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AGRA
Emerging Results
2017 - 2020

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Executive Summary

AGRA's vision is to drive inclusive agricultural transformation on the African continent, changing the lives and livelihoods of smallholder farmers. During our first decade, we focused on addressing barriers to providing farmers with the improved inputs they would need to boost productivity. This approach has limitations, of course. Change at scale requires systemic change – and systemic change demands a different lens and a broader scope of work. Starting in 2017, we began investing at multiple levels of the agricultural ecosystem, strengthening the key elements necessary for transformation.

At the national level, we work with governments to build momentum for country-led transformation. Globally, no agricultural transformation has occurred without a committed and capable state. This is foundational. With the right enabling environment, non-state actors – particularly agricultural businesses – can invest confidently in growth and serve as the engines of scalable, sustainable change. Absent this, meaningful progress becomes immeasurably harder. Thus AGRA collaborates closely with governments as they set agricultural strategy, plan and coordinate investments, update policy, and deploy resources.

We also recognize that agricultural transformation cannot be driven by AGRA or any other individual actor. The problem is too big, the underlying causes too complex, and the resource demands are too great. A broad range of partners is necessary to effect change, and they must be coordinated in a complementary to offer the right technical and financial resources, directed in the right ways, and deployed at the right time. Lack of information and a high degree of uncertainty makes this difficult. AGRA helps bridge this divide by leveraging our capabilities, connections, and convening power to build and expand partnerships on the continent.

AGRA's investments in building capable states and strategic partnerships are to establish an environment in which the private sector can grow and thrive. The agricultural systems that farmers rely on – inputs, extensions services, distribution, and output markets – will only be sustainable if they are built around businesses that can offer goods and services in a profitable, scalable way. This requires the right enabling environment, of course, but it is also dependent on market conditions in which the private sector can confidently invest and expand. Uncertainty about the business case for producing certified hybrid seed or growing the agrodealer network or developing a new fertilizer blend can easily lead to a chicken-or-egg problem – and inaction. AGRA intervenes by taking a strategic, integrated approach – identifying the most impactful interventions for the local context, coordinating among the actors that can fill the gap, and selectively de-risking growth opportunities.

Highlights of our accomplishments include:

- **AGRA went for scale as the only way to help catalyze inclusive agriculture transformation.** It has succeeded, directly reaching 10.1 million farmers, with indirect reach of 16.8 million through our PSC work, and 2.3 million through our partnership work. This provides our *gateway to impact* – and AGRA has come through on its targets. While we await outcome survey data for 2021 and 2022, we have collected and analyzed available data and can conclude that we have supported and catalyzed change at farmer, systems, and national level.

- **At farmer level,** we have seen 62% of our supported farmers change their practice, largely due to our work at systems level. There is emerging evidence that farmers are adopting technologies, seeing increases in yields, bringing more produce to market, and increasing their incomes.

- **AGRA has significantly strengthened input markets at systems level:**

    - **The development of seed markets** across AGRA's countries of operation has led to increasing development of seed companies, Early Generation Seed, commercialization, and adoption.

    - **Investments in agrodealers and village-based advisers** have seen farmers better reached, equipped and empowered. Evidence shows VBAs well along the path to sustainability, while data shows agrodealers sustaining their business, with steady or increased numbers of farmers supported, and revenue holding steady or increasing.

- **AGRA demonstrated and used the powerful and systemic effects of consortia in creating a more vibrant private sector** and delivering an integrated approach to 7.9 million (78%) of our farmers who were directly reached. Incremental investment of some $660 million (15x incremental capital) was tracked around our consortia investments.

- **AGRA significantly catalyzed change through our PSC work,** prioritizing successfully, and building important linkages with our work in systems and the private sector.

    - **As an African institution, AGRA has been established as a trusted go-to partner for governments** across its areas of operation. It engages both widely and deeply, and has been able to document improvements due to its work with partners in supporting governments.

    - **The Flagship model of mobilizing governments to lead nationally prioritized investment plans** has been successful. Design time has reduced, national ownership and prioritization has increased, and some $1.4 billion of resources have been mobilized.

    - **At policy level, AGRA was able to significantly support policy reforms at both micro and macro levels,** guided by government priorities, and has seen reform implemented in 60% of its cases.

    - **Our regional food trade investments** are leading to policy reforms to remove barriers to trade and new approaches to data, such as the Regional Food Balance Sheet. We have also supported improvement of market systems and off-taker engagement that more effectively connects farmers and structured trade opportunities.

- **AGRA sees emerging evidence that its work in supporting partnerships is paying off, addressing barriers** that hold back the sector. AGRA has worked with 100 institutions, leveraged $141 million, and worked with 875 SMEs. The AGRF deal room has been established as the preeminent platform for connecting investors and opportunities, with a 20-fold increase of capital sought by SMEs for example.

- **AGRA has moved systematically from gender-neutral to gender-responsive programming.** We supported some 3.5 million women farmers directly, with some countries seeing changes in practice by female farmers of 55%. We built the 'Value for Her' initiative into the pre-eminent gender platform for agribusiness. Much yet remains to be done in the area of inclusion, which AGRA will further expand in our next strategy.

As we assess AGRA's work over the last four years, we see strong evidence to support continued emphasis on systemic change. We observe improvements in how governments set agendas, how agricultural businesses are growing and attracting capital, and how smallholders are farming and connecting to markets. We can see the importance of AGRA's role as a credible African institution and voice that works effectively across these different levels of the ecosystem. There are many actors that we work with – implementers and service providers, multilaterals and financiers and donors, research institutions and industry bodies, private companies and public agencies – and our collective impact is enhanced as AGRA uses its unique position to convene, coordinate, and partner.

We also see a strong argument to continue investing to increase smallholder productivity. Too much of Africa's growth in agricultural output comes from expansion of land under cultivation, rather than improvements in crop yield.[1] Yet productivity remains low relative to the rest of the world, which means significant potential has not been tapped. Increasing productivity – rather than simply farming more land with low yields – will become more important as land pressures increase and expansion leads to environmental degradation and loss of biodiversity. The evidence is clear: better seeds, better fertilizer – planted and applied as per good agronomic practices – will increase smallholder productivity. Embedding such changes means meeting farmer demand, not trying to force supplier-led change. AGRA's market development work, including the scaling of village-based advisors and expansion of agrodealers – is thus designed to create a viable market that is self-sustainaing beyond our involvement. We know efforts to boost productivity should also be contextualized through local research and development, which is AGRA's investments

[1] Thomas S. Jayne *and* Pedro A. Sanchez, Agricultural Productivity Must Improve in Sub-Saharan Africa", *Science* **372** (6546), 1045-1047.

include locally-adapated seed varieties, domestic production of early-generation and certified seeds, and soil mapping – all steps towards fostering robust, domestic agricultural systems.

We acknowledge that we have much to learn. Our first ten years focused more narrowly on the inputs side of things – increasing the number of agricultural researchers, improving the supply of better seed varieties, changing farmers' approach to soil management. Our evolution towards systems-level work meant stretching ourselves strategically and tackling bigger, more intractable problems. Not everything that AGRA has tried has worked, and the effectiveness of some interventions are yet to be validated. For example, we can see evidence that farmers we have reached are changing agronomic practices, but there is variance across countries. Not all farmers have moved out of subsistence into commercial agriculture, and adoption of post-harvest technologies is still modest. We have had success scaling extension services to last-mile farmers through village-based advisors (VBA), who are increasingly connected to commercial opportunities. However, we have had mixed results instutionalizing the VBA with local and national governments. Within inputs, we have strengthened seed systems across countries – and then seen some of these gains eroded with natural disasters and the COVID pandemic, indicating that greater business resilience must be built in. Part of the answer for both resilience and growth is access to financing, of course, but we are still in the early stages of testing out de-risking and blended finance innovations; we have not yet proven that we can mobilize capital at scale from financial service providers wary of risk in the agricultural sector.

In our state capabilities work, we have also learned important lessons. AGRA has taken important strides with national governments, but we see the need to add a more intentional regional and continental strategy. We have not always aligned effectively with stakeholders outside of agriculture, such as ministries of finance or presidential delivery units, or aligned our efforts with a given cuontry's budget cycle or ROI expectations. Similarly, we have struggled in our policy work when we have not identified the right "champion" or when our timing has not matched with the right "window" for reforms. We have also concentrated much of our effort on seeds and fertilizer, but recognize the importance of investing in resilience, post-harvest systems, and nutrition, as well as incorporating a stronger climate adaptation and gender lens into our work.

We also recognize that AGRA has taken the first steps on important issues of sustainability and gender inclusivity, but we are at the start of a long journey. We recognize the threats to the unique landscapes and biodiversity of the continent and how climate change and environmental degradation will be particularly costly to smallholder farmers. Our investments in smallholder productivity also contributes a higher leaf area index, and we can estimate the resulting increase in carbon sequestration per hectare. Our work on soil health protects above- and below-ground biodiversity, and training farmers on integrated soil fertility management and targeted application of fertilizer helps protect it and embed sustainable practices. However, we acknowledge the need to do more – including improvements in water management, the integration of agroforestry trees, and use of minimum tillage and green manure cover cropping. Similarly, there is much more work to do to empower women. AGRA has shifted from a gender-neutral organization to becoming intentional and even transformative in our investments. Our efforts to improve opportunities for women farmers and women-owned/led SMEs are taking us in the right direction, but we also acknowledge that AGRA has much more work ahead to increase our impact in gender inclusivity.

As we look across AGRA's areas of investment since 2017, we provide the logic for our interventions and emerging evidence for results; our focus is on systemic change, and measuring impact at this level is not simple. Helping a government plan and operate differently, building long-term partnerships, and revamping the systems that deliver key goods and services to farmers requires a long time horizon. There is not a simple metric to reflect the results, for example, of a policy change on agriculture businesses or its eventual downstream impact on farmers. Nevertheless, we have chosen to review what we have learned from the first four years of our strategy and to find evidence of our impact. In many cases, this requires looking at what we would consider *leading* indicators that are initiating change, but whose effects will only become evident with time. Policy reform, improvements in the delivery capacity of a government agency, or the establishment of M&E tools for the public sector are all critically important, but may not have an immediate payoff. New private sector investment that AGRA has helped catalyze is strong evidence for a business case to expand rice milling capacity or mechanization services, for example, but there are not immediate, direct effects on the livelihoods of smallholder farmers.

We also acknowledge that agricultural transformation is a fundamentally difficult challenge – eluding governments and development partners across the continent for the last 50 years. Deeply-rooted structural impediments impede the development of the sector, resulting in long term rural poverty and food insecurity. AGRA was created to help governments and farmers address these challenges, irrespective of the difficulty of doing so. As an institution of limited means, AGRA exists to help catalyze and support change. We have embarked on an extensive exercise of data collection at outcome level, but believe we need at least three years of outcome data to begin drawing conclusions, and

even then, it will be difficult to account for the extensive externalities inherent in the rural and agricultural economy, beyond what AGRA is able to support with its partners.

This document has therefore been developed to gather and analyze *existing* data, with a number of proxy indicators that can be used that may indicate what change might be emerging at farmer, system and government level. This data can sometimes be limited, but we consider it best to present what we have available and engage in an open dialogue with partners and critics, even as additional data gets collected over time. Also, depending on the field of work, AGRA works with an extensive array of partners to achieve its objectives. Change is almost always attributable to these partnerships between national actors, and international actors such as AGRA.

Our objective in this document is not to claim that AGRA has gotten every strategy and decision right, but rather to reflect – and to invite others to engage in dialogue with us – on what we have achieved to date, what appears to be working, and where we are still learning.

Note on Data Sources

AGRA collects and analyses data through different sources. These include surveys of smallholder farmers, village-based advisers, agrodealers and other agricultural SMEs through targeted "rapid impact" studies, phone and in-person surveys, and longer-term outcome surveys. These surveys are conducted by third-party organizations including KIT Royal Tropical Institute, Ipsos, and GeoPoll and are generally focused on organizations and rural households that have been reached through AGRA's interventions. AGRA invests significant resources to collect comprehensive, robust data across a very wide range of indicators that reflect the scope of our work on the agricultural ecosystem. This provides a broad base of data that allows for farmer- and system-level analysis and comparisons over time and across geographies. We have supplemented that in this report with program reports and case studies.

We acknowledge certain limitations in our data. First, as noted above, the long-term nature of systemic change means that not all of AGRA's activities and outputs will manifest in clear impact in a short period of time. Further, we note that our strategy development did not suddenly cease in 2017 – some aspects of the strategy continued to evolve, so the timing of our baseline data varies across intervention areas. Second, the COVID pandemic slowed our data collection in 2020, and we believe it adversely affected both smallholder farmers and SMEs. Finally, we acknowledge that limited resources require us to maintain a narrow focus in our data collection to those geographies and communities where AGRA has invested. This means we do not have comparable nation-wide data that could serve as a counter-factual data set for the farmers, businesses, and other organizations that were outside AGRA's focus areas.

Impact on Smallholder Farmers

Introduction

AGRA's overarching vision is to contribute to inclusive agricultural transformation on the African continent, which translates into better livelihoods and food security for smallholder farmers. Our strategy, interventions, and investments focus on strengthening the foundational elements of the overall agricultural ecosystem – a capable public sector, strong partnerships, and strong agricultural systems driven by a vibrant private sector. While we do not work directly with smallholder farmers, we work at the national and systems level to improve opportunities that ultimately lead to better outcomes at the farm level.

Our expectation is that smallholder farmers benefit from our ecosystem investments. As AGRA's systems-level interventions take effect, we should see positive impact for farmers themselves. A smallholder that is served by better-coordinated, well-functioning systems for inputs, extension services, distribution, and output markets has more knowledge and more choices, and is therefore equipped to improve how they farm. This should be evident in a few key ways:

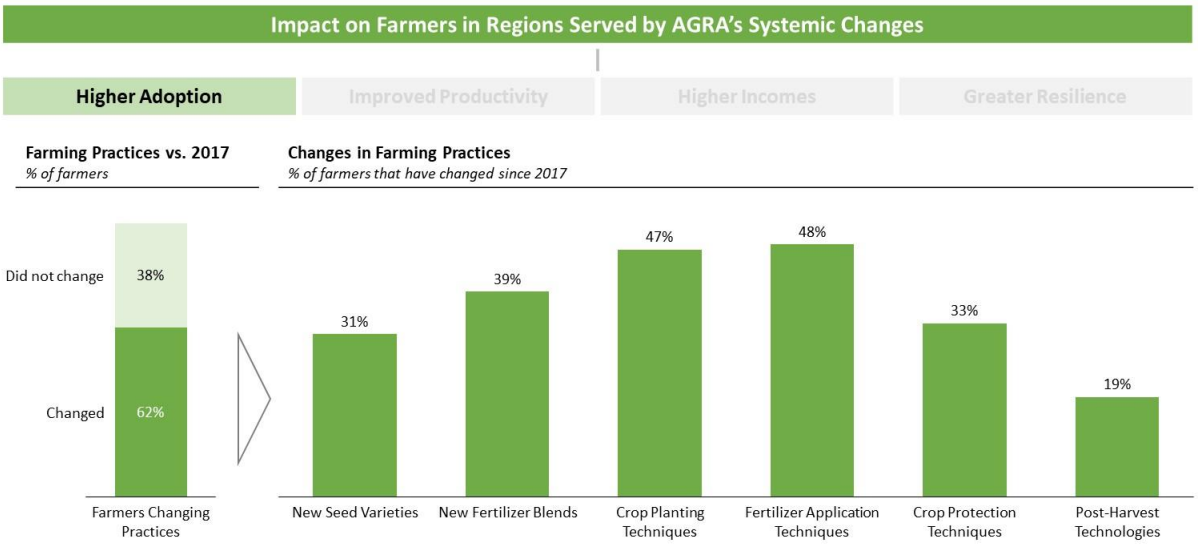
- **Increased adoption** of good agronomic practices as VBAs build awareness, access to agrodealers improves, and as improved inputs and technologies become more affordable and appropriate
- **Higher productivity and output** as better inputs and practices help farmers increase yields, grow higher-quality crops, and improve post-harvest management
- **Increased incomes** with better production, higher quality, and access to structured markets
- **Greater resilience** in crop quality, surplus, and income predictability as farmers benefit from a functioning, profitable private sector that can sustain the improved agricultural systems that serve them

Our Impact on Farmers in AGRA Regions

We conduct regular surveys of farmers in the sub-national geographies that we serve, as well as the VBAs, off-takers, and SMEs that are part of the agricultural systems that AGRA has invested in. Across our 11 focus countries, we can see evidence that our systems investments are translating to positive downstream impact on farmers in the areas reached by AGRA's consortia or other interventions.

