



Improving Seed Security Through Market-Based Programming

Interventions, Examples
& Opportunities

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[Mercy Corps](#) is a leading global organization powered by the belief that a better world is possible. In disaster, in hardship, in more than 40 countries around the world, Mercy Corps partners to put bold solutions into action—helping people triumph over adversity and build stronger communities from within. Now, and for the future.

About ISSD Africa

[Integrated Seed Sector Development \(ISSD\) Africa](#) is an international community of practice, guiding seed sector innovation and development on the African continent to alleviate the problem of limited access to quality seed. It is enabled by the Swiss Agency for Development and Cooperation (SDC) and the Government of the Netherlands. ISSD Africa addresses seed system challenges in fragile and conflict-affected states by fostering better coordination across the Humanitarian-Development-Peacebuilding (HDP) Nexus. It works to bridge emergency seed interventions with long-term sector development, ensuring responses are timely, targeted, and sustainable. This review and analysis were conducted under ISSD Africa Action Learning Project 3 (ALP3), which explores seed business development in fragile contexts and is led by Mercy Corps.

About PRO-WASH & SCALE

Practice, Research, and Operations in Water, Sanitation, and Hygiene and Strengthening Capacity in Agriculture, Livelihoods, and Environment ([PRO-WASH & SCALE](#)) is an initiative funded by USAID's Bureau for Humanitarian Assistance (BHA) and managed by the U.S. Department of State. It is implemented by Save the Children and Mercy Corps. PRO-WASH & SCALE aims to strengthen the design, implementation, and overall effectiveness of food and nutrition security, with a focus on water, sanitation, and hygiene (WASH), integrated water resource management (IWRM), agriculture, and natural resource management (NRM).



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Acronyms

ALP	Action Learning Project
BEAM	Building Effective and Accessible Markets (Exchange)
BHA	Bureau for Humanitarian Assistance
BRIDGE	Building Rural Income through Inclusive Dairy Business Growth
CAT	Context Analysis Tool
CIAT	International Center for Tropical Agriculture (part of Alliance Bioversity-CIAT)
CRS	Catholic Relief Services
CSB	Community Seed Bank
DRC	Democratic Republic of the Congo
EGS	Early Generation Seed
EMMA	Emergency Market Mapping and Analysis
FAO	Food and Agriculture Organization (of the United Nations)
FEMA	Farmer Economic Marketing Association
FSSN	Farmer Seed Stewardship Network
FSN	Food Security and Nutrition (Network)
IRC	International Rescue Committee
ISSD	Integrated Seed Sector Development
MBP	Market-Based Programming
MFIs	Microfinance Institutions
M4P	Making Markets Work for the Poor
MSD	Market Systems Development
MSME	Micro, Small, and Medium-sized Enterprises
NGO	Non-Governmental Organization
NIGSIMS	Nigeria Seed Information Management System
QDS	Quality Declared Seed
RRA	Rural Resilience Activity (Nigeria)
RSRI	Refugee Self-Reliance Initiative
SAFE	Strengthening Agricultural Markets & Food Security
SCALE	Strengthening Capacity in Agriculture, Livelihoods, and Environment
SDC	Swiss Agency for Development and Cooperation
SERT	Seed Emergency Response Tool
SIDA	Swedish International Development Agency
SSSA	Seed System Security Assessment
UN	United Nations
USAID	United States Agency for International Development
USD	United States Dollar
VSLA	Village Savings and Loan Association

Preface

Agricultural production is a vital contributor to livelihoods and food security in many fragile contexts, and a sufficient, accessible supply of quality seed of farmer-preferred varieties is a crucial input. For this reason, assistance to restart, strengthen, and develop seed systems has long been prioritized in areas affected by conflict, economic upheaval, and natural disasters. However, despite the many decades of experience in seed security and extensive work in recent years to develop more market-driven humanitarian responses, most seed aid remains short-term and unsustainable, often leading to dependency on external aid. Many programs with seed aid components, especially multi-sectoral ones, lack dedicated seed or systems experts on their teams. As populations in these contexts rely far more on their local communities and systems to help them cope and adapt than on external aid, and as traditional donor funding is shrinking, it is crucial that programs focus on enhancing local capacity, strengthening seed systems, and ensuring interventions do no harm, ultimately supporting more resilient and self-reliant communities.

This paper aims to enhance understanding of market-based seed security support and to synthesize existing knowledge on these interventions in fragile contexts. It is intended to reach humanitarian responders, seed and market systems experts, and country stakeholders with the aim of filling knowledge gaps and bridging divides among these fields. To this end, the paper does not critique specific approaches, programs, terminology, or perspectives,¹ but instead aims to serve as a basis for collective discussion on how to strengthen, adapt, and scale market-based seed interventions in fragile settings.

The paper builds on the existing body of knowledge, including many high-quality documents and tools on seed security and market-based approaches to seed systems, agriculture, and livelihoods—a selection of which is listed at the end of this paper. Through a review of these documents, unpublished reports, and key informant interviews, the paper consolidates learning from programs working on seed systems, humanitarian response, and market systems development. Starting with the *Ten Guiding Principles for Good Seed Aid*,² it presents the foundational elements of seed security and market-based programming and the primary roles and responsibilities of key stakeholders. The paper then applies the *Market-Based Programming Framework* to stratify seed security approaches, highlighting a range of interventions and their respective strengths and limitations at different levels of market engagement. The paper concludes by distilling common learnings, challenges, and recommendations for further action.

¹ Terminology often diverges between seed and market systems documentation. For example, the terms seed supplier, retailer, seed seller, trader, and agro-dealer have slightly different connotations in the two sectors.

² [Ten Guiding Principles for Good Seed Aid](#), p. 1 (SeedSystem & Mercy Corps, 2024)

Introduction

Fragile contexts are usually marked by insecurity, population movements, weak governance systems, and reduced economic activity.³ Agricultural activity is particularly hard-hit as it requires sustained and secure access to land, functioning supply chains, and engaged market actors, such as input suppliers, traders, and seed sellers.⁴ One of the most fundamental elements of agricultural production is a sufficient and accessible supply of quality seed of varieties preferred by farmers. In fragile and conflict-affected

settings, seed systems are often disrupted—formal seed systems are either weak or non-existent, farmers rely more heavily on traditional, local systems, and seed may be consumed to meet immediate food needs rather than saved for next season’s planting. In response, many humanitarian organizations prioritize emergency seed aid for farmers, often in combination with other agricultural inputs such as tools, fertilizer, and mechanized services. Historically, this aid has typically focused on the immediate provision of seed without addressing the broader constraints facing seed systems.

Fragile contexts are those suffering or recovering from a crisis such as violent conflict, political or economic upheaval, epidemics or natural disasters

As stated in the [Ten Guiding Principles for Good Seed Aid \(10P\)](#), emergency seed assistance was initially intended as a short-term measure to help farmers quickly recover from disaster and restart production. In practice, seed aid is now implemented at a very large scale and—rather than phasing out over time—has become a recurring intervention. In 2023, for example, the United Nations (UN) Food and Agriculture Organization (FAO) alone spent over USD \$470 million on seed projects. Ethiopia, one of the countries with the longest history of seed aid, has been receiving seed support in one form or another since at least 1974, over 50 years.⁵ Emergency seed aid is often delivered in ways that can hinder sustainable, longer-term seed sector development, creating seed sectors that rely on relief aid.⁶ For this reason, one of the 10P states “*Humanitarian assistance should support, not undermine, critical market functions.*”

To ensure seed security responses effectively address the specific needs of fragile contexts, programs must, at a minimum, understand local markets and farmer preferences. Providing farmers with immediate access to seed—while supporting the markets they already depend on—requires that market-based assistance be tailored to identified seed security constraints.⁷ This includes supporting market actors and improving market system function to deliver quality seed of farmer-preferred varieties at the right time.⁸ The depth of market engagement depends on program goals, timeframe, and context. For example, a program helping farmers who recently returned after conflict to resume planting might use vouchers to subsidize seed purchases from local seed sellers, while also informing the sellers of what seed varieties and quantities farmers desire. By contrast, a program building agricultural resilience might connect small-scale seed multipliers with research institutes to source improved varieties and with larger seed wholesalers to sell to them.⁹

3 [ALP 2: Humanitarian seed security response in fragile and conflict-affected states](#)

4 Throughout the document the term seed seller is used to describe individuals/entities selling seed or other inputs. This term is inclusive of informal vendors, groups, village agents, local traders, and larger registered, commercial entities.

5 [Long-term seed aid in Ethiopia: Past, present and future perspectives](#) (USAID, 2007)

6 [Six Lessons for Seed Sector Development in Fragile States](#), p. 1 (C. Longley et al., 2023)

7 [Ten Guiding Principles for Good Seed Aid](#), p. 5 (SeedSystem & Mercy Corps, 2024)

8 A market system is defined as the complex web of people, trading structures, and rules that determines how a particular good or service is produced, accessed, and exchanged. It can be thought of as a network of market actors, supported by various forms of infrastructure and services, interacting within the context of rules and norms that shape their business environment. ([Minimum Economic Recovery Standards](#), The SEEP Network, 2019)

9 This paper is focused on market-based seed-sector interventions in fragile contexts and not on larger agriculture interventions. We recognize that seeds are just one input, and part of a complex agriculture system with many other elements. For guidance on comprehensive agriculture support programs, visit the [FSN Network](#).

Key Aspects of Seed Systems & Seed Security

Before designing or implementing any seed security program, it is critical to understand the fundamental elements of seed systems and seed security that distinguish this type of programming from other agriculture input or broader humanitarian activities (for more detailed information, see chapters 2 and 3 of the [Seed Emergency Response Tool](#)). Exploring and fully understanding the following three aspects is essential to design an appropriate and effective seed security response.

1. Nature of the Seed Security Problem			
Does the seed security problem result from an acute shock or a chronic stress?			
ACUTE SHOCK		CHRONIC STRESS	
Acute seed insecurity is brought on by distinct, short-duration shocks, such as conflict that prevents planting or floods that destroy harvests. These often impact most households in an area regardless of their wealth or assets.		Chronic seed insecurity stems from ongoing stresses, such as persistently low yields due to poor or inadequate land. These predominantly affect marginalized farmers.	
2. Fundamental Elements of Seed Security			
What element(s) are causing the challenges and/or are the most affected?			
AVAILABILITY	ACCESS	SEED HEALTH/ QUALITY	VARIETAL SUITABILITY
There is sufficient quantity of seed of adapted crops within reasonable distance of farms and in time for critical sowing periods. This is the supply side of seed markets.	Diverse groups of farmers have adequate income or other resources to purchase or barter for seeds and physical access to multiple seed sources. This is the demand side of seed markets.	Seed is of high quality with good physical, physiological, and phytosanitary quality.	The varieties on offer must be adapted to local contexts and preferences of male and female farmers and other groups aiming to use seed, as well as to consumers.
It is rare that all four elements are compromised at the same time, assessments are therefore critical to fully understand the specific challenges before selecting an intervention.			
3. Seed Systems			
What seed is sourced and how?			
FORMAL SEED SUPPLY SYSTEM		INFORMAL SEED SUPPLY SYSTEM	
Formal channels provide new and improved varieties of “high-quality” certified or quality-declared seed (QDS) through government bodies, research outlets, and companies. Seed (for planting) and grain (for consumption) are produced differently with clear standards.		Informal channels include most of the ways farmers and traders produce, disseminate, and purchase seed, either directly from home harvest through barter/sale among neighbors or through local markets. Seed is mainly produced as a part of grain production.	
Seed systems incorporate formal and informal seed supply channels. Farmers usually rely on a combination of both, depending on the crop, what they can afford, and whether trusted sources of improved seed exist. This blending of formal and informal channels, and the market actors who access both, is termed <i>the intermediary seed supply system</i> . While most assessments and seed programs focus on formal channels, smallholder farmers traditionally obtain an estimated 90% of their seed from informal seed supply channels and those systems may be more resilient to crises. ¹⁰			

¹⁰ Following common usage, the terms *formal* and *informal* are used to distinguish these two seed channels. Other more inclusive and specific terminology is gaining traction, such as *commercial* or *registered* for formal seed sellers and *traditional*, *local* or *farmer-managed* for informal seed sellers.

