

AGRA knowledge series

AGRA's Approach to Developing Domestic Rice Industries

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Rice is one of the most important grains for consumers and farmers in most of AGRA target countries. In addition to meeting food needs of the growing middle class, rice provides farmers and processors with higher profit margins than maize and other key grains, making it the most food secure and income enhancing crop in the AGRA's crop portfolio. However, most of AGRA's target countries do not produce enough rice to meet their domestic demand. This deficit causes these countries to spend a sizable amount of their foreign exchange reserves to import rice.



	Burkina Faso	Ghana	Mozambique
Demand in MT	583,000	1,066,000	598,000
Rice production in MT	233,000	416,000	226,889
Rice imports in MT	350,000	650,000	365,800
Rice import bill in USD	87,944,100		
Per capita consumption in kg	27	28	22
Rice self-sufficiency in %	40%	39%	38%

Source: *Grow Africa and AGRA, 2017*

Most of these countries are pursuing a rice import substitution strategy that would enable them to reduce pressure on their foreign exchange reserves, and increase domestic rice production to meet the demand. However, increasing domestic rice production requires financial and technological resources, that can be mobilized through a combination of public and private investments. There are four conditions that must be met for the development of

the local rice industry:

1. Increased irrigated land: Irrigation is a sine qua non for increased paddy production because rice is an aquatic plant, and most of the high yielding varieties grow in irrigated ecologies.
2. Access to improved inputs: The adoption of improved seed and fertilizer enables rice farmers to realize the genetic potential of high-yielding varieties.
3. Adoption of advanced farming technologies: Rice farming requires the adoption of key practices such as efficient management of plant, water, soil, weeds, and nutrients.
4. Investment in improved processing technologies and marketing: Most of the available processing technologies provide a milling ratio (paddy to milled rice) of around 60%. Milling ratio is influenced by the variety and milling technology, and a higher milling ratio leads to higher profitability of the entire value chain. Furthermore, locally produced rice suffers from a low level of marketing effort, as only a few brands are known and available in the market. In addition to the difficulties of meeting quality specifications, local rice processors do not invest in packaging and development distribution channels.

To meet these conditions, interests of public and private actors must be aligned through Public-Private Partnership (PPP) models. Blending finance instruments can also be used to de-risk these investments.

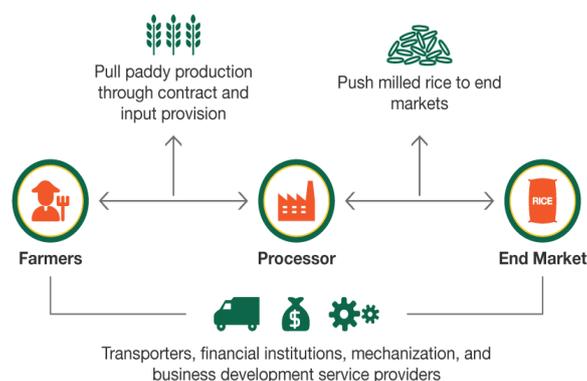
AGRA develops proof of concepts and scales up its rice interventions through government, private sector, and other bilateral and multilateral donors' investments. AGRA uses a two-tiered approach to developing a domestic rice industry that is competitive, inclusive, and sustainable.

Tier I: Country Support and Partnerships

AGRA provides direct or indirect technical assistance to the government to mobilize the investments for infrastructure required to develop the rice sector and achieve import substitution goals. Critical infrastructure such as irrigation and processing plants are developed using various PPP models, including the following:

- i. **Design, Build, and Operate:** Allocating prime land to the private sector to develop irrigation and operate it for a period of time. This takes the form of infrastructure concession.
- ii. **Build, Operate, and Transfer:** Government taking the initiative to build infrastructure whose commercial viability is not obvious initially, or does not guarantee short-term financial returns, and transfer assets to the private sector once the business model is proven and the investment is operating above the profitability threshold.
- iii. **Blended Finance:** Non-profit actors' partner with government agencies and private sector operators to mobilize resources and buy down the risk (real and perceived), that limit private sector investments in strategic areas by providing concessional resources and reducing uncertainties.

on processors, or a group of processors who provide a full package of services to rice farmers. Implementation modalities entail building an ecosystem or a consortium that crowds in key players such as seed and fertilizer companies, extension service providers, farmers, financial institutions, mechanization, and post-harvest technology providers, as well as business development service providers.