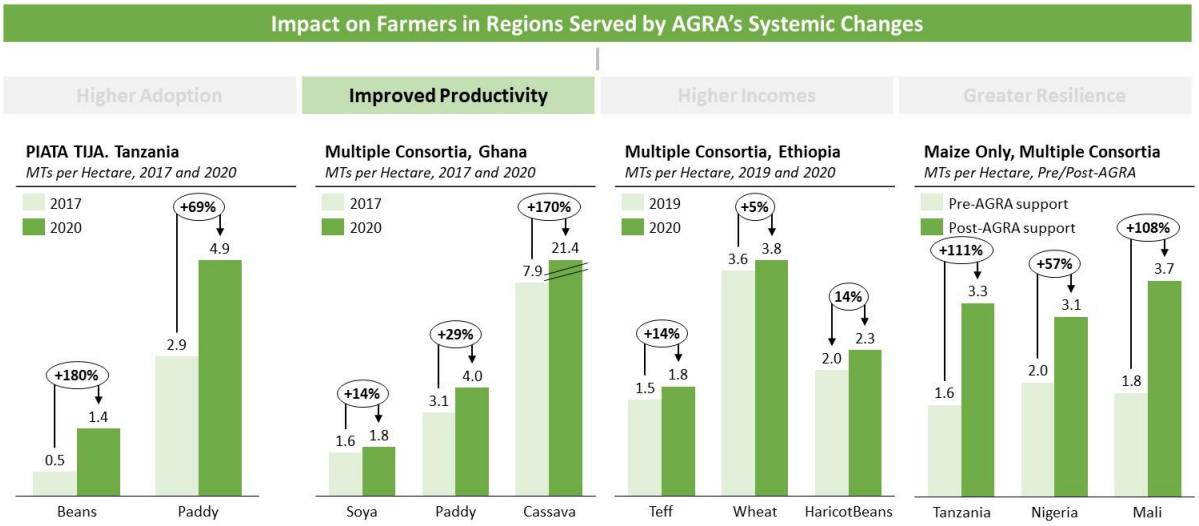
Smallholders report adopting new practices across a range of areas. While many farmers in AGRA countries have already adopted improved hybrid seeds or fertilizer, we are also observing changes in the way farmers plant, apply fertilizer, and protect their crops.

Figure 1: Adoption of New Farming Practices



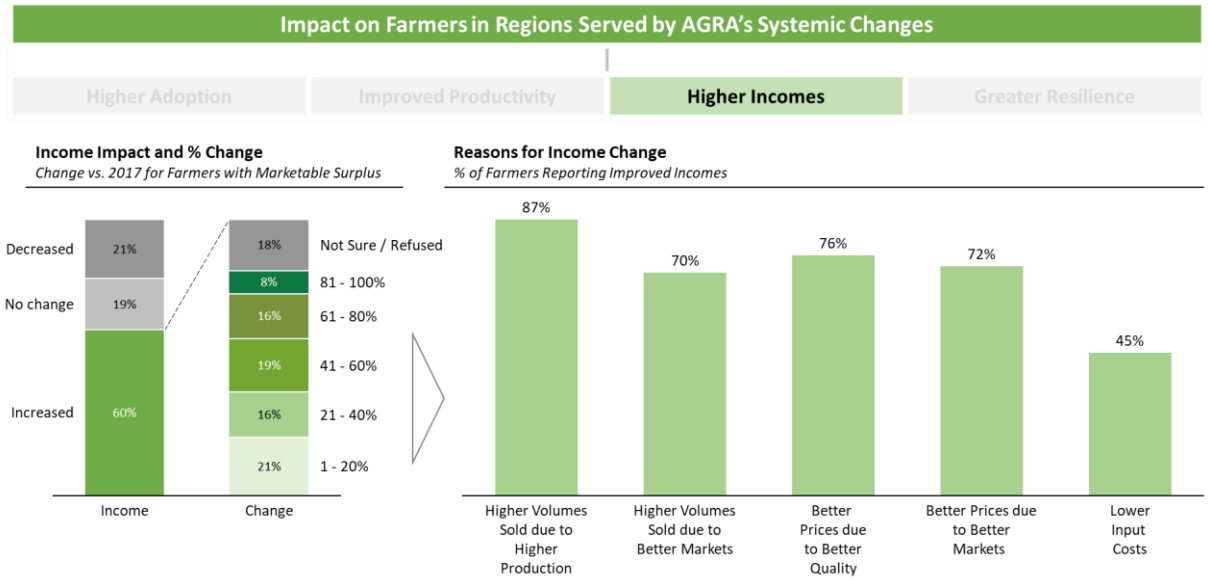
These better practices are translating into increases in yields. While there can be significant variability in yields across geographies and seasons, we are starting to see evidence of meaningful gains in average yields across a range of crops for farmers served by our consortia.

Figure 2: Improvement in Productivity



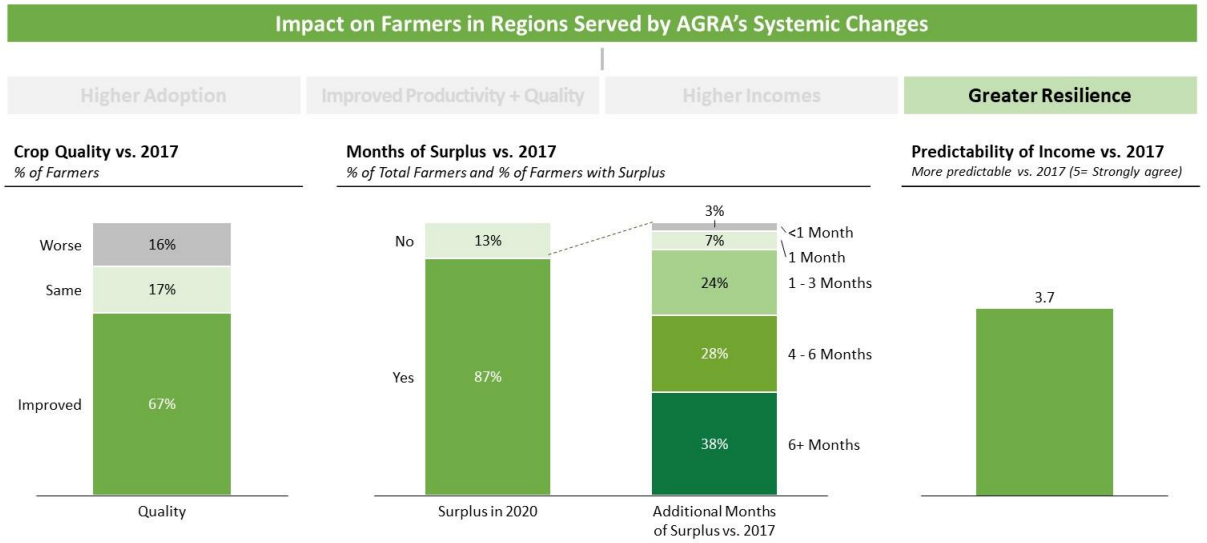
Better productivity is also leading to an increase in incomes for many farmers. Among farmers who have reported increased incomes in 2020 compared to 2017, nearly 60% have experienced income growth of 20% or higher. Multiple factors have contributed to this, most notably increase in total production, better quality, and improved access to structured output markets.

Figure 3: Increases in Income



Finally, there is evidence that this impact is contributing to more resilient farmers. Two-thirds of farmers report that their crops have higher quality – with nearly one-third noting better resilience to drought and pests. The vast majority of farmers had production surpluses in 2020, with 66% reporting that compared to 2017, their surpluses have increased by at least 4 months. We also see evidence that this is gradually translating into a view that incomes are somewhat predictable – an encouraging sign in communities in which subsistence farming is common.

Figure 4: Improvements in Resilience Factors

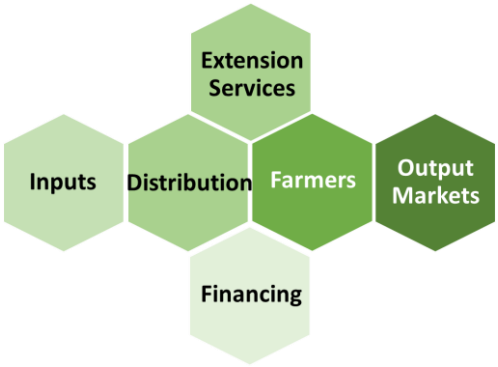


The evidence of progress and impact is encouraging, but we are acutely aware that more progress is needed. Reported productivity, for instance, is still far behind global benchmarks, and a significant share of farmers still produce for on-farm consumption, rather than commercial markets. Use of post-harvest technologies is growing, but remains modest across most markets; we expect these to increase as access to markets improves and the cost-benefit ratio for changing post-harvest management changes. The impact of climate change will only worsen, increasing the urgency of helping smallholder farmers find cost-effective ways to become more adaptive.

AGRA also recognizes the need to adopt a more intentional gender inclusion strategy. Across our focus countries, women farmers reached through our investments are mostly keeping pace with their male counterparts – with similar percentages in most markets reporting improved crop quality, higher incomes, and predictability of income. Yet there remain slight gaps on most metrics, most notably the share of women farmers who adopted new practices over the last few years. Moreover, these gaps are worse in some countries, with women lagging slightly more in Ghana, Nigeria, and Tanzania, for instance. Additional information on AGRA's work to date is provided in the *Gender Inclusivity* section.

Impact on Agricultural Systems and the Private Sector

Introduction



Functioning, efficient agricultural systems are key to sustained, scalable change that lead to agricultural transformation for smallholder farmers. A capable state creates an enabling environment and strategic partnerships leverage technical and financial resources, as will be reviewed below in the *Country-Led Transformation* and *Strategic Partnerships* sections. Our investments in those areas are not ends unto themselves, but to transform agricultural systems, oriented primarily around private sector firms that must thrive to serve farmers. Seed and fertilizer systems deliver the improved inputs that lead to better quality crops and higher yields. Extension systems provide information on good agronomic practices and develop markets for improved inputs, and distribution systems move physical goods from suppliers to last-mile farming communities. On the other side, well-functioning output markets provide attractive post-harvest options and, when needed, the financial sector facilitates the flow of capital and credit to agricultural SMEs and farmers.

However, in much of sub-Saharan Africa, the private sector is not fully delivering the agricultural systems that farmers need. For example, many countries have limited capacity to develop and produce improved seeds, and farmers may still rely on old, open-pollinated seed varieties. Similarly, fertilizer blends may not be suitable for local conditions, and production may be insufficient to meet market. Even where inputs are available, the geographic coverage of the agrodealer distribution network may be poor and too far away from a large share of farmers. These and other systemic limitations leave smallholders ill-equipped to change their agronomic practices, increase production, and operate more profitable farms. We observe common challenges across the systems of many countries:

- **Lack of upstream firms to develop appropriate inputs** for the local market, including early-generation seeds, certified seeds, or fertilizer blends
- **Chicken-or-egg dilemma** where market demand for key agricultural goods and services remains nascent, deterring the private sector from investing in supply
- **Narrowly-focused and fragmented interventions** address specific needs for smallholder farmers, but the impact is limited by the failure to address broader, systemic challenges

AGRA aims to improve the livelihoods of smallholder farmers by investing in the systems around them. We had already helped countries improve aspects of their inputs value chains, particularly for seeds and fertilizer. In 2017, we broadened our scope to work more deliberately at the system level. Rather than targeted interventions, such as only introducing new seed varieties or training new African agricultural researchers, we looked for coordinated, multi-pronged interventions that would address different points of system failure at once. At the heart of this work is a commitment to strengthening the private sector-driven agricultural systems that will be the driver of scale and sustainability. We help improve systems by supporting the businesses that comprise them. This work thus encompasses stimulating market demand, coordinating among private sector actors, and de-risking investment and expansion.

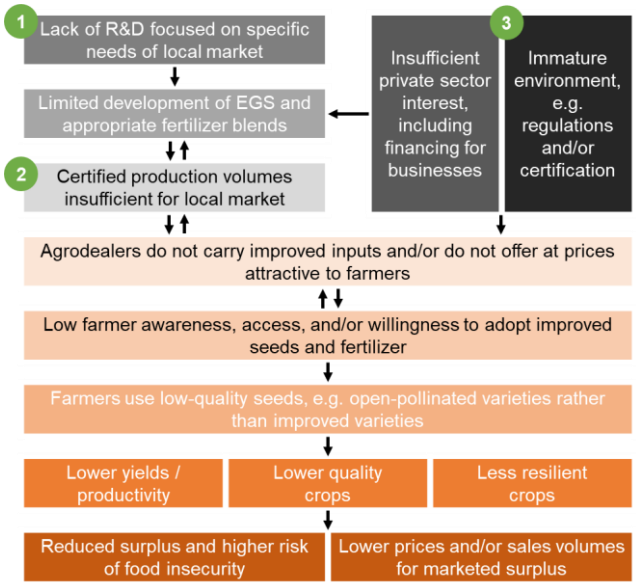
Our Impact on Seeds and Fertilizer Systems

In our early years of operation, AGRA helped countries make significant progress in improving their input value chains. We had supported the introduction of new fertilizer blends and seed varieties. Yet it was evident that a number of issues still stymied these systems:

1. **Limited research and development support** to tailor products to the needs of the local market
2. **Insufficient domestic production volumes** to meet potential local market demand
3. **Weak regulatory environment** to oversee registration and certification to protect integrity of input systems

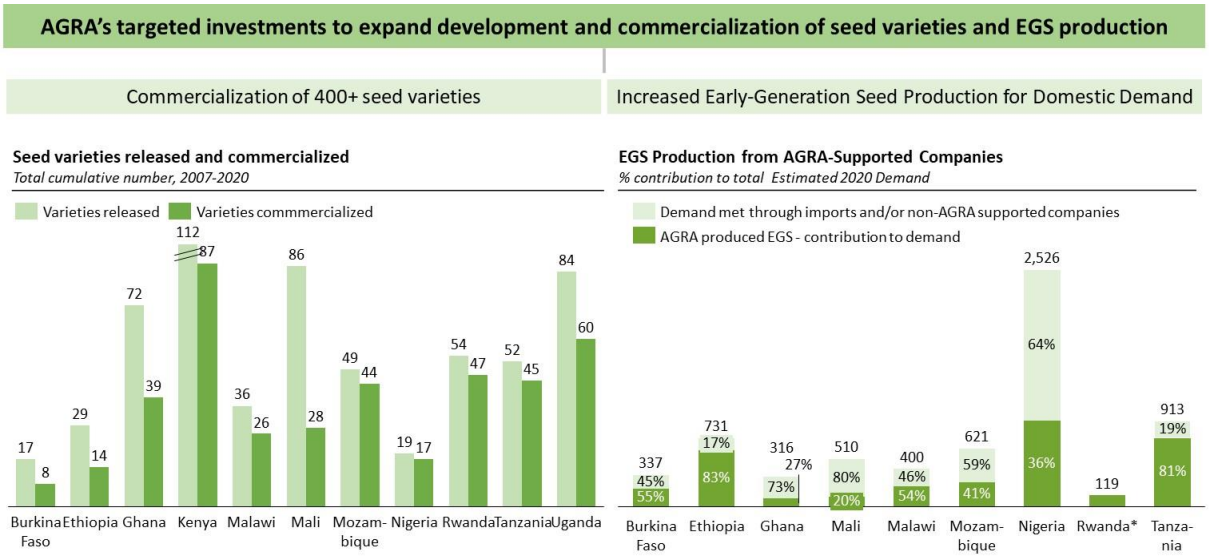
Further downstream challenges existed in distribution and farmer willingness to adopt, which created greater risk for private sector investment.

Figure 5: Inputs System Challenges



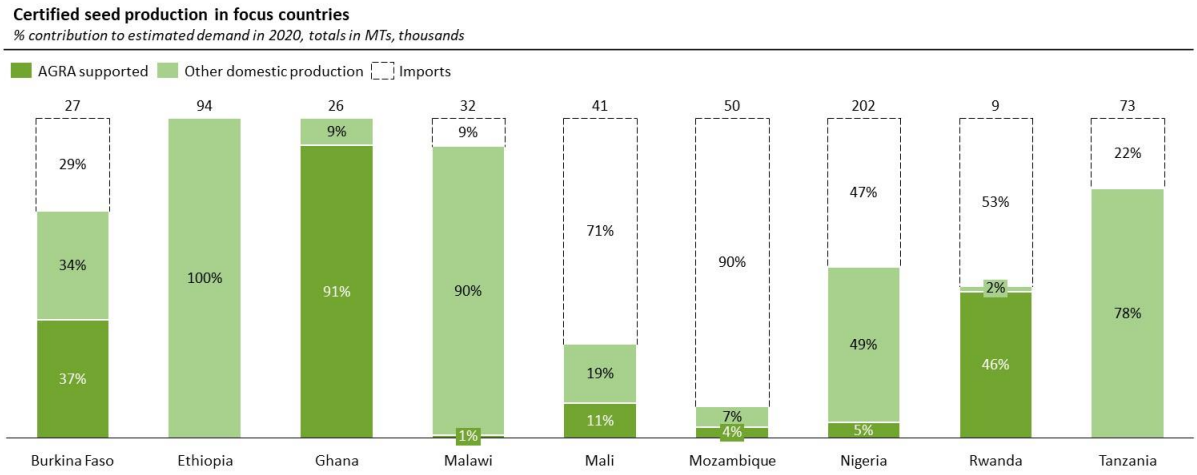
AGRA's investments have led to significant improvements against each of these challenges. While research progress, expanded production by domestic companies, or improved regulatory environments are not ends unto themselves, they establish the core elements for a vibrant inputs systems that can scalably serve smallholders. In seeds, AGRA's investments have supported the commercialization of hundreds of improved seed varieties ranging from key staples like maize and rice to sweet potato, bananas, and faba beans. AGRA supported early-generation seed (EGS) development through targeted support to companies and public-private partnerships, leading to much improved availability for downstream seed producers. Similarly, AGRA assessed available blends and soil diagnostics in 5 focus countries. Based on this gap analysis, AGRA funded soil maps for Malawi and Mozambique and supported the development and validation of new blends in those countries, as well as Ghana, Nigeria, and Uganda.