Market-Based Programming

Market-Based Programming (MBP) refers to a broad range of humanitarian and development interventions that work *“through local markets to deliver emergency relief, support post-crisis recovery, or strengthen local economies...and target specific market actors, services, policies, and infrastructure.”*¹¹ MBP is a subset of Market Systems Development (MSD), an approach that recognizes all people live and work within systems and that changing these systems to work more effectively for the poor will create lasting positive change with large-scale impact.¹² In fragile contexts, MBP interventions can be implemented to more sustainably support seed security, using the [Market-Based Programming Framework \(MBP Framework\)](#) (page 4) as a guide. This framework helps humanitarian actors understand the range of market approaches applicable in fragile contexts, from interventions that support immediate relief to those that strengthen market systems.¹³ Both the MBP Framework and the [10P](#) emphasize that all humanitarian and development teams should, at a minimum, be aware of local market systems and conduct at least basic market analysis. The better teams understand the local systems used by program participants, the more impactful their programming will be and the less likely they will do unintentional harm.



Photo credit: Ezra Millstein/Mercy Corps (2025)

¹¹ [Markets in Crises \(MiC\) Community of Practice Start Page](#)

¹² For more information on MSD see the [Building Effective and Accessible Markets \(BEAM\) Exchange](#)

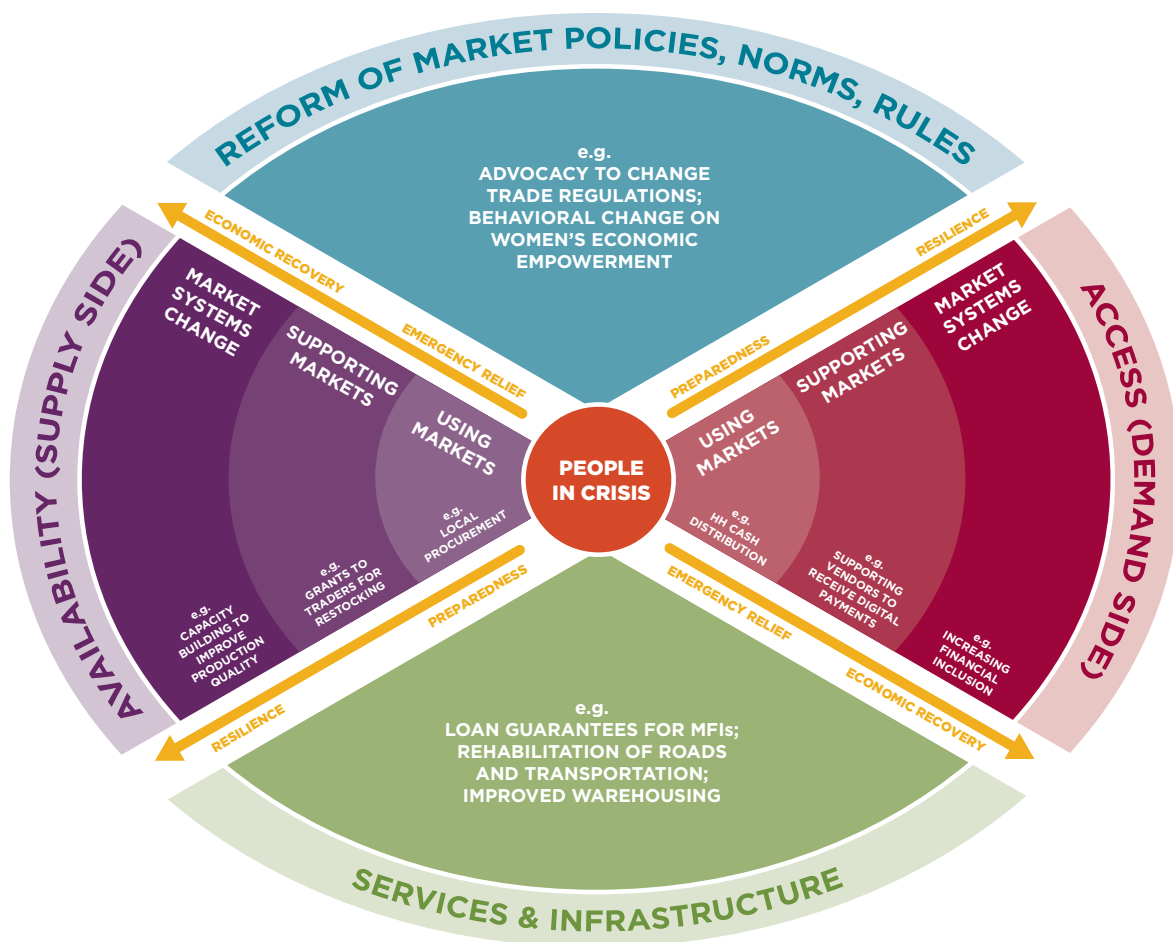
¹³ The MBP Framework was developed by the Markets in Crises (MiC) Community of Practice in 2015 and updated in 2017 and 2022. The document can be found in English, French, Spanish, and Arabic on the [MBP Framework landing page](#).

The MBP Framework includes key components of a market system in a diagram adapted from the MSD 'donut' graphic.¹⁴ Supply and demand functions are shown in the middle (purple and red); policies, norms, and supporting environment for market activities are shown across the top (blue); and infrastructure and services are shown along the bottom (green).

Intervention examples near the center of the graphic are most limited in terms of market engagement and are often part of immediate post-crisis responses. As the interventions move outward, the depth of engagement increases. Programs are grouped into three levels:

1. **Using Markets** to provide essential goods and services, with limited capacity building of market actors.
2. Directly **Supporting Market** actors to ensure the availability of, and access to, essential goods and services, while also strengthening the businesses to be better able to respond to the crisis or more resilient in the long run.
3. Supporting **Market Systems Change** to ensure long-term availability of, and access to, essential goods and services through competitive, resilient local systems.

Figure 1: The Market-Based Programming Framework



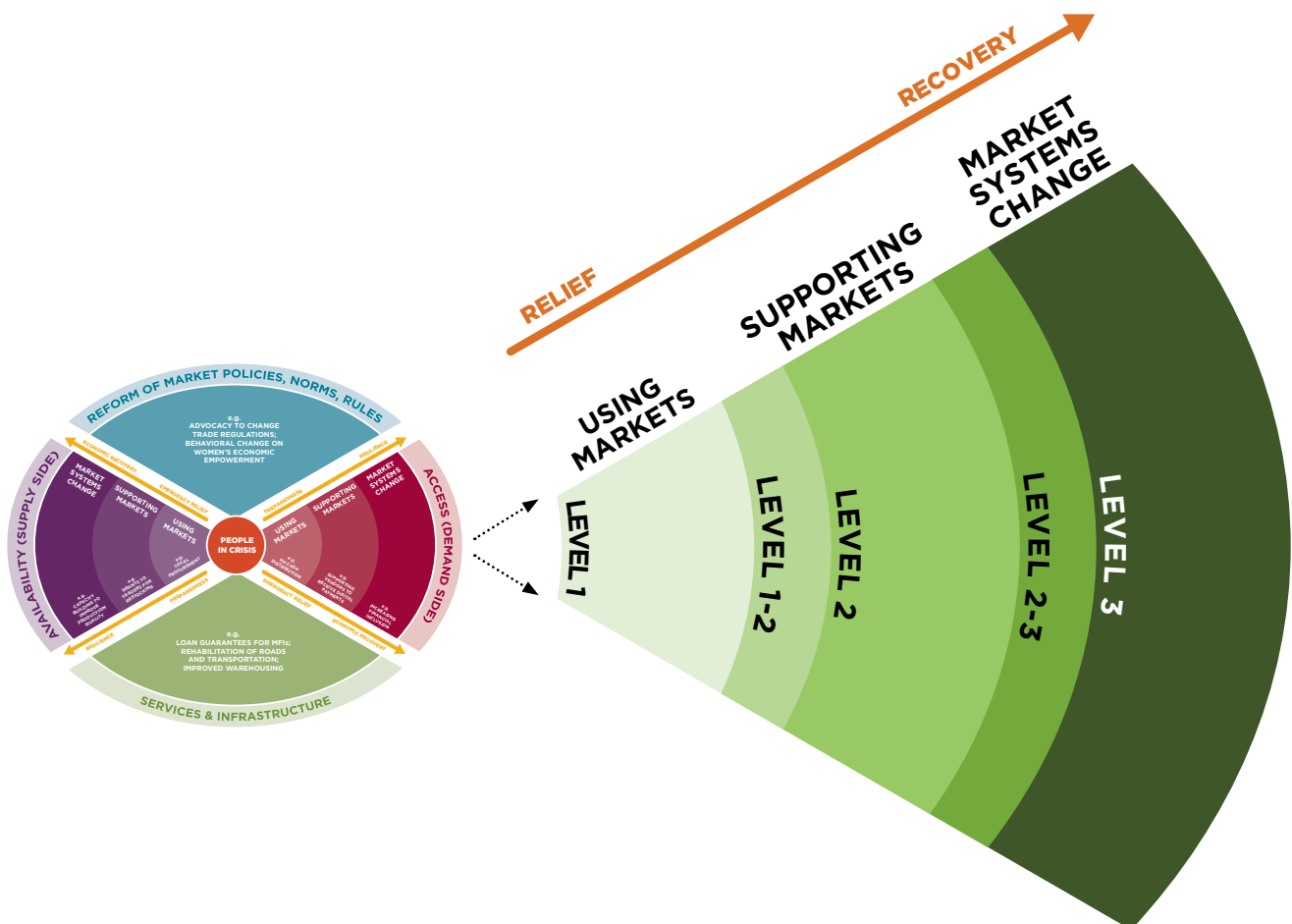
¹⁴ The MSD donut is a graphic used to illustrate specific market systems. For more information, please see the [Operational Guide for the M4P Approach](#).

Addressing Seed Security through MBP

The MBP Framework can guide the design of market-based seed security interventions that align with the specific program’s context, goals, and feasible level of market engagement. The MBP Framework for Seed Security (Figure 2 below) shows how seed security interventions—whether addressing seed availability, accessibility, quality, or varietal suitability—fit into the MBP Framework’s three levels (further explanations and examples in [Figure 3](#) on page 7 and in the [tables](#) starting on page 12). While the MBP Framework graphic separates supply-side and demand-side activities, the seed security graphic combines them, since many interventions address both at the same time.

Interventions are rarely effective in isolation. A single activity is unlikely to effectively improve seed security; impact usually requires combining interventions that address multiple aspects of the seed system—supply, demand, services and infrastructure, and rules and norms. For example, improving the supply and availability of good quality seed might involve both increasing the reach of local seed sellers and upgrading seed warehouse facilities. It is also important to recognize that seed is only one of many inputs farmers need, and only one of several decision factors for cultivation planning. Addressing seed supply and/or demand alone may not increase farm production without also addressing other key elements, such as farmers’ access to knowledge, support services, additional inputs, and markets to grow and sell their crops successfully.

Figure 2: Market-Based Programming Framework for Seed Security



LEVEL 1

Use Markets

Interventions at this level are appropriate for short-term programs that meet immediate needs. They can quickly ensure farmers have the seed they need for planting without undermining the local market actors communities depend on, such as traders and agro-dealers. A challenge with these interventions is that they do not encourage sustainability and can lead to aid dependency if continued longer than absolutely necessary. In most cases, providing 100% subsidized seed aid—whether by direct distributions or vouchers—for a single season is sufficient before transitioning to interventions that better support markets. Even programs that use markets can still distort them by selectively partnering with certain private sector actors while excluding others. This can destabilize local supply chains and shift the private sector's focus from serving local customers to meeting the needs of humanitarian organizations. It can also exclude marginalized groups and exacerbate tensions if gender, social, ethnic, and economic dynamics are not understood. Finally, interventions at this level are not effective at changing behaviors—such as adopting improved seeds and improving cultivation techniques—without complementary, longer-term strategies.

