do not act on climate change. PreventionWeb. https://www.preventionweb.net/quick/96298
8. J-PAL. (2025, July). *Video-based support for small-scale farmers around the world.* https://www.povertyactionlab.org/case-study/video-based-support-small-scale-farmers-around-world
9. HelpAge International. (2014). The ageing of rural populations: Evidence on older farmers in low- and middle-income countries. HelpAge International. Retrieved from: https://www.helpage.org/silo/files/the-ageing-of-rural-populations-evidence-on-older-farmers-in-low-and-middleincome-countries.pdf
10. Madende, P., Henning, J. I., & Jordaan, H. (2023). Accounting for heterogeneity among youth: A missing link in enhancing youth participation in agriculture—A south african case study. *Sustainability,* 15(6), 4981.
11. Mastercard Foundation. (2025). Africa Youth Employment Outlook 2026. Mastercard Foundation. https://mastercardfdn.org/en/our-research/africa-youth-employment-outlook-2026/
12. Ruhweza, I. (2025, August 18). Ugandan youth embrace technology to promote tree planting. New Vision. Agric. & Environment: How Ugandan youth are using technology
13. Omulo, G., & Kumeh, E. M. (2020). Farmer-to-farmer digital network as a strategy to strengthen agricultural performance in Kenya: A research note on 'Wefarm' platform. *Technological Forecasting and Social Change,* 158, 120120. https://doi.org/10.1016/j.techfore.2020.120120

How to enable youth to participate in agriculture?

A playbook for designing youth-inclusive agriculture programs

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