Figure 6: Seed R&D Investments



Improvements to production of these inputs is evident in expanded production. In seeds, this has led to marked improvement in the share of certified maize seed demand that can be met through domestic production – not just through businesses supported directly by AGRA, but also by other players in the system. This is particularly encouraging impact on the private sector given that domestic production of certified seed was virtually non-existent just fifteen years ago. Likewise, in fertilizer, AGRA's focus countries have seen available blends grow by approximately 8x over the same period – a positive result as the work of AGRA and other actors has strengthened the system.

Figure 7: Domestic Production vs. Estimated Demand for Certified Maize Seed



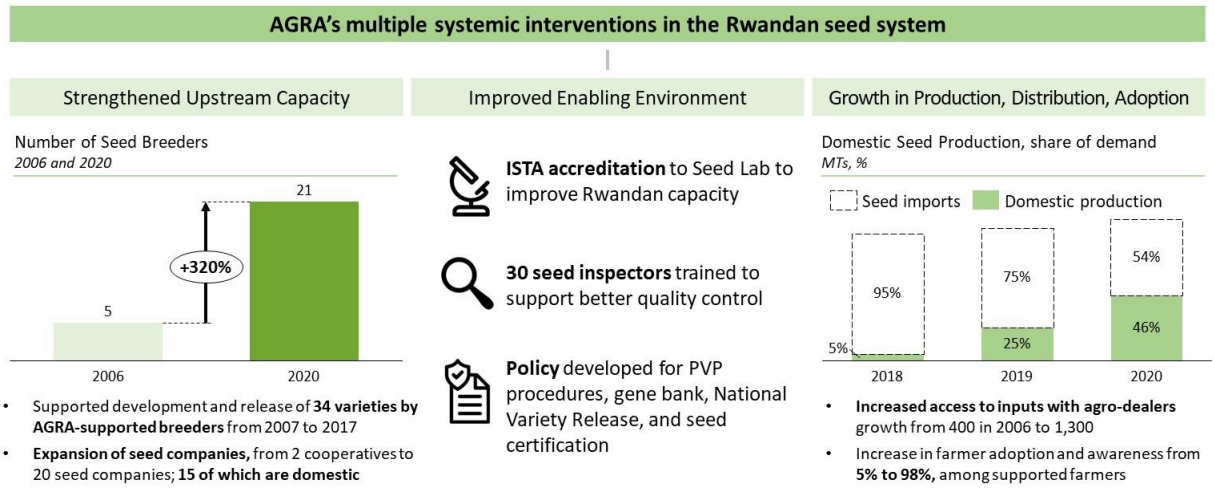
The growth in production has led to healthy competition and improved accessibility, choice, and affordability for smallholders. The share of agrodealers carrying fertilizer has doubled or tripled in most of AGRA's focus countries, with even higher increases estimated in Burkina Faso, Malawi, and Nigeria. The volume of certified seeds has grown steadily, offering more options and competitive pricing to farmers.

Figure 8: Volumes and Pricing of Certified Seed Production

AGRA also invested in other enabling factors for seed companies. The Seed Management Training Institute (SEMIS) provided valuable training and business development services to over 1,100 seed companies in AGRA's focus countries and beyond. AGRA also supported 5 countries to improve protections against fake seeds, including additional seed inspectors, electronic tag systems, and the establishment of better standards and labs. For promising companies that needed finance, AGRA provided equity and debt financing through ASIF and WAAIF, as well as blended finance through the ABC Fund that were more mature. Companies such as Nafasco, M&B, and FICA that attracted investment on commercial terms offered further evidence of AGRA's contribution to strengthening the private sector for inputs.

The evolution of the Rwandan seed system offers a clear view of how multiple points of systemic intervention by AGRA come together. The result is stronger, maturing seed system. Improved upstream capacity and a more reliable enabling environment has led to higher production, wider distribution and, most importantly, increased awareness and adoption by smallholders. This is compelling evidence of the impact that our investments in input systems can have.

Figure 9: Systemic Interventions and Change in Rwanda Seed Industry



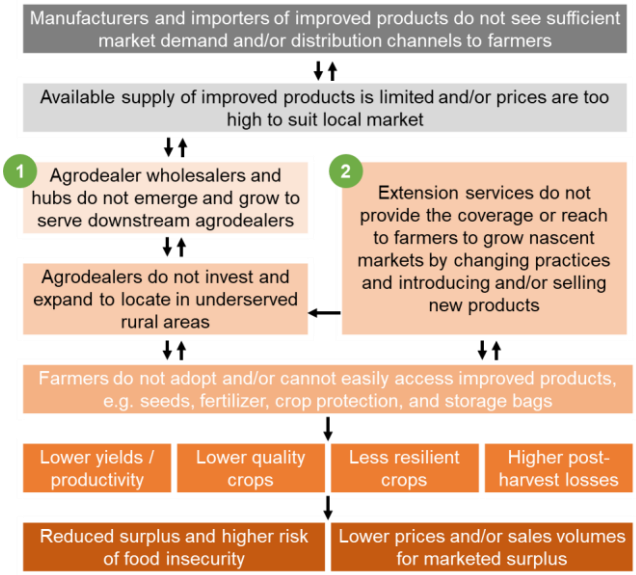
Our Impact on Distribution and Extension Systems

Even as seed and fertilizer systems improve upstream, they can be stifled by insufficient channels to market and uncertain customer demand. The difficulty of overcoming both last-mile distribution and market development challenges to reach smallholder farmers contributes to a chicken-or-egg challenge in which neither demand nor supply will emerge without intervention. Two common challenges exist:

1. **Limited distribution networks**, primarily in the form of agrodealers, may not provide enough geographic coverage and may not have incentive or means to expand

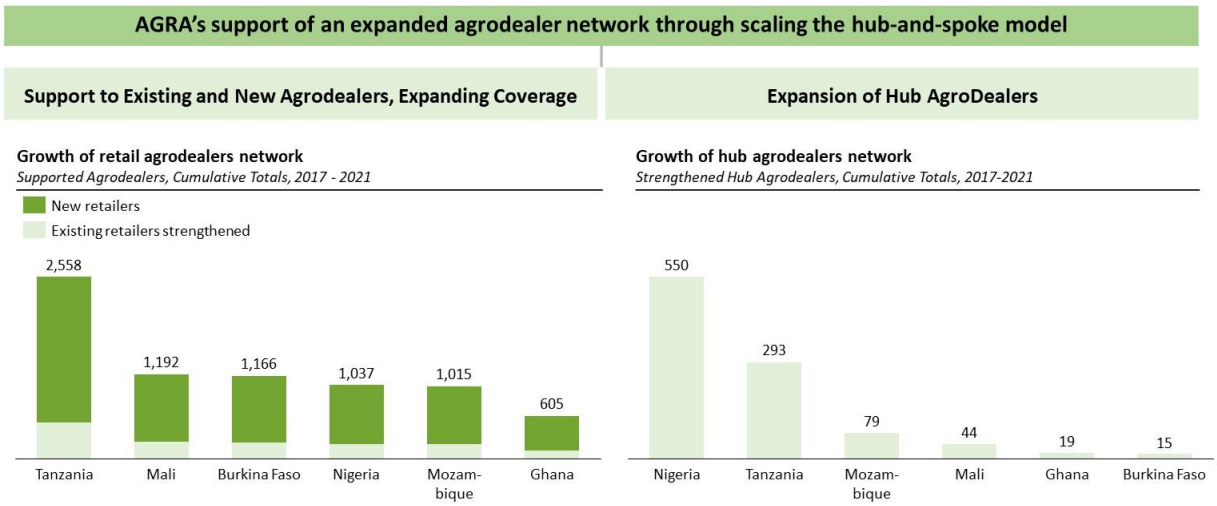
2. **Limited reach and capacity of extension services** to provide farmers with training on good agronomic practices and develop market demand that attracts investments in improved inputs or expanded distribution

Figure 10: Extension and Distribution Systems Challenges



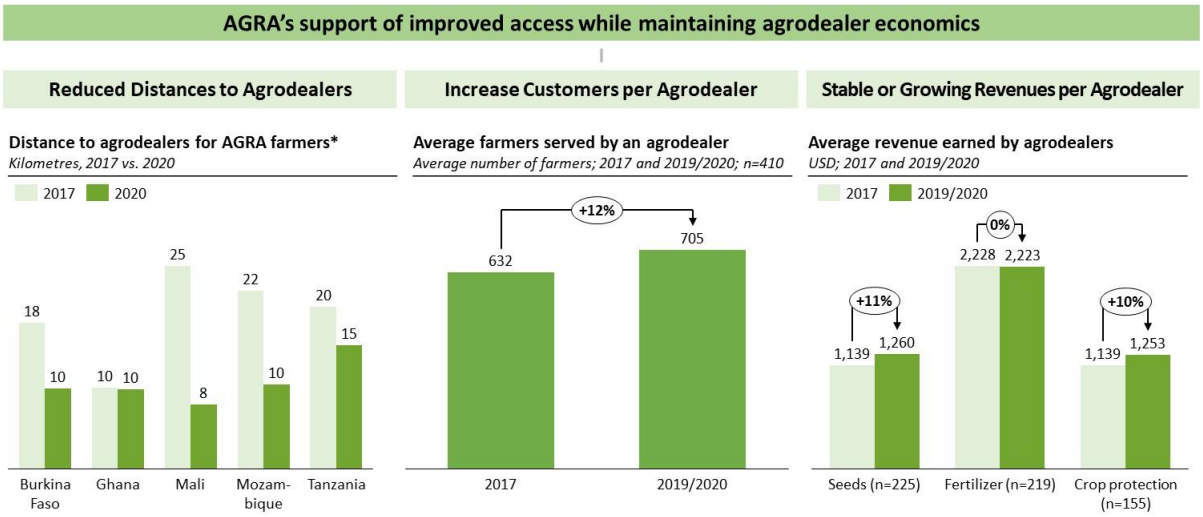
In response, AGRA has invested in both distribution and extension models to break the impasse. We invested in the development of a hub-and-spoke model to strengthen market channels to reach smallholder farmers. We strengthened established agrodealers to serve as wholesale hubs, and provided grants to establish new retail agrodealers to expand access in rural geographies. Since 2017, we have supported approximately 7,500 agrodealers, of which 80% were new, and a thousand hub agrodealers to provide wholesale distribution.

Figure 11: Expansion to Agrodealer Network



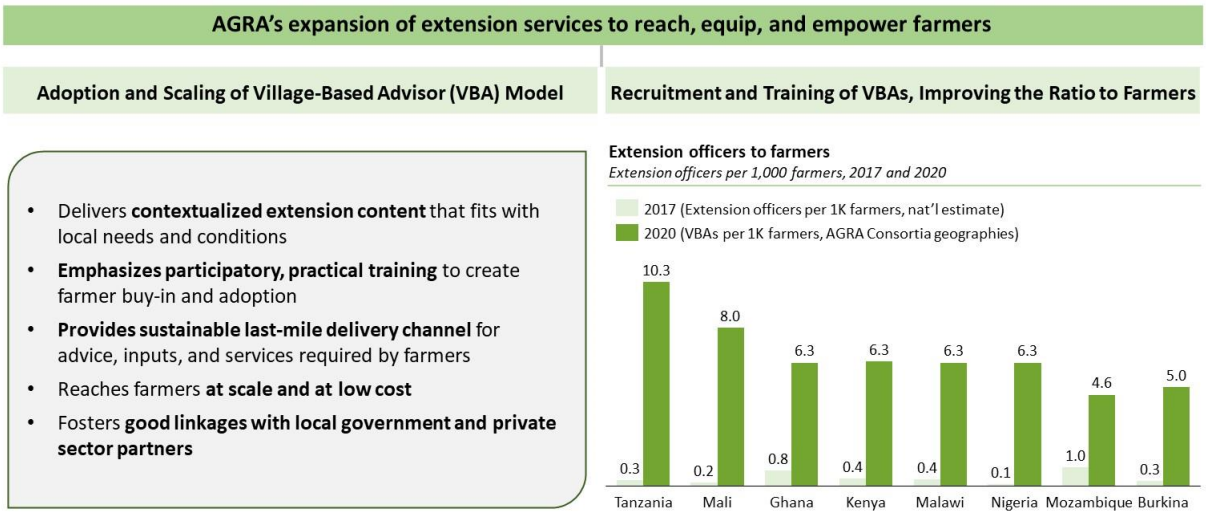
The improved accessibility of agrodealers for farmers has been significant. In most geographies served by AGRA's consortia, farmers report significant reductions in distance to agrodealer. Crucially, this has not come at the expense of agrodealer economics. Instead, agrodealers report an increase in the average number of customers served and stable or growing revenues across sales of seeds, fertilizer, and crop protection products. The stability and growth speaks to the sustainability of this investment. This is strong evidence that expanded distribution addresses unmet demand and that the larger agrodealer network will be economically sustainable.

Figure 12: Improved Accessibility and Agrodealer Economics



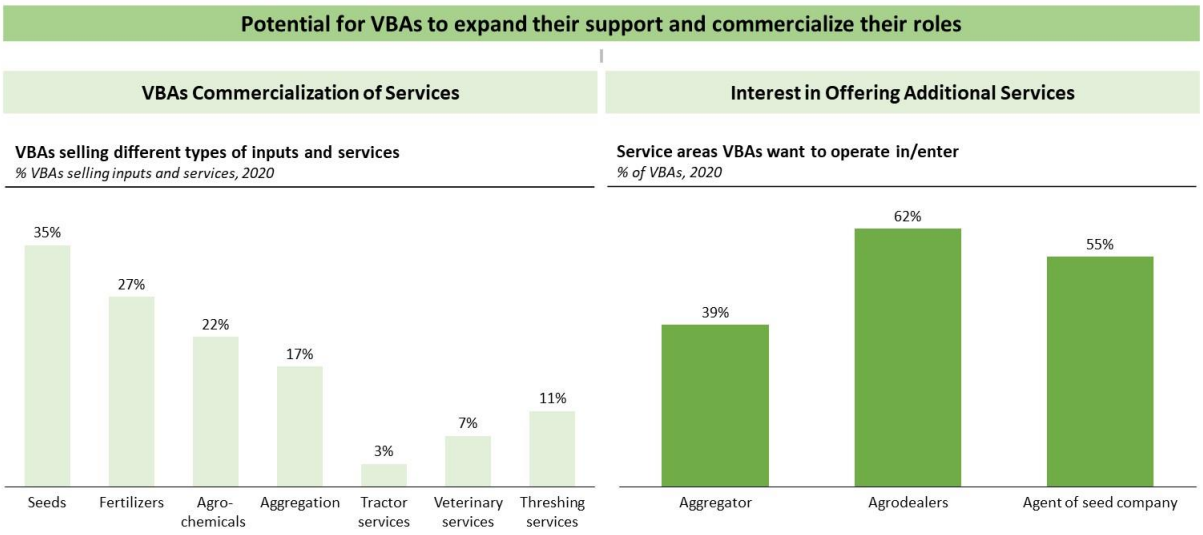
AGRA also recognized the shortage of extension services across our focus countries, and scaled up a model to improve the farmer-extension ratio. We promoted and trained approximately 32,000 village-based advisors (VBAs), growing a proven model for extension and providing a means for input suppliers to build up markets, such as through the distribution of seed packs. In geographies covered by AGRA consortia, there were an average of 6.6 VBAs for every one thousand farmers, whereas the estimated national average was less than 1 VBA per thousand.

Figure 13: Scaling and Improved Coverage of Extension Services



By working with other private sector actors, AGRA is also seeing opportunities emerge for VBAs to generate income. These include inputs, as well as a number of other services for post-harvest market access, livestock support, and more. Moreover, a high share of VBAs express interest in offering other services on behalf of input companies, aggregators of output, or agrodealers. For the VBA model itself, this suggests potential sustainability beyond AGRA's support, reflecting both market need and opportunity. Furthermore, it suggests that our investment is positively impacting farmers by linking them to a broader set of private sector actors; this expands access and opportunities for both smallholders and businesses, and will remain a key element in Africa's longer-term agricultural transformation story.

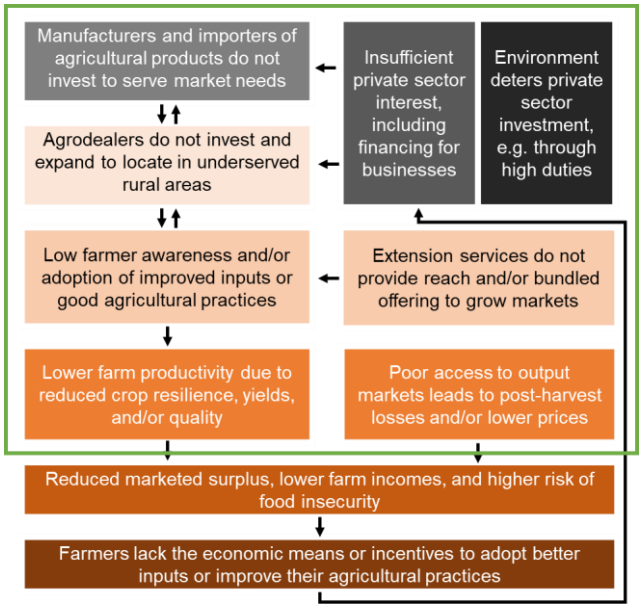
Figure 14: Potential to Commercial and Sustain VBA Model



Our Integrated Approach

Any investment to address a difficult, complex problem, such as low farmer productivity or food insecurity for smallholders, requires a nuanced understanding of the context. Interventions are obviously not applied in a vacuum. On a standalone basis, an improvement in an input, extension, or distribution system will have some benefit for farmers. However, a narrowly-targeted intervention may solve one challenge facing smallholders while overlooking other issues. This in turn risks undermining the effectiveness of the intervention, as there may be other constraints that must be simultaneously addressed.