LEVEL 2

Support Markets

Interventions at this level focus on building the capacity of local market actors, facilitating supply chain linkages, and beginning efforts to support behavior change. These programs often run longer than Level 1, as they develop the connections needed for systemic change and building resilience. They are still flexible however, if the context changes—it is easy to restart subsidies for seed purchase through last-mile seed sellers if there is a new shock. Because they have less control over the types of seeds included, programs must collaborate with partners to ensure seed quality and suitability. This requires teams that are comfortable working with the private sector and government, and organizations with procurement systems that can manage these arrangements. Market support programs often work with a relatively small and focused set of market actors (companies, cooperatives, producer groups, etc.) and therefore do not develop widespread resilience. Activities may not continue once the program ends.

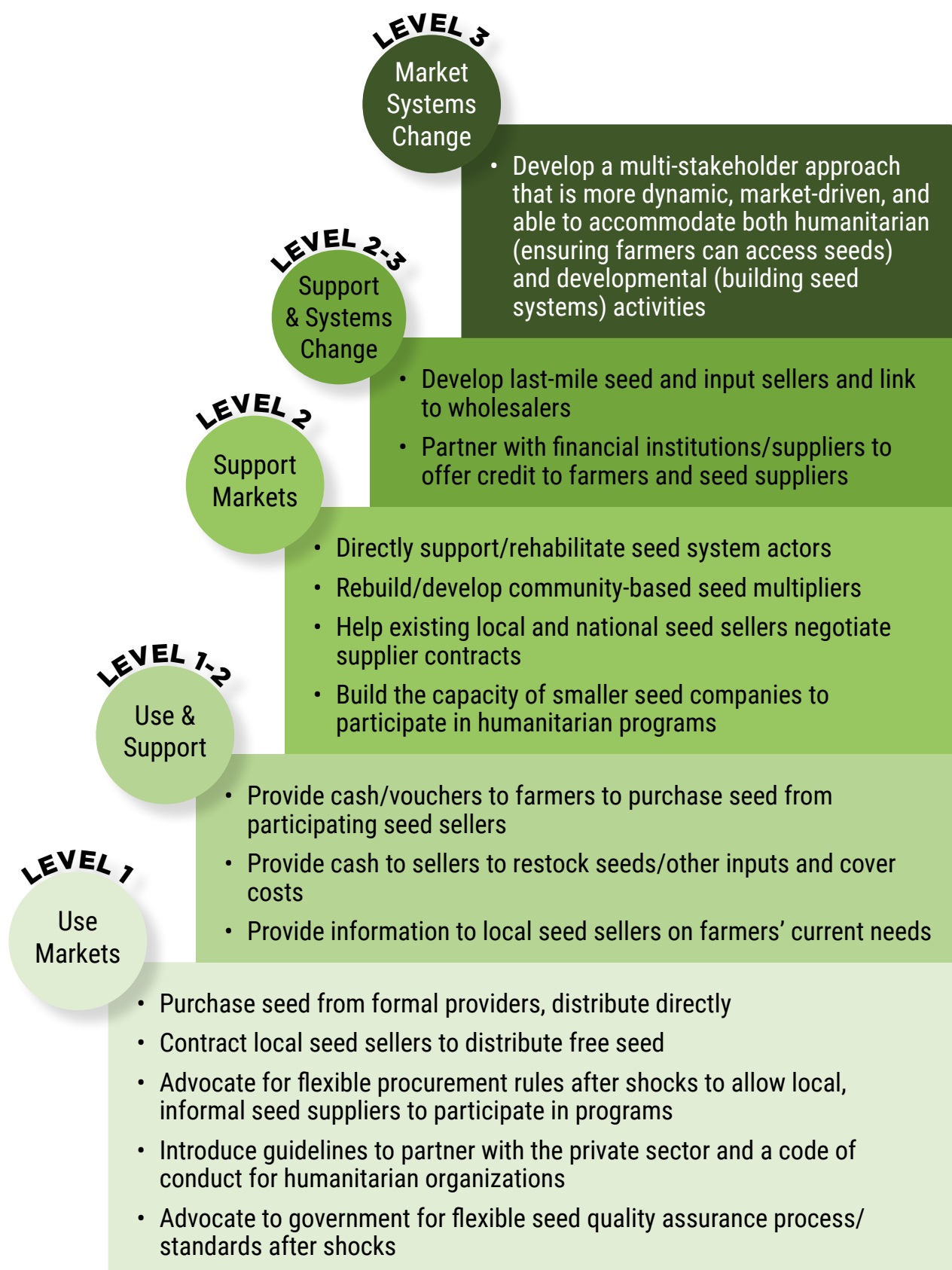
LEVEL 3

Market Systems Change

Interventions at this level aim to facilitate long-term changes that enable local farmers, market actors, and systems to be self-reliant and resilient. While it can take longer to develop key relationships and see impact, the exit strategy is built into the program design, and the aim is to eventually eliminate the need for external aid. Market system interventions seek to improve behaviors and coordination, such as farmers adopting improved seeds and applying new knowledge, seed sellers offering affordable and desired varieties, and seed companies developing new varieties. Activities often include partnerships with government entities to expand knowledge of, and access to, new seed varieties and early generation seed. This can include research, seed quality assurance and regulation, and access to information. Programs like these require a team with the technical capacity to facilitate private sector and government partnerships and to guide behavior change. They also require engaged system actors, both formal and informal, who have the interest and capacity to participate. These are multi-year efforts. In fragile settings, progress can be undone or pushed back if there are big shocks. However, as described in the [Sudan SAFE](#) case (page 21), programs can usually continue to partner with market actors and pivot to Level 2 (Supporting Markets) or even Level 1 (Using Markets) interventions when necessary.

Some interventions can fit in multiple, overlapping levels (Level 1-2 or Level 2-3) depending on how they are implemented.

Figure 3: Examples of Market-Based Responses for Seed Security



Roles and Responsibilities of Market System Actors

To apply the MBP Framework effectively to seed security, programs must first identify the roles different entities play within the system and develop effective partnerships around them. Within the MSD approach, humanitarian organizations are not considered market actors and should refrain from conducting activities that override those actors' roles. However, in many fragile contexts, these organizations exert a significant, if short-term, influence and may even be the dominant actors for a time. They are therefore included below.

Local community structures are both the primary source of coping and support for households, and key partners in MBP. These structures can include larger bodies, such as village councils and religious entities, as well as smaller more specialized groups, such as savings and loan groups, community-based seed producers, and community seed banks (CSBs). In times of conflict, when government entities may be absent, community structures can play a particularly important role in ensuring community buy-in, resolving disputes, implementing and monitoring seed and other agriculture activities, and advocating with government. For example, as highlighted in the [South Sudan International Rescue Committee \(IRC\) case example](#) (page 19), community agricultural committees allocate land to refugees and other vulnerable households, conduct “dispute resolution among farmers or between farmers and livestock owners...[and] carry out advocacy with government entities, such as the Commission for Refugee Affairs, to discuss levies or inclusion of refugee and host communities in projects.”¹⁵ It is important to recognize that communities are likely diverse, may not be cohesive, and may have inequalities embedded in local governance structures. Especially in conflict contexts, programs must understand community dynamics and develop partnerships to ensure equity. For example, the [SAFE program in Sudan](#) (page 21) had to analyze tribal dynamics and ensure that seed sellers from different tribes within one community participated in the program to avoid excluding some farmers and exacerbating tensions.¹⁶



Photo credit: Sean Sheridan/Mercy Corps (2016)

¹⁵ [Models for Strengthening Last Mile Seed Production and Distribution in Fragile Contexts](#), p. 13 (SCALE & ISSD Africa, 2022)

¹⁶ Key informant interview with Emmanuel Otim, Mercy Corps Sudan MSD Technical Director.

The **private sector** is generally the primary source of goods and services and often offers local aid in times of need. It is important to remember that the **private sector includes both formally recognized businesses and unregistered (informal) businesses, such as market vendors and cooperatives and other communal entities**. Farming communities often trust and have long-standing relationships with these actors who are also adept at accessing customers and moving goods to the last mile. An assessment of seed and market systems in Eastern Democratic Republic of the Congo (DRC) found that *“informal traders are a vital connector of people in local or cross-border markets. They link supply and demand for grain and other commodities, including seeds and planting material, in different markets...Their connectedness with farmers who are regular customers for grain, cassava, and associated products gives them a wider reach.”*¹⁷ Larger regional and national market actors hold key buying relationships, including the networks to import seeds. They also often maintain government contacts and know how to obtain necessary registrations and approvals. This network of national to last-mile market actors will serve the target communities long after humanitarian organizations have left and they are the key element in sustainability (see Text Box below).¹⁸

Text Box 1. Diverse Roles of the Private Sector in Seed Security Programming

Premier Seed is a major Nigerian seed producer with 30 years of experience. They have partnered with many humanitarian and development programs to ensure Nigerian farmers access seed during crises using different methodologies. They have sold seed directly to farmers at subsidized rates. They have also disbursed seed through vouchers, both at 100% of value for FAO and the International Committee of the Red Cross and at different percentages with HarvestPlus. The pilot with HarvestPlus showed that when farmers had to pay something, a much smaller proportion (25%) took advantage of the offer. With AGRA, Premier Seed distributed free seed packages to create awareness and get feedback on the seeds. They then connected farmers to regular suppliers for follow-up purchases. When asked about Premier Seeds’ perspective on the benefits and challenges of the different models, Dr. Afolabi Samson, Premier Seed’s Director of Research and Production, said direct seed distribution is nice for the seed

companies because they are paid by the non-governmental organizations (NGOs), but it distorts the market. For vouchers, it is important to consider the farmers’ capacity as well as dependency issues.

Taking a comprehensive approach, Premier Seed collaborated with Mercy Corps under the Rural Resilience Activity Nigeria (RRA) to rebuild the commercial activities they had abandoned during the conflicts in Northeast Nigeria and to support the sustainable supply and demand for seed. They trained small-scale seed producers and signed outgrower contracts to make them regular suppliers for the company. Premier Seed also reopened two seed distribution offices in Borno and Yobe states, expanded their offices in Adamawa and Gombe states, and developed sales relationships with the seed sellers RRA supported (using the digital seed management system developed by RRA). Eventually, Premier Seed made a major investment, in partnership with the Gombe State Investment Committee, to establish a large seed processing facility serving the northeast region.

¹⁷ [Seed and Market Systems of the Eastern DRC: A Fragile State Case Study](#), p. 10 (N. Templer et al., 2022)

¹⁸ Premier Seed information taken primarily from session notes from the workshop [Increasing the effectiveness of emergency seed programming in humanitarian contexts in Nigeria](#), held in Abuja, Nigeria in February, 2025. (ISSD Africa & the Collaborative Seed Programme of Nigeria)

Government, both local and national, also plays an important role in seed systems. It is typically responsible for seed regulation, quality assurance, and import controls (standards, taxes, delivery modalities), amongst other functions. Governments may also provide technical knowledge, produce early generation seed (EGS), and, in more stable and well-resourced contexts, conduct research on new and adapted varieties. In many fragile contexts, governments approve humanitarian programs, monitor their implementation, and may even directly manage seed distributions. Different government agencies are not always aligned in their approaches and can either support or block market-based seed interventions. Local agriculture departments, however, are often key supporters of more market-driven interventions. For example, in meetings with the Kasai Central Inspection Provincial de l'Agriculture Pêche et Elevage in the DRC in 2024, officials requested international actors stop distributing free seeds and inputs because they were destroying the local seed multiplication system.¹⁹ However, whether that request was aligned with other elements across the complex DRC network of governance is unclear.