The core intervention focuses on developing processors' capacity to provide embedded services to rice growers. Services that processors provide to farmers include good agronomic practices, access to tillage, harvesting and threshing services, input finance under out-grower or contract farming arrangements, or processor-guaranteed bank loans that cover inputs and can be repaid at harvest time.

This approach is developed through a 6-step process that includes the following:

1. Identify the market and its preferred varieties of rice: This is done through market research that focuses on both milled rice and paddy. Selected varieties are the ones that meet consumer preference and processors' requirements.
2. Estimate processors' needs: This entails taking stock of the processor's quality and quantity specifications, as well as the supply chain or logistical constraints and opportunities.
3. Mobilize farmer organizations to tap into existing market opportunities: Facilitators share the analysis of the rice industry with farmer groups and develop profitability scenarios to ensure that farmers select the right market segment.
4. Broker contractual relationships between processors and farmer groups: Facilitators organize initial contacts between farmer groups and processors. These contacts involve processors visiting paddy production sites and farmer representatives visiting rice processing units. These visits and negotiations culminate in signed supply contracts.
5. Production planning: With the known demand and validated offer, farmer groups calculate the acreage and inputs needed to produce and supply the identified markets. Once input require-

Role of the Government

1. Making available economically viable prime land for the development of irrigation schemes;
2. Supporting the PPP framework for a comprehensive rice value chain development including upstream and downstream investments;
3. Putting in place an enabling environment to enhance the competitiveness of the locally produced rice;
4. Put in place or adapt a land tenure system to enable the co-existence of commercial farming and smallholders.

Role of the Private Sector Companies

Large private rice milling companies will focus on the following areas:

1. Working with governments to expand the areas under irrigation;
2. Establishing out-grower schemes and commercial farms;
3. Establishing large rice milling facilities; and
4. Ensuring that local processors integrate their supply chain through a franchising model to boost the marketing of locally produced rice and transfer improved technologies.

Tier II: Value Chain Development

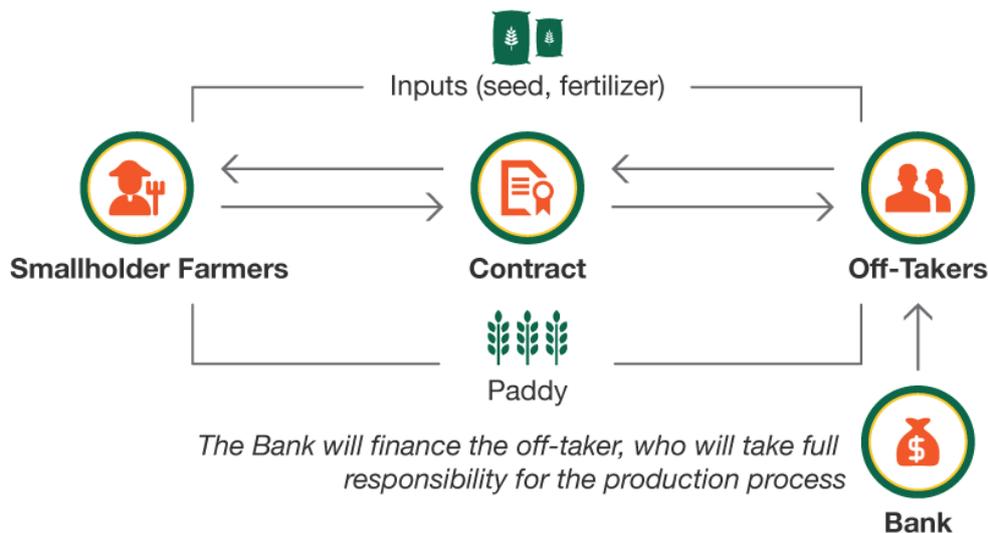
In addition to providing technical assistance to enable the success of Tier 1 interventions, AGRA provides funding to upgrade the rice value chain and generate an impact on rice smallholder farmers' income and food security. AGRA focuses on developing rice production and marketing systems around lead processors. AGRA resources are also deployed in a way that will enable rice processors to reach the scale needed to sustain profitability.