Figure 15: Integrated Approach to Agricultural Systems



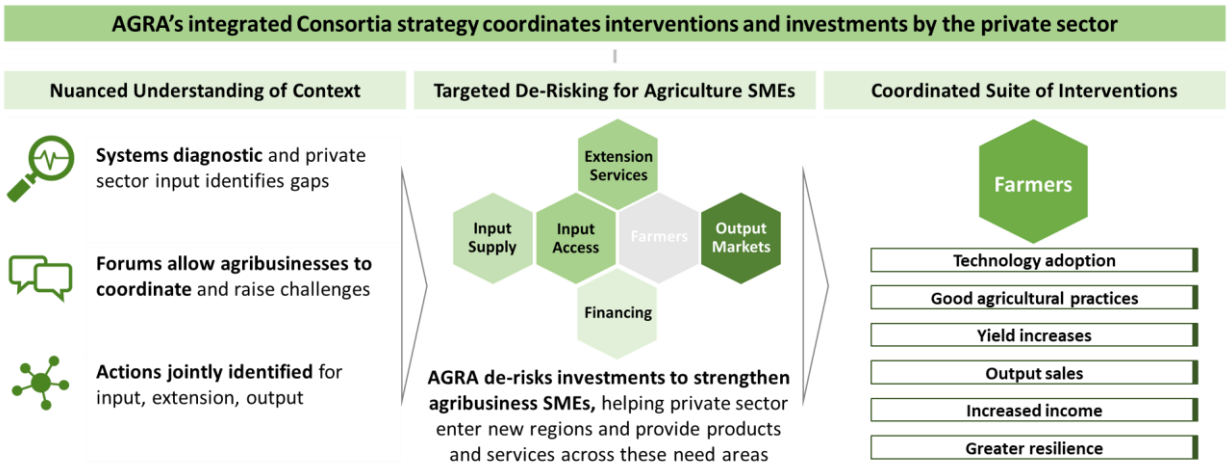
For the overall ecosystem, an integrated approach addresses two additional challenges. First, there is a high cost of investment in any individual system, such as VBAs or agrodealer networks. Using these as platforms for a broader range of actions creates economies of scale. For example, a VBA may be able to provide training across multiple practices and inputs and link farmers to output markets. This will increase the return on investment for any individual systemic improvement. Second, the businesses operating within an agricultural system still face uncertainty and limited information about farmer needs, available resources, and the plans of other actors. In the absence of coordination and information sharing, the opportunity may be unclear and the perceived risk too high for investment.

The integrated strategy of AGRA's consortia model is an effective way to overcome these difficulties. Our consortia are vehicles to coordinate and catalyze more effective, strategic actions:

- **A suite of interventions has greater impact than the sum of its parts,** when appropriate tailored to the context of local farmers, as evaluated in the *Impact on Smallholder Farmers* section
- **Systemic improvements have a higher return on investment** as they become platforms for other business opportunities, such as the use of agrodealers for an expanded range of inputs and agricultural services
- **Coordination and targeted de-risking** can effectively connect and crowd in the private sector, particularly resource-constrained agricultural SMEs

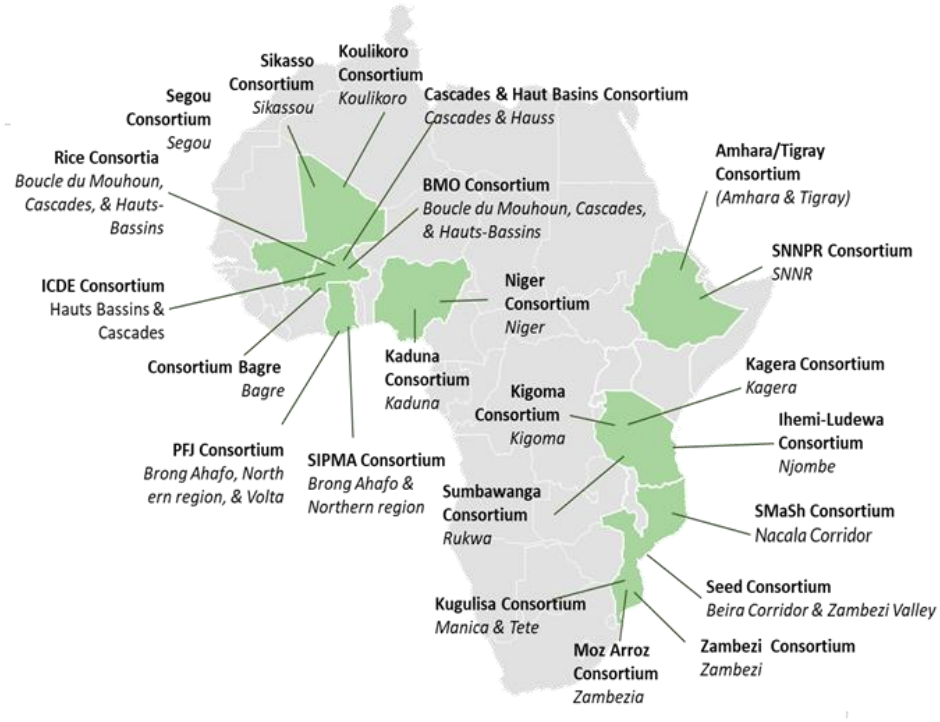
Consortia are design for specific sub-national regions, and AGRA's approach starts with careful, systematic ground-truthing to understand farmer and private sector needs. This allows key interventions across agricultural systems and actions by different actors to be jointly identified. Where necessary, AGRA then provides additional coordination and de-risking for SMEs to help them enter new geographies or expand their products and services. This leads to a coordinated bundle of interventions to smallholders.

Figure 16: Approach to Consortia Design



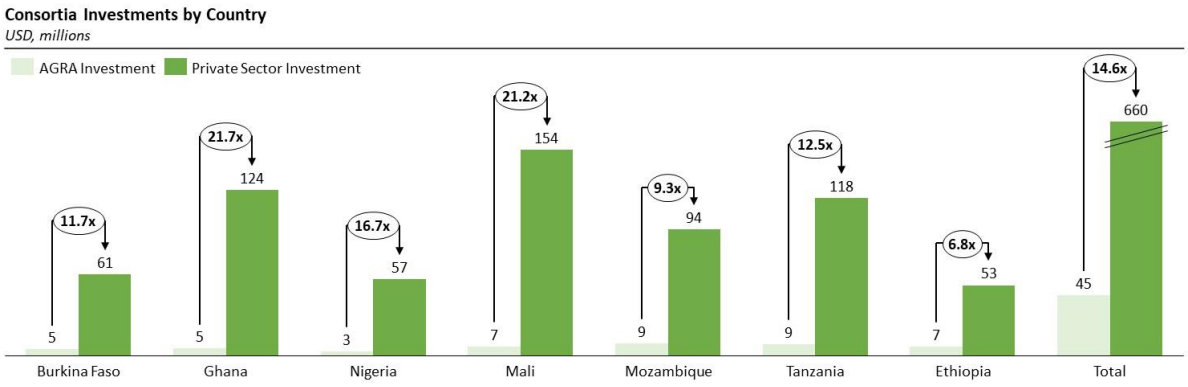
AGRA has launched 23 consortia in 7 of our focus countries, reaching an estimated 7.9 million smallholder farmers. In most of these AGRA joins with other partners and businesses to deliver a tailored set of actions across multiple agriculture systems - inputs, extension, distribution, and output markets.

Figure 17: Target Geographies of AGRA Consortia



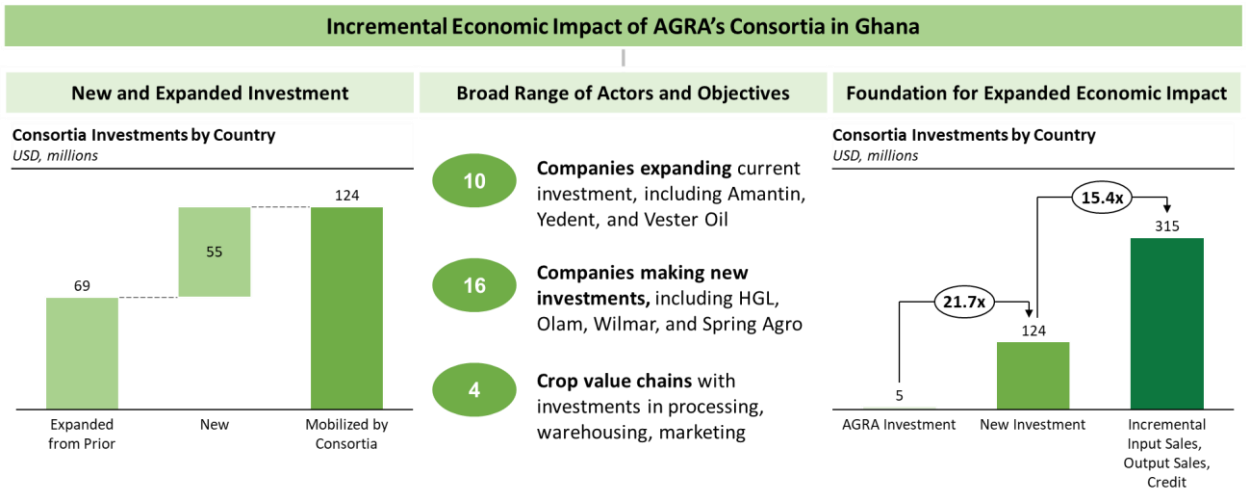
The return on AGRA's investment in consortia is high – mobilizing nearly 15x of incremental capital across the countries. We have invested nearly $7 USD for every farmer reached, for a total investment of $45 million in investment. This in turn has led to the incremental investment of $660 million from private sector actors. This crowding in of resources that would otherwise remain untapped is strong evidence that AGRA is helping to drive systemic change. Moreover, the private sector's recognition of commercial opportunities and its confidence in making longer-term bets are strong indications that these systemic changes will be sustainable beyond the life of our direct involvement.

Figure 18: Mobilization of Investment by Consortia



Our consortia in Ghana provides compelling, concrete evidence of new and expanded investments. These totaled $124 million USD across twenty-six different companies. Investments include capital investments in warehousing and processing of rice, maize, soya, and cassava, as well as expansion of irrigation and mechanization services. Furthermore, these are investments that provide the foundation for the generation of longer-term, recurring economic value. To date, the value of additional inputs sold and agricultural product sold via output markets through the Ghana consortia is estimated at $305 million USD.

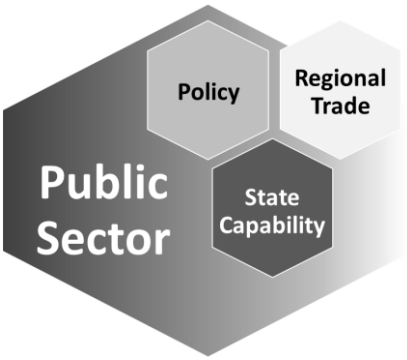
Figure 19: Economic Impact of Ghana Consortia



AGRA has demonstrated the powerful, systemic effects of consortia in creating a more vibrant private sector. As we plan to take lessons forward, there are important areas of learning for continuous improvement. Our consortia strategy provides business support services to the ecosystem, and we must determine when and how this works best, how it should be paid for, and the right conditions under which AGRA should provide de-risking supports. In addition, much of our work is oriented to growing agricultural SMEs, and we need to leverage our state capability and policy work to ensure that national policies create the right type of business environment. We also seek to further refine the optimal roles and responsibilities of the set of actors with whom we engage. On the private sector side, these include agri-food industry organizations, trade clusters, corridors, and industrial parks, as well as digital platforms. In the public sector, we will refine our engagement strategy with government agencies that focus, for example, on SMEs and farmer cooperatives, as well as other ministries and public development banks. Finally, we recognize that our early efforts at improving gender inclusivity need to be expanded and accelerated. Our Value4Her digital platform provides a promising start, but much more investment is needed to grow women-owned and women-led SMEs.

Impact on Country-Led Agricultural Transformation

Introduction



Governments play a critical role in leading inclusive agricultural transformation. A key theme among countries that have succeeded in agricultural transformation is an effective public sector that kickstarts and sustains change, makes long-term investments in systemic enablers, and creates strong incentives that crowd in other resources. Without the right enabling environment, philanthropic actors and NGOs – however well-intentioned – will have limited impact. Likewise, the private sector is unlikely to grow or invest in the absence of a predictable, business-friendly environment, thus holding back improvements in agricultural systems. In short, an effective government is a fundamental pre-condition to agricultural transformation. It sets the vision and strategy and establishes the policy and regulations that foster – or undermine – an environment in which businesses and smallholder farmers can flourish. Further, the public sector is uniquely positioned to convene and coordinate among key stakeholders, setting direction that can boost private sector confidence and mobilize resources. However, we observe common challenges across many of the countries in which we operate:

- **Limited government capabilities and capacity** to define a vision and set strategy, coordinate key actors, implement plans, and create accountability and learning systems
- **Weak or outdated policies** that hinder the development of key agricultural systems and discourage private sector investment
- **Inadequate regional trade and market systems** that deter agricultural trading and increase the likelihood of food insecurity

In 2017, AGRA made a strategic shift towards working with governments – aiming to strengthen state capability, improve the policy environment, and boost regional market systems. We collaborated closely with the governments in our core countries, aligning our support with their national priorities. We know that strengthening state capabilities and policies will incent private businesses to invest, which will lead to better-functioning systems that serve smallholder farmers. Such efforts require a long time horizon. Indeed, this work is laying the groundwork for systemic change. Even more than our other interventions, our policy and state capability investments are forward-looking efforts that will pay dividends in the longer-term. Even so, we already see compelling early results – evident in changes to long-held institutional practices, in smarter and faster policy reform, and in the response of private sector actors.

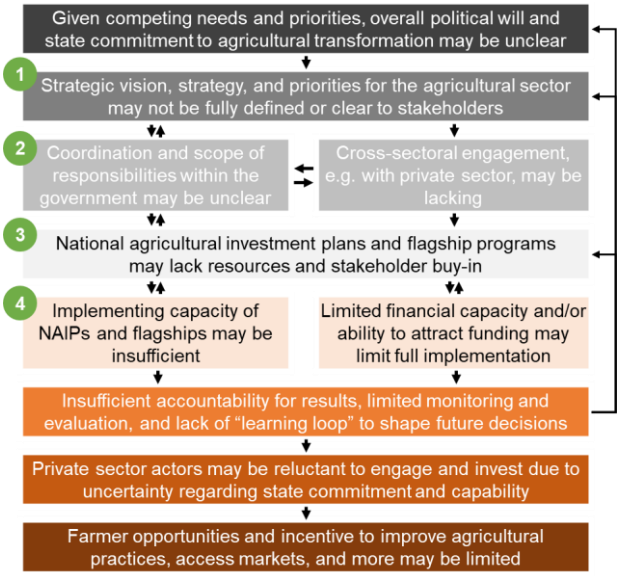
Our Impact on State Capability

Institutional change is difficult. Setting the right strategy and building alignment among public sector entities and with the private sector is not a trivial matter. Even where countries develop strong national agricultural investment plans (NAIPs), these are often not implemented as a result of capacity gaps or competing priorities. Neither AGRA nor our partners alone have the capacity to intervene across every element of the government's role in agricultural development. Our work has thus focused on four areas of challenge where change can have catalytic impact:

1. **Uneven political commitment** marked by uncertain vision and strategy
2. **Limited coordination** within government bodies and with private sector, deterring action
3. **Lack of capacity** in setting investment and programmatic priorities and delivering on them
4. **Limited accountability** in defining success, measuring results, and learning

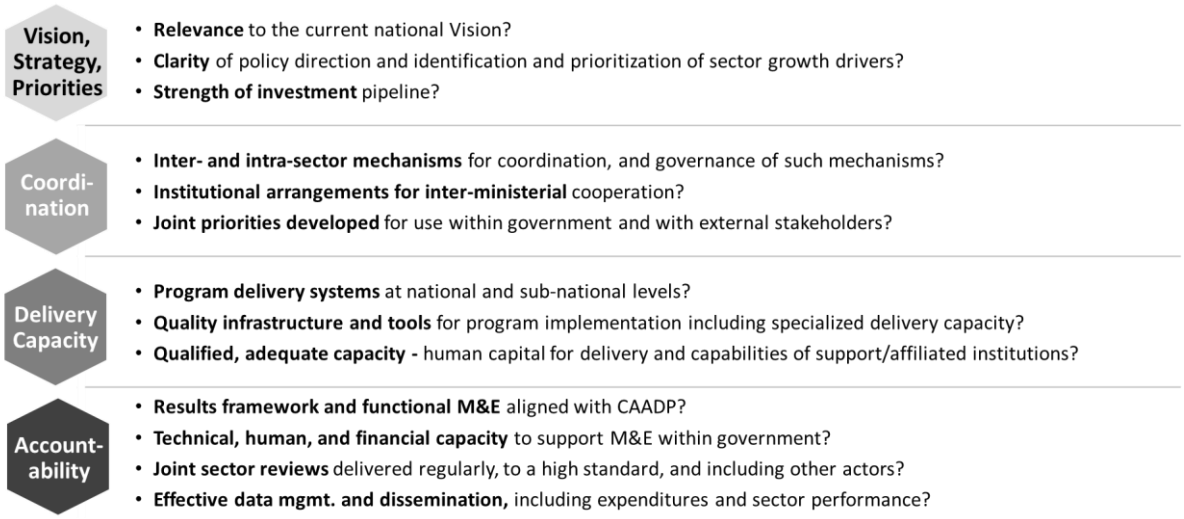
Our approach systematically addresses each of these challenges. We work closely with governments and system stakeholders on the analysis, conceptualization, and development of NAIPs – building trust and helping present a vision for the sector. To develop or strengthen inter- and intra-ministerial coordination, we collaborate closely through agriculture sector working groups. We also welcome private sector actors into these mechanisms to enable better policy input and improved buy-in. These actions enable us to support governments in prioritizing key investment initiatives and developing "bankable" flagship projects that mobilize incremental capital from private and development financiers. Finally, AGRA strengthens country agricultural monitoring and evaluation systems – improving data collection frameworks, tools and processes, as well as supporting Joint Sector Reviews to create an accountability mechanism.