Humanitarian organizations, while not permanent market actors, can either help or hinder MBP approaches, depending on the type of programs they are operating. In many fragile contexts there are multiple humanitarian actors, including UN agencies, international and national NGOs, and grass-roots organizations. Ideally, they coordinate to support different aspects of the seed system so that immediate needs are met and system resilience is built. The reality is that in many places these programs overlap and undermine each other. Large direct distribution programs or long-term subsidies can interfere with MBP by sending confusing messages to recipients, undermining local market actors, and distorting market incentives. For example, IRC found *"[the] rise in private sector seed companies catering to NGOs has led to market distortions in Niger, discouraging the development of local seed production by flooding the market with free, low-quality and maladapted seeds distributed by humanitarian agencies."*²⁰

Coordination among humanitarian organizations, partnerships with market and community actors, and effective government advocacy can result in better seed security programming and more sustainable outcomes. The below case example of [ÉLAN RDC in Eastern DRC](#) (page 24) documents this in practice. The program facilitated coordination between an international seed company, local agro-dealers, and humanitarian organizations to deliver seed into conflict-affected areas. Working with local business associations, provincial seed councils, the Food Security Cluster, and government research bodies, ÉLAN RDC was able to liberalize foundation seed multiplication and improve access to variety descriptors. These efforts enhanced information on seed use, improved the quality of distributed seed, and supported a shift toward more private sector-driven seed programming.



Photo credit: Ezra Millstein/Mercy Corps (2025)

¹⁹ Key informant interview with members of the Kasai Central Inspection Provincial de l'Agriculture Pêche et Elevage (IPAPEL), DRC, in March 2024.

²⁰ [Farmer Seed Stewardship Network \(FSSN\): A New Approach to Rooting Climate-Resilient Futures in Fragile Contexts](#), p. 28 (IRC, 2025)

Market-Based Interventions and Examples

This section describes interventions that address the four elements of the MBP framework—supply, demand, supporting services and infrastructure, and policies, rules, and norms—across the three levels: Level 1 (Use Markets), Level 2 (Support Markets), and Level 3 (Market Systems Change). It also outlines interventions that can fit in multiple, overlapping levels (Use & Support or Support & Systems Change), depending on how they are implemented.

For each intervention, this section explains both positive aspects and limitations, along with key questions stakeholders and program teams should consider to maximize impact and avoid doing harm. It presents real-world examples from the literature review and interviews with organizations, and concludes with a program that incorporated all three levels. It is important to acknowledge that none of these interventions are perfect. As shown under the limitations heading, each one may require trade-offs; for example, vouchers may increase farmer autonomy but reduce control over seed quality. Program teams must weigh which intervention aspects are most important and suitable in their specific operating context and address the key identified seed security problem.



Photo credit: Ezra Millstein/Mercy Corps (2025)

TABLE 1: MARKET-BASED INTERVENTIONS FOR SEED SECURITY—LEVEL 1

➤ Purchase seeds from formal providers and distribute directly

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Puts money into the formal seed system. + Easier to control distributed varieties and potentially seed quality. 	<ul style="list-style-type: none"> – Usually excludes smaller local seed suppliers and may undermine traditional seed systems. – May bring in unreliable seed suppliers incentivized by large contracts. – Seed quality is still not assured, even from large suppliers. – No plan for sustainable seed supplies in future seasons, could lead to dependency. – Limits farmers' agency by dictating type and amount of seed distributed. – Limits seed diversity and may reduce usage of traditional varieties. – Purchasing and transporting large volumes may create operational and logistical challenges that reduce seed quality or delay its arrival beyond planting season. – Can disincentivize formal suppliers from serving the needs of local markets directly and building sustainable relationships with farmers. – Can create price inflation in seed markets.

KEY QUESTIONS TO CONSIDER

- Which companies benefit the most from the seed purchase (large or small, local or regional)?
- What types of seeds are being distributed and who chooses them—locally preferred varieties or high-performing, ability to reproduce, etc.? Are they appropriate to the local environment?
- Which market actors, relationships, or customer segments may be undermined by this intervention?
- How can smaller and local seed suppliers be included in the tenders (still reaching scale and maintaining seed quality)?
- Do farmers have the knowledge, access to other inputs and services, and market linkages to effectively utilize the seed?

➤ Contract local seed sellers/traders to distribute free seed

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Utilizes and supports existing local actors who may also be affected by the crisis. + Enables suppliers to build relationships directly with farmers. + Can spark business ideas or prove models for serving previously under-reached areas and populations. + Private traders may be able to transport seeds to areas humanitarian organizations cannot access, e.g., across conflict lines. 	<ul style="list-style-type: none"> – Still an artificial delivery method dependent on funding from humanitarian agencies. – No plan for sustainability in future seasons. – May change farmers' perceptions of seed sellers as conduits of free inputs and undermine their businesses in the longer term. – May create the perception that seeds should always be free. – If not managed carefully, may exclude female seed sellers due to cultural barriers or lack of access to capital. – Have to monitor that the right seeds are distributed to the right people in the right quantities. – Seed quality may be compromised as not all seed sellers use proper seed handling and quality assurance may be logistically more challenging.

TABLE 1: MARKET-BASED INTERVENTIONS FOR SEED SECURITY—LEVEL 1

KEY QUESTIONS TO CONSIDER

- Which types/levels of market actors are contracted and from which communities?
- What are the risks to those actors?
- What is the supply of seeds to those actors (who procures them and where)?
- How can preferred varieties and smaller seed suppliers already known to farmers be included?
- Can farmers choose their preferred crop types and varieties?
- Which market actors, relationships, or customer segments may be undermined by this intervention?

➤ **Advocate for more flexible donor and implementer procurement rules after shocks to allow local, informal seed suppliers to participate in tenders and voucher schemes**

ADVANTAGES	LIMITATIONS
+ Enables smaller and more local companies to participate in seed tenders.	<ul style="list-style-type: none"> – Still maintains direct distribution focus. – Requires additional steps to ensure seed quality. – May require more time to sensitize local suppliers to quality and tender requirements, etc.

KEY QUESTION TO CONSIDER

- How can smaller and more local seed suppliers be included in the tenders while still reaching scale and without compromising seed quality?

➤ **Introduce guidelines to support and partner with the private sector and a code of conduct for humanitarian organizations conducting seed tenders**

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Nudges humanitarians to partner with the private sector and maintain standards. + Can enable smaller and more local companies to participate in seed tenders. 	<ul style="list-style-type: none"> – Hard to enforce and ensure everyone complies. – Still maintains direct distribution focus.

KEY QUESTION TO CONSIDER

- What are the humanitarian organizations' incentives to partner with the private sector and follow a code of conduct?

➤ **Advocate to government for flexible seed quality assurance process/standards after shocks, such as relaxed requirements for Certified and Quality Declared Seeds**

ADVANTAGES	LIMITATIONS
+ Ensures smaller and more local seed producers and companies can sell seeds and participate in aid programs.	<ul style="list-style-type: none"> – Its effectiveness may be limited by political resistance, government priorities, bureaucratic inertia, or lack of government capacity. – Policy change is a lengthy process, so this work must be started before any crises. – This may still not include farmers and community seed producers who cannot register and/or certify seed.

KEY QUESTIONS TO CONSIDER

- What government bodies historically regulated, inspected, and certified seed stock?
- Are they functional and/or still active and relevant?
- What are the laws governing transporting and selling seed?
- What are the key government policy priorities and how can seed sector support be aligned with them?
- What are the existing coordination mechanisms between government, NGOs, and the private sector, and how can they be strengthened?

LEVEL 1

Use Markets

CASE EXAMPLE

Cash and Vouchers in an Emergency Livelihood Response Program South Sudan | Food and Agriculture Organization (FAO)

FAO has implemented humanitarian seed interventions in South Sudan for over 20 years (in addition to seed sector development programming), primarily through direct distribution of seeds to farmers. In the late 2000s FAO began purchasing some of that seed locally from producers and/or commercial seed companies. A seed security assessment in 2019 found that seeds were available in local markets and that the farmers' primary challenge was lack of money to purchase them. Understanding that the problem was on the demand side, FAO began providing vouchers to some farmers to redeem for seed at input fairs that brought in larger input sellers. In 2020, FAO shifted to a cash-based approach for some of its recipient farmers, partly to avoid the fair crowds in the COVID era and partly to address logistical challenges. In that year, 67,881 households received unconditional cash grants of 5,000 South Sudanese Pounds (approx. USD \$30) "to enable them to purchase seeds of their choice from local markets and other farmers."²¹ Farmers also received training on good agricultural and post-harvest practices. Post-distribution monitoring found that farmers were able to purchase larger seed quantities than what they would have received through in-kind distribution, suggesting they were able to plant a larger crop with the cash.

*"At community levels, the 2019 Seed System Security Assessment (Goss et al., 2019) showed that the overall supply of seed through the informal seed system was considered to be adequate by slightly more than half of households interviewed, but access by some households seems to be the major concern."*²²

Learn more:

- [Seed System Security Assessment \(SSSA\) in South Sudan - Final Report](#)
- [Contextual Analysis of South Sudan's Seed Sector and Pathways for Building to Seed Sector Resilience](#)



Photo credit: Edward Ahonobadha/Mercy Corps (2023)

²¹ [Review of Cash Transfers for Seed Security in Emergency Contexts](#), p. 62 (C. Longley et. al., 2023)

²² *Ibid.*, p. 60.

TABLE 2: MARKET-BASED INTERVENTIONS FOR SEED SECURITY—LEVEL 1-2

➤ **Provide cash or vouchers to farmers to purchase seed from participating seed sellers**

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Utilizes existing local actors and known/trusted retail outlets. + Injects money into local markets and may incentivize actors to improve their services to farmers. + Allows farmers to choose what seed they want, how much, and when they want to purchase it, especially for cash modalities. + Using a partial/declining voucher amount can build a relationship between farmers and seed sellers and shift the intervention from Level 1 (Using Markets) to Level 2 (Supporting Markets). + Cash modalities are relatively quick and easy to set up. 	<ul style="list-style-type: none"> – It is harder to ensure quality and type of seeds sold unless farmers redeem their cash/vouchers at a controlled seed fair. – Still offers a subsidy so sustainability is not guaranteed. – May need to be combined with other activities, such as seed seller linkages and information, so suppliers know to stock enough of the right seed. – May be challenging for unregistered, smaller seed sellers to participate in voucher programs. – Need to ensure seed sellers do not inflate prices due to the subsidy. – It can take time to ensure the availability of enough preferred, quality seed and establish a voucher scheme.

KEY QUESTIONS TO CONSIDER

- How many seed sellers are needed, where, and what size of business?
- Are seed sellers present in markets close to farmers and do they offer an appropriate diversity of desired seeds?
- What level of subsidy is needed and appropriate?
- What information do the farmers need to choose the most appropriate seed?
- How can vouchers be structured and slowly reduced to build a sustainable relationship between buyer and seller?
- What steps are necessary to increase seed sellers' financial resources and knowledge so they can implement the intervention quickly, possibly moving sales closer to farmers?
- What measures can be taken to prevent/reduce market distortion and ensure fair competition among seed sellers?

➤ **Provide cash to seed sellers to restock seeds and other inputs and cover transport and other costs**

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Ensures local supply of seeds to meet demand. + Helps known/trusted market actors remain in business. 	<ul style="list-style-type: none"> – Only useful when there are supply issues due to seed sellers' liquidity constraints. – Does not address deeper market system weaknesses. – Relies on the commitment of seed sellers to serve the range of farmers' needs. – Likely needs to be combined with cash or vouchers to farmers to ensure they can purchase the seed. This creates a double subsidy and lack of clarity on whether seed sellers are interested in selling to farmers beyond the subsidy period. – If not done well, it can undermine non-participating businesses and reduce competition.

TABLE 2: MARKET-BASED INTERVENTIONS FOR SEED SECURITY—LEVEL 1-2

KEY QUESTIONS TO CONSIDER

- Is cash flow or financing the primary issue or do seed suppliers face other barriers?
- Which seed sellers and how many should be targeted?
- What is the geographic and demographic diversity necessary to meet all farmers' needs?
- How will the diversity of crops and varieties be decided?
- What measures can be taken to prevent/reduce market distortion and ensure fair competition among seed sellers?