AGRA's delivery model for Tier 2 interventions is based

ments are known, facilitators organize negotiations between multiple partners to discuss business opportunities along the supply chains. These stakeholders include seed and fertilizer suppliers as well as financial institutions. These business-to-business exchanges results in input credit arrangements that are most of the time guaranteed by processors.

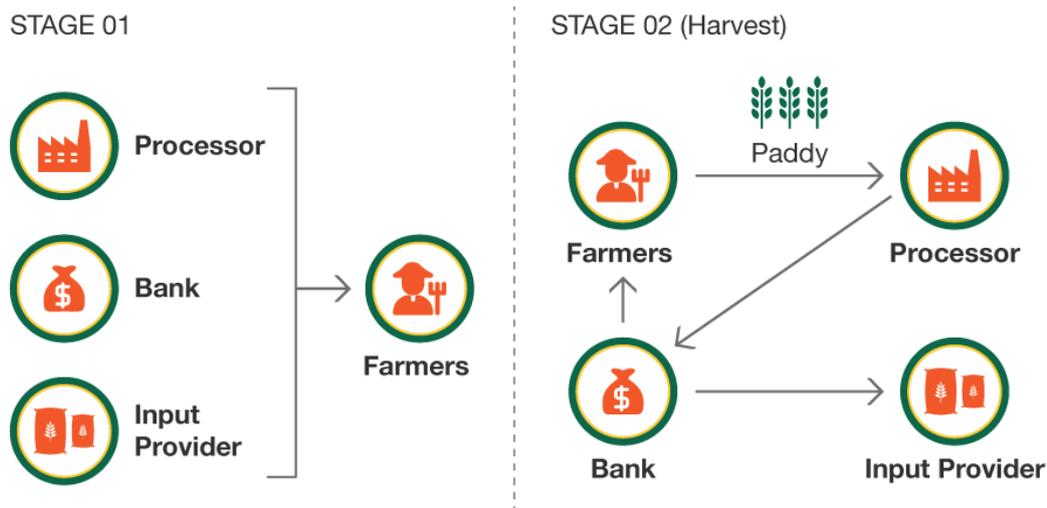
There are 2 input financing models that AGRA promotes as depicted below:

Anchor borrower: Single processor - internal value chain finance model



Trade finance: Single processor - external value chain finance model

A processor and a bank partner with input providers who agree to provide the needed inputs to farmers who present a voucher or promissory note from the bank. At harvest, the processor collects paddy from the farmers and pays them through the bank that provided them with an input loan. The bank credit farmers' account with the remaining amount after deducting the value of the input loan, which is remitted to input dealers.



6. Ensure accountability and build capacity: Facilitators follow up on commitments made by various stakeholders to enable negotiated supply deals to materialize. In addition, facilitators build the capacity of farmers to produce the required quantities and quality. This entails the provision of training in good agronomic practices, and the establishment of demonstration plots to showcase the benefits of adopting improved technologies. In some instances, facilitators support processors to negotiate loan products with financial institutions and lease finance with suppliers of improved processing technologies. Facilitators also assist processors in adopting good manufacturing practices (GMP) and meet HACCP standards.