Figure 20: State Capability Challenges



AGRA defined key criteria in of these areas that characterize a capable state. We have articulated important factors of success that would be common across countries, building on the USAID Institutional Architecture Framework and our own Institutional Capacity Assessment Framework.

Figure 21: State Capability Criteria

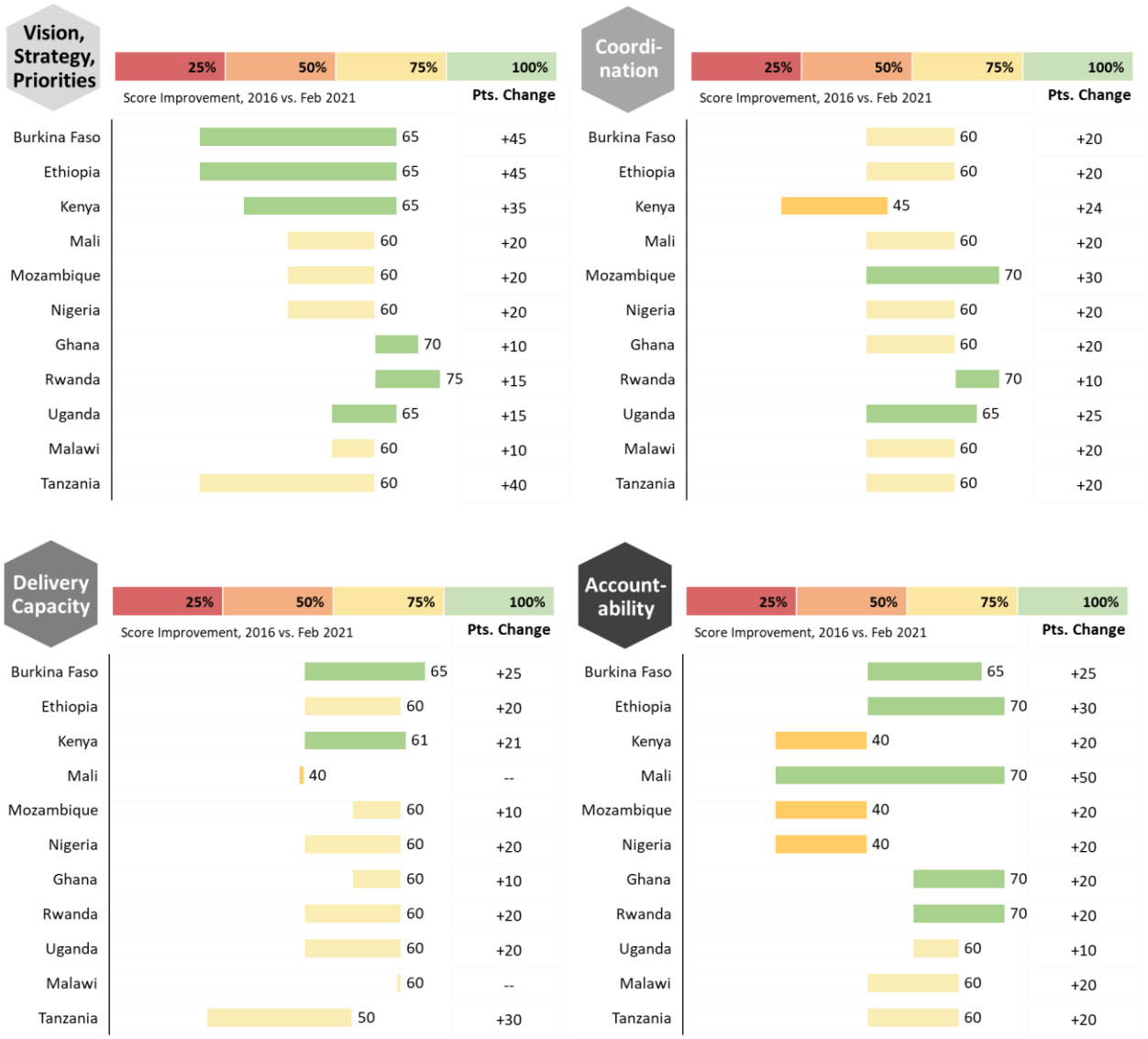


Measuring change on these dimensions is inherently difficult, but we believe in the value of doing so and in our approach. We track the percentage of success factors that were evident in each country, using widely understood and accepted indicators. Where possible, we use metrics that enable consistent measurement over time and across countries. Our methodology is still evolving and will be further improved and peer reviewed to ensure data accuracy, reliability, and consistency in our assessments. Nevertheless, this approach provides a view on the *leading* indicators of positive institutional change where AGRA can evaluate our contributions to improvements in state capability. In turn, these connect to the early evidence of tangible results in bankable flagship programs, funding mobilized, and farmers impacted, as will be discussed below.

Our analysis below would suggest that our core countries have made meaningful progress on most dimensions since AGRA began investing in this area. By focusing on and measuring changes in the *capabilities* of governments, we believe that AGRA's investments contribute to embedding and institutionalizing improvements – and will thus prove sustainable beyond our support. This approach also provides a perspective on which countries have made relatively greater progress, as well as the improvement opportunities that remain. For instance, Burkina Faso has taken important strides forward across all areas. In contrast, Mali has improved on most dimensions, most notably its measurement and accountability systems – yet its delivery capacity remains much the same now as in 2016. Kenya is relatively stronger in setting vision and strategy, as well as delivery capacity, but struggles in coordination and accountability. It should be

noted that this analysis is made on the best available information, and represents AGRA's 'best view' of the situation. These changes have been supported alongside many other partners, necessary to operate with impact in the PSC space.

Figure 22: State Capability Indicators



AGRA's work on <u>vision, strategy, and priorities</u> focused primarily on improving and operationalizing National Agriculture Investment Plans (NAIPs). We collaborated on NAIPs with 9 of our focus countries; from these, we have supported the implementation of 10 flagship programs, the prioritized, bankable investment projects selected from NAIPs. These flagships serve as umbrella initiatives under which different actors can mobilize resources, expertise, and operations towards a common goal. Our impact is evident both in the improved *process* of developing NAIPs and flagships, as well as the resulting mobilization of financial resources:

- **Process improvements** are evident in accelerated development, with flagship design time declining from an average of 2 years to 4–6 months with AGRA support
- **Financial resources** mobilized total $1.4 billion USD to date, comprised of $400 million from the governments themselves and an additional $1 billion from multilaterals and the private sector

AGRA's ingoing hypothesis was that well-designed NAIPs and flagships would boost agricultural investment by providing a platform around which governments can rally investors – showcasing both the investment opportunity and the positive downstream impact on smallholder farmers. The levels of funding mobilized from public and private sources provides strong evidence in favor of this approach. Furthermore, these programs have tremendous potential for reaching smallholder farmers at scale. Indeed, the 10 flagship programs supported by AGRA are projected to reach 13 million smallholder farmers.

Figure 23: Examples Flagship Programs in Ghana, Kenya, Tanzania

	Planting for Food & Jobs	National Value Chain Support Programme (NVSP)	TZ Agro-Industrial Development Flagship
Objectives	Promote Ghana's food security via technologies, adoption of high-quality inputs, strengthening market linkages	Support Kenya's agricultural production and marketing with subsidized inputs using e-vouchers	Facilitate structural economic transformation in Tanzania via support to agro-industrialization sub-sector
Government	$274 million	$35 million	$90 million
Other DFIs, private sector	$353 million	$2 million	$80 million
Key Partners	MoFA, Global Affairs Canada, World Bank, IFAD, and PIATA Partners	Ministry of Agriculture, Livestock, Fisheries and Co-operatives and World Bank	African Development Bank, World Bank, IFAD, Government of Tanzania
Results + Projected Reach	***Realized*** 1.74M **Farmers reached** via flagship 700K **Jobs created** via flagship	***Projected*** 200K **Farmers reached** by end of 2020	***Projected*** 5M **Households** to benefit directly, including 3.5M farming and 1.5M non-farming households

Our work in improving coordination has strengthened intra- and inter-ministerial linkages, as well as connections with non-government actors. Avoiding confusion and misalignment within government is key, and building relationships and gathering input from development partners and the private sector increase the likelihood that initiatives will gain buy-in. We have facilitated sector coordination mechanisms and processes in Ethiopia, Ghana, Mozambique, Burkina Faso, Tanzania, and Nigeria. For instance, we worked closely with the Ministry of Agriculture in Ethiopia to engage inter-sector joint planning processes, and we collaborated with GIZ to roll out a coordination mechanism among 7 provinces of Mozambique. The importance of AGRA's sectoral coordination efforts has been evident as governments faced challenges posed by the COVID-19 pandemic. We supported the design of the COVID "war room" in Kenya, which was a key platform for the organization of the government's response. Similarly, we provided technical assistance in support of Ghana, Malawi, and Mali's COVID-19 response plans at the outset of the pandemic, which helped coordinate inter-ministerial implementation of agriculture activities.

At the sub-national level, our coordination work in Nigerian states illustrates the catalytic potential of AGRA's interventions. Our support helped restore coordination among agricultural stakeholders in the states of Kaduna and Niger. We did this by convening the stakeholders from both states through the dormant State Council agriculture meetings to align on common priorities. The partners jointly developed agriculture plans, which shaped the agriculture policies of both states and the State Agriculture Investment Plan for Niger. Through technical assistance and training, we helped the state ministries improve their internal planning and budgeting processes and equipped them with methods by which to coordinate with non-state actors. Aided by these improvements, the state ministries mobilized over $ 5 million USD in investment in the agriculture sector.

To translate strategy and better coordination into results, AGRA also supported delivery capacity through practical implementation tools and skills. In 2019, we conducted institutional capability assessments (ICAs) in all AGRA countries, leading to the design of agricultural sector Institutional Capacity Strengthening Programmes (ICSPs), now implemented in Burkina Faso, Nigeria, and Ethiopia. Our work with Burkina Faso's Ministry of Agriculture and Hydro-agricultural Development (MAAH) reflects practical and tangible areas of support. We mobilized technical assistance to support the creation of an efficient budget management unit. We then funded the production of an organizational manual focused on budget programs, as well as a formal framework for the execution of finance and accounting operations.

Improved state capability must also mean improved tools to build accountability, measure results, and learn. With better data collection tools, governments can more easily assess their interventions, draw lessons, and implement programmatic changes that ensure better outcomes. To this end, AGRA supported the development and improvement of 9 national agriculture monitoring and evaluation (M&E) systems and trained over 350 government staff on measurement tools, systems, and frameworks. In addition, we supported the establishment of joint sector reviews (JSR) across 11 countries, thereby providing a powerful accountability mechanism.

A capable, committed state is foundational to agricultural transformation, and AGRA's investments in improving the enabling environment makes other change possible. Absent a credible, effective government approach to the agriculture sector, progress is exceedingly difficult. Conversely, as countries take strides towards demonstrating greater commitment, capabilities, and capacity, they establish a stronger ecosystem that unlock a range of other possibilities: smarter policy design and implementation, growth in regional food trade, and a more attractive environment for private sector investment. The early evidence of our impact across NAIP and flagship programs and cross-sector coordination mechanisms, which bring broader ecosystem benefits, demonstrates the importance of this work.

In the four years since AGRA shifted to strengthening state capabilities in agriculture, we have also learned important lessons that will help us increase our impact in the future. Strategically, we will adopt a more deliberate regional and continental lens in identifying and designing flagship programs. Tactically, we have also recognized the importance of even earlier alignment – engaging other actors, such as the Ministry of Finance or presidential delivery units from the start, and matching the flagship design timeline more closely with the country's budget cycle. We have also recognized important success factors for mobilizing non-government resources for flagships, not least clarifying and agreeing earlier on the projected return on investment. As AGRA continues to improve our own experience and expertise in building state capability, particularly in the area of flagships, we will also develop an inventory of evidence to shape future government demand for such programs and accelerate their design.

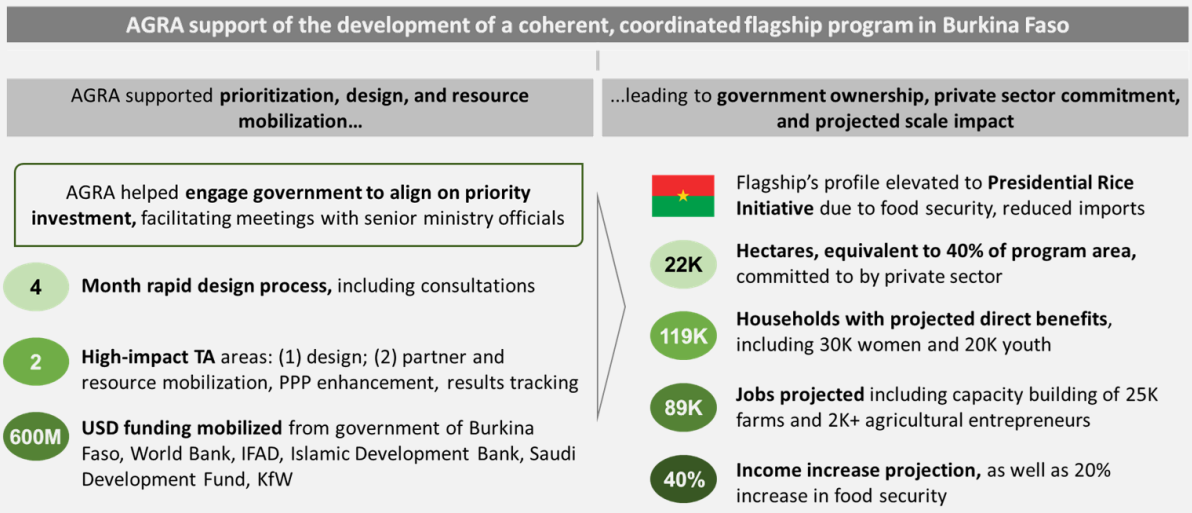
Case Study: Burkina Faso Flagship, "One Million" Presidential Rice Initiative

Despite having favorable conditions for rice production, Burkina Faso's annual demand exceeds domestic production by nearly 2.5 times. While the high cost of import reliance and the implications for foreign exchange were widely recognized, the government's strategic priorities were unclear. Various rice value chain interventions, including both government- and donor-led projects, had been implemented in silos. Government projects had been further undermined by poor planning, insufficient budget, and uncoordinated delivery units. Moreover, the fundamental capacity of the Ministère de l'Agriculture et des Aménagements Hydrauliques was low, and weaknesses ranged from team skills to ICT systems. Indeed, Burkina Faso struggled on all four dimensions of state capability – vision, strategy, and priorities; coordination; delivery capacity, and accountability.

AGRA provided grant support to strengthen state capability across multiple areas – planning, coordination, implementation, and M&E. Furthermore, we invested $250,000 to provide technical assistance in the design and implementation of a flagship program. This led to the launch of the "One Million" Rice Initiative, which is projected to increase rice production by four-fold to 1 million MTs. The project encompasses improvements to hydro-agriculture infrastructure, in-country processing, and enhanced market access – all supported by an improved institutional framework.

This flagship has attracted significant investor interest in Burkina Faso's rice value chain. The government of has attracted $600 million USD in investments through key development partners, including the World Bank, the Saudi Development Fund, Islamic Development Bank, and KfW. These financing commitments have also generated the interest from the local private sector ecosystem, which is now prepared to invest in the irrigation of over 20,000 ha – about 40% of the program area – impacting 20,000–40,000 smallholder farmers.[2] This is a particularly welcome shift as support for irrigation had previously been heavily public driven, with investment in irrigation accounting for nearly 73% of all public expenditure on agricultural infrastructure.[3] While the flagship has not yet reached the implementation stage, projections are extremely promising. We estimate that the investments and actions resulting from the flagship will reach many smallholders and mitigate many of the food security and nutrition challenges facing the country.