➤ **Provide information to local seed sellers on farmers' needs in the current context, such as appropriate bag size, desired seeds, etc.**

ADVANTAGES

- + Gives seed sellers information needed to build customer loyalty.

LIMITATIONS

- Information may not be enough without linkages to seed producers and/or wholesalers and/or financial support.

KEY QUESTIONS TO CONSIDER

- What is the current context and how can seed sellers utilize the information to benefit both farmers and themselves?
- Is it feasible to partner with suppliers to conduct the farmer needs analysis?

LEVEL 1-2**Use & Support****CASE EXAMPLE**

Voucher Fairs/Diversity for Nutrition & Enhanced Resilience (DiNER) Seed Fairs
Uganda | Catholic Relief Services (CRS)

CRS has developed a methodology for agriculture input fairs, including seeds, that uses voucher fairs as a starting point for establishing longer-term relationships between farmers and seed suppliers. The fairs bring together agro-dealers, preferably local, to demonstrate their seeds and explain their uses to farmers who use partial- or full-value vouchers to purchase seeds. Beyond the traditional one-off voucher fair, the DiNER model provides support to agro-dealers, who then continue to sell to farmers after the fair. This approach was applied in Uganda starting in 2018 as part of the larger Nuyok activity in Karamoja. DiNER fairs were held over four years with declining subsidies (from 100% in year one to no subsidy in year four), building relationships between local agro-dealers and farmers. Agro-dealers were connected to seed wholesalers and with financial institutions to prefinance stock. They then offered additional ongoing services to farmers, including extension services and demonstration plots, weather forecasts, and even compensation for farmers whose seeds failed to germinate.

Learn more:

- [The Role of Seed Vouchers and Fairs in Promoting Seed Market Development: Opportunities and Limitations](#)

TABLE 3: MARKET-BASED INTERVENTIONS FOR SEED SECURITY—LEVEL 2

➤ **Directly support or rehabilitate seed system actors, such as seed labs, research institutes, seed companies, etc.**

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Maintains local seed development capacity and ensures those actors can continue in the immediate future. + Can be an incentive for seed suppliers to better serve smallholder farmers, like reducing seed pack sizes. 	<ul style="list-style-type: none"> – Has no sustainability or exit strategy beyond the initial period.

KEY QUESTIONS TO CONSIDER

- What types of system actors existed before and what was their financial model (private, state supported, etc.)?
- Is that model still viable?
- How do socio-cultural factors (e.g., gender norms, power dynamics) influence access to, and control over, seed and how can the intervention address inequities?
- Are there ways to support the system at other levels or in different ways to ensure longer-term seed development and sustainability, including through government partnerships?
- What business model or regulatory changes could improve access to early generation seed?

➤ **Rebuild/develop community-based seed multipliers**

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Ensures seed availability in the near term. + May boost local seed availability when larger formal actors are absent (due to crisis). + Supports known/trusted local suppliers and the local community rather than external formal suppliers. + Supports local seed varieties known by farmers. 	<ul style="list-style-type: none"> – Local seed multipliers may become dependent on the humanitarian agencies, undermining their long-term viability. – Does not ensure wide supply of improved varieties at a commercial level. – Requires many multipliers to reach larger numbers of farmers. – Other programs that import seed can still undermine local multipliers.

KEY QUESTIONS TO CONSIDER

- Is there a historic local seed multiplication system that can be rebuilt and improved?
- What is the current capacity of local seed multipliers?
- How do socio-cultural factors (e.g., gender norms, power dynamics) influence access to and control over seed, and how can the intervention address inequities?
- What quality assurance systems are necessary to ensure seed quality?
- Are business models and enterprise plans developed and is there future business viability?
- What type of support would encourage sustainability after the activity?

TABLE 3: MARKET-BASED INTERVENTIONS FOR SEED SECURITY—LEVEL 2

➤ Help existing local seed sellers and national input companies negotiate supplier contracts

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Strengthens sustainable supplies of seeds. + Boosts local market actors. + Creates a channel to provide embedded technical services, introduce improved seeds, support behavioral change, and build trust and relationships. 	<ul style="list-style-type: none"> – Takes time to build strong relationships. – Shocks can halt progress. – Local seed sellers can be undermined if other programs are distributing seed in the same area.

KEY QUESTIONS TO CONSIDER

- Are the national input companies truly committed to supporting local retail sales networks beyond the life of the program?
- What specific support and/or incentives do they need to build sustainable services?

➤ Build the capacity of smaller seed companies and seed multiplier groups to participate in humanitarian seed tenders

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Proactively helps smaller and more local seed producers to participate in tenders. + Builds their capacity to sustain operations. 	<ul style="list-style-type: none"> + Still maintains direct distribution focus.

KEY QUESTIONS TO CONSIDER

- What are the tendering criteria of existing humanitarian seed providers?
- What is the capacity of existing seed producers and what support do they need to be able to meet the quantity and quality requirements of tenders?
- Do producers have diversified sales already or is there a risk again of creating dependency?



Photo credit: Ezra Millstein/Mercy Corps (2023)

LEVEL 2

Support Markets

CASE EXAMPLE

Commercializing Seed Multipliers

South Sudan | International Rescue Committee (IRC)

In 2019, IRC created local commercially oriented seed multipliers in South Sudan to serve farmers, helping them reduce their reliance on imported seeds and seed distributions, which were both unreliable. They provided foundation seed, which was purchased from accredited suppliers, and technical assistance to lead farmers who then worked with 25-30 outgrowers. IRC also facilitated the establishment of the Farmer Economic Marketing Association (FEMA) that, among other activities, helped the seed multipliers improve storage facilities and connected them to agro-dealers. After planting groundnuts, cowpeas, sesame, and sorghum in 2020, harvesting 218 metric tons (MT) of seeds, and then storing them for 6 months, outgrowers sold their seeds in 2021 to traders and directly to other farmers. IRC also purchased some of the seed through its food security programs and distributed them to 11,000 vulnerable farmers. Overall, participating farmers reported an average yield increase of 59% between 2018 and 2020 harvests. The long-term benefits of the program were *“increased access to locally viable and preferred seeds for farmers, which increased acreage and yields; reduced cost of input provisions (i.e., lower transportation costs for local versus imported seeds) for farmers and IRC; additional income for seed producers; and enhanced food security.”*²³

“South Sudan farmers were heavily reliant on imported seeds and seed aid and encountered significant supply interruptions. Delayed acquisition of seed meant missing the time window to plant, resulting in poor harvests. Facing such limitations, refugee and host community farmers have little choice but to buy what is available in local markets. That often means buying seeds that have low germination rates due to inadequate storage throughout the supply chain and during long transport times.”

Learn more:

➤ [Models for Strengthening Last Mile Seed Production and Distribution in Fragile Contexts](#)



Photo credit: Mercy Corps (2006)

²³ [Models for Strengthening Last Mile Seed Production and Distribution in Fragile Contexts](#), p. 14 (SCALE & ISSD Africa, 2024)

TABLE 4: MARKET-BASED INTERVENTIONS FOR SEED SECURITY—LEVEL 2-3

› **Develop last-mile seed and input sellers and link to wholesalers**

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Increases farmgate/local availability of seed. + Supports local market and economic development. + Creates a channel to provide embedded technical services, improved seeds, and enhancements. 	<ul style="list-style-type: none"> – Requires strong wholesaler connections or program mentoring to ensure seed quality and business viability. – May require a system for seed quality certification and traceability that reaches the last mile. – It takes time to build a strong system. – Needs a strategy to identify agents that are likely to invest and continue the business, ideally having suppliers identify their own agents. – Requires understanding of local social, economic, and cultural dynamics, (e.g., ethnic or gender divides to avoid excluding groups and increasing tension. – May require building seed demand by increasing farmer knowledge and ability to pay.

KEY QUESTIONS TO CONSIDER

- › Are wholesalers truly committed to building and/or supporting last-mile agent networks?
- › What is the appropriate number of agents based on the current/future demand for seed?
- › What is the value proposition for wholesalers?
- › Does the program have the resources and time needed to support viable, sustainable business networks?
- › How can the program maintain oversight to ensure fair prices and inclusion of women and minority groups?
- › Can wholesalers provide varieties and services appropriate for specific localities/agricultural zones?
- › What approaches already exist to build local seed demand and awareness of seed and variety quality?

› **Partner with financial institutions and/or suppliers to offer credit to farmers and seed suppliers to purchase seeds**

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Creates sustainable cash flow for the seed system that is not dependent on aid. 	<ul style="list-style-type: none"> + Requires farmers and seed suppliers to earn income to repay loans. + Requires appropriate financial institutions or other market actors with the capability and resources to offer appropriate loans.

KEY QUESTIONS TO CONSIDER

- › What financial products are appropriate for farmers and other market actors?
- › What financial institutions exist and how do they operate?
- › What other market actors are appropriate lenders (e.g., input suppliers)?
- › What client protection measures exist to avoid over-indebtedness?

LEVEL 2-3

Support & Systems Change

CASE EXAMPLE

Vouchers through Market Actors | SAFE Program
Sudan | Mercy Corps

When conflict erupted in Sudan in April 2023, it interrupted the progress of Mercy Corps' Strengthening Agricultural Markets & Food Security (SAFE) program, funded by the Swedish International Development Agency (SIDA). SAFE had sustainably improved the lives of more than 40,000 farmers by utilizing market systems approaches to increase private sector investment since 2019.

With the planting season approaching, SAFE utilized its pre-existing relationships with formal seed suppliers and village agents to quickly respond. The suppliers were able to move seed to retail outlets, including across conflict lines and into areas international organizations were unable to reach. SAFE then offered vouchers to farmers to purchase the desired seeds from the local seed sellers, following a similar model employed prior to the most recent crisis. Mercy Corps continued this approach under SAFE and other programs in 2024 to maintain food production despite the conflict. Because of high inflation, the program changed the amount of subsidy depending on farmers' ability to pay, initially increasing from the per-crisis 75% subsidy to 95% in 2023 (a token farmer contribution to reinforce the model) and back down in 2024 to 80%. More than 7,000 farmers utilized seeds through this program after the outbreak of war.

Learn more:

› [Adapting a Market Systems Approach to Crisis in Sudan](#)

LEVEL 2-3

Support & Systems Change

CASE EXAMPLE

De-risking Seed Companies | Uthabiti Project
Uganda | Swisscontact

In 2022 and 2023, after erratic rain patterns in Uganda led to both floods and drought, the Uthabiti project helped refugee and host community farmers adopt climate-sensitive seeds. Extension agents from large seed companies introduced drought-tolerant, high-yielding, and short-maturity variety seeds, alongside ongoing technical support, advisory services, and training. The seed varieties demonstrated superior performance under climatic stress, leading 63% of the participating farmers to adopt improved agricultural practices promoted by extension technicians. As a result, household incomes increased by up to 95%. Swisscontact also supported the seed companies with cofinancing to derisk their entry into the refugee settlements. Prior to the activity, one company had no plans to serve the refugee settlements but now, having experienced the demand and potential income, they have expanded their activities without external support. This has created a sustainable seed supply system in the refugee settlements.

LEVEL 3

Market Systems Change

TABLE 5: MARKET-BASED INTERVENTIONS FOR SEED SECURITY—LEVEL 3

➤ **Facilitate development of a tiered, integrated seed supply system from seed researchers to producers to wholesalers to seed sellers with information services, embedded training, etc. Includes both informal multipliers and formal certified seed producers to meet different farmers' needs, a diverse, robust last-mile retail system, and an active investor pool and financial system. Incorporates partnerships with government entities regulating and coordinating seed, managing quality control, and supporting early generation seed.**

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Creates a resilient system that supports seed producers, farmers, and supporting market actors without dependence on aid. + Prepares farmers and the entire seed system for future shocks and ideally enables them to adapt and transform without humanitarian aid. 	<ul style="list-style-type: none"> – Takes time to develop. – Requires a team with a range of skills and strong market system development knowledge. – Progress can be undermined by shocks and stresses. – Humanitarian actors utilizing unsustainable interventions in the same areas can make progress harder. – Some services, such as research and information, are harder to make sustainable.