Figure 24: Policies Approved

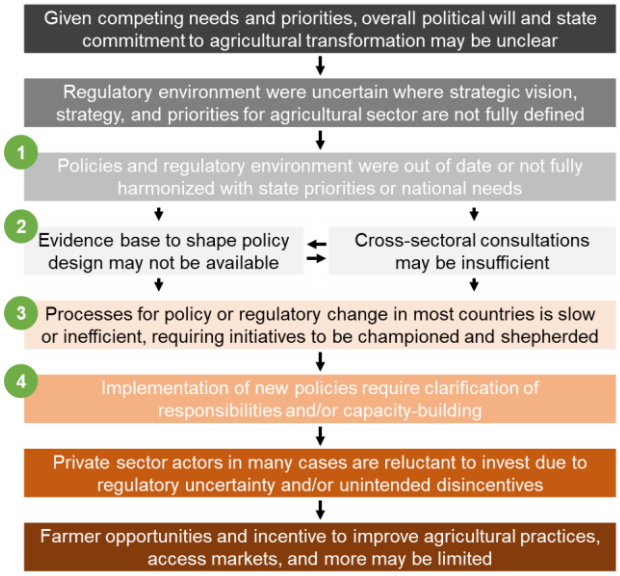


[2] BMGF, Developing the rice sector industry in Africa – Burkina Faso; Smallholder farmers in rice typically farm 0.5 – 1.0 ha each
[3] FAO/MAFAP, Country Analysis – Burkina Faso

Our Impact on Policy

Every country in sub-Saharan Africa seeks to attract more private sector investment in smallholder agriculture. Yet policies and regulations in most countries deter rather than encourage such investments. Innovation and investment in seed systems, fertilizer systems, input distribution, and output markets is a function of the enabling environment - the market-shaping policy, regulations, and institutions governing these sub-sectors. AGRA's past efforts on seeds, fertilizer, and market systems provided insight on policy failures – some economically flawed, others excessive or poorly implemented – that hindered development. A value chain-focused intervention, such as developing early-generation seeds, might be necessary, but would not be sufficient if a poorly designed regulatory environment remained as a barrier. We observed four problems common across many countries:

Figure 25: Policy Challenges



1. **Outdated or unclear** policies and regulatory environment that created uncertainty or disincentives for the private sector
2. **Limited evidence base and expertise** within the government to identify needs and design the appropriate policy or regulatory framework
3. **Inefficient, bureaucratic processes** for the development, review, and approval of new policies
4. **Ineffective implementation** by the relevant public sector body due to capacity gaps

AGRA's addresses each of these issues in our policy and advocacy work. We know that analyzing, distilling, and reforming the precise regulations that can limit private investment in smallholder value chains is complex and technical, requiring specialized policy reform, economic modeling, and legal skills that most governments lack. We target our investments and technical assistance to bridge these gaps. As we initiate policy reforms, we draw on our country diagnostics, best practice, and benchmarking. We support studies to build the right evidence to inform design and follow a highly consultative process on policy reform. By collaborating closely with government champions to shepherd the policy approval process, we help reduce the overall timeline from design to approval to implementation. Finally, when necessary, we invest in strengthening the capacity of institutions to ensure to implement and communicate policy changes effectively.

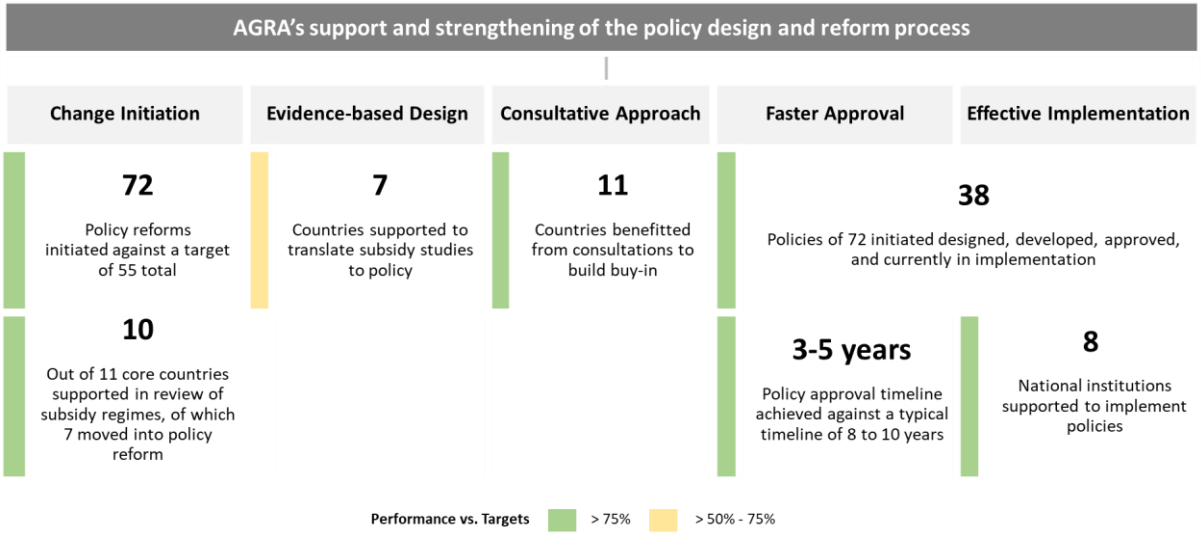
The range of potential policy failures is wide, cutting across all agricultural systems. AGRA works in two broad categories, targeting the "micro" reforms that remove barriers in specific steps of a value chain. We also tackle national level "macro" reforms, particularly in the area of input subsidies.

Figure 26: Example Policy Challenges

Micro	Fertilizer systems	• Blanket, rather than blend-specific fertilizer registration, adding costs and complexity • Complications through many sources, e.g. multiple levies, high registration costs, high burden of evidence
Micro	Seed systems	• Restriction of private sector seed companies from accessing public varieties • EGS production and seed inspection reserved for government institutions, which often lack capacity • Variety release institutions are absent or dysfunctional, and seed inspection agency lacked capacity
Micro	Markets and Trade	• Unpredictable and intermittent export bans weakens investment incentives • Trade permits and high tariffs add barriers to trade • Weak standards limits trade options
Micro	Other: Finance, Extension, Mechanization	• High cost of mechanization inputs compromises value for money • Extension systems are unregulated and largely public sector-driven
Macro	Input (fertilizer) subsidies	• Subsidies (primarily for fertilizer) designed poorly for cost-efficiency and/or timely distribution to farmers • Significant fiscal strain on government finances from poorly-designed subsidies

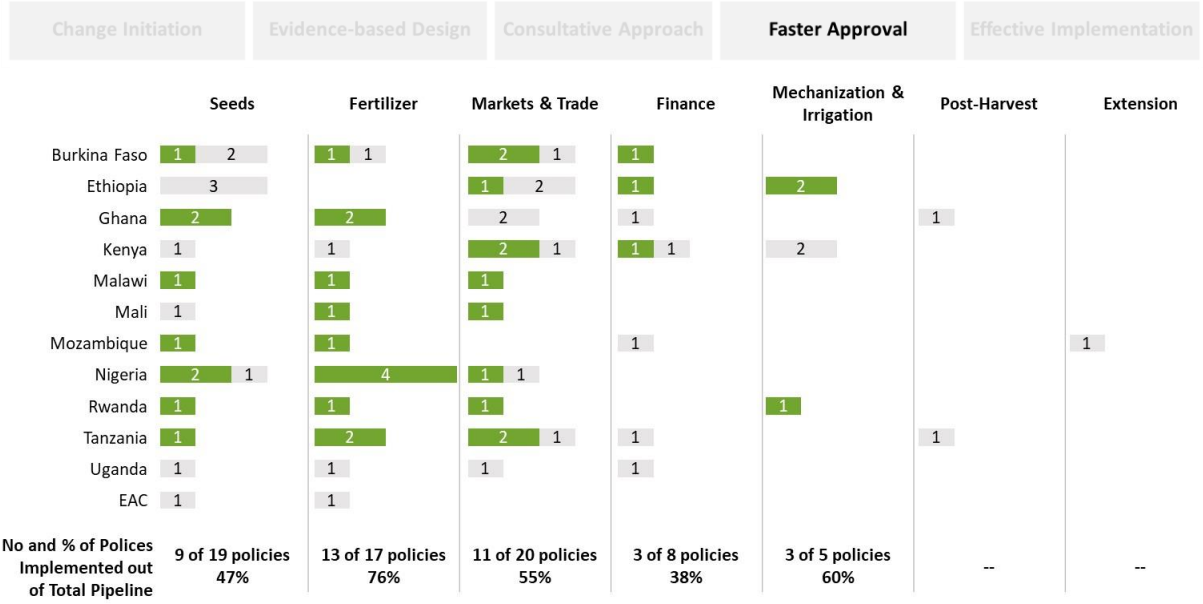
AGRA's impact is evident in three areas: the reform process, the policies approved, and the impact of these policies. AGRA did not focus narrowly only on specific problematic policies, but also worked to improve the institutional process so that future reforms would also be easier. We collaborated with all 11 of our focus countries to improve key steps of the reform process. For instance, we supported several studies on subsidy impacts to encourage an evidence-based approach. We built on our investments to improve coordination within the government, as discussed earlier, and established extensive consultative processes for reforms in each country. AGRA's efforts fostered faster buy-in among stakeholders and facilitated a more efficient policy reform process. Indeed, our investment in improving the process has led to a significant reduction in the total lead-time, which declined from an average of 8 to 10 years to just 3 to 5. Even in the best of circumstances, accelerating a government process is difficult; we believe these improvements are evidence of sustainable, institutional change.

Figure 27: Policy Design and Reform Success Factors, Performance vs. Targets



Of 72 policy reforms initiated, AGRA has supported the approval and implementation of 38, with the remainder still in the pipeline. The approved policies address problems across countries and systems, including seed, fertilizer, markets, finance, mechanization, irrigation, and extension.

Figure 28: Policies Implemented and Pipeline



The true test of the impact of our policy investments lie, of course, in the response of actors in the agricultural ecosystem. The intended effect of a well-designed, well-implemented policy change should be evident in investment by the private sector as they operate in a more attractive, predictable business environment. Further downstream impact should be observed in smallholder farmers who find they have better access to inputs or opportunities, leading to changing behaviors and improved outcomes. Such impact requires the appropriate time horizon; after all, in most cases the policy reform itself requires several years, to say nothing of subsequent effects on the decisions of businesses and smallholder farmers. While most policy reforms do not lead to immediate, measurable change, evidence from some of our markets demonstrates the power of tackling the right policy reforms in the right way. For example, our *micro* policy work on fertilizer policy in Tanzania improved an onerous registration process and removed costly, duplicative processes and fees. This incentivized more companies to enter the market with new blends, leading to more competitive pricing, an increase in sold volumes, and a higher share of farmers now willing to adopt fertilizer. Likewise, in Kenya, our work on *macro* subsidy reform has strengthened a system that had previously been vulnerable to inefficiencies and corruption. Early evidence shows an increase in farmers benefiting as intended from the subsidy, with further increases expected in farmers reached and resulting improvements in yield.

Figure 29: Example Impact of Micro and Macro Policy Reform

Change Initiation | Evidence-based Design | Consultative Approach | Faster Approval | **Effective Implementation**

	Fertilizer Reform, Tanzania – *Micro*	**E-Voucher Subsidy Reform, Kenya** – *Macro*
Constraints	• Cumbersome registration requirements, including $30,000 USD testing costs and 3-year timeline • Overlapping responsibilities of mandated institutions charging duplicating fees	• Inefficiencies in subsidy program implementation and processing due to paper-based system • Vulnerability to corruption
Policy Reform	• New law that reduced testing costs and testing timeline • Abolished taxes and fees from various authorities	• Private e-voucher system for better delivery of inputs and fertilizers, as well as improved tracking • Integration of additional services such as soil testing
Key Partners	Directorate of Policy in the Ministry of Agriculture, Fertilizer Society of Tanzania, Economic and Social Research Foundation	Agriculture Transformation Office (ATO) & Ministry of Agriculture, Tegemeo, IFDC, IFAD, FAO, IFAD, World Bank
Early Results	**Actual** 1.65M **Farmers reached** with blends, with 10-20% increase in adoption 10-40% **Decrease in prices** for fertilizer 47% **Increase in traded** volumes, 2016 to 2018	**Actual** 200K **Farmers reached** with 12% p.a. growth in usage **Projected** 2.7M **Farmers reached** by end 2021 10-80% **Farm yield increase** with fertilizer usage

AGRA's investments in policy and advocacy removes barriers and creates opportunities in the agricultural ecosystem. As indicated above, AGRA has many other policy reform efforts already in process, and we know there are other areas that will need similar focus and effort. The African Union's Comprehensive Africa Agriculture Development Programme (CAADP) framework aims in part to drive transformation through smarter policy that boosts investment, recognizing the barriers that exist in many countries. Similarly, Grow Africa and the G8's New Alliance for Food Security and Nutrition have flagged the absence of necessary policy commitments as a major hinderance to private sector investments. In short, this work is vital to agricultural transformation. Our efforts across policy and regulations in seeds, fertilizer, post-harvest markets, mechanization, irrigation, and more will continue to unlock investments that change what is accessible and affordable for smallholder farmers.

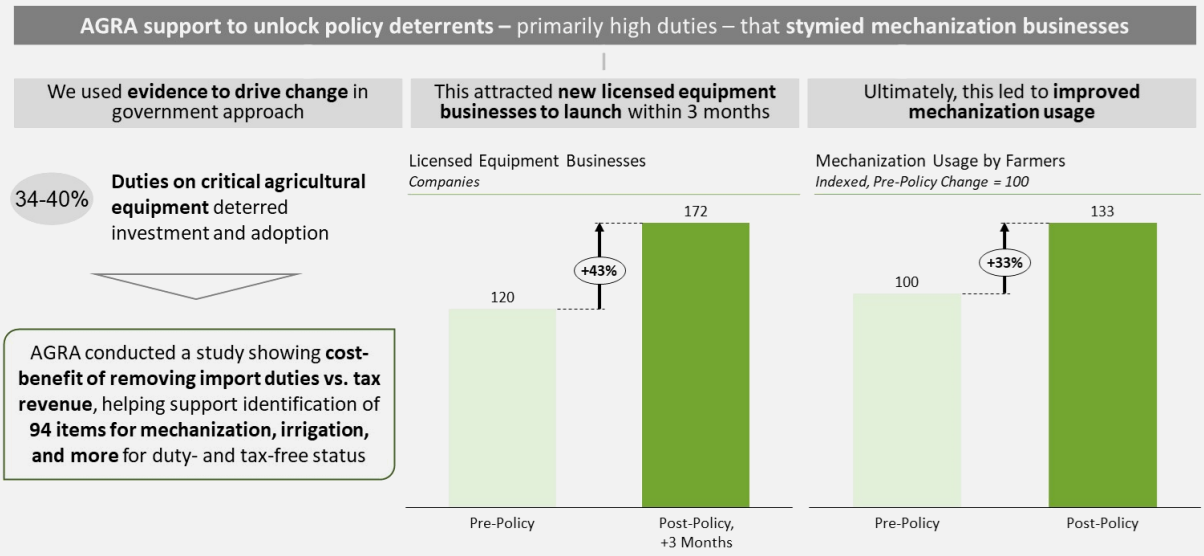
Looking ahead, AGRA will draw on important insights developed over the last four years of policy reform effort. A number of these pertain to the pragmatic realities of effecting change – not surprisingly, we have had greatest success in countries where we collaborated with a clear champion for change, but struggled in countries where we experienced turnover of key staff and loss of momentum. Timing is thus key, as there may be specific windows of opportunity in which a policy reform is most likely to have traction. However, because most aspects of timing are outside AGRA's control, in order to maximize these "windows", our approach must be one of flexibility in both design and process. There is also the practical challenge of implementation, and we have seen the benefits of starting with the end in mind, i.e. designing the policy implementation program from the beginning. Beyond practical matters of navigating challenges in policy reform, AGRA will also expand our focus to relatively overlooked areas, including resilience, extension services, post-harvest systems, and nutrition. We will also continue to build out partnerships in this effort, which are important, but require patience and investment, as reflected by our experience collaborating with the African Union and NEPAD.

The strategic importance of such partnerships cannot be overstated, particularly as longer-term and larger-scale impact to policy reform may require complementary investments in infrastructure and other public goods.

Case Study: Ethiopia, Mechanization Reforms

Adoption of mechanization by Ethiopian farmers was deterred by punitive duties. The government's focus on collecting import duties and interest in fostering domestic manufacturing of agricultural equipment had not yielded meaningful results in its priority of increasing agricultural mechanization. Meanwhile, the business economics under the existing duty regime made it nearly impossible for private sector firms to import equipment and supply farmers with mechanization goods and services. In close coordination with the Government, AGRA conducted a study that systematically demonstrated the missed opportunities for the country. The consequent removal of duties across 94 products had an immediate effect, with new licensed equipment businesses launching within months of the change and subsequent increase in farmer usage of mechanization services.

Figure 30: Policies Approved

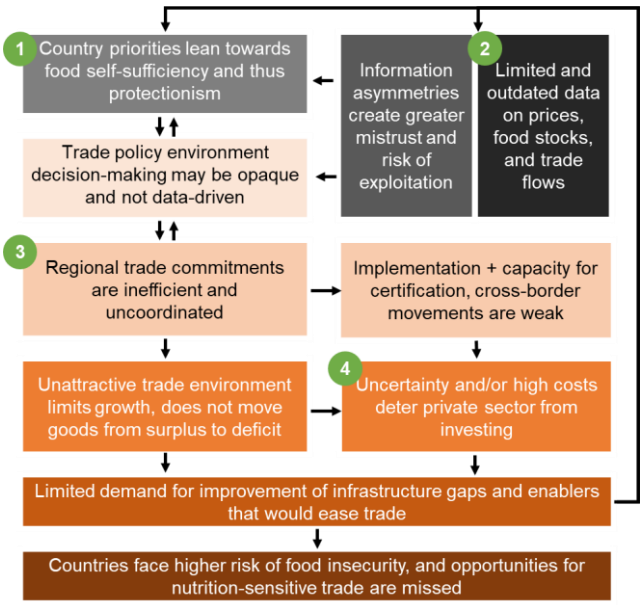


Our Impact on Regional Food Trade

Most countries in sub-Saharan Africa operate with a focus on food self-sufficiency. While food security is critical for obvious reasons, in practice this can lead to sub-optimal decisions – protectionist policies and a lack of investment in infrastructure and other trade enablers. Countries may miss opportunities to build on natural advantages, instead approaching agriculture as a zero-sum game and fostering agricultural sectors that are uncompetitive. Food stocks may not flow efficiently from areas of surplus to areas of deficit. We see a number of important limiting factors:

1. **Country prioritization** that leads towards protectionism that stymies growth
2. **Limited data** on food stocks, prices, trade flows, creating information asymmetries and limiting smarter policy and decision-making
3. **Poor coordination and implementation** of trade commitments and policy, making practical aspects of trade – such as certification – more difficult

Figure 31: Regional Food Trade Challenges

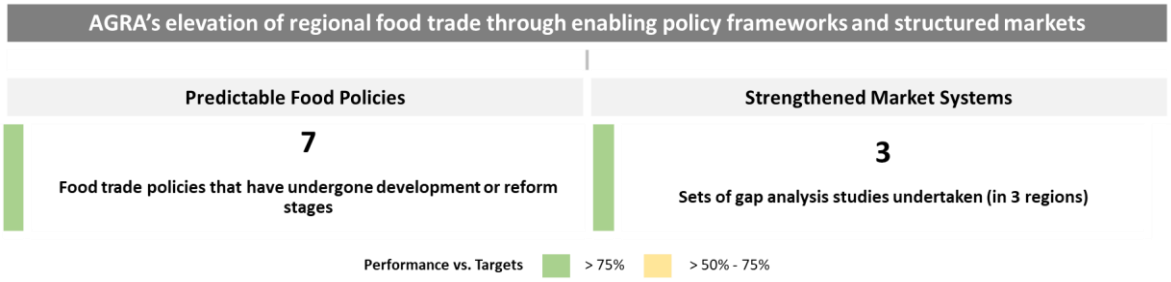


4. **Limited investment by private sector** due to an unattractive or unpredictable trade environment, high costs, corruption, and more

AGRA's work on regional food trade focuses on overcoming these key barriers to a more vibrant, predictable trade environment. We take a data-driven approach to understanding market dynamics and needs, political economy, and institutional barriers. Our investment in the Regional Food Balance Sheet (RFBS) Initiative for East and Southern Africa, for example, recognizes the inability to make evidence-based decisions across the region and technical capacity challenges that prevent countries from generating up-to-date, accurate crop production and food balance data. With the RFBS, we are leveraging technology to develop better data on multiple crops, particularly key staples. We are also collaborating with – and investing in the capacity of – local institutions, helping to embed and institutionalize the RFBS as a practical tool. This will drive more effective decision-making for governments as they national and regional questions of trade and food security, and also support private sector actors in the value chain who are making operational and investment decisions.

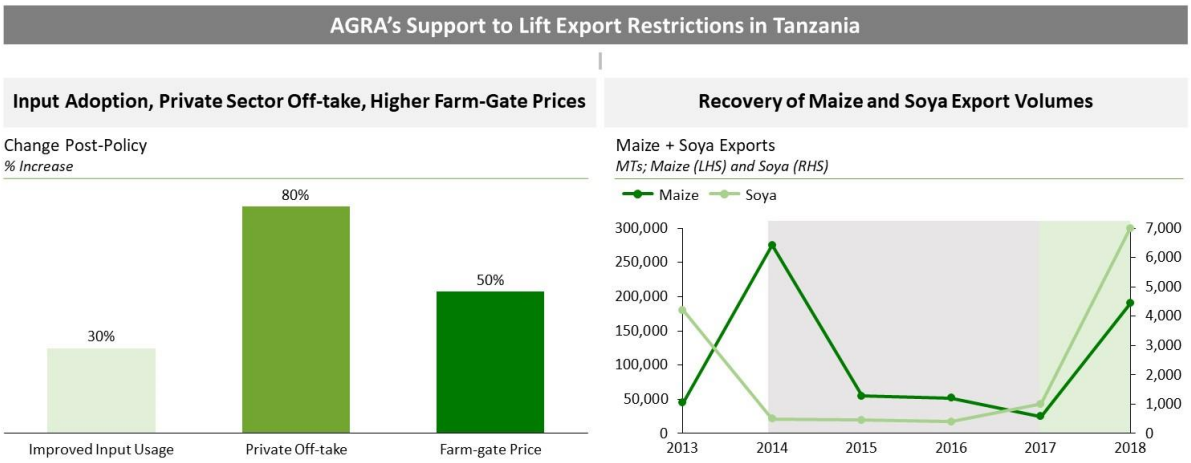
We also work with governments to identify policy strategies that may take a self-defeating, beggar-thy-neighbor approach and thus deter private sector investment. We have also supported the improvement of government implementation, including capacity in areas such as foods standards implementation. Furthermore, with private sector actors, we help coordinate investment in commercial companies that can engage smallholder farmers and link them to more functional, structured trade options. This can include working with off-takers, including through our consortia, to help them develop more resilient supply chains and integrate more smallholders into regional food markets.

Figure 32: Regional Food Trade, Performance vs. Targets



Improving the policy and regulatory deterrents to trade can, in some instances, have rapid impact. We worked with the government of Tanzania to evaluate the cost of restrictions on the export of cereals, including maize. The unfavorable trade environment had removed farmer incentives to use improved seeds and fertilizer or to grow commercially, and some had switched from producing for markets to growing purely for subsistence. By providing technical assistance and facilitating intra-government dialogue, AGRA helped build the case for the lifting of restrictions. This led to improved behaviors by farmers, growth in private sector off-take volumes, higher farm-gate prices, and a recovery of exports in maize and soya.

Figure 33: Impact of Lifting Export Restrictions, Tanzania



AGRA's work also extends to broader needs in the market ecosystem that affects food trade. For example, we collaborated with the government of Kenya on their policy for food reserves, developing an approach to create clearer

standards – and mechanisms to foster compliance to those standards – that would support a better trading environment to the benefit of both producers and traders. In Kenya and Tanzania, we worked with both the respective governments and the private sector to improve off-taker engagement to create better linkages, such as to a major brewery, and foster more inclusive trade opportunities.

Figure 34: Example Impact of Food Trade Policy and Market Systems Projects

	Support for Strategic Food Reserve – Policy	**Commodity Off-takers** – Market Systems
Constraints	• The Food Reserve had opaque operations with minimal harmonized staple foods standards where importers and regional traders faced political economy risk • Lack of capacity to ensure compliance, and lack of awareness of existing standards can be major barriers to trade.	• Off takers faced difficulty security desire quality and quantity and grains partly due to Shortage input and finance facilities for food producers • Misaligned incentives of stakeholders involved in output markets – off takers, trade middlemen and farmers
Policy and market interventions	• The reforms looked to create stability in pricing and stock for the benefit of both producers and traders.	• Leverage technical assistance to engage off takers (e.g., East Africa Breweries) to develop inclusive trade opportunities • Provide a blend of services – financial services, improve operational efficiencies, and extension adoption
Key Partners	National Food Reserve and Food Storage Management in Kenya, Ministry of Agriculture, Livestock and Fisheries	Agriculture Transformation Office (ATO) & Ministry of Agriculture, Tegemeo, IFDC, IFAD, FAO, IFAD, World Bank
Early Results	**Projected** 48% **Reduction in storage prices** to help cut post-harvest loss, boost food security **Qualitative** Increased business for the 750 farmer-facing agro-dealers and equipment suppliers, and 150 storage facilities and processors in 20 value chains	**Actual** 62K **Farmers benefitting from food orders** 740K **USD value of staple crops** sold through structured crop markets 1.3M **USD value of loans** leveraged by smallholders and SMEs

Impact on Strategic Partnerships

Introduction

There is a tremendous gulf between those with resources and those who need them. It is difficult to build linkages between those seeking financial or technical resources and those who could potentially deploy them. A committed, capable government must first establish the right vision, rules, and environment. But there are limits to the resources that the governments of AGRA's focus countries can contribute, mobilize, or expect from multilateral institutions. Of the estimated $32 to 40 billion USD per annum that would be necessary to fund agricultural transformation, domestic government spending, overseas development assistance, and commercial lending account cover only one-third of the total.[4] Catalyzing resources – financial and beyond – is urgently needed to meet this gap.

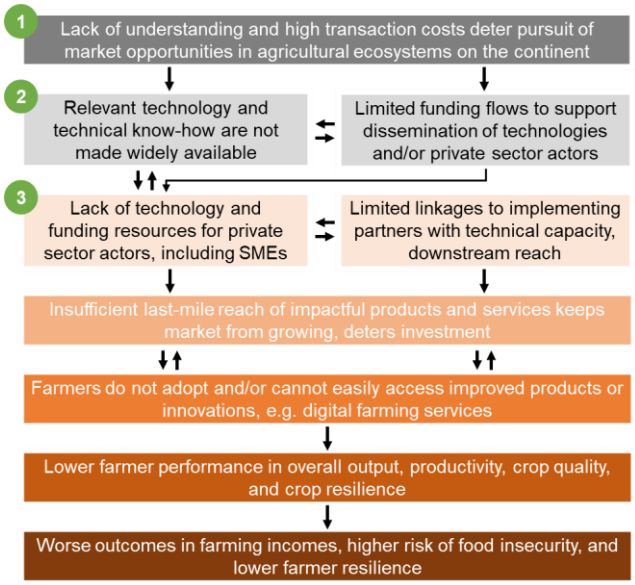
A "business as usual" approach will not work. The gap is too big and impactful opportunities are too easily missed. Coordination is critical, but there is not enough of it. Building connections and fostering vibrant partnerships requires an intermediary with the right relationships, understanding of the landscape, and credibility. AGRA is well-positioned to play a critical role in building the right bridges, particularly in the area of public-private partnerships. Furthermore, we can draw on our unique blend of capabilities and expertise in working with both the private sector and Government. Thus in 2017, AGRA began building intentional partnerships as a core element of our strategy. We leverage our deep network and continental presence to help foster catalytic partnerships – thereby bringing new capital, expertise, and technology into agricultural systems.

Our Impact on Linkages and Partnerships

AGRA's study of the private sector's contribution to African agricultural transformation found the biggest challenge lay in the convergence of key assets – at the right time and in the right place.[5] There are three key underlying drivers to this challenge:

1. **High search and transaction costs** for those who do not understand commercial opportunities in Africa
2. **Relevant technology, ideas, and innovation are not matched with funding opportunities,** and vice versa – so transferrable assets do not get the opportunity to launch and scale
3. **Existing private sector actors, particularly SMEs,** that are needed for implementation and reaching markets, lack both resources and linkages

Figure 35: Partnership Challenges



Starting in 2018, AGRA invested in building strategic partnerships systematically to tackle these barriers. We establish and run platforms to showcase agricultural sector

[4] Source: Feed Africa Strategy for Agriculture Transformation in Africa 2016-2025 (p.43) OECD DAC CRS database; http://www.governmentspendingwatch.org/spending-data; Initiative for Smallholder Finance, "A Roadmap For Growth: Positioning Local Banks For Success In Smallholder Finance," 2013; Dalberg, "Catalyzing Smallholder Agricultural Finance," 2012; IFC, "Closing the Credit Gap for Formal and Informal Micro, Small, and Medium Enterprises; EY, "Africa 2015 Making Choices"; IFC, "Private Equity and Emerging Markets Agribusiness: Building Value Through Sustainability," 2015

[5] AGRA, Africa Agriculture Status Report 2019: Hidden Middle, 2019

opportunities and to link those seeking – and those who can provide – capital for investment. We also identify and shape specific opportunities for investors and global players with relevant technologies, easing the introduction of innovations in inputs, digital solutions, and more. Our downstream work in agricultural systems, including our last-mile linkages via our village-based advisor and integrated delivery models, help us to offer technical areas of partnership. Indeed, it is AGRA's unique capability set and vantage point that enable us to complement other agricultural actors and partners, particularly in building public-private partnerships.

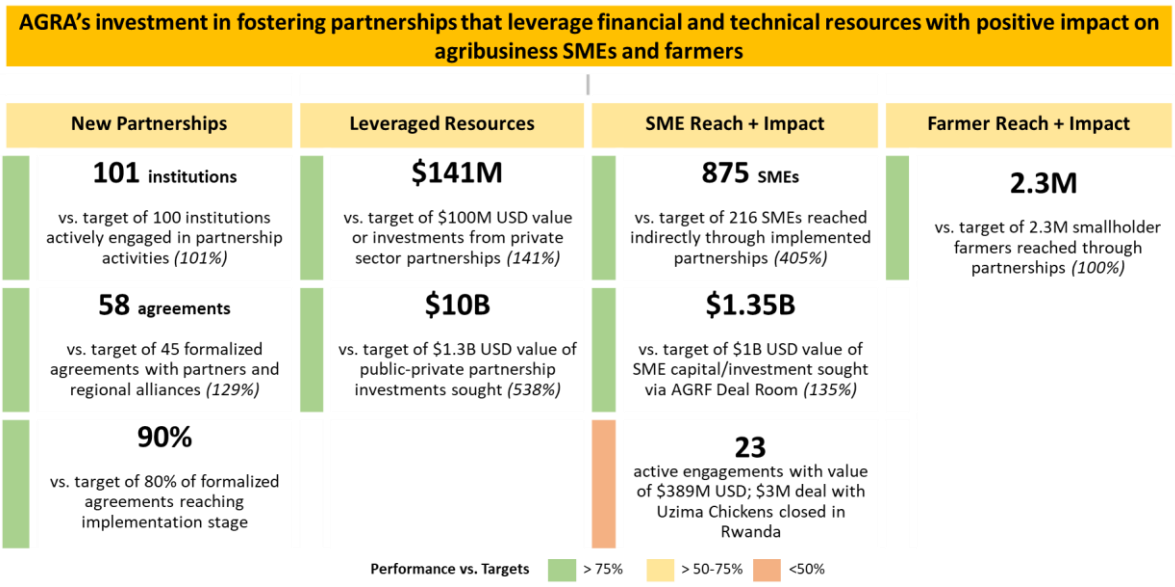
Figure 36: Agricultural Landscape – Focus Areas with Potential to Support Partnerships

Partner Types \ *Capabilities*	Government Capacity	Integrated Delivery	Investments	Convenings	SME Development	Technical Advisory	Public-Private Partnerships
AGRA	Strong Focus	Strong Focus	Strong Focus	Strong Focus	Strong Focus	Strong Focus	Strong Focus
Global Orgs / Multilaterals (e.g. FAO, WFP)	Strong Focus	Light Focus	Light Focus	Light Focus		Strong Focus	Light Focus
Financiers, Donors, Foundations (e.g. AfDB, MasterCard foundation)			Strong Focus	Light Focus	Light Focus		Light Focus
Implementers and Coordinators (e.g. Technoserve, Farm Africa, AFAP)		Strong Focus	Light Focus		Light Focus	Strong Focus	
Industry Bodies and Associations (e.g. AFSTA, IFDC)	Strong Focus			Light Focus		Light Focus	Light Focus
Consultancies (e.g. Dalberg, KPMG, Deloitte)	Light Focus	Light Focus	Light Focus			Strong Focus	Light Focus
Research Bodies + Knowledge Mgmt (e.g. IFPRI, CGIAR, FARA)		Light Focus		Light Focus		Strong Focus	
Investment Platforms (e.g. East Africa Trade Hub)			Strong Focus		Light Focus		Light Focus
Convening Bodies (e.g. WEF, CEO Forum)			Strong Focus	Strong Focus			Strong Focus
Integrated Service Delivery (e.g. One-Acre fund)		Strong Focus	Light Focus		Strong Focus	Light Focus	

Strong Focus | Light Focus | Not a Priority

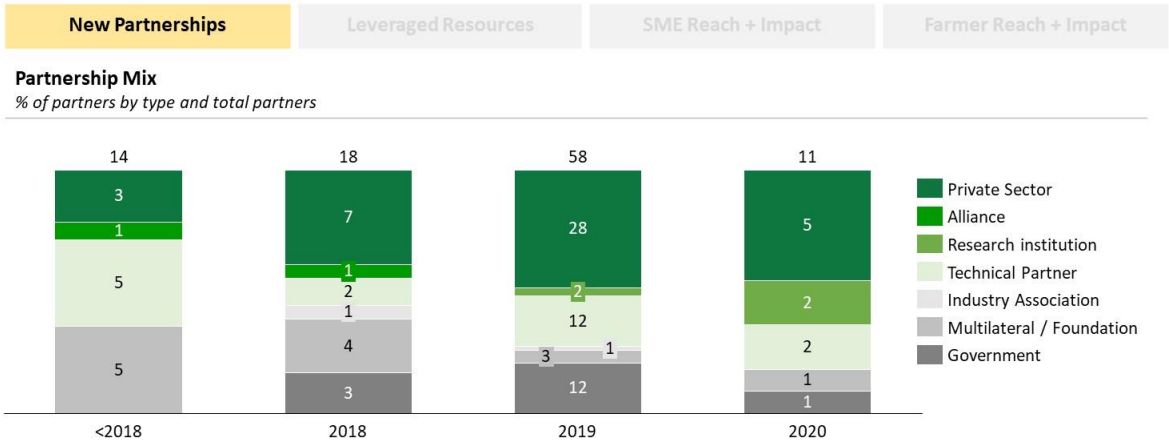
As with investing in strengthening state capability, developing strategic partnerships demands investment over a longer time horizon. Building connections, fostering trust, and then formalizing and implementing the partnership itself takes sustained effort. AGRA has tracked the development of the partnership pipeline as an early indicator of the connections that we are building. From this pipeline emerges formalized partnerships and incremental financial value created through new investments or increased revenues, as well as a large pipeline of PPP investments sought. This progress can then be linked to the agricultural SMEs that benefit from the implemented partnerships, not least through incremental capital mobilized. The end goal, of course, is reaching and benefiting smallholder farmers as a result of these partnerships. After just over three years, partnerships fostered by AGRA have reached an estimated 2.3 million farmers.