KEY QUESTIONS TO CONSIDER

- How is the seed system currently functioning, who are the primary actors, and how are they communicating/coordinating?
- What supporting functions exist (e.g., financial services, training providers, transportation) and how capable are they?
- Where are there opportunities to remove specific obstacles within the system?
- How do socio-cultural factors (e.g., gender norms, power dynamics) influence access to, and control over seed, and how can the intervention be designed to address inequities?
- Does the program have the resources and time needed to enable a viable, sustainable system?
- How might governments be encouraged to strengthen support for key public services (such as variety development and extension)?

➤ **Develop a multi-stakeholder approach to aid and development that is more dynamic, market-driven, and able to accommodate both humanitarian (ensuring farmers can access seeds) and developmental (building seed systems) activities.**

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> + Divides interventions between different organizations based on timing and capacity. + Builds long-term capacity and develops relationships while meeting immediate needs. 	<ul style="list-style-type: none"> – Coordinating interventions across implementers and donors is challenging. – Risks sending mixed messages to the private sector and communities. – Depends on the different organizations continuing their roles and funding. – May still displace market system actors.

KEY QUESTIONS TO CONSIDER

- What are decision points for phasing out humanitarian approaches and building additional sustainable interventions?
- How are the different interventions implemented and communicated seamlessly?

LEVEL 3

Market Systems Change

CASE EXAMPLE

Forage seed stimulation—BRIDGE Project
Ethiopia | SNV and Wageningen University

The Building Rural Income through Inclusive Dairy Business Growth (BRIDGE) project (2018–2023), funded by the Ministry of Foreign Affairs of the Netherlands, aimed to improve the livelihoods of more than 90,000 dairy farmers in Ethiopia. In 2020, it implemented a forage seeds pilot to move away from direct seed distributions. BRIDGE linked forage seed producers, farmers, and agro-dealers (seed sellers) and utilized a smart subsidy (voucher)²⁴ that started at 50% of seed value and went down to 33% in year two. This market-driven process stimulated forage seed demand, built a network of producers and suppliers, and developed a sustainable supply of forage seed for cattle farms. Previously, forage seed was typically delivered by the government and NGOs, and the existing market system barely functioned. By the second year of the project, 36 agro-dealers were purchasing high-quality forage seed and selling it to local farmers, 10,151 of whom used the partial voucher to purchase a total of 103,470 kilograms of seed. The model offered all local farmers a reliable supply of high-quality seed and other inputs at the time and in the amounts they needed and created a sustainable supply chain.

“The stakeholders participating in the smart subsidy model expressed the opinion that the model is better than other ways of distributing forage seed: It improves the trust between the value chain actors and encourages forage seed market actors to invest in forage production and marketing.”²⁵

Learn more:

› [Kickstarting the Ethiopian Forage Seed Market](#)

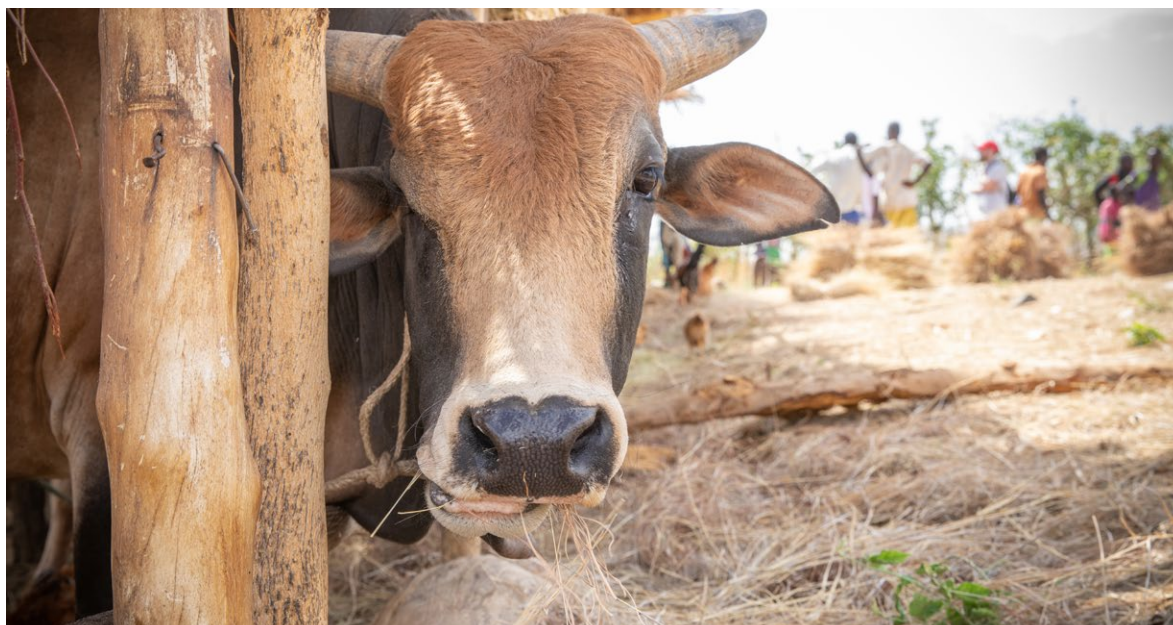


Photo credit: Ezra Millstein/Mercy Corps (2019)

²⁴ A smart subsidy is a form of voucher that builds willingness to pay and sustainable relationships between buyers and seed sellers by requiring some level of co-payment and usually utilizing declining subsidy levels or short-duration subsidies.

²⁵ [BRIDGE Project Brief: Kickstarting the Ethiopian forage seed market](#), p. 3 (T. Berhanu, et al., 2022)

LEVEL 3

Market Systems Change

CASE EXAMPLE

Multiple Market Actor Engagement | ÉLAN RDC

Democratic Republic of Congo (DRC) | Adam Smith International

ÉLAN RDC was a multisectoral MSD program funded by the UK Government and implemented from 2012 to 2019 in Eastern DRC. It aimed to increase poor farmer and household incomes by “addressing market constraints inhibiting economic growth and improving the business climate” in an area suffering from active conflict and served by numerous humanitarian agencies. Among other activities under the agriculture component, ÉLAN provided technical and financial support to seed companies and supported government and private sector partnerships for seed development. Using the regional seed councils, it worked to improve coordination between humanitarian organizations and the private seed sector and supported government regulators, research institutions, and the private sector to update the DRC seed catalogue.²⁶

“Markets in crisis are at times too dangerous or difficult even for humanitarian agencies to service. In these cases, the private sector may be able to operate where programmes themselves cannot... For example, ÉLAN RDC partnered with NASECO, a seed company, to establish a network of agro-dealers that provided both inputs and agronomic training to rural areas of the Kivus where no programme could viably operate in the midst of conflict.”²⁷

Learn more:

› [Market Systems Development in Thin and Crisis-Prone Markets: Learning from the ÉLAN RDC Programme](#)



Photo credit: Ezra Millstein/Mercy Corps (2022)

²⁶ Unfortunately, experts have recently confirmed that the seed councils either no longer function or have been captured by interest groups. This points to the challenges of maintaining momentum and effecting sustainable system change in these complex, crisis-affected contexts and amidst ongoing direct seed distributions.

²⁷ [Market Systems Development in Thin and Crisis-Prone Markets: Learning from the ÉLAN RDC Programme](#), p. 8 (K. Beevers, 2019)



CASE EXAMPLE

Adapting interventions to Respond to Shifting Contexts | Rural Resilience Activity Nigeria (RRA) Nigeria | Mercy Corps

RRA was a five-year program funded by USAID and operating in Northeast Nigeria to facilitate economic recovery and growth in vulnerable, conflict-affected areas by promoting systemic change in market systems. RRA worked on both the supply and demand for seeds, utilizing demonstration plots and field days, input fairs, and smart subsidies to build farmer awareness of, and demand for, improved and climate-adapted seeds. At the same time, RRA supported local seed producers, built a network of village-level agents, and connected both these market actors with larger seed companies, creating a more vibrant supply chain from seed production to retail sales. RRA educated the larger seed companies on the level and type of farmer demand, encouraged their investment, and created the Nigeria Seed Information Management System (NIGSIMS), an e-marketing portal/online marketplace for high-quality, certified seeds.

The COVID pandemic hit in 2020, mid-way through RRA, and shut down the global economy. Northeast Nigerian farmers were devastated, unable to shift production to markets, pursue other income-generating activities, or engage in any RRA interventions. In response, RRA pivoted its approach to a humanitarian response that included providing unconditional cash transfers to 47,387 farmers to enable them to meet immediate household needs without selling assets or consuming grain stocks. Farmers also used the cash to invest in agricultural inputs, including seeds, for the upcoming planting season. In addition, RRA provided cash to 5,560 local micro, small, and medium-sized enterprises (MSMEs) and 85 key intermediary actors, including seed suppliers, to ensure they could survive the pandemic-related economic collapse. For example, one seed supplier called GreenPal had been an RRA partner but the COVID-19 movement restrictions meant they could not sell their seed. GreenPal used the funds to purchase pallets to better store seed and to advertise toward seed sellers and wholesalers about the benefits of improved seeds. They also purchased a milling machine to grind the unsold rice and maize seed and sell it locally for household consumption. The revenue from the milling operation enabled them to keep their staff and, after the crisis eased, expand their network of sales agents. Once the movement restrictions had subsided and the economy began to recover, RRA refocused on its core market systems change interventions.

By the end of 2023, RRA had mobilized 20 national, regional, and local seed companies, who created new partnerships with 1,300 community-based seed producers, who then produced 7,130 metric tons of climate-adapted varieties during the 2022 and 2023 cropping seasons. This led to 142,600 smallholder farming households utilizing climate-adapted seeds, with an increase in crop productivity in that period of 44% for maize, 122% for rice, 139% for groundnuts, and 134% for cowpeas. After the RRA intervention, farmers continued to purchase a wide variety of seeds and the companies expanded independently, in some cases increasing their number of sales outlets and staff by 300-400%. Some also contacted research institutes to maintain their supply of high quality, climate-adapted seed.

“Once an invested network of seed companies coalesced, RRA used a multi-pronged approach to lower the cost of logistics and de-risk business operations for these companies to operate in the rural Northeast.”²⁸

Learn more:

- › [Building Climate Resilience in Northeast Nigeria Through the Adoption of Climate Adapted Seeds](#)
- › [Layering Cash into Market Systems Programs: Catalyzing Market-Driven Recovery in Nigeria](#)

28 [Building Climate Resilience in Northeast Nigeria Through the Adoption of Climate Adapted Seeds](#), pp. 9-10 (2024)

Challenges, Recommendations, and Lessons for Market-Based Seed Security

Every market-based seed security intervention involves trade-offs and no approach is without limitations. This review of program examples, evaluations, and tools reveals several knowledge gaps and challenges, as well as opportunities to strengthen future programming. Some of these challenges are ones commonly faced by many types of MBP programs in fragile and conflict-affected settings (useful resources are available on [CaLP](#) and [BEAM Exchange](#)). However, organizations applying MBP to seed security interventions also reported several sector-specific issues. These are outlined below along with recommendations for addressing them within the MBP Framework and calls for further discussion to fill remaining gaps.

Challenge: Conducting Integrated Assessments in Fragile Environments

A foundational step for any effective program is to fully understand the problem and context and then use that understanding to shape design and implementation. For market-based seed security interventions, this begins with conducting assessments that integrate both seed and market dynamics while capturing supply- and demand-side constraints. This is an essential step for pinpointing the specific seed constraint(s) in a given context—whether related to availability, accessibility, quality, or varietal suitability—and ensuring the response type is appropriate to address them. For example, direct seed distribution may be appropriate when seed availability is the main barrier, while cash or voucher-based modalities that enhance buying power might be used if seed access is the primary issue. However, most programs struggle to complete assessments that are both comprehensive and feasible. Balancing analytical depth with speed and practicality is especially difficult in fragile and conflict-affected contexts where time, resources, and access are limited. Additionally, assessments are often treated as one-off activities, rather than routine activities necessary to adapt program implementation as contexts evolve.

Existing tools, such as the [Seed System Security Assessment \(SSSA\)](#), [Seed Emergency Response Tool \(SERT\)](#), [Seed Systems in Conflict-Affected Areas: Context Analysis Tool \(CAT\)](#), and the [Rapid Seed Security Assessment](#) and market system resources such as the [Emergency Market Mapping and Analysis \(EMMA\)](#) and the [Comparison of Market Analysis Tools](#) offer useful guidance (in addition to the longer list of resources at the end of this document). However, many implementation teams still struggle to apply these tools, especially at the start of more emergency-focused programs. They are often seen as too technical to manage without specialist expertise, too time-consuming to complete, or inadequate for capturing both seed and market dynamics. There is currently no widely endorsed rapid assessment tool that is both simple enough for non-specialists and rigorous enough to guide effective programming.

Recommendation: Develop new and/or promote existing practical, standardized tools for rapid joint seed and market systems assessments. These tools should be light-touch, adaptable, appropriate for emergency and fragile contexts, and accessible to teams with limited technical expertise. They should offer “good enough” insights to quickly guide programming decisions. Joint work across agencies to consolidate existing tools, define practical standards, and determine which to widely endorse would greatly improve program start-up and quality.

Recommendation: Strengthen technical capacity in seed systems and market-based programming for humanitarian actors working in emergency settings. Many early phase humanitarian responders lack specific seed and market systems expertise, despite seed aid being a common intervention. Easily accessible training and guidance in the fundamentals of seed systems, market-based programming, and conflict-sensitive approaches are essential. Humanitarian actors must be able to use assessment tools, analyze and interpret findings, engage relevant seed system actors, and translate results into actionable program design. Resources such as the [SSSA Online Course](#) (which includes modules introducing users to the basics of seed and seed systems) and [MBP training modules](#) and [orientation videos](#) are a good starting point. Joint planning, shared terminology, and cross-learning between seed and market experts would also improve collaboration and lead to more effective seed security responses.

Challenge: Timing of Seed Availability

One of the biggest challenges in seed security programming is ensuring the timely arrival of quality seed at the start of the planting season. Delays result in farmers missing optimal planting times, which can reduce yields and delay harvests. This is particularly a challenge for Level 1 (Using Markets) direct interventions. Procurement processes take time and other challenges—such as delayed program approvals from donors or host governments, implementing agencies' complex procurement requirements, staffing limitations, and seed quality clearance—can all extend that process. At the same time, farmers must be confident they will be able to access necessary seed before they prepare their fields or purchase other inputs, labor, and services. If organizations have not conducted timely assessments, they struggle to meet hard deadlines with insufficient information on local actors and market conditions.

Recommendation: When feasible, move beyond direct distribution to MBP interventions that partner with the private sector. This can be purchasing, moving, and selling seed (Level 1) or using cash/ voucher modalities and/or grants to seed sellers to increase stock (Level 2-3). These approaches can reduce administrative, logistical and/or procurement burdens while leveraging local actors' knowledge and capacity. Having a realistic understanding of local actor capacities ahead of time can greatly help designing and implementing the most appropriate intervention.

Recommendation: Be realistic about timeframes and communicate accurate information as early as possible to program partners and farmers. Planning and coordination among implementing organization departments—including programs, procurement, and leadership—can help define timelines, identify bottlenecks, tailor procurement approaches, and ensure a sense of urgency to meet hard deadlines. Tailoring procurement approaches in advance to reflect a realistic understanding of local capacities can also speed up the process. Maintaining honest dialogue between donors and implementers about the impact of administrative delays could speed up approval processes in some situations. Programs should also have contingency plans for alternate activities if timeframes slip beyond planting windows.

Recommendation: Establish cross-agency working groups at both local and global levels. At the local level, these working groups could facilitate the exchange of experiences across organizations operating in similar contexts, allowing them to compare approaches and share effective solutions. At the global level, working groups could co-develop practical guidance, including recommendations for procurement modifications that streamline seed delivery and strengthen overall MBP practice, as discussed in more detail below.

Challenge: Seed Quality and Viability

Poor quality and/or counterfeit seed are a significant challenge for farmers even in normal times. It is vitally important that seed distributed or sold to farmers is viable and of good quality, i.e., that it will produce a healthy, vigorous crop with expected traits. Aid programs often default to supporting seed sold by formal suppliers on the assumption that it is higher quality but that is not always true.²⁹

Because of the seed viability challenge, many donors and host governments require implementing agencies to disburse certified seeds and/or to test the quality of seed supported by the program. This is important but can add significant time and cost to a seed distribution or voucher activity. It can also limit the types of eligible private sector partners to larger, formal companies rather than the local seed sellers farmers traditionally rely on. All of this undermines local seed systems and may not result in quality seed getting to farmers—rather, it ensures companies who can produce the right papers win the tenders.

While some entities have introduced flexible guidance—such as USAID/BHA’s³⁰ [Emergency Seed Security Guidelines](#) offering alternative quality assessment options and FAO’s Seed and Seed Quality Technical Information for Emergency Staff explaining how to perform germination tests in the absence of a reliable seed testing laboratory³¹—these documents are not well known and the flexibility on paper does not always help in practice. Implementing organizations’ procurement and contracting systems are designed to prioritize efficiency and minimize the chance of fraud. They maintain strict separation of roles and responsibilities between procurement and program teams. Any deviation from standard procedure requires waivers, and alternative quality checking processes require teams with the specialized knowledge and resources to manage them. In places like Syria or Sudan, the absence of functioning labs, limited staff expertise, and the sheer scale of procurement often make it unrealistic for implementing organizations to carry out truly effective seed quality testing. This reveals a systemic issue: current donor guidance is useful in theory, but organizations may lack the technical tools, training, or time to implement it at scale. Without a better solution tailored to fragile and conflict-affected contexts, poor quality seed will continue to circulate, and local actors will continue to be excluded.

“Two years ago, we received seeds from another organization, and after planting, it became clear that this type of sorghum, known as ‘Wad-Ahmed,’ is suited for irrigated projects that require a large amount of rainfall. It is not suitable for rain-fed projects, which led to its incomplete growth, and we ended up selling it as feed for livestock owners.”

(A Humanitarian Story: Bina’ Aljusur. CRS.)

Recommendation: Start (re)building local capacity to produce, test, and sell quality seed while immediate seed needs are being met. Programs can do this by including Level 2 and 3 interventions—such as supporting seed multipliers and government labs, or linking local seed sellers to national companies—early in a seed security response. This will address the challenge over the longer term. Utilizing cash modalities (Level 1-2) in the short term can remove the testing burden on programs, but it creates a grey area in quality control: using cash means programs do not have to test the seed yet have no mechanism to ensure its quality. Pairing cash transfers with concurrent investments in local seed testing capacity—while not an immediate solution—can help bridge that gap over time.

29 [Emergency Seed Interventions, Subsidies and Seed System Development](#), p. 6 (C. Longley, 2023)

30 As of this report’s publication, USAID had recently been integrated into the U.S. Department of State. The extent to which guidance developed under USAID will remain applicable within this new arrangement is still unclear.

31 [Seed and Seed Quality: Technical Information for FAO Emergency Staff](#), Annex 1, pp. 33-37 (FAO, 2009)

Recommendation: Develop alternative procurement and contracting processes for fragile contexts. Implementing organizations—particularly those managing seed security programs across multiple contexts or over extended periods—should design these processes with flexible quality assurance options that can be adapted to local realities. Global-level procedures alone are often insufficient. Country-level procurement teams must possess (or be trained in) knowledge not only in the technical mechanics of these alternative processes but also in the rationale behind them. Close collaboration between procurement and program staff is essential to ensure the selection and effective implementation of the most appropriate options. To support this shift, a sector-wide working group—comprising seed systems stakeholders including implementers, donors, and private sector actors—should be established. This group can build consensus around feasible alternatives and co-develop practical guidance and training materials to support uptake at both organizational and field levels.

Challenge: Inclusive Private Sector Partnerships

Timing challenges, rigid quality assurance requirements, and implementing agency procurement and contracting rules—often involving complex application processes and requiring formal companies with major bank accounts—create incentives to work only with larger, more sophisticated firms. The resulting engagement between agencies and market actors are often limited to contractual relationships rather than true partnerships. This can eventually distort markets and create monopolies, as a few seed companies become the sole private sector actors supporting a humanitarian response. For example, the Strengthening Livelihoods and Resilience Activity (SLR) in DRC found that, in addition to the challenges small- and medium enterprises (SMEs) faced with formal procurement processes, *“payment delays (often up to three months delay in payment), mean that smaller market actors do not have the cash flow and financing to participate in these larger, more profitable procurement processes.”*³²

Recommendation: In the immediate term, utilize cash methodologies (Level 1-2) to enable farmers to purchase seed from the seed seller(s) they prefer. This increases competition and strengthens local systems. Layering in Level 2 interventions, such as directly supporting local actors, and eventually Level 3 interventions that link the different levels of the seed system will build capacity of the local private sector actors preferred by farmers and ensure system resilience.

Recommendation: If direct distribution is necessary, enhance use of modified tender procedures to enable smaller local companies to participate in programs. Some organizations have done this already and may serve as models for wider adoption. Modifications include waiving full tender requirements in crisis contexts or starting with a simple expression of interest phase and then supporting a short-list of firms to complete full applications. The Seed Commercial, Legal, and Institutional Reform (SeedCLIR) report for DRC also recommends breaking tenders into smaller lots to enable small-scale seed suppliers to participate.³³

Challenge: Transportation Logistics

Transporting seed to last-mile locations is expensive and operationally difficult, particularly in fragile and conflict-affected areas. Road blockages, security checkpoints, and high fuel costs can delay delivery or prevent access altogether. These constraints are often exacerbated when humanitarian

32 [Private-sector Engagement Strategy: Catalyzing the Private Sector for Development in Ituri](#), p. 26 (Feed the Future DRC SLR, 2022)

33 [SeedCLIR:DRC](#), p. 37 (Feed the Future Enabling Environment for Food Security Project, 2019)

agencies rely on centralized distribution models. In contrast, local traders and private sector partners often have established networks, contextual knowledge, and greater flexibility to navigate access challenges. In Sudan in 2023, for example, private traders working with Mercy Corps successfully delivered seed to areas controlled by non-state actors—locations that were inaccessible to international agencies due to security restrictions.³⁴

Recommendation: Incorporate local and regional market actors as core, front-line partners in seed supply.

As detailed in the [Level 1 interventions table](#) (pages 12-13), larger traders often maintain networks to move seed to hard-to-reach and even high-risk areas, while local seed sellers and community groups have the knowledge and connections to get seed to farmers. Leveraging their capacities can reduce delays, lower costs, and improve reach as long as partnerships are structured to incentivize last-mile delivery. Having local actors at the forefront of the activity early on also reinforces local systems and makes the transition to more sustainable approaches in Levels 2 and 3 easier. Logistics strategies should align with broader MBP goals by building on existing networks and avoiding parallel delivery systems.

“While aid organizations often must perform logistical feats to move commodities in time for planting, medium to large traders can have a firm grasp of what it takes to move in-demand items (access to fuel, safety and security on the route including handling official and impromptu roadblocks and fees, navigation of government systems and requirements, etc.).”³⁵



Photo credit: Benny Manser/Mercy Corps (2011)

Challenge: External Influences

Governments can facilitate, direct, and restrict interventions, for example through rules and requirements related to food security, agricultural support, and humanitarian programming. At the same time, humanitarian organizations can also undermine MBP by setting community and market actors' expectations for free seed and other handouts. This can create farmer dependency, undermine local market actors and discourage sustainable investment. For example, in 2022, CRS reported that after more than two years of seed distributions in Kasai Central, DRC, local seed producers had no intention of selling directly to local farmers because they were confident humanitarian organizations would continue to buy all their seed.³⁶ In other places, multiple organizations have partnered with the same larger seed companies to expand local outreach,

³⁴ [Adapting a Market Systems Approach to Crisis in Sudan](#) (S. Muench et al., 2024.)