Figure 37: Strategic Partnerships Performance vs. Targets



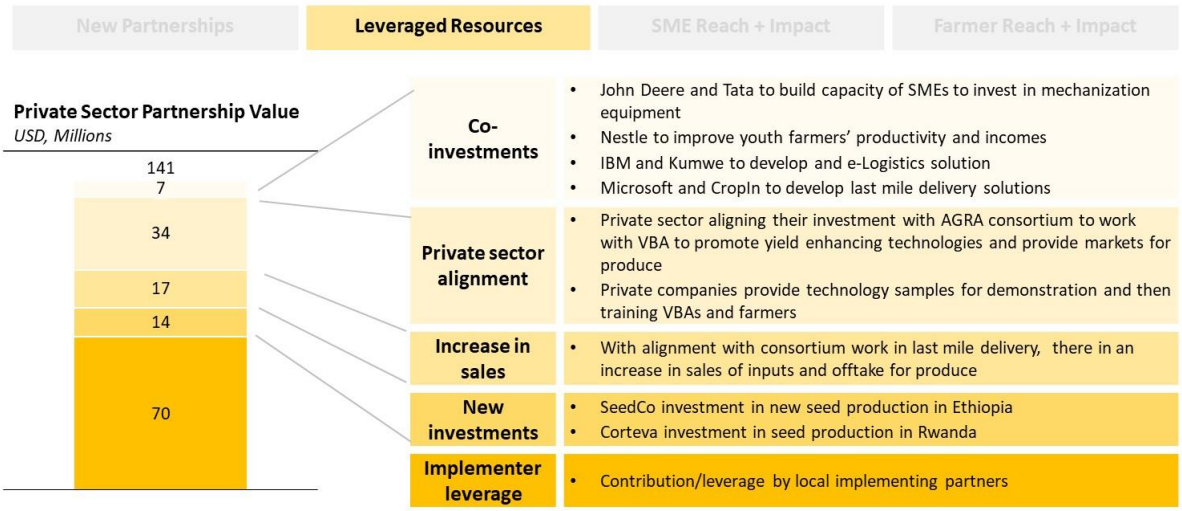
While the number of partnerships implemented is not itself an impact objective, this is a telling and important leading indicator. Over 100 of these have been formed across a broad range of actors, from private sector actors to research institutions and technical partners, from multilaterals to governments. Many provide the leverage of multi-country reach through a single partnership, such as those with SeedCo and Corteva that each operate in 9 of AGRA's 11 focus countries. They also touch on a wide range of crop value chains and opportunity areas, such as mechanization, artificial intelligence, and digitization of extension and government services. This diversity reflects the importance of linking otherwise disconnected organizations that can complement and augment work in agricultural development. It also suggests a large, untapped opportunity, as this progress is merely the early results of AGRA's work since 2018, including the significant disruption of the COVID pandemic.

Figure 38: Organization Type Mix, Implemented Strategic Partnerships



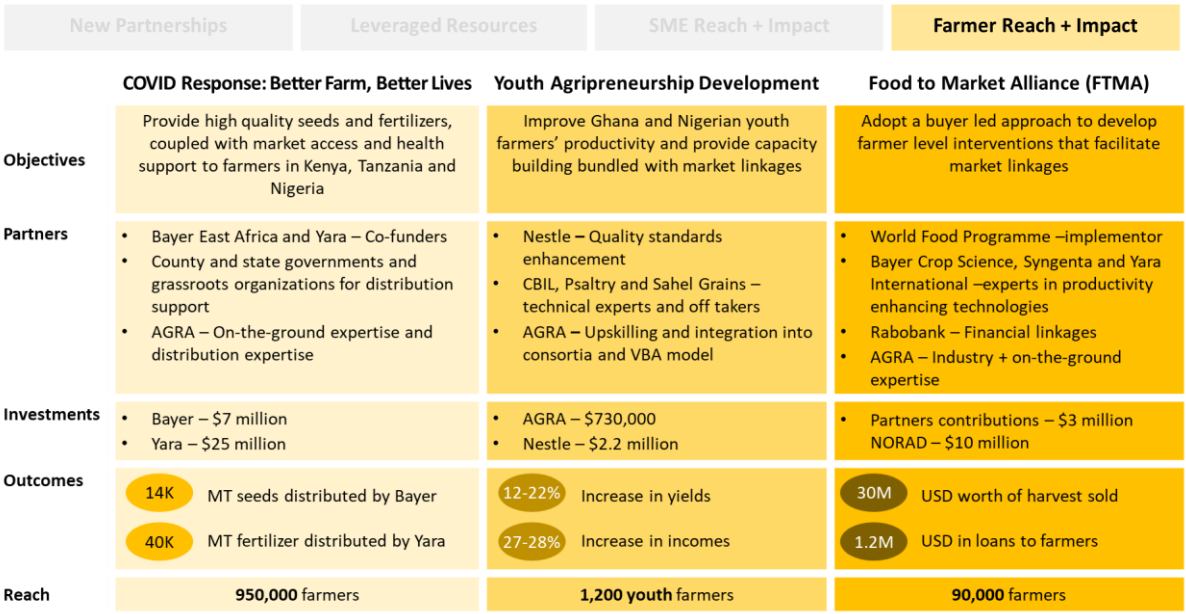
Furthermore, the $141 million of value created from private sector partnerships is indicative of the many ways that financial resources can be unlocked. The total is comprised of co-investments from multinational corporations, such as John Deere and Tata in mechanization, Nestlé in youth farmers, and IBM, Microsoft, and others in logistics and last-mile solutions. This also includes private sector actors aligning their investments by building upon the platform provided by AGRA's consortia, our integrated delivery model that helps businesses reach farmers. In other instances, the incremental financial impact comes from revenue growth, brand new investments, or additional "leveraged" investments. Notably, the $141 million of value created to date represents a 6x return on AGRA's own expenditures and investments.

Figure 39: Types of Incremental Financial Value from Strategic Partnerships



Each partnership is unique in its reach and impact on smallholder farmers. Our COVID response partnership with Bayer and Yara provided nearly a million farmers with seeds and fertilizer, as well as health services. Others are focused on the longer-term impact opportunity, such as the Food to Market Alliance to connect farmers to structured markets and Youth Agripreneurship Development project with Nestlé, CBIL, Psaltry, and Sahel Grains to support and train youth in good agronomic practices.

Figure 40: Partners, Investments, and Farmer Impact of Strategic Partnerships

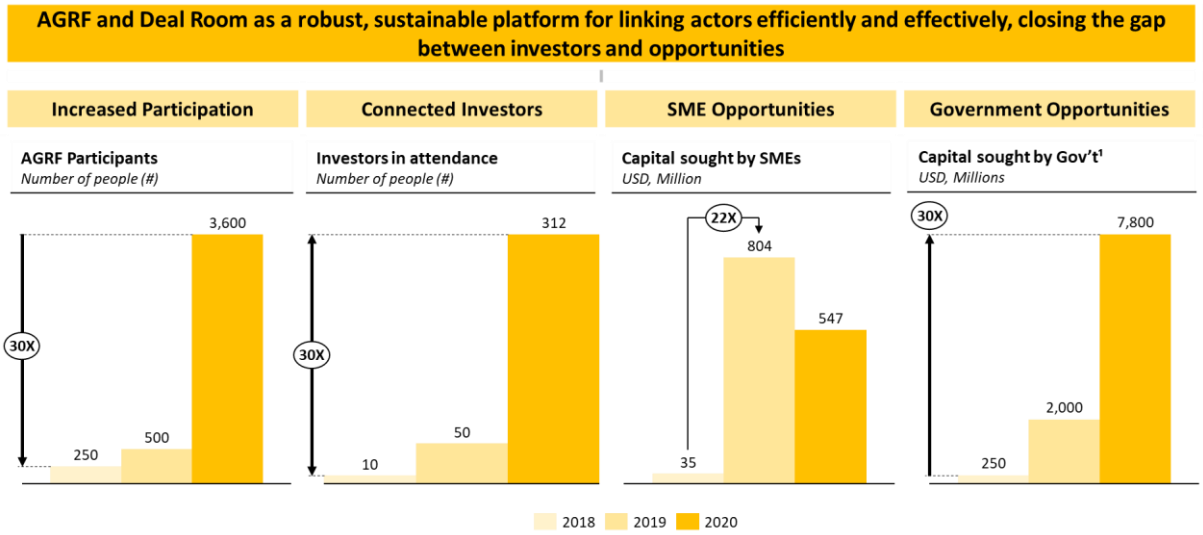


Beyond the partnerships that have already been implemented, AGRA's new partnerships also show tremendous promise for future impact. For example, we have signed a memorandum of understanding with the Farmer Foundation of ETG, the multinational agricultural conglomerate that has long-standing relationships with over half a million smallholders. ETG and AGRA aim to build on existing and new consortia to provide access to regional and global markets for farmers. Similarly, AGRA and Olam, a global food and agribusiness company, are collaborating on opportunities across multiple value chains in West Africa, including rice, soya, and other staples. This has resulted in an off-taker agreement for 170,000 Nigerian rice farmers and active exploration of a soy off-take arrangement in Ghana that can dovetail with a poultry flagship program.

In addition to our own partnership pipeline opportunities, AGRA has established a vibrant platform for ecosystem players to connect. Through the annual AGRF and especially through its Agribusiness Deal Room, AGRA has helped create a powerful forum for communication and connections. Both public and private sector actors are using AGRF to launch their platforms. For instance, the World Business Council for Sustainable Development (WBSCD) announced the

launch of its Global Agribusiness Alliance (GAA) platform, which, among other services, supports agribusinesses with financial linkages. Similarly, United States Agency for International Development (USAID) used AGRF to announce the launch of its Market Systems and Partnerships (MSP) mechanism. The Deal Room itself helps convene and matchmake among ecosystem players and investors. Interest, participation, and investment opportunities have grown dramatically over the last three years. While these are leading indicators, they demonstrate the need for fostering more diverse agricultural partnerships on the continent and the positive results that can emerge from doing so. For example, the African Development Bank announced a $45 million USD commitment to Senegal's Agripole – an investment that was pitched in the 2019 forum.

Figure 41: AGRF Agribusiness Deal Room



AGRA's investment in building strategic partnerships – both for ourselves and others – is in early stages. Even so, the growth of the AGRF and the active engagement of major national, regional, and global agribusinesses demonstrate the importance of this work and AGRA's positioning as a critical convener. There is significant appetite and willingness within the private sector to invest to market technologies to smallholder farmers. With the right matching of technology to appropriate use and need, this is an encouraging step towards an economically sustainable way of bridging gaps in resources and technologies. Looking ahead, there are important questions on how AGRA applies what we have learned to date. The financial value created through our investment in partnerships has been high, but some successful engagement models, such as the Food to Market Alliance, have also been quite costly to run. We have generated tremendous interest through the Agribusiness Deal Room, but need to identify ways to support the close of more deals like the Uzima Chicken investment in Rwanda. Finally, we need to consider how AGRA's assets – both consortia as platform and especially the village-based advisor extension model – can be most effectively and efficiently used as a way to attract and amplify our partnerships. Early steps towards creating more commercial opportunities for VBAs may provide a viable path to sustain the model beyond donor funding.

Case Study: AGRF Deal Room and Uzima Chicken

The Rwandan poultry sector is growing rapidly. Growing urbanization and a rising middle class have increased demand for animal poultry. This has been predominantly rural and family-based, but the sector has started to attract investment in medium to large-scale farms. The Rwandan government aims to help shift the poultry indstury from subsistence-based to being more knowledge-driven and market-oriented.

Among the 208 SMEs selected for facilitated matchmaking at the Agribusiness Deal Room in 2020 was Uzima Chicken, a supplier of day-old chicks and feed to Rwandan smallholders. The dual-purpose broiler and layer chicks are sold through a network of agents and reached an estimated 50,000 farmers in 2019 alone. The company sought investments to expand production of improved chicks and to add new product lines. In January 2020, the Transaction Team engaged AgDevCo, a specialist investor in African agribusinesses, to support a follow-on debt investment into the business. The team conducted field visits to Rwanda and Uganda to study the opportunity with feed producers, poultry experts, and stakeholders, gathering data to help validate the investment thesis.

In May 2021, Uzima Chicken closed the $3 million investment from AgDevCo. This demonstrated the potential impact of the forum provided by the AGRF Deal Room and the transaction support, including a market analysis study, provided by the Investment Facilitation Program.

Our Impact on Gender Inclusivity

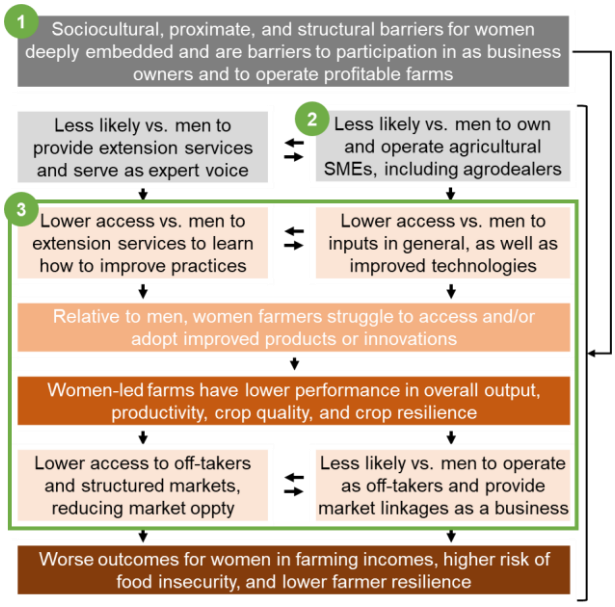
The gender gap in agriculture is large and tremendously costly. Due to the disparity in access to knowledge, improved inputs, land, and other critical resources, on the continent as a whole, the productivity of women-led farms is 20 to 30% lower than those of men. A range of sociocultural and structural barriers lead to worse outcomes for women across the agriculture ecosystem. Women are far less likely to be entrepreneurs and own agribusinesses, whether as agrodealers or off-takers. They are less likely to provide extension services or to access them. We see specific challenges to address:

1. **Structural barriers limiting opportunity for women,** with deeply-embedded assumptions and biases entrenching systemic challenges

2. **Lack of support for women-owned and led agricultural businesses,** adding additional challenges to what can – especially for SMEs – be a difficult sector to begin with

3. **Lack of access and limited agency for women farmers**, leading to lower adoption of improved inputs and good agronomic practices, lower productivity, and greater vulnerability

Figure 42: Gender Challenges



In our early years, AGRA took a "gender-neutral" approach to our interventions. Recognizing that this was not enough, we have made a conscious shift to focusing on opportunities and agency for women – as business owners and as the heads of profitable farms. These efforts are in the early stages and must be expanded, but we are seeing early evidence of change.

At the farmer level, AGRA has reached 3.5 million women from 2018 to 2020 with improved technologies and extension services. We have tracked the share of women that receive extension services, and we can see the gap compared to men closing across most of our countries. We also found that 55% of women farmers reported changing the way they farm as compared to 2017, which is an important first step towards closing the productivity gap. Part of our outreach effort is the deliberate inclusion of women as VBAs. We have had particular success in Kenya, Tanzania, and Burkina Faso, where 24% of VBAs are now women – making it easier for women farmers to connect, receive services, and have role models.

In the private sector, we have worked with nearly two thousand women-owned or led businesses. AGRA's work across input systems, agrodealers, and other interventions, we have supported those who are ready to challenge a male-dominated sector. Our support includes practical business and management skills, as well as linkages to financial services and markets. Among the companies we have helped are 23 seed companies led by women, as well as over 1,400 agrodealers. This is an encouraging start, though we acknowledge that these account for just 13 to 15% of the total businesses we have engaged in those areas.

AGRA is also investing in strategies that help drive scalable impact, most notably our Value4Her platform. We acquired the platform as a deliberate step in improving the our capabilities to support women entrepreneurs. The platform has reached over one thousand women-led/owned companies across 39 countries, and we expect that it will enable AGRA to deliver better training, networking, and market and financing connections.

Significantly more investment will be needed, but we expect our impact to grow as our gender inclusivity strategy is more deeply embedded into our work. Through the AGRF and Deal Room, we have deliberately created a platform for women to connect with partners and showcase investment opportunities. Our work in private sector and agricultural systems will increasingly emphasize a deliberate inclusion strategy, as evidenced in selecting women VBAs and supporting women-led/owned SMEs. We are also introducing this into our state capability and policy work, leading, for example, to inclusion of gender priorities and advocacy element in flagship programs for Malawi and Mozambique.

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Growing Africa's Agriculture

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