³⁵ [Informal Seed Traders: The Backbone of Seed Business and African Smallholder Seed Supply](#), p. 12 (L. Sperling et al., 2020)

³⁶ [Participatory impact assessment of CRS Ditekemena emergency seed interventions in Kasai Central Province, Democratic Republic of the Congo](#), p. 29 (E. Walters et al., 2023)

reducing competition, and undermining system resilience. Stronger coordination among humanitarian organizations and with local seed system actors is critical to avoid these unintended consequences.

Recommendation: Improve coordination among humanitarian actors and with local system actors and donors through interventions such as Level 1 humanitarian codes of conduct and Level 3 multi-stakeholder approaches. Existing coordination platforms, such as the Food Security Cluster and technical working groups, can play a key role in promoting guidance on MBP and the importance of aligning seed interventions with local market conditions. Humanitarian agencies can further strengthen coordination by operationalizing guidelines such as the 10P throughout their organizational strategies, technical guidelines, and program designs. Wider uptake and consistent application of the 10P across implementing agencies would help foster more coordinated and context-appropriate seed security programming. At the same time, without a clear driver from donors or government partners, traction for such coordination efforts—particularly developing and adopting codes of conduct—may remain limited. Donors should therefore take an active role in mandating and incentivizing coordination, as well as incorporating MBP language into their guidelines and promoting the 10P as a shared foundation for harmonized responses.

Recommendation: Capture and share lessons and evidence more systematically from market-based seed security programming in fragile contexts to inform stronger national, NGO, and donor policies and strategies. This includes documenting what works or does not in fragile settings, enhancing understanding of the different seed sources and modalities (including raising awareness of the MBP Framework) and highlighting practical ways of working through informal and formal seed channels. Implementers and donors should jointly invest in cross-program learning, comparative analyses, and learning platforms. Strategic use of this evidence can help shift entrenched norms around direct seed distribution and promote policy environments that enable market-based approaches to scale.

Challenge: Information Consolidation

While there are many informative reports and useful guides on seed security and market-based programming, they are dispersed across numerous platforms, making it difficult for humanitarian actors—especially those without deep technical expertise—to find practical, actionable tools. The closure of several U.S. Government-supported websites has further limited access to key resources. The MBP community benefits from platforms such as [Markets in Crises \(MiC\)](#), while the MSD community is supported by the [BEAM Exchange](#), both of which consolidate resources and facilitate active communities of practice. For seed, [SeedSystem.org](#) serves as the foundational hub for technical materials and learning documents, and [ISSD Africa](#) has created a community of practice that generates important evidence and fosters exchange across regions. However, there is currently no seed system platform that consolidates resources and builds an active cross-learning community of practice to the same extent as MiC or BEAM, and no specific platform yet exists that brings together market systems and seed security guidance and communities.

Recommendation: Develop a centralized, open-access platform that bridges the divide between market systems and seed security communities (or determine which amongst the existing platforms should play this role). This “one-stop shop” should curate practical tools, case studies, policy guidance, and learning briefs to support practitioners implementing effective MBP in fragile contexts. Linking this platform to existing sites would reduce the learning burden and promote cross-sectoral information exchange.

Conclusion

Seed-related interventions are an essential feature of humanitarian responses in agricultural contexts but, to be effective, they must be timely, context-appropriate, and avoid undermining the local systems farmers rely on. The MBP Framework offers a valuable structure for improving seed security programming in a way that strengthens seed systems over the long term and supports the resilience of local communities. When a diverse set of interventions are applied at varying levels of market engagement they can be tailored to different program objectives, timeframes, and contexts, enabling humanitarian actors and their partners to support and strengthen seed systems during crises and afterwards. While no single approach applies to every context or market level, some overarching lessons emerge:

- › **The use of seed distributions and subsidies must be well-targeted, time-bound, and appropriately priced.** In acute emergencies, distributions or subsidized support may be justified; but without clear exit strategies and pricing that reflects local market conditions, these interventions can entrench dependency and crowd out local seed system actors.
- › **Subsidies should be quickly reduced and replaced by market-based approaches.** Where possible, programs should limit full subsidies to one season and prioritize transitioning to market-based interventions that build farmer capacity, engage a broader range of actors, and support resilience across the seed system. The MBP Framework provides a range of tested modalities for consideration, from expanding seed seller outreach to integrated system strengthening.
- › **Effective seed security programming requires investment in local capacity and broad collaboration with a range of market actors.** Programs that partner with, and invest in, various stakeholders, including local seed sellers, seed multipliers, community-based structures, and government entities help facilitate functioning seed systems and reduce the need for external aid. Effective use of MBP approaches requires building trust with local actors and maintaining a strong understanding of the evolving context, including the specific needs of local farmers and the market actors they rely on.
- › **Sustainability and flexibility must be embedded into program design.** Operating effectively in fragile and conflict-affected environments requires programs that can adapt to changing conditions without losing sight of long-term goals. Programs must be designed with the flexibility to shift between the MBP Framework's levels of market engagement depending on context and shocks. Prioritizing sustainability in program design from the outset means beginning with strong assessments, including clear exit strategies, focusing on lasting behavior change and ensuring technical teams have the knowledge and resources to remain responsive to dynamic conditions.
- › **Donor guidelines and operational processes should be adapted to better support program aims.** Restrictions and procedures to limit misuse of funds and ensure seed quality are necessary but have inadvertently incentivized implementing agencies to prioritize direct distributions, distort the local systems farmers depend on, and undermine long-term resilience.

Applying the 10P and the MBP Framework to seed security programming requires more than minor adjustments. It demands an intentional shift from treating seed aid as a logistics exercise to addressing it as a systems challenge with its own technical nuances. And it requires programming

grounded in solid assessments of the current context with interventions tailored to specific objectives, timeframes, and settings. Many tools, resources, and rich learning already exist and can be mobilized for this purpose. But incentives, coordination mechanisms, and funding structures must align to support their use.

The examples highlighted in this review show that MBP for seed security in fragile contexts is not only possible, it is already happening. In Nigeria, South Sudan, Uganda, DRC, and beyond, implementers are partnering with local and regional seed sellers, informal multipliers, and government partners to deliver aid that aligns with local realities. What is still needed is clearer guidance, stronger evidence, and better collaboration—particularly among market systems and seed systems experts and humanitarian responders—to make these practices the norm.

Humanitarian organizations are navigating an evolving aid landscape and a future of diminishing resources. Flexibility, cost-effectiveness, and local ownership are increasingly prioritized and market-based approaches to seed security offer a promising path forward. The challenge now is to scale what works, document the learning, and develop a seed aid system that really does meet urgent needs, support foundational seed security development, and drive long-term resilience.

Resources

Cash and Voucher Resources

CALP Network (n.d.). Cash and voucher resources. <https://www.calpnetwork.org/cash-and-voucher-assistance/> See also CALP Library: <https://www.calpnetwork.org/library/>

Cash for Seed Technical Note

Catholic Relief Services (CRS). (2025). *Cash for seed technical note*. https://fscluster.org/sites/default/files/documents/CRS_Cash%20for%20Seed_Final-Feb%202025-compressed-1.pdf

Delivering Better Together: Standard Operating Procedures for Oxfam's Approach to Cash and Voucher Assistance

Oxfam. (2022). *Delivering better together: Standard operating procedures for Oxfam's approach to cash and voucher assistance*. <https://www.calpnetwork.org/publication/delivering-better-together-standard-operating-procedures-for-oxfams-approach-to-cash-and-voucher-assistance/>

Guidelines for Developing Sustainable Farmer Access to Quality Seeds: Some Do's and Don'ts

Ferris, S. (2023). *Guidelines for developing sustainable farmer access to quality seeds: Some do's and don'ts*. Feed the Future Global Supporting Seed Systems for Development (S34D). <https://fsnnetwork.org/resource/guidelines-developing-market-based-farmer-access-quality-seeds-some-dos-and-donts>

Markets in Crises (MiC) — Comparison of Market Analysis Tools

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Market-Based Programming — What's It All About

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Markets in Crisis (MiC). (2022). *The Market-Based Programming Framework*. <https://marketsincrises.net/resources/market-based-programming-framework/>

Minimum Economic Recovery Standards (MERS), Third Edition.

The SEEP Network. (2017). *Minimum economic recovery standards* (3rd ed.). Washington, DC, and Rugby, UK: The SEEP Network and Practical Action Publishing. <https://handbook.hspstandards.org/en/mers/#ch001>

Rapid Seed System Security Assessment (RSSSA) Tools

Catholic Relief Services (CRS). (n.d.). *Rapid seed system security assessment (RSSSA) tools*. <https://www.crs.org/our-work/research-publications/rapid-seed-system-security-assessment-rsssa-tools>

Review of Existing Last Mile Seed Delivery Models and Approaches

Catholic Relief Services (CRS). (2020). *Review of existing last mile seed delivery models and approaches*. https://www.crs.org/sites/default/files/2025-06/review_of_existing_last_mile_seed_delivery_models_and_approaches.pdf

Seed and Seed Quality: Technical Information for FAO Emergency Staff

Food and Agriculture Organization (FAO). (2009). *Seed and seed quality: Technical information for FAO emergency staff*. https://www.fao.org/fileadmin/templates/tc/tce/pdf/Appendix_14_Seed_and_Seed_Quality_for_Emg.pdf

Seed Emergency Response Tool (SERT): Guidance for Practitioners

Sperling, L., Mottram, A., Ouko, W., & Love, A. (2022). *Seed emergency response tool: Guidance for practitioners*. Produced by Mercy Corps and SeedSystem as part of the ISSD Africa activity. <https://issdafrica.org/2024/01/05/seed-emergency-response-tool-sert/>

Seed System Security Assessment (SSSA)

SeedSystem. (n.d.). *Seed system security assessment (SSSA)*. <https://seedsystem.org/assessments-and-e-learning-course/seed-system-security-assessment/>

Seed Systems in Conflict-Affected Areas: Conflict Analysis Tool (CAT)

Sperling, L., Holmquist, C. T., Ouko, W., Mottram, A., & Love, A. (2022). *Seed systems in conflict-affected areas: Context analysis tool (Version 1)*. Produced by Mercy Corps and SeedSystem as part of the ISSD Africa activity. https://issdafrica.org/wp-content/uploads/2022/07/CAT_Final_English.pdf

SEADS Standards for Supporting Crop-Related Livelihoods in Emergencies

SEADS. (2022). *Standards for supporting crop-related livelihoods in emergencies*. Rugby, UK: Practical Action Publishing. <https://doi.org/10.3362/9781788532419>. (See Chapter 6 on seeds and seed systems.)

Six Lessons for Seed Sector Development in Fragile States

Catholic Relief Services (CRS). (2023, October). *Six lessons for seed sector development in fragile states*. <https://fsnnetwork.org/resource/six-lessons-seed-sector-development-fragile-states>

Study on Cash Transfers for Seed Security in Humanitarian Settings

Keane, J., Brick, D., & Sperling, L. (2019). *Study on cash transfers for seed security in humanitarian settings*. Feed the Future Global Supporting Seed Systems for Development (S34D). <https://fsnnetwork.org/resource/study-cash-transfers-seed-security-humanitarian-settings>

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SeedSystem & Mercy Corps. (2024). *Ten Guiding Principles for Good Seed Aid*. SeedSystem and Mercy Corps, as part of the ISSD Africa activity. <https://issdafrica.org/2024/10/17/new-document-the-ten-guiding-principles-for-good-seed-aid/>

The Role of Seed Vouchers and Fairs in Promoting Seed Market Development: Opportunities and Limitations

Croft, M., Davis, V., Ferris, S., Longley, C., & Templer, N. (2021). *The role of seed vouchers and fairs in promoting seed market development: Opportunities and limitations*. Feed the Future Global Supporting Seed Systems for Development (S34D). https://www.crs.org/sites/default/files/2025-06/role_of_seed_vouchers_fairs_in_seed_market_development.pdf

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